

**GW -** 140

## **REPORTS**

**YEAR(S):**

1997 - 1996



GW-140

1997

**SUPPLEMENTAL SUBSURFACE  
INVESTIGATION REPORT**

**TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

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Oil Conservation Division



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# **SUBSURFACE INVESTIGATION REPORT**

**TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**



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# **SUBSURFACE INVESTIGATION REPORT**

**TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

PREPARED FOR:

**TEXAS - NEW MEXICO PIPE LINE COMPANY**

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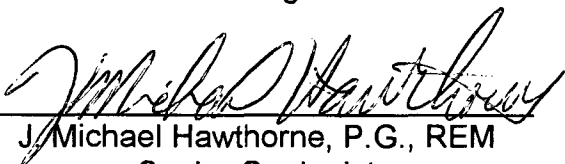
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## EXECUTIVE SUMMARY

The Texas - New Mexico Pipe Line Company (TNMPL) site SPS-11 is located approximately 12 miles northwest of Monument in Lea County, New Mexico, in Section 18, Township 18 South, Range 36 East. A site location map is presented as FIG. 1. Specific site details are presented on FIG. 2. This report summarizes subsurface investigation activities performed at the project site from March 1997 through May 1997.

Subsurface investigation activities performed included the following:

- Installation of monitoring wells MW-10 through MW-16;
- Advancement of soil borings B-1 through B-6;
- Collection of native soil samples from the monitoring wells and soil borings and laboratory analysis of the samples for determination of benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH) concentrations;
- Gauging of ground water levels in monitoring wells MW-1 through MW-16; and
- Collection of ground water samples from monitoring wells MW-1 through MW-4, MW-6, MW-7, and MW-9 through MW-16 and submittal of the samples for determination of BTEX concentrations.

The following conclusions are based on the field and laboratory data:

- The standard New Mexico Oil Conservation Division (OCD) closure levels for soils at the site are:

Total Petroleum Hydrocarbons (TPH)	100 mg/kg
Benzene	10 mg/kg
Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)	50 mg/kg

- Soil samples at the site indicated TPH, benzene, and BTEX concentrations above closure standards.
- Ground water samples at the site indicated BTEX concentrations above the New Mexico Water Quality Control Commission (NMWQCC) drinking water standards for benzene.

## PURPOSE AND SCOPE

The objective of the subsurface investigation activities was to delineate hydrocarbon impact across the site. The following activities were performed to achieve this objective:

- Installation of additional monitoring wells and soil borings upgradient and downgradient from release location;
- Gauging of water levels in all on-site monitoring wells;
- Collection of soil samples for analysis of hydrocarbon concentrations; and
- Collection of ground water samples for analysis of hydrocarbon concentrations.

## FIELD INVESTIGATION

### SOIL INVESTIGATION AND SOIL DESCRIPTION

During the subsurface investigation, six soil borings (B-1 through B-6) were advanced and six monitoring wells (MW-10 through MW-16) were installed utilizing air rotary technology. Soil samples were collected at selected intervals from the ground surface to termination boring depth. The soils were classified in the field, soil samples were field screened, and selected samples were prepared and shipped to the laboratory for determination of benzene, toluene, ethylbenzene, xylenes (BTEX) and total petroleum hydrocarbons (TPH) concentrations.

Upon advancement to total depth and collection of soil samples, a permanent well consisting of two-inch perforated PVC and blank riser was placed in the open hole of each boring designated as a permanent monitoring well. The borings were advanced until refusal was encountered or apparent ground water was encountered.

All drilling equipment was cleaned prior to first use and between boring locations. Sampling equipment was cleaned prior to first use and between sampling intervals with a Liqui-Nox detergent wash followed by a distilled water rinse.

The soil boring and monitoring well locations were surveyed by a Professional Land Surveyor registered in the state of New Mexico. Copies of the well reports are included as APPENDIX A. The locations of all soil borings advanced and monitoring wells installed are presented on FIG. 2.

### SOIL DESCRIPTION

The subsurface soil profile was classified in general accordance with the Unified Soil Classification System by visually observing the soil samples obtained during the assessment. In general, three soil types were encountered. A general description of the soil, approximate thickness, and head-space sample results for each soil type are as follows:

#### Soil Type I

This soil type consisted of a brown clay and was encountered at depths ranging from 0 to 3.5 feet below ground surface. It was observed at all soil boring locations and monitoring well MW-10 through MW-13, MW-15, and MW-16 locations. The clay contained gravel and was silty, sandy, firm to stiff, moist, and contained roots. This soil type varied in thickness from approximately 1 to 3.5 feet. The head-space readings from samples of this soil type varied from ND to 57 ppm.

### Soil Type II

This soil type consisted of a gray to light tan gravel and was encountered at depths ranging from 1 to 29 feet below ground surface. It was observed at all soil boring and monitoring well locations. The gravel was silty, sand, and moist. This soil type varied in thickness from approximately 2.5 to 27.5 feet. The head-space readings from samples of this soil type varied from ND to 1,282 ppm.

### Soil Type III

This soil type consisted of a light brown to brown sand and was encountered at depths ranging from 4.5 to 72 feet below ground surface. It was observed at all soil boring and monitoring well locations. The sand was silty, fine-grained, moist to wet, and contained occasional cemented lenses. This soil type varied in thickness from approximately 7.5 to 49 feet. The head-space readings from samples of this soil type varied from ND to 1,661 ppm.

Logs indicating the typical subsurface soil profile, depths at which soil samples were obtained, head-space results, laboratory results, and generalized geologic profiles are presented in APPENDIX B.

## **SOIL SAMPLING AND ANALYTICAL RESULTS**

Native soil samples were collected at selected intervals from the ground surface to a depth of approximately two feet below ground water by pushing a pitcher sampler. The soil samples were used to evaluate water levels and the distribution of phase-separate hydrocarbon (PSH).

Representative soil samples were divided into two separate portions using clean, disposable gloves and clean sampling tools. One portion of the soil sample was placed in a disposable sample bag. The bag was labeled and sealed for head-space analysis using a photo-ionization detector (PID) calibrated to a 100 ppm isobutylene standard. Each sample was allowed to volatilize for approximately 30 minutes at ambient temperature prior to conducting the PID analysis.

The other portion of the soil sample was 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. Upon selection of samples for analysis, the cooler was sealed for shipment to the laboratory. Proper chain-of-custody documentation was maintained throughout the sampling process.

The samples were transported to for determination of TPH concentrations by EPA Method 418.1. Eight soil samples were selected and submitted to Environmental Lab of Texas (ELOT) located in Odessa, Texas for determination of BTEX and TPH concentrations by EPA Method SW846-8020 and 418.1, respectively.

Laboratory results indicated the following concentrations ranges:

PARAMETER	CONCENTRATION RANGE (mg/kg)
Benzene	ND to 22.853
BTEX	ND to 304.373
TPH	ND to 12,100

Soil laboratory results are summarized in TABLE I and are graphically presented on FIG. 3. Analytical laboratory reports are included in APPENDIX C.

#### GROUND WATER SAMPLING AND ANALYTICAL RESULTS

On May 1, 1997, each monitoring well was purged of approximately three well volumes of water using a PVC bailer. The bailer was cleaned prior to each use with Liqui-Nox detergent and rinsed with water. After purging the wells, ground water samples were collected with a disposable Teflon bailer and polyethylene line.

Water samples collected for BTEX analyses were placed in sterile, 40 ml glass VOA vials equipped with Teflon-lined caps. The containers were provided by the analytical laboratory. The vials were filled to a positive meniscus, sealed, and visually checked for the presence of air bubbles.

The filled containers were labeled and placed on ice in an insulated cooler. The cooler was sealed for shipment to ELOT in Odessa, Texas for determination of BTEX concentrations using EPA Method SW846-8020. Proper chain-of-custody documentation was maintained throughout the sampling process.

Laboratory results indicated the following concentrations ranges:

PARAMETER	CONCENTRATION RANGE (mg/kg)
Benzene	ND to 9.639
BTEX	ND to 17.448

Soil laboratory results are summarized in TABLE II and are graphically presented on FIG. 4. Analytical laboratory reports are included in APPENDIX C.

Ground water elevations indicate an approximate gradient of 0.003 ft/ft towards the southeast. Ground water contours are presented on FIG. 5.

Purged water collected during the event was stored in steel drums pending disposal.

## CONCLUSIONS

The following conclusions are based on field and laboratory data:

- The standard New Mexico Oil Conservation Division (OCD) levels for soils at the site are:

Total Petroleum Hydrocarbons (TPH)	100 mg/kg
Benzene	10 mg/kg
Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)	50 mg/kg

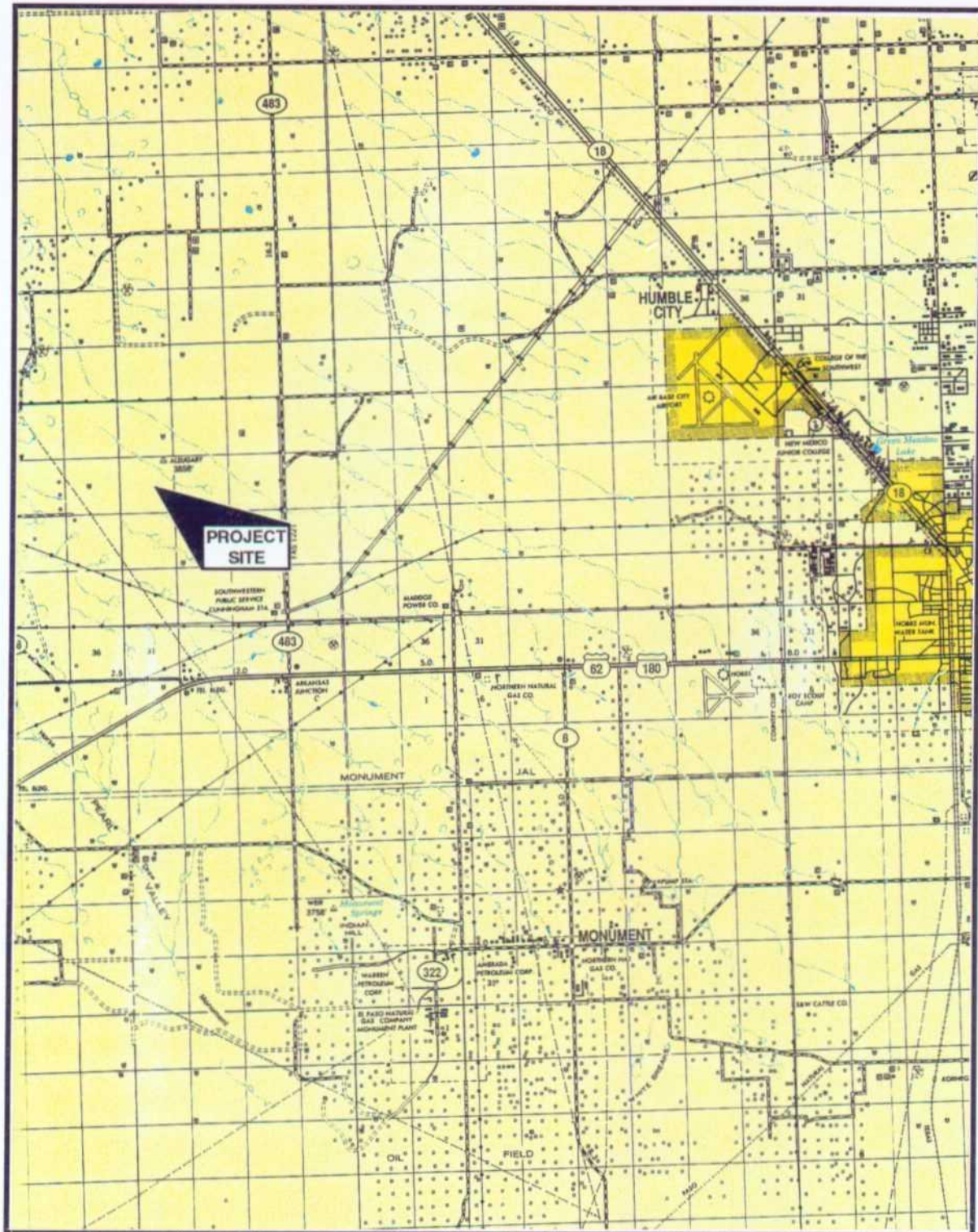
- Soil samples obtained from soil borings B-3 through B-6 and monitoring wells MW-10, MW-11, MW-12, MW-14, and MW-16 indicated TPH, benzene, and BTEX concentrations above closure standards.
- Ground water samples obtained from monitoring wells MW-1, MW-7, MW-9, MW-10, MW-11, MW-14, and MW-16 indicated benzene concentrations above the New Mexico Water Quality Control Commission (NMWQCC) drinking water standard for benzene.



# THE ROADS OF NEW MEXICO MAP

NEW MEXICO-LEA CO.

PRINTED 1993



0 1 2 3 4 5 6

SCALE 1" = 2.9 MILES

kei

## SITE LOCATION MAP

TNMPL

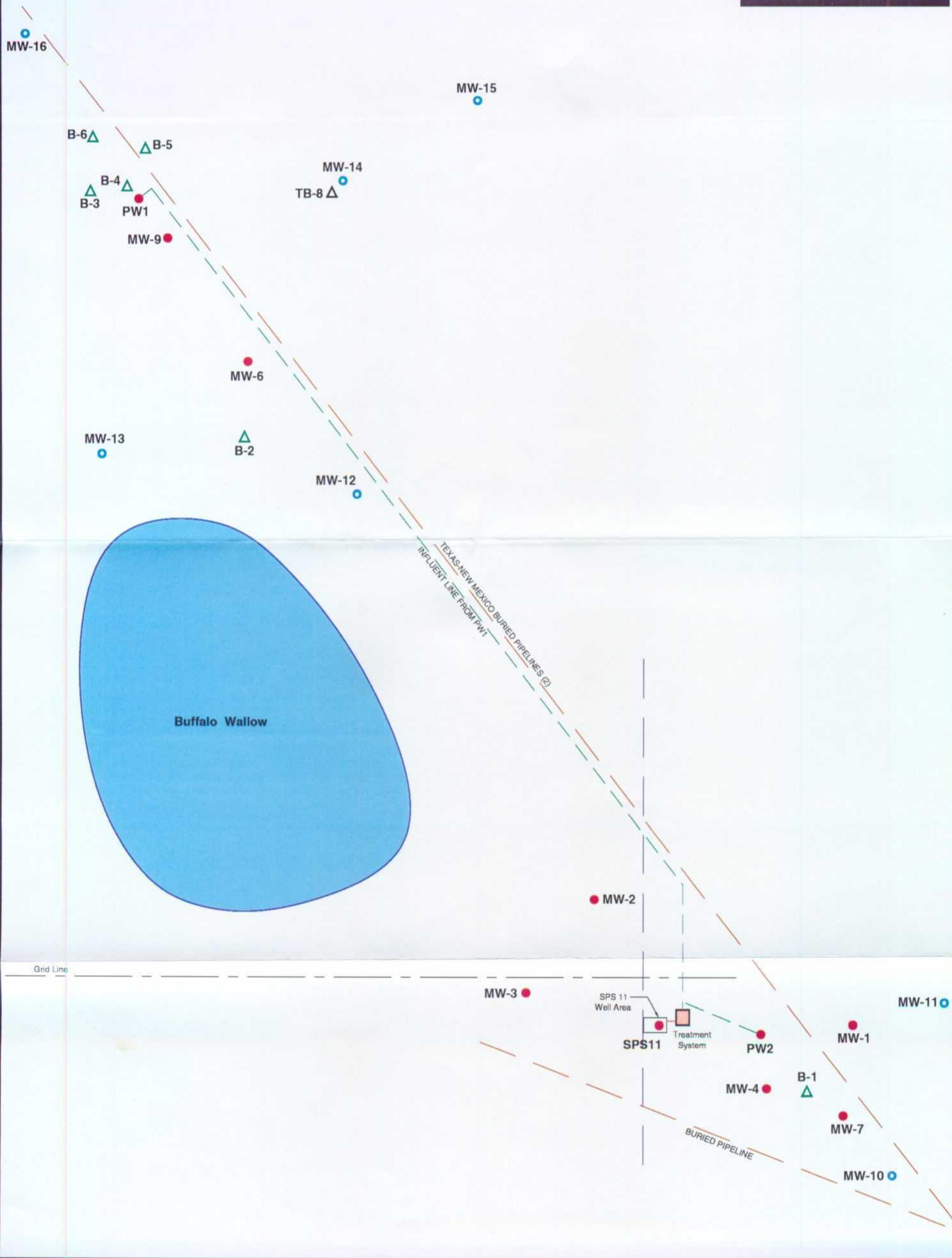
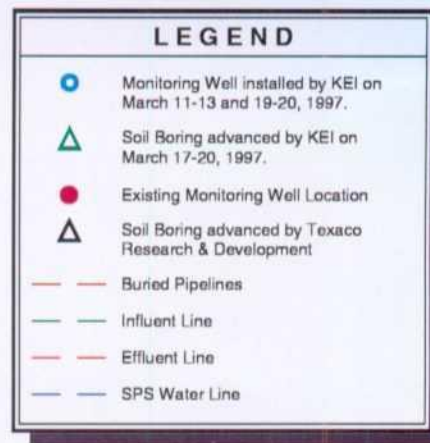
SPS-11

LEA COUNTY, NEW MEXICO

610099

FIG 1





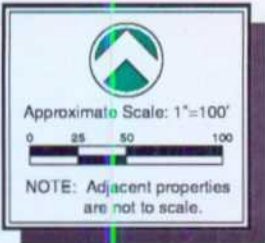
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SITE PLAN		
TNMPL	SPS-11	LEA COUNTY, NEW MEXICO

610099
FIG 2

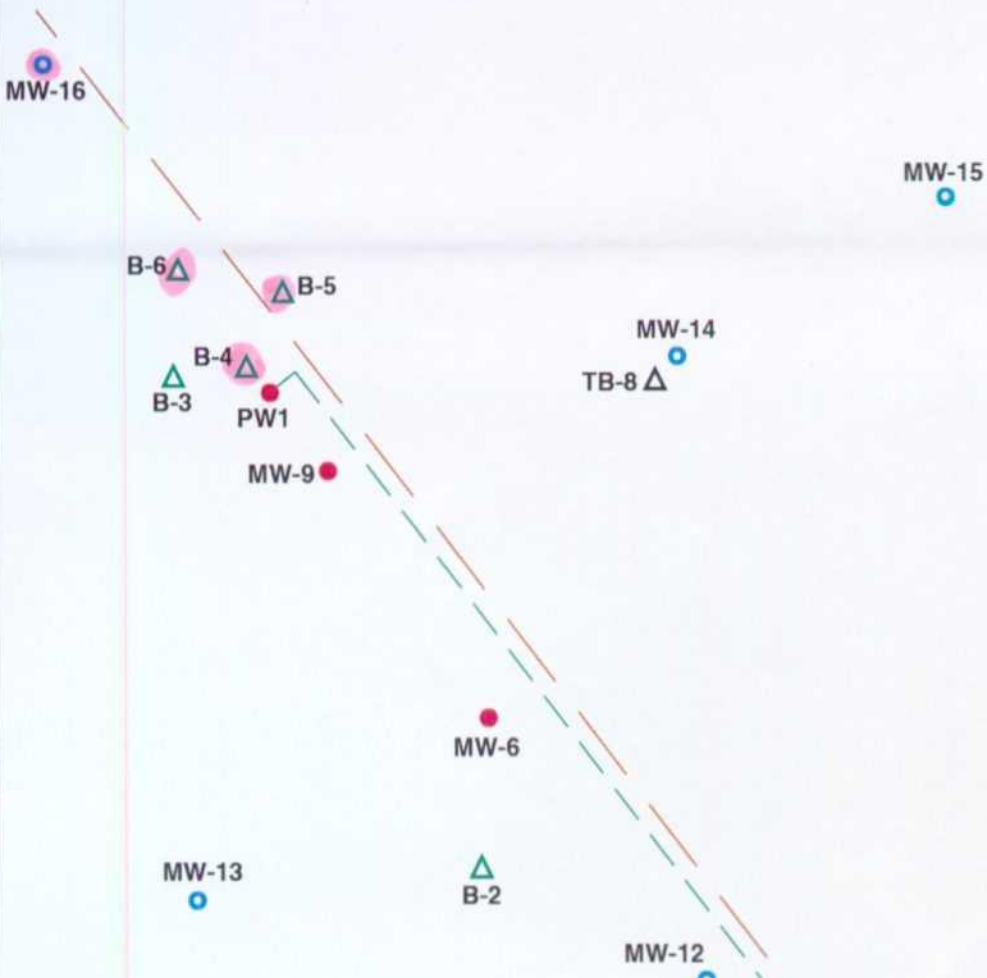




### LEGEND

- Monitoring Well installed by KEI on March 11-13 and 19-20, 1997.
- Soil Boring advanced by KEI on March 17-20, 1997.
- Existing Monitoring Well Location
- Soil Boring advanced by Texaco Research & Development
- Buried Pipelines
- Influent Line
- Effluent Line
- SPS Water Line

D = Depth of Soil Sample (feet)  
 B = Benzene Concentration (mg/kg)  
 BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)  
 TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)



### LAB RESULTS

MW-10				MW-11		
D=0-1	D=20-21	D=40-41	D=55-56	D=20	D=40	D=55
B=ND	B=ND	B=ND	B=ND	B=ND	B=ND	B=ND
BTEX=0.154	BTEX=0.415	BTEX=1.596	BTEX=ND	BTEX=ND	BTEX=ND	BTEX=ND
TPH=1,750	TPH=20	TPH=4,030	TPH=ND	TPH=10	TPH=150	TPH=10

MW-12				MW-13		
D=0-1	D=40-41	D=50-51	D=66-67	D=20	D=50	D=55
B=0.104	B=0.143	B=0.158	B=0.106	B=ND	B=ND	B=ND
BTEX=1.101	BTEX=1.086	BTEX=0.319	BTEX=0.285	BTEX=ND	BTEX=ND	BTEX=0.144
TPH=20	TPH=1,820	TPH=50	TPH=ND	TPH=10	TPH=ND	TPH=ND

MW-14				MW-15		
D=1	D=10	D=50	D=55	D=20	D=50	D=55
B=ND	B=ND	B=0.200	B=ND	B=ND	B=ND	B=ND
BTEX=ND	BTEX=ND	BTEX=37.093	BTEX=0.743	BTEX=ND	BTEX=ND	BTEX=ND
TPH=800	TPH=ND	TPH=2,570	TPH=1,020	TPH=ND	TPH=ND	TPH=ND

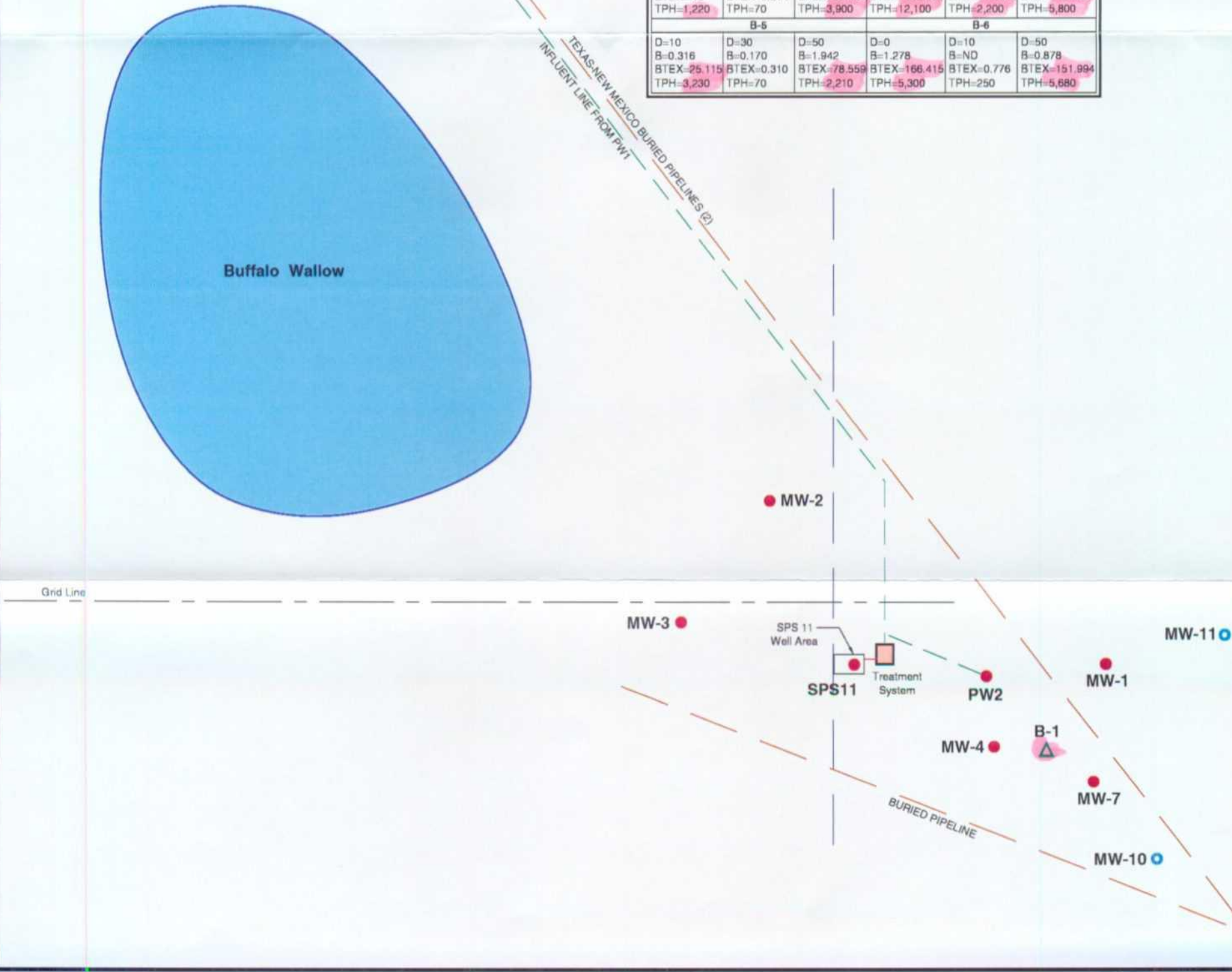
MW-16			
D=0-1	D=20	D=30	D=50
B=ND	B=ND	B=22.853	B=ND
BTEX=ND	BTEX=52.956	BTEX=304.373	BTEX=4.597
TPH=60	TPH=6,400	TPH=6,000	TPH=540

### LAB RESULTS

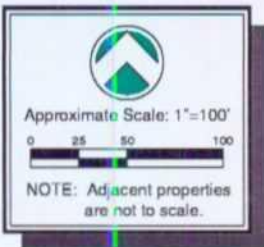
B-1				B-2			
D=0-1	D=10-11	D=40-41	D=54-55	D=0	D=5	D=30	D=55
B=0.222	B=0.198	B=0.758	B=ND	B=ND	B=ND	B=ND	B=ND
BTEX=62.815	BTEX=0.462	BTEX=279.17	BTEX=54.845	BTEX=0.237	BTEX=ND	BTEX=ND	BTEX=ND
TPH=3,710	TPH=20	TPH=3,720	TPH=9,400	TPH=10	TPH=ND	TPH=ND	TPH=10

B-3				B-4	
D=0	D=10	D=40	D=5	D=30	D=50
B=ND	B=ND	B=ND	B=0.927	B=0.337	B=1.594
BTEX=ND	BTEX=0.214	BTEX=53.526	BTEX=162.353	BTEX=14.896	BTEX=46.656
TPH=1,220	TPH=70	TPH=3,900	TPH=12,100	TPH=2,200	TPH=5,800

B-5				B-6	
D=10	D=30	D=50	D=0	D=10	D=50
B=0.316	B=0.170	B=1.942	B=1.278	B=ND	B=0.878
BTEX=25.115	BTEX=0.310	BTEX=78.559	BTEX=166.415	BTEX=0.776	BTEX=151.994
TPH=3,230	TPH=70	TPH=2,210	TPH=5,300	TPH=250	TPH=5,680

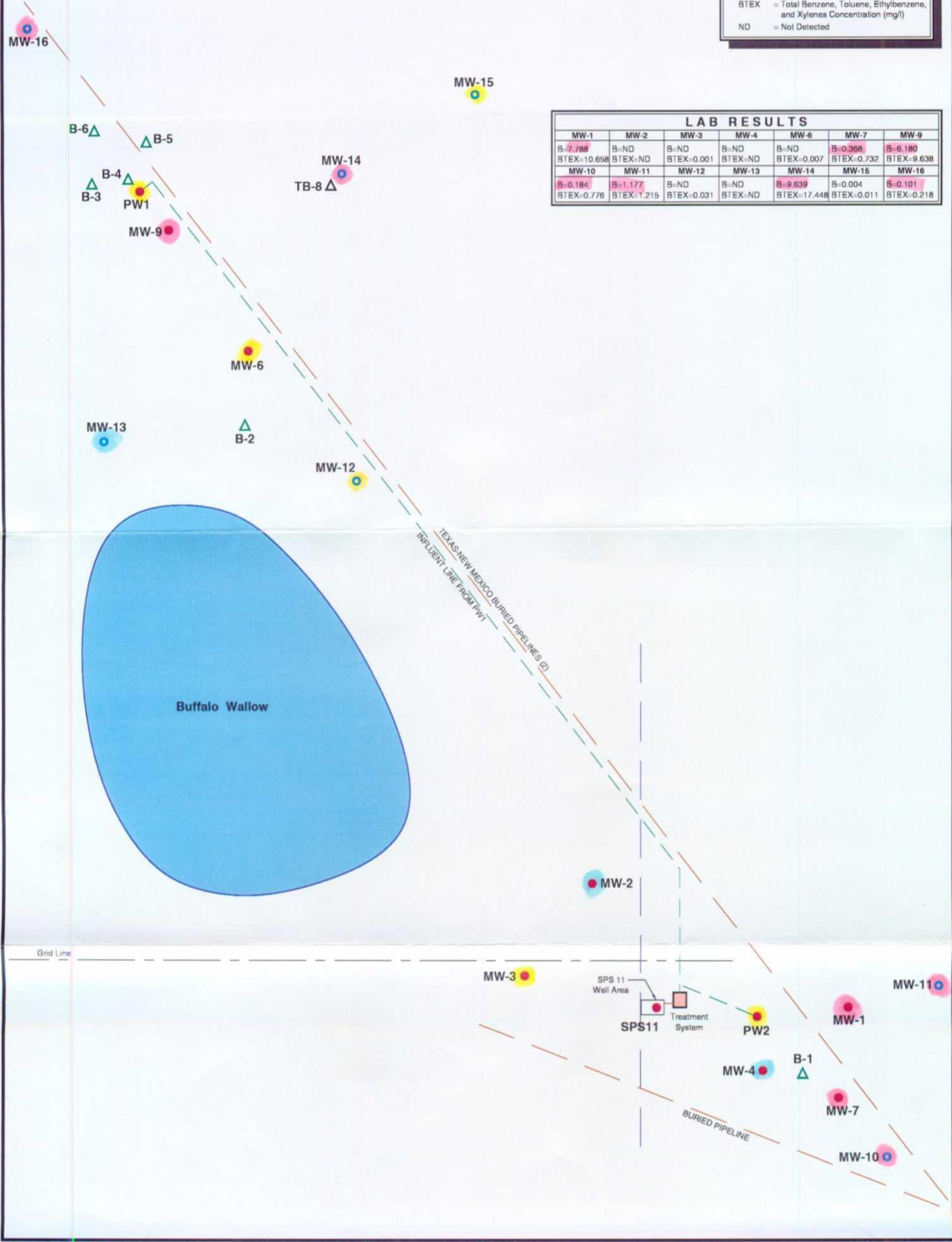


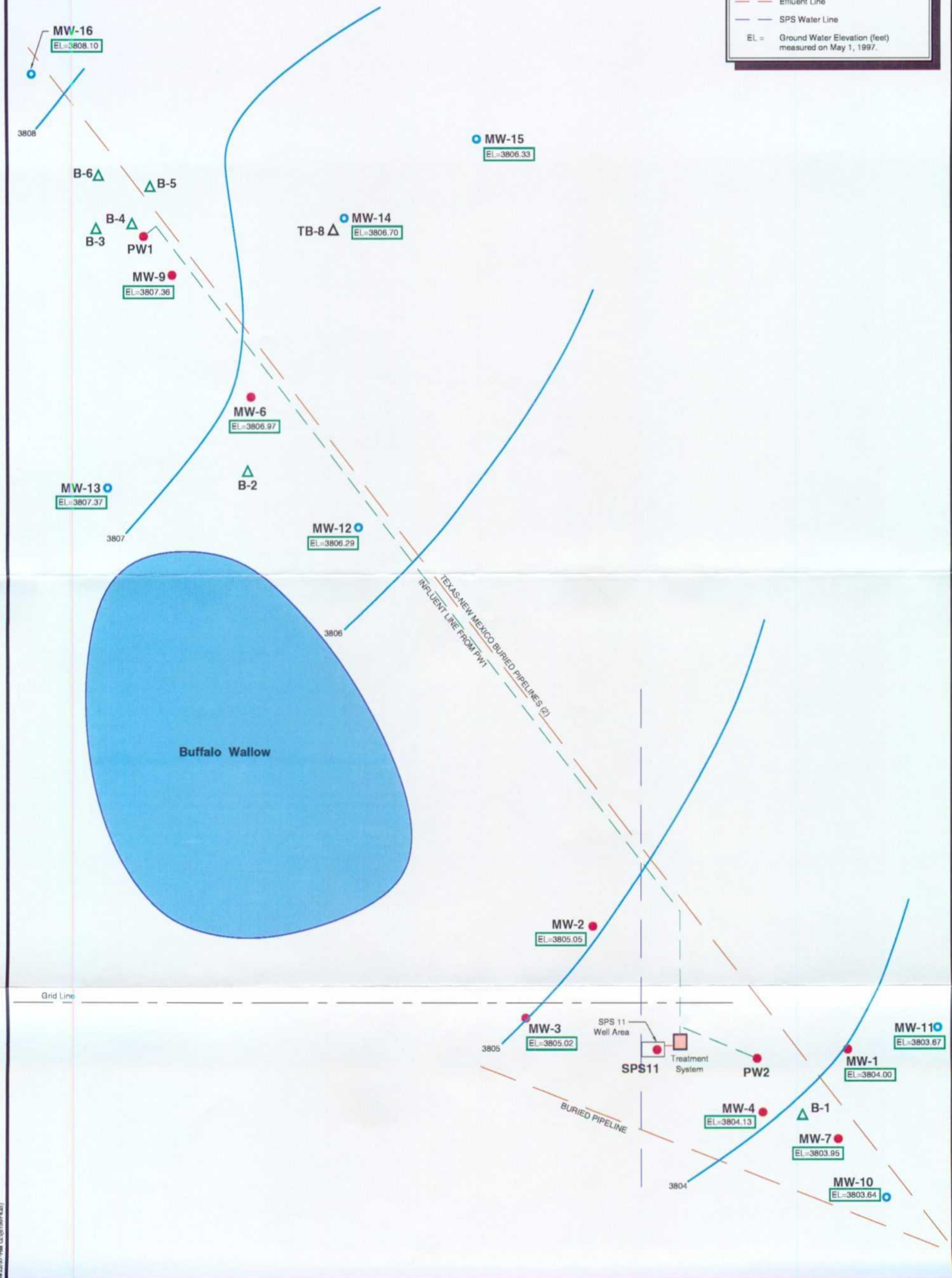
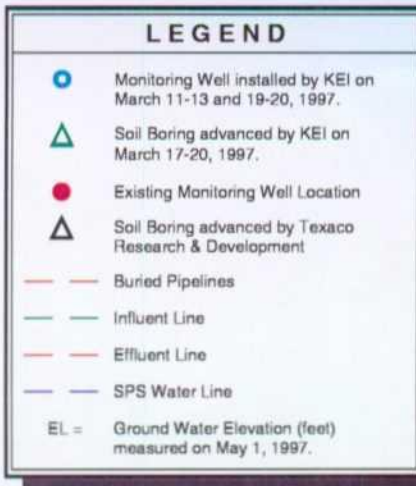




LEGEND	
<span style="color: blue;">●</span>	Monitoring Well installed by KEI on March 11-13 and 19-20, 1997.
<span style="color: green;">▲</span>	Soil Boring advanced by KEI on March 17-20, 1997.
<span style="color: red;">●</span>	Existing Monitoring Well Location
<span style="color: red;">▲</span>	Soil Boring advanced by Texaco Research & Development
<span style="color: brown;">---</span>	Buried Pipelines
<span style="color: green;">---</span>	Influent Line
<span style="color: red;">---</span>	Effluent Line
<span style="color: blue;">---</span>	SPS Water Line
B	= Benzene Concentration (mg/l)
BTEX	= Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/l)
ND	= Not Detected

LAB RESULTS						
MW-1	MW-2	MW-3	MW-4	MW-6	MW-7	MW-9
B=7.788 BTEX=10.658	B=ND BTEX=ND	B=ND BTEX=0.001	B=ND BTEX=ND	B=ND BTEX=0.007	B=0.368 BTEX=0.732	B=6.180 BTEX=9.638
MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16
B=0.184 BTEX=0.776	B=1.177 BTEX=1.215	B=ND BTEX=0.031	B=ND BTEX=ND	B=9.639 BTEX=17.448	B=0.004 BTEX=0.011	B=0.101 BTEX=0.218





## GENERAL NOTES

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

### Method detection limits:

Soil:            BTEX - 0.02 mg/kg  
                  TPH - 10 mg/kg

Water:           BTEX - 0.001 mg/l

Laboratory test methods: BTEX - EPA Method SW846-8020  
                                  TPH - EPA Method 418.1



TABLE I

**SUMMARY OF LABORATORY RESULTS - SOIL  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
TNMPL SPS-11  
LEA COUNTY, NEW MEXICO**

SAMPLE LOCATION	SAMPLE DATE	DEPTH (feet)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYLBENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	TPH (mg/kg)
B-1	03/20/97	0 - 1	0.222	10.991	18.776	32.826	62.815	3,710
B-1	03/20/97	10 - 11	0.198	0.151	ND	0.113	0.462	20
B-1	03/20/97	40 - 41	10.758	85.292	75.323	108.244	279.617	3,720
B-1	03/20/97	53 - 54	ND	8.441	17.652	28.752	54.845	9,400
B-2	03/17/97	0	ND	ND	ND	0.237	0.237	ND
B-2	03/17/97	5	ND	ND	ND	ND	ND	10
B-2	03/17/97	30	ND	ND	ND	ND	ND	ND
B-2	03/17/97	55	ND	ND	ND	ND	ND	10
B-3	03/17/97	0	ND	ND	ND	ND	ND	1,220
B-3	03/17/97	10	ND	ND	ND	0.214	0.214	70
B-3	03/17/97	40	ND	7.219	16.764	29.543	53.526	3,900
B-4	03/18/97	5	0.927	7.593	55.077	98.756	162.353	12,100
B-4	03/18/97	30	0.337	0.485	0.639	13.435	14.896	2,200
B-4	03/18/97	50	1.594	11.293	11.954	21.815	46.656	5,800
B-5	03/19/97	10	0.316	ND	8.727	16.076	25.119	3,230
B-5	03/19/97	30	0.17	ND	ND	0.14	0.31	70
B-5	03/19/97	51	1.942	20.447	22.087	34.083	78.559	2,210
B-6	03/18/97	0	1.278	15.924	55.441	93.772	166.415	5,300
B-6	03/18/97	10	ND	0.123	0.163	0.49	0.776	250
B-6	03/18/97	50	0.878	50.806	40.788	59.522	151.994	5,680
MW-10	03/21/97	0 - 1	ND	ND	ND	0.154	0.154	1,750
MW-10	03/21/97	20 - 21	ND	ND	ND	0.415	0.415	20
MW-10	03/21/97	40 - 41	ND	ND	0.196	1.4	1.596	4,030
MW-10	03/21/97	55 - 56	ND	ND	ND	ND	ND	ND
MW-11	03/11/97	20	ND	ND	ND	ND	ND	10
MW-11	03/11/97	40	ND	ND	ND	ND	ND	150
MW-11	03/11/97	55	ND	ND	ND	ND	ND	10
MW-12	03/20/97	0 - 1	0.104	0.136	ND	0.861	1.101	20
MW-12	03/20/97	40 - 41	0.143	ND	ND	0.943	1.086	1,820
MW-12	03/20/97	50 - 51	0.158	ND	ND	0.161	0.319	50
MW-12	03/20/97	66 - 67	0.106	ND	ND	0.179	0.285	ND
MW-13	03/12/97	20	ND	ND	ND	ND	ND	10
MW-13	03/12/97	50	ND	ND	ND	ND	ND	ND
MW-13	03/12/97	55	ND	ND	ND	0.144	0.144	ND
MW-14	03/13/97	1	ND	ND	ND	ND	ND	800
MW-14	03/12/97	10	ND	ND	ND	ND	ND	ND
MW-14	03/12/97	50	0.2	1.402	11.461	24.03	37.093	2,570
MW-14	03/13/97	55	ND	ND	0.182	0.561	0.743	1,020
MW-15	03/13/97	20	ND	ND	ND	ND	ND	ND
MW-15	03/13/97	50	ND	ND	ND	ND	ND	ND
MW-15	03/13/97	55	ND	ND	ND	ND	ND	ND
MW-16	03/19/97	0 - 1	ND	ND	ND	ND	ND	60
MW-16	03/19/97	20	ND	4.056	14.763	34.137	52.956	6,400
MW-16	03/19/97	30	22.853	99.739	72.631	109.15	304.373	6,000
MW-16	03/19/97	50	ND	0.644	1.169	2.784	4.597	540

TABLE II

SUMMARY OF LABORATORY RESULTS - GROUND WATER  
 TEXAS - NEW MEXICO PIPE LINE COMPANY  
 SPS-11  
 LEA COUNTY, NEW MEXICO

MONITORING WELL	SAMPLE DATE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYLBENZENE (mg/l)	XYLENES (mg/l)	BTEX (mg/l)
MW-1	04/10/92	4.92	2.06	1.20	1.13	9.31
MW-1	10/15/96	6.445	1.132	1.184	0.913	9.674
MW-1	05/01/97	7.788	0.778	1.282	0.810	10.658
MW-2	04/10/92	0.005	0.014	ND	ND	0.019
MW-2	10/15/96	ND	ND	ND	ND	ND
MW-2	05/01/97	ND	ND	ND	ND	ND
MW-3	04/10/92	ND	0.010	ND	ND	0.010
MW-3	10/15/96	0.003	ND	ND	ND	0.003
MW-3	05/01/97	ND	ND	ND	0.001	0.001
MW-4	04/10/92	ND	0.008	ND	ND	0.008
MW-4	10/15/96	0.005	ND	ND	ND	0.005
MW-4	05/01/97	ND	ND	ND	ND	ND
MW-6	04/10/92	0.130	0.011	ND	ND	0.141
MW-6	10/15/96	0.210	0.002	0.021	0.006	0.239
MW-6	05/01/97	ND	0.001	0.002	0.004	0.007
MW-7	04/10/92	1.590	0.590	0.470	0.310	2.960
MW-7	10/15/96	0.211	0.016	0.095	0.066	0.388
MW-7	05/01/97	0.368	0.034	0.206	0.124	0.732
MW-9	04/10/92	5.270	4.650	1.380	1.660	12.960
MW-9	10/15/96	4.224	0.056	1.252	0.865	6.397
MW-9	05/01/97	6.180	0.019	2.056	1.383	9.638
MW-10	05/01/97	0.184	0.292	0.124	0.180	0.776
MW-11	05/01/97	1.177	ND	0.011	0.027	1.215
MW-12	05/01/97	ND	0.003	0.001	0.027	0.031
MW-13	05/01/97	ND	ND	ND	ND	ND
MW-14	05/01/97	9.639	2.414	2.626	2.769	17.448
MW-15	05/01/97	0.004	0.002	0.002	0.003	0.011

**TABLE II**  
(continued)

**SUMMARY OF LABORATORY RESULTS - GROUND WATER  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

MONITORING WELL	SAMPLE DATE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYLBENZENE (mg/l)	XYLENES (mg/l)	BTEX (mg/l)
MW-16	05/01/97	0.101	0.090	0.015	0.012	0.218
PW-1	10/15/96	0.007	ND	ND	ND	0.007
PW-2	05/07/92	0.048	0.054	0.022	0.024	0.148
PW-2	10/15/96	ND	0.001	0.001	0.013	0.015

TABLE III

SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO

WELL NO.	DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
				Actual	Corrected	
MW-1	05/06/92	3,859.20	55.37	3803.83	---	---
	07/13/92	3,859.20	55.93	3803.27	---	---
	05/01/97	3,859.20	55.20	3804.00	---	---
MW-2	05/06/92	3,860.90	56.06	3804.84	---	---
	07/13/92	3,860.90	56.43	3804.47	---	---
	05/01/97	3,860.90	55.85	3805.05	---	---
MW-3	05/06/92	3,861.30	56.48	3804.82	---	---
	07/13/92	3,861.30	56.86	3804.44	---	---
	05/01/97	3,861.30	56.28	3805.02	---	---
MW-4	05/06/92	3,859.40	55.36	3804.04	---	---
	07/13/92	3,859.40	55.83	3803.57	---	---
	05/01/97	3,859.40	55.27	3804.13	---	---
MW-5	07/13/92	Unknown	26.48	---	---	---
MW-6	05/06/92	3,862.70	55.78	3806.92	---	---
	07/13/92	3,862.70	56.23	3806.47	---	---
	05/01/97	3,862.70	55.73	3806.97	---	---
MW-7	05/06/92	3,859.40	55.65	3803.75	---	---
	07/13/92	3,859.40	56.15	3803.25	---	---
	05/01/97	3,859.40	55.45	3803.95	---	---
MW-9	05/06/92	3,862.10	54.69	3807.41	---	---
	07/13/92	3,862.10	55.18	3806.92	---	---
	05/01/97	3,862.10	54.74	3807.36	---	---
MW-10	05/01/97	3,860.60	56.96	3803.64	---	---
MW-11	05/01/97	3,860.10	56.43	3803.67	---	---
MW-12	05/01/97	3,863.20	56.91	3806.29	---	---
MW-13	05/01/97	3,862.60	55.23	3807.37	---	---
MW-14	05/01/97	3,863.10	56.40	3806.70	---	---
MW-15	05/01/97	3,861.90	55.57	3806.33	---	---
MW-16	05/01/97	3,863.40	55.30	3808.10	---	---



## LEGEND



Clay (CL), silty, sandy, gravel, firm to stiff, moist, brown to dark brown, roots.



Gravel (GM), silty, sandy, moist, gray to tan.



Sand (SP), silty, fine-grained, dense to very dense, moist to wet, brown to light brown.



Indicates the depth interval from which a soil sample was selected and prepared for field head-space and/or laboratory analysis. The soil samples were obtained by a pitcher sampler.



Indicates approximate depth to ground water during drilling.



Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)

BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)

TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)

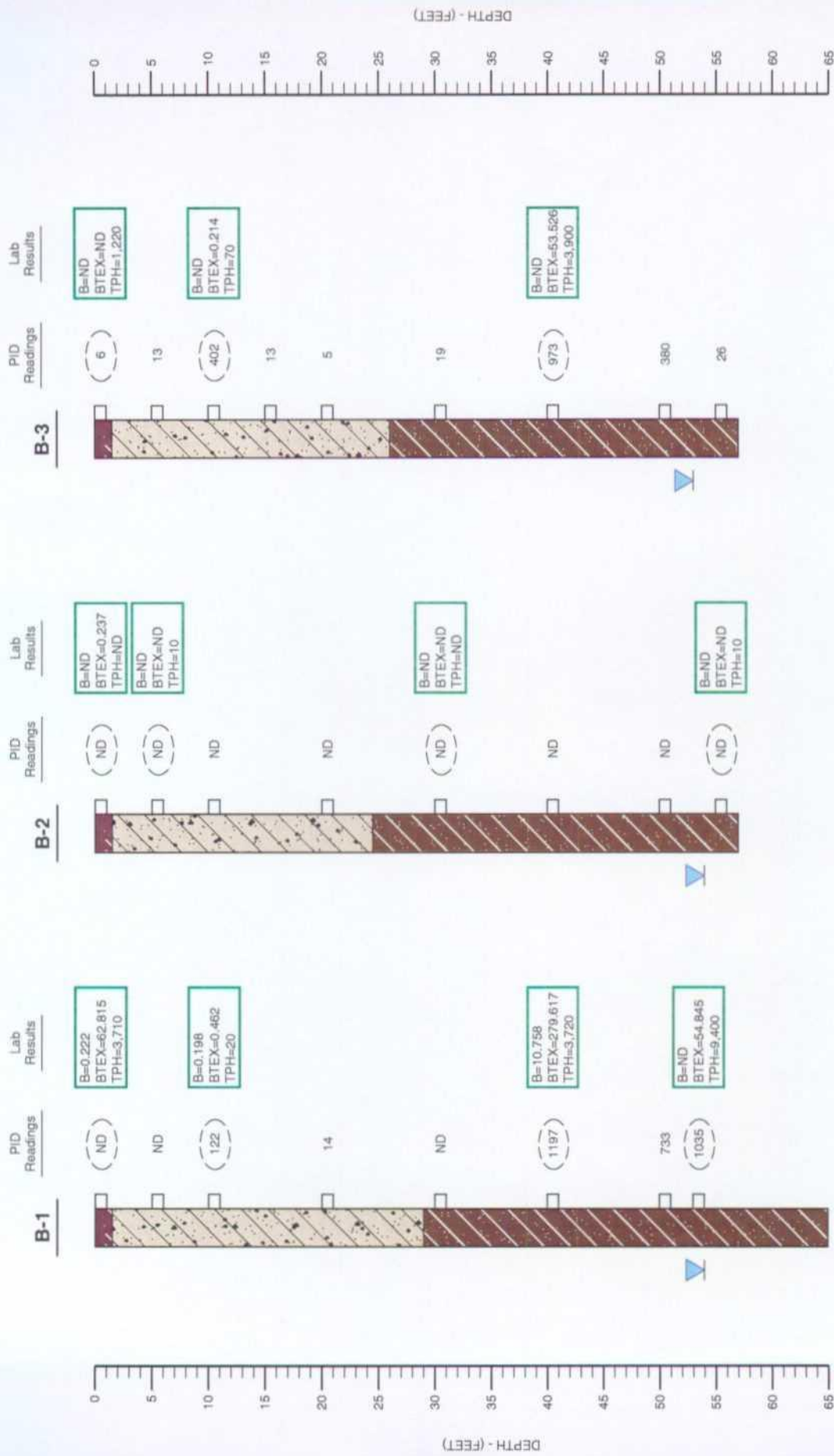
PID Head-space readings in ppm obtained with a photoionization detector.

ND = Indicates the concentration was below laboratory detection limits.

## NOTES:

1. The soil borings were advanced March 17-20, 1997 using an air rotary sampling device.
2. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
3. The depths indicated are referenced from the ground surface.
4. The soil borings were backfilled with cement/bentonite grout and capped at the surface.

09/22/97-PM G:\810099\

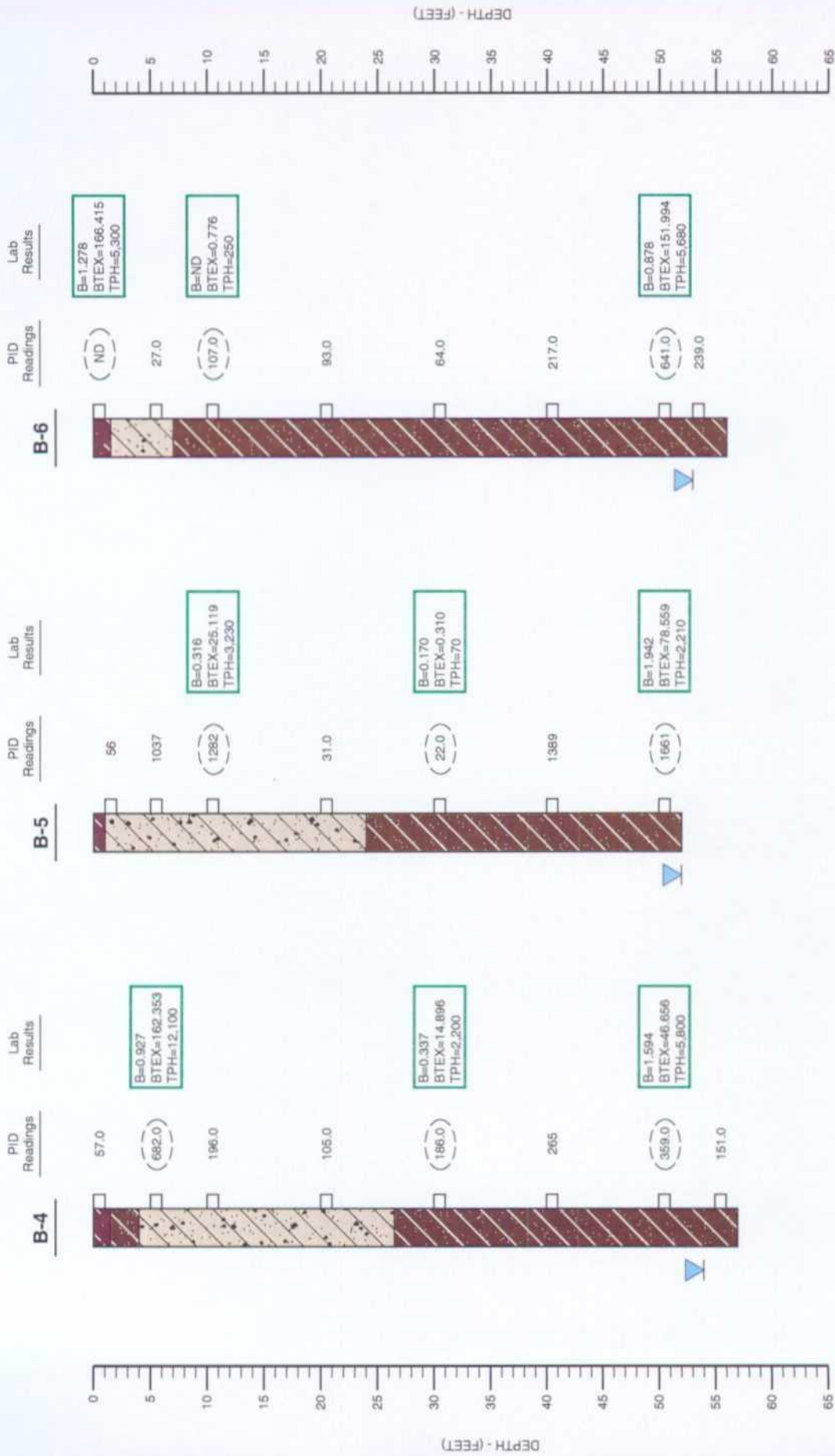


LOG AND DETAILS OF SOIL BORINGS

TNMPL SPS-11

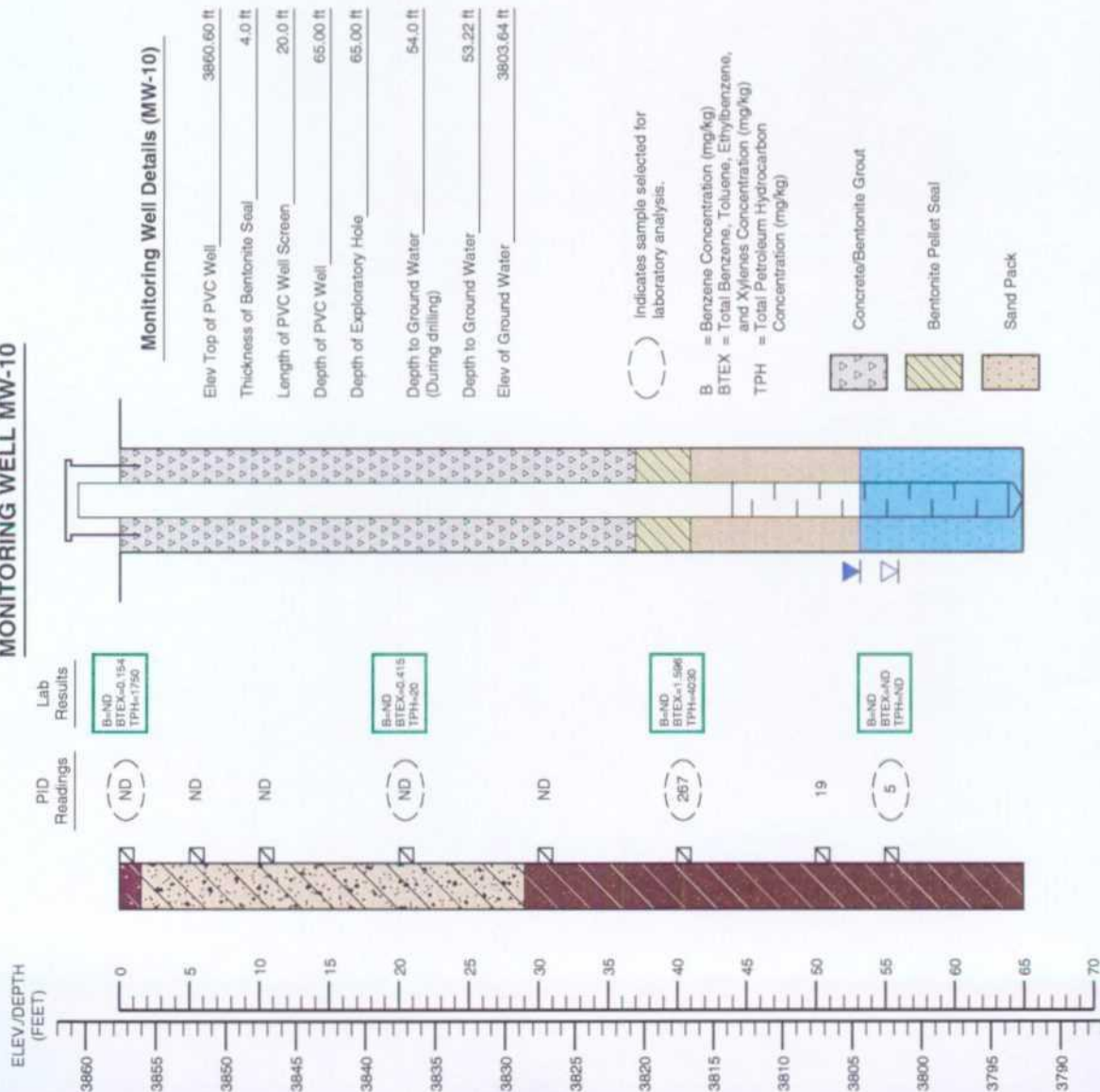
LEA COUNTY, NEW MEXICO

610099  
APPENDIX A

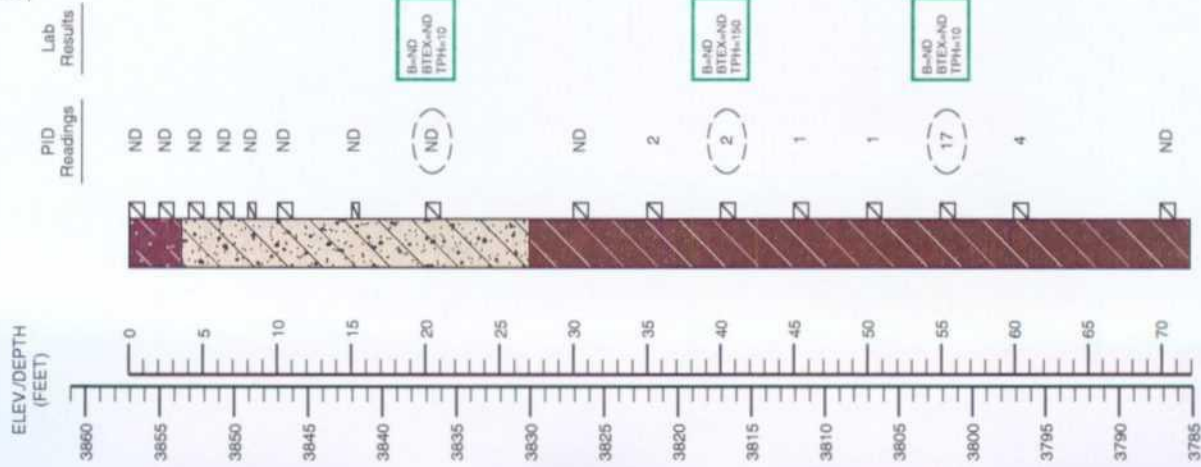




## MONITORING WELL MW-10



## MONITORING WELL MW-11



## LEGEND

- Clay (CL), silty, gravel, stiff to very stiff, moist, brown to dark brown, roots.
- Gravel (GM), silty, sandy, dense to very dense, moist, gray to tan.
- Sand (SP), silty, fine-grained, dense to very dense, moist to wet, brown to light brown.
- Indicates sample interval. Sample was obtained by hydraulically pushing a pitcher sampler.
- Indicates the ground water level measured during drilling.
- Indicates the ground water level measured on May 1, 1997.
- PID Head-space readings in ppm obtained with a photo-ionization detector.
- ND Indicates the constituent was not detected.

## Monitoring Well Details (MW-11)

Elev Top of PVC Well	3860.10 ft
Thickness of Bentonite Seal	4.0 ft
Length of PVC Well Screen	20.0 ft
Depth of PVC Well	72.00 ft
Depth of Exploratory Hole	72.00 ft
Depth to Ground Water (During drilling)	56.0 ft
Depth to Ground Water	53.33 ft
Elev of Ground Water	3803.67 ft

( ) Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)  
 BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)  
 TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)

- Concrete/Bentonite Grout
- Bentonite Pellet Seal
- Sand Pack

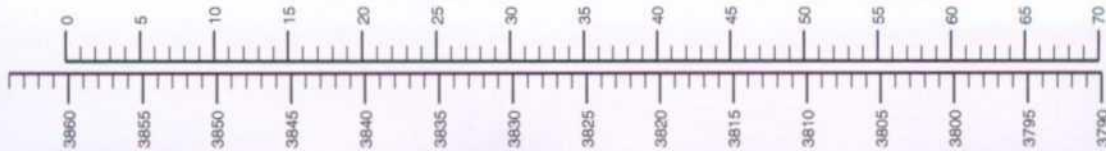
## NOTES

- The monitoring well was installed on March 11, 1997 using 6 inch diameter air rotary rig.
- The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
- The well is protected with a stick-up steel cover and a locked compression cap.
- The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- The depths indicated are referenced from the ground surface.



## MONITORING WELL MW-12

PID Readings	Lab Results
(ND)	B-0.104 BTEX=0.101 TPH=0.020
ND	
ND	
ND	
ND	
(11)	B-0.143 BTEX=0.086 TPH=0.020
(ND)	
ND	
(ND)	B-0.138 BTEX=0.319 TPH=0.020
ND	
(ND)	B-0.108 BTEX=0.285 TPH=0.020



## Monitoring Well Details (MW-12)

Elev Top of PVC Well	3863.20 ft
Thickness of Bentonite Seal	4.0 ft
Length of PVC Well Screen	20.0 ft
Depth of PVC Well	67.00 ft
Depth of Exploratory Hole	67.00 ft
Depth to Ground Water (During drilling)	53.0 ft
Depth to Ground Water	54.13 ft
Elev of Ground Water	3806.29 ft

( ) Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)  
 BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)  
 TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)

Concrete/Bentonite Grout  
 Bentonite Pellet Seal  
 Sand Pack

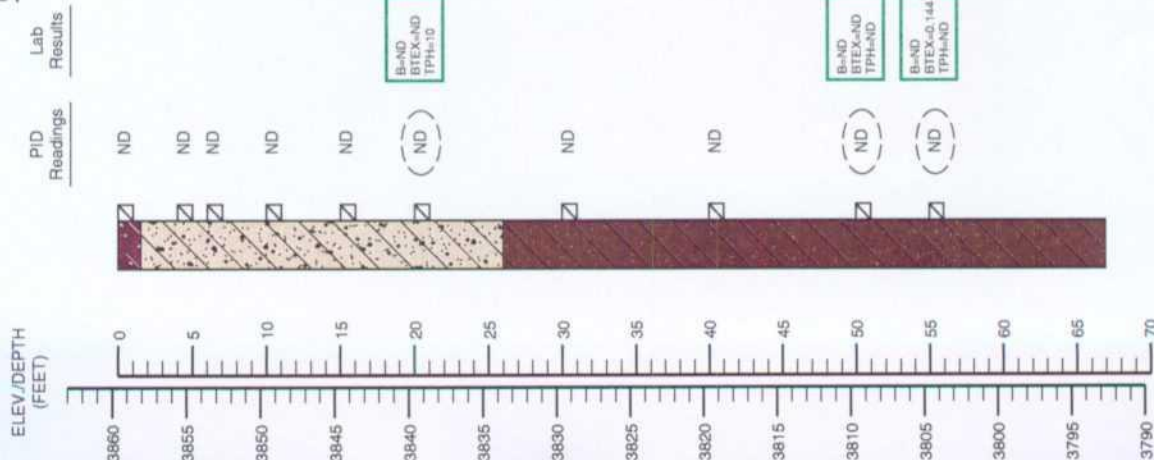
## LEGEND

- Clay (CL), silty, gravel, stiff to very stiff, moist, brown to dark brown, roots.
- Gravel (GM), silty, sandy, dense to very dense, moist, gray to tan.
- Sand (SP), silty, fine-grained, dense to very dense, moist to wet, brown to light brown.
- Indicates sample interval. Sample was obtained by hydraulically pushing a pitcher sampler.
- Indicates the ground water level measured during drilling.
- Indicates the ground water level measured on May 1, 1997.
- PID
- Head-space readings in ppm obtained with a photo-ionization detector.
- ND
- Indicates the constituent was not detected.

## NOTES

- The monitoring well was installed on March 20, 1997 using 6 inch diameter air rotary rig.
- The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
- The well is protected with a stick-up steel cover and a locked compression cap.
- The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- The depths indicated are referenced from the ground surface.

## MONITORING WELL MW-13



## LEGEND



Clay (CL), silty, gravel, stiff to very stiff, moist, brown to dark brown, roots.



Gravel (GM), silty, sandy, dense to very dense, moist, gray to tan.



Sand (SP), silty, fine-grained, dense to very dense, moist to wet, brown to light brown.



Indicates sample interval. Sample was obtained by hydraulically pushing a pitcher sampler.



Indicates the ground water level measured during drilling.



Indicates the ground water level measured on May 1, 1997.



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



ND Indicates the constituent was not detected.

( ) Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)  
BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)  
TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)



Concrete/Bentonite Grout



Bentonite Pellet Seal



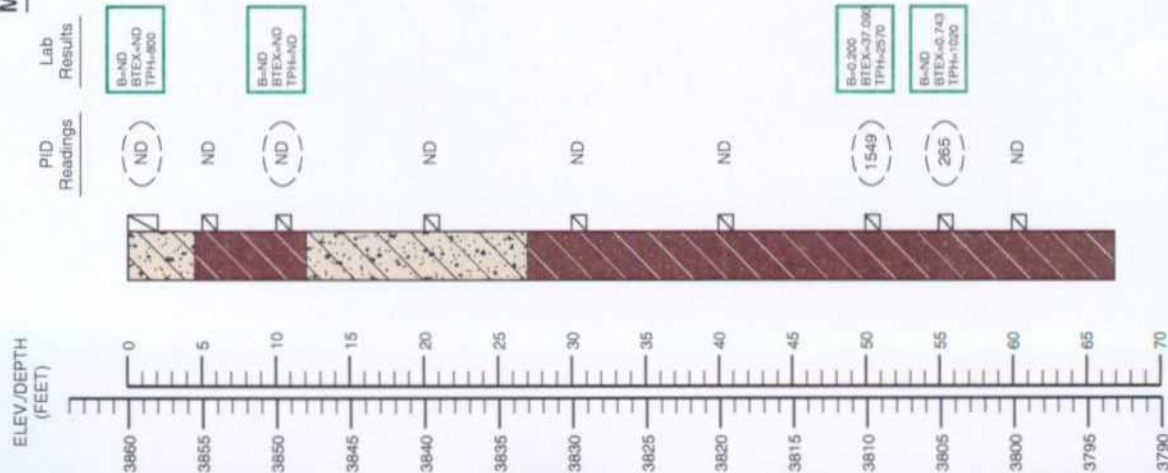
Sand Pack

## NOTES

- The monitoring well was installed on March 12, 1997 using 6 inch diameter air rotary rig.
- The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
- The well is protected with a stick-up steel cover and a locked compression cap.
- The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- The depths indicated are referenced from the ground surface.



## MONITORING WELL MW-14



## LEGEND



Gravel (GM), silty, sandy, dense to very dense, moist, gray to tan.



Sand (SP), silty, fine-grained, dense to very dense, moist to wet, brown to light brown.



Indicates sample interval. Sample was obtained by hydraulically pushing a pitcher sampler.



Indicates the ground water level measured during drilling.



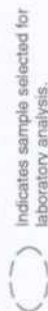
Indicates the ground water level measured on May 1, 1997.



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



ND Indicates the constituent was not detected.



Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)  
BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)  
TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)



Concrete/Bentonite Grout



Bentonite Pellet Seal



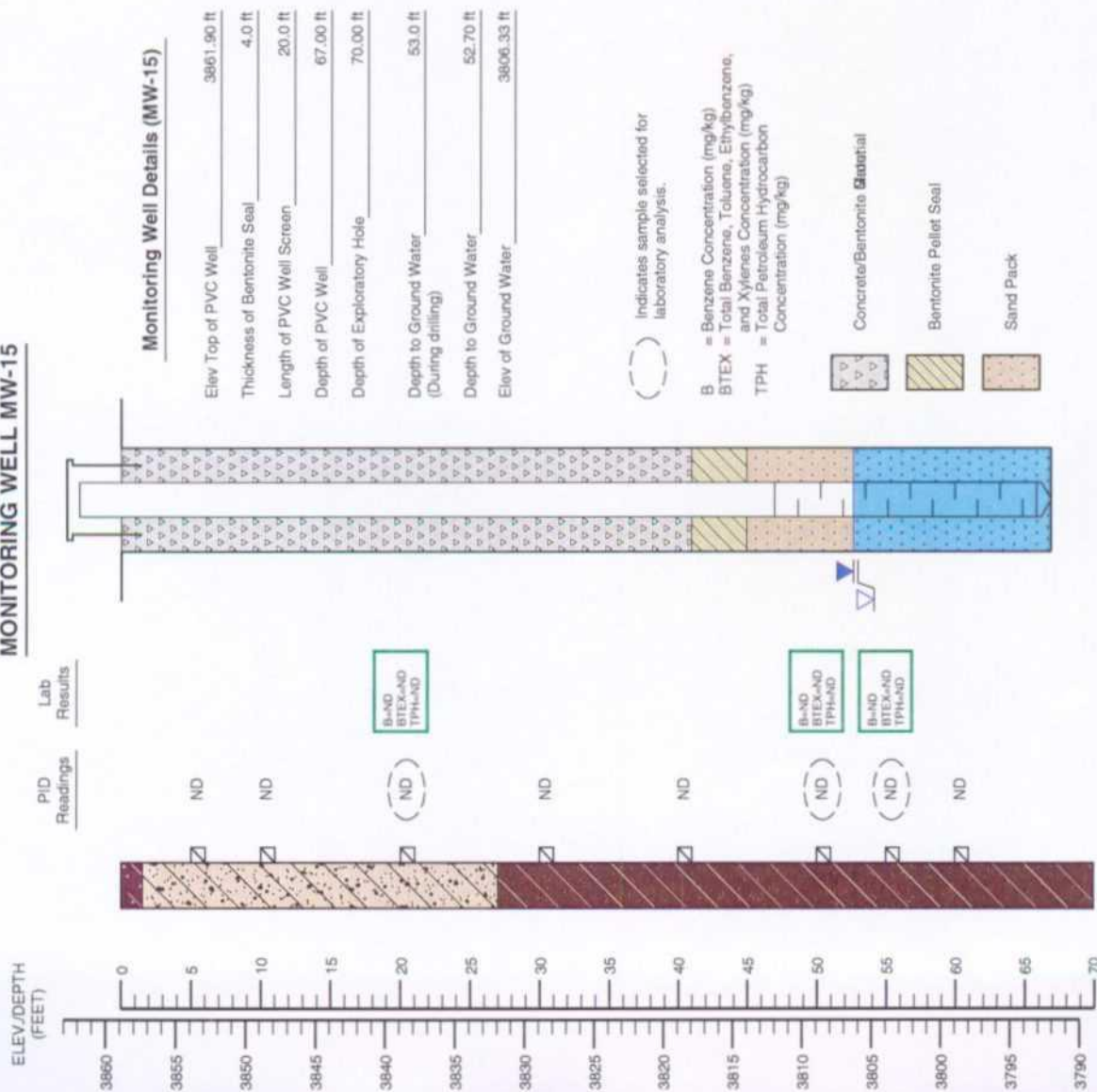
Sand Pack

## NOTES

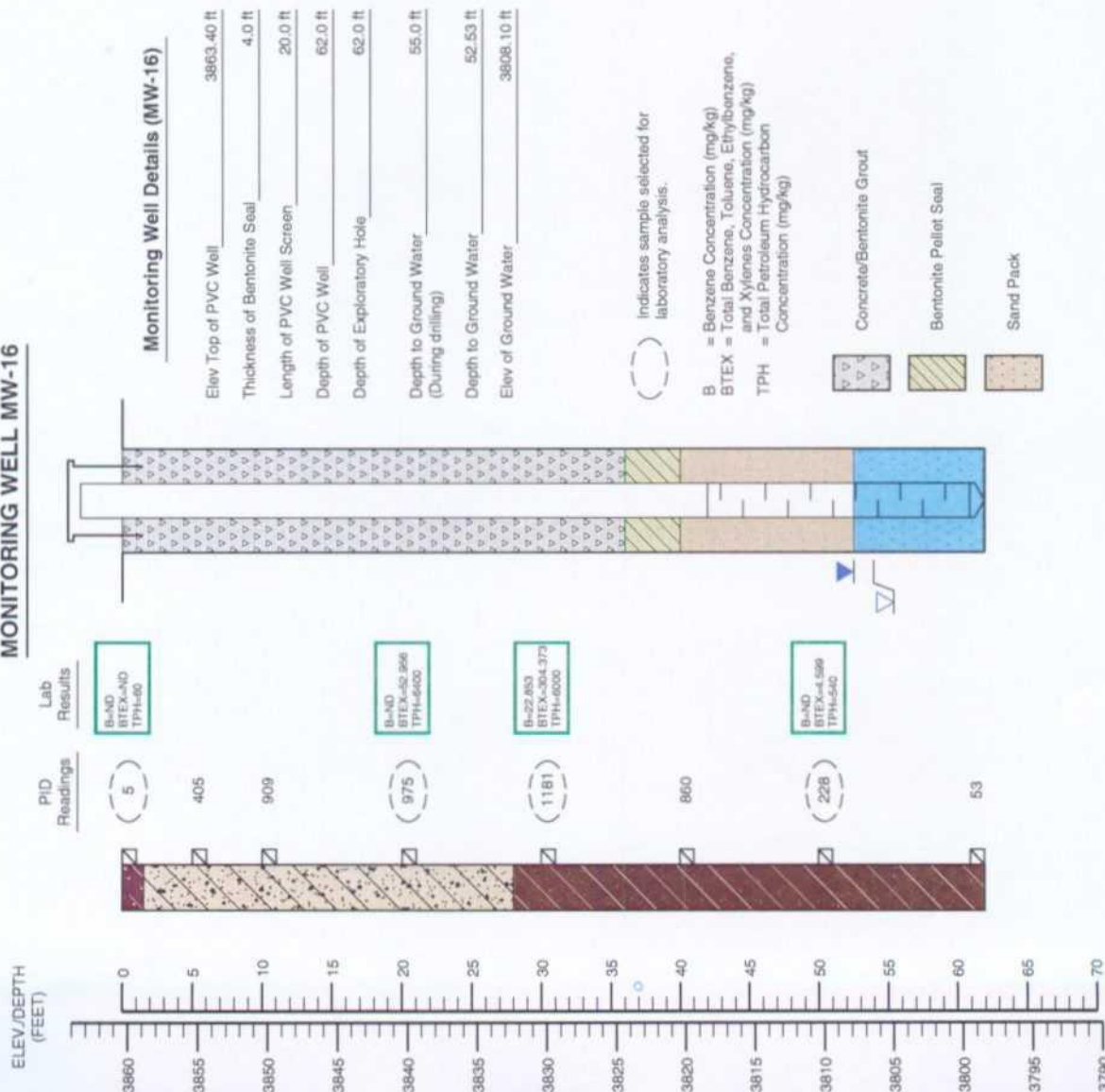
1. The monitoring well was installed on March 12-13, 1997 using 6 inch diameter air rotary rig.
2. The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a slick-up steel cover and a locked compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from the ground surface.



## MONITORING WELL MW-15



## MONITORING WELL MW-16



# 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: 210-680-3763

Receiving Date: 03/14/97  
Sample Type: SOIL  
Project : 610099, SPS-11  
Project Location: NONE GIVEN

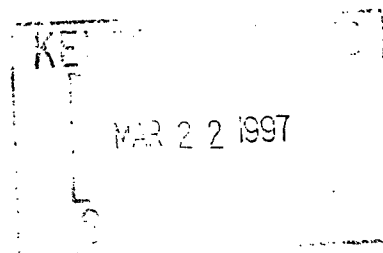
Analysis Date: 03/17/97  
Sampling Date: 3/11/97 THRU 3/13/97  
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	TPH mg/kg
10458	MW-11 @ 20'	<0.100	<0.100	<0.100	<0.100	<0.100	10
10459	MW-11 @ 40'	<0.100	<0.100	<0.100	<0.100	<0.100	150
10460	MW-11 @ 55'	<0.100	<0.100	<0.100	<0.100	<0.100	10
10461	MW-13 @ 20'	<0.100	<0.100	<0.100	<0.100	<0.100	10
10462	MW-13 @ 50'	<0.100	<0.100	<0.100	<0.100	<0.100	<10
10463	MW-13 @ 55'	<0.100	<0.100	<0.100	0.144	<0.100	<10
10464	MW-14 @ 1'	<0.100	<0.100	<0.100	<0.100	<0.100	800
10465	MW-14 @ 10'	<0.100	<0.100	<0.100	<0.100	<0.100	<10
10466	MW-14 @ 50'	0.200	1.402	11.461	17.889	6.141	2570
10467	MW-14 @ 55'	<0.100	<0.100	0.182	0.390	0.171	1020
10468	MW-15 @ 20'	<0.100	<0.100	<0.100	<0.100	<0.100	<10
10469	MW-15 @ 50'	<0.100	<0.100	<0.100	<0.100	<0.100	<10
10470	MW-15 @ 55'	<0.100	<0.100	<0.100	<0.100	<0.100	<10
% IA		92	92	94	113	93	102
% EA		91	89	88	106	88	106
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1

  
Michael R. Fowler

3-18-97  
Date



# Environmental Lab of Texas, Inc. 12600 West 1-20 East Odessa, Texas 79763 (915) 563-1800 FAX (915) 563-1713

Project Manager:

PAUL HARTNET

Phone #: (210) 680-3767

FAX #: (210) 680-3763

Company Name & Address:

KEI 5309 WURZBACH SUITE 100 SA TX 750236

Project #:

600099

Project Name:

SPS-11

Project Location:

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
10458	MW-11 @ 20'	2	12oz	X							X			3/11/97	1146
10459	MW-11 @ 40'	2	12oz	X							X			3/11/97	1401
10460	MW-11 @ 55'	2	12oz	X							X			3/11/97	1813
10461	MW-13 @ 20'	2	12oz	X							X			3/12/97	1026
10462	MW-13 @ 50'	1	8oz	X							X			3/12/97	1204
10463	MW-13 @ 55'	2	12oz	X							X			3/12/97	1230
10464	MW-14 @ 1'	1	8oz	X							X			3/12/97	0930
10465	MW-14 @ 10'	1	8oz	X							X			3/12/97	1452
10466	MW-14 @ 50'	1	8oz	X							X			3/12/97	1620
10467	MW-14 @ 55'	1	8oz	X							X			3/13/97	0831

Relinquished by:	Date:	Times:	Received by:	REMARKS
<i>[Signature]</i>	3-14-97	1052	<i>[Signature]</i>	PLEASE SEND ME 1 COOLER 2 BOXES OF 602 JARS 6 COCS
Relinquished by:	Date:	Times:	Received by:	
<i>[Signature]</i>	3-14-97	1400	<i>[Signature]</i>	TO: RAMADA INN 501 NORTH MARLAND HOUSTON, TX 77052-40
Relinquished by:	Date:	Times:	Received by Laboratory:	
				ATTN: JEFF MCCANN RM 123

THANKS

PAGE 1 OF 2  
COC 0009  
PO. 7214

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST



1881 Meadowlands Suite L Houston, Texas 77082  
(713) 589-0692

# CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

Page 2 of 2

Lab. Batch #

Contractor <b>KET</b>		Phone ( 210 ) 680 - 3767		No. coolers this shipment		Contractor COC # <b>0009</b>			
Address <b>5309 WURZBACH SUITE 100 SA TX 78238</b>		Carrier:		Airbill No.		Quote #: P.O. No: <b>7214</b>			
Project Name <b>SPS-11</b>		Project Director <b>MIKE HATHORN</b>		No. of CONTAINERS		Total			
Project Location <b>624997</b>		Project Manager <b>PAUL HARTNET</b>		TFH (483)		Turn-around			
Sampler Signature		Project No. <b>910099-1</b>		BTX (503/9020-602)		* ASAP * 24 hrs 48 hrs Standard			
SAMPLE CHARACTERIZATION									
Field ID	Date	Time	DEPTH	SOIL	PRESERVATIVE			Waste Oil	TANK NO:
					WATER	COMPO	GRA		
20' MW-15	3/13/97	1159	20'	X	X	X	6	X	SOIL
50' MW-15	3/13/97	1320	50'	X	X	X	6	X	SOIL
55' MW-15	3/13/97	1342	55'	X	X	X	6	X	SOIL
Remarks									
Please Hold									
LAB ONLY ID #									
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

Relinquished by	Signature	DATE	TIME	Received by	Signature	DATE	TIME	Remarks
<i>[Signature]</i>		3/14/97	1052	<i>[Signature]</i>				
<i>[Signature]</i>		3/14/97	1400	<i>[Signature]</i>		3/14/97	1400	

Prk (Contractor), Yellow & White (Lab).

\* Pre-scheduling is recommended

Precision Analytical Services

# 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: 210-680-3763

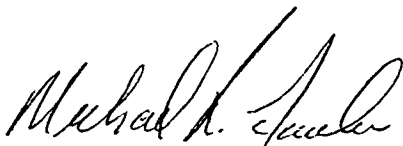
Receiving Date: 03/24/97  
Sample Type: SOIL  
Project : 610099 SPS-11 TNMPL  
Project Location: SPS-11

Analysis Date: 03/24/97  
Sampling Date: 3/20,21/97  
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
10556	MW 12, 0-1'	0.104	0.136	<.100	0.607	0.254	20
10557	MW 12, 40-41'	0.143	<.100	<.106	0.651	0.292	1,820
10558	MW 12, 50-51'	0.158	<.100	<.100	0.161	<.100	50
10559	MW 12, 66-67'	0.106	<.100	<.100	0.179	<.100	<10
10560	B-1, 0-1'	0.222	10.991	18.776	22.958	9.868	3,710
10561	B-1, 10-11'	0.198	0.151	<.100	0.113	<.100	20
10562	B-1, 40-41'	10.758	85.292	75.323	79.196	29.048	3720
10563	B-1, 53-54'	<.100	8.441	17.652	19.805	8.947	9400
10564	MW 10, 0-1'	<.100	<.100	<.100	0.154	<.100	1750
10565	MW 10, 20-21'	<.100	<.100	<.100	0.296	0.119	20
10566	MW 10, 40-41'	<.100	<.100	0.196	1.400	<.100	4030
10567	MW 10, 55-56'	<.100	<.100	<.100	<.100	<.100	<10

% IA	107	102	99	98	100	95
% EA	114	119	122	123	118	110
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1



Michael R. Fowler

3-25-97

Date

MAR 28 1997











SUBJECT: \_\_\_\_\_  
JOB NO.: \_\_\_\_\_ CLIENT: \_\_\_\_\_  
BY: \_\_\_\_\_ DATE: \_\_\_\_\_ 19\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ 19\_\_

ARCHIVE °

10568

MW-10, 5-6'

10569

" , 10-11'

10570

" , 30-31'

10571

" , 50-51'

10572

MW-12, 5-6'

10573

" , 10-11'

10574

" , 20-21'

10575

" , 30-31'

10576

" , 55-56'

10577

B-1, 5-6'

10578

" , 20-21'

10579

" , 30-31'

10580

" , 50-51'

# 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: 210-680-3763

Receiving Date: 03/20/97  
Sample Type: SOIL  
Project: 610099 SPS-11 TNMPL  
Project Location: SPS-11

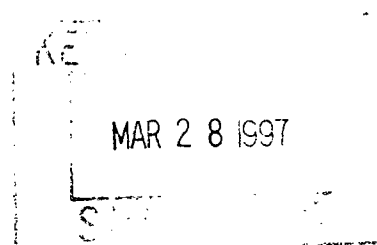
Analysis Date: TPH 03/20/97  
Analysis Date: BTEX 03/21/97  
Sampling Date: 3/17/97  
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	TPH mg/kg
10527	B-3 @ 0'	<.100	<.100	<.100	<.100	<.100	1,220
10528	B-3 @ 10'	<.100	<.100	<.100	0.214	<.100	70
10529	B-3 @ 40'	<.100	7.219	16.764	20.74	8.803	3,900
10530	B-2 @ 0'	<.100	<.100	<.100	0.237	<.100	<10
10531	B-2 @ 55'	<.100	<.100	<.100	<.100	<.100	10
10532	B-2 @ 30'	<.100	<.100	<.100	<.100	<.100	<10
10533	B-2 @ 5'	<.100	<.100	<.100	<.100	<.100	10
% IA		89	88	89	93	92	100
% EA		107	103	104	106	104	
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1

  
Michael R. Fowler

3-25-97  
Date



# ENVIRONMENTAL LAB OF , INC.

KEI

"Don't Treat Your Soil Like Dirt!"

ATTN: MR. PAUL HARTNETT  
5309 WURZBACH SUITE 100  
SAN ANTONIO, TEXAS 78238  
FAX: 210-680-3763

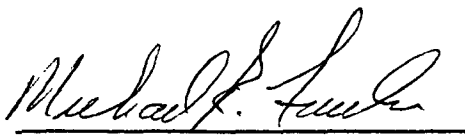
Receiving Date: 03/20/97  
Sample Type: SOIL  
Project: 610099 SPS-11 TNMPL  
Project Location: SPS-11

Analysis Date: TPH 03/20/97  
Analysis Date: BTEX 03/24/97  
Sampling Date: 3/18/97  
Sample Condition: Intact/Iced

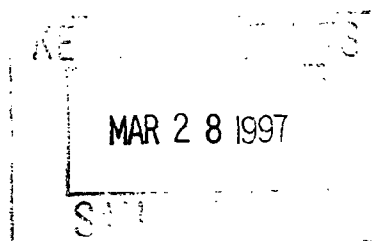
ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	TPH mg/kg
10534	B-6 @ 0'	1.278	15.924	55.441	68.474	25.298	5,300
10535	B-6 @ 10'	<.100	0.123	0.163	0.345	0.145	250
10536	B-6 @ 50'	0.878	50.806	40.788	42.973	16.549	5,680
10537	B-4 @ 5'	0.927	7.593	55.077	75.326	23.430	12,100
10538	B-4 @ 30'	0.337	0.485	0.639	8.498	4.937	2,200
10539	B-4 @ 50'	1.594	11.293	11.954	15.301	6.514	5800
10540	B-5 @ 10'	0.316	<.100	8.727	12.014	4.062	3230
10541	B-5 @ 30'	0.170	<.100	<.100	0.140	<.100	70
10542	B-5 @ 51'	1.942	20.447	22.087	24.464	9.619	2210
10543	MW-16 @ 0-1'	<.100	<.100	<.100	<.100	<.100	60
10544	MW-16 @ 20'	<.100	4.056	14.763	24.840	9.297	6400
10545	MW-16 @ 30'	22.853	99.739	72.631	79.628	29.522	6000
10546	MW-16 @ 50'	<.100	0.644	1.169	1.949	0.835	540

% IA	107	102	99	98	100	100
% EA	97	95	99	100	97	
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1

  
Michael R. Fowler

3-25-97  
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:

PAUL HARTNET

Phone # (210) 680-3767

FAX # (210) 680-3763

Company Name & Address:

K&J 5309 WUEZBACH SUITE 100 SA. TE 75238

Project #:

610099

Project Name:

SPS-11 TMAPL

Project Location:

SPS-11

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		
10527	B-3 e 0'	1	8oz	X								X			3/17/97	1320	
10528	B-3 e 10'	1	8oz	X								X			3/17/97	1358	
10529	B-3 e 40'	1	8oz	X								X			3/17/97	1502	
10530	B-2 e 0'	1	8oz	X								X			3/17/97	1018	
10531	B-2 e .55'	1	8oz	X								X			3/17/97	0949	
10532	B-2 e 30'	1	8oz	X								X			3/17/97	0857	
10533	B-2 e 5'	1	8oz	X								X			3/17/97	0820	
10534	B-6 e 0'	1	8oz	X								X			3/18/97	1316	
10535	B-6 e 10'	1	8oz	X								X			3/18/97	1357	
10536	B-6 e 50'	1	8oz	X								X			3/18/97	1509	
10537	B-4 e 5'	1	8oz	X								X			3/18/97	716	

REMARKS

Received by:

*[Signature]*

Time:

1033

Date:

3/20/97

Relinquished by:

*[Signature]*

Date:

Time:

Received by:

Relinquished by:

Date:

Time:

Received by Laboratory:

MAR 28 1997

# Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas 79763 (915) 563-1880 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:  
PAUL HARTNET  
Phone #: 680-3763  
FAX #: (210) 680-3767

Company Name & Address:  
KEI 5309 WULZBAEY SUITE 100 SA. TE. 78278

Project #:  
610099  
Project Name:  
THANZL

Project Location:  
SPS-41  
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	
10538	B-4 @ 30'	1	6oz	X							X				3/18/97	1015
10539	B-4 @ 50'	1	6oz	X							X				3/18/97	1107
10540	B-5 @ 10'	1	6oz	X							X				3/19/97	1007
10541	B-5 @ 30'	1	6oz	X							X				3/19/97	1005
10542	B-5 @ 51'	1	6oz	X							X				3/19/97	1301
10543	MW-16 @ 0-1'	1	6oz	X							X				3/19/97	1630
10544	MW-16 @ 20'	1	6oz	X							X				3/19/97	1415
10545	MW-16 @ 30'	1	6oz	X							X				3/19/97	1436
10546	MW-16 @ 50'	1	6oz	X							X				3/19/97	1540

REMARKS

Relinquished by:	Date:	Times:	Received by:
<i>[Signature]</i>	3/20/97	1033	<i>[Signature]</i>
Relinquished by:	Date:	Times:	Received by:
Relinquished by:	Date:	Times:	Received by Laboratory:

KEI  
MAR 28 1997

ANALYSIS REQUEST

BTX 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  
RCI



# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

KEI CONSULTANTS  
ATTN: MS TERESA NIX  
5309 WURZBACH, SUITE 100  
SAN ANTONIO, TEXAS 78238  
FAX: 210-680-3763

Receiving Date: 05/02/97  
Sample Type: WATER  
Project: 610099, SPS-11  
Project Location: HOBBS, LEA COUNTY

Analysis Date: 05/05/97  
Sampling Date: 05/01/97  
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYLBENZENE (mg/l)	m,p-XYLENE (mg/l)	o-XYLENE (mg/l)
11086	MW-1	7.788	0.778	1.282	0.536	0.274
11087	MW-2	<0.001	<0.001	<0.001	<0.001	<0.001
11088	MW-3	<0.001	<0.001	<0.001	0.001	<0.001
11089	MW-4	<0.001	<0.001	<0.001	<0.001	<0.001
11090	MW-6	<0.001	0.001	0.002	0.004	<0.001
11091	MW-7	0.368	0.034	0.206	0.082	0.042
11092	MW-9	6.180	0.019	2.056	1.243	0.140
11093	MW-10	0.184	0.292	0.124	0.118	0.062
11094	MW-11	1.177	<0.001	0.011	0.025	0.002
11095	MW-12	<0.001	0.003	0.001	0.016	0.011
11096	MW-13	<0.001	<0.001	<0.001	<0.001	<0.001
11097	MW-14	9.639	2.414	2.626	1.831	0.938
11098	MW-15	0.004	0.002	0.002	0.003	<0.001
11099	MW-16	0.101	0.090	0.015	0.003	0.009
% IA		87	89	89	88	87
% EA		113	98	76	102	121
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-8020,5030  
Spiked w/ 100 ppb

  
Michael R. Fowler

5-6-97  
Date

MAY 12 1997

# 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: MIKE STARRILENO  
TERESA NIX

Phone #: 1-800-253-0507  
FAX #: 972 484 5719

Company Name & Address: KEI CONSULTANTS

Project #: 610099

Project Name: SPS-11

Project Location: HOBBS, LEA COUNTY

Sampler Signature: Joel W. Brini

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

11086	MW-1	2	X	X										5/1	1515
11087	MW-2	2	X	X										5/1	1650
11088	MW-3	2	X	X										5/1	1640
11089	MW-4	2	X	X										5/1	1630
11090	MW-6	2	X	X										5/1	1655
11091	MW-7	2	X	X										5/1	1620
11092	MW-9	2	X	X										5/1	1440
11093	MW-10	2	X	X										5/1	1605
11094	MW-11	2	X	X										5/1	1550
11095	MW-12	2	X	X										5/1	1315
			X	X											

BTEX (9120/5030)  
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

Relinquished by: Joel W. Brini	Date: 5/12/97	Time: 1650	Received by: Kala dk [Signature]	REMARKS: P.O. # 1764
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by Laboratory:	

# 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

#052

Project Manager: TERESA NIX  
MIKE STAFFORD  
Phone #: 1-800-253-0607  
FAX #: 972 484 5719

ANALYSIS REQUEST

Company Name & Address: KEI CONSULTANTS

Project #: 610099 Project Name: SPS-11

Project Location: HOBBS, LEA Sampler Signature: *God W. Barn*

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

11096	MW-13	2		X							X			5/1	1335
11097	MW-14	2		X							X			5/1	1435
11098	MW-15	2		X							X			5/1	1400
11099	MW-16	2		X							X			5/1	1350

BTX 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  
RCI

Relinquished by: <i>God W. Barn</i>	Date: 5/2/97	Time: 1650	Received by: <i>Paula dk</i>	REMARKS: P.O. # 1764
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by Laboratory:	





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

## SUPPLEMENTAL SUBSURFACE INVESTIGATION REPORT

TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
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**

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

Theresa Nix  
Project Manager

A handwritten signature in cursive script, reading 'Paul Hartnett', written over a horizontal line.

Paul Hartnett, P.E.  
Senior Engineer

A handwritten signature in cursive script, reading 'J. Michael Hawthorne', 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) site SPS-11 is located approximately 12 miles northwest of Monument in Lea County, New Mexico, in Section 18, Township 18 South, Range 36 East. A site location map is presented as FIG. 1. Specific site details are presented on FIG. 2. This report summarizes supplemental subsurface investigation activities performed at the project site from December 1997 through January 1998.

Supplemental subsurface investigation activities performed included the following:

- Installation of monitoring wells MW-17 through MW-25;
- Advancement of soil borings B-7 through B-9;
- Collection of native soil samples from the monitoring wells and soil borings and laboratory analysis of the samples for determination of benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH) concentrations;
- Gauging of ground water levels in monitoring wells MW-1 through MW-4, MW-6, MW-7, and MW-9 through MW-25; and
- Collection of ground water samples from monitoring wells MW-1 through MW-4, MW-6, MW-7, and MW-9 through MW-25 and submittal of the samples for determination of BTEX concentrations.

The following conclusions are based on the field and laboratory data:

- The standard New Mexico Oil Conservation Division (OCD) closure levels for soils at the site are:

CONSTITUENT	SOIL CLOSURE STANDARD
TPH	100 mg/kg
BENZENE	10 mg/kg
BTEX	50 mg/kg

- Soil samples at the site indicated benzene concentrations below closure standards, 3 BTEX soil samples above closure standards (B-9 and MW-24), and 7 soil samples above TPH closure standards (B-8, B-9, MW-17, and MW-24).
- Ground water samples at the site indicated BTEX concentrations above New Mexico Environment Department (NMED) Drinking Water Standards (MW-1, MW-7, MW-9, MW-10, MW-11, MW-12, MW-14, MW-15, MW-17, MW-21, and MW-24). The NMED Drinking Water Standards for BTEX are as follows:

CONSTITUENT	DRINKING WATER STANDARD
BENZENE	0.01 mg/l
TOLUENE	0.75 mg/l
ETHYLBENZENE	0.75 mg/l
XYLENES	0.62 mg/l

## **PURPOSE AND SCOPE**

The objective of the supplemental subsurface investigation activities was to delineate hydrocarbon impact across the site. The following activities were performed to achieve this objective:

- Installation of additional monitoring wells and soil borings upgradient and downgradient from the release location;
- Gauging of water levels in all on-site monitoring wells;
- Collection of soil samples for analysis of hydrocarbon concentrations; and
- Collection of ground water samples for analysis of hydrocarbon concentrations.

## **FIELD INVESTIGATION**

### **SOIL INVESTIGATION AND SOIL DESCRIPTION**

During the subsurface investigation, three soil borings (B-7 through B-9) were advanced and nine monitoring wells (MW-17 through MW-25) were installed utilizing air rotary technology. Soil samples were collected at selected intervals from the ground surface to termination boring depth. The soils were classified in the field, soil samples were field screened, and selected samples were prepared and shipped to the laboratory for determination of benzene, toluene, ethylbenzene, xylenes (BTEX) and total petroleum hydrocarbons (TPH) concentrations.

Upon advancement to total depth and collection of soil samples, a permanent well consisting of two-inch perforated PVC and blank riser was placed in the open hole of each boring designated as a permanent monitoring well. The borings not designated as a permanent monitoring well were advanced until apparent ground water was encountered and grouted to the ground surface upon completion. The borings designated as a permanent monitoring well were advanced approximately ten feet below the apparent ground water depth.

All drilling equipment was cleaned prior to first use and between boring locations. Sampling equipment was cleaned prior to first use and between sampling intervals with a Liqui-Nox detergent wash followed by a distilled water rinse.

The soil boring and monitoring well locations were surveyed by a Professional Land Surveyor registered in the state of New Mexico. Copies of the well reports are included as APPENDIX A. The locations of all soil borings advanced and monitoring wells installed are presented on FIG. 2.

### **SOIL DESCRIPTION**

The subsurface soil profile was classified in general accordance with the Unified Soil Classification System by visually observing the soil samples obtained during the assessment. In general, three soil types were encountered. A general description of the soil, approximate thickness, and head-space sample results for each soil type are as follows:

### Soil Type I

This soil type consisted of a brown to dark brown clay and was encountered at depths ranging from 0 to 2.0 feet below ground surface. It was observed at all soil boring locations and monitoring well MW-10 through MW-13, MW-15, and MW-16 locations. The clay contained gravel and was silty, sandy, firm to stiff, moist, and contained roots. This soil type varied in thickness from approximately 1.5 to 2.0 feet. Head-space readings from samples of this soil type were not measured.

### Soil Type II

This soil type consisted of a gray to light tan gravel and was encountered at depths ranging from 1.5 to 30 feet below ground surface. It was observed at all soil boring and monitoring well locations. The gravel was silty, sand, and moist. This soil type varied in thickness from approximately 1.0 to 27 feet. The head-space readings from samples of this soil type varied from non-detect to 1 ppm.

### Soil Type III

This soil type consisted of a light brown to brown sand and was encountered at depths ranging from 5.5 to 64 feet below ground surface. It was observed at all soil boring and monitoring well locations. The sand was silty, fine-grained, moist to wet, and contained occasional cemented lenses. This soil type varied in thickness from approximately 2.5 to 51 feet. The head-space readings from samples of this soil type varied from non-detect to 254 ppm.

Logs indicating the typical subsurface soil profile, depths at which soil samples were obtained, head-space results, laboratory results, and generalized geologic profiles are presented in APPENDIX A.

## **SOIL SAMPLING AND ANALYTICAL RESULTS**

Native soil samples were collected at selected intervals from the ground surface to a depth of approximately two feet below ground water by pushing a split spoon sampler. The soil samples were used to delineate and evaluate the distribution of phase-separate hydrocarbon (PSH).

Representative soil samples were divided into two separate portions using clean, disposable gloves and clean sampling tools. One portion of the soil sample was placed in a disposable sample bag. The bag was labeled and sealed for head-space analysis using a photo-ionization detector (PID) calibrated to a 100 ppm isobutylene standard. Each sample was allowed to volatilize for approximately 30 minutes at ambient temperature prior to conducting the PID analysis.

The other portion of the soil sample was 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. Upon selection of samples for analysis, the cooler was sealed for shipment to the laboratory. Proper chain-of-custody documentation was maintained throughout the sampling process.

Twenty eight soil samples were selected and submitted to Xenco Laboratories located in San Antonio, Texas for determination of BTEX and TPH concentrations by EPA Method



SW846-8020 and 8015 DRO (diesel range organics), respectively. Soil samples from MW-17 were also selected and submitted to Xenco Laboratories for determination of TPH concentrations by EPA Method 8015 GRO (gasoline range organics). The soil sample from the monitoring well location and soil boring with the highest TPH concentration (MW-17 and B-9) were selected for determination of SPLP Volatile Organic Compounds (VOC), SPLP Semi-Volatile Organic Compounds (SVOC), and SPLP TPH using EPA Method 1312/8260, 1312/8270, and 1312/418.1, respectively.

Laboratory results indicated the following concentrations ranges:

PARAMETER	CONCENTRATION RANGE (mg/kg)
Benzene	ND to 4.11
BTEX	ND to 103.29
TPH	ND to 3030
SPLP Ethylbenzene	0.741 to 0.610
SPLP Isopropylbenzene	0.066 to 0.068
SPLP Naphthalene	0.055 to 0.073
SPLP Toluene	ND to 0.226
SPLP 1, 2, 4 - Trimethylbenzene	0.131 to 0.235
SPLP 1, 3, 5 - Trimethylbenzene	0.050 to 0.055
SPLP m, p - Xylenes	0.557 to 0.615
SPLP n - Propylbenzene	0.090 to 0.111
SPLP o - Xylene	0.296 to 0.281
SPLP Trichlorofluoromethane	ND to 0.864*
SPLP 2 - Methyl naphthalene	0.024 to 0.044
SPLP Naphthalene	0.019 to 0.048
SPLP bis [2 - Ethylhexyl] phthalate	ND to 0.028
SPLP TPH	20.6 to 34.3

\* - Results beyond calibration limits.

Soil laboratory results are summarized in TABLE I and TABLE II, and are graphically presented on FIG. 3. FIGS 4 through 6 present all soil laboratory results for BTEX at different ranges of depth. Soil analytical laboratory reports are included in APPENDIX B.

#### GROUND WATER SAMPLING AND ANALYTICAL RESULTS

On January 21 and 22, 1998, each monitoring well was purged of approximately three well volumes of water using a PVC bailer. The bailer was cleaned prior to each use with Liqui-Nox detergent and rinsed with water. After purging the wells, ground water samples were collected with a disposable Teflon sampler and polyethylene line.

Water samples collected for BTEX analyses were placed in sterile, 40 ml glass VOA vials equipped with Teflon-lined caps. The containers were provided by the analytical laboratory.

The vials were filled to a positive meniscus, sealed, and visually checked for the presence of air bubbles.

The filled containers were labeled and placed on ice in an insulated cooler. The cooler was sealed for shipment to Xenco Laboratories in San Antonio, Texas for determination of BTEX concentrations using EPA Method SW846-8020. Proper chain-of-custody documentation was maintained throughout the sampling process.

Laboratory results indicated the following concentrations ranges:

PARAMETER	CONCENTRATION RANGE (mg/kg)
Benzene	ND to 11.2
BTEX	ND to 16.7

Ground water laboratory results are summarized in TABLE III and are graphically presented on FIGS. 8 and 9. Ground water analytical laboratory reports are included in APPENDIX C.

Ground water elevations indicate an approximate gradient of 0.003 ft/ft towards the southeast. Ground water contours are presented on FIG. 10.

Purged water collected during the event was stored in steel drums pending disposal.

## CONCLUSIONS

The following conclusions are based on field and laboratory data:

- The standard New Mexico Oil Conservation Division (OCD) levels for soils at the site are:

CONSTITUENT	SOIL CLOSURE STANDARD
TPH	100 mg/kg
BENZENE	10 mg/kg
BTEX	50 mg/kg

- The NMED Drinking Water Standards for BTEX are as follows:

CONSTITUENT	DRINKING WATER STANDARD
BENZENE	0.01 mg/l
TOLUENE	0.75 mg/l
ETHYLBENZENE	0.75 mg/l
XYLENES	0.62 mg/l

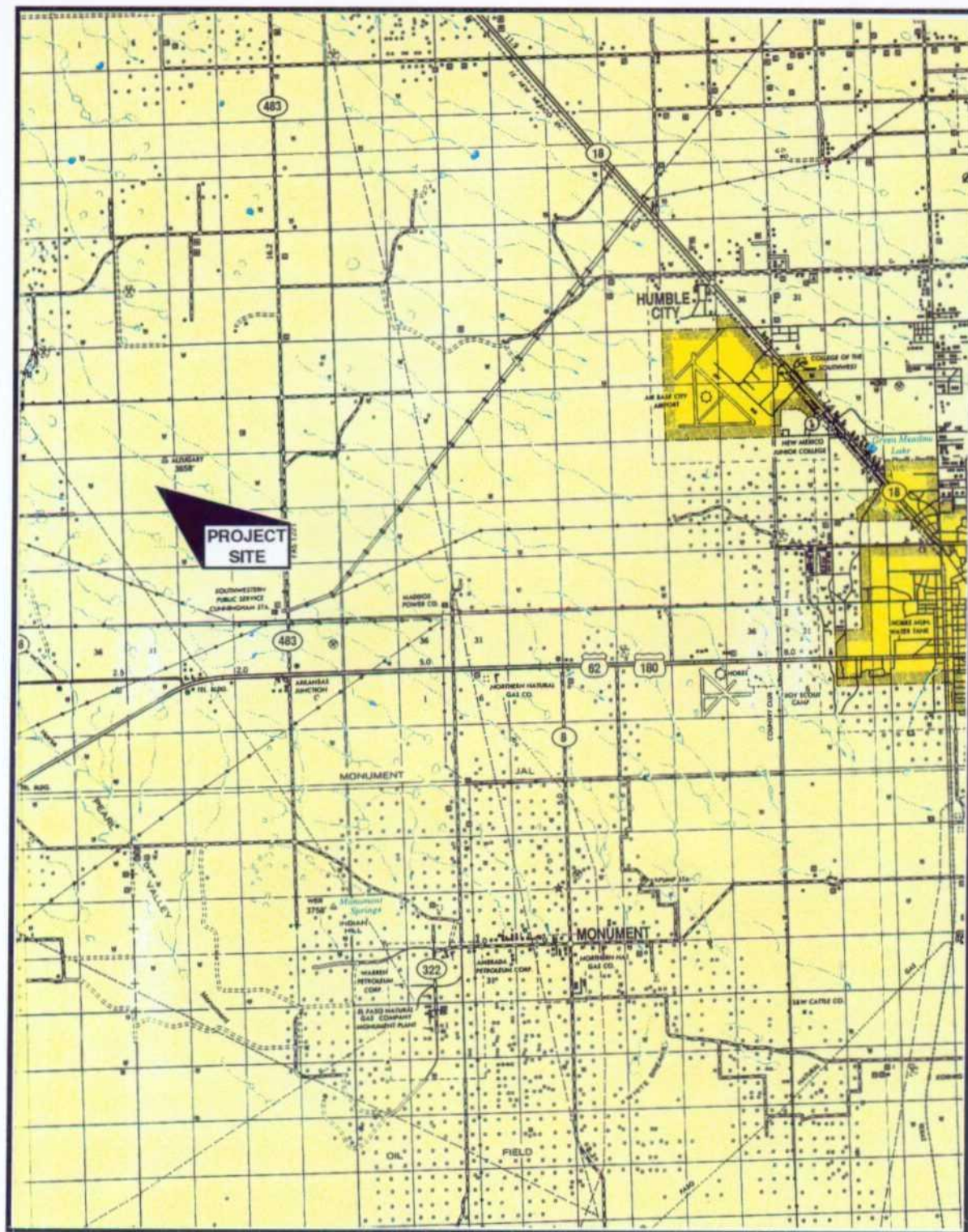
- Soil samples obtained from soil borings B-8 and B-9, monitoring wells, and MW-17 and MW-24 indicated TPH and/or BTEX concentrations above closure standards.

- Ground water samples obtained from monitoring wells MW-1, MW-7, MW-9, MW-11, MW-12, MW-14, MW-15 MW-17, MW-21, and MW-24 indicated BTEX concentrations above the New Mexico Water Quality Control Commission (NMWQCC) drinking water standard for BTEX.
- Hydrocarbon impact in soils has been delineated across the site.
- Hydrocarbon impact in ground water has been delineated across the site.

# THE ROADS OF NEW MEXICO MAP

NEW MEXICO-LEA CO.

PRINTED 1993



0 1 2 3 4 5 6

SCALE 1" = 2.9 MILES

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## SITE LOCATION MAP

TNMPL

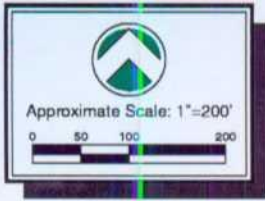
SPS-11

LEA COUNTY, NEW MEXICO

610099

FIG 1





LEGEND	
<span style="color: red;">○</span>	Monitoring Well installed by KEI on December 16-22, 1997.
<span style="color: red;">△</span>	Soil Boring advanced by KEI on January 6, 1998.
<span style="color: blue;">○</span>	Monitoring Well installed by KEI on March 11-13 and 19-20, 1997.
<span style="color: green;">△</span>	Soil Boring advanced by KEI on March 17-20, 1997.
<span style="color: red;">●</span>	Existing Monitoring Well Location
<span style="color: blue;">△</span>	Soil Boring advanced by Texaco Research & Development
<span style="color: brown;">---</span>	Buried Pipelines
<span style="color: green;">---</span>	Influent Line
<span style="color: red;">---</span>	Effluent Line
<span style="color: blue;">---</span>	SPS Water Line



03/04/98-PM G:\9196\SITE



SITE PLAN		
TNMPL	SPS-11	LEA COUNTY, NEW MEXICO

610099
FIG 2





# LEGEND

- Monitoring Well installed by KEI on December 16-22, 1997.
- △ Soil Boring advanced by KEI on January 6, 1998.
- Monitoring Well installed by KEI on March 11-13 and 19-20, 1997.
- △ Soil Boring advanced by KEI on March 17-20, 1997.
- Existing Monitoring Well Location
- △ Soil Boring advanced by Texaco Research & Development
- Buried Pipelines
- Influent Line
- Effluent Line
- SPS Water Line
- D = Depth of Soil Sample (feet)
- B = Benzene Concentration (mg/kg)
- BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylene Concentration (mg/kg)
- TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)
- ND = Not Detected

D=30-32	D=52-54
B=ND	B=ND
BTEX=ND	BTEX=ND
TPH=46.4	TPH=33.8

MW-25

MW-23

D=20-22	D=52-54
B=ND	B=ND
BTEX=ND	BTEX=ND
TPH=36.6	TPH=21.6

MW-24

D=10-12	D=40-42	D=52-54
B=ND	B=1.10	B=ND
BTEX=ND	BTEX=98.70	BTEX=ND
TPH=33.4	TPH=2030	TPH=71.5

MW-16

B-6  
B-3  
B-4  
B-5  
PW-1  
MW-9

MW-15

TB-8  
MW-14

MW-6

B-2

MW-13

MW-12

MW-22

D=5-7	D=52-54
B=ND	B=ND
BTEX=ND	BTEX=ND
TPH=34.3	TPH=31.9

D=20-21	D=40-42	D=52-54
B=ND	B=0.69	B=4.11
BTEX=ND	BTEX=50.41	BTEX=103.29
TPH=ND	TPH=1350	TPH=3030

B-9

MW-21

D=52-53	D=52-54
B=ND	B=ND
BTEX=ND	BTEX=ND
TPH=29.1	TPH=27.7

MW-20

D=30-32	D=52-54
B=ND	B=ND
BTEX=ND	BTEX=ND
TPH=42.4	TPH=27.7

D=20-21.5	D=40-42	D=52-54
B=ND	B=ND	B=ND
BTEX=ND	BTEX=2.70	BTEX=ND
TPH=ND	TPH=276	TPH=22.3

MW-2

SPS-11 Well Area

PW-2

MW-1

MW-7

B-1

MW-10

MW-11

MW-3

B-7

D=30-30.5	D=40-42	D=52-54
B=ND	B=ND	B=ND
BTEX=ND	BTEX=ND	BTEX=0.081
TPH=ND	TPH=16.7	TPH=ND

D=10-12	D=52-54
B=ND	B=ND
BTEX=ND	BTEX=0.154
TPH=36.7	TPH=46.2

MW-19

MW-18

D=20-21.5	D=52-54
B=ND	B=ND
BTEX=ND	BTEX=ND
TPH=48.8	TPH=26.5

MW-17

D=35-37	D=49-51	D=51-53
B=0.029	B=0.238	B=0.028
BTEX=14.027	BTEX=30.998	BTEX=0.421
TPH=810	TPH=954	TPH=126

03/04/98 JSM GV(8196504)

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## SOIL CONCENTRATION MAP

TNMPL

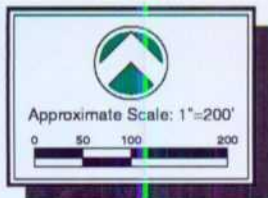
SPS-11

LEA COUNTY, NEW MEXICO

610099

FIG 3





**LEGEND**

- Monitoring Well installed by KEI on December 16-22, 1997.
- △ Soil Boring advanced by KEI on January 6, 1998.
- Monitoring Well installed by KEI on March 11-13 and 19-20, 1997.
- △ Soil Boring advanced by KEI on March 17-20, 1997.
- Existing Monitoring Well Location
- △ Soil Boring advanced by Texaco Research & Development
- Buried Pipelines
- Influent Line
- Effluent Line
- SPS Water Line

BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylene Concentration (mg/kg)  
 ND = Not Detected

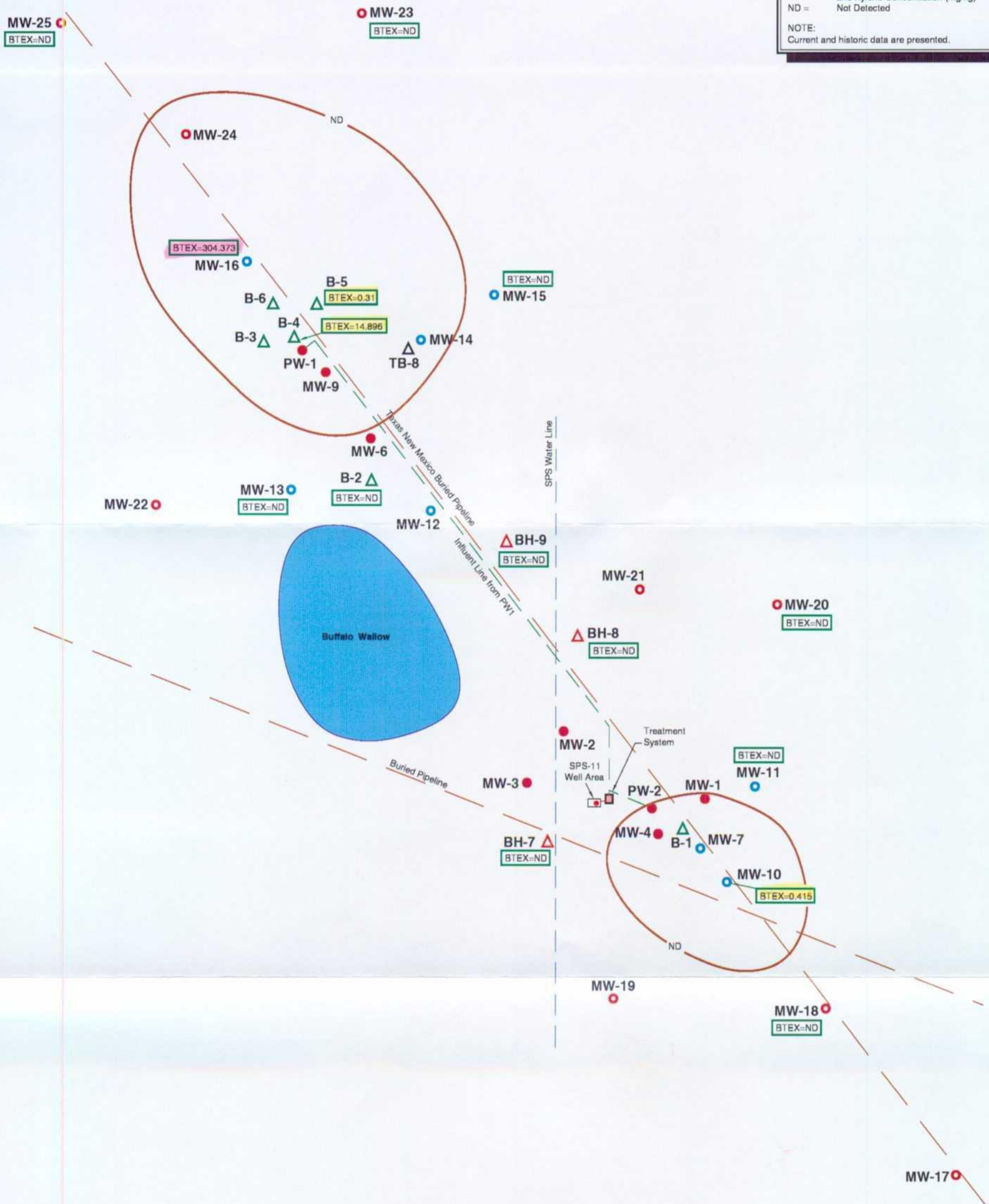
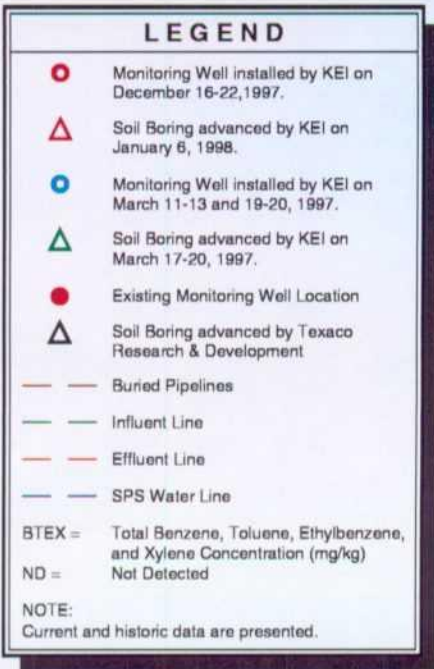
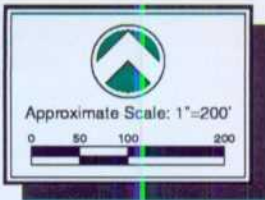
NOTE:  
 Current and historical data are presented.



0304096.FRM GV(19-BTEX)

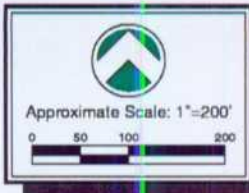






03/04/98-FM-GA(19-BTEX)



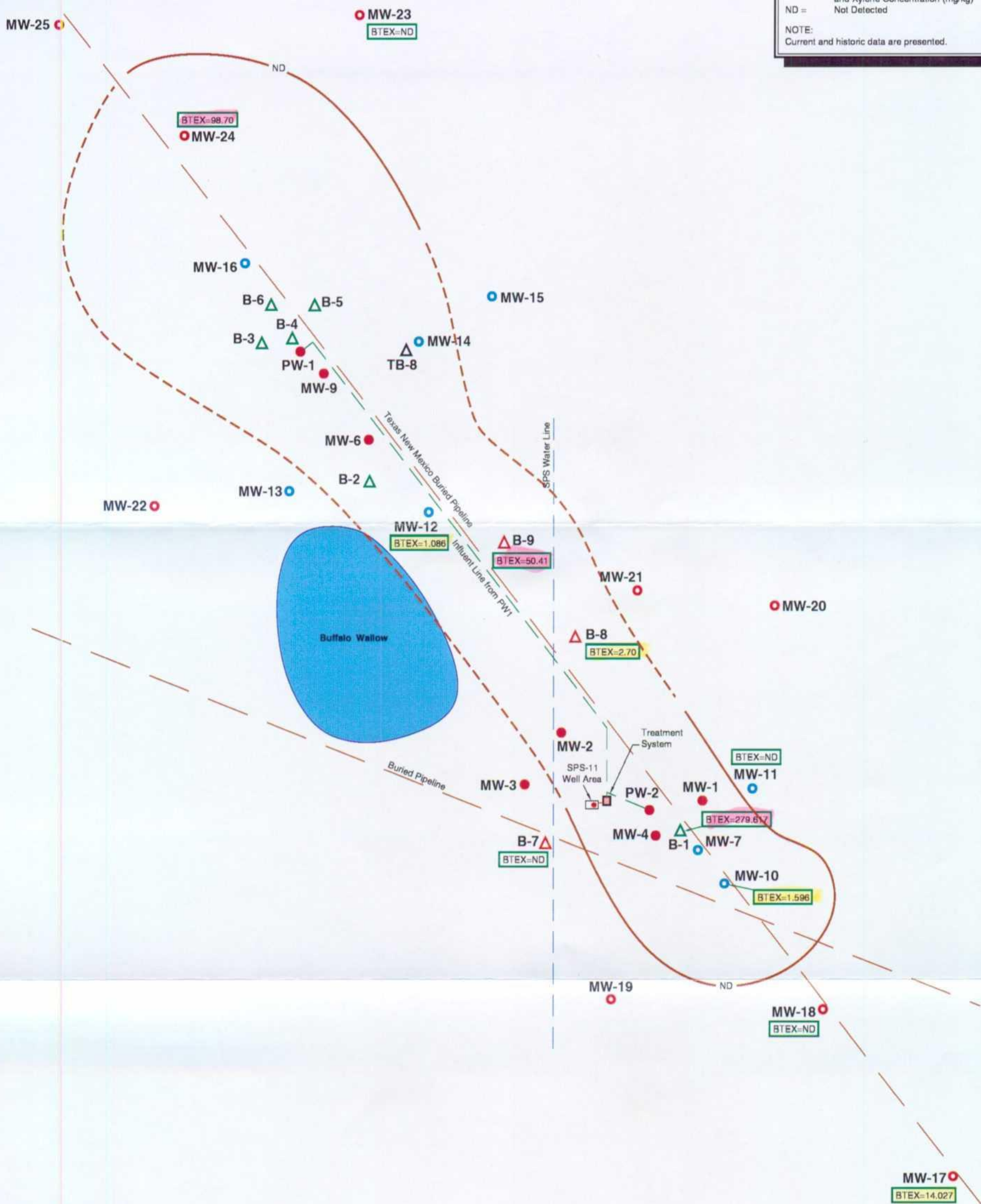


**LEGEND**

- Monitoring Well installed by KEI on December 16-22, 1997.
- △ Soil Boring advanced by KEI on January 6, 1998.
- Monitoring Well installed by KEI on March 11-13 and 19-20, 1997.
- △ Soil Boring advanced by KEI on March 17-20, 1997.
- Existing Monitoring Well Location
- △ Soil Boring advanced by Texaco Research & Development
- Buried Pipelines
- Influent Line
- Effluent Line
- SPS Water Line

BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylene Concentration (mg/kg)  
 ND = Not Detected

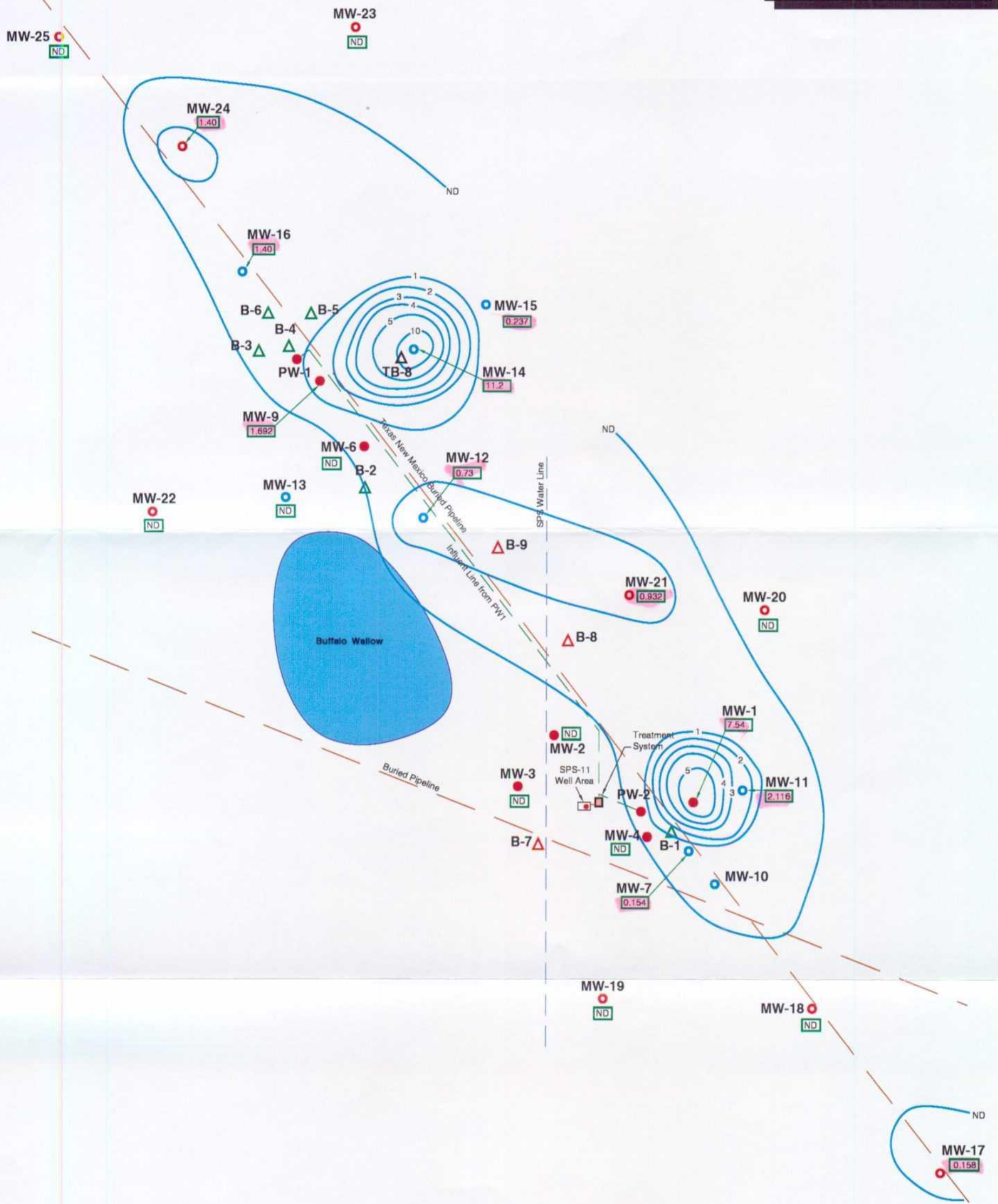
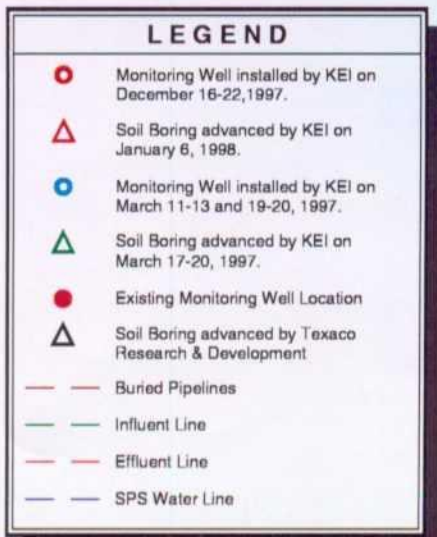
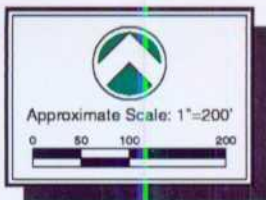
NOTE:  
 Current and historic data are presented.



03/04/98-TM-GA(819-BTEX)

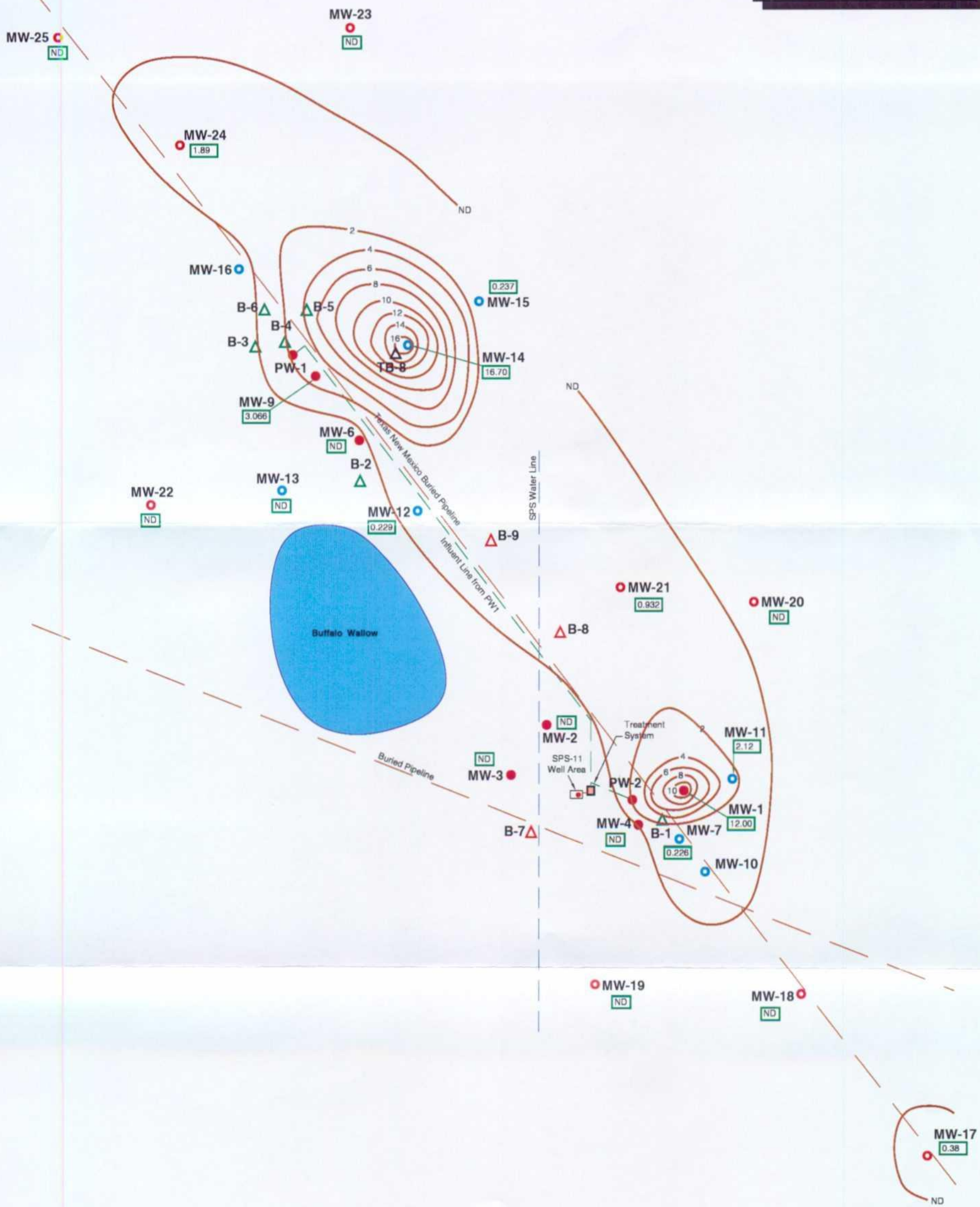
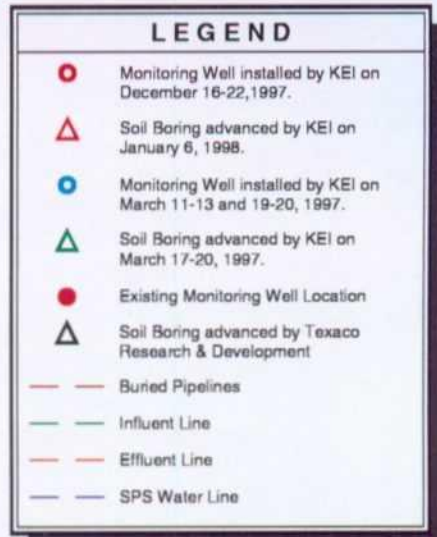
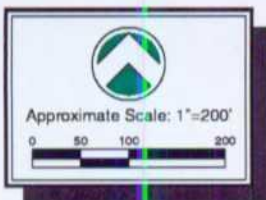






0304096-FRM.G:\1301\BEGW





0304096-FRM-CL(1/19/97)G.W.

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GROUND WATER BTEX CONCENTRATION MAP - JANUARY 21-22, 1998

TNMPL

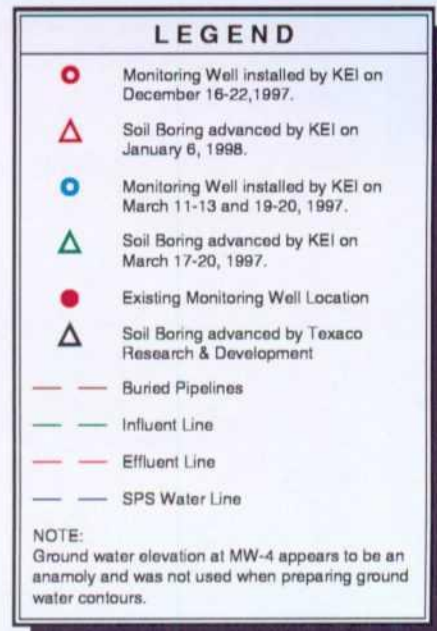
SPS-11

LEA COUNTY, NEW MEXICO

610099

FIG 8





## GENERAL NOTES

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

### Method detection limits:

Soil:	BTEX	0.020 to 0.20 mg/kg
	TPH	10 to 100 mg/kg
	SPLP VOC	0.025 to 0.50 mg/kg
	SPLP SVOC	0.010 to 0.025 mg/kg
	SPLP TPH	1.1 to 5.0 mg/kg
	TPH (GRO)	10 to 100 mg/kg

Water:	BTEX	0.001 to 0.2 mg/l
	Metals	0.02 to 0.56 mg/l

Laboratory test methods:	BTEX	EPA Method SW846-8020
	TPH	EPA Method 8015 DRO and GRO
	SPLP VOC	EPA Method 1312/8260
	SPLP SVOC	EPA Method 1312/8270
	SPLP TPH	EPA Method 1312/418.1
	Metals	EPA Method 6010

TABLE I

SUMMARY OF SOIL LABORATORY RESULTS - BTEX AND TPH  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO

SAMPLE LOCATION	SAMPLE DATE	DEPTH (feet)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	TPH (mg/kg)
B-7	01/06/98	30 - 30.5	ND	ND	ND	ND	ND	ND
B-7	01/06/98	40 - 42	ND	ND	ND	ND	ND	16.7
B-7	01/06/98	52 - 54	ND	ND	ND	0.081	0.081	ND
B-8	01/06/98	20 - 21.5	ND	ND	ND	ND	ND	ND
B-8	01/06/98	40 - 42	ND	0.17	0.66	1.87	2.70	276
B-8	01/06/98	52 - 54	ND	ND	ND	ND	ND	22
B-9	01/06/98	20 - 21	ND	ND	ND	ND	ND	ND
B-9	01/06/98	40 - 42	0.69	0.79	19.50	29.43	50.41	1,350
B-9	01/06/98	52 - 54	4.11	0.88	39.70	58.60	103.29	3,030
MW-17	12/16/97	35 - 37	0.029	0.778	4.720	8.500	14.027	810 (165*)
MW-17	12/16/97	49 - 51	0.238	5.800	9.600	15.360	30.998	954 (251*)
MW-17	12/16/97	51 - 53	0.028	ND	0.132	0.261	0.421	126 (52.6*)
MW-18	12/16/97	20 - 21.5	ND	ND	ND	ND	ND	48.8
MW-18	12/16/97	52 - 54	ND	ND	ND	ND	ND	26.5
MW-19	12/17/97	10 - 12	ND	ND	ND	ND	ND	36.7
MW-19	12/17/97	52 - 54	ND	ND	0.026	0.128	0.154	46.2
MW-20	12/17/97	30 - 32	ND	ND	ND	ND	ND	42.4
MW-20	12/17/97	52 - 54	ND	ND	ND	ND	ND	27.7
MW-21	12/18/97	52 - 53	ND	ND	ND	ND	ND	29.1
MW-22	12/18/97	5 - 7	ND	ND	ND	ND	ND	34.3
MW-22	12/18/97	52 - 54	ND	ND	ND	ND	ND	31.9
MW-23	12/19/97	20 - 22	ND	ND	ND	ND	ND	36.6
MW-23	12/19/97	52 - 54	ND	ND	ND	ND	ND	21.6
MW-24	12/19/97	10 - 12	ND	ND	ND	ND	ND	33.4
MW-24	12/19/97	40 - 42	1.10	18.00	31.60	48.00	98.70	2,030
MW-24	12/19/97	52 - 54	ND	ND	ND	ND	ND	71.5
MW-25	12/22/97	30 - 32	ND	ND	ND	ND	ND	46.4
MW-25	12/22/97	52 - 54	ND	ND	ND	ND	ND	33.8

\*Indicates that the TPH results in parenthesis is TPH Gasoline Range Organics (GRO).

TABLE II

SUMMARY OF SOIL LABORATORY RESULTS - SPLP VOC, SVOC, AND TPH  
 TEXAS - NEW MEXICO PIPE LINE COMPANY  
 SPS-11  
 LEA COUNTY, NEW MEXICO

CONSTITUENT	LABORATORY RESULT (mg/kg)	
Well or Boring ID	MW-24	B-9
Sample Date	12/19/97	12/19/97
Sample Depth (feet)	40-42	52-54
<b>SPLP VOC</b>		
Ethylbenzene	0.610	0.741
Isopropylbenzene	0.068	0.066
Naphthalene	0.073	0.055
Toluene	0.226	ND
1, 2, 4 Trimethylbenzene	0.235	0.131
1, 3, 5 Trimethylbenzene	0.055	0.050
m,p Xylenes	0.615	0.557
n Propylbenzene	0.111	0.090
o Xylene	0.281	0.296
Trichlorofluoromethane	ND	0.864*
<b>SPLP SVOC</b>		
2 Methylnaphthalene	0.024	0.044
Naphthalene	0.019	0.048
bis [2-Ethylhexyl] phthalate	ND	0.028
<b>SPLP TPH</b>		
	34.3	20.60

\* Result is beyond calibration limits.

**TABLE III**  
(continued)

**SUMMARY OF GROUND WATER LABORATORY RESULTS - BTEX**  
**TEXAS - NEW MEXICO PIPE LINE COMPANY**  
**SPS-11**  
**LEA COUNTY, NEW MEXICO**

MONITORING WELL	SAMPLE DATE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYLBENZENE (mg/l)	XYLENES (mg/l)	BTEX (mg/l)
MW-9	04/10/92	5.270	4.650	1.380	1.660	12.960
MW-9	10/15/96	4.224	0.056	1.252	0.865	6.397
MW-9	05/01/97	6.180	0.019	2.056	1.383	9.638
MW-9	08/28/97	2.930	ND	0.930	0.360	4.220
MW-9	11/17/97	2.5	0.2	0.7	0.5	3.9
MW-9	01/22/98	1.692	0.015	0.836	0.523	3.066
MW-10	05/01/97	0.184	0.292	0.124	0.180	0.776
MW-10	08/28/97	0.123	0.146	0.162	0.158	0.589
MW-10	11/17/97	0.143	0.203	0.165	0.153	0.664
MW-11	05/01/97	1.177	ND	0.011	0.027	1.215
MW-11	08/28/97	2.74	ND	0.11	0.04	2.89
MW-11	11/17/97	3.32	ND	ND	ND	3.32
MW-11	01/21/98	2.116	ND	0.004	ND	2.120
MW-12	05/01/97	ND	0.003	0.001	0.027	0.031
MW-12	08/28/97	0.099	0.032	0.030	0.043	0.204
MW-12	11/17/97	0.237	0.088	0.047	0.106	0.478
MW-12	01/22/98	0.173	ND	0.035	0.021	0.229
MW-13	05/01/97	ND	ND	ND	ND	ND
MW-13	08/28/97	ND	ND	ND	ND	ND
MW-13	11/17/97	ND	ND	ND	ND	ND
MW-13	01/22/98	ND	ND	ND	ND	ND
MW-14	05/01/97	9.639	2.414	2.626	2.769	17.448
MW-14	08/28/97	8.62	2.04	1.91	2.04	14.61
MW-14	11/17/97	7.76	2.36	ND	1.67	11.79
MW-14	01/22/98	11.2	1.5	2.4	1.6	16.7
MW-15	05/01/97	0.004	0.002	0.002	0.003	0.011
MW-15	08/28/97	0.441	ND	ND	ND	0.441
MW-15	11/17/97	0.063	ND	ND	ND	0.063
MW-15	01/22/98	0.237	ND	ND	ND	0.237
MW-16	05/01/97	0.101	0.090	0.015	0.012	0.218
MW-16	08/28/97	0.112	0.119	0.060	0.036	0.327
MW-16	11/17/97	0.053	0.061	0.021	0.035	0.170
MW-16	01/22/98	ND	ND	ND	ND	ND

**TABLE III**  
(continued)

**SUMMARY OF GROUND WATER LABORATORY RESULTS - BTEX  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

MONITORING WELL	SAMPLE DATE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYLBENZENE (mg/l)	XYLENES (mg/l)	BTEX (mg/l)
MW-17	01/21/98	0.158	0.156	0.026	0.040	0.380
MW-18	01/21/98	ND	ND	ND	ND	ND
MW-19	01/21/98	ND	ND	ND	ND	ND
MW-20	01/22/98	ND	ND	ND	ND	ND
MW-21	01/22/98	0.932	ND	ND	ND	0.932
MW-22	01/22/98	ND	ND	ND	ND	ND
MW-23	01/22/98	ND	ND	ND	ND	ND
MW-24	01/22/98	1.40	0.23	0.15	0.11	1.890
MW-25	01/22/98	ND	ND	ND	ND	ND
PW-1	10/15/96	0.007	ND	ND	ND	0.007
PW-2	05/07/92	0.048	0.054	0.022	0.024	0.148
PW-2	10/15/96	ND	0.001	0.001	0.013	0.015



**TABLE IV**

**MONITORING WELL MW-1  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/06/92	3847.61	55.37	3792.24	---	---
07/13/92	3847.61	55.93	3791.68	---	---
05/01/97	3859.20	55.20	3804.00	---	---
08/27/97	3859.20	55.28	3803.92	---	---
10/16/97	3859.20	56.55	3802.65	---	---
10/17/97	3859.20	56.64	3802.56	---	---
10/18/97	3859.20	56.72	3802.48	---	---
10/19/97	3859.20	56.79	3802.41	---	---
10/20/97	3859.20	56.87	3802.33	---	---
10/22/97	3859.20	57.00	3802.20	---	---
10/29/97	3859.20	57.11	3802.09	---	---
11/05/97	3859.20	56.77	3802.43	---	---
11/12/97	3859.20	57.00	3802.20	---	---
11/17/97	3859.20	57.33	3801.87	---	---
11/19/97	3859.20	57.34	3801.86	---	---
12/08/97	3859.20	57.59	3801.61	---	---
01/07/98	3859.20	56.81	3802.39	---	---
01/21/98	3859.08	57.69	3801.39	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-2  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/06/92	3848.68	56.06	3792.62	---	---
07/13/92	3848.68	56.43	3792.25	---	---
05/01/97	3860.90	55.85	3805.05	---	---
08/27/97	3860.90	56.22	3804.68	---	---
10/16/97	3860.90	56.80	3804.10	---	---
10/17/97	3860.90	56.86	3804.04	---	---
10/18/97	3860.90	56.93	3803.97	---	---
10/19/97	3860.90	56.98	3803.92	---	---
10/20/97	3860.90	57.04	3803.86	---	---
10/22/97	3860.90	57.11	3803.79	---	---
10/29/97	3860.90	57.21	3803.69	---	---
11/05/97	3860.90	57.01	3803.89	---	---
11/12/97	3860.90	57.16	3803.74	---	---
11/17/97	3860.90	57.64	3803.26	---	---
11/19/97	3860.90	57.66	3803.24	---	---
12/08/97	3860.90	57.69	3803.21	---	---
01/07/98	3860.90	57.36	3803.54	---	---
01/21/98	3860.76	57.84	3802.92	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-3  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/06/92	3849.23	56.48	3792.75	---	---
07/13/92	3849.23	56.86	3792.37	---	---
05/01/97	3861.30	56.28	3805.02	---	---
08/27/97	3861.30	56.57	3804.73	---	---
10/16/97	3861.30	57.30	3804.00	---	---
10/17/97	3861.30	57.36	3803.94	---	---
10/18/97	3861.30	57.42	3803.88	---	---
10/19/97	3861.30	57.48	3803.82	---	---
10/20/97	3861.30	57.53	3803.77	---	---
10/22/97	3861.30	57.63	3803.67	---	---
10/29/97	3861.30	57.72	3803.58	---	---
11/05/97	3861.30	57.48	3803.82	---	---
11/12/97	3861.30	57.64	3803.66	---	---
11/17/97	3861.30	58.07	3803.23	---	---
11/19/97	3861.30	58.07	3803.23	---	---
12/08/97	3861.30	58.25	3803.05	---	---
01/07/98	3861.30	57.79	3803.51	---	---
01/21/98	3861.15	58.34	3802.81	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-4  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/06/92	3847.58	55.36	3792.22	---	---
07/13/92	3847.58	55.83	3791.75	---	---
05/01/97	3859.40	55.27	3804.13	---	---
08/27/97	3859.40	55.44	3803.96	---	---
10/16/97	3859.40	57.44	3801.96	---	---
10/17/97	3859.40	57.54	3801.86	---	---
10/18/97	3859.40	57.59	3801.81	---	---
10/19/97	3859.40	57.69	3801.71	---	---
10/20/97	3859.40	57.75	3801.65	---	---
10/22/97	3859.40	57.86	3801.54	---	---
10/29/97	3859.40	57.93	3801.47	---	---
11/05/97	3859.40	57.28	3802.12	---	---
11/12/97	3859.40	57.72	3801.68	---	---
11/17/97	3859.40	58.05	3801.35	---	---
11/19/97	3859.40	58.06	3801.34	---	---
12/08/97	3859.40	58.22	3801.18	---	---
01/07/98	3859.40	57.15	3802.25	---	---
01/21/98	3859.62	56.38	3803.24	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-5  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
07/13/92	Unknown	26.48	NA	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-6  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/06/92	3850.28	55.78	3794.50	---	---
07/13/92	3850.28	56.23	3794.05	---	---
05/01/97	3862.70	55.73	3806.97	---	---
08/27/97	3862.70	55.84	3806.86	---	---
10/16/97	3862.70	56.36	3806.34	---	---
10/17/97	3862.70	56.43	3806.27	---	---
10/18/97	3862.70	56.48	3806.22	---	---
10/19/97	3862.70	56.56	3806.14	---	---
10/20/97	3862.70	56.61	3806.09	---	---
10/22/97	3862.70	56.69	3806.01	---	---
10/29/97	3862.70	56.84	3805.86	---	---
11/05/97	3862.70	56.80	3805.90	---	---
11/12/97	3862.70	56.87	3805.83	---	---
11/17/97	3862.70	57.02	3805.68	---	---
11/19/97	3862.70	57.05	3805.65	---	---
12/08/97	3862.70	57.25	3805.45	---	---
01/07/98	3862.70	57.23	3805.47	---	---
01/22/98	3862.47	57.55	3804.92	---	---



**TABLE IV**  
(continued)

**MONITORING WELL MW-7  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/06/92	3847.13	55.65	3791.48	---	---
07/13/92	3847.13	56.15	3790.98	---	---
05/01/97	3859.40	55.45	3803.95	---	---
08/27/97	3859.40	55.55	3803.85	---	---
10/16/97	3859.40	56.69	3802.71	---	---
10/17/97	3859.40	56.78	3802.62	---	---
10/18/97	3859.40	56.84	3802.56	---	---
10/19/97	3859.40	56.91	3802.49	---	---
10/20/97	3859.40	57.00	3802.40	---	---
10/22/97	3859.40	57.10	3802.30	---	---
10/29/97	3859.40	57.21	3802.19	---	---
11/05/97	3859.40	56.86	3802.54	---	---
11/12/97	3859.40	57.06	3802.34	---	---
11/17/97	3859.40	57.40	3802.00	---	---
11/19/97	3859.40	57.42	3801.98	---	---
12/08/97	3859.40	57.61	3801.79	---	---
01/07/98	3859.40	57.12	3802.28	---	---
01/21/98	3859.31	57.79	3801.52	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-9  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/06/92	3856.60	54.69	3801.91	---	---
07/13/92	3856.60	55.18	3801.42	---	---
05/01/97	3862.10	54.74	3807.36	---	---
08/27/97	3862.10	54.78	3807.32	---	---
10/16/97	3862.10	56.70	3805.40	---	---
10/17/97	3862.10	56.84	3805.26	---	---
10/18/97	3862.10	56.96	3805.14	---	---
10/19/97	3862.10	57.08	3805.02	---	---
10/20/97	3862.10	57.13	3804.97	---	---
10/22/97	3862.10	57.30	3804.80	---	---
10/29/97	3862.10	57.40	3804.70	---	---
11/05/97	3862.10	56.62	3805.48	---	---
11/12/97	3862.10	57.18	3804.92	---	---
11/17/97	3862.10	57.54	3804.56	---	---
11/19/97	3862.10	57.58	3804.52	---	---
12/08/97	3862.10	57.70	3804.40	---	---
01/07/98	3862.10	56.60	3805.50	---	---
01/22/98	3861.88	57.88	3804.00	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-10  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/01/97	3860.60	56.96	3803.64	---	---
08/27/97	3860.60	57.04	3803.56	---	---
10/16/97	3860.60	57.61	3802.99	---	---
10/17/97	3860.60	57.67	3802.93	---	---
10/18/97	3860.60	57.73	3802.87	---	---
10/19/97	3860.60	57.79	3802.81	---	---
10/20/97	3860.60	57.86	3802.74	---	---
10/22/97	3860.60	57.94	3802.66	---	---
10/29/97	3860.60	58.04	3802.56	---	---
11/05/97	3860.60	57.97	3802.63	---	---
11/12/97	3860.60	58.04	3802.56	---	---
11/17/97	3860.60	58.17	3802.43	---	---
11/19/97	3860.60	58.42	3802.18	---	---
12/08/97	3860.60	58.41	3802.19	---	---
01/07/98	3860.60	58.43	3802.17	---	---
01/21/98	3860.58	DRY	---	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-11  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/01/97	3860.10	56.43	3803.67	---	---
08/27/97	3860.10	56.49	3803.61	---	---
10/16/97	3860.10	57.24	3802.86	---	---
10/17/97	3860.10	57.38	3802.72	---	---
10/18/97	3860.10	57.36	3802.74	---	---
10/19/97	3860.10	57.42	3802.68	---	---
10/20/97	3860.10	57.46	3802.64	---	---
10/22/97	3860.10	57.56	3802.54	---	---
11/05/97	3860.10	57.49	3802.61	---	---
11/12/97	3860.10	57.62	3802.48	---	---
11/17/97	3860.10	57.74	3802.36	---	---
11/19/97	3860.10	57.91	3802.19	---	---
12/08/97	3860.10	57.95	3802.15	---	---
01/07/98	3860.10	57.86	3802.24	---	---
01/21/98	3860.00	58.25	3801.75	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-12  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/01/97	3863.20	56.91	3806.29	---	---
08/27/97	3863.20	56.98	3806.22	---	---
10/16/97	3863.20	57.42	3805.78	---	---
10/17/97	3863.20	57.48	3805.72	---	---
10/18/97	3863.20	57.54	3805.66	---	---
10/19/97	3863.20	57.59	3805.61	---	---
10/20/97	3863.20	57.60	3805.60	---	---
10/22/97	3863.20	57.65	3805.55	---	---
10/29/97	3863.20	57.74	3805.46	---	---
11/05/97	3863.20	57.75	3805.45	---	---
11/12/97	3863.20	57.82	3805.38	---	---
11/17/97	3863.20	57.89	3805.31	---	---
11/19/97	3863.20	58.24	3804.96	---	---
12/08/97	3863.20	58.14	3805.06	---	---
01/07/98	3863.20	58.20	3805.00	---	---
01/21/98	3863.10	58.44	3804.66	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-13  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/01/97	3862.60	55.23	3807.37	---	---
08/27/97	3862.60	55.32	3807.28	---	---
10/16/97	3862.60	55.75	3806.85	---	---
10/17/97	3862.60	55.82	3806.78	---	---
10/18/97	3862.60	55.88	3806.72	---	---
10/19/97	3862.60	55.96	3806.64	---	---
10/20/97	3862.60	55.96	3806.64	---	---
10/22/97	3862.60	56.03	3806.57	---	---
10/29/97	3862.60	56.10	3806.50	---	---
11/05/97	3862.60	56.11	3806.49	---	---
11/12/97	3862.60	56.17	3806.43	---	---
11/17/97	3862.60	56.22	3806.38	---	---
11/19/97	3862.60	56.38	3806.22	---	---
12/08/97	3862.60	56.55	3806.05	---	---
01/07/98	3862.60	56.56	3806.04	---	---
01/22/98	3862.44	56.82	3805.62	---	---



**TABLE IV**  
(continued)

**MONITORING WELL MW-14  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/01/97	3863.10	56.40	3806.70	---	---
08/27/97	3863.10	56.50	3806.60	---	---
10/16/97	3863.10	57.34	3805.76	---	---
10/17/97	3863.10	57.39	3805.71	---	---
10/18/97	3863.10	57.48	3805.62	---	---
10/19/97	3863.10	57.56	3805.54	---	---
10/20/97	3863.10	57.56	3805.54	---	---
10/22/97	3863.10	57.63	3805.47	---	---
10/29/97	3863.10	57.71	3805.39	---	---
01/05/97	3863.10	57.42	3805.68	---	---
11/12/97	3863.10	57.73	3805.37	---	---
11/17/97	3863.10	57.83	3805.27	---	---
12/08/97	3863.10	58.12	3804.98	---	---
01/07/98	3863.10	57.73	3805.37	---	---
01/22/98	3862.95	58.32	3804.63	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-15  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/01/97	3861.90	55.57	3806.33	---	---
08/27/97	3861.90	55.64	3806.26	---	---
10/16/97	3861.90	56.04	3805.86	---	---
10/17/97	3861.90	56.08	3805.82	---	---
10/18/97	3861.90	56.13	3805.77	---	---
10/19/97	3861.90	56.18	3805.72	---	---
10/20/97	3861.90	56.15	3805.75	---	---
10/22/97	3861.90	56.20	3805.70	---	---
10/29/97	3861.90	56.26	3805.64	---	---
11/05/97	3861.90	56.23	3805.67	---	---
11/12/97	3861.90	56.32	3805.58	---	---
11/17/97	3861.90	56.36	3805.54	---	---
11/19/97	3861.90	56.66	3805.24	---	---
12/05/97	3861.90	56.74	3805.16	---	---
01/07/98	3861.90	56.69	3805.21	---	---
01/22/98	3861.70	57.05	3804.65	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-16  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/01/97	3863.40	55.30	3808.10	---	---
08/27/97	3863.40	55.33	3808.07	---	---
10/16/97	3863.40	55.91	3807.49	---	---
10/17/97	3863.40	55.98	3807.42	---	---
10/18/97	3863.40	56.06	3807.34	---	---
10/19/97	3863.40	56.12	3807.28	---	---
10/20/97	3863.40	56.14	3807.26	---	---
10/22/97	3863.40	56.21	3807.19	---	---
10/29/97	3863.40	56.29	3807.11	---	---
11/05/97	3863.40	56.18	3807.22	---	---
11/12/97	3863.40	56.30	3807.10	---	---
11/17/97	3863.40	56.39	3807.01	---	---
11/19/97	3863.40	56.65	3806.75	---	---
12/08/97	3863.40	56.84	3806.56	---	---
01/07/98	3863.40	56.61	3806.79	---	---
01/22/98	3863.15	56.91	3806.24	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-17**  
**SUMMARY OF GROUND WATER MONITORING**  
**TEXAS - NEW MEXICO PIPE LINE COMPANY**  
**SPS-11**  
**LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
01/21/98	3859.17	58.43	3800.74	---	---

**TABLE IV**  
**(continued)**

**MONITORING WELL MW-18**  
**SUMMARY OF GROUND WATER MONITORING**  
**TEXAS - NEW MEXICO PIPE LINE COMPANY**  
**SPS-11**  
**LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
01/21/98	3859.98	58.19	3801.79	---	---

**TABLE IV**  
**(continued)**

**MONITORING WELL MW-19**  
**SUMMARY OF GROUND WATER MONITORING**  
**TEXAS - NEW MEXICO PIPE LINE COMPANY**  
**SPS-11**  
**LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
01/22/98	3862.30	59.66	3802.64	---	---



**TABLE IV**  
(continued)

**MONITORING WELL MW-20  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
01/22/98	3861.30	58.73	3802.57	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-21  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
01/22/98	3862.30	59.05	3803.25	---	---

**TABLE IV**  
**(continued)**

**MONITORING WELL MW-22**  
**SUMMARY OF GROUND WATER MONITORING**  
**TEXAS - NEW MEXICO PIPE LINE COMPANY**  
**SPS-11**  
**LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
01/22/98	3864.01	57.32	3806.69	---	---

**TABLE IV**  
**(continued)**

**MONITORING WELL MW-23**  
**SUMMARY OF GROUND WATER MONITORING**  
**TEXAS - NEW MEXICO PIPE LINE COMPANY**  
**SPS-11**  
**LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
01/22/98	3862.44	55.91	3806.53	---	---

**TABLE IV**  
(continued)

**MONITORING WELL MW-24**  
**SUMMARY OF GROUND WATER MONITORING**  
**TEXAS - NEW MEXICO PIPE LINE COMPANY**  
**SPS-11**  
**LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
01/22/98	3864.36	56.74	3807.62	---	---

**TABLE IV**  
**(continued)**

**MONITORING WELL MW-25**  
**SUMMARY OF GROUND WATER MONITORING**  
**TEXAS - NEW MEXICO PIPE LINE COMPANY**  
**SPS-11**  
**LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
01/22/98	3864.16	55.33	3808.83	---	---



**TABLE IV**  
(continued)

**PUMPING WELL PW-1  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/06/92	3849.08	54.28	3794.80	---	---
07/13/92	3849.08	54.46	3794.62	---	---

**TABLE IV**  
(continued)

**PUMPING WELL PW-1  
SUMMARY OF GROUND WATER MONITORING  
TEXAS - NEW MEXICO PIPE LINE COMPANY  
SPS-11  
LEA COUNTY, NEW MEXICO**

DATE MEASURED	PVC ELEVATION (feet)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION		PSH THICKNESS (feet)
			Actual	Corrected	
05/06/92	3847.23	55.27	3791.96	---	---
07/13/92	3847.23	55.76	3791.47	---	---





Clay (CL) silty, sandy, gravel, firm to stiff, moist, brown to dark brown, roots.

Gravel (GM), silty, sandy, moist, gray to tan.

Sand (SP), silty, fine-grained, dense to very dense, moist to wet, brown to light brown, locally cemented.

Indicates sample interval. Sample was obtained by a split-spoon sampler.

Indicates the ground water level measured during drilling.

Indicates the ground water level measured on January 6, 1998.

Head-space readings in ppm obtained with a photoionization detector.

Indicates the constituent was not detected.

## NOTES

1. The monitoring well was installed on December 16, 1997 using an air rotary rig.
2. The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a 3 foot stick-up steel cover and a locked compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from the ground surface, unless otherwise noted.

○ Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)  
BTEX = Total Benzene, Toluene, Ethylbenzene,  
and Xylenes Concentration (mg/kg)  
TPH = Total Petroleum Hydrocarbon  
Concentration (mg/kg)

Concrete/Bentonite Grout

Bentonite Pellet Seal

Sand Pack

k·e·i

LOG AND DETAILS OF MONITORING WELL MW-18

TNMPL

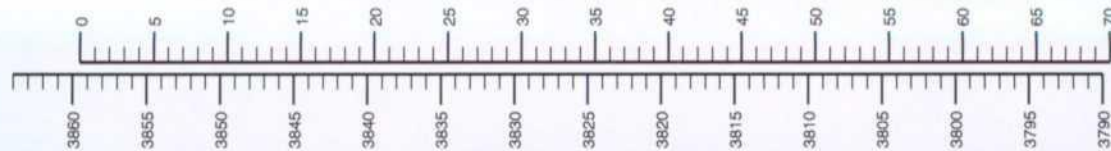
SPS-11

LEA COUNTY, NEW MEXICO

610099

## APPENDIX A



ELEV./DEPTH  
(FEET)PID  
ReadingsLab  
Results

## LEGEND



Clay (CL), silty, sandy, gravel, firm to stiff, moist, brown to dark brown, roots.



Gravel (GM), silty, sandy, moist, gray to tan.



Sand (SP), silty, fine-grained, dense to very dense, moist to wet, brown to light brown, locally cemented.



Indicates sample interval. Sample was obtained by a split-spoon sampler.



Indicates the ground water level measured during drilling.



Indicates the ground water level measured on January 6, 1998.



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



ND Indicates the constituent was not detected.

## Monitoring Well Details (MW-19)

Elev Top of PVC Well 3862.30 ft

Thickness of Bentonite Seal 4.0 ft

Length of PVC Well Screen 20.0 ft

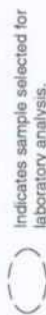
Depth of PVC Well (Measured from top of PVC) 67.5 ft

Depth of Exploratory Hole 64.0 ft

Depth to Ground Water (During drilling) 54.0 ft

Depth to Ground Water (Measured from top of PVC) 59.32 ft

Elev of Ground Water 3802.98 ft



Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)

BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)

TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)



Concrete/Bentonite Grout



Bentonite Pellet Seal



Sand Pack

## NOTES

1. The monitoring well was installed on December 17, 1997 using an air rotary rig.
2. The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a 3 foot stick-up steel cover and a locked compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from the ground surface, unless otherwise noted.

kei

## LOG AND DETAILS OF MONITORING WELL MW-19

TNMPL

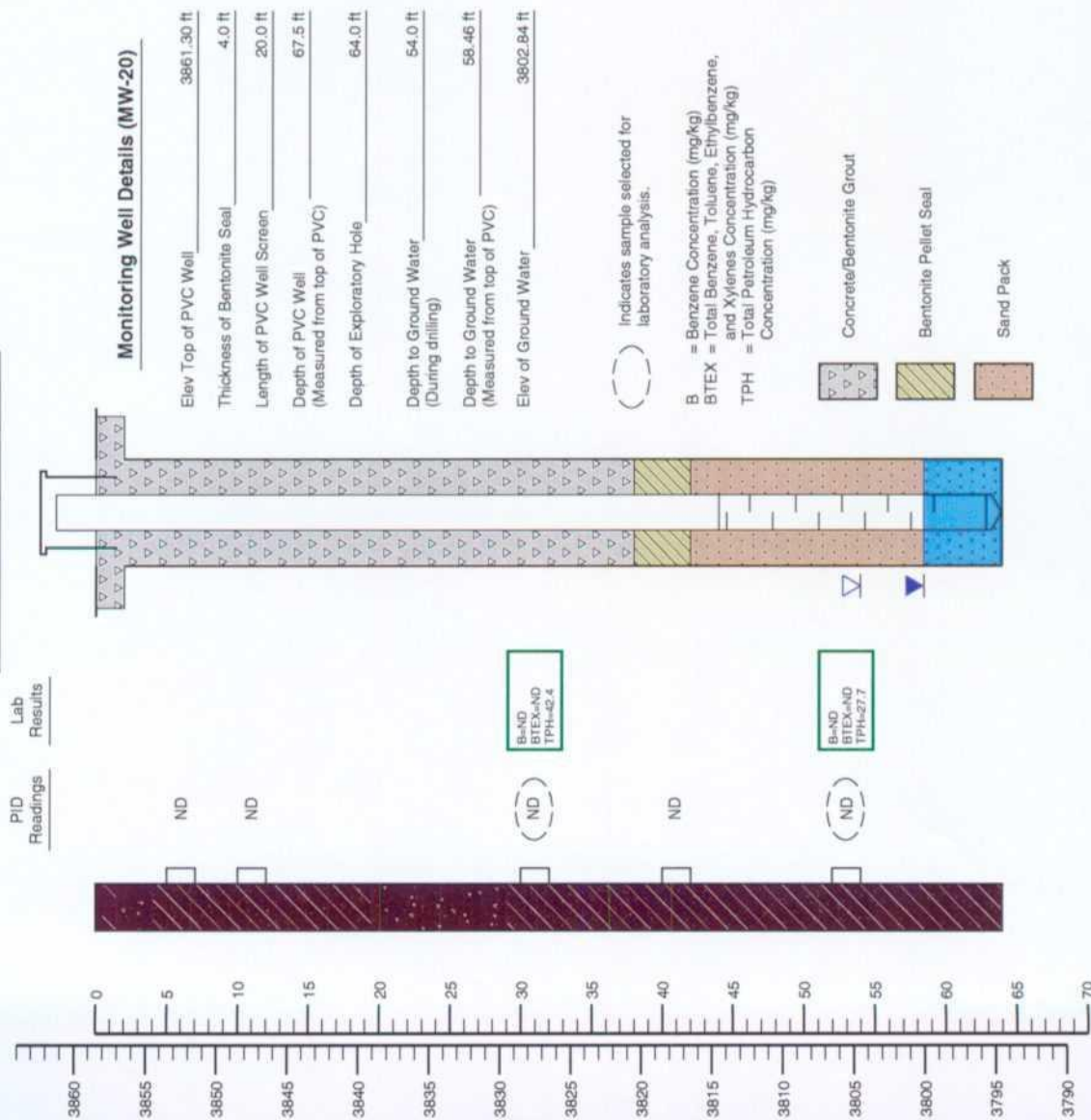
SPS-11

LEA COUNTY, NEW MEXICO

610099

APPENDIX A

## MONITORING WELL MW-20



Clay (CL). silty, sandy, gravel, firm to stiff, moist, brown to dark brown, roots.

Gravel (GM), silty, sandy, moist, gray to tan.

Sand (SP), silty, fine-grained, dense to very dense, moist to wet, brown to light brown, locally cemented.

Indicates sample interval. Sample was obtained by a split-spoon sampler.

Indicates the ground water level measured during drilling.

Indicates the ground water level measured on January 6, 1998.

Head-space readings in ppm obtained with a photoionization detector.

Indicates the constituent was not detected.

## NOTES

1. The monitoring well was installed on December 17, 1997 using an air rotary rig.
2. The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a 3 foot stick-up steel cover and a locked compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from the ground surface, unless otherwise noted.

Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)  
BTEX = Total Benzene, Toluene, Ethylbenzene,  
and Xylenes Concentration (mg/kg)  
TPH = Total Petroleum Hydrocarbon  
Concentration (mg/kg)

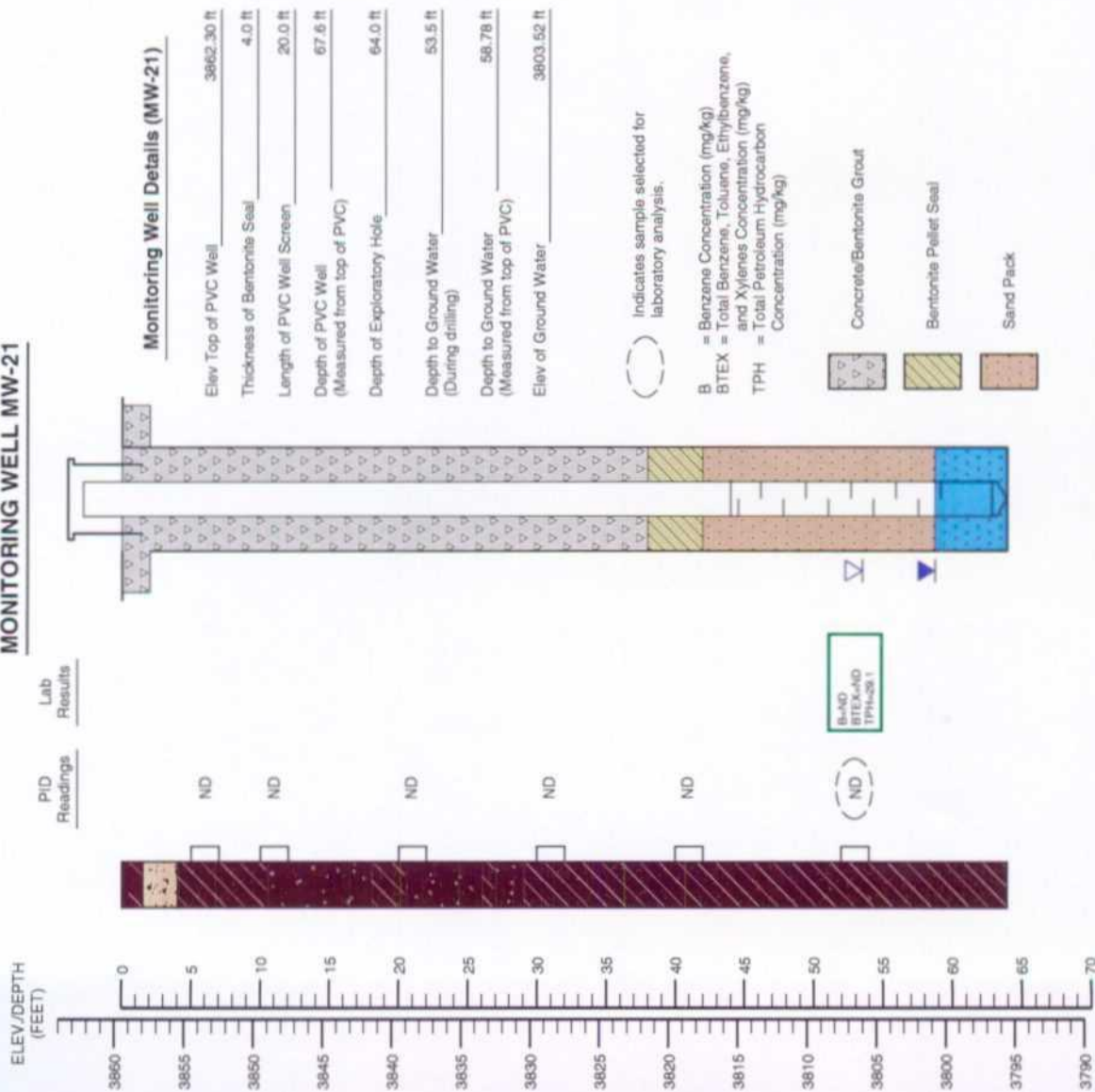
Concrete/Bentonite Grout

Bentonite Pellet Seal

Sand Pack



## MONITORING WELL MW-21



## LOG AND DETAILS OF MONITORING WELL MW-21

TNMPL SPS-11

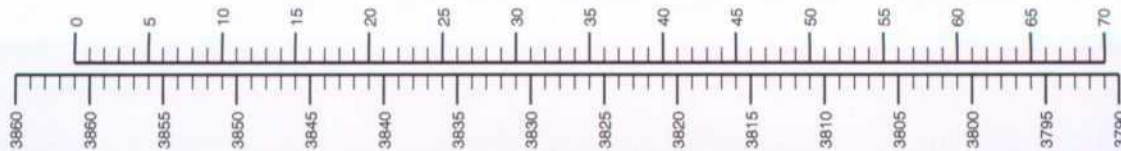
LEA COUNTY, NEW MEXICO

610099

APPENDIX A

ELEV/DEPTH  
(FEET)

## MONITORING WELL MW-22

PID  
ReadingsLab  
Results

## LEGEND



Clay (CL), silty, sandy, gravel, firm to stiff, moist, brown to dark brown, roots.



Gravel (GM), silty, sandy, moist, gray to tan.



Sand (SP), silty, fine-grained, dense to very dense, moist to wet, brown to light brown, locally cemented.



Indicates sample interval. Sample was obtained by a split-spoon sampler.



Indicates the ground water level measured during drilling.



Indicates the ground water level measured on January 6, 1998.



Head-space readings in ppm obtained with a photoionization detector.



Indicates the constituent was not detected.

## Monitoring Well Details (MW-22)

Elev Top of PVC Well 3864.01 ft

Thickness of Bentonite Seal 4.0 ft

Length of PVC Well Screen 20.0 ft

Depth of PVC Well (Measured from top of PVC) 67.3 ft

Depth of Exploratory Hole 64.0 ft

Depth to Ground Water (During drilling) 54.0 ft

Depth to Ground Water (Measured from top of PVC) 57.08 ft

Elev of Ground Water 3806.93 ft

Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)  
 BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)  
 TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)

Concrete/Bentonite Grout

Bentonite Pellet Seal

Sand Pack

## NOTES

1. The monitoring well was installed on December 18, 1997 using an air rotary rig.
2. The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a 3 foot stick-up steel cover and a locked compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from the ground surface, unless otherwise noted.

kei

## LOG AND DETAILS OF MONITORING WELL MW-22

TNMPL

SPS-11

LEA COUNTY, NEW MEXICO

610099

APPENDIX A



## MONITORING WELL MW-23

## LEGEND

Clay (CL), silty, sandy, gravel, firm to stiff, moist, brown to dark brown, roots.

Gravel (GM), silty, sandy, moist, gray to tan.

Sand (SP), silty, fine-grained, dense to very dense, moist to wet, brown to light brown, locally cemented.

Indicates sample interval. Sample was obtained by a split-spoon sampler.

Indicates the ground water level measured during drilling.

Indicates the ground water level measured on January 6, 1998.

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

ND Indicates the constituent was not detected.

## NOTES

1. The monitoring well was installed on December 19, 1997 using an air rotary rig.
2. The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a 3 foot stick-up steel cover and a locked compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from the ground surface, unless otherwise noted.

## Monitoring Well Details (MW-23)

Elev Top of PVC Well	3862.44 ft
Thickness of Bentonite Seal	4.0 ft
Length of PVC Well Screen	20.0 ft
Depth of PVC Well (Measured from top of PVC)	67.3 ft
Depth of Exploratory Hole	64.0 ft
Depth to Ground Water (During drilling)	54.0 ft
Depth to Ground Water (Measured from top of PVC)	55.79 ft
Elev of Ground Water	3806.66 ft

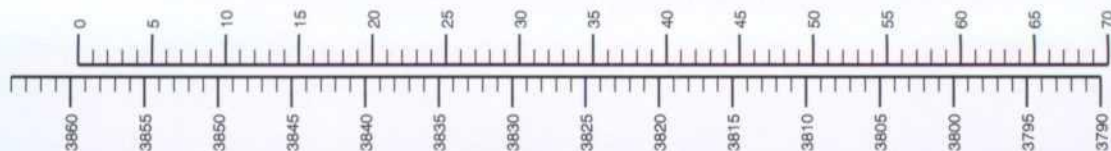
Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)  
 BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)  
 TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)

Concrete/Bentonite Grout

Bentonite Pellet Seal

Sand Pack

ELEV/DEPTH  
(FEET)PID  
ReadingsLab  
Results

kei

## LOG AND DETAILS OF MONITORING WELL MW-23

TNMPL

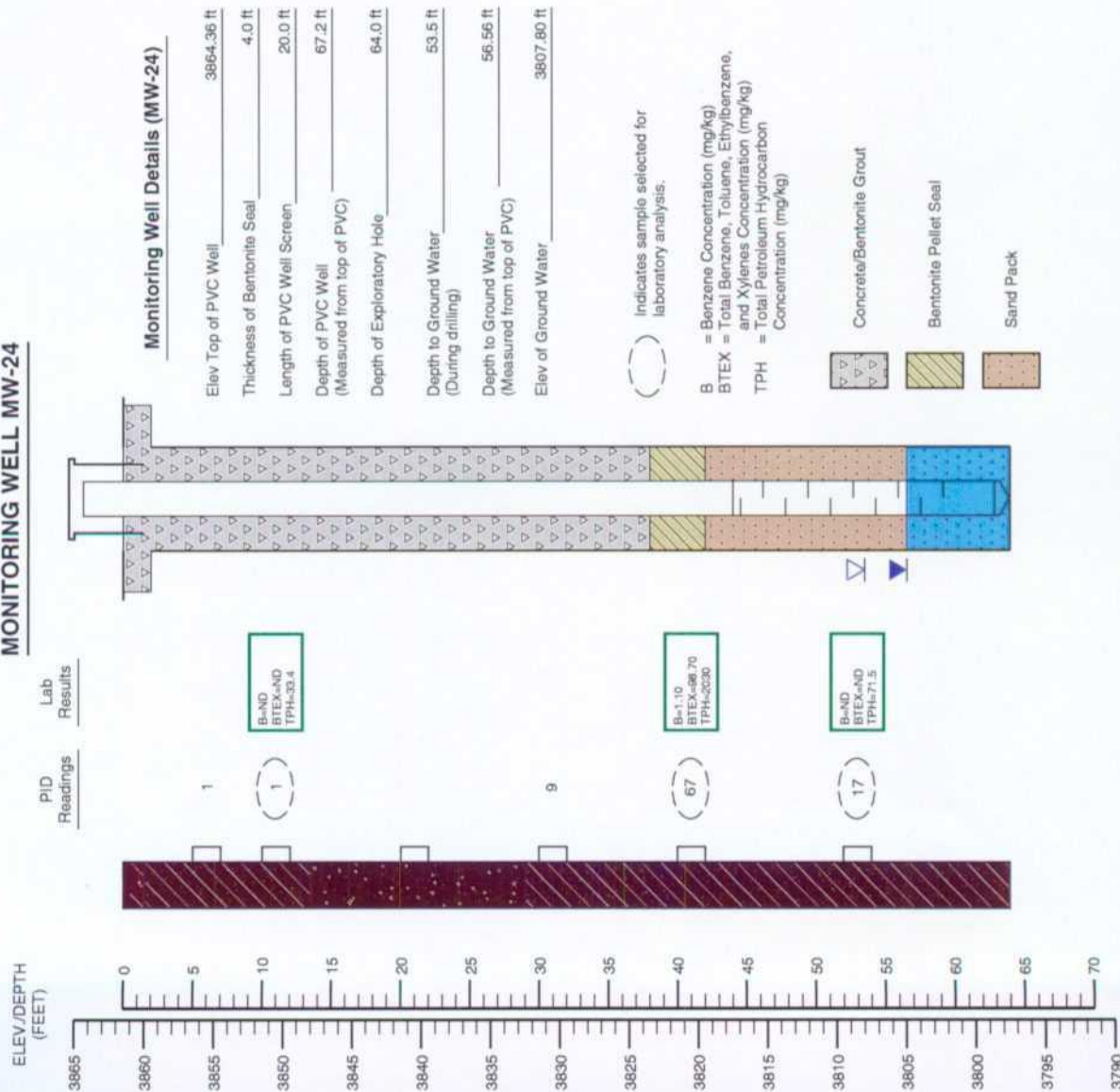
SPS-11

LEA COUNTY, NEW MEXICO

610099

APPENDIX A

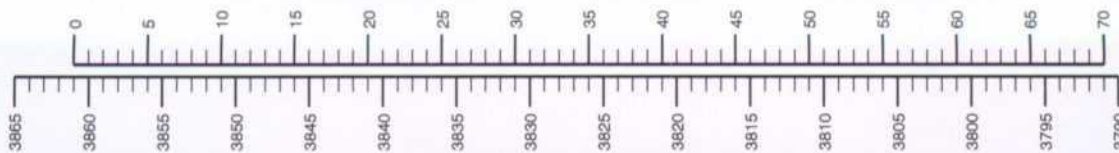
## MONITORING WELL MW-24





ELEV./DEPTH  
(FEET)

## MONITORING WELL MW-25

PID  
ReadingsLab  
Results

Monitoring Well Details (MW-25)	
Elev Top of PVC Well	3864.16 ft
Thickness of Bentonite Seal	4.0 ft
Length of PVC Well Screen	20.0 ft
Depth of PVC Well (Measured from top of PVC)	67.7 ft
Depth of Exploratory Hole	64.0 ft
Depth to Ground Water (During drilling)	54.0 ft
Depth to Ground Water (Measured from top of PVC)	55.14 ft
Elev of Ground Water	3809.02 ft

## LEGEND

- Clay (CL), silty, sandy, gravel, firm to stiff, moist, brown to dark brown, roots.  
 Gravel (GM), silty, sandy, moist, gray to tan.  
 Sand (SP), silty, fine-grained, dense to very dense, moist to wet, brown to light brown, locally cemented.  
 Indicates sample interval. Sample was obtained by a split-spoon sampler.  
 Indicates the ground water level measured during drilling.  
 Indicates the ground water level measured on January 6, 1998.  
 PID  
 ND

Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/kg)  
 BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylenes Concentration (mg/kg)  
 TPH = Total Petroleum Hydrocarbon Concentration (mg/kg)

- Concrete/Bentonite Grout  
 Bentonite Pellet Seal  
 Sand Pack

## NOTES

1. The monitoring well was installed on December 22, 1997 using an air rotary rig.
2. The well was constructed with 2 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a 3 foot stick-up steel cover and a locked compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from the ground surface, unless otherwise noted.

kei

LOG AND DETAILS OF MONITORING WELL MW-25

TNMPL

SPS-11

LEA COUNTY, NEW MEXICO

610099

APPENDIX A

# **ANALYTICAL REPORT 1-73428**

for

**K.E.I. Consultants, Inc.**

**Project Manager: Theresa Nix**

**Project Name: TNMPL**

**Project Id: 610099**

**January 9, 1998**



HOUSTON • DALLAS • SAN ANTONIO

11381 Meadowglen Lane Suite L \* Houston, Texas 77082-2647  
Phone (281) 589-0692 Fax (281) 589-0695





11381 Meadowglen Suite L  
Houston, Texas 77082-2647  
(281) 589-0692 Fax: (281) 589-0695  
Houston - Dallas - San Antonio

January 9, 1998

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

Reference: **XENCO Report No.: 1-73428**  
**Project Name: TNMPL**  
**Project ID: 610099**  
**Project Address: SPS-11**

Dear Theresa Nix:

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 1-73428. 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. 1-73428 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 Yohemoto, 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!*

**CERTIFICATE OF ANALYSIS SUMMARY 1-73428**

**K.E.I. Consultants, Inc.**

Project ID: 610099

Project Manager: Theresa Nix

Project Location: SPS-11

Project Name: *TNMPL*

Date Received in Lab : Dec 23, 1997 15:45

Date Report Faxed: Jan 9, 1998

**XENCO contact : Carlos Castro/Edward Yonemoto**

Analysis Requested	Lab ID:		Field ID:		Depth:		Matrix:		Sampled:		173428 001		173428 002		173428 003		173428 004		173428 005		173428 006	
	Analyzed:		Units:		12/26/97		mg/kg		R.L.		(10.0)		mg/kg		R.L.		(10.0)		mg/kg		R.L.	
TPH-DRO (Diesel)	Analyzed:		Units:		12/26/97		mg/kg		R.L.		(10.0)		mg/kg		R.L.		(10.0)		mg/kg		R.L.	
EPA 8015 M	Analyzed:		Units:		12/26/97		mg/kg		R.L.		(10.0)		mg/kg		R.L.		(10.0)		mg/kg		R.L.	
Total Petroleum Hydrocarbons	Analyzed:		Units:		12/26/97		mg/kg		R.L.		(10.0)		mg/kg		R.L.		(10.0)		mg/kg		R.L.	
TPH-GRO (Gasoline)	Analyzed:		Units:		12/26/97		mg/kg		R.L.		(10.0)		mg/kg		R.L.		(10.0)		mg/kg		R.L.	
Total Petroleum Hydrocarbons	Analyzed:		Units:		12/26/97		mg/kg		R.L.		(10.0)		mg/kg		R.L.		(10.0)		mg/kg		R.L.	
BTEX	Analyzed:		Units:		12/26/97		ppm		R.L.		(10.0)		ppm		R.L.		(10.0)		ppm		R.L.	
EPA 8020	Analyzed:		Units:		12/26/97		ppm		R.L.		(10.0)		ppm		R.L.		(10.0)		ppm		R.L.	
Benzene	Analyzed:		Units:		12/26/97		ppm		R.L.		(10.0)		ppm		R.L.		(10.0)		ppm		R.L.	
Toluene	Analyzed:		Units:		12/26/97		ppm		R.L.		(10.0)		ppm		R.L.		(10.0)		ppm		R.L.	
Ethylbenzene	Analyzed:		Units:		12/26/97		ppm		R.L.		(10.0)		ppm		R.L.		(10.0)		ppm		R.L.	
m,p-Xylenes	Analyzed:		Units:		12/26/97		ppm		R.L.		(10.0)		ppm		R.L.		(10.0)		ppm		R.L.	
o-Xylene	Analyzed:		Units:		12/26/97		ppm		R.L.		(10.0)		ppm		R.L.		(10.0)		ppm		R.L.	
Total BTEX	Analyzed:		Units:		12/26/97		ppm		R.L.		(10.0)		ppm		R.L.		(10.0)		ppm		R.L.	

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.  
Technical Director

**CERTIFICATE OF ANALYSIS SUMMARY 1-73428**

Project ID: 610099

Project Manager: Theresa Nix

Project Location: SPS-11

**K.E.I. Consultants, Inc.**

Project Name: *TNMPL*

Date Received in Lab : Dec 23, 1997 15:45

Date Report Faxed: Jan 9, 1998

**XENCO contact:** Carlos Castro/Edward Yonemoto

Analysis Requested		Lab ID:	173428 007	173428 008	173428 009	173428 010	173428 011	173428 012
		Field ID:	MW-19	MW-20	MW-20	MW-21	MW-22	MW-22
		Depth:	52.0-54.0	30.0-32.0	52.0-54.0	52.0-53.0	5.0-7.0	52.0-54.0
		Matrix:	Solid	Solid	Solid	Solid	Solid	Solid
		Sampled:	12/17/97	12/17/97	12/17/97	12/18/97	12/18/97	12/18/97
TPH-DRO (Diesel)		Analyzed:	12/27/97	12/27/97	12/27/97	12/27/97	12/27/97	12/27/97
EPA 8015 M		Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Petroleum Hydrocarbons			46.2 (10.0)	42.4 (10.0)	27.7 (10.0)	29.1 (10.0)	34.3 (10.0)	31.9 (10.0)
BTEX								
EPA 8020		Analyzed:	12/26/97	12/26/97	12/26/97	12/26/97	12/26/97	12/26/97
		Units:	ppm	ppm	ppm	ppm	ppm	ppm
Benzene			< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)
Toluene			< 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			0.026 (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			0.128 (0.040)	< 0.040 (0.040)	< 0.040 (0.040)	< 0.040 (0.040)	< 0.040 (0.040)	< 0.040 (0.040)
o-Xylene			< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)
Total BTEX			0.154	N.D.		N.D.	N.D.	N.D.

**CERTIFICATE OF ANALYSIS SUMMARY 1-73428**

Project ID: 610099  
Project Manager: Theresa Nix  
Project Location: SPS-11

**K.E.I. Consultants, Inc.**

Project Name: **TNMPL**


Date Received in Lab : Dec 23, 1997 15:45  
Date Report Faxed: Jan 9, 1998

**XENCO contact : Carlos Castro/Edward Yonemoto**

**Analysis Requested**

Lab ID: Field ID: Depth: Matrix: Sampled:	173428 013 MW-23 20.0-22.0 Solid 12/19/97	173428 014 MW-23 52.0-54.0 Solid 12/19/97	173428 015 MW-24 10.0-12.0 Solid 12/19/97	173428 016 MW-24 40.0-42.0 Solid 12/19/97	173428 017 MW-24 52.0-54.0 Solid 12/19/97	173428 018 MW-25 30.0-32.0 Solid 12/22/97
TPH-DRO (Diesel)	12/27/97 mg/kg	12/27/97 mg/kg	12/27/97 mg/kg	12/27/97 mg/kg	12/27/97 mg/kg	12/27/97 mg/kg
EPA 8015 M	R.L.	R.L.	R.L.	R.L.	R.L.	R.L.
Total Petroleum Hydrocarbons	36.6 (10.0)	21.6 (10.0)	33.4 (10.0)	2030 (20.0)	71.5 (10.0)	46.4 (10.0)
BTEX	12/26/97 ppm	12/26/97 ppm	12/26/97 ppm	12/26/97 ppm	12/26/97 ppm	12/26/97 ppm
EPA 8020	R.L.	R.L.	R.L.	R.L.	R.L.	R.L.
Benzene	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)
Toluene	< 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	< 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	< 0.040 (0.040)	< 0.040 (0.040)	< 0.040 (0.040)	< 0.040 (0.040)	< 0.040 (0.040)	< 0.040 (0.040)
o-Xylene	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)	< 0.020 (0.020)
Total BTEX	N.D.	N.D.	N.D.	98.70	N.D.	N.D.
SPLP-Semivolatiles	12/26/97 mg/L	12/26/97 mg/L	12/26/97 mg/L	12/26/97 mg/L	12/26/97 mg/L	12/26/97 mg/L
EPA1312/8270	R.L.	R.L.	R.L.	R.L.	R.L.	R.L.
Acenaphthene	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)
Acenaphthylene	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)
Anthracene	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)
Benzo(a)anthracene	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)
Benzo(a)pyrene	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)
Benzo(b)fluoranthene	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)
Benzo(g,h,i)perylene	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)
Benzo(k)fluoranthene	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)
4-Bromophenyl-phenylether	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)
Butyl benzyl phthalate	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)
Carbazole	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)
4-Chloro-3-Methylphenol	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)	< 0.010 (0.010)

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Edward H. Yonemoto, Ph.D.  
Technical Director

# CERTIFICATE OF ANALYSIS SUMMARY 1-73428

**K.E.I. Consultants, Inc.**

Project ID: 610099

Project Manager: Theresa Nix

Project Location: SPS-11


Date Received in Lab : Dec 23, 1997 15:45

Date Report Faxed: Jan 9, 1998

**XENCO contact :** Carlos Castro/Edward Yonemoto

Analysis Requested	Lab ID: Field ID: Depth: Matrix: Sampled:	173428 013 MW-23 20.0-22.0 Solid 12/19/97	173428 014 MW-23 52.0-54.0 Solid 12/19/97	173428 015 MW-24 10.0-12.0 Solid 12/19/97	173428 016 MW-24 40.0-42.0 Solid 12/19/97	173428 017 MW-24 52.0-54.0 Solid 12/19/97	173428 018 MW-25 30.0-32.0 Solid 12/22/97
	Analyzed: Units:				01/02/98 mg/L	R.L.	
4-Chloroaniline					< 0.010 (0.010)		
2-Chloronaphthalene					< 0.010 (0.010)		
2-Chlorophenol					< 0.010 (0.010)		
4-Chlorophenyl-phenyl ether					< 0.010 (0.010)		
Chrysene					< 0.010 (0.010)		
Di-n-butyl phthalate					< 0.010 (0.010)		
Di-n-octyl phthalate					< 0.010 (0.010)		
Dibenzo(a,h)anthracene					< 0.010 (0.010)		
Dibenzofuran					< 0.010 (0.010)		
1,2-Dichlorobenzene					< 0.010 (0.010)		
1,3-Dichlorobenzene					< 0.010 (0.010)		
1,4-Dichlorobenzene					< 0.010 (0.010)		
3,3'-Dichlorobenzidine					< 0.010 (0.010)		
2,4-Dichlorophenol					< 0.025 (0.025)		
Diethyl phthalate					< 0.010 (0.010)		
2,4-Dimethylphenol					< 0.010 (0.010)		
Dimethyl phthalate					< 0.010 (0.010)		
4,6-Dinitro-2-methylphenol					< 0.025 (0.025)		
2,4-Dinitrophenol					< 0.010 (0.010)		
2,4-Dinitrotoluene					< 0.010 (0.010)		
2,6-Dinitrotoluene					< 0.010 (0.010)		
Fluoranthene					< 0.010 (0.010)		
Fluorene					< 0.010 (0.010)		
Hexachlorobenzene					< 0.010 (0.010)		

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Edward H. Yonemoto, Ph.D.  
Technical Director



# CERTIFICATE OF ANALYSIS SUMMARY 1-73428

## K.E.I. Consultants, Inc.

Project Name: *TNMPL*

Project ID: 610099  
Project Manager: Theresa Nix  
Project Location: SPS-11

Date Received in Lab : Dec 23, 1997 15:45

Date Report Faxed: Jan 9, 1998

**XENCO** contact : Carlos Castro/Edward Yonemoto

Analysis Requested	Lab ID: Field ID: Depth: Matrix: Sampled:	173428 013 MW-23 20.0-22.0 Solid 12/19/97	173428 014 MW-23 52.0-54.0 Solid 12/19/97	173428 015 MW-24 10.0-12.0 Solid 12/19/97	173428 016 MW-24 40.0-42.0 Solid 12/19/97	173428 017 MW-24 52.0-54.0 Solid 12/19/97	173428 018 MW-25 30.0-32.0 Solid 12/22/97
	Analyzed: Units:				01/02/98 mg/L		
Hexachlorobutadiene					< 0.010 (0.010)		
Hexachlorocyclopentadiene					< 0.010 (0.010)		
Hexachloroethane					< 0.010 (0.010)		
Indeno(1,2,3-cd)pyrene					< 0.010 (0.010)		
Isophorone					< 0.010 (0.010)		
2-Methylnaphthalene					0.024 (0.010)		
2-Methylphenol					< 0.010 (0.010)		
4-Methylphenol					< 0.010 (0.010)		
N-Nitroso-di-n-propylamine					< 0.010 (0.010)		
N-Nitrosodiphenylamine					< 0.010 (0.010)		
Naphthalene					0.019 (0.010)		
2-Nitroaniline					< 0.025 (0.025)		
3-Nitroaniline					< 0.025 (0.025)		
4-Nitroaniline					< 0.025 (0.025)		
Nitrobenzene					< 0.010 (0.010)		
2-Nitrophenol					< 0.010 (0.010)		
4-Nitrophenol					< 0.010 (0.010)		
Pentachlorophenol					< 0.025 (0.025)		
Phenanthrene					< 0.010 (0.010)		
Phenol					< 0.010 (0.010)		
Pyrene					< 0.010 (0.010)		
1,2,4-Trichlorobenzene					< 0.010 (0.010)		
2,4,5-Trichlorophenol					< 0.010 (0.010)		
2,4,6-Trichlorophenol					< 0.025 (0.025)		
					< 0.010 (0.010)		

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Edward H. Yonemoto, Ph.D.  
Technical Director

# CERTIFICATE OF ANALYSIS SUMMARY 1-73428

Project ID: 610099

Project Manager: Theresa Nix

Project Location: SPS-11

**K.E.I. Consultants, Inc.**

Project Name: *TNMPL*

Date Received in Lab : Dec 23, 1997 15:45

Date Report Faxed: Jan 9, 1998

**XENCO** contact : Carlos Castro/Edward Yonemoto

Analysis Requested	Lab ID: Field ID: Depth: Matrix: Sampled:		173428 013 MW-23 20.0-22.0 Solid 12/19/97	173428 014 MW-23 52.0-54.0 Solid 12/19/97	173428 015 MW-24 10.0-12.0 Solid 12/19/97	173428 016 MW-24 40.0-42.0 Solid 12/19/97	173428 017 MW-24 52.0-54.0 Solid 12/19/97	173428 018 MW-25 30.0-32.0 Solid 12/22/97
	Analyzed: Units:							
bis [2-Chloroethoxy] methane						R.L.		
bis [2-Chloroethyl] ether						< 0.010 (0.010)		
bis [2-Chloroisopropyl] ether						< 0.010 (0.010)		
bis [2-Ethylhexyl] phthalate						< 0.010 (0.010)		
						< 0.010 (0.010)		
SPLP Volatiles EPA 8260	Analyzed: Units:					01/02/98 mg/L		
Benzene						R.L.		
Bromobenzene						< 0.025 (0.025)		
Bromochloromethane						< 0.025 (0.025)		
Bromodichloromethane						< 0.025 (0.025)		
Bromoform						< 0.025 (0.025)		
Bromomethane						< 0.025 (0.025)		
Carbon Tetrachloride						< 0.025 (0.025)		
Chlorobenzene						< 0.025 (0.025)		
Chloroethane						< 0.025 (0.025)		
Chloroform						< 0.050 (0.050)		
Chloromethane						< 0.025 (0.025)		
2-Chlorotoluene						< 0.050 (0.050)		
4-Chlorotoluene						< 0.025 (0.025)		
1,2-Dibromo-3-chloropropane						< 0.025 (0.025)		
Dibromochloromethane						< 0.025 (0.025)		
1,2-Dibromoethane						< 0.025 (0.025)		
Dibromomethane						< 0.025 (0.025)		

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## K.E.I. Consultants, Inc.

Project ID: 610099

Project Manager: Theresa Nix

Project Location: SPS-11

Project Name: *TNMPL*

Date Received in Lab : Dec 23, 1997 15:45

Date Report Faxed: Jan 9, 1998

XENCO contact : Carlos Castro/Edward Yonemoto

Analysis Requested	Lab ID: Field ID: Depth: Matrix: Sampled:	173428 013 MW-23 20.0-22.0 Solid 12/19/97	173428 014 MW-23 52.0-54.0 Solid 12/19/97	173428 015 MW-24 10.0-12.0 Solid 12/19/97	173428 016 MW-24 40.0-42.0 Solid 12/19/97	173428 017 MW-24 52.0-54.0 Solid 12/19/97	173428 018 MW-25 30.0-32.0 Solid 12/22/97
	Analyzed: Units:				01/06/98 mg/L		
1,2-Dichlorobenzene					< 0.025 (0.025)		
1,3-Dichlorobenzene					< 0.025 (0.025)		
1,4-Dichlorobenzene					< 0.025 (0.025)		
Dichlorodifluoromethane					< 0.025 (0.025)		
1,1-Dichloroethane					< 0.025 (0.025)		
1,2-Dichloroethane					< 0.025 (0.025)		
1,1-Dichloroethene					< 0.025 (0.025)		
1,2-Dichloropropane					< 0.025 (0.025)		
1,3-Dichloropropane					< 0.025 (0.025)		
2,2-Dichloropropane					< 0.025 (0.025)		
1,1-Dichloropropene					< 0.025 (0.025)		
Ethylbenzene					0.610 (0.025)		
Hexachlorobutadiene					< 0.025 (0.025)		
Isopropylbenzene					0.068 (0.025)		
MTBE					< 0.050 (0.050)		
Methylene chloride					< 0.050 (0.050)		
Naphthalene					0.073 (0.025)		
Styrene					< 0.025 (0.025)		
1,1,1,2-Tetrachloroethane					< 0.025 (0.025)		
1,1,2,2-Tetrachloroethane					< 0.025 (0.025)		
Tetrachloroethene					< 0.025 (0.025)		
Toluene					0.226 (0.025)		
1,2,3-Trichlorobenzene					< 0.025 (0.025)		
1,2,4-Trichlorobenzene					< 0.025 (0.025)		

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Technical Director

# CERTIFICATE OF ANALYSIS SUMMARY 1-73428

Project ID: 610099

Project Manager: Theresa Nix

Project Location: SPS-11

K.E.I. Consultants, Inc.

Project Name: TNMPL

Date Received in Lab : Dec 23, 1997 15:45

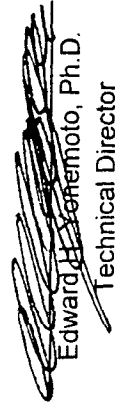
Date Report Faxed: Jan 9, 1998

XENCO contact : Carlos Castro/Edward Yonemoto

## Analysis Requested

Lab ID: Field ID: Depth: Matrix: Sampled:	173428 013 MW-23 20.0-22.0' Solid 12/19/97	173428 014 MW-23 52.0-54.0 Solid 12/19/97	173428 015 MW-24 10.0-12.0' Solid 12/19/97	173428 016 MW-24 40.0-42.0 Solid 12/19/97	173428 017 MW-24 52.0-54.0 Solid 12/19/97	173428 018 MW-25 30.0-32.0 Solid 12/22/97
1,1,1-Trichloroethane				01/06/98 mg/L	R.L.	
1,1,2-Trichloroethane				< 0.025 (0.025)		
Trichloroethene				< 0.025 (0.025)		
Trichlorofluoromethane				< 0.025 (0.025)		
1,2,3-Trichloropropane				< 0.025 (0.025)		
1,2,4-Trimethylbenzene				0.235 (0.025)		
1,3,5-Trimethylbenzene				0.055 (0.025)		
Vinyl chloride				< 0.025 (0.025)		
cis-1,2-Dichloroethene				< 0.025 (0.025)		
cis-1,3-Dichloropropene				< 0.025 (0.025)		
m,p-Xylenes				0.615 (0.025)		
n-Butylbenzene				< 0.025 (0.025)		
n-Propylbenzene				0.111 (0.025)		
o-Xylene				0.281 (0.025)		
p-Isopropyltoluene				< 0.025 (0.025)		
sec-Butylbenzene				< 0.025 (0.025)		
tert-Butylbenzene				< 0.025 (0.025)		
trans-1,2-Dichloroethene				< 0.025 (0.025)		
trans-1,3-Dichloropropene				< 0.025 (0.025)		
SPLP TPH 1312/418.1				12/31/97 ppm	R.L.	
Total Petroleum Hydrocarbons				34.3 (5.0)		

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Edward H. Yonemoto, Ph.D.  
Technical Director

# CERTIFICATE OF ANALYSIS SUMMARY 1-73428

**K.E.I. Consultants, Inc.**

**Project Name: TNMPL**

**Project ID: 610099**

**Project Manager: Theresa Nix**

**Project Location: SPS-11**

**Date Received in Lab : Dec 23, 1997 15:45**

**Date Report Faxed: Jan 9, 1998**

**XENCO contact : Carlos Castro/Edward Yonemoto**

## Analysis Requested

TPH-DRO (Diesel) EPA 8015 M	Lab ID: Field ID: Depth: Matrix: Sampled:	173428 019 MW-25 52.0-54.0 Solid 12/22/97				
	Analyzed: Units:	12/27/97 mg/kg	R.L.			
Total Petroleum Hydrocarbons						
BTEX	Analyzed: Units:	12/26/97 ppm	R.L.			
Benzene		< 0.020 (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		N.D.				

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Edward H. Yonemoto, Ph.D.  
Technical Director



# Certificate Of Quality Control for Batch : 17A25E03

**SW- 846 8015 M. TPH- GRO (Gasoline)**

Date Validated: Dec 29, 1997 16:30

Analyst: HL

Date Analyzed: Dec 26, 1997 13:01

Matrix: Solid

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

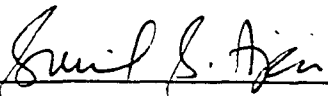
Parameter	BLANK SPIKE ANALYSIS						
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
	Blank	Blank Spike	Blank	Method	QC	LIMITS	
	Result	Result	Spike	Detection	Blank Spike	Recovery	
	mg/kg	mg/kg	Amount	Limit	Recovery	Range	Qualifier
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	
Total Petroleum Hydrocarbons	< 0.050	2.546	2.000	0.050	127.3	65-135	

Blank Spike Recovery [E] =  $100 \times (B-A)/(C)$

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

N.D. = Below detection limit

Results are based on MDL and validated for QC purposes only

  
Edward H. Yonemoto, Ph.D.  
Technical Director



**SW- 846 8015 M. TPH- GRO (Gasoline)**

Date Validated: Dec 29, 1997 16:30

Analyst: HL

Date Analyzed: Dec 26, 1997 14:36

Matrix: Solid

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

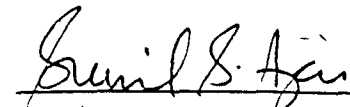
MATRIX DUPLICATE ANALYSIS						
Q.C. Sample ID 173428- 001	[A]	[B]	[C]	[D]	[E]	[F]
	Sample Result	Duplicate Result	Method Detection Limit	QC	LIMITS	Qualifier
	mg/kg	mg/kg	mg/kg	Relative Difference %	Relative Difference %	
Parameter						
Total Petroleum Hydrocarbons	165	170	1.00	3.0	30.0	

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.  
Technical Director

**SW- 846 8015 M TPH- DRO (Diesel)**
**Date Validated:** Dec 29, 1997 13:45

**Analyst:** MM

**Date Analyzed:** Dec 26, 1997 19:57

**Matrix:** Solid

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

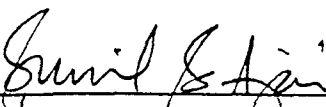
Parameter	BLANK SPIKE ANALYSIS						Qualifier
	[A]	[B]	[C]	[D]	[E]	[F]	
	Blank Result	Blank Spike Result	Blank Spike Amount	Method Detection Limit	QC	LIMITS	
	mg/kg	mg/kg	mg/kg	mg/kg	Blank Spike Recovery %	Recovery Range %	
Total Petroleum Hydrocarbons	< 10.00	155	155	10.00	100.2	65-135	

 Blank Spike Recovery [E] =  $100 \times (B-A)/(C)$ 

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

N.D. = Below detection limit

results are based on MDL and validated for QC purposes only

  
 Edward H. Yonemoto, Ph.D.  
 Technical Director



# Certificate Of Quality Control for Batch : 17Z99A66

SW- 346 3015 M TPH- DRO (Diesel)

Date Validated: Dec 29, 1997 13:45

Date Analyzed: Dec 27, 1997 05:05

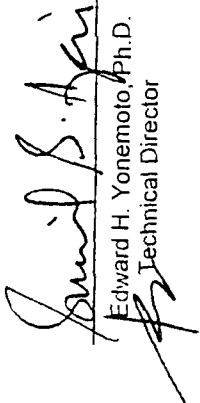
QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: MM

Matrix: Solid

MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY											
Q.C. Sample ID 173423- 019	[A] Sample Result  mg/kg	[B] Matrix Spike Result  mg/kg	[C] Matrix Spike Duplicate Result  mg/kg	[D] Matrix Spike Amount  mg/kg	[E] Method Detection Limit  mg/kg	Matrix Limit Relative Difference  %	[F]		[G]		[J] Qualifier
							Spike Relative Difference  %	QC	Matrix Spike Recovery Range  %	M.S.D. Recovery %	
Parameter											
Total Petroleum Hydrocarbons	33.83	188	184	200	10.00	30.0	2.2	77.1	75.1	65-135	

Spike Relative Difference [F] =  $200 \cdot (B-C)/(B+C)$   
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.  
Technical Director

**Certificate Of Quality Control for Batch : 17A25E02**
**SW- 846 5030/8020 BTEX**
**Date Validated:** Dec 29, 1997 16:00

**Analyst:** HL

**Date Analyzed:** Dec 26, 1997 13:01

**Matrix:** Solid

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

**BLANK SPIKE ANALYSIS**

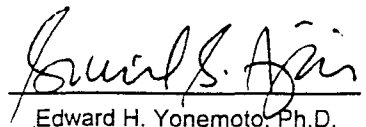
Parameter	[A]	[B]	[C]	[D]	[E]	[F]	[G] Qualifier
	Blank Result	Blank Spike Result	Blank Spike Amount	Method Detection Limit	QC	LIMITS	
	ppm	ppm	ppm	ppm	Blank Spike Recovery %	Recovery Range %	
Benzene	< 0.0010	0.0991	0.1000	0.0010	99.1	65-135	
Toluene	< 0.0010	0.0983	0.1000	0.0010	98.3	65-135	
Ethylbenzene	< 0.0010	0.1050	0.1000	0.0010	105.0	65-135	
m,p-Xylenes	< 0.0020	0.2180	0.2000	0.0020	109.0	65-135	
o-Xylene	< 0.0010	0.1040	0.1000	0.0010	104.0	65-135	

 Blank Spike Recovery [E] =  $100 \times (B-A)/(C)$ 

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

D. = Below detection limit

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

  
 Edward H. Yonemoto, Ph.D.

Technical Director

**Certificate Of Quality Control for Batch : 17A25E02**

**SW- 846 5030/3020 BTX**

Date Validated: Dec 29, 1997 16:00

Date Analyzed: Dec 26, 1997 18:25

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

Analyst: HL

Matrix: Solid

MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY											
Q.C. Sample ID 173423- 010	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]	
								QC	Spike Relative Difference %	QC	Matrix Spike Recovery %
Benzene		< 0.020	2.060	2.100	2.000	0.020	25.0		1.9	103.0	105.0
Toluene		< 0.020	2.060	2.060	2.000	0.020	25.0		0.0	103.0	103.0
Ethylbenzene		< 0.020	2.120	2.160	2.000	0.020	25.0		1.9	106.0	108.0
m,p-Xylenes		< 0.040	4.560	4.680	4.000	0.040	25.0		2.6	114.0	117.0
o-Xylene		< 0.020	2.100	2.180	2.000	0.020	25.0		3.7	105.0	109.0
											65-135
											65-135
											65-135
											65-135
											65-135

Spike Relative Difference [F] =  $200 \cdot (B-C) / (B+C)$   
 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.*  
 Edward H. Yonemoto, Ph.D.  
 Technical Director



## Certificate Of Quality Control for Batch : 18A23A04

### EPA 1311/8260 TCLP Volatiles

Date Validated: Jan 8, 1998 16:45

Analyst: CE

Date Analyzed: Jan 6, 1998 11:37

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	
	mg/L	mg/L	mg/L	mg/L	Blank Spike Recovery %	Recovery Range %	
Benzene	< 0.005	0.050	0.050	0.005	100.0	76-127	
Chlorobenzene	< 0.005	0.048	0.050	0.005	96.0	75-130	
1,1-Dichloroethene	< 0.005	0.050	0.050	0.005	100.0	61-145	
Toluene	< 0.005	0.047	0.050	0.005	94.0	76-125	
Trichloroethene	< 0.005	0.054	0.050	0.005	108.0	71-120	

Blank Spike Recovery [E] =  $100 \times (B-A)/(C)$

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.  
Technical Director



**Certificate Of Quality Control for Batch : 18A23A04**

**EPA 1311/3260 TCLP Volatiles**

Date Validated: Jan 8, 1998 16:45

Date Analyzed: Jan 6, 1998 17:00

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

Analyst: CE

Matrix: Solid

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY**

Q.C. Sample ID 173420- 016	[A] Sample Result mg/L	[B] Matrix Spike Result mg/L	[C] Matrix Spike Duplicate Result mg/L	[D] Matrix Spike Amount mg/L	[E] Method Detection Limit mg/L	Matrix Limit Relative Difference %	[F] QC		[G] QC Matrix Spike Recovery %	[H] QC M.S.D. Recovery %	[I] Matrix Spike Recovery Range %	[J] Qualifier
							Spike Relative Difference %	Difference %				
Benzene	0.013	0.053	0.051	0.050	0.005	20.0	3.2		100.0	96.0	75-127	
Chlorobenzene	< 0.005	0.048	0.048	0.050	0.005	20.0	0.0		96.0	96.0	75-130	
1,1-Dichloroethene	< 0.005	0.049	0.048	0.050	0.005	20.0	2.1		98.0	96.0	61-145	
Toluene	0.041	0.088	0.088	0.050	0.005	20.0	0.0		94.0	94.0	76-125	
Trichloroethene	< 0.005	0.049	0.048	0.050	0.005	20.0	2.1		98.0	96.0	71-120	

Spike Relative Difference [F] =  $200 \cdot (B-C)/(B+C)$

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.  
Technical Director

**Certificate Of Quality Control for Batch : 18A34A06**

**SW846- 1312/3270MOD SPLP- Semivolatiles, Target Com**

Date Validated: Jan 6, 1998 10:50

Date Analyzed: Jan 2, 1998 17:57

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

Analyst: LC

Matrix: Solid

**BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY**

Parameter	[A] Blank Result mg/L	[B] Blank Spike Result mg/L	[C] Blank Spike Duplicate Result mg/L	[D] Blank Spike Amount mg/L	[E] Method Detection Limit mg/L	Blank Limit Relative Difference %	[F]		[G]		[H]		[I]		[J] Qualifier
							Spike Relative Difference %	QC	Blank Spike Recovery %	QC	QC B.S.D. Recovery %	Blank Spike Recovery Range %			
Acenaphthene	< 0.0025	0.0234	0.0227	0.0250	0.0025	19.0	3.0		93.6		90.8	31-137			
4-Chloro-3-Methylphenol	< 0.0038	0.0249	0.0237	0.0250	0.0038	33.0	4.9		99.6		94.8	26-103			
2-Chlorophenol	< 0.0050	0.0236	0.0234	0.0250	0.0050	28.7	0.9		94.4		93.6	25-102			
1,4-Dichlorobenzene	< 0.0042	0.0225	0.0230	0.0250	0.0042	32.1	2.2		90.0		92.0	28-104			
2,4-Dinitrotoluene	< 0.0050	0.0206	0.0206	0.0250	0.0050	21.8	0.0		82.4		82.4	28-89			
N-Nitroso-di-n-propylamine	< 0.0040	0.0319	0.0300	0.0250	0.0040	55.4	6.1		127.6		120.0	41-126			A
4-Nitrophenol	< 0.0040	0.0072	0.0101	0.0250	0.0040	47.2	33.5		28.8		40.4	11-114			
Pentachlorophenol	< 0.0086	0.0181	0.0193	0.0250	0.0086	48.9	6.4		72.4		77.2	17-109			
Phenol	< 0.0037	0.0196	0.0180	0.0250	0.0037	22.6	8.5		78.4		72.0	26-90			
Pyrene	< 0.0020	0.0246	0.0243	0.0250	0.0020	25.2	1.2		98.4		97.2	35-142			
1,2,4-Trichlorobenzene	< 0.0054	0.0217	0.0237	0.0250	0.0054	23.0	8.8		86.8		94.8	38-107			

(A) Continuous Calibration Verification within acceptance limits

Spike Relative Difference [F] =  $200 \cdot (B-C)/(B+C)$


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

B.S.D. = Blank Spike Duplicate

B.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.  
Technical Director



# Certificate Of Quality Control for Batch : 17A07J83

## EPA 1312/418.1 SPLP TPH

Date Validated: Dec 31, 1997 16:15

Date Analyzed: Dec 31, 1997 13:50

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

Analyst: JM

Matrix: Solid

BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY												
Parameter	[A]	[B]	[C]	[D]	[E]	Blank Limit Relative Difference %	[F]	[G]	[H]	[I]	[J]	Qualifier
	Blank Result  ppm	Blank Spike Result  ppm	Blank Spike Duplicate Result  ppm	Blank Spike Amount  ppm	Method Detection Limit  ppm		QC	Blank Spike Recovery	QC	B.S.D. Recovery	Blank Spike Recovery Range %	
Total Petroleum Hydrocarbons	< 0.50	3.61	3.57	4.22	0.50	20.0	1.1	85.5	84.6	65-135		

Spike Relative Difference [F] =  $200 \cdot (B-C)/(B+C)$

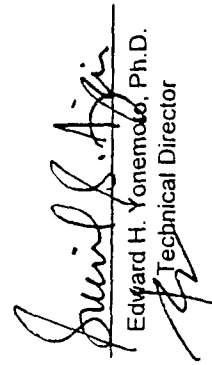
Blank Spike Recovery [G] =  $100 \cdot (B-A)/[D]$

B.S.D. = Blank Spike Duplicate

B.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.  
Technical Director



# ANALYTICAL CHAIN OF CUSTODY REPORT CHRONOLOGY OF SAMPLES

K.E.I. Consultants, Inc.

Project ID: 610099

Project Manager: Theresa Nix

Project Location: SPS-11

Project Name: TNMPL

XENCO COC#: 1-73428

Date Received in Lab: Dec 23, 1997 15:45 by HL

XENCO contact : Carlos Castro/Edward Yonemoto

Field ID		Lab. ID	Method Name	Method ID	Units	Turn Around	Sample Collected	Addition Requested	Extraction	Analysis
1	MW-17 (35.0-37.0)	173428-001	BTEX	SW-846	ppm	3 days	Dec 16, 1997		Dec 26, 1997 by HL	Dec 26, 1997 14:36 by HL
2			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 16, 1997		Dec 26, 1997 by MM	Dec 26, 1997 20:48 by MM
3			TPH8015M-G	SW-846 8015 M.	mg/kg	3 days	Dec 16, 1997		Dec 26, 1997 by HL	Dec 26, 1997 14:36 by HL
4	MW-17 (49.0-51.0)	173428-002	BTEX	SW-846	ppm	3 days	Dec 16, 1997		Dec 26, 1997 by HL	Dec 26, 1997 15:14 by HL
5			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 16, 1997		Dec 26, 1997 by MM	Dec 26, 1997 21:56 by MM
6			TPH8015M-G	SW-846 8015 M.	mg/kg	3 days	Dec 16, 1997		Dec 26, 1997 by HL	Dec 26, 1997 15:14 by HL
7	MW-17 (51.0-53.0)	173428-003	BTEX	SW-846	ppm	3 days	Dec 16, 1997		Dec 26, 1997 by HL	Dec 26, 1997 15:33 by HL
8			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 16, 1997		Dec 26, 1997 by MM	Dec 26, 1997 22:18 by MM
9			TPH8015M-G	SW-846 8015 M.	mg/kg	3 days	Dec 16, 1997		Dec 26, 1997 by HL	Dec 26, 1997 15:33 by HL
10	MW-18 (20.0-21.5)	173428-004	BTEX	SW-846	ppm	3 days	Dec 16, 1997		Dec 26, 1997 by HL	Dec 26, 1997 15:52 by HL
11			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 16, 1997		Dec 26, 1997 by MM	Dec 26, 1997 22:49 by MM
12	MW-18 (52.0-54.0)	173428-005	BTEX	SW-846	ppm	3 days	Dec 16, 1997		Dec 26, 1997 by HL	Dec 26, 1997 16:11 by HL
13			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 16, 1997		Dec 26, 1997 by MM	Dec 26, 1997 23:14 by MM
14	MW-19 (10.0-12.0)	173428-006	BTEX	SW-846	ppm	3 days	Dec 17, 1997		Dec 26, 1997 by HL	Dec 26, 1997 16:31 by HL
15			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 17, 1997		Dec 26, 1997 by MM	Dec 26, 1997 23:39 by MM
16		173428-007	BTEX	SW-846	ppm	3 days	Dec 17, 1997		Dec 26, 1997 by HL	Dec 26, 1997 16:50 by HL
17			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 17, 1997		Dec 26, 1997 by MM	Dec 27, 1997 00:04 by MM
18	MW-20 (30.0-32.0)	173428-008	BTEX	SW-846	ppm	3 days	Dec 17, 1997		Dec 26, 1997 by HL	Dec 26, 1997 17:09 by HL
19			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 17, 1997		Dec 26, 1997 by MM	Dec 27, 1997 00:29 by MM
20	MW-20 (52.0-54.0)	173428-009	BTEX	SW-846	ppm	3 days	Dec 17, 1997		Dec 26, 1997 by HL	Dec 26, 1997 17:28 by HL
21			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 17, 1997		Dec 26, 1997 by MM	Dec 27, 1997 00:54 by MM
22	MW-21 (52.0-53.0)	173428-010	BTEX	SW-846	ppm	3 days	Dec 18, 1997		Dec 26, 1997 by HL	Dec 26, 1997 18:25 by HL
23			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 18, 1997		Dec 26, 1997 by MM	Dec 27, 1997 01:19 by MM
24	MW-22 (5.0-7.0)	173428-011	BTEX	SW-846	ppm	3 days	Dec 18, 1997		Dec 26, 1997 by HL	Dec 26, 1997 17:47 by HL
25			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 18, 1997		Dec 26, 1997 by MM	Dec 27, 1997 01:44 by MM
26	MW-22 (52.0-54.0)	173428-012	BTEX	SW-846	ppm	3 days	Dec 18, 1997		Dec 26, 1997 by HL	Dec 26, 1997 19:21 by HL
27			TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 18, 1997		Dec 26, 1997 by MM	Dec 27, 1997 02:09 by MM
28	MW-23 (20.0-22.0)	173428-013	BTEX	SW-846	ppm	3 days	Dec 19, 1997		Dec 26, 1997 by HL	Dec 26, 1997 19:40 by HL



# ANALYTICAL CHAIN OF CUSTODY REPORT CHRONOLOGY OF SAMPLES

K.E.I. Consultants, Inc.

XENCO COC#: 1-73428

Project Name: TNMPL

Project ID: 610099

Project Manager: Theresa Nix

Project Location: SPS-11

Date Received in Lab: Dec 23, 1997 15:45 by HL

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
29		TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 19, 1997		Dec 26, 1997 by MM	Dec 27, 1997 02:35 by MM
30	MW-23 (52.0-54.0)	BTEX	SW-846	ppm	3 days	Dec 19, 1997		Dec 26, 1997 by HL	Dec 26, 1997 19:59 by HL
31		TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 19, 1997		Dec 26, 1997 by MM	Dec 27, 1997 03:00 by MM
32	MW-24 (40.0-42.0)	BTEX	SW-846	ppm	3 days	Dec 19, 1997		Dec 26, 1997 by HL	Dec 26, 1997 20:18 by HL
33		TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 19, 1997		Dec 26, 1997 by MM	Dec 27, 1997 03:25 by MM
34	MW-24 (40.0-42.0)	BTEX	SW-846	ppm	3 days	Dec 19, 1997		Dec 26, 1997 by HL	Dec 26, 1997 22:11 by HL
35		TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 19, 1997		Dec 26, 1997 by MM	Dec 27, 1997 03:50 by MM
36		SPLP TPH	EPA	ppm	7 days	Dec 19, 1997	Dec 29, 1997 15:50	Dec 31, 1997 by JM	Dec 31, 1997 15:55 by JM
37		SPLP VOA	EPA1312/8260	mg/kg	7 days	Dec 19, 1997	Dec 29, 1997 15:50	Jan 6, 1998 by CE	Jan 6, 1998 18:47 by CE
38		SPLP-SV(TCL)	SW846-1312/82	ug/L	7 days	Dec 19, 1997	Dec 29, 1997 15:50	Dec 31, 1997 by RR	Jan 2, 1998 21:08 by LC
39	MW-24 (52.0-54.0)	BTEX	SW-846	ppm	3 days	Dec 19, 1997		Dec 26, 1997 by HL	Dec 26, 1997 21:52 by HL
40		TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 19, 1997		Dec 26, 1997 by MM	Dec 27, 1997 04:15 by MM
41	MW-25 (30.0-32.0)	BTEX	SW-846	ppm	3 days	Dec 22, 1997		Dec 26, 1997 by HL	Dec 26, 1997 21:15 by HL
42		TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 22, 1997		Dec 26, 1997 by MM	Dec 27, 1997 04:40 by MM
43	MW-25 (52.0-54.0)	BTEX	SW-846	ppm	3 days	Dec 22, 1997		Dec 26, 1997 by HL	Dec 26, 1997 21:33 by HL
44		TPH8015M-D	SW-846 8015 M	mg/kg	Standard	Dec 22, 1997		Dec 26, 1997 by MM	Dec 27, 1997 05:05 by MM



1381 Meadowglen Suite L Houston, Texas 77082  
(713) 589-0692

# CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

Page 1 of 2  
Lab. Batch # 173428

<b>Contractor</b> KET Consultants		<b>Phone</b> (210) 680-3767		<b>No. coolers this shipment</b>		<b>Contractor COC #</b>								
<b>Address</b> 5309 Wurzbach Suite 100 San Antonio, TX 78238				<b>Carrier</b>		<b>Quote #:</b>								
<b>Project Name</b>		<b>Project Director</b> Mike Hawthorne		<b>Airbill No.</b>		<b>P.O. No.:</b>								
<b>Project Location</b> SPS-11		<b>Project Manager</b> Theresa Nix												
<b>Sampler Signature</b>		<b>Project No.</b> 610099												
<b>SAMPLE CHARACTERIZATION</b>														
<b>Field ID</b>	<b>Date</b>	<b>Time</b>	<b>D E P T H</b>	<b>S O I L</b>	<b>W A T E R</b>	<b>C O M P</b>	<b>G R A B</b>	<b>Container Size Type P.G.</b>	<b>Preservative Ice</b>	<b>Unl Dies Ker Unknown</b>	<b>Waste Oil PPT No:</b>	<b>Tank No:</b>	<b>Sample Description</b>	
MW-17	12-16-97		35.0-					902 G						
MW-17	12-16-97		37.0-											
MW-17	12-16-97		45.0-											
MW-17	12-16-97		51.0-											
MW-17	12-16-97		53.0-											
MW-18	12-16-97		24.0-											
MW-18	12-16-97		24.5-											
MW-18	12-16-97		52.0-											
MW-18	12-16-97		54.0-											
MW-19	12-17-97		10.0-											
MW-19	12-17-97		12.0-											
MW-19	12-17-97		52.0-											
MW-19	12-17-97		54.0-											
MW-20	12-17-97		30.0-											
MW-20	12-17-97		32.0-											
MW-20	12-17-97		52.0-											
MW-20	12-17-97		54.0-											
MW-21	12-18-97		20.0-											
MW-21	12-18-97		20.5-											
<b>Relinquished by (Signature)</b>										<b>DATE</b>	<b>TIME</b>	<b>Received by (Signature)</b>	<b>DATE</b>	<b>TIME</b>
										12-22-97	1430			
<b>Delivered via UPS</b>										12/23/97		<b>Received For Laboratory</b> Theresa Nix		12/23/97 15:45

Turn-around  
\* ASAP  
\* 24 hrs  
\* 48 hrs  
Standard

Remarks  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
THIS SAMPLE TO  
MISSING C-C-12/23

LAB ONLY ID #

Remarks  
Sample with highest TPH (COC)  
nn SPLP TPH  
SPLP VOC  
SPLP SVOC

Print (Contractor), Yellow & White (Lab.)

\* Pre-scheduling is recommended

Precision Analytical Services





1381 Meadowglen Suite L Houston, Texas 77082  
(713) 589-0692

# CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

Page 2 of 2  
Lab. Batch # 173428

Contractor <b>KEI Consultants</b>		Phone ( )		No. of CONTAINERS		No. coolers this shipment:		Contractor COC #																	
Address <b>5309 Wurzbach Suite 100 San Antonio, TX 78238</b>		Carrier:		Airbill No.		Quote #:		P.O. No.:																	
Project Name <b>SPS-11</b>		Project Director <b>Mike Hawthorne</b>		Project Manager <b>Theresa Nix</b>		Project No. <b>610099</b>		Turn-around → ASAP → 24 hrs → 48 hrs Standard																	
Field ID		Date		Time		D E P T H		S O I L		W A T E R		C O M P		G R A B		Container Size Type P, G		Preservative Ice Other		Unl Dies Ker Unknown		Waste Oil PPT No: Sample Description		Tank No: Sample Description	
MW-21		12-18-97		5:20		5:35		G		G		G		G		G		G		G		G		G	
MW-22		12-18-97		5:00		7:00		G		G		G		G		G		G		G		G		G	
MW-22		12-18-97		5:20		5:40		G		G		G		G		G		G		G		G		G	
MW-23		12-19-97		20:00		22:00		G		G		G		G		G		G		G		G		G	
MW-23		12-19-97		5:20		5:40		G		G		G		G		G		G		G		G		G	
MW-24		12-19-97		10:00		12:00		G		G		G		G		G		G		G		G		G	
MW-24		12-19-97		40:00		42:00		G		G		G		G		G		G		G		G		G	
MW-26		12-19-97		5:20		5:40		G		G		G		G		G		G		G		G		G	
MW-25		12-22-97		20:00		22:00		G		G		G		G		G		G		G		G		G	
MW-25		12-22-97		5:20		5:40		G		G		G		G		G		G		G		G		G	
Relinquished by		Signature		DATE		TIME		Received by		Signature		DATE		TIME		Remarks									
Delivered via UPS		12/23/97		14:30		12-22-97		14:30		12-22-97		15:45		Sample w/ highest TPH (DRO) run SPUP TPH SPUP VOC SPUP SVOC											

Print (Contractor), Yellow & White (Lab).

\* Pre-scheduling is recommended

Precision Analytical Services

# **ANALYTICAL REPORT 1-80098**

for

**K.E.I. Consultants, Inc.**

**Project Manager: Theresa Nix**

**Project Name: TNMPL**

**Project Id: 610099**

**January 28, 1998**



HOUSTON - DALLAS - SAN ANTONIO

**11381 Meadowglen Lane Suite L \* Houston, Texas 77082-2647**  
**Phone (281) 589-0692 Fax (281) 589-0695**



11381 Meadowglen Suite L  
Houston, Texas 77082-2647  
(281) 589-0692 Fax: (281) 589-0695  
Houston - Dallas - San Antonio

January 28, 1998

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

Reference: **XENCO Report No.: 1-80098**  
**Project Name: TNMPL**  
**Project ID: 610098**  
**Project Address: SPS-11**

Dear Theresa Nix:

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 1-80098. 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. 1-80098 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 Yonamoto, 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!*



11381 Meadowglade Suite L Houston, Texas 77082  
(713) 589-0692 Fax (713) 589-0695

# CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

Page 1 of 1

Lab. Batch # 180098-SA

Contractor <b>KEI Consultants</b>		Phone (210) 680-3763		No coolers this shipment:		Contractor COC #								
Address <b>S309 Wurzbach Suite 100 SA, TX 78238</b>				Carrier:		Quote #:								
Project Name		Project Director <b>Mike Hawthorne</b>		Airbill No.		P.O. No:								
Project Location <b>SPS-11</b>		Project Manager <b>Theresa Nix</b>												
Sampler Signature		Project No. <b>610099</b>												
SAMPLE CHARACTERIZATION														
Field ID	Date	Time	D E P T H	S O I L	W A T E R	C O M P	G R A B	Container Size Type P, G	Preservative Ice Other	Unl Dies Ker Unknown	Waste Oil	PT No:	Tank No:	Sample Description
B-7	1-6-98		30-	30.5										
B-7	1-6-98		52.0-	54.0										
B-8	1-6-98		20.0-	21.5										
B-8	1-6-98		40.0-	42.0										
B-8	1-6-98		52.0-	54.0										
B-9	1-6-98		20.0-	21.0										
B-9	1-6-98		40.0-	42.0										
B-9	1-6-98		52.0-	54.0										
B-7	1-6-98		40.0-	42.0										
Relinquished by:														
Signature:														
DATE: 1-12-98 TIME: 1610														
Received For Laboratory by:														
DATE: 1-13-98 TIME: 09:00														
Remarks: SAMPLE 4/ highest DEQ NO SPLP TPH VOC SVOC (Via UPS)														

Print (Contractor), Yellow & White (Lab.)

\* Pre-scheduling is recommended

Precision Analytical Services

# CERTIFICATE OF ANALYSIS SUMMARY 1-80098

Project ID: 610099  
Project Manager: Theresa Nix  
Project Location: SPS-11

K.E.I. Consultants, Inc.

Project Name: TNMPL

Date Received in Lab : Jan 13, 1998 09:00

Date Report Faxed: Jan 28, 1998

XENCO contact : Carlos Castro/Edward Yonemoto

## Analysis Requested

Lab ID: Field ID: Depth: Matrix: Sampled:	180098 001 B-7 30-30.5 Solid 01/06/98	180098 002 B-7 52.0-54.0 Solid 01/06/98	180098 003 B-8 20.0-21.5 Solid 01/06/98	180098 004 B-8 40.0-42.0 Solid 01/06/98	180098 005 B-8 52.0-54.0 Solid 01/06/98	180098 006 B-9 20.0-21.0 Solid 01/06/98
TPH-DRO (Diesel)	01/15/98 mg/kg	01/16/98 mg/kg	01/16/98 mg/kg	01/16/98 mg/kg	01/16/98 mg/kg	01/16/98 mg/kg
EPA 8015 M	R.L. (10.0)	R.L. (10.0)	R.L. (10.0)	R.L. (10.0)	R.L. (10.0)	R.L. (10.0)
Total Petroleum Hydrocarbons	< 10.0	< 10.0	< 10.0	276	22.3	< 10.0
BTEX	01/13/98 ppm	01/13/98 ppm	01/13/98 ppm	01/13/98 ppm	01/13/98 ppm	01/13/98 ppm
EPA 8020	R.L. (10.0)	R.L. (10.0)	R.L. (10.0)	R.L. (10.0)	R.L. (10.0)	R.L. (10.0)
Benzene	< 0.020	< 0.020	< 0.020	< 0.10	< 0.10	< 0.020
Toluene	< 0.020	< 0.020	< 0.020	0.17	< 0.10	< 0.020
Ethylbenzene	< 0.020	< 0.020	< 0.020	0.66	< 0.10	< 0.020
m,p-Xylenes	< 0.040	0.081	< 0.040	0.99	< 0.20	< 0.040
o-Xylene	< 0.020	< 0.020	< 0.020	0.88	< 0.10	< 0.020
Total BTEX	N.D.	0.081	N.D.	2.70	N.D.	N.D.

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*Edward H. Yonemoto*  
Edward H. Yonemoto, Ph.D.  
Technical Director

**CERTIFICATE OF ANALYSIS SUMMARY 1-80098**

Project ID: 610099  
Project Manager: Theresa Nix  
Project Location: SPS-11

**K.E.I. Consultants, Inc.**

Project Name: **TNMPL**

Date Received in Lab : Jan 13, 1998 09:00

Date Report Faxed: Jan 28, 1998

**XENCO** contact : Carlos Castro/Edward Yonemoto

**Analysis Requested**

Lab ID: Field ID: Depth: Matrix: Sampled:	180098 007 B-9 40.0-42.0 Solid 01/06/98	180098 008 B-9 52.0-54.0 Solid 01/06/98	180098 009 B-7 40.0-42.0 Solid 01/06/98		
TPH-DRO (Diesel) EPA 8015 M	Analyzed: Units: 01/16/98 mg/kg R.L. (100)	01/16/98 mg/kg R.L. (100)	01/16/98 mg/kg R.L. (10.0)		
Total Petroleum Hydrocarbons					
BTEX	Analyzed: Units: 01/13/98 ppm R.L. (100)	01/13/98 ppm R.L. (100)	01/13/98 ppm R.L. (10.0)		
EPA 8020					
Benzene	0.69 (0.10)	4.11 (0.10)	< 0.020 (0.020)		
Toluene	0.79 (0.10)	0.88 (0.10)	< 0.020 (0.020)		
Ethylbenzene	19.50 (0.10)	39.70 (0.10)	< 0.020 (0.020)		
m,p-Xylenes	22.20 (0.20)	42.30 (0.20)	< 0.040 (0.040)		
o-Xylene	7.23 (0.10)	16.30 (0.10)	< 0.020 (0.020)		
Total BTEX	50.41	103.29	N.D.		
SPLP-Semivolatiles, Target Com EPA1312/8270	Analyzed: Units: 01/22/98 mg/L R.L.	01/22/98 mg/L R.L.			
Acenaphthene		< 0.010 (0.010)			
Acenaphthylene		< 0.010 (0.010)			
Anthracene		< 0.010 (0.010)			
Benzo(a)anthracene		< 0.010 (0.010)			
Benzo(a)pyrene		< 0.010 (0.010)			
Benzo(b)fluoranthene		< 0.010 (0.010)			
Benzo(g,h,i)perylene		< 0.010 (0.010)			
Benzo(k)fluoranthene		< 0.010 (0.010)			
4-Bromophenyl-phenylether		< 0.010 (0.010)			
Butyl benzyl phthalate		< 0.010 (0.010)			
Carbazole		< 0.010 (0.010)			
4-Chloro-3-Methylphenol		< 0.010 (0.010)			

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*Edward H. Yonemoto*  
Edward H. Yonemoto, Ph.D.  
Technical Director



**CERTIFICATE OF ANALYSIS SUMMARY 1-80098**

Project ID: 610099

Project Manager: Theresa Nix

Project Location: SPS-11

**K.E.I. Consultants, Inc.**

Project Name: *TNMPL*

Date Received in Lab : Jan 13, 1998 09:00

Date Report Faxed: Jan 28, 1998

**XENCO contact :** Carlos Castro/Edward Yonemoto

**Analysis Requested**

Lab ID: Field ID: Depth: Matrix: Sampled:	180098 007 B-9 40.0-42.0 Solid 01/06/98	180098 008 B-9 52.0-54.0 Solid 01/06/98	180098 009 B-7 40.0-42.0 Solid 01/06/98		
Analyzed: Units:		01/22/98 mg/L	R.L.		
4-Chloroaniline		< 0.010 (0.010)			
2-Chloronaphthalene		< 0.010 (0.010)			
2-Chlorophenol		< 0.010 (0.010)			
4-Chlorophenyl-phenyl ether		< 0.010 (0.010)			
Chrysene		< 0.010 (0.010)			
Di-n-butyl phthalate		< 0.010 (0.010)			
Di-n-octyl phthalate		< 0.010 (0.010)			
Dibenzo(a,h)anthracene		< 0.010 (0.010)			
Dibenzofuran		< 0.010 (0.010)			
1,2-Dichlorobenzene		< 0.010 (0.010)			
1,3-Dichlorobenzene		< 0.010 (0.010)			
1,4-Dichlorobenzene		< 0.010 (0.010)			
3,3'-Dichlorobenzidine		< 0.010 (0.010)			
2,4-Dichlorophenol		< 0.010 (0.010)			
Diethyl phthalate		< 0.010 (0.010)			
2,4-Dimethylphenol		< 0.010 (0.010)			
Dimethyl phthalate		< 0.010 (0.010)			
4,6-Dinitro-2-methylphenol		< 0.025 (0.025)			
2,4-Dinitrophenol		< 0.025 (0.025)			
2,4-Dinitrotoluene		< 0.010 (0.010)			
2,6-Dinitrotoluene		< 0.010 (0.010)			
Fluoranthene		< 0.010 (0.010)			
Fluorene		< 0.010 (0.010)			
Hexachlorobenzene		< 0.010 (0.010)			

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# CERTIFICATE OF ANALYSIS SUMMARY 1-80098

Project ID: 610099  
Project Manager: Theresa Nix  
Project Location: SPS-11

K.E.I. Consultants, Inc.

Project Name: TNMPL

Date Received in Lab : Jan 13, 1998 09:00

Date Report Faxed: Jan 28, 1998

XENCO contact : Carlos Castro/Edward Yonemoto

## Analysis Requested

Lab ID: Field ID: Depth: Matrix: Sampled:	180098 007 B-9 40.0-42.0 Solid 01/06/98	180098 008 B-9 52.0-54.0 Solid 01/06/98	180098 009 B-7 40.0-42.0 Solid 01/06/98		
Analyzed: Units:		01/22/98 mg/L	R.L.		
Hexachlorobutadiene		< 0.010 (0.010)			
Hexachlorocyclopentadiene		< 0.010 (0.010)			
Hexachloroethane		< 0.010 (0.010)			
Indeno(1,2,3-cd)pyrene		< 0.010 (0.010)			
Isophorone		< 0.010 (0.010)			
2-Methylnaphthalene		0.044 (0.010)			
2-Methylphenol		< 0.010 (0.010)			
4-Methylphenol		< 0.010 (0.010)			
N-Nitroso-di-n-propylamine		< 0.010 (0.010)			
N-Nitrosodiphenylamine		< 0.010 (0.010)			
Naphthalene		0.048 (0.010)			
2-Nitroaniline		< 0.025 (0.025)			
3-Nitroaniline		< 0.025 (0.025)			
4-Nitroaniline		< 0.025 (0.025)			
Nitrobenzene		< 0.010 (0.010)			
2-Nitrophenol		< 0.010 (0.010)			
4-Nitrophenol		< 0.010 (0.010)			
Pentachlorophenol		< 0.025 (0.025)			
Phenanthrene		< 0.010 (0.010)			
Phenol		< 0.010 (0.010)			
Pyrene		< 0.010 (0.010)			
1,2,4-Trichlorobenzene		< 0.010 (0.010)			
2,4,5-Trichlorophenol		< 0.025 (0.025)			
2,4,6-Trichlorophenol		< 0.010 (0.010)			

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# CERTIFICATE OF ANALYSIS SUMMARY 1-80098

Project ID: 610099  
Project Manager: Theresa Nix  
Project Location: SPS-11

K.E.I. Consultants, Inc.

Project Name: TNMPL

Date Received in Lab: Jan 13, 1998 09:00

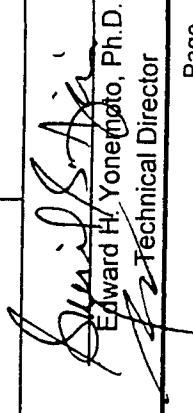
Date Report Faxed: Jan 28, 1998

XENCO contact: Carlos Castro/Edward Yonemoto

## Analysis Requested

Lab ID: Field ID: Depth: Matrix: Sampled:	180098 007 B-9 40.0-42.0 Solid 01/06/98	180098 008 B-9 52.0-54.0 Solid 01/06/98	180098 009 B-7 40.0-42.0 Solid 01/06/98		
Analyzed: Units:		01/22/98 mg/L	R.L.		
bis [2-Chloroethoxy] methane		< 0.010 (0.010)			
bis [2-Chloroethyl] ether		< 0.010 (0.010)			
bis [2-Chloroisopropyl] ether		< 0.010 (0.010)			
bis [2-Ethylhexyl] phthalate		0.028 (0.010)			
SPLP Volatiles EPA 8260		01/26/98 mg/L	R.L.		
Benzene		< 0.025 (0.025)			
Bromobenzene		< 0.025 (0.025)			
Bromochloromethane		< 0.025 (0.025)			
Bromodichloromethane		< 0.025 (0.025)			
Bromoform		< 0.025 (0.025)			
Bromomethane		< 0.025 (0.025)			
Carbon Tetrachloride		< 0.025 (0.025)			
Chlorobenzene		< 0.025 (0.025)			
Chloroethane		< 0.050 (0.050)			
Chloroform		< 0.025 (0.025)			
Chloromethane		< 0.050 (0.050)			
2-Chlorotoluene		< 0.025 (0.025)			
4-Chlorotoluene		< 0.025 (0.025)			
1,2-Dibromo-3-chloropropane		< 0.025 (0.025)			
Dibromochloromethane		< 0.025 (0.025)			
1,2-Dibromoethane		< 0.025 (0.025)			
Dibromomethane		< 0.025 (0.025)			

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Edward H. Yonemoto, Ph.D.  
Technical Director

# CERTIFICATE OF ANALYSIS SUMMARY 1-80098

Project ID: 610099  
 Project Manager: Theresa Nix  
 Project Location: SPS-11

**K.E.I. Consultants, Inc.**

Project Name: **TNMPL**

Date Received in Lab : Jan 13, 1998 09:00

Date Report Faxed: Jan 28, 1998

**XENCO** contact : Carlos Castro/Edward Yonemoto

## Analysis Requested


Lab ID: Field ID: Depth: Matrix: Sampled:	180098 007 B-9 40.0-42.0 Solid 01/06/98	180098 008 B-9 52.0-54.0 Solid 01/06/98	180098 009 B-7 40.0-42.0 Solid 01/06/98	
Analyzed: Units:	01/26/98 mg/L	R.L.		
1,2-Dichlorobenzene	< 0.025 (0.025)			
1,3-Dichlorobenzene	< 0.025 (0.025)			
1,4-Dichlorobenzene	< 0.025 (0.025)			
Dichlorodifluoromethane	< 0.025 (0.025)			
1,1-Dichloroethane	< 0.025 (0.025)			
1,2-Dichloroethane	< 0.025 (0.025)			
1,1-Dichloroethene	< 0.025 (0.025)			
1,2-Dichloropropane	< 0.025 (0.025)			
1,3-Dichloropropane	< 0.025 (0.025)			
2,2-Dichloropropane	< 0.025 (0.025)			
1,1-Dichloropropene	< 0.025 (0.025)			
Ethylbenzene	0.741 (0.025)			
Hexachlorobutadiene	< 0.025 (0.025)			
Isopropylbenzene	0.066 (0.025)			
MTBE	< 0.050 (0.050)			
Methylene chloride	< 0.050 (0.050)			
Naphthalene	0.055 (0.025)			
Styrene	< 0.025 (0.025)			
1,1,1,2-Tetrachloroethane	< 0.025 (0.025)			
1,1,2,2-Tetrachloroethane	< 0.025 (0.025)			
Tetrachloroethene	< 0.025 (0.025)			
Toluene	< 0.025 (0.025)			
1,2,3-Trichlorobenzene	< 0.025 (0.025)			
1,2,4-Trichlorobenzene	< 0.025 (0.025)			

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*Edward H. Yonemoto*  
 Edward H. Yonemoto, Ph.D.  
 Technical Director

## CERTIFICATE OF ANALYSIS SUMMARY 1-80098

<b>Project ID:</b> 610099 <b>Project Manager:</b> Theresa Nix <b>Project Location:</b> SPS-11		<b>K.E.I. Consultants, Inc.</b> <b>Project Name:</b> TNMPL		<b>Date Received in Lab :</b> Jan 13, 1998 09:00 <b>Date Report Faxed:</b> Jan 28, 1998 <b>XENCO contact :</b> Carlos Castro/Edward Yonemoto	
<b>Analysis Requested</b>		<b>Lab ID:</b> Field ID: Depth: Matrix: Sampled:	180098 007 B-9 40.0-42.0 Solid 01/06/98	180098 008 B-9 52.0-54.0 Solid 01/06/98	180098 009 B-7 40.0-42.0 Solid 01/06/98
	<b>Analyzed:</b> Units:	01/26/98 mg/L	R.L.		
1,1,1-Trichloroethane			< 0.025 (0.025)		
1,1,2-Trichloroethane			< 0.025 (0.025)		
Trichloroethene			< 0.025 (0.025)		
Trichlorofluoromethane		**	0.864 (0.025)		
1,2,3-Trichloropropane			< 0.025 (0.025)		
1,2,4-Trimethylbenzene			0.131 (0.025)		
1,3,5-Trimethylbenzene			0.050 (0.025)		
Vinyl chloride			< 0.025 (0.025)		
cis-1,2-Dichloroethene			< 0.025 (0.025)		
cis-1,3-Dichloropropene			< 0.025 (0.025)		
m,p-Xylenes			0.557 (0.025)		
n-Butylbenzene			< 0.025 (0.025)		
n-Propylbenzene			0.090 (0.025)		
o-Xylene			0.296 (0.025)		
p-Isopropyltoluene			< 0.025 (0.025)		
sec-Butylbenzene			< 0.025 (0.025)		
tert-Butylbenzene			< 0.025 (0.025)		
trans-1,2-Dichloroethene			< 0.025 (0.025)		
trans-1,3-Dichloropropene			< 0.025 (0.025)		
** Result beyond calibration limits					
SPLP TPH			01/22/98		
1312/418.1			ppm		
Total Petroleum Hydrocarbons			20.6 (1.1)		

  
 Edward H. Yonemoto, Ph.D.  
 Technical Director

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**SW- 846 5030/8020 BTEX**
**Date Validated:** Jan 14, 1998 09:00

**Analyst:** HL

**Date Analyzed:** Jan 13, 1998 13:29

**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 %	
Benzene	< 0.0010	0.1060	0.1000	0.0010	106.0	65-135	
Toluene	< 0.0010	0.1060	0.1000	0.0010	106.0	65-135	
Ethylbenzene	< 0.0010	0.1110	0.1000	0.0010	111.0	65-135	
m,p-Xylenes	< 0.0020	0.2340	0.2000	0.0020	117.0	65-135	
o-Xylene	< 0.0010	0.1100	0.1000	0.0010	110.0	65-135	

 Blank Spike Recovery [E] =  $100 \times (B-A)/(C)$ 

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

N.D. = Below detection limit

results are based on MDL and validated for QC purposes only

  
 Edward H. Yonemoto, Ph.D.  
 Technical Director



**Certificate Of Quality Control for Batch : 18A25A13**

**SW- 346 5030/3020 BTEx**

Date Validated: Jan 14, 1998 09:00

Date Analyzed: Jan 13, 1998 14:26

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

Analyst: HL

Matrix: Solid

MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY														
Q.C. Sample ID 130098- 002	Parameter	[A]	[B]	[C]	[D]	[E]	Matrix Limit	[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	Relative Difference %	QC	QC	QC	Matrix Spike Recovery Range %	Qualifier		
	Benzene	< 0.020	1.790	1.906	2.000	0.020	25.0	6.3	89.5	95.3	65-135			
	Toluene	< 0.020	1.788	1.848	2.000	0.020	25.0	3.3	89.4	92.4	65-135			
	Ethylbenzene	< 0.020	1.830	1.950	2.000	0.020	25.0	6.3	91.5	97.5	65-135			
	m,p-Xylenes	0.080	3.960	4.220	4.000	0.040	25.0	6.4	97.0	103.5	65-135			
	o-Xylene	< 0.020	1.842	1.966	2.000	0.020	25.0	6.5	92.1	98.3	65-135			

Spike Relative Difference [F] =  $200 \cdot (B-C)/(B+C)$

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.  
Technical Director

**SW- 846 8015 M TPH- DRO (Diesel)**

Date Validated: Jan 16, 1998 14:20

Analyst: MM

Date Analyzed: Jan 15, 1998 22:30

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	
	mg/kg	mg/kg	mg/kg	mg/kg	Blank Spike Recovery %	Recovery Range %	
Total Petroleum Hydrocarbons	< 10.00	254	300	10.00	84.7	65-135	

 Blank Spike Recovery [E] =  $100 \times (B-A)/(C)$ 

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

B.D. = Below detection limit

results are based on MDL and validated for QC purposes only

  
 Edward H. Yonemoto, Ph.D.  
 Technical Director



# Certificate Of Quality Control for Batch : 18A34A34

SW- 846 8015 M TPH- DR0 (Diesel)

Date Validated: Jan 16, 1998 14:20

Date Analyzed: Jan 15, 1998 23:28

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

Analyst: MM

Matrix: Solid

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY

Q.C. Sample ID 180098- 001	[A] Sample Result mg/kg	[B] Matrix Spike Result mg/kg	[C] Matrix Spike Duplicate Result mg/kg	[D] Matrix Spike Amount mg/kg	[E] Method Detection Limit mg/kg	Matrix		[F] QC	[G] QC	[H] QC	[I] Matrix Spike Recovery Range %	[J] Qualifier
						Limit	Relative Difference %	Spike Relative Difference %	Matrix Spike Recovery %	M.S.D. Recovery %		
Parameter												
Total Petroleum Hydrocarbons	< 10.00	258	272	300	10.00	30.0	5.3	86.0	90.7	65-135		

Spike Relative Difference [F] =  $200 \cdot (B-C)/(B+C)$   
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.  
Technical Director



# Certificate Of Quality Control for Batch : 18A34A45

SW846-8270 PAHs by SW-846-8270B

Date Validated: Jan 22, 1998 18:10

Date Analyzed: Jan 22, 1998 03:03

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

Analyst: LC

Matrix: Solid

## BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY

Parameter	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
	Blank Result mg/L	Blank Spike Result mg/L	Blank Spike Duplicate Result mg/L	Blank Spike Amount mg/L	Method Detection Limit mg/L	Blank Limit	QC	QC	Blank Spike Recovery Range %	Qualifier
						Relative Difference %	Spike Relative Difference %	Blank Spike Recovery %		
Acenaphthene	< 0.0040	0.0724	0.0724	0.1000	0.0040	19.0	0.0	72.4	72.4	31-137
4-Chloro-3-Methylphenol	< 0.0020	0.0760	0.0714	0.1000	0.0020	33.0	6.2	76.0	71.4	26-103
2-Chlorophenol	< 0.0020	0.0750	0.0712	0.1000	0.0020	28.7	5.2	75.0	71.2	25-102
1,4-Dichlorobenzene	< 0.0084	0.0774	0.0734	0.1000	0.0084	32.1	5.3	77.4	73.4	28-104
2,4-Dinitrotoluene	< 0.0020	0.0766	0.0732	0.1000	0.0020	21.8	4.5	76.6	73.2	28-89
N-Nitroso-di-n-propylamine	< 0.0080	0.0822	0.0760	0.1000	0.0080	55.4	7.8	82.2	76.0	41-126
4-Nitrophenol	< 0.0080	0.0294	0.0230	0.1000	0.0080	47.2	24.4	29.4	23.0	11-114
Pentachlorophenol	< 0.0040	0.0770	0.0766	0.1000	0.0040	48.9	0.5	77.0	76.6	17-109
Phenol	< 0.0020	0.0372	0.0342	0.1000	0.0020	22.6	8.4	37.2	34.2	26-90
Pyrene	< 0.0032	0.0862	0.0810	0.1000	0.0032	25.2	6.2	86.2	81.0	35-142
1,2,4-Trichlorobenzene	< 0.0108	0.0776	0.0766	0.1000	0.0108	23.0	1.3	77.6	76.6	38-107

Spike Relative Difference [F] =  $200 \times (B-C)/(B+C)$

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

B.S.D. = Blank Spike Duplicate

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

N.D. = Below detection limit or not detected

All results are based on MDL and validated for QC purposes

Edward H. Yonemoto, Ph.D.  
Technical Director

**Certificate Of Quality Control for Batch : 18A23A29**

**EPA1312/8260 SPLP Volatiles**

Date Validated: Jan 27, 1998 16:30

Date Analyzed: Jan 26, 1998 19:19

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

Analyst: CE

Matrix: Solid

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY**

Q.C. Sample ID 180098- 008		Parameter	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
			Sample Result mg/L	Matrix Spike Result mg/L	Matrix Spike Duplicate Result mg/L	Matrix Spike Amount mg/L	Method Detection Limit mg/L	Matrix Limit Relative Difference %	QC	QC	Matrix Spike Recovery Range %	Qualifier
									Spike Relative Difference %	M.S.D. Recovery %		
		Benzene	0.0115	0.2455	0.2545	0.2500	0.0050	3.6	93.6	97.2	66-142	
		Chlorobenzene	< 0.0050	0.2285	0.2390	0.2500	0.0050	4.5	91.4	95.6	60-133	
		1,1-Dichloroethene	< 0.0200	0.2360	0.2535	0.2500	0.0200	7.2	94.4	101.4	59-172	
		Toluene	0.0060	0.2355	0.2475	0.2500	0.0050	5.0	91.8	96.6	59-139	
		Trichloroethene	< 0.0150	0.2355	0.2485	0.2500	0.0150	5.4	94.2	99.4	62-137	

Spike Relative Difference [F] =  $200 \cdot (B-C)/(B+C)$   
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*  
Edward H. Yonemoto, Ph.D.  
Technical Director



Certificate Of Quality Control for Batch : 18A07A65

EPA 1312/418.1 SPLP TPH

Date Validated: Jan 22, 1998 12:45

Date Analyzed: Jan 22, 1998 10:04

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

Analyst: OG

Matrix: Solid

BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY																	
Parameter	{A} Blank Result  ppm  < 0.50	{B} Blank Spike Result  ppm  4.00	{C} Blank Spike Duplicate Result  ppm  4.03	{D} Blank Spike Amount  ppm  4.23	{E} Method Detection Limit  ppm  0.50	Blank Limit  Relative Difference  %	20.0	{F}	{G}	{H}	{I}	{J}					
													QC	QC	QC	Blank Spike Recovery Range  %	Qualifier
Total Petroleum Hydrocarbons								0.7	94.6	95.3	65-135						

Spike Relative Difference [F] =  $200 \cdot (B-C)/(B+C)$

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


B.S.D. = Blank Spike Duplicate

B.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

Houston Dallas San Antonio

  
Edward H. Yonemoto, Ph.D.  
Technical Director



# **ANALYTICAL REPORT 1-80255**

for

**K.E.I. Consultants, Inc.**

**Project Manager: Theresa Nix**

**Project Name: SPS-11**

**Project Id: 610099**

**January 27, 1998**



HOUSTON • DALLAS • SAN ANTONIO

11381 Meadowglen Lane Suite L \* Houston, Texas 77082-2647  
Phone (281) 589-0692 Fax (281) 589-0695



11381 Meadowglen Suite L  
Houston, Texas 77082-2647  
(281) 589-0692 Fax: (281) 589-0695  
Houston - Dallas - San Antonio

January 27, 1998

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

Reference: **XENCO Report No.: 1-80255**  
**Project Name: SPS-11**  
**Project ID: 610099**  
**Project Address: SPS-11**

Dear Theresa Nix:

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 1-80255. 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. 1-80255 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 Yohemoto, 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!*



# ANALYTICAL CHAIN OF CUSTODY REPORT CHRONOLOGY OF SAMPLES

K.E.I. Consultants, Inc.

Project ID: 610099

Project Manager: Theresa Nix

Project Location: SPS-11

Project Name: SPS-11

XENCO COC#: 1-80255

Date Received in Lab: Jan 23, 1998 09:20 by LY

XENCO contact : Carlos Castro/Edward Yonemoto

Field ID	Date and Time									
	Lab. ID	Method Name	Method ID	Units	Turn Around	Sample Collected	Addition Requested	Extraction	Analysis	
1 MW-1	180255-001	BTEX	SW-846	ppm	5 days	Jan 21, 1998 14:05		Jan 25, 1998 by HL	Jan 25, 1998 11:57 by HL	
2 MW-2	180255-002	BTEX	SW-846	ppm	5 days	Jan 21, 1998 14:23		Jan 25, 1998 by HL	Jan 25, 1998 11:00 by HL	
3 MW-3	180255-003	BTEX	SW-846	ppm	5 days	Jan 21, 1998 14:58		Jan 25, 1998 by HL	Jan 25, 1998 12:16 by HL	
4 MW-4	180255-004	BTEX	SW-846	ppm	5 days	Jan 21, 1998 13:49		Jan 25, 1998 by HL	Jan 25, 1998 12:35 by HL	
5 MW-6	180255-005	BTEX	SW-846	ppm	5 days	Jan 22, 1998 10:50		Jan 25, 1998 by HL	Jan 25, 1998 12:53 by HL	
6 MW-7	180255-006	BTEX	SW-846	ppm	5 days	Jan 21, 1998 13:39		Jan 25, 1998 by HL	Jan 25, 1998 13:12 by HL	
7 MW-9	180255-007	BTEX	SW-846	ppm	5 days	Jan 22, 1998 11:18		Jan 25, 1998 by HL	Jan 25, 1998 13:31 by HL	
8 MW-11	180255-008	BTEX	SW-846	ppm	5 days	Jan 21, 1998 13:58		Jan 25, 1998 by HL	Jan 25, 1998 13:50 by HL	
9 MW-12	180255-009	BTEX	SW-846	ppm	5 days	Jan 22, 1998 10:43		Jan 25, 1998 by HL	Jan 25, 1998 14:09 by HL	
10 MW-13	180255-010	BTEX	SW-846	ppm	5 days	Jan 22, 1998 11:00		Jan 25, 1998 by HL	Jan 25, 1998 14:28 by HL	
11 MW-14	180255-011	BTEX	SW-846	ppm	5 days	Jan 22, 1998 11:58		Jan 25, 1998 by HL	Jan 25, 1998 18:17 by HL	
12 MW-15	180255-012	BTEX	SW-846	ppm	5 days	Jan 22, 1998 12:06		Jan 25, 1998 by HL	Jan 25, 1998 15:25 by HL	
13 MW-16	180255-013	BTEX	SW-846	ppm	5 days	Jan 22, 1998 11:25		Jan 25, 1998 by HL	Jan 25, 1998 15:44 by HL	
14 MW-17	180255-014	BTEX	SW-846	ppm	5 days	Jan 21, 1998 13:10		Jan 25, 1998 by HL	Jan 25, 1998 16:03 by HL	
15 MW-18	180255-015	BTEX	SW-846	ppm	5 days	Jan 21, 1998 13:21		Jan 25, 1998 by HL	Jan 25, 1998 16:22 by HL	
16 MW-19	180255-016	BTEX	SW-846	ppm	5 days	Jan 21, 1998 13:28		Jan 25, 1998 by HL	Jan 25, 1998 16:41 by HL	
17 MW-20	180255-017	BTEX	SW-846	ppm	5 days	Jan 22, 1998 10:16		Jan 25, 1998 by HL	Jan 25, 1998 17:01 by HL	
18 MW-21	180255-018	BTEX	SW-846	ppm	5 days	Jan 22, 1998 10:30		Jan 25, 1998 by HL	Jan 25, 1998 17:20 by HL	
19 MW-22	180255-019	BTEX	SW-846	ppm	5 days	Jan 22, 1998 11:11		Jan 25, 1998 by HL	Jan 25, 1998 17:39 by HL	
20 MW-23	180255-020	BTEX	SW-846	ppm	5 days	Jan 22, 1998 11:58		Jan 25, 1998 by HL	Jan 25, 1998 17:58 by HL	
21 MW-24	180255-021	BTEX	SW-846	ppm	5 days	Jan 22, 1998 11:32		Jan 26, 1998 by HL	Jan 26, 1998 07:58 by HL	
22 MW-25	180255-022	BTEX	SW-846	ppm	5 days	Jan 22, 1998 11:41		Jan 25, 1998 by HL	Jan 26, 1998 00:27 by HL	

# CERTIFICATE OF ANALYSIS SUMMARY 1-80255

Project ID: 610099  
Project Manager: Theresa Nix  
Project Location: SPS-11

K.E.I. Consultants, Inc.  
Project Name: SPS-11

Date Received in Lab : Jan 23, 1998 09:20  
Date Report Faxed: Jan 27, 1998

XENCO contact : Carlos Castro/Edward Yonemoto

## Analysis Requested

Lab ID: Field ID: Depth: Matrix: Sampled:	180255 001 MW-1 Liquid 01/21/98 14:05	180255 002 MW-2 Liquid 01/21/98 14:23	180255 003 MW-3 Liquid 01/21/98 14:58	180255 004 MW-4 Liquid 01/21/98 13:49	180255 005 MW-6 Liquid 01/22/98 10:50	180255 006 MW-7 Liquid 01/21/98 13:39
BTEX	01/25/98 ppm	01/25/98 ppm	01/25/98 ppm	01/25/98 ppm	01/25/98 ppm	01/25/98 ppm
Benzene	7.54 (0.02)	< 0.001 (0.001)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	0.154 (0.004)
Toluene	1.11 (0.02)	< 0.001 (0.001)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	0.013 (0.004)
Ethylbenzene	1.76 (0.02)	< 0.001 (0.001)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	0.045 (0.004)
m,p-Xylenes	1.13 (0.04)	< 0.002 (0.002)	< 0.008 (0.008)	< 0.008 (0.008)	< 0.008 (0.008)	0.009 (0.008)
o-Xylene	0.46 (0.02)	< 0.001 (0.001)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	0.005 (0.004)
Total BTEX	12.00	N.D.	N.D.	N.D.	N.D.	0.226

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.  
Technical Director

# CERTIFICATE OF ANALYSIS SUMMARY 1-80255

**K.E.I. Consultants, Inc.**

Project ID: 610099  
Project Manager: Theresa Nix  
Project Location: SPS-11

Project Name: SPS-11

Date Received in Lab : Jan 23, 1998 09:20  
Date Report Faxed: Jan 27, 1998

**XENCO contact : Carlos Castro/Edward Yonemoto**

## Analysis Requested

BTEX EPA 8020	Lab ID: Field ID: Depth: Matrix: Sampled:	180255 007 MW-9 Liquid 01/22/98 11:18	180255 008 MW-11 Liquid 01/21/98 13:58	180255 009 MW-12 Liquid 01/22/98 10:43	180255 010 MW-13 Liquid 01/22/98 11:00	180255 011 MW-14 Liquid 01/22/98 11:58	180255 012 MW-15 Liquid 01/22/98 12:06
		Analyzed: Units: ppm	R.L. ppm	R.L. ppm	R.L. ppm	R.L. ppm	R.L. ppm
Benzene		1.692 (0.004)	2.116 (0.004)	0.173 (0.004)	< 0.004 (0.004)	11.2 (0.1)	0.237 (0.004)
Toluene		0.015 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	1.5 (0.1)	< 0.004 (0.004)
Ethylbenzene		0.836 (0.004)	0.004 (0.004)	0.035 (0.004)	< 0.004 (0.004)	2.4 (0.1)	< 0.004 (0.004)
m,p-Xylenes		0.385 (0.008)	< 0.008 (0.008)	0.015 (0.008)	< 0.008 (0.008)	1.0 (0.2)	< 0.008 (0.008)
o-Xylene		0.138 (0.004)	< 0.004 (0.004)	0.006 (0.004)	< 0.004 (0.004)	0.6 (0.1)	< 0.004 (0.004)
Total BTEX		3.066	2.120	0.229	N.D.	16.7	0.237

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Edward H. Yonemoto, Ph.D.  
Technical Director

# CERTIFICATE OF ANALYSIS SUMMARY 1-80255

**K.E.I. Consultants, Inc.**

**Project Name: SPS-11**

**Project ID: 610099**

**Project Manager: Theresa Nix**

**Project Location: SPS-11**

**Date Received in Lab : Jan 23, 1998 09:20**

**Date Report Faxed: Jan 27, 1998**

**XENCO contact : Carlos Castro/Edward Yonemoto**

## Analysis Requested

Lab ID: Field ID: Depth: Matrix: Sampled:	180255 013 MW-16 Liquid 01/22/98 11:25	180255 014 MW-17 Liquid 01/21/98 13:10	180255 015 MW-18 Liquid 01/21/98 13:21	180255 016 MW-19 Liquid 01/21/98 13:28	180255 017 MW-20 Liquid 01/22/98 10:16	180255 018 MW-21 Liquid 01/22/98 10:30
BTEX	01/25/98 ppm	01/25/98 ppm	01/25/98 ppm	01/25/98 ppm	01/25/98 ppm	01/25/98 ppm
Benzene	< 0.004 (0.004)	0.158 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	0.932 (0.004)
Toluene	< 0.004 (0.004)	0.156 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)
Ethylbenzene	< 0.004 (0.004)	0.026 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)
m,p-Xylenes	< 0.008 (0.008)	0.027 (0.008)	< 0.008 (0.008)	< 0.008 (0.008)	< 0.008 (0.008)	< 0.008 (0.008)
o-Xylene	< 0.004 (0.004)	0.013 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)	< 0.004 (0.004)
Total BTEX	N.D.	0.380	N.D.	N.D.	N.D.	0.932

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.  
Technical Director

# CERTIFICATE OF ANALYSIS SUMMARY 1-80255

**K.E.I. Consultants, Inc.**

Project ID: 610099

Project Manager: Theresa Nix

Project Location: SPS-11

Project Name: SPS-11

Date Received in Lab : Jan 23, 1998 09:20


Date Report Faxed: Jan 27, 1998

XENCO contact : Carlos Castro/Edward Yonemoto

## Analysis Requested

Lab ID: Field ID: Depth: Matrix: Sampled:	180255 019 MW-22 Liquid 01/22/98 11:11	180255 020 MW-23 Liquid 01/22/98 11:58	180255 021 MW-24 Liquid 01/22/98 11:32	180255 022 MW-25 Liquid 01/22/98 11:41
BTEX	01/25/98 ppm	01/25/98 ppm	01/26/98 ppm	01/26/98 ppm
EPA 8020	R.L.	R.L.	R.L.	R.L.
Benzene	< 0.004 (0.004)	< 0.004 (0.004)	1.40 (0.02)	< 0.001 (0.001)
Toluene	< 0.004 (0.004)	< 0.004 (0.004)	0.23 (0.02)	< 0.001 (0.001)
Ethylbenzene	< 0.004 (0.004)	< 0.004 (0.004)	0.15 (0.02)	< 0.001 (0.001)
m,p-Xylenes	< 0.008 (0.008)	< 0.008 (0.008)	0.07 (0.04)	< 0.002 (0.002)
o-Xylene	< 0.004 (0.004)	< 0.004 (0.004)	0.04 (0.02)	< 0.001 (0.001)
Total BTEX	N.D.	N.D.	1.89	N.D.

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.  
Technical Director



**Certificate Of Quality Control for Batch : 18A25A24**

**SW- 346 5030/3020 BTX**

Date Validated: Jan 26, 1998 14:00

Date Analyzed: Jan 25, 1998 11:19

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

Analyst: HL

Matrix: Liquid

MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY										
Q.C. Sample ID 180255- 002	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] QC		[J] Qualifier
								Spike Relative Difference %	Matrix Spike Recovery Range %	
	Benzene	< 0.0010	0.0956	0.0975	0.1000	0.0010	20.0	2.0	95.6	65-135
	Toluene	< 0.0010	0.0964	0.0980	0.1000	0.0010	20.0	1.6	96.4	65-135
	Ethylbenzene	< 0.0010	0.0995	0.1010	0.1000	0.0010	20.0	1.5	99.5	65-135
	m,p-Xylenes	< 0.0020	0.2150	0.2190	0.2000	0.0020	20.0	1.8	107.5	65-135
	o-Xylene	< 0.0010	0.0997	0.1020	0.1000	0.0010	20.0	2.3	99.7	65-135

Spike Relative Difference [F] =  $200 \cdot (B-C)/(B+C)$   
 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.  
 Technical Director



# Certificate Of Quality Control for Batch : 18A25A24

SW- 346 5030/8020 BTX

Date Validated: Jan 26, 1998 14:00

Date Analyzed: Jan 25, 1998 10:04

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

Analyst: HL

Matrix: Liquid

## BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY

Parameter	[A] Blank Result ppm	[B] Blank Spike Result ppm	[C] Blank Spike Duplicate Result ppm	[D] Blank Spike Amount ppm	[E] Method Detection Limit ppm	Blank Limit Relative Difference %	[F] QC		[G] QC	[H] QC	[I] Blank Spike Recovery Range %	[J] Qualifier
							Spike Relative Difference %	Blank Spike Recovery %		B.S.D. Recovery %		
Benzene	< 0.0010	0.1050	0.0942	0.1000	0.0010	20.0	10.8	104.9	94.2	65-135		
Toluene	< 0.0010	0.1030	0.0946	0.1000	0.0010	20.0	8.5	102.9	94.6	65-135		
Ethylbenzene	< 0.0010	0.1080	0.0981	0.1000	0.0010	20.0	9.6	107.9	98.1	65-135		
m,p-Xylenes	< 0.0020	0.2330	0.2100	0.2000	0.0020	20.0	10.4	116.4	104.9	65-135		
o-Xylene	< 0.0010	0.1070	0.0961	0.1000	0.0010	20.0	10.7	106.9	96.1	65-135		

Spike Relative Difference [F] =  $200 \cdot (B-C)/(B+C)$

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

B.S.D. = Blank Spike Duplicate

B.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

Houston • Dallas • San Antonio

  
Edward H. Yonemoto, Ph.D.  
Technical Director

**Certificate Of Quality Control for Batch : 18A25A25**

**SW- 846 5030/8020 BTEX**

Date Validated: Jan 26, 1998 15:00

Date Analyzed: Jan 25, 1998 22:14


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

Analyst: HL

Matrix: Liquid

Parameter	BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY									
	[A] Blank Result ppm	[B] Blank Spike Result ppm	[C] Blank Spike Duplicate Result ppm	[D] Blank Spike Amount ppm	[E] Method Detection Limit ppm	Blank Limit Relative Difference %	[F]		[G]	
							QC	Spike Relative Difference %	QC	Blank Spike Recovery %
Benzene	< 0.0010	0.1110	0.1070	0.1000	0.0010	20.0		3.7	110.3	106.3
Toluene	< 0.0010	0.1070	0.1030	0.1000	0.0010	20.0		3.8	106.9	102.9
Ethylbenzene	< 0.0010	0.1120	0.1080	0.1000	0.0010	20.0		3.6	111.9	107.9
m,p-Xylenes	< 0.0020	0.2410	0.2300	0.2000	0.0020	20.0		4.7	120.4	114.9
o-Xylene	< 0.0010	0.1110	0.1060	0.1000	0.0010	20.0		4.6	110.9	105.9
										65-135
										65-135
										65-135
										65-135
										65-135

Spike Relative Difference [F] =  $200 \cdot (B-C) / (B+C)$   
Blank Spike Recovery [G] =  $100 \cdot (B-A) / (D)$   
B.S.D. = Blank Spike Duplicate  
B.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.  
Technical Director

Lab. Batch # 186255-2A

Contractor: K.E.I. Consultants Address: 5309 Wurzbach, Suite 100 San Antonio, TX 78238 Project Name: SPS-11 Project Location: Project Director: Mike Hawthorne Project Manager: Theresa Nix Project No: 610099										Phone: (210) 680-3767 No coolers this shipment: Carrier: UPS Airbill No: Contractor COC #: Quote #: PO No: 86572									
No of CONTAINERS Total										Turn-around → ASAP → 24 hrs 48 hrs (Standard)									
SAMPLE CHARACTERIZATION										Please Hold									
Field ID	Date	Time	DEPTH	SOURCE	WATER	COMB	GRA	Container Size	Type	PG	Ice	Other	Preservative	Unl	Dies	Ker	Unknown	Tank No:	Sample Description
MW-1	1-21-98	1405			/			40ml			/	HCl							
MW-2	1-21-98	1423			/			40ml			/	HCl							
MW-3	1-21-98	1458			/			40ml			/	HCl							
MW-4	1-21-98	1349			/			40ml			/	HCl							
MW-6	1-22-98	1050			/			40ml			/	HCl							
MW-7	1-21-98	1339			/			40ml			/	HCl							
MW-9	1-22-98	11:18			/			40ml			/	HCl							
MW-11	1-21-98	1358			/			80ml			/	HCl							
MW-12	1-22-98	1043			/			40ml			/	HCl							
MW-13	1-22-98	11:00			/			40ml			/	HCl							
Relinquished by: (Signature)										Received by: (Signature)									
DATE: 1-22-98										DATE: 1-22-98									
TIME: 1600										TIME: 1600									
(Signature)										(Signature)									
Received For Laboratory by: UPS										Received For Laboratory by: UPS									
(Signature)										(Signature)									
1/23/98										1/23/98									
930										930									
BTEX (5000-8020-602)										BTEX (5000-8020-602)									
TPH (482)										TPH (482)									
ID #										ID #									
ONLY										ONLY									
IB										IB									
A										A									
I										I									
Remarks										Remarks									
1										1									
2										2									
3										3									
4										4									
5										5									
6										6									
7										7									
8										8									
9										9									
10										10									
BTEX EPA method SW846-8020										BTEX EPA method SW846-8020									
For analytical to Theresa Nix et										For analytical to Theresa Nix et									
210-680-3763										210-680-3763									
Cex analytical to Stan Grover et										Cex analytical to Stan Grover et									
505-397-7065										505-397-7065									

Pink (Contractor), Yellow &amp; White (Lab).

**\*\* Pre-scheduling is recommended**

## Precision Analytical Services



11381 Meadowglen Suite L Houston, Texas 77082  
(713) 589-0692

CHAIN OF CUSTODY RECORD  
AND ANALYSIS REQUEST FORM

Lab. Batch # 180255-SA

Contractor <b>K.C. Consultants</b>		Phone (210) 680-5767		No. coolers this shipment: Carrier: <b>UPS</b>		Contractor COC #									
Address <b>5309 Wurzbach, Suite 100 San Antonio, TX 78238</b>		Project Director <b>Mike Hawthorne</b>		Airbill No.		Quote #:									
Project Name <b>SPS-11</b>		Project Manager <b>Theresa Nix</b>		Project No. <b>610099</b>		P.O. No: <b>8652</b>									
Sampler Signature <i>[Signature]</i>		Project No.		Total		Turn-around * ASAP * 24 hrs * 48 hrs Standard									
SAMPLE CHARACTERIZATION		Preservative		Unl. Dies Ker. Unknown		ID #									
Field ID	Date	Time	DEPT H	SOIL	WATER	COMB	GRA B	Container Size Type P.G.	Is	Other	PTT No.	Waste Oil	Sample Description	Tank No.	
MW-14	1-22-98	11:58						40ml	/	HCl					
MW-15	1-22-98	12:06						40ml	/	HCl					
MW-16	1-22-98	11:25						40ml	/	HCl					
MW-17	1-21-98	13:10						40ml	/	HCl					
MW-18	1-21-98	13:21						40ml	/	HCl					
MW-19	1-21-98	13:28						40ml	/	HCl					
MW-20	1-22-98	10:16						40ml	/	HCl					
MW-21	1-22-98	10:30						40ml	/	HCl					
MW-22	1-22-98	11:11						40ml	/	HCl					
MW-23	1-22-98	11:56						40ml	/	HCl					
Relinquished by <i>[Signature]</i>		Signature <i>[Signature]</i>		DATE 1-22-98		Received by <i>[Signature]</i>		Signature <i>[Signature]</i>		DATE 1-23-98		TIME 920		Remarks BTEX: EPA method SW846-8020 PAH Analytical to Theresa Nix 210-680-3763 PAH Analytical to - Stan Grover 505-392-2065	

PKK (Contractor), Yellow & White (Lab.)

\* Pre-scheduling is recommended

Precision Analytical Services



1381 Meadowglen Suite L Houston, Texas 77082  
(713) 589-0692

CHAIN OF CUSTODY RECORD  
AND ANALYSIS REQUEST FORM

Lab. Batch # 180255-SA

Contractor <b>K.e.i. Consultants</b>		Phone (210) 680-3767		No coolers this shipment:		Contractor COC #	
Address <b>5309 Wurzbach, Suite 100 San Antonio, TX 78238</b>		Project Director <b>Mike Hawthorne</b>		Carrier: <b>UPS</b>		Quote #:	
Project Name <b>SPS-11</b>		Project Manager <b>Theresa Nix</b>		Airtail No.		P.O. No: <b>8652</b>	
Project Location <b>325-11</b>		Project No. <b>610099</b>					
SAMPLE CHARACTERIZATION				Turn-around			
Field ID	Date	Time	Container	Size	Type	PTG	LAB ONLY ID #
MW-24	1-22-98	11:32	40ml				1
MW-25	1-22-98	11:41	40ml				2
							3
							4
							5
							6
							7
							8
							9
							10

No of CONTAINERS		Total		Remarks	
2				BTX (5030/8020-602)	
2				TFH (418)	
				Please Hold	
				Standard	
				48 hrs	
				24 hrs	
				ASAP	

Relinquished by: <b>Shirley</b>		Signature		DATE		TIME		RECEIVED BY: <b>UPS</b>		Signature		DATE		TIME		REMARKS	
				1-22-98		1600						1/23/98		920		BTX EPA Method SW 846-8020 Fax Analytical to Theresa Nix at 210-680-3763 Fax Analytical to STAN Grover at 505-392-2065	







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

GW-140

October 23, 1996

Eddie Gripp  
TEXAS - NEW MEXICO PIPE LINE CO.  
3330 Executive Drive  
P.O. Box 60028  
San Angelo, Texas 76906

**RECEIVED**

OCT 28 1996

Environmental Bureau  
Oil Conservation Division

RE: TNMPL SPS-11 Site

Dear Mr. Gripp:

The information herein is provided in response to the OCD letters of March 5, 1993, and October 2, 1996 (copies in Appendix A). The information is organized chronologically by OCD letter date, and identified by the specific item number provided in each OCD letter. A Site Location map is provided as FIG. 1.

**MARCH 5, 1993 LETTER**

Item 1: Well logs for monitoring wells MW-1, MW-2, MW-3, and MW-4 are presented as FIG. 3 through FIG. 6. ✓

Item 2: The analytical results of the May 6 and May 7, 1992 influent and effluent samples collected during the pump tests were included in the January 25, 1993 report. However, the sample descriptions were not listed in the report. The analytical results are presented below. ✓

Sample ID	Date Sampled	B (mg/L)	T (mg/L)	E (mg/L)	X (mg/L)
PW1-1 (Sparge Tank Influent)	05/06/92	<0.004	0.005	<0.004	<0.004
PW1-2 (Effluent)	05/06/92	<0.004	<0.004	<0.004	<0.004
PW1-3 (Influent)	05/07/92	<0.004	<0.004	<0.004	<0.004
PW1-4 (Effluent)	05/07/92	<0.004	<0.004	<0.004	<0.004

Item 3: As you pointed out in your letter, the estimated capture zone shown on Figure 11 of Appendix E in the site investigation report dated January 25, 1993, is oriented incorrectly. ✓

Item 4: TNMPL will comply with the line pressure testing requirement. Currently the system is not operating. An initial pressure test will be performed to at least 3 psi above the anticipated operating pressure before the treatment system is started up.

Subsequent tests to the same standard will be performed annually. The results of the pressure test(s) will be submitted to OCD.

Item 5: TNMPL proposes to install additional soil borings and monitoring wells to further define the boundaries of impacted soil and ground water. The approximate proposed locations of these borings and wells are presented on FIG. 2. Actual locations of these points may vary depending upon field conditions encountered during installation. Soil and ground water samples will be collected from each of these borings and wells. Installation will proceed upon receipt of approval from OCD.

Item 6: The highest priority at the time of system installation was ground water treatment. Consequently, the ground water treatment system was designed to contain the spread of dissolved hydrocarbons. We agree with OCD that the soils at the site should be characterized further. The results of the soil and ground water sample analyses from the new soil borings and monitoring wells will be utilized to define the impact to soils at the site. If this analysis indicates the need for soil remediation, an appropriate system design will be submitted to OCD for approval. In the interim, TNMPL proposes to proceed with the startup of the ground water treatment system following receipt of OCD and NMED approval to do so.

Item 7: Appendix B is a proposed sampling plan which has been prepared in accordance with NMED regulations and project specific directives. We request that OCD defer regulation of drinking water sampling and approvals to NMED, as appropriate. The proposed sampling plan will be submitted to NMED for review and approval prior to system startup.

Item 8: TNMPL herein requests a modification to the reporting schedule to eliminate quarterly reports and replace them with one annual report. This annual report will summarize project monitoring data for the previous year, and will be provided by February 15 of each year following the reporting year. Site monitoring will be conducted on a quarterly basis, at a minimum.

Item 9: TNMPL wishes to update the sampling plan, as follows:

The pumping wells and treatment system will be monitored for a broad range of organic and inorganic constituents as noted in the proposed sampling plan in Appendix B. The monitor wells at the site will be gauged and sampled on a quarterly basis. TNMPL proposes to conduct quarterly sampling from the monitoring wells for BTEX and TPH. In addition, an initial sample for PAH's will be obtained for ground water from each monitoring well. Should the PAH results be at or below acceptable ground water standards, no further PAH sampling will be performed.

The initial non-VOC treatment system samples at the site (as identified in the proposed sampling plan) are to be obtained from each pumping well prior to the treatment system. Therefore, the broad range of organic and inorganic samples identified in the proposed sampling plan should adequately represent site conditions without the need for extensive sampling of each monitoring well.

Item 10: TNMPL will not terminate remediation prior to OCD approval. When TNMPL believes remediation is no longer necessary, a site closure request will be submitted to OCD for approval.

## OCTOBER 2, 1996 LETTER

- Item 1: The January 25, 1993 report summarized site activities prior to the date of the report. Subsequently, the system was installed and briefly operated. A summary description of site activities subsequent to the January 25, 1993 report is provided as Appendix C.
- Item 2: FIG. 2 is a site map which also includes the remediation system and the "Buffalo Wallow" adjacent to the site. Apparently, the Hobbs OCD office provided verbal approval for the discharge of the produced aquifer test water into Buffalo Wallow. In addition, during initial system testing prior to discharging into the SPS-11 water system, treated ground water was discharged into Buffalo Wallow. During the brief periods of system operation, treated water was discharged into the SPS-11 water system connection at SPS-11. We know of no subsurface discharges.
- Item 3: Appendix D summarizes existing information concerning the duration and volume of all discharges from the system to date.
- Item 4: The January 25, 1993 report contained site analytical data obtained prior to the report. Appendix E contains a table summarizing subsequent analytical data for ground water and discharge water quality.
- Item 5: A response to the OCD letter of March 5, 1993 is provided in the first section of this letter.

If you have any questions or need additional information, please contact me at (210) 680-3767.

Respectfully,



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

cc: Mr. J.A. Savoie, TNMPL, P.O. Box 1030, Jal, NM 88252  
Mr. Marc Oler, TTTI, 1670 Broadway, Denver, CO 80202-4899

## PRINTED 1993

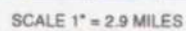


FIG 1

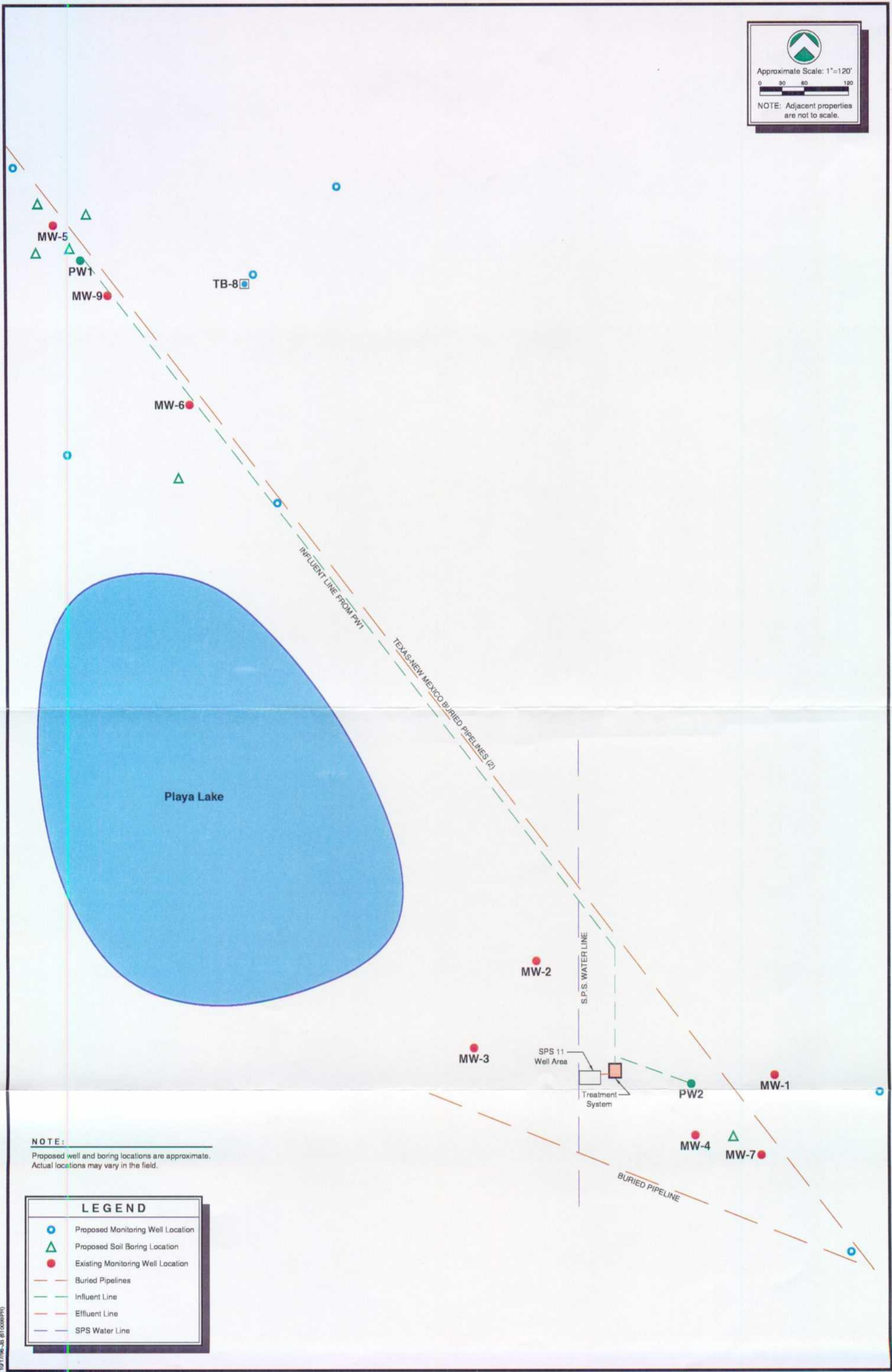




Approximate Scale: 1"=120'

0 30 60 120

NOTE: Adjacent properties are not to scale.



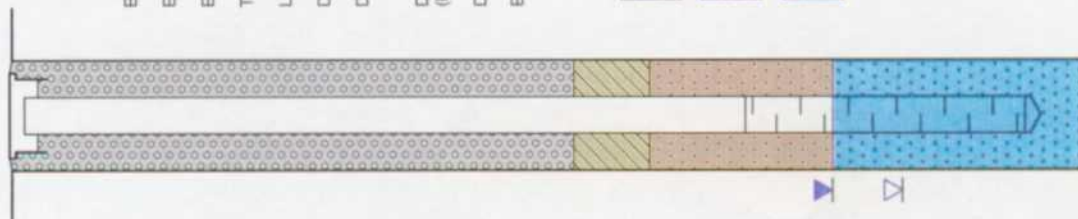
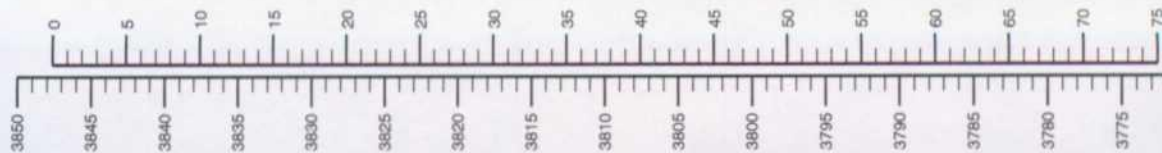
NOTE:  
Proposed well and boring locations are approximate.  
Actual locations may vary in the field.

**LEGEND**

- Proposed Monitoring Well Location
- Proposed Soil Boring Location
- Existing Monitoring Well Location
- Buried Pipelines
- Influent Line
- Effluent Line
- SPS Water Line



# MONITORING WELL MW-1



## Monitoring Well Details (MW-1)

Elev Top of Protective Cover	ft
Elev of Ground Surface	3847.61 ft
Elev Top of PVC Well	ft
Thickness of Bentonite Seal	5.25 ft
Length of PVC Well Screen	20.0 ft
Depth of PVC Well	70.0 ft
Depth of Exploratory Hole	73.0 ft
Depth to Ground Water (During drilling)	60.67 ft
Depth to Ground Water	55.93 ft
Elev of Ground Water	3791.68 ft

## LEGEND

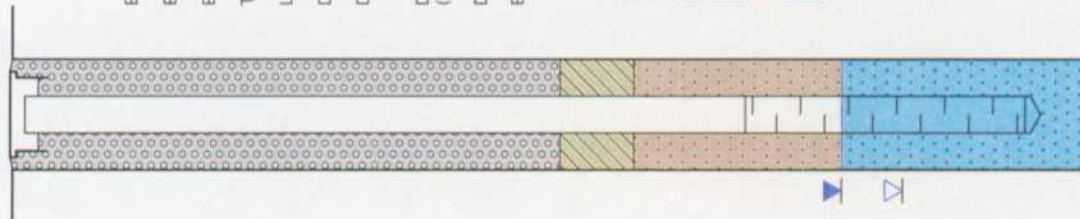
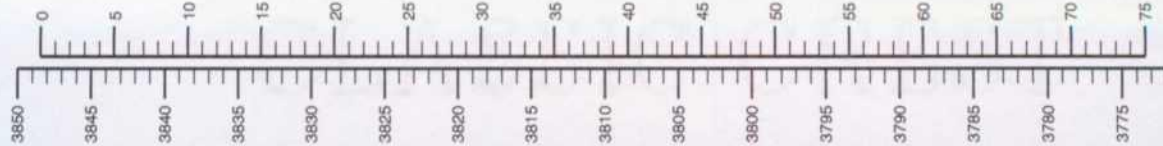
	Topsoil
	Rock, sand, caliche
	Sand
	Rock
	Indicates the ground water level measured during drilling.
	Indicates the ground water level measured on July 13, 1992.

## NOTES

1. The monitoring well was installed on August 19, 1991 using approximately 8 inch diameter air rotary cone augers.
2. The well was constructed with 4 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a monument type steel cover.
4. Drilling activities were not conducted by KEI. Soil classifications and monitoring well details were obtained from contractor's field notes.
5. The depths indicated are referenced from the ground surface.



# MONITORING WELL MW-2



## LEGEND



Indicates the ground water level measured during drilling.  
 Indicates the ground water level measured on July 13, 1992.

## NOTES

1. The monitoring well was installed on August 19, 1991 using approximately 8 inch diameter air rotary cone augers.
2. The well was constructed with 4 inch ID, 0.010 inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The well is protected with a monument type steel cover.
4. Drilling activities were not conducted by KEI. Soil classifications and monitoring well details were obtained from contractor's field notes.
5. The depths indicated are referenced from the ground surface.

## Monitoring Well Details (MW-2)

Elev Top of Protective Cover	ft
Elev of Ground Surface	3848.68 ft
Elev Top of PVC Well	ft
Thickness of Bentonite Seal	5.0 ft
Length of PVC Well Screen	20.0 ft
Depth of PVC Well	70.0 ft
Depth of Exploratory Hole	73.0 ft
Depth to Ground Water (During drilling)	ft
Depth to Ground Water	56.43 ft
Elev of Ground Water	3792.25 ft



LOG AND DETAILS OF MONITORING WELL MW-2

TNMPL SPS-11

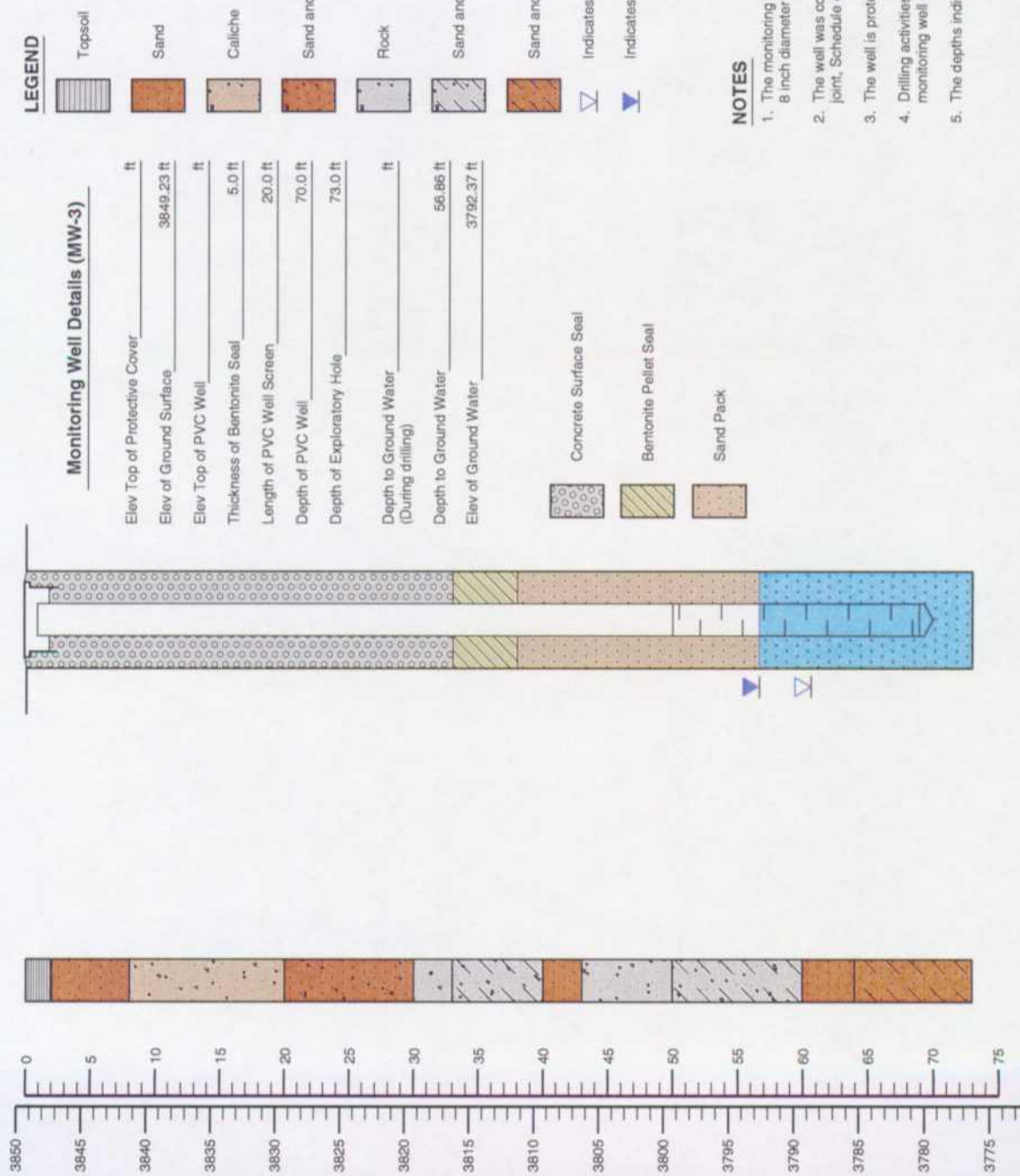
LEA COUNTY, NEW MEXICO

610099

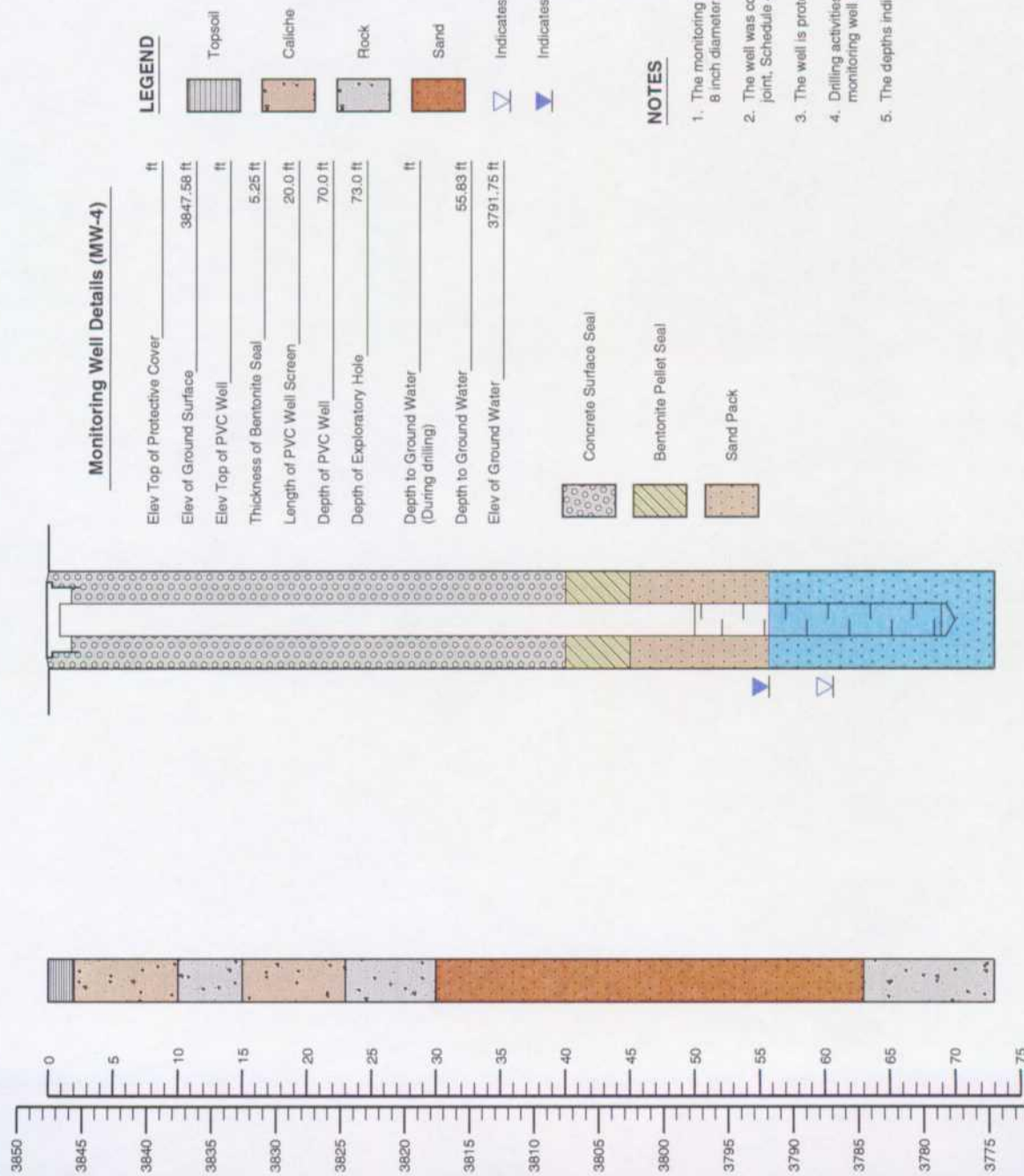
FIG 4



## MONITORING WELL MW-3



## MONITORING WELL MW-4



LOG AND DETAILS OF MONITORING WELL MW-4

LEA COUNTY, NEW MEXICO

SPS-11

TNMPL

610099

FIG 6

kei

OCT. 8.1996 2:42PM TTTI SOUTHERN REGION

NO. 73 P.2/6



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

## OIL CONSERVATION DIVISION

2001 E. PACHECO  
SANTA FE, NEW MEXICO 87301  
(505) 827-7134

October 27, 1996

CERTIFIED MAILRETURN RECEIPT NO. P-269-269-293

Mr. Ed Murray  
President  
Texas-New Mexico Pipe Line Co.  
P.O. Box 4454  
Houston, Texas 77210-4454

RE: GROUND WATER REMEDIATION  
SPS WATER WELL #11  
LEA COUNTY, NEW MEXICO

DEAR Mr. MURRAY:

The New Mexico Oil Conservation Division (OCD) has recently learned that the Texas-New Mexico Pipe Line Company (TNMPLC) has been discharging treated effluent in violation of state regulations. The effluent is the result of treatment of petroleum contaminated ground water from TNMPLC's SPS-11 ground water remediation project which was discharged into a public water supply system. It is also OCD's understanding that treated effluent was discharged on the surface into an adjacent buffalo wallow. The remediation project is the result of a spill of crude oil from a TNMPLC pipeline which contaminated southwestern Public Service Company's (SPS) water well SPS-11 located in the NW/4, NW/4, SE/4, Section 18, Township 18 South, Range 36 East, NMPL, Lea County, New Mexico.

A review of the OCD's file on this case shows that pursuant to New Mexico Water Quality Control Commission (WQCC) regulations, the Director of the OCD required a discharge plan for this activity on August 21, 1992. In compliance with this requirement, TNMPLC submitted a site investigation and remediation plan to the OCD on February 10, 1993. On March 5, 1993, the OCD requested additional information and commitments from TNMPLC regarding the site investigation and remediation plan which needed to be supplied to the OCD prior to issuing discharge plan approval. This correspondence was received by TNMPLC on March 9, 1993. To date TNMPLC has not responded to this document. By discharging treated effluent to the SPS water supply system without a plan approved by the OCD, TNMPLC violated state regulations.

SOUTHERN REGION	
OCT 8 1996	
ERM	JFK
QEM	PEE
RWL	WVW
CMH	FES
RAR	ERC
SGK	DWC
DLB	JWS
JEN	APP
RJM	MME

CC: E. Schubert  
D. Bue

OCT. 8, 1996 2:42PM

TTTI SOUTHERN REGION

NO. 75

P.3/6

Mr. Ed Murray  
October 2, 1996  
Page 2

The OCD's correspondence clearly stated that WQCC regulations require a discharge plan be approved prior to commencement of the remedial activities. In order to resolve the permitting and compliance issues in this matter, the OCD requires that TNPPLC submit the following information to the OCD by October 30, 1996:

1. A detailed description of all ground water remediation, treatment, discharge and monitoring activities conducted to date.
2. A map showing the location of the remediation facilities and the location of all discharges to the surface, subsurface and public water supply system.
3. The duration and volume of all discharges from the remediation system to date.
4. The laboratory analytical results of all ground water and discharge water quality monitoring conducted to date.
5. A response to the OCD's March 6, 1993 correspondence (enclosed) requesting additional information and commitments regarding the investigation and remediation activities.

The New Mexico Environment Department recently required SPS to disconnect the discharge line from the public water supply system. TNPPLC will not conduct any further unauthorized discharges at the site until an approved WQCC discharge plan has been approved.

If you have any questions, please contact Bill Olson of my staff at (505) 827-7154.

Sincerely,



Roger C. Anderson  
Environmental Bureau Chief

cc: Jerry Saxton, OCD Hobbs District Supervisor  
Wayne Price, OCD Hobbs District Office  
Robert Gallegos, NMED Drinking Water and Community Services  
Bureau  
Robert Garrett, NMED Hobbs  
Dwain Glidewell, New Mexico State Land Office

OCT. 8, 1996 2:42PM TTTI SOUTHERN REGION

NO. 771

P.4/6



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION



BRUCE KING  
GOVERNOR

ANITA LOCKWOOD  
CABINET SECRETARY

March 5, 1993

POST OFFICE BOX 2098  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. P-667-242-323**

Mr. Douglas D. Bau  
Texas-New Mexico Pipe Line Co.  
P.O. Box 2528  
Hobbs, New Mexico 88241-7528

**RE: SPS WATER WELL #11 REMEDIATION**  
**LEA COUNTY, NEW MEXICO**

Dear Mr. Bau:

The New Mexico Oil Conservation Division (OCD) is in the process of reviewing the Texas-New Mexico Pipe Line Company's (TNMPLC) discharge plan application contained in TNMPLC's January 25, 1993 "SPS SITE INVESTIGATION AND REMEDIAL ACTION PLAN" HOBBES, NEW MEXICO and February 10, 1993 correspondence. Public notice of the discharge plan application was issued on March 2, 1993.

The OCD has the following comments and requests for additional information and/or commitments regarding the above referenced application:

1. Appendix A did not contain the well logs for monitor wells MW-1 through MW-4. Please provide OCD with these well logs.
2. Appendix B did not contain the laboratory analytical results of the May 6 and May 7, 1992 influent and effluent samples from the air sparge unit. Please provide OCD with these analyses.
3. As a point of clarification, the capture zone depicted in Figure 11 of Appendix E is not oriented correctly. The stagnation point should be located 240 feet downgradient instead of 240 feet upgradient and the open end of the capture zone parabola should be facing upgradient instead of downgradient.



OCT. 8, 1996 2:43PM TTTI SOUTHERN REGION

NO. 71 P.5/5

Mr. Douglas D. Bau

March 5, 1993

Page 2

4. The OCD requires that underground waste water lines be pressure tested to 3 psi above operating pressure prior to operation and annually thereafter. Please provide a commitment to perform these tests and submit the results to OCD.
5. The ground water investigation work to date is satisfactory. However, the investigation has not defined the full extent of contamination at the site. Please provide a commitment and time schedule for submission of a work plan to complete the definition of the extent of contamination.
6. The remediation proposal does not address the remediation of contaminated soils identified during the investigation. Complete remediation of ground water will be difficult if contaminated soils remain as a source of future leaching of contaminants. Please provide a commitment and time schedule for submission of either a work plan to address remediation of these source areas or a risk analysis demonstrating that such remediation is not necessary.
7. Prior to discharging treated ground water into the SPS distribution system, the OCD requires a one time sample be taken of the effluent and analyzed for all New Mexico Water Quality Commission drinking water constituents. The results of this sample will be submitted to OCD for approval. Please supply a commitment to comply with this requirement.
8. The OCD requires that a quarterly report be submitted to OCD containing the results of all water quality sampling which has occurred during the respective quarter. Reports will be due on January 1, April 1, July 1 and October 1 of the calendar year. Please supply a commitment to provide these reports.
9. The proposed sampling plan for the monitor wells is acceptable at this time. Please be aware that OCD may require modification of the sampling plan based upon the results of future investigation of the complete extent of contamination.
10. Section 4.1, page 5 sets out proposed criteria for termination of remedial actions. The OCD defers approval of criteria for termination of remediation until OCD reviews the results of additional investigations into the complete extent of contamination.

OCT. 8.1996

2:43PM

TTTI SOUTHERN REGION

NO.716

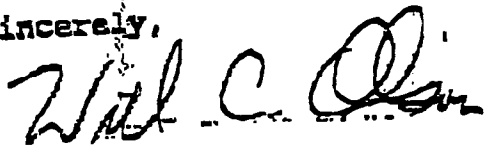
P.6/6

Mr. Douglas D. Bau  
March 5, 1993  
Page 3

The above information and commitments to meet discharge plan requirements must be received before the OCD can complete a review of your discharge plan application.

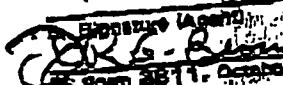
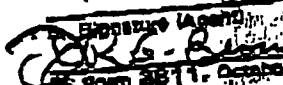
If you have any questions, please contact me at (505) 887-5925.

Sincerely,



William C. Olson  
Hydrogeologist  
Environmental Bureau

cc: Jerry Sexton, OCD Hobbs District Supervisor  
Myra Myers, NMED Hobbs  
William Weber, NMED Roswell

<b>SENDER:</b> • Complete items 1 through 4 for additional service. • Complete items 5, 6, and 7. • Print your name and address on the reverse of this form so that we can return this card to you. • Attach this form to the front of the mailpiece, or on the back if space does not permit. • Write "Return Receipt Requested" on the mailpiece next to the article number.		I also wish to receive the following services (for an extra fee): 1. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery 3. <input type="checkbox"/> Certified Mail 4. <input type="checkbox"/> Registered Mail 5. <input type="checkbox"/> Insured 6. <input type="checkbox"/> COD 7. <input type="checkbox"/> Return Receipt for Merchandise	
3. Article Addressed to: Mr. Douglas D. Bau Tarr-Nor Texas Pipe Line Co. P.O. Box 2528 Hobbs, NM 88241-2528		4a. Article Number: P-667 242-323	
5. Signature (Addressee): 		7. Date of Delivery: 3-7-93	
6. Signature (Agent): 		8. Addressee's Address (Only if requested and fee is paid)	

DOMESTIC RETURN RECEIPT



## **WORK PLAN - SPS-11**

### **COMPLIANCE SAMPLING - NMED DRINKING WATER REGULATIONS**

**Texas - New Mexico Pipe Line Co.  
Water Supply Wells PW1 and PW2**

#### **Objective and Background**

The objective of this Work Plan is to define the sampling constituents and schedule to be implemented at the Texas - New Mexico Pipe Line Co. (T-NMPL) Project SPS-11. This project consists of the operation of an existing groundwater remediation system consisting of two pumping wells (PW1 and PW2) followed by packed tower aeration with an activated carbon polish. The treated effluent from this system will be introduced into the SPS water supply system in place of the water previously provided to the plant by SPS-11. NMED has exercised jurisdiction over this system to the extent of monitoring and approving the water quality for use as planned. The sampling constituents and schedule proposed in this Work Plan are proposed in accordance with those stipulated by NMED representatives and in accordance otherwise with NMED drinking water regulations in 20 NMAC 7.1.

#### **Sampling Constituents**

The potential contaminants to be analyzed for in the groundwater produced from the two water supply wells (PW1 and PW2) have been specified in correspondence dated September 5, 1996 from Mr. Robert Garrett of NMED to Mr. W.T. Miller of SPS. In a subsequent phone conversation Mr. Garret indicated that NMED would agree to waive analysis for Synthetic Organic Compounds. He also indicated Fluoride would be required, though it had not been specified in his original letter. The following analyses will be performed:

- Nitrate
- Nitrite
- Asbestos (waiver requested)
- Heavy Metals
- Fluoride
- Cyanide
- Sulfate (unregulated)
- Radiological Contaminants
- Volatile Organic Compounds

As noted above, T-NMPL does not believe that the wells, treatment or conveyance system are vulnerable to asbestos contamination. Previous sampling of SPS-11 has not indicated an asbestos concern with the source water, and none of the materials utilized in the wells, treatment system, or conveyance piping represent a source of potential asbestos contamination. Therefore, T-NMPL herein requests a waiver of compliance sampling for asbestos. In accordance with this request, asbestos sampling is not included herein.

This Work Plan assumes that the list specified in Mr. Garrett's correspondence and subsequently modified represents the total list of analytes to be required by NMED for approval of the introduction of the treated groundwater into the SPS drinking water system, as planned.

Table 1 (attached) details the specific potential contaminants to be analyzed for within the foregoing general list.

In addition to the sampling specified herein, T-NMPL may conduct additional sampling from time to time as it may be required to perform by outside agencies with jurisdiction, or which T-NMPL may feel are appropriate for system monitoring. Such sample results are outside of the drinking water compliance sampling requirements and will not automatically be provided to NMED, but will be provided upon request.

### **Sampling Schedule**

20 NMAC 7.1 specifies various sampling frequencies and durations for the list of analytes of concern for this project. Table 2 (attached) indicates the analyte sampling schedule proposed for this project. This schedule is derived from 20 NMAC 7.1 and from written and phone correspondence with Mr. Garrett and Mr. Mason of the NMED.

The schedule recognizes that VOC's are the primary potential contaminant of concern based upon known data for the groundwater to be produced. Therefore, initially VOC's will be sampled daily, subsequently stairstepping down in frequency as a baseline for the system is established.

### **Sampling Points**

During the first six months of sampling, all compliance samples except VOC's will be obtained from each well prior to commingling with groundwater produced from the other well. However, in accordance with 20 NMAC 7.1.304.A.4, after six months of sampling has been completed, composite samples of the produced groundwater will be obtained after it has been commingled from the two wells in the treatment system.

In the case of VOC's, the purpose of the treatment system is to reduce or remove those VOC's which may be present. Groundwater produced from the two wells is commingled and treated in one treatment system. Therefore, all VOC compliance samples for the duration of the project (startup to finish) will be composite samples obtained following treatment, rather than samples from each well. In accordance with 20 NMAC 7.1.304.3, T-NMPL will attempt to obtain samples representative of groundwater produced from both wells and commingled in the treatment system.

Table 1

**COMPLIANCE SAMPLING - POTENTIAL CONTAMINANTS**  
**Texas - New Mexico Pipe Line Co.**  
**SPS-11 Project**

Analyte Category	Analyte	MCL (mg/l)
Inorganics	Nitrate (as N)	10
	Nitrite (as N)	1
	Asbestos	7E6 fibers/l
	Antimony	0.006
	Arsenic	0.05
	Barium	2
	Beryllium	0.004
	Cadmium	0.005
	Chromium	0.1
	Mercury	0.002
	Nickel	0.1
	Selenium	0.05
	Thallium	0.002
	Cyanide	0.2
	Fluoride	4.0
	Sulfate	unreg
Radiological Contaminants	Radium-226/ Radium-228	5 pCi/l
	Gross alpha particle activity (excluding radon and uranium)	15 pCi/l
Volatile Organic Compounds (I&II)	Benzene	0.005
	Bromobenzene	
	Bromochloromethane	
	Bromodichloromethane	0.080
	Bromoform	0.080
	Bromomethane	
	2-Butanone (MEK)	
	n-Butylbenzene	
	sec-Butylbenzene	
	tert-Butylbenzene	
	tert-Butyl methyl ether (MTBE)	
	Carbon tetrachloride	0.005
	Chlorobenzene (monochlorobenzene)	0.100
	Chloroethane	
	Chloroform	0.080
	Chloromethane	
	2-Chlorotoluene	
	4-Chlorotoluene	

Analyte	Analyte	MCL (mg/l)
---------	---------	------------

Category		
Volatile Organic Compounds (I&II) (continued)	1,2-Dibromo-3-chloropropane (DBCP)	0.0002
	Dibromochloromethane	0.080
	1,2-Dibromoethane (ethylene dibromide (EDB))	0.00005
	Dibromomethane	
	1,2-Dichlorobenzene (o-Dichlorobenzene)	0.600
	1,3-Dichlorobenzene (m-Dichlorobenzene)	0.600
	1,4-Dichlorobenzene (p-Dichlorobenzene)	0.075
	Dichlorodifluoromethane	
	1,1-Dichloroethane	
	1,2-Dichloroethane	0.005
	1,1-Dichloroethene	0.007
	cis-1,2-Dichloroethene	0.070
	trans-1,2-Dichloroethene	0.100
	1,2-Dichloropropane	0.005
	1,3-Dichloropropane	
	2,2-Dichloropropane	
	1,1-Dichloropropene	
	cis-1,3-Dichloropropene	
	trans-1,3-Dichloropropene	
	Ethylbenzene	0.700
	Hexachlorobutadiene	
	Isopropylbenzene	
	4-Isopropyltoluene	
	Methylene chloride (Dichloromethane)	0.005
	Naphthalene	
	Propylbenzene	
	Styrene	0.100
	1,1,1,2-Tetrachloroethane	
	1,1,2,2-Tetrachloroethane	
	Tetrachloroethene	0.005
	Tetrahydrofuran (THF)	
	Toluene	1.000
	1,2,3-Trichlorobenzene	
	1,2,4-Trichlorobenzene	0.070
	1,1,1-Trichloroethane	0.200
	1,1,2-Trichloroethane	0.005
	Trichloroethene	0.005
	Trichlorofluoromethane	
	1,2,3-Trichloropropane	
	1,2,4-Trimethylbenzene	
	1,3,5-Trimethylbenzene	
	Vinyl chloride	0.002
	O-Xylene	
	p- & m-Xylene	
	Total of Xylenes above	10.000
	Total of Trihalomethanes above	0.100

**Table 2**

**COMPLIANCE SAMPLING - SAMPLING FREQUENCY & DURATION**  
**Texas - New Mexico Pipe Line Co.**  
**SPS-11 Project**

<b>Potential Contaminant</b>	<b>Frequency</b>	<b>Duration</b>
VOC's	Daily	14 days (Weeks 1-2)
VOC's	Weekly	28 days (Weeks 3-6)
VOC's	Monthly	6 months following Week 6
VOC's	Quarterly	Project Duration
Nitrate	Annually	Project Duration
Nitrite	Initial	One Time Only (20 NMAC 7.1.304.E.2)
Asbestos	waiver requested	Project Duration (20 NMAC 7.1.304.B.2)
Heavy Metals	Once every 3 years	Project Duration
Fluoride	Once every 3 years	Project Duration
Cyanide	Once every 3 years	Project Duration
Sulfate	Initial	One Time Only (20 NMAC 7.1.701.L.2-3)
Radiological Contaminants	Quarterly	First Year
Radiological Contaminants	Annually	Project Duration after Year 1

## APPENDIX C

### Ground Water Remediation, Treatment, Discharge, and Monitoring Activities

Site activities prior to the January 25, 1993 report are summarized in that report. This includes assessment, monitoring, aquifer characterization, and system design activities. We have attempted to reconstruct site activities subsequent to that report. As best we can determine, activities subsequent to those described in the report are as follows:

February 1993	Remediation system installed
August 8-9, 1994	Remediation system test for 31 hours. Water treated and discharged to Buffalo Wallow
August 15-22, 1995	Remediation system startup test. Treated water discharged into Buffalo Wallow.
August 22, 1995	Discharge of treated groundwater into SPS-11 initiated on a continuous basis. After approximately October of 1995 the system operated intermittently due to mechanical problems.
February 27, 1996	Remediation system shut down due to discoloration of packing. Packing and carbon samples obtained. System has not been operated since this time.
September 6, 1996	NMED, OCD, TNMPL, SPS meeting to discuss project held at NMED office in Hobbs, NM.
October 15, 1996	Ground water from pumping and monitoring wells sampled to establish current conditions.

In addition to these physical activities, several items of correspondence variously between NMED, OCD, SPS, and TNMPL concerning this project exist throughout this time period.



## APPENDIX D

### Treatment System Discharges - Duration and Volume

Prior to installation of the treatment system, ground water was produced from the two pumping wells (PW1 and PW2) during the aquifer pump test which was summarized in the January 25, 1993 report previously submitted to OCD. Subsequent to that report, the treatment system was installed in February of 1993. The attached table briefly summarizes system operational parameters since that time.

TREATMENT SYSTEM  
VOLOMETRIC FLOW ANALYSIS  
TNMPL SPS-11  
LEA COUNTY, NEW MEXICO

DATE	FLOWMETER READING					FLOW RATES (gal. per min.)	
	PW-1		PW-2		SYSTEM TOTAL	PW-1	PW-2
METER	TOTAL	METER	TOTAL				
8/8/94	126700		126700				
8/9/94	184300	57600	211500	84800	142400	40	45
SYSTEM SHUT DOWN FROM 8/10/94 THROUGH 8/15/95							
8/15/95	184300		211500				
8/22/95	992300	808000	1119800	908300	1716300	40	45
8/23/95	1045500	53200	1180100	60300	113500	41	47
8/24/95	1095400	49900	1237000	56900	106800	42	46
8/25/95	1165600	70200	1316100	79100	149300	40	46
8/26/95	1206500	40900	1361800	45700	86600	40	46
8/27/95	1219700	13200	1377000	15200	28400	41	46
8/28/95	1241800	22100	1401000	24000	46100	41	46
8/29/95	1245300	3500	1405400	4400	7900		
9/6/95	1294000	48700	1461700	56300	105000	40	40
9/7/95	1345600	51600	1511700	50000	101600	40	40
9/8/95	1404700	59100	1568400	56700	115800	40	40
9/9/95	1474800	70100	1634400	66000	136100	40	40
9/10/95	1547700	72900	1703700	69300	142200	42	40
9/11/95	1590000	42300	1744600	40900	83200	40	39
9/12/95	1668600	78600	1820000	75400	154000	40	40
9/18/95	1793000	124400	1938700	118700	243100	41	40
9/29/95	2134100	341100	2269700	331000	672100	41	40
10/4/95	2414800	280700	2533400	263700	544400	41	40
1/18/96	2921500	506700	3069000	535600	1042300	41	40
2/27/96	4994200	2072700	4826500	1757500	3830200		

## APPENDIX E

### Site Analytical Data

The January 25, 1993 report previously provided to OCD summarized data prior to that report. Subsequent to that report, data has been obtained from the treatment system discharge for water quality analysis, from the air stripping tower packing, from the carbon in the carbon polish unit, and from ground water from the wells at the site.

The water quality analytical data is relatively voluminous, and is currently being tabulated into an easily reviewed format. We will provide this summary in a future transmittal. However, a brief review of the results for the VOC analyses conducted indicate non-detectable concentrations for all constituents analyzed. The laboratory analytical reports are attached.

The air stripping tower packing was analyzed to determine the cause of the discoloration it was experiencing. As anticipated, the results indicated routine inorganics precipitation, principally iron.

The carbon from the polish unit was analyzed for BTEX and TCLP metals. The results for both BTEX and all TCLP metals indicated non-detectable concentrations. A copy of the laboratory analytical report is attached.

On October 15, 1996, ground water samples from all wells at the site were obtained and analyzed for BTEX and TPH concentrations. The results are summarized in the attached table. The laboratory analytical report is also attached.

GROUND WATER ANALYTICAL DATA  
OCTOBER 15, 1996  
TNMPL SPS-11  
LEA COUNTY, NEW MEXICO

FIELD CODE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYL- BENZENE (mg/l)	m,p-XYLENE (mg/l)	o-XYLENE (mg/l)	TOTAL BTEX	TPH (mg/l)
MW-1	6.445	1.132	1.184	0.630	0.283	9.674	4
MW-2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<1
MW-3	0.003	<0.001	<0.001	<0.001	<0.001	0.003	<1
MW-4	0.005	<0.001	<0.001	<0.001	<0.001	0.005	<1
MW-6	0.210	0.002	0.021	0.006	<0.001	.0239	<1
MW-7	0.211	0.016	0.095	0.047	0.019	0.388	2
MW-9	4.224	0.056	1.252	0.763	0.102	6.397	17
RW-1	0.007	<0.001	<0.001	<0.001	<0.001	0.007	<1
RW-2	<0.001	0.001	0.001	0.009	0.004	0.015	<1

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

KEI CONSULTANTS, INC.  
ATTN: MR. PAUL HARTNETT  
5309 WURZBACH STE 100  
SAN ANTONIO, TEXAS 78238  
FAX: 210-680-3763

Receiving Date: 10/15/96  
Sample Type: WATER  
Project: SPS-11  
Project #: 610099  
Project Location: Lea County, New Mexico

Analysis Date: 10/16/96  
Sampling Date: 10/15/96  
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYLBENZENE (mg/l)	m,p-XYLENE (mg/l)	o-XYLENE (mg/l)	TPH (mg/l)
9239	MW-1	6.445	1.132	1.184	0.630	0.283	4
9240	MW-2	<0.001	<0.001	<0.001	<0.001	<0.001	<1
9241	MW-3	0.003	<0.001	<0.001	<0.001	<0.001	<1
9242	MW-4	0.005	<0.001	<0.001	<0.001	<0.001	<1
9243	MW-6	0.210	0.002	0.021	0.006	<0.001	<1
9244	MW-7	0.211	0.016	0.095	0.047	0.019	2
9245	MW-9	4.224	0.056	1.252	0.763	0.102	17
9246	RW-1	0.007	<0.001	<0.001	<0.001	<0.001	<1
9247	RW-2	<0.001	0.001	0.001	0.009	0.004	<1
	% IA	116	104	99	95	95	94
	% EA	121	104	99	95	95	---
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<1

METHODS: SW 846-8020,5030; EPA 418.1

  
Michael R. Fowler

10-17-96  
Date

# MAXIM

TECHNOLOGIES INC

703 West Industrial P.O. Box 2150 • Midland, Texas 79701 • 915/683-3349 FAX 915/686-0492

Client Eddie Gripp  
Texas New Mexico Pipe Line Co  
P.O. Box 60028  
San Angelo, TX 76906

Client No. 6839100  
Report No. MS-10-028  
Report Date 10/27/95 23:33

Project SPS-11, Carbon Unit

Phone: 915-949-7019 Fax: 915-944-2721

Date Sampled 10/05/95

Sampled By Client

Sample Type Solids

Transported by Ernest Richarte

P.O. # \_\_\_\_\_

Date Received 10/06/95

cc: Ernest Richarte  
Texas NM. Pipe Line  
P.O. Box 1027  
Lovington, NM. 88260

Lab No.  
MS-10-028-01

Sample Identification  
SPS-11, Carbon Unit

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our prior written approval.

on  
Reviewed By

MAXIM



ALLAN B. JOHNSTON

MAXIM

Order # MS-10-028

Page 2 of 4

10/27/95 23:33

TEST RESULTS BY SAMPLE

Client: Texas New Mexico Pipe Line Co

Sample: DIA SPS-11, Carbon Unit

Collected: 10/05/95 15:00

Category: S

<u>Test Name</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Detection</u>	<u>Date</u>	<u>Limit</u>	<u>Started</u>	<u>Analyst</u>
HYDRIDE DIGESTION	SW-846, 7061	10/12/95	DATE				10/12/95	WCR
MERCURY DIGESTION	SW-846, 7470	10/13/95	DATE				10/13/95	WCR
TCLP PREPARATION - SOLIDS	SW-846, 1311	10/09/95	DATE				10/09/95	WCR



MAXIM

Order # M5-10-028

10/27/95 23:33

Client: Texas New Mexico Pipe Line Co

TEST RESULTS BY SAMPLE

Page 3 of 4

Sample Description: SPS-11, Carbon Unit

Lab No: 01A

Test Description: BTEX - SOIL SAMPLE

Method: SW-846, 8020 Test Code: BTEX\_S

Collected: 10/05/95 15:00

Category: S

Date Extracted 10/10/95Date Started 10/10/95Analyst ABJDetection Limit 0.2Units mg/kgMethod SW-846, 8020CompoundResults

BENZENE

< 0.2

TOLUENE

< 0.2

ETHYLBENZENE

< 0.2

XYLENE

< 0.2

MAXIM

Order # M5-10-028

10/27/95 23:33

TEST RESULTS BY SAMPLE

Client: Texas New Mexico Pipe Line Co

Page 4 of 4

Sample Description: SPS-11, Carbon Unit

Lab No: 01A

Test Description: TCLP METALS

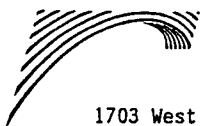
Method: SW-846

Test Code: TCLP\_M

Collected: 10/05/95 15:00

Category: S

<u>Element</u>	<u>Result</u>	<u>Regulatory Limit</u>	<u>Units</u>	<u>Date Started</u>	<u>Analyst</u>	<u>Method</u>
<b>TCLP METALS</b>						
ARSENIC	< 0.1	5.0	mg/L	10/24/95	MLC	SW-846, 7061
BARIUM	< 5.0	100	mg/L	10/21/95	MLC	SW-846, 7080
CADMIUM	< 0.1	1.0	mg/L	10/21/95	MLC	SW-846, 7130
CHROMIUM	< 0.2	5.0	mg/L	10/21/95	MLC	SW-846, 7190
LEAD	< 0.5	5.0	mg/L	10/21/95	MLC	SW-846, 7420
MERCURY	< 0.01	0.2	mg/L	10/24/95	MLC	SW-846, 7470
SELENIUM	< 0.1	1.0	mg/L	10/27/95	MLC	SW-846, 7741
SILVER	< 0.2	5.0	mg/L	10/21/95	MLC	SW-846, 7760



1703 West Industrial Avenue \* P.O. Box 2150, Midland, Texas 79702 \* 915/683-3349

ALLAN B. JOHNSTON

## SOUTHWESTERN LABORATORIES

Order # M4-04-178

04/25/94 07:26

Client: Texas New Mexico Pipe Line Co

TEST RESULTS BY SAMPLE

Page 2

Sample Description: Tower Influent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 08:40

Lab No: 01A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/22/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>0.064</u>
TOLUENE	<u>0.011</u>
ETHYLBENZENE	<u>0.013</u>
XYLENES	<u>0.007</u>

Sample Description: Carbon Effluent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 08:40

Lab No: 02A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/22/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

## SOUTHWESTERN LABORATORIES

Order # M4-04-178

04/25/94 07:26

Client: Texas New Mexico Pipe Line Co

TEST RESULTS BY SAMPLE

Page 3

Sample Description: Tower Influent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 10:50

Lab No: 03A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/22/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>0.018</u>
TOLUENE	<u>0.006</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

Sample Description: Carbon Effluent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 10:50

Lab No: 04A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/22/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

## SOUTHWESTERN LABORATORIES

Order # M4-04-178

04/25/94 07:26

Client: Texas New Mexico Pipe Line Co

Page 4

## TEST RESULTS BY SAMPLE

Sample Description: Tower Influent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 12:20

Lab No: 05A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/22/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>0.020</u>
TOLUENE	<u>0.006</u>
ETHYLBENZENE	<u>0.004</u>
XYLENES	<u>&lt; 0.004</u>

Sample Description: Carbon Effluent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 12:20

Lab No: 06A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/22/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

## SOUTHWESTERN LABORATORIES

Order # M4-04-178

04/25/94 07:26

TEST RESULTS BY SAMPLE

Page 5

Client: Texas New Mexico Pipe Line Co

Sample Description: Tower Influent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/21/94 18:45

Lab No: 07A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/22/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

Sample Description: Carbon Effluent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 18:45

Lab No: 08A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/22/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>



SOUTHWESTERN LABORATORIES										Analysis Request and Chain of Custody Record																																																																																																	
Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services 1703 West Industrial • P.O. Box 2150, Midland, Texas 79702 • 915/683-3349																																																																																																											
Project no.	Client/Project	Sample Date																																																																																																									
SPS11	Texas New Mexico Pipeline Co.	4/22/94																																																																																																									
Field Sample No./ Identification	Grab	Comp	Sample Container (Size/Mat)	Sample Type (Liquid Sludge, Etc.)	Preservative	ANALYSIS REQUESTED	LAB I.D. NO.																																																																																																				
Tower Influent 0840	✓		VOA	water	acid	BTEX																																																																																																					
Tower Effluent 0840	✓		"	"	"	"																																																																																																					
Carbon Effluent 0840	✓		"	"	"	"																																																																																																					
Tower Influent 1050	✓		"	"	"	"																																																																																																					
Tower Effluent 1050	✓		"	"	"	"																																																																																																					
Carbon Effluent 1050	✓		"	"	"	"																																																																																																					
Tower Influent 1220	✓		"	"	"	"																																																																																																					
Tower Effluent 1220	✓		"	"	"	"																																																																																																					
Carbon Effluent 1220	✓		"	"	"	"																																																																																																					
<table border="1"> <tr> <td colspan="2">Samplers: (Print)</td> <td colspan="2">Relinquished by: (Signature)</td> <td colspan="2">Date: Time:</td> <td colspan="2">Received by: (Signature)</td> <td colspan="2">Date: Time:</td> <td colspan="2">COC Seal No.</td> </tr> <tr> <td colspan="2">EJR</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2">Affiliation</td> <td colspan="2">Relinquished by: (Signature)</td> <td colspan="2">Date: Time:</td> <td colspan="2">Received by: (Signature)</td> <td colspan="2">Date: Time:</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">TNMPLCO</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2">Results by</td> <td colspan="2">Relinquished by: (Signature)</td> <td colspan="2">Date: 4/22/94 Time: 1521</td> <td colspan="2">Received by: (Signature)</td> <td colspan="2">Date: 04/22/94 Time: 1521</td> <td colspan="2">Intact:</td> </tr> <tr> <td colspan="2">Rush Charges Authorized</td> <td colspan="2">REMARKS:</td> <td colspan="2">Dwayne Conrad</td> <td colspan="2">Data Results To:</td> <td colspan="2">Jay Janica</td> <td colspan="2">Laboratory No.</td> </tr> <tr> <td colspan="2">Yes _____ No _____</td> <td colspan="2">Need benzene detection limit below 0.005 mg/L.</td> <td colspan="2"></td> <td colspan="2">1. Texas New Mexico Pipeline</td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2">2. Texaco R+D</td> <td colspan="2"></td> <td colspan="2"></td> </tr> </table>												Samplers: (Print)		Relinquished by: (Signature)		Date: Time:		Received by: (Signature)		Date: Time:		COC Seal No.		EJR												Affiliation		Relinquished by: (Signature)		Date: Time:		Received by: (Signature)		Date: Time:				TNMPLCO												Results by		Relinquished by: (Signature)		Date: 4/22/94 Time: 1521		Received by: (Signature)		Date: 04/22/94 Time: 1521		Intact:		Rush Charges Authorized		REMARKS:		Dwayne Conrad		Data Results To:		Jay Janica		Laboratory No.		Yes _____ No _____		Need benzene detection limit below 0.005 mg/L.				1. Texas New Mexico Pipeline												2. Texaco R+D					
Samplers: (Print)		Relinquished by: (Signature)		Date: Time:		Received by: (Signature)		Date: Time:		COC Seal No.																																																																																																	
EJR																																																																																																											
Affiliation		Relinquished by: (Signature)		Date: Time:		Received by: (Signature)		Date: Time:																																																																																																			
TNMPLCO																																																																																																											
Results by		Relinquished by: (Signature)		Date: 4/22/94 Time: 1521		Received by: (Signature)		Date: 04/22/94 Time: 1521		Intact:																																																																																																	
Rush Charges Authorized		REMARKS:		Dwayne Conrad		Data Results To:		Jay Janica		Laboratory No.																																																																																																	
Yes _____ No _____		Need benzene detection limit below 0.005 mg/L.				1. Texas New Mexico Pipeline																																																																																																					
						2. Texaco R+D																																																																																																					

\* \* \* \* \*

# SWL



## SOUTHWESTERN LABORATORIES

1703 West Industrial Avenue \* P.O. Box 2150, Midland, Texas 79702 \* 915/683-3349

Client Texas New Mexico Pipe Line Co  
P.O. Box 60028  
San Angelo, Texas 76906  
915/949-7019 FAX 915/944-2721  
Attn: J.T. Janica

Client No. 26839100  
Report No. M4-04-178  
Report Date 04/25/94 07:26

Project Project SPS11

Date Sampled 04/21/94 04/22/94

Sampled By Client

Sample Type Water

Transported by J.T. Janica

P.O. # \_\_\_\_\_

Date Received 04/22/94

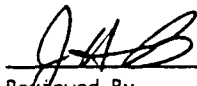
cc: Dwayne Conrad  
Texaco Inc.  
P.O. Box 1608  
Port Arthur, Tx. 77640

Lab No.

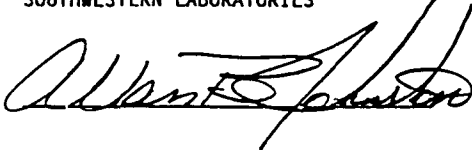
M4-04-178-01  
M4-04-178-02  
M4-04-178-03  
M4-04-178-04  
M4-04-178-05  
M4-04-178-06  
M4-04-178-07  
M4-04-178-08

Sample Identification

Tower Influent  
Carbon Effluent  
Tower Influent  
Carbon Effluent  
Tower Influent  
Carbon Effluent  
Tower Influent  
Carbon Effluent

  
Reviewed By

SOUTHWESTERN LABORATORIES

  
ALLAN B. JOHNSTON

## SOUTHWESTERN LABORATORIES

Order # M4-04-178

04/25/94 07:26

Client: Texas New Mexico Pipe Line Co

Page 2

TEST RESULTS BY SAMPLE

Sample Description: Tower Influent

Lab No: 01A

Test Description: BTEX - WATER SAMPLE

Method: SW-846, 8020 Test Code: BTEX\_W

Collected: 04/22/94 08:40

Date Started	<u>04/22/94</u>	Analyst	<u>RBB</u>
Detection Limit	<u>0.004</u>	Units	<u>mg/L</u>
Method	<u>SW-846, 8020</u>		

<u>Compound</u>	<u>Results</u>
BENZENE	<u>0.064</u>
TOLUENE	<u>0.011</u>
ETHYLBENZENE	<u>0.013</u>
XYLENES	<u>0.007</u>

Sample Description: Carbon Effluent

Lab No: 02A

Test Description: BTEX - WATER SAMPLE

Method: SW-846, 8020 Test Code: BTEX\_W

Collected: 04/22/94 08:40

Date Started	<u>04/22/94</u>	Analyst	<u>RBB</u>
Detection Limit	<u>0.004</u>	Units	<u>mg/L</u>
Method	<u>SW-846, 8020</u>		

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

## SOUTHWESTERN LABORATORIES

Order # M4-04-178

04/25/94 07:26

Client: Texas New Mexico Pipe Line Co

Page 3

## TEST RESULTS BY SAMPLE

Sample Description: Tower Influent

Lab No: 03A

Test Description: BTEX - WATER SAMPLE

Method: SW-846, 8020 Test Code: BTEX\_W

Collected: 04/22/94 10:50

Date Started	<u>04/22/94</u>	Analyst	<u>RBB</u>
Detection Limit	<u>0.004</u>	Units	<u>mg/L</u>
Method	<u>SW-846, 8020</u>		

<u>Compound</u>	<u>Results</u>
BENZENE	<u>0.018</u>
TOLUENE	<u>0.006</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

Sample Description: Carbon Effluent

Lab No: 04A

Test Description: BTEX - WATER SAMPLE

Method: SW-846, 8020 Test Code: BTEX\_W

Collected: 04/22/94 10:50

Date Started	<u>04/22/94</u>	Analyst	<u>RBB</u>
Detection Limit	<u>0.004</u>	Units	<u>mg/L</u>
Method	<u>SW-846, 8020</u>		

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

## SOUTHWESTERN LABORATORIES

Order # M4-04-178

04/25/94 07:26

Client: Texas New Mexico Pipe Line Co

Page 4

## TEST RESULTS BY SAMPLE

Sample Description: Tower Influent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 12:20

Lab No: 05A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/22/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>0.020</u>
TOLUENE	<u>0.006</u>
ETHYLBENZENE	<u>0.004</u>
XYLENES	<u>&lt; 0.004</u>

Sample Description: Carbon Effluent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 12:20

Lab No: 06A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/22/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

## SOUTHWESTERN LABORATORIES

Order # M4-04-178

04/25/94 07:26

Client: Texas New Mexico Pipe Line Co

Page 5

## TEST RESULTS BY SAMPLE

Sample Description: Tower Influent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/21/94 18:45

Lab No: 07A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started	<u>04/22/94</u>	Analyst	<u>RBB</u>
Detection Limit	<u>0.004</u>	Units	<u>mg/L</u>
Method	<u>SW-846, 8020</u>		

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

Sample Description: Carbon Effluent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 18:45

Lab No: 08A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started	<u>04/22/94</u>	Analyst	<u>RBB</u>
Detection Limit	<u>0.004</u>	Units	<u>mg/L</u>
Method	<u>SW-846, 8020</u>		

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

# SWL



## SOUTHWESTERN LABORATORIES

1703 West Industrial Avenue \* P.O. Box 2150, Midland, Texas 79702 \*

SAN ANGELO OFFICE  
FILE

MAY 5 1994

FILED					
915/683-3349					
ELH					
CDK					
AER					
JH					

Client Texas New Mexico Pipe Line Co  
P.O. Box 60028  
San Angelo, Texas 76906  
915/949-7019 FAX 915/944-2721  
Attn: J.T. Janica

Client No. 26839100  
Report No. M4-04-179  
Report Date 05/02/94 14:30

Project SPS11

Date Sampled 04/21/94 04/22/94

Sampled By Client

Sample Type Water

Transported by J.T. Janica

P.O. # \_\_\_\_\_

Date Received 04/22/94

cc: Dwayne Conrad  
Texaco  
P.O. Box 1608  
Port Arthur, Texas 77641

Lab No.

M4-04-179-01  
M4-04-179-02  
M4-04-179-03  
M4-04-179-04

Sample Identification

Tower Effluent  
Tower Effluent  
Tower Effluent  
Tower Effluent

AMB  
Reviewed By

SOUTHWESTERN LABORATORIES

ALLAN B. JOHNSTON

ALLAN B. JOHNSTON



## SOUTHWESTERN LABORATORIES

Order # M4-04-179

05/02/94 14:30

Client: Texas New Mexico Pipe Line Co

Page 2

## TEST RESULTS BY SAMPLE

Sample Description: Tower Effluent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 08:40

Lab No: 01A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/23/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

Sample Description: Tower Effluent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 10:50

Lab No: 02A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/23/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

## SOUTHWESTERN LABORATORIES

Order # M4-04-179

05/02/94 14:30

Client: Texas New Mexico Pipe Line Co

Page 3

## TEST RESULTS BY SAMPLE

Sample Description: Tower Effluent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/22/94 12:20

Lab No: 03A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/23/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

Sample Description: Tower Effluent  
Test Description: BTEX - WATER SAMPLE  
Collected: 04/21/94 18:45

Lab No: 04A  
Method: SW-846, 8020 Test Code: BTEX\_W

Date Started 04/23/94 Analyst RBB  
Detection Limit 0.004 Units mg/L  
Method SW-846, 8020

<u>Compound</u>	<u>Results</u>
BENZENE	<u>0.008</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

START

25

05

9.121

10.608

11.450

14.730

24.232

05

TIMETABLE STOP

RUN# 4 APR 23, 1994 14:19:43

SAMPLE NAME: 04-179-01

P4 5ML

ESTD%-AREA

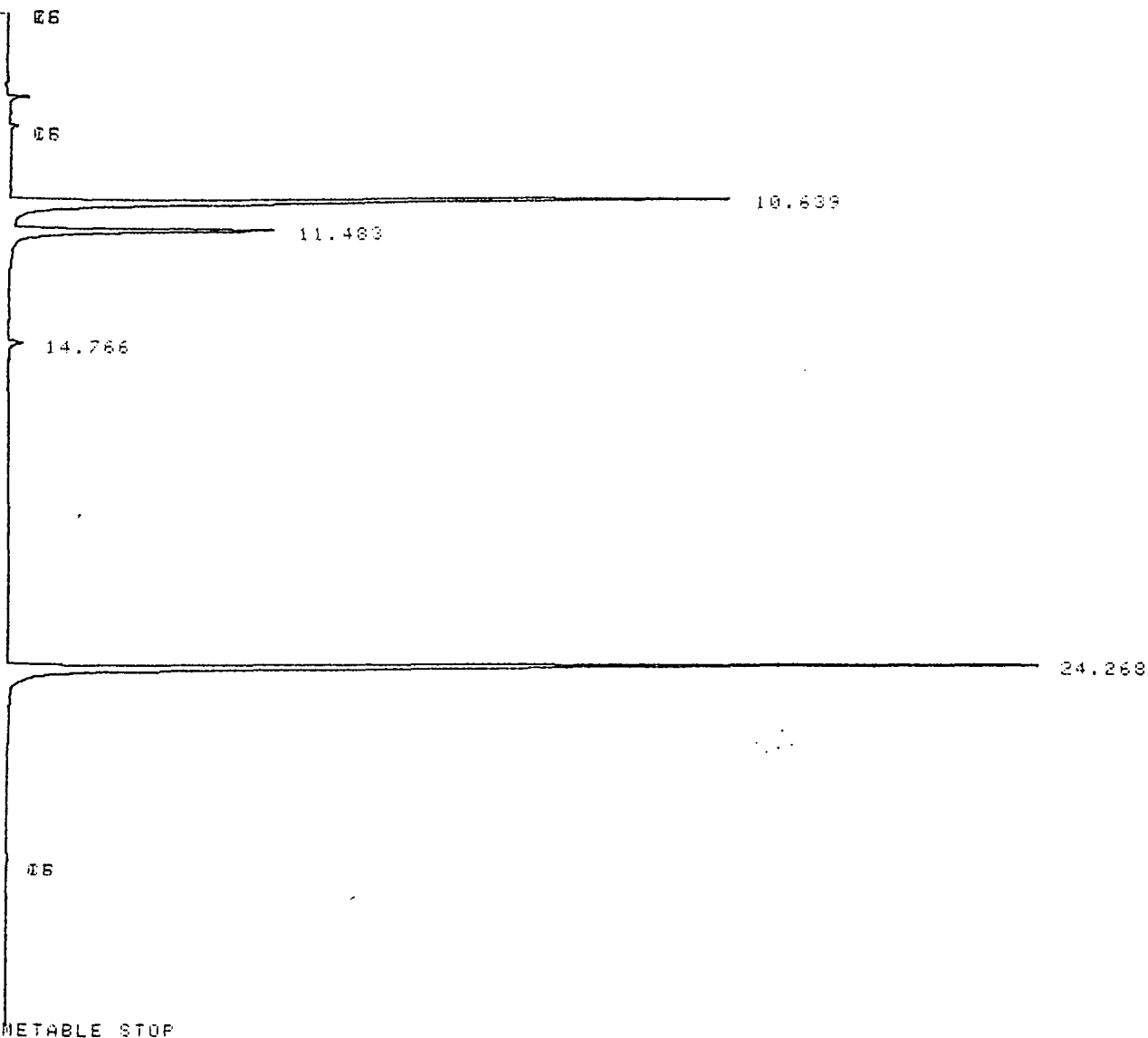
RT	TYPE	AREA	WIDTH	HEIGHT	CAL#	AMOUNT	NAME
9.121	BB	153256	.159	16044		.000	
10.608	PS	11183456	.129	1442089	3P	1890260800	Fluorobenzene
11.450	PS	4500419	.141	530195	3P	726853120.	Trifluorotoluene
14.730	BB	157340	.133	19738	4P	91612.672	Toluene
24.232	PS	15201992	.126	2114522	8P	855272320.	Bromofluorobenze

TOTAL AREA=3.1196E+07

MUL FACTOR=1.0000E+00

SAMPLE AMT=3.2900E-01

START



TIMETABLE STOP

RUN# 5 APR 23, 1994 15:11:28

SAMPLE NAME: 04-179-02

P5

ESTD%-AREA

RT	TYPE	AREA	WIDTH	HEIGHT	CAL#	AMOUNT	NAME
10.639	PB	10919440	.128	1423366	2R	1845636000	Fluorobenzene
11.483	BB	4392253	.141	518473	3R	709383360.	Trifluorotoluene
14.766	BB	211755	.130	27165	4R	123374.750	Toluene
24.268	PB	14758728	.120	2047809	8R	830334080.	Bromofluorobenzene

TOTAL AREA=3.0282E+07

MUL FACTOR=1.0000E+00

SAMPLE AMT=8.2900E-01

START

05

05

10.624

11.467

14.746

24.228

05

TIMETABLE STOP

RUN# 6 APR 23, 1994 16:03:12

SAMPLE NAME: 04-179-03

P6 5ML

ESTD%-AREA

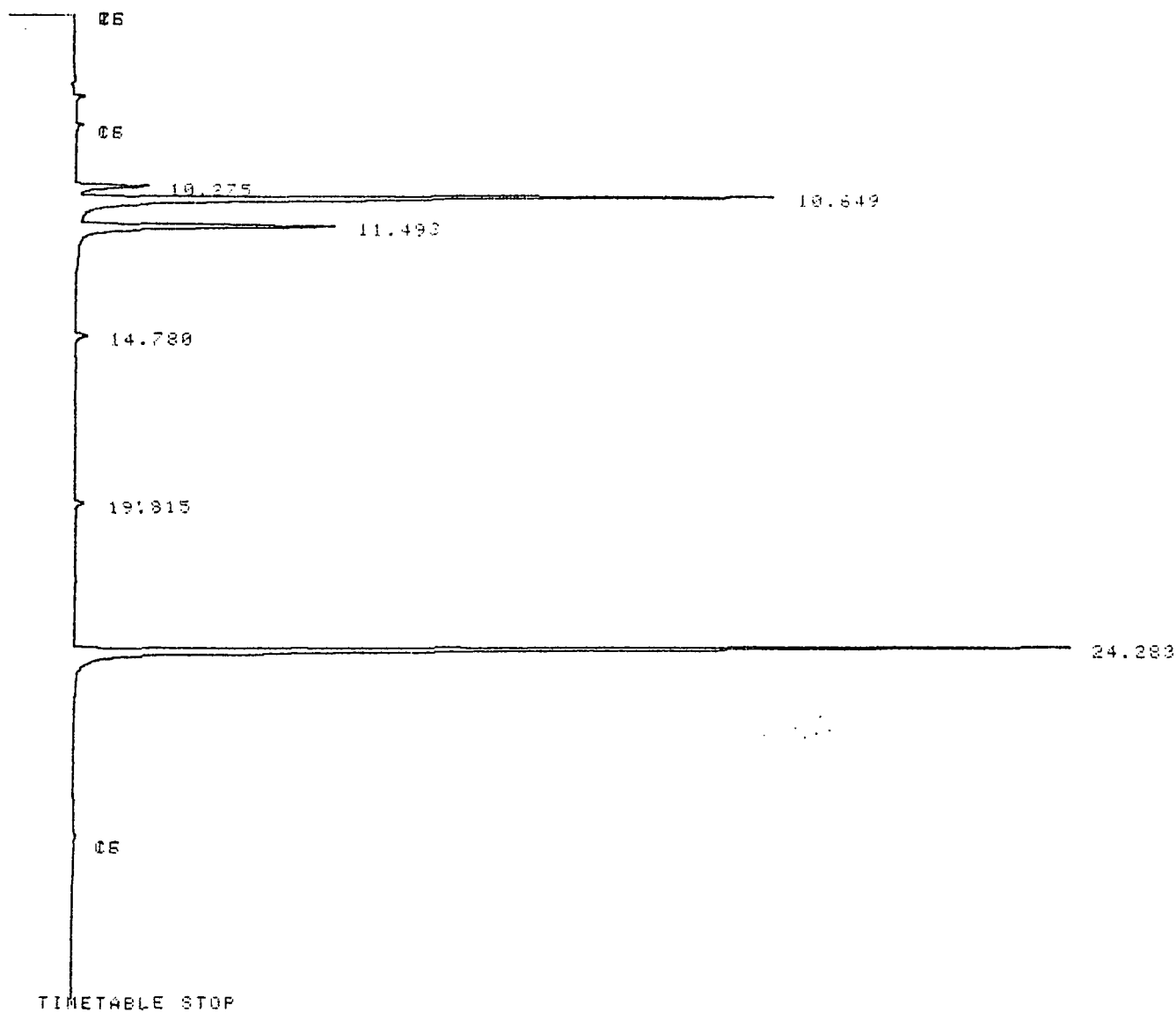
RT	TYPE	AREA	WIDTH	HEIGHT	CAL#	AMOUNT	NAME
10.624	PB	10966608	.128	1432973	2R	1853608800	Fluorobenzene
11.467	BB	4409331	.141	520472	3R	712141120.	Trifluorotoluene
14.746	BB	158289	.132	20006	4R	92323.840	Toluene
24.228	PB	15027208	.120	2093703	8R	845439040.	Bromofluorobenze

TOTAL AREA=3.0561E+07

MUL FACTOR=1.0000E+00

SAMPLE AMT=0.2900E-01

START



RUN# 7 APR 23, 1994 16:55:10

SAMPLE NAME: 04-179-04

P7 5ML

ESTOX-AREA

RT	TYPE	AREA	WIDTH	HEIGHT	CAL#	AMOUNT	NAME
10.275	PP	1014159	.118	143069	1R	636143.040	Benzene
10.649	PB	10786326	.127	1419862	2R	1823476000	Fluorobenzene
11.493	BB	4384838	.141	519581	3R	708185920.	Trifluorotoluene
14.780	PB	239138	.130	28144	4R	126258.880	Toluene
19.815	BV	158168	.119	32171	5P	102647.000	Ethylbenzene
24.283	PB	15008800	.119	2099523	6R	844403200.	Bromofluorobenze

TOTAL AREA=3.1574E+07

MUL FACTOR=1.0000E+00

SAMPLE AMT=8.2900E-01

# SWL



## SOUTHWESTERN LABORATORIES

1703 West Industrial Avenue \* P.O. Box 2150, Midland, Texas 79702 \* 915/683-3349

Client Texas New Mexico Pipe Line Co  
P.O. Box 60028  
San Angelo, Texas 76906  
915/949-7019 FAX 915/944-2721  
Attn: J.T. Janica

Client No. 26839100  
Report No. M4-04-179  
Report Date 05/02/94 14:30

Project SPS11

Date Sampled 04/21/94 04/22/94

Sampled By Client \_\_\_\_\_

Sample Type Water

Transported by J.T. Janica

P.O. # \_\_\_\_\_

Date Received 04/22/94

cc: Dwayne Conrad  
Texaco  
P.O. Box 1608  
Port Arthur, Texas 77641

Lab No.

M4-04-179-01  
M4-04-179-02  
M4-04-179-03  
M4-04-179-04

Sample Identification

Tower Effluent  
Tower Effluent  
Tower Effluent  
Tower Effluent

AMB  
Reviewed By

SOUTHWESTERN LABORATORIES

ALLAN B. JOHNSTON  
ALLAN B. JOHNSTON



## SOUTHWESTERN LABORATORIES

Order # M4-04-179

05/02/94 14:30

TEST RESULTS BY SAMPLE

Page 2

Client: Texas New Mexico Pipe Line Co

Sample Description: Tower Effluent

Lab No: 01A

Test Description: BTEX - WATER SAMPLE

Method: SW-846, 8020 Test Code: BTEX\_W

Collected: 04/22/94 08:40

Date Started	<u>04/23/94</u>	Analyst	<u>RBB</u>
Detection Limit	<u>0.004</u>	Units	<u>mg/L</u>
Method	<u>SW-846, 8020</u>		

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

Sample Description: Tower Effluent

Lab No: 02A

Test Description: BTEX - WATER SAMPLE

Method: SW-846, 8020 Test Code: BTEX\_W

Collected: 04/22/94 10:50

Date Started	<u>04/23/94</u>	Analyst	<u>RBB</u>
Detection Limit	<u>0.004</u>	Units	<u>mg/L</u>
Method	<u>SW-846, 8020</u>		

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

## SOUTHWESTERN LABORATORIES

Order # M4-04-179

05/02/94 14:30

TEST RESULTS BY SAMPLE

Page 3

Client: Texas New Mexico Pipe Line Co

Sample Description: Tower Effluent

Lab No: 03A

Test Description: BTEX - WATER SAMPLE

Method: SW-846, 8020 Test Code: BTEX\_W

Collected: 04/22/94 12:20

Date Started	<u>04/23/94</u>	Analyst	<u>RBB</u>
Detection Limit	<u>0.004</u>	Units	<u>mg/L</u>
Method	<u>SW-846, 8020</u>		

<u>Compound</u>	<u>Results</u>
BENZENE	<u>&lt; 0.004</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

Sample Description: Tower Effluent

Lab No: 04A

Test Description: BTEX - WATER SAMPLE

Method: SW-846, 8020 Test Code: BTEX\_W

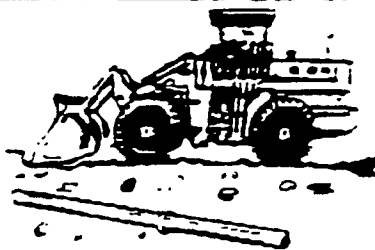
Collected: 04/21/94 18:45

Date Started	<u>04/23/94</u>	Analyst	<u>RBB</u>
Detection Limit	<u>0.004</u>	Units	<u>mg/L</u>
Method	<u>SW-846, 8020</u>		

<u>Compound</u>	<u>Results</u>
BENZENE	<u>0.008</u>
TOLUENE	<u>&lt; 0.004</u>
ETHYLBENZENE	<u>&lt; 0.004</u>
XYLENES	<u>&lt; 0.004</u>

TEXAS NEW MEXICO  
PIPELINE COMPANY

FAX



Date 7-31-95  
Number of pages including cover sheet 3

Before Excavating Or In An Emergency Please Call Collect 1-800-515-3341

To:

Jay Janica

Phone

Fax phone

CC

From:

TEXAS NEW MEXICO  
PIPELINE COMPANY

Ernest J. Richarte

Phone 505 390-3341

Fax phone 505 390-2754

REMARKS:

☐ Urgent

☒ For your review

☐ Reply ASAP

☐ Please comment



CITY OF HOBBS  
300 N. Turner  
Hobbs, NM 88240  
Lab # 9411

## MICROBIOLOGICAL WATER REPORT

Time Test Began 13:45 Date 7-25-95

Time Test Ended 12:52 Date 7-26-95

Date Received 7-25-95

Time Received 10:14

Received by AD

SAMPLE IDENTIFICATION			TESTING REQUIRED	
Quality Control No. <u>95 0 51</u>		County <u>Lea</u>	<input checked="" type="checkbox"/> MF-Total Coliform <input type="checkbox"/> MMO MUG-Total Coliform	
Water Supply System Name <u>PW-1</u>		WSS Code No.	LABORATORY TEST RESULTS	
			Total Coliforms / 100 ml <input type="checkbox"/> Absent <input type="checkbox"/> Present	Total Coliforms / 100 ml <input type="checkbox"/> Absent <input type="checkbox"/> Present
			Fecal Coliforms / 100 ml <input checked="" type="checkbox"/> Absent <input type="checkbox"/> Present	E. coli / 100 ml <input type="checkbox"/> Absent <input type="checkbox"/> Present
COLLECTION INFORMATION				
Date Collected Mo. Day Yr. <u>07-25-95</u>	Time Collected <u>0850</u>	Collected By <u>E.J. Richarte</u>		
NEW, NEW Collection Point <u>SE 44 Sec. 18, T18S, R36E, Lea Co., N.M. approx. 15 miles west of Hobbs and 14 miles south of Lovington</u>				
TYPE OF SYSTEM				
Check One <input checked="" type="checkbox"/> Public Non-Community <input type="checkbox"/> Swimming Pool <input type="checkbox"/> Public Community <input type="checkbox"/> Private Well Disinfected <input type="checkbox"/> Yes <input type="checkbox"/> No Residual: _____ mg / l (required for fecal test)				
REASON FOR SAMPLING				
Check One <input type="checkbox"/> Routine Sample <input checked="" type="checkbox"/> Special Sample <input type="checkbox"/> Check Sample <input type="checkbox"/> Monitor Sample				
INVALID SAMPLE				
If one of the following is checked, resample. <input type="checkbox"/> TNTC Non-Coliforms <input type="checkbox"/> Confluent Growth				
REJECTED SAMPLE				
If one of the following is checked, resample. <input type="checkbox"/> Sample too old. <input type="checkbox"/> Temperature violation. (above 10° C) <input type="checkbox"/> Form incomplete. See circled item. <input type="checkbox"/> Date discrepancy. <input type="checkbox"/> Leaking Sample. <input type="checkbox"/> Quantity insufficient for testing. <input type="checkbox"/> Quantity too great to permit agitation. <input type="checkbox"/> Turbid sample. <input type="checkbox"/> Other _____				
FOR INTERPRETATION OF RESULTS CALL THE NEW MEXICO ENVIRONMENT DEPARTMENT AT 393-4302.				

SEND REPORT AND BILL TO THE FOLLOWING:

NAME Ernest J. Richarte

COMPANY Texas-New Mexico Pipe Line Co.

ADDRESS P.O. Box 1027

Lovington, N.M. 88260

PHONE 505 - 396-3341

Fax 505 - 396-2754

George B. Bly  
Bacteriologist

A FEE OF \$10.00 PLUS TAX IS CHARGED FOR  
EACH TEST.

OFFICE USE ONLY

ACCT. #



CITY OF HOBBS  
300 N. Turner  
Hobbs, NM 88240  
Lab # 9411

## MICROBIOLOGICAL WATER REPORT

Date Received 7-25-95Time Received 1014Received by ADTime Test Began 13:45 Date 7-25-95Time Test Ended 12:32 Date 7-26-95

SAMPLE IDENTIFICATION			TESTING REQUIRED	
Quality Control No. <u>95 066</u> <u>PW2</u>	County <u>Lea</u>		<input checked="" type="checkbox"/> MF-Total Coliform	<input type="checkbox"/> MMO MUG-Total Coliform
Water Supply System Name			WSS Code No.	
<b>COLLECTION INFORMATION</b> Date Collected Mo. Day Yr. <u>07-25-95</u> Time Collected <u>0846</u> Collected By <u>E. J. Richarte</u> Collection Point <u>NEW, NEW Sec. 18, T8S, R36E, Lea Co. N.M. approx. 15 miles West of Hobbs, 14 miles South of Lovington</u>			<b>LABORATORY TEST RESULTS</b> Total Coliforms / 100 ml <input checked="" type="checkbox"/> Absent <input type="checkbox"/> Present Fecal Coliforms / 100 ml <input checked="" type="checkbox"/> Absent <input type="checkbox"/> Present Total Coliforms / 100 ml <input type="checkbox"/> Absent <input type="checkbox"/> Present E. coli / 100 ml <input type="checkbox"/> Absent <input type="checkbox"/> Present	
<b>TYPE OF SYSTEM</b> Check One <input checked="" type="checkbox"/> Public Non-Community <input type="checkbox"/> Swimming Pool <input type="checkbox"/> Public Community <input type="checkbox"/> Private Well Disinfected <input type="checkbox"/> Yes <input type="checkbox"/> No Residual: _____ mg / l (required for fecal test)			<b>INVALID SAMPLE</b> If one of the following is checked, resample. <input type="checkbox"/> TNTC Non-Coliforms <input type="checkbox"/> Confluent Growth	
<b>REASON FOR SAMPLING</b> Check One <input type="checkbox"/> Routine Sample <input checked="" type="checkbox"/> Special Sample <input type="checkbox"/> Check Sample <input type="checkbox"/> Monitor Sample			<b>REJECTED SAMPLE</b> If one of the following is checked, resample. <input type="checkbox"/> Sample too old. <input type="checkbox"/> Temperature violation. (above 10° C) <input type="checkbox"/> Form incomplete. See circled item. <input type="checkbox"/> Date discrepancy. <input type="checkbox"/> Leaking Sample. <input type="checkbox"/> Quantity insufficient for testing. <input type="checkbox"/> Quantity too great to permit agitation. <input type="checkbox"/> Turbid sample. <input type="checkbox"/> Other _____	
<b>FOR INTERPRETATION OF RESULTS CALL THE NEW MEXICO ENVIRONMENT DEPARTMENT AT 393-4302.</b>				

SEND REPORT AND BILL TO THE FOLLOWING:

NAME Ernest J. RicharteCOMPANY Texas-New Mexico Pipe Line Co.ADDRESS P.O. Box 1027Lovington, N.M. 88260PHONE 505-396-3341Fax 505-396-2754

Bacteriologist

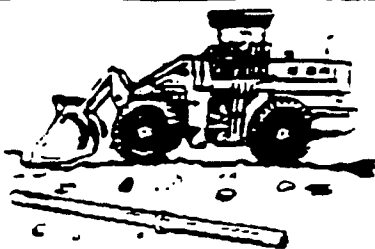
A FEE OF \$10.00 PLUS TAX IS CHARGED FOR  
EACH TEST.

OFFICE USE ONLY

ACCT. #

TEXAS NEW MEXICO  
PIPELINE COMPANY

# FAX



Date:

7-31-95

Number of pages including cover sheet:

3

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Ernest J. Richarte

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505 396-3341

Fax phone

505 396-2754

REMARKS:



Urgent



For your review



Reply ASAP



Please comment

SAN ANGELO OFFICE  
FILE

JUL 31 1995

	Note	P/H		file	P/H
EHG			TWL		
DOB			MDG		
SOH			DU		
CBK			SNH		
AER			ELV		
JH			CDH		



CITY OF HOBBS  
300 N. Turner  
Hobbs, NM 88240  
Lab # 9411

## MICROBIOLOGICAL WATER REPORT

Date Received 7-25-95Time Received 1014Received by ADTime Test Began 13:45 Date 7-25-95Time Test Ended 12:30 Date 7-26-95

SAMPLE IDENTIFICATION			TESTING REQUIRED	
Quality Control No. <u>95 066</u> <u>PW2</u>	County <u>Lea</u>		<input checked="" type="checkbox"/> MF-Total Coliform      [ ] MMO MUG-Total Coliform	
Water Supply System Name		WSS Code No.	LABORATORY TEST RESULTS	
			Total Coliforms / 100 ml [ <input checked="" type="checkbox"/> Absent      [ ] Present	Total Coliforms / 100 ml [ ] Absent      [ ] Present
			Fecal Coliforms / 100 ml [ <input checked="" type="checkbox"/> Absent      [ ] Present	E. coli / 100 ml [ ] Absent      [ ] Present
COLLECTION INFORMATION			INVALID SAMPLE	
Date Collected Mo. Day Yr. <u>07-25-95</u>	Time Collected <u>0846</u>	Collected By <u>E. J. Richarte</u>	If one of the following is checked, resample.	
<u>NE 1/4, NW 1/4, Sec. 18, T8S, R36E, Lea Co.</u> <u>N.M. approx. 15 miles west of Hobbs, 14 miles south of Lovington</u>			[ ] TNTC Non-Coliforms      [ ] Confluent Growth	
TYPE OF SYSTEM			REJECTED SAMPLE	
Check One <input checked="" type="checkbox"/> Public Non-Community      [ ] Swimming Pool <input type="checkbox"/> Public Community      [ ] Private Well Disinfected      [ ] Yes      [ ] No Residual: _____ mg / l (required for fecal test)			If one of the following is checked, resample. <input type="checkbox"/> Sample too old. <input type="checkbox"/> Temperature violation. (above 10° C) <input type="checkbox"/> Form incomplete. See circled item. <input type="checkbox"/> Date discrepancy. <input type="checkbox"/> Leaking Sample. <input type="checkbox"/> Quantity insufficient for testing. <input type="checkbox"/> Quantity too great to permit agitation. <input type="checkbox"/> Turbid sample. <input type="checkbox"/> Other _____	
REASON FOR SAMPLING			FOR INTERPRETATION OF RESULTS CALL THE NEW MEXICO ENVIRONMENT DEPARTMENT AT 393-4302.	
Check One <input type="checkbox"/> Routine Sample <input checked="" type="checkbox"/> Special Sample <input type="checkbox"/> Check Sample      [ ] Monitor Sample				

SEND REPORT AND BILL TO THE FOLLOWING:

NAME Ernest J. RicharteCOMPANY Texas-New Mexico Pipe Line Co.ADDRESS P.O. Box 1027Lovington, N.M. 88260PHONE 505-396-3341Fax 505-396-2754
  
 Bacteriologist

A FEE OF \$10.00 PLUS TAX IS CHARGED FOR  
EACH TEST.

OFFICE USE ONLY

ACCT. #



STATE OF NEW MEXICO

DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION  
P.O. Box 4700 700 Camino de Salud, NE  
Albuquerque, NM 87196-4700 [505]-841-2500  
ORGANIC CHEMISTRY SECTION [505]-841-2570

SAN ANGELO OFFICE	
NE	FILE
AUG 22 1994	
Distribution	
FIG	( ) User 54000
DIE	( ) Submitter
BCH	( ) SLD
CBK	
AER	
JH	

August 16, 1994

Requested Priority 2  
ID No. 090041

ANALYTICAL REPORT  
SLD Accession No. OR-94-2635

To: Douglas D. Beu  
Texas NM Pipe Line Co.  
P.O. Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on August 11, 1994

SAN ANGELO OFFICE	
FILE	
FEB 7 1995	
Distribution	
FIG	( ) User 54000
DIE	( ) Submitter
BCH	( ) SLD
CBK	
AER	
JH	

## DEMOGRAPHIC DATA

COLLECTION	LOCATION
On: 9-Aug-94 By: Ric...	SPS Well 11 Treating Skid
At: 17:30 hrs. In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Note	PQL	Units
Halogenated Volatiles (42)	0.00	N	0.50	ppb
See Laboratory Remarks for Additional Information				

## Notations &amp; Comments:

PQL = Practical Quantitation Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;  
T = Trace (< Detection Limit); U = Compound Identity Not Confirmed.Evidentiary Seals: Not Sealed ☒ Intact: No ☐ Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

## Laboratory Remarks:

A possible trace of Tetrahydrofuran was detected at 4.8 ppb by the Photoionization detector. Tetrahydrofuran is a common component of PVC pipe glue.

SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-94-2635
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 363
Level: (low/med) Low	Date Received: 8/11/94
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 8/11/94
GPC Cleanup: (Y/N) No pH: N/D	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

D. Conrad, J. Holly

BDC EJH

(Continued on page 2.)

ANALYTICAL REPORT  
SLD Accession No. OR-94-2635  
Continuation, Page 2 of 4

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	POL
71-43-2	Benzene		U	0.5
108-86-1	Bromobenzene		U	0.5
74-97-5	Bromochloromethane		U	0.5
75-27-4	Bromodichloromethane		U	0.5
75-25-2	Bromoform		U	0.5
24-83-9	Bromomethane		U	0.5
78-93-3	2-Butanone (MEK)		U	5.0
104-51-8	n-Butylbenzene		U	0.5
135-98-8	sec-Butylbenzene		U	0.5
98-06-6	tert-Butylbenzene		U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)		U	5.0
56-23-5	Carbon tetrachloride		U	0.5
108-90-7	Chlorobenzene		U	0.5
75-00-3	Chloroethane		U	2.5
67-66-3	Chloroform		U	0.5
74-87-3	Chloromethane		U	0.5
95-49-8	2-Chlorotoluene		U	0.5
106-43-4	4-Chlorotoluene		U	0.5
96-12-8	1,2-Dibromo-3-chloropropane		U	0.5
124-48-1	Dibromochloromethane		U	0.5
106-93-4	1,2-Dibromoethane		U	0.5
74-95-3	Dibromomethane		U	0.5
95-50-1	1,2-Dichlorobenzene		U	0.5
541-73-1	1,3-Dichlorobenzene		U	0.5
106-46-7	1,4-Dichlorobenzene		U	0.5
75-71-8	Dichlorodifluoromethane		U	0.5
75-34-3	1,1-Dichloroethane		U	0.5
107-06-2	1,2-Dichloroethane		U	0.5
75-35-4	1,1-Dichloroethene		U	0.5
156-59-4	cis-1,2-Dichloroethene		U	0.5
156-60-5	trans-1,2-Dichloroethene		U	0.5
78-87-5	1,2-Dichloropropane		U	0.5
142-28-9	1,3-Dichloropropane		U	0.5
590-20-7	2,2-Dichloropropane		U	0.5
563-58-6	1,1-Dichloropropene		U	0.5
1006-01-5	cis-1,3-Dichloropropene		U	0.5
1006-02-6	trans-1,3-Dichloropropene		U	0.5
100-41-4	Ethylbenzene		U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-94-2635  
Continuation, Page 3 of 4

87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride	U	0.5
91-20-3	Naphthalene	U	0.5
103-65-1	Propylbenzene	U	0.5
100-42-5	Styrene	U	0.5
630-20-6	1,1,1,2-Tetrachloroethane	U	0.5
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5
127-18-4	Tetrachloroethene	U	0.5
109-99-9	Tetrahydrofuran (THF)	U	5.0
108-88-3	Toluene	U	0.5
87-61-5	1,2,3-Trichlorobenzene	U	0.5
120-82-1	1,2,4-Trichlorobenzene	U	0.5
71-55-6	1,1,1-Trichloroethane	U	0.5
79-00-5	1,1,2-Trichloroethane	U	0.5
79-01-6	Trichloroethene	U	0.5
75-69-4	Trichlorofluoromethane	U	0.5
96-18-4	1,2,3-Trichloropropane	U	0.5
95-63-6	1,2,4-Trimethylbenzene	U	0.5
108-67-8	1,3,5-Trimethylbenzene	U	0.5
75-01-4	Vinyl chloride	U	2.0
95-47-6	o-Xylene	U	0.5
N/A	p- & m-Xylene	U	0.5
N/A	Total Xylenes	U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL)

B - Indicates compound was detected in the Lab Blank as well as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the standard curve.

J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-94-2635  
Continuation, Page 4 of 4

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	96.3
Bromofluorobenzene (HALL Surr)	10.0 ppb	95.2

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ppb	.

Analyst:

Nancy DeWitt  
Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By:

Richard F. Meyerhein  
Richard F. Meyerhein 08/16/94  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570

Request |||||  
ID No. 090041-C

Date Received:

4 Priority Code # 2

ST-7  
Lab-250  
C-250

2 User Code #

3 Request ID No.

6 County: Lea

7 City: Lovington

8 State: 72, 7m

5 Facility Name: SPS-11

9 Sample Location: S.P.S. Well 1, 1, 1, Treating, Skid

10 Collected By: Ernest Richards On: 9/10/87 At: 11:30 hrs  
Date: (YY/MM/DD) Time: 24 hr clock 200 pre - 1900 hrs

11 Codes: 0.675 Submitter WSS # 0.00214 Organization

12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13 Report To: Douglas D. Baw Phone #: 915-947-9003

Address: Texas New Mexico Pipe Line Co.

P.O. Box 60028

City, State Zip: San Angelo, Texas 76906

15 Sampling Information:  
Sample Purpose: ☒ Compliance ☐ NIMED Monitoring ☐ Confirmation ☐ Special  
☒ Grab ☐ Composite ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/Permittes ☐ Chain of Custody

16 Field Data: pH < 2 Conductivity: umhos/cm @ Temperature: °C Chlorine Residual: mg/L Flow:

17 Sample Source:  
☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP  
☐ Entry Point to Distribution ☐ Well; Depth: ☐ Spring ☐ Distribution ☒ Other: Treating Skid

18 Field Remarks: Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge

19 Sample Type: ☒ Water ☐ Wastewater ☐ Soil ☐ Food ☐ Other  
This form accompanies a single sample consisting of:  
2 septum vial(s) (volume = 40 ml ea.)  
glass jug(s) (volume = ml ea.)

20 Preservation:  
☐ NP No Preservation; Sample stored at room temperature  
☒ P-ice Sample stored in an ice bath (Not Frozen)  
☒ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ Other

21 Analytes Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected

Volatile Screens:  
☐ (753) Aliphatic Headspace (Qualitative Screen)  
☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2)  
☐ (765) Mass Spectrometer Purgeables (EPA 624)  
☐ (766) SDWA Total Trihalomethanes (EPA 501.1)  
☒ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)  
☐ (775) SDWA VOC's II [EOB & DBCP] (EPA 504)  
☐ (790) Composite Sample for Analysis No.

Semivolatile Screens:  
☐ (755) Base/Neutral Extractables (EPA 625)  
☐ (756) Base/Neutral/Acid Extractables (EPA 8270)  
☐ (772) Carbamate Pesticides (EPA 531.1)  
☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)  
☐ (759) Herbicides, Triazine (EPA 507)  
☐ (751) Hydrocarbon Fuel Screen (EPA M-8015)  
☐ (760) Organochlorine Pesticides (EPA 505)  
☐ (761) Organophosphate Pesticides (EPA 507)  
☐ (767) Polychlorinated Biphenyls (PCB's) in Oil  
☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760)  
☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

Other Specific Compounds or Classes:  
☐ - { }  
☐ - { }

Remarks: phone 505-396-3341  
Please send duplicate of results to me at  
Texas New Mexico Pipe Line Co.  
P.O. Box 1027 Lovington, N.M. 88260

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

SAN ANGELO OFFICE  
FILE

AUG 22 1994

August 17, 1994

Requested Priority 2  
ID No. 090041

# ANALYTICAL REPORT

## SLD Accession No. OR-94-2636

To: Douglas D. Beu  
Texas-New Mexico Pipeline Co.  
P.O. Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on August 11, 1994

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 9-Aug-94	By: Ric . . .	SPS Well (II) Treating Skid
At: 17:30 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Note	POL	Units
1,2-Dibromoethane (EDB)	0.00	N	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	N	0.02	ppb

See Laboratory Remarks for Additional Information

## Notations &amp; Comments:

PQL = Practical Quantitation Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;  
T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.

Evidentiary Seals: Not Sealed ☒ Intact: No ☐ Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

## Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: /A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A  
 Matrix: (soil/water) Water Lab Sample ID: OR-94-2636  
 Sample wt/vol: 35.0 (g/mL) ml SLD Batch No: 367  
 Level: (low/med) Low Date Received: 08/11/94  
 % Moisture: not dec. N/A dec. N/A Date Extracted: 08/11/94  
 Extraction: (SepF/Cont/Sonc) Micro Date Analyzed: 08/14/94  
 GPC Cleanup: (Y/N) No pH: ~3 Dilution Factor: 1  
 CONCENTRATION UNITS:  
 (ug/L or ug/Kg): ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	O	POL

D. Conrad, J. Holly

(Continued on page 2.)

BDC EJR

ANALYTICAL REPORT  
SLD Accession No. OR-94-2636  
Continuation, Page 2 of 2

106-93-4	1,2-Dibromoethane (EDB)	U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	U	0.02

\* CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit ( Approximately 10 times MDL)

\* Q = Qualifier Definitions:

B - Indicates compound was detected in the Lab Blank as well as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

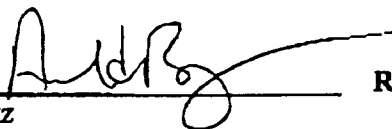
E - Indicates compound concentration exceeded the range of the standard curve.

J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

Analyst:

  
Arnold F. Bentz  
Analyst, Organic Chemistry

Reviewed By:

  
Richard F. Meyerhein 08/17/94  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106  
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

JR94 2636 8

Date

Received: 8/11/94 OK

Request ID No. 090041-C

Priority Code #:

2

City:

Houston

State

TX, TX

Facility Name:

SPS-11

Sample Location:

S.P.S. Well 1, 1, 1, Treating Skid

Collected By:

Ernest R. Richey

On: 8/10/94

At: 11:30 hrs.

Codes:

10, 6, 8

Submitter

WSS #

Organization

Report To:

Douglas D. Beu

Phone #:

915-947-9003

Address: Texas New Mexico Pipe Line Co.

P.O. Box 60028

City, State Zip

San Angelo, Texas 76906

Field Data:

pH: &lt; 2, Conductivity:

umhos/cm @ Temperature:

Chlorine Residual: mg/L, Flow:

Sample Source:

☐ Stream☐ Lake☐ Drain☐ Pool☐ WWTP☐ Entry Point to Distribution☐ Well; Depth:☐ Spring☐ Distribution☒ Other: Treating Skid

Sample Type:

☒ Water☐ Wastewater☐ Soil☐ Food☐ Other

This form accompanies a single sample consisting of:

2 - septum vial(s) (volume = 40 ml ea.)

- glass jug(s) (volume = ml ea.)

(volume = )

(volume = )

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Field Remarks:

Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge

Preservation:

☐ NP☒ P-ice☐ P-TS☒ P-HCl☐ P-HgCl<sub>2</sub>☐ OtherNo Preservation; Sample stored at room temperature.  
Sample stored in an ice bath (Not Frozen):  
Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
Sample Preserved with 20 mg/l Mercuric Chloride

Analyses Requested:

Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

## Volatile Screens:

- ☐ (753) Aliphatic Headspace (Qualitative Screen)
- ☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2)
- ☐ (765) Mass Spectrometer Purgeables (EPA 624)
- ☐ (766) SDWA Total Trihalomethanes (EPA 501.1)
- ☐ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)
- ☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)
- ☐ (790) Composite Sample for Analysis No.

## Other Specific Compounds or Classes:

- ☐ - { }
- ☐ - { }

## Semivolatile Screens:

- ☐ (755) Base/Neutral Extractables (EPA 625)
- ☐ (756) Base/Neutral/Acid Extractables (EPA 8270)
- ☐ (772) Carbamate Pesticides (EPA 531.1)
- ☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
- ☐ (759) Herbicides, Triazine (EPA 507)
- ☐ (751) Hydrocarbon Fuel Screen (EPA M-8015)
- ☐ (760) Organochlorine Pesticides (EPA 505)
- ☐ (761) Organophosphate Pesticides (EPA 507)
- ☐ (767) Polychlorinated Biphenyls (PCB's) in Oil
- ☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760)
- ☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

phone

505-396-3341

Please send duplicate of results to me at

Texas New Mexico Pipe Line Co.

P.O. Box 1027

Houston, TX 77058-2602



## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

August 24, 1995

Requested Priority 1  
ID No. 090042

**ANALYTICAL REPORT**  
**SLD Accession No. OR-95-3807**

Distribution

☐ User 64000  
☐ Submitter 68  
☒ Client  
☒ SLD Files

To: Jay Janica  
Texas-New Mexico Pipe Line Co.  
PO Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on August 23, 1995

User:

SLD Fee For Service - MISC  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Submitter:

Myra Meyers  
ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

SAN ANGELO OFFICE  
FILE

AUG 29 1995

	Note	%		Note	%
EHG			FWL		
DOB			MOD		
BDH			774		
CDK			774		
REF			774		
JH			DDK		

## DEMOGRAPHIC DATA

COLLECTION

On: 22-Aug-95 By: Ric . . .  
At: 14:00 hrs. In/Near: Lovington

LOCATION

SPS Well 11 Treating Skid

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

Laboratory Remarks:

SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A  
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A  
Matrix: (soil/water) Water Lab Sample ID: OR-95-3807  
Sample wt/vol: 5.0 (g/mL) mL SLD Batch No: 436  
Level: (low/med) Low Date Received: 8/23/95  
% Moisture: not dec. N/A dec. N/A Date Extracted: N/A  
Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 8/23/95  
GPC Cleanup: (Y/N) No pH: 1 Dilution Factor: 1  
CONCENTRATION UNITS:  
(ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	O	POL
71-43-2	Benzene		U	0.5

## ANALYTICAL REPORT

SLD Accession No. OR-95-3807

Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene	U	0.5
541-73-1	1,3-Dichlorobenzene	U	0.5
106-46-7	1,4-Dichlorobenzene	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3807  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene	U	0.5
100-42-5	Styrene	U	0.5
630-20-6	1,1,1,2-Tetrachloroethane	U	0.5
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5
127-18-4	Tetrachloroethene	U	0.5
109-99-9	Tetrahydrofuran (THF)	U	5.0
108-88-3	Toluene	U	0.5
87-61-5	1,2,3-Trichlorobenzene	U	0.5
120-82-1	1,2,4-Trichlorobenzene	U	0.5
71-55-6	1,1,1-Trichloroethane	U	0.5
79-00-5	1,1,2-Trichloroethane	U	0.5
79-01-6	Trichloroethene	U	0.5
75-69-4	Trichlorofluoromethane	U	0.5
96-18-4	1,2,3-Trichloropropane	U	0.5
95-63-6	1,2,4-Trimethylbenzene	U	0.5
108-67-8	1,3,5-Trimethylbenzene	U	0.5
75-01-4	Vinyl chloride	U	0.5
95-47-6	o-Xylene	U	0.5
N/A	p- & m-Xylene	U	0.5
N/A	Total Xylenes	U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well  
 as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the  
 standard curve.

J - Indicates an estimated value for tentatively identified compounds,  
 or for compounds detected and identified but present at  
 a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a  
 concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3807  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	97.
Bromofluorobenzene (HALL Surr)	10.0 ppb	93.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ppb	.

Analyst:

Nancy DeWitt  
Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By:

Richard F. Meyerhein  
Richard F. Meyerhein 08/24/95  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. 0R95 3807 C

Date Received: AUG 23 1995

Request ID No. 090042-A

User Code #: 64000 Request ID No.:

Facility Name: SPS-11

County: Lea

Priority Code #:

City: Lovington State: N.M.

Sample Location: S.P.S. Well 111 Treating Skid

Collected By: Ernest Richarte On: 95/08/22 At: 11:40 hrs.

Code: 0.618 Submitter: WSS # 0.00214 Organization:

Report To: Jay Janica Phone #: 915-947-9008

Address: Texas-New Mexico Pipe Line Co.

P.O. Box 60028

City, State Zip: San Angelo, Texas 76906

Field Data: pH, Conductivity, umhos/cm, Temperature, Chlorine Residual, mg/L, Flow.

Sample Source: Stream, Lake, Drain, Pool, WWTP, Entry Point to Distribution, Well, Depth, Spring, Distribution, Other: Treating Skid

Sample Type: Water, Wastewater, Soil, Food, Other, Unchlorinated, Chlorinated

Preservation: NP, P-Ice, P-TS, P-HCl, P-HgCl<sub>2</sub>, Other

Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens: (753) Aliphatic Headspace (Qualitative Screen), (754) Aromatic & Halogenated Purgeables (EPA 601/2), (765) Mass Spectrometer Purgeables (EPA 624), (766) SDWA Total Trihalomethanes (EPA 501.1), (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2), (775) SDWA VOC's II [EDB & DBCP] (EPA 504), (790) Composite Sample for Analysis No.

Other Specific Compounds or Classes: (755) Base/Neutral Extractables (EPA 625), (756) Base/Neutral/Acid Extractables (EPA 8270), (772) Carbamate Pesticides (EPA 531.1), (758) Herbicides, Chlorophenoxy Acid (EPA 515.1), (759) Herbicides, Triazine (EPA 507), (751) Hydrocarbon Fuel Screen (EPA M-8015), (760) Organochlorine Pesticides (EPA 505), (761) Organophosphate Pesticides (EPA 507), (767) Polychlorinated Biphenyls (PCB's) in Oil, (762) SDWA Synthetic Org. Compds. (SLD 758/760), (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks: Ernest Richarte Please fax results to me @ (505) 396-2754

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

August 25, 1995

Requested Priority 1  
ID No. 090043ANALYTICAL REPORT  
SLD Accession No. OR-95-3808Distribution☐ User 0  
☒ Submitter 68  
☒ SLD FilesTo: Jay Janica  
Texas-New Mexico Pipeline Co.  
PO BOX 60028  
San Angelo, TX 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on August 23, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 22-Aug-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 14:00 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3808
Sample wt/vol: 35.0 (g/mL) mL	SLD Batch No: 445
Level: (low/med) Low	Date Received: 8/23/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 8/23/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 8/25/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	O	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

(Continued on page 2.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3808  
Continuation, Page 2 of 3

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE RECOVERIES	CONCENTRATION	%RECOVERY
SURROGATE		

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3808  
Continuation, Page 3 of 3

1,1,2,2,-TTCE

0.570 ug/L  
LS

84 %

SPIKE RECOVERY: The % recoveries for compounds in the batch  
spike were from 70% to 130% with the exception of the compounds  
listed below:

COMPOUND	CONCENTRATION	% RECOVERY
	ug/L	
No exceptions		

Analyst:

Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By:

Richard F. Meyerhein 08/25/95  
Supervisor, Organic Chemistry Section



## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 22, 1995

Request  
ID No. 090045ANALYTICAL REPORT  
SLD Accession No. OR-95-3866

## Distribution

SAN ANGELO OFFICE  
( ) User 64000  
(X) Submitter 995  
(X) SLD Files  
SEP 27 1995To: Jay Janica  
Texas-New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on August 24, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 23-Aug-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 10:45 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

## Notations &amp; Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

## Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3866
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 456
Level: (low/med) Low	Date Received: 08/24/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 08/31/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 09/02/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

(Continued on page 2.)

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

#### QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE RECOVERIES	CONCENTRATION	%RECOVERY
SURROGATE		

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3866  
Continuation, Page 3 of 3

1,1,2,2,-TTCE

50. ug/L

121.0%

SPIKE RECOVERY: The % recoveries for compounds in the batch  
spike were from 70% to 130% with the exception of the compounds  
listed below:

COMPOUND	CONCENTRATION	% RECOVERY
	ug/L	
No exceptions		

Analyst:

NW  
Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By:

Richard F. Meyerhein  
Richard F. Meyerhein 09/22/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

## SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

UR95 3866 G

Date

Received:

8-24-95

Request ID No. 090045-A

2 User Code #:	3 Request ID No.:	4 Priority Code #:	5 Facility Name:	6 County:	7 City:	8 State:
			SPS -11	Lea	Lovington	N.M.
9 Sample Location: S P I S I W E I L L I I I I I T I R I F A I T I N I G I S I K I T I D I I I I						
10 Collected By: Ernest R. Charte On: 9/5/95 At: 11:04 hrs. Date: (YY/MM/DD) Time: 34 hr. clock 200 yrs = 1800 hrs.						
11 Codes: Submitter WSS # Organization						
12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (# needed)						
13 Report To: Jay Janica Address: Texas-New Mexico Pipeline Co PO Box 60028 City, State Zip: San Angelo, Texas 76906						
14 Phone #: (915) 947-9008						
15 Sampling Information: Sample Purpose: <input type="checkbox"/> Grab <input type="checkbox"/> Composite <input type="checkbox"/> Flow Proportioned <input type="checkbox"/> Compliance <input checked="" type="checkbox"/> NMED Monitoring <input type="checkbox"/> Equal Aliquot <input type="checkbox"/> Confirmation <input type="checkbox"/> Sample Split w/Permittee <input type="checkbox"/> Special <input type="checkbox"/> Chain of Custody						
16 Field Data: pH Conductivity: umhos/cm Temperature: Chlorine Residual: mg/L Flow:						
17 Sample Source: <input type="checkbox"/> Stream <input type="checkbox"/> Lake <input type="checkbox"/> Drain <input type="checkbox"/> Pool <input type="checkbox"/> WWTP <input type="checkbox"/> Entry Point to Distribution <input type="checkbox"/> Well; Depth: <input type="checkbox"/> Spring <input type="checkbox"/> Distribution <input checked="" type="checkbox"/> Other: Treating Skid						
18 Field Remarks: Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge						
19 Sample Type: <input checked="" type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Food <input type="checkbox"/> Other <input type="checkbox"/> Unchlorinated <input type="checkbox"/> Chlorinated <input type="checkbox"/> Wastewater						
20 Preservation: <input type="checkbox"/> NP No Preservation; Sample stored at room temperature <input checked="" type="checkbox"/> P-Is Sample stored in an ice bath (Not Frozen) <input type="checkbox"/> P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual <input checked="" type="checkbox"/> P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) <input type="checkbox"/> P-HgCl <sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride <input type="checkbox"/> Other						
This form accompanies a single sample consisting of: - septum vial(s) (volume = 40 ml ea.) - glass jug(s) (volume = ml ea.) (volume = )						

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

## Volatile Screens:

- ☐ - (753) Aliphatic Headspace (Qualitative Screen)
- ☐ - (754) Aromatic & Halogenated Purgeables (EPA 601/2)
- ☐ - (765) Mass Spectrometer Purgeables (EPA 624)
- ☐ - (766) SDWA Total Trihalomethanes (EPA 501.1)
- ☐ - (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)
- ☒ - (775) SDWA VOC's II [EDB & DBCP] (EPA 504)
- ☐ - (790) Composite Sample for Analysis No.

## Other Specific Compounds or Classes:

- ☐ - { }
- ☐ - { }

## Semivolatile Screens:

- ☐ - (755) Base/Neutral Extractables (EPA 625)
- ☐ - (756) Base/Neutral/Acid Extractables (EPA 8270)
- ☐ - (772) Carbamate Pesticides (EPA 531.1)
- ☐ - (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
- ☐ - (759) Herbicides, Triazine (EPA 507)
- ☐ - (751) Hydrocarbon Fuel Screen (EPA M-8015)
- ☐ - (760) Organochlorine Pesticides (EPA 505)
- ☐ - (761) Organophosphate Pesticides (EPA 507)
- ☐ - (767) Polychlorinated Biphenyls (PCB's) in Oil
- ☐ - (762) SDWA Synthetic Org. Compds. (SLD 758/760)
- ☐ - (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Please Fax Results To Me AT (505) 396-2754

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

SAN ANGELO OFFICE  
FILE

SEP 18 1995

Distribution

☒ User 55000  
☒ Submitter 68  
☒ Client  
☒ SLD Files

September 6, 1995

Request  
ID No. 090044

## ANALYTICAL REPORT

SLD Accession No. OR-95-3867

To: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Division  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on August 24, 1995

## User:

Richard Asbury  
Drinking Water Bureau  
NM-ED Dist. #3 Office  
1001 N. Solano Drive  
Las Cruces, NM 88001

## Submitter:

ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

## COLLECTION

On: 23-Aug-95 By: Ric . . .  
At: 10:45 hrs. In/Near: Lovington

## LOCATION

SPS Wel 11 Treating Skid

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	PQL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

## Notations &amp; Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

## Laboratory Remarks:

SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3867
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 451
Level: (low/med) Low	Date Received: 8/24/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 8/28/95

(Continued on page 2.)

700 Camino de Sabad, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

**GELO OFFICE  
FILE**

Request  
ID No. 090044

**ANALYTICAL REPORT**  
**SLD Accession No. OR-95-3867**

From: Organic Chemistry Section  
Scientific Laboratory Division  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

**Re: A water, Purgeable sample submitted to this laboratory on August 24, 1995**

User:

Richard Asbury  
Drinking Water Bureau  
NM-ED Dist. #3 Office  
1001 N. Solano Drive  
Las Cruces, NM 88001

**Submitter:**

ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

COLLECTION

On: 23-Aug-95                      By: Ric . . .  
At: 10:45 hrs.                      In/Near: Lovington

**LOCATION**  
SPS Wel 11 Treating Skid

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb
See Laboratory Remarks for Additional Information				

Notations & Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

**Laboratory Remarks:**

SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A  
 Matrix: (soil/water) Water Lab Sample ID: OR-95-3867  
 Sample wt/vol: 5.0 (g/mL) mL SLD Batch No: 451  
 Level: (low/med) Low Date Received: 8/24/95  
 % Moisture: not dec. N/A dec. N/A Date Extracted: N/A  
 Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 8/28/95

(Continued on page 2.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3867  
 Continuation, Page 2 of 4

GPC Cleanup: (Y/N) No pH: 1 Dilution Factor: 1  
 CONCENTRATION UNITS:  
 (ug/L or ug/Kg) : ug/L

This sample was analyzed for the following compounds  
 using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	POL
71-43-2	Benzene		U	0.5
108-86-1	Bromobenzene		U	0.5
74-97-5	Bromochloromethane		U	0.5
75-27-4	Bromodichloromethane		U	0.5
75-25-2	Bromoform		U	0.5
24-83-9	Bromomethane		U	0.5
78-93-3	2-Butanone (MEK)		U	5.0
104-51-8	n-Butylbenzene		U	0.5
135-98-8	sec-Butylbenzene		U	0.5
98-06-6	tert-Butylbenzene		U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)		U	5.0
56-23-5	Carbon tetrachloride		U	0.5
108-90-7	Chlorobenzene		U	0.5
75-00-3	Chloroethane		U	0.5
67-66-3	Chloroform		U	0.5
74-87-3	Chloromethane		U	0.5
95-49-8	2-Chlorotoluene		U	0.5
106-43-4	4-Chlorotoluene		U	0.5
96-12-8	1,2-Dibromo-3-chloropropane		U	0.5
124-48-1	Dibromochloromethane		U	0.5
106-93-4	1,2-Dibromoethane		U	0.5
74-95-3	Dibromomethane		U	0.5
95-50-1	1,2-Dichlorobenzene		U	0.5
541-73-1	1,3-Dichlorobenzene		U	0.5
106-46-7	1,4-Dichlorobenzene		U	0.5
75-71-8	Dichlorodifluoromethane		U	0.5
75-34-3	1,1-Dichloroethane		U	0.5
107-06-2	1,2-Dichloroethane		U	0.5
75-35-4	1,1-Dichloroethene		U	0.5
156-59-4	cis-1,2-Dichloroethene		U	0.5
156-60-5	trans-1,2-Dichloroethene		U	0.5
78-87-5	1,2-Dichloropropane		U	0.5
142-28-9	1,3-Dichloropropane		U	0.5
590-20-7	2,2-Dichloropropane		U	0.5
563-58-6	1,1-Dichloropropene		U	0.5

(Continued on page 3.)

## ANALYTICAL REPORT

SLD Accession No. OR-95-3867

Continuation, Page 3 of 4

1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride	U	0.5
91-20-3	Naphthalene	U	0.5
103-65-1	Propylbenzene	U	0.5
100-42-5	Styrene	U	0.5
630-20-6	1,1,1,2-Tetrachloroethane	U	0.5
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5
127-18-4	Tetrachloroethene	U	0.5
109-99-9	Tetrahydrofuran (THF)	U	5.0
108-88-3	Toluene	U	0.5
87-61-5	1,2,3-Trichlorobenzene	U	0.5
120-82-1	1,2,4-Trichlorobenzene	U	0.5
71-55-6	1,1,1-Trichloroethane	U	0.5
79-00-5	1,1,2-Trichloroethane	U	0.5
79-01-6	Trichloroethene	U	0.5
75-69-4	Trichlorofluoromethane	U	0.5
96-18-4	1,2,3-Trichloropropane	U	0.5
95-63-6	1,2,4-Trimethylbenzene	U	0.5
108-67-8	1,3,5-Trimethylbenzene	U	0.5
75-01-4	Vinyl chloride	U	0.5
95-47-6	o-Xylene	U	0.5
N/A	p- & m-Xylene	U	0.5
N/A	Total Xylenes	U	1.0

## \* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
Equivalent to the "minimum detection limit" defined for  
regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well  
as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the  
standard curve.

J - Indicates an estimated value for tentatively identified compounds,  
or for compounds detected and identified but present at  
a concentration less than the PQL listed.

(Continued on page 4.)



## ANALYTICAL REPORT

SLD Accession No. OR-95-3867

Continuation, Page 4 of 4

- N - Indicates that more than one peak was used for quantitation.  
U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

## QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

## SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	98.
Bromofluorobenzene (HALL Surr)	10.0 ppb	95.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ppb	.

Analyst:

SAM

S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By:

CS

Richard F. Meyerhein 09/06/95  
Supervisor, Organic Chemistry Section

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 22, 1995

Request  
ID No. 090046

**ANALYTICAL REPORT**  
**SLD Accession No. OR-95-3878**

*Distribution*  
SAN ANGELO  
User 64000  
Submitter 68  
SEP 27 1995  
SLD Files

To: Jay Janica  
Texas-New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on August 25, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 24-Aug-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 10:55 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

Evidentiary Seals: Not Sealed ☒ Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3878
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 456
Level: (low/med) Low	Date Received: 8/25/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 08/31/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 9/02/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)	0.00	U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	0.00	U	0.02

(Continued on page 2.)

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

#### QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE	CONCENTRATION	%RECOVERY
SURROGATE RECOVERIES		

(Continued on page 3.)

## ANALYTICAL REPORT

SLD Accession No. OR-95-3878

Continuation, Page 3 of 3

1,1,2,2,-TTCE

50. ug/L

120.0%

SPIKE RECOVERY: The % recoveries for compounds in the batch  
spike were from 70% to 130% with the exception of the compounds  
listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	ug/L	

Analyst: Nancy DeWitt

Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By: Richard F. Meyerhein

Richard F. Meyerhein 09/19/95  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106  
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. **OR95 3878 C**

Request **|||||**  
ID No. 090046-A

Date Received: **7/25/95**

2 User Code #:	3 Request ID No.:	4 Priority Code #:	5 Facility Name:	6 County:	7 City:	8 State:
		<b>3</b>	SPS -11	Lea	Lovington	N.M.

9 Sample Location: **S.P.I.S.I. | W.I.E.I.L.I.I. | I.I.I.I. | T.I.R.I.E.I.A.I.T.I.N.I.G.I. | S.I.K.I.T.I.D.I. | I.I.I.I.**

10 Collected By: **Forest A. R. Hart** On: **95/08/24** At: **7:15:15** hrs.  
First: **Forest** Last: **Hart** Date: (YY/MM/DD) Time: 24 hr. clock 2000 hrs. - 1800 hrs.

11 Codes: **0000** Submitter: **WSS #** Organization: **0101012114**

13 Report To: **Jay Janica** 14 Phone #: **(915) 947-9008**

Address: **Texas-New Mexico Pipeline Co**  
**PO Box 60028**

City, State Zip: **San Angelo, Texas 76906**

16 Field Data: pH: **7.0**, Conductivity: **umhos/cm**, Temperature: **°C**, Chlorine Residual: **mg/L**, Flow: **gpm**

17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☐ Entry Point to Distribution ☐ Well; Depth: ☐ Spring ☐ Distribution ☒ Other: **Treating Skid**

18 Field Remarks: **Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge**

19 Sample Type: ☒ Water ☐ Wastewater ☐ Soil ☐ Food ☐ Other ☐ Unchlorinated ☐ Chlorinated

20 Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-Ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride ☐ Other

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

<b>Volatile Screens:</b> <input type="checkbox"/> (753) Aliphatic Headspace (Qualitative Screen) <input type="checkbox"/> (754) Aromatic & Halogenated Purgeables (EPA 801.2) <input type="checkbox"/> (765) Mass Spectrometer Purgeables (EPA 624) <input type="checkbox"/> (766) SDWA Total Trihalomethanes (EPA 501.1) <input type="checkbox"/> (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2) <input checked="" type="checkbox"/> (775) SDWA VOC's II [EDB & DBCP] (EPA 504) <input type="checkbox"/> (780) Composite Sample for Analysis No. _____	<b>Semivolatile Screens:</b> <input type="checkbox"/> (755) Base/Neutral Extractables (EPA 625) <input type="checkbox"/> (756) Base/Neutral/Acid Extractables (EPA 8270) <input type="checkbox"/> (772) Carbamate Pesticides (EPA 531.1) <input type="checkbox"/> (758) Herbicides, Chlorophenoxy Acid (EPA 515.1) <input type="checkbox"/> (759) Herbicides, Triazine (EPA 507) <input type="checkbox"/> (751) Hydrocarbon Fuel Screen (EPA M-8015) <input type="checkbox"/> (760) Organochlorine Pesticides (EPA 505) <input type="checkbox"/> (761) Organophosphate Pesticides (EPA 507) <input type="checkbox"/> (767) Polychlorinated Biphenyls (PCB's) in Oil <input type="checkbox"/> (762) SDWA Synthetic Org. Compds. (SLD 758/760) <input type="checkbox"/> (782) Total Petroleum Hydrocarbons (EPA 418.1)
---	---

**Other Specific Compounds or Classes:**  
☐ - { }  
☐ - { }

Remarks: **99c**  
Please Fax Results To Me AT (505) 396-2754  
These samples were taken 18 hours after we reglued some of the skid piping  
*Forest A. R. Hart*

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 22, 1995

Request  
ID No. 090047ANALYTICAL REPORT  
SLD Accession No. OR-95-3879

## Distribution

☐ User 64000  
☒ Submitter 68  
☒ SLD FilesSAN ANGELO OFFICE  
FILE

SEP 27 1995

To: Jay Janica  
Texas New Mexico Pipeline Co.  
P.O. Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

	EHG	TWL	Note	%
EDH				
CBK				
AER				
JH				

Re: A water, Purgeable sample submitted to this laboratory on August 25, 1995

## DEMOGRAPHIC DATA

COLLECTION	LOCATION
On: 24-Aug-95 By: Ric . . .	SPS Well 11 Treating Skid
At: 10:55 hrs. In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

## Notations &amp; Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

## Laboratory Remarks:

SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A  
 Matrix: (soil/water) Water Lab Sample ID: OR-95-3879  
 Sample wt/vol: 5.0 (g/mL) mL SLD Batch No: 462  
 Level: (low/med) Low Date Received: 8/25/95  
 % Moisture: not dec. N/A dec. N/A Date Extracted: N/A  
 Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 9/7/95  
 GPC Cleanup: (Y/N) No pH: 1 Dilution Factor: 1  
 CONCENTRATION UNITS:  
 (ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	POL
71-43-2	Benzene		U	0.5

(Continued on page 2.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3879  
 Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene	U	0.5
541-73-1	1,3-Dichlorobenzene	U	0.5
106-46-7	1,4-Dichlorobenzene	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3879  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the PQL listed.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)



this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	98.
Bromofluorobenzene (HALL Surr)	10.0 ppb	89.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	ppb	

Analyst: SAM  
S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By: Richard F. Meyerhein  
Richard F. Meyerhein 09/13/95  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

OR95 3879 C

Date

Received:

8/25/95

Request |||||

ID No. 090047-A

User Code #:

3 Request ID No.:

Facility Name:

SPS-11

6 County:

Lea

7 City:

Lovington

8 State:

N.M.

Sample Location:

Collected By:

First

Last

On:

9/5/08/24

At:

11:15 hrs.

Codes:

Submitter

WSS #

Organization

12 Latitude (DDMMSS)

Longitude (DDMMSS)

2 Digit ID (if needed)

Report To:

Jay Janica

14 Phone #:

(915) 947-9008

Texas New Mexico Pipeline Co

PO Box 60028

San Angelo, Texas 76906

15 Sampling Information:

- Sample Purpose:
- ☐ Compliance
  - ☐ NMED Monitoring
  - ☐ Confirmation
  - ☐ Special
  - ☐ Grab
  - ☐ Composite
  - ☐ Flow Proportioned
  - ☐ Equal Aliquot
  - ☐ Sample Split w/Permittee
  - ☐ Chain of Custody

Field Data:

pH

Conductivity:

umhos/cm

Temperature:

Chlorine Residual:

mg/L

Flow:

Sample Source:

- ☐ Stream
- ☐ Lake
- ☐ Drain
- ☐ Pool
- ☐ WWTP
- ☐ Entry Point to Distribution
- ☐ Well; Depth:
- ☐ Spring
- ☐ Distribution
- ☒ Other: Treating Skid

18 Field Remarks:

Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge

Sample Type:

- ☒ Water
- ☐ Soil
- ☐ Food
- ☐ Other
- ☐ Unchlorinated
- ☐ Chlorinated

20 Preservation:

- ☐ NP No Preservation; Sample stored at room temperature
- ☒ P-Ice Sample stored in an ice bath (Not Frozen)
- ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual
- ☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)
- ☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride
- ☐ Other

This form accompanies a single sample consisting of:

- 2 septum vial(s) (volume = 40 ml ea.)
- glass jug(s) (volume = ml ea.)
- (volume = )

Analyses Requested:

Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens:

- ☐ (753) Aliphatic Headspace (Qualitative Screen)
- ☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2)
- ☐ (765) Mass Spectrometer Purgeables (EPA 624)
- ☐ (766) SDWA Total Trihalomethanes (EPA 501.1)
- ☒ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)
- ☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)
- ☐ (790) Composite Sample for Analysis No.

Semivolatile Screens:

- ☐ (755) Base/Neutral Extractables (EPA 625)
- ☐ (756) Base/Neutral/Acid Extractables (EPA 8270)
- ☐ (772) Carbamate Pesticides (EPA 531.1)
- ☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
- ☐ (759) Herbicides, Triazine (EPA 507)
- ☐ (751) Hydrocarbon Fuel Screen (EPA M-8015)
- ☐ (760) Organochlorine Pesticides (EPA 505)
- ☐ (761) Organophosphate Pesticides (EPA 507)
- ☐ (767) Polychlorinated Biphenyls (PCB's) in Oil
- ☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760)
- ☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

Other Specific Compounds or Classes:

- ☐ { }
- ☐ { }

Remarks:

80C

Please Fax Results To Me at (505) 396-2754.

These samples were taken 18 hours after we reglued some of the skid piping

Janet A. Belant

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 22, 1995

Request  
ID No. 090048ANALYTICAL REPORT  
SLD Accession No. OR-95-3896

## Distribution

☐ User 64000☒ Submitter 68☒ SLD Files

SAN ANGELO OFFICE

SEP 27 1995

To: Jay Janica  
Texas New Mexico Pipeline Co.  
P.O. Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on August 29, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 25-Aug-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 16:00 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

## Notations &amp; Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

## Laboratory Remarks:

SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3896
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 462
Level: (low/med) Low	Date Received: 8/29/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 9/2/95
GPC Cleanup: (Y/N) No pH: 1	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	POL
71-43-2	Benzene		U	0.5

(Continued on page 2.)

## ANALYTICAL REPORT

SLD Accession No. OR-95-3896

Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene	U	0.5
541-73-1	1,3-Dichlorobenzene	U	0.5
106-46-7	1,4-Dichlorobenzene	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3896  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the PQL listed.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3896  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

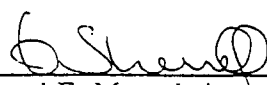
SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	99.
Bromofluorobenzene (HALL Surr)	10.0 ppb	89.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ppb	.

Analyst: SAM  
S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By:   
Richard F. Meyerhein 09/11/95  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SLD No. OR95 3896 C

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570

Request |||||  
ID No. 090048-A

Date Received: AUG 29 1995

User Code #:	3 Request ID No.:
--------------	-------------------

4 Priority Code #: 3 RT or T and ED-86 Overweight

Facility Name:	SPS-11	6 Country:	Lea	7 City:	Lexington	8 State:	N. M.
----------------	--------	------------	-----	---------	-----------	----------	-------

Sample Location: S.P.S. W.E.L.L. 1111 Trench at 1100 ft. S. 1111

Collected By: Ernest R. Harte On: 25/08/25 At: 16:00 hrs.  
 First Lielt Date: (YY/MM/DD) Time: 24 hr. clock  
 2:00 am - 1:00 pm

Codes: 068 Submitter WSS # 010012114 Organization 12 Latitude (DDMMSS)                      Longitude (DDMMSS)                      2 DIGIT ID (if needed)

Report To:	Name Jay Janica	14 Phone #: (915) 947-9008	15 Sampling Information:
------------	--------------------	-------------------------------	--------------------------

Texas New Mexico Pipeline Co  
PO Box 60028

State Zip San Angelo, Texas 76906	<input type="checkbox"/> - Original Request <input checked="" type="checkbox"/> - Confirmation <input type="checkbox"/> - Sample Split w/Permittee <input type="checkbox"/> - Special <input type="checkbox"/> - Chain of Custody
--------------------------------------	---

Field Data: pH \_\_\_\_\_, Conductivity: \_\_\_\_\_ umhos/cm @ \_\_\_\_\_ Temperature: \_\_\_\_\_ °C, Chlorine Residual: \_\_\_\_\_ mg/L, Flow: \_\_\_\_\_

<b>Sample Source:</b> <input type="checkbox"/> Stream <input type="checkbox"/> Lake <input type="checkbox"/> Drain <input type="checkbox"/> Pool <input type="checkbox"/> WWTP	<input type="checkbox"/> Entry Point to Distribution <input type="checkbox"/> Well; Depth: _____ <input type="checkbox"/> Spring <input type="checkbox"/> Distribution <input checked="" type="checkbox"/> Other: <u>Treating Skid</u>	<b>18 Field Remarks:</b> Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge
---	--	--

**Sample Type:** ☒ - Water ☐ - Wastewater ☐ - Food ☐ - Other \_\_\_\_\_  
**Soil:** ☐ - Food, ☐ - Other \_\_\_\_\_  
 This form accompanies a single sample consisting of:  
 \_\_\_\_\_ - septum vial(s) (volume = 40 ml ea.)  
 \_\_\_\_\_ - glass jug(s) (volume = \_\_\_\_\_ ml ea.)  
 \_\_\_\_\_ (volume = \_\_\_\_\_)

**20 Preservation:**  
☐ - NP No Preservation; Sample stored at room temperature  
☒ - P-Ice Sample stored in an ice bath (Not Frozen)  
☐ - P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ - P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ - P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ - Other \_\_\_\_\_

**Analyzes Requested:** Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

<p><b><u>Volatile Screens:</u></b></p> <ul style="list-style-type: none"> <li>- (753) Aliphatic Headspace (Qualitative Screen)</li> <li>- (754) Aromatic &amp; Halogenated Purgeables (EPA 601/2)</li> <li>- (765) Mass Spectrometer Purgeables (EPA 624)</li> <li>- (766) SDWA Total Trihalomethanes (EPA 501.1)</li> <li>- (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)</li> <li>- (775) SDWA VOC's II [EDB &amp; DBCP] (EPA 504)</li> <li>- (790) Composite Sample for Analysis No. _____</li> </ul>	<p><b><u>Semivolatile Screens:</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> - (755) Base/Neutral Extractables (EPA 625)</li> <li><input type="checkbox"/> - (756) Base/Neutral/Acid Extractables (EPA 8270)</li> <li><input type="checkbox"/> - (772) Carbamate Pesticides (EPA 531.1)</li> <li><input type="checkbox"/> - (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)</li> <li><input type="checkbox"/> - (759) Herbicides, Triazine (EPA 507)</li> <li><input type="checkbox"/> - (751) Hydrocarbon Fuel Screen (EPA M-8015)</li> <li><input type="checkbox"/> - (760) Organochlorine Pesticides (EPA 505)</li> </ul>
--	---

Other Specific Compounds or Classes:

☐ - (761) Organophosphate Pesticides (EPA 507)

☐ - (767) Polychlorinated Biphenyls (PCB's) in Oil

☐ - (762) SDWA Synthetic Org. Compds. (SLD 758/760)

☐ - (782) Total Petroleum Hydrocarbons (EPA 418.1)

Signature: \_\_\_\_\_

Please Fax Results To Me at (505) 396-2754.

Arvid J. Liebert

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 22, 1995

Request  
ID No. 090049

**ANALYTICAL REPORT**  
**SLD Accession No. OR-95-3897**

Distribution

SAN ANGELO ☐ User 64000  
☒ Submitter 68  
☒ SLD Files

To: Jay Janica  
Texas-New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on August 29, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 25-Aug-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 16:00 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	PQL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: /A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A  
 Matrix: (soil/water) Water Lab Sample ID: OR-95-3897  
 Sample wt/vol: 35.0 (g/mL) ml SLD Batch No: 456  
 Level: (low/med) Low Date Received: 08/29/95  
 % Moisture: not dec. N/A dec. N/A Date Extracted: 08/31/95  
 Extraction: (SepF/Cont/Sonc) Micro Date Analyzed: 09/02/95  
 GPC Cleanup: (Y/N) No pH: N/A Dilution Factor: 1  
 CONCENTRATION UNITS:  
 (ug/L or ug/Kg): ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	O	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

(Continued on page 2.)



\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

#### QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE RECOVERIES	CONCENTRATION	%RECOVERY
SURROGATE		

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3897  
Continuation, Page 3 of 3

1,1,2,2,-TTCE

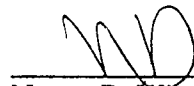
50. ug/L

84.0%

SPIKE RECOVERY: The % recoveries for compounds in the batch  
spike were from 70% to 130% with the exception of the compounds  
listed below:

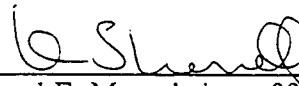
COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	ug/L	.

Analyst:



Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By:



Richard F. Meyerhein 09/22/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

## SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

OR95 3057

Date

AUG 29 1995

Received:

Request ||||| |||||  
ID No. 090049-A

2) User Code #:	3) Request ID No.:	4) Priority Code #:	5) Facility Name:	6) County:	7) City:	8) State:
		3	SPS -11	Lea	Lovington	N.M.

9) Sample Location: S P I S I W I F I L I I I I I T I R I F I A T I T I N I G I I S I K I T I D I I I I I

10) Collected By: Ernest R. McChargue On: 9/1/95 At: 11:00 hrs.  
First: (11:00) Date: (YY/MM/DD) Time: 24 hr. clock 2000 hrs = 1900 hrs.

11) Codes: Submitter WSS # Organization 12) Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13) Report Name: Jav Janica 14) Phone #: (915) 947-9008

Address: Texas-New Mexico Pipeline Co.  
PO Box 60028

City, State Zip: San Angelo, Texas 76906

16) Field Data: pH Conductivity umhos/cm @ Temperature: °C Chlorine Residual: mg/L Flow:

17) Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☐ Entry Point to Distribution ☐ Well; Depth: ☐ Spring ☐ Distribution ☒ Other: Treating Skid 18) Field Remarks: Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge19) Sample Type: ☒ Water ☐ Wastewater ☐ Soil ☐ Food ☐ Other ☐ Unchlorinated ☐ Chlorinated 20) Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-Ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride ☐ Other

21) Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

<b>Volatile Screens:</b> <input type="checkbox"/> (753) Aliphatic Headspace (Qualitative Screen) <input type="checkbox"/> (754) Aromatic & Halogenated Purgeables (EPA 601/2) <input type="checkbox"/> (765) Mass Spectrometer Purgeables (EPA 624) <input type="checkbox"/> (766) SDWA Total Trihalomethanes (EPA 501.1) <input type="checkbox"/> (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2) <input checked="" type="checkbox"/> (775) SDWA VOC's II [EDB & DBCP] (EPA 504) <input type="checkbox"/> (790) Composite Sample for Analysis No. _____	<b>Semivolatile Screens:</b> <input type="checkbox"/> (755) Base/Neutral Extractables (EPA 625) <input type="checkbox"/> (756) Base/Neutral/Acid Extractables (EPA 8270) <input type="checkbox"/> (772) Carbamate Pesticides (EPA 531.1) <input type="checkbox"/> (758) Herbicides, Chlorophenoxy Acid (EPA 515.1) <input type="checkbox"/> (759) Herbicides, Triazine (EPA 507) <input type="checkbox"/> (751) Hydrocarbon Fuel Screen (EPA M-8015) <input type="checkbox"/> (760) Organochlorine Pesticides (EPA 505) <input type="checkbox"/> (761) Organophosphate Pesticides (EPA 507) <input type="checkbox"/> (767) Polychlorinated Biphenyls (PCB's) In Oil <input type="checkbox"/> (762) SDWA Synthetic Org. Cmpds. (SLD 758/760) <input type="checkbox"/> (782) Total Petroleum Hydrocarbons (EPA 418.1)
<b>Other Specific Compounds or Classes:</b> <input type="checkbox"/> - { } <input type="checkbox"/> - { }	

Remarks:

Please Fax Results To Me AT (505) 396-2754

*Ernest R. McChargue*

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 22, 1995

Request  
ID No. 090050

# ANALYTICAL REPORT

## SLD Accession No. OR-95-3898

SAN ANGELO Distribution  
( ) User 64000  
(X) Submitter 68  
SEP (X) SLD Files

To: Jay Janica  
Texas New Mexico Pipeline Co.  
P.O. Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on August 29, 1995

## DEMOGRAPHIC DATA

COLLECTION	LOCATION
On: 26-Aug-95 By: Ric . . .	SPS Well 11 Treating Skid
At: 10:00 hrs. In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	PQL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

## Notations &amp; Comments:

Evidentiary Seals: Not Sealed ☒ Intact: No ☐ , Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

## Laboratory Remarks:

### SAFE DRINKING WATER ACT

### VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A  
 Matrix: (soil/water) Water Lab Sample ID: OR-95-3898  
 Sample wt/vol: 5.0 (g/mL) mL SLD Batch No: 462  
 Level: (low/med) Low Date Received: 8/29/95  
 % Moisture: not dec. N/A dec. N/A Date Extracted: N/A  
 Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 9/2/95  
 GPC Cleanup: (Y/N) No pH: 1 Dilution Factor: 1  
 CONCENTRATION UNITS:  
 (ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	PQL
71-43-2	Benzene		U	0.5

(Continued on page 2.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3898  
 Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene	U	0.5
541-73-1	1,3-Dichlorobenzene	U	0.5
106-46-7	1,4-Dichlorobenzene	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3898  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the PQL listed.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3898  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	98.
Bromofluorobenzene (HALL Surr)	10.0 ppb	90.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ppb	.

Analyst: SAM  
S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By: Richard F. Meyerhein  
Richard F. Meyerhein 09/11/95  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

OR95 3898 C

Date

AUG 29 1995

Received:

Request |||||

ID No. 090050-A

User Code #: \_\_\_\_\_

3 Request ID No.:

4 Priority Code #: 3

ET or T  
all ED-SD  
Construct

Facility Name:

SPS-11

6 County:

Lea

7 City:

Lovington

8 State:

N.M.

Sample Location:

Collected By:

Ernest R. L. Larte

On:

9/5/95

At:

11:00 hrs.

Codes:

Submitter

WSS #

Organization

Report To:

Jay Janica

14 Phone #:

(915) 947-9008

Texas New Mexico Pipeline Co

PO Box 60028

State Zip

San Angelo, Texas 76906

Field Data:

pH

Conductivity:

umhos/cm

Temperature:

Chlorine Residual:

mg/L

Sample Source:

☐ Stream

☐ Entry Point to Distribution

☐ Lake

☐ Well; Depth:

☐ Drain

☐ Spring

☐ Pool

☐ Distribution

☐ WWTP

☒ Other: Treating Skid

Sample Type:

☒ Water

☐ Unchlorinated

☐ Wastewater

☐ Chlorinated

☐ Soil, ☐ Food, ☐ Other

is form accompanies a single sample consisting of:

- septum vial(s) (volume = 20 ml ea.)

- glass jug(s) (volume = ml ea.)

(volume = )

18 Field Remarks:

Sampled from 1/4" Hose Bib from

activated charcoal filter vessel

discharge

20 Preservation:

☐ NP

No Preservation; Sample stored at room temperature

☒ P-Ice

Sample stored in an ice bath (Not Frozen)

☐ P-TS

Sample Preserved with Sodium Thiosulfate to remove chlorine residual

☒ P-HCl

Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

☐ P-HgCl<sub>2</sub>

Sample Preserved with 20 mg/l Mercuric Chloride

☐ Other

Analyses Requested:

Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens:

- ☐ (753) Aliphatic Headspace (Qualitative Screen)
- ☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2)
- ☐ (765) Mass Spectrometer Purgeables (EPA 624)
- ☐ (766) SDWA Total Trihalomethanes (EPA 501.1)
- ☒ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)
- ☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)
- ☐ (790) Composite Sample for Analysis No. \_\_\_\_\_

Other Specific Compounds or Classes:

{ } \_\_\_\_\_

Semivolatile Screens:

- ☐ (755) Base/Neutral Extractables (EPA 625)
- ☐ (756) Base/Neutral/Acid Extractables (EPA 8270)
- ☐ (772) Carbamate Pesticides (EPA 531.1)
- ☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
- ☐ (759) Herbicides, Triazine (EPA 507)
- ☐ (751) Hydrocarbon Fuel Screen (EPA M-8015)
- ☐ (760) Organochlorine Pesticides (EPA 505)
- ☐ (761) Organophosphate Pesticides (EPA 507)
- ☐ (767) Polychlorinated Biphenyls (PCB's) in Oil
- ☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760)
- ☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

Please Fax Results To Me at (505) 396-2754.

*Ernest R. Larte*



## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 22, 1995

Request  
ID No. 090051

**ANALYTICAL REPORT**  
**SLD Accession No. OR-95-3899**

SAN ANGELO *Distribution*  
User 64000  
Submitter 68  
SLD Files

To: Jay Janica  
Texas-New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on August 29, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 26-Aug-95	By: Ric . . .	SPS Well 11 Treatment Skid
At: 10:00 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	PQL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

Evidentiary Seals: Not Sealed ☒ Intact: No ☐ Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3899
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 456
Level: (low/med) Low	Date Received: 08/29/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 08/31/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 09/02/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

(Continued on page 2.)

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

#### QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE	CONCENTRATION	%RECOVERY
SURROGATE RECOVERIES		

(Continued on page 3.)

## ANALYTICAL REPORT

SLD Accession No. OR-95-3899

Continuation, Page 3 of 3

1,1,2,2,-TTCE

50. ug/L

102.0%

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 70% to 130% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ug/L	.

Analyst: ND

Nancy DeWitt

Analyst, Organic Chemistry

Reviewed By: RFM

Richard F. Meyerhein 09/22/95

Supervisor, Organic Chemistry Section



## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 22, 1995

Request  
ID No. 090052

# ANALYTICAL REPORT

## SLD Accession No. OR-95-3900

Distribution	
SAN ANGELO OFFICE	64000
FILE	Submitter 58
SEP 27 1995	SLD Files

To: Jay Janica  
Texas New Mexico Pipeline Co.  
P.O. Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on August 29, 1995

## DEMOGRAPHIC DATA

COLLECTION	LOCATION
On: 27-Aug-95 By: Ric . . .	SPS Well 11 Treating Skid
At: 9:00 hrs. In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

Laboratory Remarks:

### SAFE DRINKING WATER ACT

### VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3900
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 462
Level: (low/med) Low	Date Received: 8/29/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 9/6/95
GPC Cleanup: (Y/N) No pH: 2	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	O	POL
71-43-2	Benzene		U	0.5

(Continued on page 2.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3900  
 Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene	U	0.5
541-73-1	1,3-Dichlorobenzene	U	0.5
106-46-7	1,4-Dichlorobenzene	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3900  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well  
 as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the  
 standard curve.

J - Indicates an estimated value for tentatively identified compounds,  
 or for compounds detected and identified but present at  
 a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a  
 concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3900  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	99.
Bromofluorobenzene (HALL Surr)	10.0 ppb	90.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ppb	.

Analyst:

SAM

S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By:

Richard F. Meyerhein

Richard F. Meyerhein 09/11/95  
Supervisor, Organic Chemistry Section



# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

OR95 3900 C

SLD No.

Date Received: AUG 29 1995

Request ID No. 090052-A

User Code #:	3 Request ID No.:	4 Priority Code #:	5 County:	6 City:	7 State:
		3	Lea	Lovington	N.M.

Sample Location: S.P.S. W.E.L.L. T.R.I.E.A.T.I.O.N. S.K.I.D.

Collected By: Ernest R. Charte On: 9/5/95 At: 10:10 hrs.  
First Initial Date: (YY/MM/DD) Time: 24 hr. clock 2:00 pm - 1:00 am

Codes: Submitter WSS # Organization Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

Report To: Jay Janira 14 Phone #: (915) 947-9008

Texas New Mexico Pipeline Co  
PO Box 60028  
San Angelo, Texas 76906

Field Data: pH Conductivity: umhos/cm Temperature: °C Chlorine Residual: mg/L Flow:

Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☐ Entry Point to Distribution ☐ Well; Depth: ☐ Spring ☐ Distribution ☒ Other: Treating Skid

Sample Type: ☒ Water ☐ Wastewater ☐ Soil ☐ Food ☐ Other ☐ Unchlorinated ☐ Chlorinated  
This form accompanies a single sample consisting of:  
2 septum vial(s) (volume = 40 ml ea.)  
glass jug(s) (volume = ml ea.)  
(volume = )

Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

<b>Volatile Screens:</b> <input type="checkbox"/> (753) Aliphatic Headspace (Qualitative Screen) <input type="checkbox"/> (754) Aromatic & Halogenated Purgeables (EPA 601/2) <input type="checkbox"/> (765) Mass Spectrometer Purgeables (EPA 624) <input type="checkbox"/> (766) SDWA Total Trihalomethanes (EPA 501.1) <input checked="" type="checkbox"/> (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2) <input type="checkbox"/> (775) SDWA VOC's II [EDB & DBCP] (EPA 504) <input type="checkbox"/> (790) Composite Sample for Analysis No.	<b>Semivolatile Screens:</b> <input type="checkbox"/> (755) Base/Neutral Extractables (EPA 625) <input type="checkbox"/> (756) Base/Neutral/Acid Extractables (EPA 8270) <input type="checkbox"/> (772) Carbamate Pesticides (EPA 531.1) <input type="checkbox"/> (758) Herbicides, Chlorophenoxy Acid (EPA 515.1) <input type="checkbox"/> (759) Herbicides, Triazine (EPA 507) <input type="checkbox"/> (751) Hydrocarbon Fuel Screen (EPA M-8015) <input type="checkbox"/> (760) Organochlorine Pesticides (EPA 505) <input type="checkbox"/> (761) Organophosphata Pesticides (EPA 507) <input type="checkbox"/> (767) Polychlorinated Biphenyls (PCB's) in Oil <input type="checkbox"/> (762) SDWA Synthetic Org. Compds. (SLD 758/760) <input type="checkbox"/> (782) Total Petroleum Hydrocarbons (EPA 418.1)
---	---

Other Specific Compounds or Classes:

Remarks: 180

Please Fax Results To Me at (505) 396-2754.

Ernest R. Charte

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 22, 1995

Request  
ID No. 090053

# ANALYTICAL REPORT

## SLD Accession No. OR-95-3901

Distribution

SAN ANGELO OFFICE  
User: 64000  
(X) Submitter 68  
(X) SLD Files  
SEP 27 1995

To: Jay Janica  
Texas-New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on August 29, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 27-Aug-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 7:00 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

## Notations &amp; Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

## Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: /A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A  
 Matrix: (soil/water) Water Lab Sample ID: OR-95-3901  
 Sample wt/vol: 35.0 (g/mL) ml SLD Batch No: 456  
 Level: (low/med) Low Date Received: 08/29/95  
 % Moisture: not dec. N/A dec. N/A Date Extracted: 08/31/95  
 Extraction: (SepF/Cont/Sonc) Micro Date Analyzed: 09/02/95  
 GPC Cleanup: (Y/N) No pH: N/A Dilution Factor: 1  
 CONCENTRATION UNITS:  
 (ug/L or ug/Kg): \_\_\_\_\_ ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

(Continued on page 2.)

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

#### QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE	CONCENTRATION	%RECOVERY
SURROGATE RECOVERIES		

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3901  
Continuation, Page 3 of 3


1,1,2,2,-TTCE

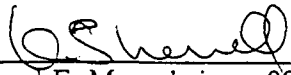
50. ug/L

109.0%

SPIKE RECOVERY: The % recoveries for compounds in the batch  
spike were from 70% to 130% with the exception of the compounds  
listed below:

COMPOUND	CONCENTRATION	% RECOVERY
	ug/L	
No exceptions		

Analyst:   
Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By:   
Richard F. Meyerhein 09/22/95  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. 0R95 3901 G

Date Received: AUG 29 1995

Request ID No. 090053-A

2 User Code #:	3 Request ID No.:	4 Priority Code #:	5 Facility Name:	6 County:	7 City:	8 State:
		3	SPS -11	Lea	Lovington	N.M.

9 Sample Location: S.P.I.S.I. W.E.I.L.L.I. I.I.I.I. I.T.R.I.E.I.A.I.T.I.N.I.G.I. I.S.I.K.I.T.I.D.I. I.I.I.I.

10 Collected By: Ernest R. Charte On: 9/1/87 At: 0123 hrs.  
First: Ernest Last: Charte Date: (YY/MM/DD) Time: 01 hr, 23 min, 00 sec

11 Codes: Submitter: WSS # Organization: 12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13 Report To: Jay Janica 14 Phone #: (915) 947-9008

Address: Texas-New Mexico Pipeline Co  
PO Box 60028

City, State Zip: San Angelo, Texas 76906

16 Field Data: pH, Conductivity, umhos/cm, Temperature, Chlorine Residual, mg/L, Flow

17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☐ Entry Point to Distribution ☐ Well; Depth: ☐ Spring ☐ Distribution ☒ Other: Treating Skid  
18 Field Remarks: Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge

19 Sample Type: ☒ Water ☐ Wastewater ☐ Soil ☐ Food ☐ Other ☐ Unchlorinated ☐ Chlorinated  
This form accompanies a single sample consisting of:  
- septum vial(s) (volume = 40 ml ea.)  
- glass jug(s) (volume = ml ea.)  
20 Preservation: ☐ NP No Preservation; Sample stored at room temperature  
☒ P-ice Sample stored in an ice bath (Not Frozen)  
☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ Other

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens:	Semivolatile Screens:
<input type="checkbox"/> (753) Aliphatic Headspace (Qualitative Screen)	<input type="checkbox"/> (755) Base/Neutral Extractables (EPA 625)
<input type="checkbox"/> (754) Aromatic & Halogenated Purgeables (EPA 601/2)	<input type="checkbox"/> (756) Base/Neutral/Acid Extractables (EPA 8270)
<input type="checkbox"/> (765) Mass Spectrometer Purgeables (EPA 624)	<input type="checkbox"/> (772) Carbamate Pesticides (EPA 531.1)
<input type="checkbox"/> (766) SDWA Total Trihalomethanes (EPA 501.1)	<input type="checkbox"/> (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
<input type="checkbox"/> (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)	<input type="checkbox"/> (759) Herbicides, Triazine (EPA 507)
<input checked="" type="checkbox"/> (775) SDWA VOC's II [EDB & DBCP] (EPA 504)	<input type="checkbox"/> (751) Hydrocarbon Fuel Screen (EPA M-8015)
<input type="checkbox"/> (790) Composite Sample for Analysis No. _____	<input type="checkbox"/> (760) Organochlorine Pesticides (EPA 505)
Other Specific Compounds or Classes:	<input type="checkbox"/> (761) Organophosphate Pesticides (EPA 507)
<input type="checkbox"/> ( )	<input type="checkbox"/> (767) Polychlorinated Biphenyls (PCB's) in Oil
<input type="checkbox"/> ( )	<input type="checkbox"/> (762) SDWA Synthetic Org. Compds. (SLD 758/760)
	<input type="checkbox"/> (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Please Fax Results To Me AT (505) 396-2754

*Ernest R. Charte*

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 22, 1995

Request  
ID No. 090054

**ANALYTICAL REPORT**  
**SLD Accession No. OR-95-3902**

Distribution

☐ User 64000  
☒ Submitter 68  
☒ SLD Files

SAN ANGELO OFFICE  
FILE

SEP 27 1995

To: Jay Janica  
Texas New Mexico Pipeline Co.  
P.O. Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on August 29, 1995

## DEMOGRAPHIC DATA

COLLECTIONLOCATION

On: 28-Aug-95 By: Ric . . .  
At: 10:00 hrs. In/Near: Lovington

SPS Well 11 Treating Skid

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

Laboratory Remarks:

SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A  
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A  
Matrix: (soil/water) Water Lab Sample ID: OR-95-3902  
Sample wt/vol: 5.0 (g/mL) mL SLD Batch No: 462  
Level: (low/med) Low Date Received: 8/29/95  
% Moisture: not dec. N/A dec. N/A Date Extracted: N/A  
Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 9/4/95  
GPC Cleanup: (Y/N) No pH: 1 Dilution Factor: 1  
CONCENTRATION UNITS:  
(ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	POL
71-43-2	Benzene		U	0.5

(Continued on page 2.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3902  
 Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene	U	0.5
541-73-1	1,3-Dichlorobenzene	U	0.5
106-46-7	1,4-Dichlorobenzene	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3902  
Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
Equivalent to the "minimum detection limit" defined for  
regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well  
as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the  
standard curve.

J - Indicates an estimated value for tentatively identified compounds,  
or for compounds detected and identified but present at  
a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a  
concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)



ANALYTICAL REPORT  
SLD Accession No. OR-95-3902  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

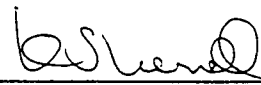
SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	100.
Bromofluorobenzene (HALL Surr)	10.0 ppb	90.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ppb	.

Analyst: SAM  
S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By:   
Richard F. Meyerhein 09/11/95  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

0R95 3902 C

Date

Received: AUG 29 1995

User Code #:

3 Request ID No.:

Request ID No. 090054-A

4 Priority Code #:

3

5 T.E.T. ED-SD Coordinator

Facility Name:

SPS-11

6 County:

Lea

7 City:

Lovington

8 State:

N. M.

Sample Location:

Collected By:

Ernest R. L. Clarke

On:

75-1-08-28

At:

12:00 hrs.

First

Last

Date: (YY/MM/DD)

Time: 24 hr. clock 2:00 pm - 12:00 hrs.

Codes:

Submitter

WSS #

Organization

12 Latitude (DDMMSS)

Longitude (DDMMSS)

2 Digit ID (if needed)

Report To:

Jay Janica

14 Phone #:

(915) 947-9008

Texas New Mexico Pipeline Co

PO Box 60028

State Zip

San Angelo, Texas 76906

Field Data:

pH

Conductivity:

umhos/cm @

Temperature:

Chlorine Residual:

mg/L, Flow:

Sample Source:

☐ Stream

☐ Lake

☐ Drain

☐ Pool

☐ WWTP

☐ Entry Point to Distribution

☐ Well; Depth:

☐ Spring

☐ Distribution

☒ Other: Treating Skid

Sample Type:

☒ Water

☐ Wastewater

☐ Food

☐ Other

☐ Unchlorinated

☐ Chlorinated

is form accompanies a single sample consisting of:

- septum vial(s) (volume = 40 mil. ea.)

- glass jug(s) (volume = mil. ea.)

(volume = )

18 Field Remarks:

Sampled from 1/4" Hose Bib from

activated charcoal filter vessel

discharge

20 Preservation:

☐ NP

No Preservation; Sample stored at room temperature

☒ P-Ice

Sample stored in an ice bath (Not Frozen)

☒ P-TS

Sample Preserved with Sodium Thiosulfate to remove chlorine residual

☒ P-HCl

Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

☐ P-HgCl<sub>2</sub>

Sample Preserved with 20 mg/l Mercuric Chloride

☐ Other

Analyses Requested:

Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens:

Semivolatile Screens:

- ☐ (753) Aliphatic Headspace (Qualitative Screen)
- ☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2)
- ☐ (765) Mass Spectrometer Purgeables (EPA 624)
- ☐ (766) SDWA Total Trihalomethanes (EPA 501.1)
- ☒ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)
- ☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)
- ☐ (790) Composite Sample for Analysis No.

- ☐ (755) Base/Neutral Extractables (EPA 625)
- ☐ (756) Base/Neutral/Acid Extractables (EPA 8270)
- ☐ (772) Carbamate Pesticides (EPA 531.1)
- ☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
- ☐ (759) Herbicides, Triazine (EPA 507)
- ☐ (751) Hydrocarbon Fuel Screen (EPA M-8015)
- ☐ (760) Organochlorine Pesticides (EPA 505)
- ☐ (761) Organophosphate Pesticides (EPA 507)
- ☐ (767) Polychlorinated Biphenyls (PCB's) in Oil
- ☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760)
- ☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

Other Specific Compounds or Classes:

marks:

Please Fax Results To Me at (505) 396-2754.

*Ernest R. Clarke*

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 22, 1995

Request  
ID No. 090055ANALYTICAL REPORT  
SLD Accession No. OR-95-3903

Distribution

() User 64000

SAN ANGELO (X) Submitter 68

FILE (X) SLD Files

SEP 27 1995

To: Jay Janica  
Texas-New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on August 29, 1995

## DEMOGRAPHIC DATA

COLLECTION	LOCATION
On: 28-Aug-95 By: Ric . . .	SPS Well 11 Treating Skid
At: 10:00 hrs. In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

## Notations &amp; Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

## Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3903
Sample wt/vol: 35.0 (g/mL) mL	SLD Batch No: 456
Level: (low/med) Low	Date Received: 08/29/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 08/31/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 09/02/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

(Continued on page 2.)

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

#### QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE RECOVERIES	CONCENTRATION	%RECOVERY
SURROGATE		

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3903  
Continuation, Page 3 of 3

1,1,2,2,-TTCE

50. ug/L

79.0%

SPIKE RECOVERY: The % recoveries for compounds in the batch  
spike were from 70% to 130% with the exception of the compounds  
listed below:

COMPOUND	CONCENTRATION	% RECOVERY
	ug/L	
No exceptions		

Analyst:

NW  
Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By:

R. Meyerhein  
Richard F. Meyerhein 09/22/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. OR95 3903 G

Date Received: AUG 29 1995

Request ID No. 090055-A

2 User Code #:	3 Request ID No.:	4 Priority Code #:	5 Facility Name:	6 County:	7 City:	8 State:
		3	SPS -11	Lea	Lovington	N.M.

9 Sample Location:	10 Collected By:	11 Codes:	12 Latitude (DDMMSS):	13 Report To:	14 Phone #:
	ERAST, J. Gharke			Jay Janica	(915) 947-9008

10 Collected By:	11 Codes:	12 Latitude (DDMMSS):	13 Report To:	14 Phone #:
ERAST, J. Gharke			Jay Janica	(915) 947-9008

11 Codes:	12 Latitude (DDMMSS):	13 Report To:	14 Phone #:
		Jay Janica	(915) 947-9008

13 Report To:	14 Phone #:	15 Sampling Information:
Jay Janica	(915) 947-9008	

15 Sampling Information:	16 Field Data:	17 Sample Source:	18 Field Remarks:

16 Field Data:	17 Sample Source:	18 Field Remarks:

17 Sample Source:	18 Field Remarks:

18 Field Remarks:	19 Sample Type:	20 Preservation:

19 Sample Type:	20 Preservation:

20 Preservation:	21 Analyzes Requested:

21 Analyzes Requested:	22 Volatile Screens:	23 Semivolatile Screens:

22 Volatile Screens:	23 Semivolatile Screens:

23 Semivolatile Screens:	24 Other Specific Compounds or Classes:

24 Other Specific Compounds or Classes:	25 Remarks:

25 Remarks:	26 Please Fax Results To Me AT (505) 396-2754

26 Please Fax Results To Me AT (505) 396-2754	27 Signature:

27 Signature:	28 Date:

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 31, 1995

Request  
ID No. 090056ANALYTICAL REPORT  
SLD Accession No. OR-95-3967Distribution☐ User 64000  
☒ Submitter 68  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO BOX 60028  
San Angelo, TX 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on September 7, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 6-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 10:20 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3967
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 475
Level: (low/med) Low	Date Received: 9/7/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 9/14/95
GPC Cleanup: (Y/N) No pH: 3	Dilution Factor: 1
CONCENTRATION UNITS:	
(ug/L or ug/Kg): ug/L	

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	POL
71-43-2	Benzene		U	0.5
108-86-1	Bromobenzene		U	0.5
74-97-5	Bromochloromethane		U	0.5

(Continued on page 2.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3967  
 Continuation, Page 2 of 4

75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene (mono-)	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene (ortho-)	U	0.5
541-73-1	1,3-Dichlorobenzene (meta-)	U	0.5
106-46-7	1,4-Dichlorobenzene (para-)	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride (Dichloromethane)	U	0.5
91-20-3	Naphthalene	U	0.5
103-65-1	Propylbenzene	U	0.5
100-42-5	Styrene	U	0.5

(Continued on page 3.)



ANALYTICAL REPORT  
 SLD Accession No. OR-95-3967  
 Continuation, Page 3 of 4

630-20-6	1,1,1,2-Tetrachloroethane	U	0.5
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5
127-18-4	Tetrachloroethene	U	0.5
109-99-9	Tetrahydrofuran (THF)	U	5.0
108-88-3	Toluene	U	0.5
87-61-5	1,2,3-Trichlorobenzene	U	0.5
120-82-1	1,2,4-Trichlorobenzene	U	0.5
71-55-6	1,1,1-Trichloroethane	U	0.5
79-00-5	1,1,2-Trichloroethane	U	0.5
79-01-6	Trichloroethene	U	0.5
75-69-4	Trichlorofluoromethane	U	0.5
96-18-4	1,2,3-Trichloropropane	U	0.5
95-63-6	1,2,4-Trimethylbenzene	U	0.5
108-67-8	1,3,5-Trimethylbenzene	U	0.5
75-01-4	Vinyl chloride	U	0.5
95-47-6	o-Xylene	U	0.5
N/A	p- & m-Xylene	U	0.5
N/A	Total Xylenes	U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).

Equivalent to the "minimum detection limit" defined for regulated VOC-1 compounds in 40 CFR 141.25(c).

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the PQL listed.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3967  
Continuation, Page 4 of 4

environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
Methylene chloride	0.52
Acetone	1.25
Naphthalene	1.16

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	104.
Bromofluorobenzene (HALL Surr)	10.0 ppb	101.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
1,1,2,2-Tetrachloroethane	10.0 ppb	128.
Acetone	10.0 ppb	140.
THF	40.0 ppb	130.

Analyst: ND

Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By: Richard F. Meyerhein

Richard F. Meyerhein 10/02/95  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

0R95 3967 C

## SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

Date Received: SEP 7 1995

Request ID No. 090056-A

2 User Code #:	3 Request ID No.:	4 Priority Code #:	5 State:
5 Facility Name:	6 County:	7 City:	8 State:

9 Sample Location: SPS-11

10 Collected By: Ernest R. L. G. Harber On: 9/5/95 At: 12:00 hrs. Date: (YY/MM/DD) Time: 0000 hrs. - 1800 hrs.

11 Codes: Submitter WSS # Organization

12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13 Report To: Jay Janica Texas New Mexico Pipeline Co PO Box 60028 San Angelo, Texas 76906

14 Phone #: (915) 947-9008

15 Sampling Information: Sample Purpose: Compliance, NMED Monitoring, Confirmation, Special, Grab, Composite, Flow Proportioned, Equal Aliquot, Sample Split w/Permittee, Chain of Custody

16 Field Data: pH, Conductivity, umhos/cm, Temperature, Chlorine Residual, mg/L, Flow

17 Sample Source: Stream, Lake, Drain, Pool, WWTP, Entry Point to Distribution, Well, Depth, Spring, Distribution, Other: Treating Skid

18 Field Remarks: Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge

19 Sample Type: Water, Wastewater, Soil, Food, Other, Unchlorinated, Chlorinated

20 Preservation: NP, P-Ice, P-TS, P-HCl, P-HgCl<sub>2</sub>, Other

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatiles Screens: (753) Aliphatic Headspace (Qualitative Screen), (754) Aromatic & Halogenated Purgeables (EPA 601/2), (765) Mass Spectrometer Purgeables (EPA 624), (766) SDWA Total Trihalomethanes (EPA 501.1), (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2), (775) SDWA VOC's II [EDB & DBCP] (EPA 504), (790) Composite Sample for Analysis No.

Other Specific Compounds or Classes:

Semivolatile Screens: (755) Base/Neutral Extractables (EPA 625), (756) Base/Neutral/Acid Extractables (EPA 8270), (772) Carbamate Pesticides (EPA 531.1), (758) Herbicides, Chlorophenoxy Acid (EPA 515.1), (759) Herbicides, Triazine (EPA 507), (751) Hydrocarbon Fuel Screen (EPA M-8015), (760) Organochlorine Pesticides (EPA 505), (761) Organophosphate Pesticides (EPA 507), (767) Polychlorinated Biphenyls (PCB's) in Oil, (762) SDWA Synthetic Org. Compds. (SLD 758/760), (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks: 130

Please Fax Results To Me at (505) 396-2754.

Ernest R. L. G. Harber

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 18, 1995

Request  
ID No. 090057ANALYTICAL REPORT  
SLD Accession No. OR-95-3968Distribution☒ User 64000  
☒ Submitter 68  
☒ Client  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Division  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on September 7, 1995

User:SLD Fee For Service - MISC  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700Submitter:Myra Meyers  
ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 6-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 10:20 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒, Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3968
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 490
Level: (low/med) Low	Date Received: 9/7/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 09/18/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 9/19/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1

(Continued on page 2.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3968  
Continuation, Page 2 of 3

CONCENTRATION UNITS:  
(ug/L or ug/Kg): \_\_\_\_\_ ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3968  
Continuation, Page 3 of 3

environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE RECOVERIES	CONCENTRATION	%RECOVERY
SURROGATE		
1,1,2,2,-TTCE	50. ug/L	104.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 70% to 130% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ug/L	.

Analyst: Nancy DeWitt

Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By: Richard F. Meyerhein

Richard F. Meyerhein 10/04/95  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. OR95 3968 C

Date Received: SEP 7 1995

Request ID No. 090057-A

2 User Code #:	3 Request ID No.:	4 Priority Code #:	5 Facility Name:	6 Country:	7 City:	8 State:
		3	SPS -11	Lea	Lovington	N.M.

9 Sample Location: S P I S I W E I L L I I I I I T I R I E A I T I N I G I I S I K I T I D I I I I

10 Collected By: Ernest R. L. Hart On: 9/5/95 At: 10:30 hrs.  
Date: (YY/MM/DD) Time: 24 hr. clock 2000 hrs = 1800 hrs.

11 Codes: Submitter WSS # Organization  
12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13 Report To: Jay Janica 14 Phone #: (915) 947-9008

Address: Texas-New Mexico Pipeline Co  
PO Box 60028

City, State Zip: San Angelo, Texas 76906

16 Field Data: pH Conductivity: umhos/cm Temperature: C Chlorine Residual: mg/L Flow:

7 Sample Source:  
☐ Stream ☐ Entry Point to Distribution  
☐ Lake ☐ Well; Depth:  
☐ Drain ☐ Spring  
☐ Pool ☐ Distribution  
☐ WWTP ☒ Other: Treating Skid

9 Sample Type: ☒ Water ☐ Unchlorinated ☐ Chlorinated  
☐ Wastewater ☐ Soil ☐ Food ☐ Other  
This form accompanies a single sample consisting of:  
2 septum vial(s) (volume = 40 ml ea.)  
glass jug(s) (volume = ml ea.)  
(volume = )

20 Preservation:  
☐ NP No Preservation; Sample stored at room temperature  
☒ P-Ice Sample stored in an ice bath (Not Frozen)  
☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/L Mercuric Chloride  
☐ Other

21 Analytes Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens:	Semivolatile Screens:
<input type="checkbox"/> (753) Aliphatic Headspace (Qualitative Screen)	<input type="checkbox"/> (755) Base/Neutral Extractables (EPA 625)
<input type="checkbox"/> (754) Aromatic & Halogenated Purgeables (EPA 801.2)	<input type="checkbox"/> (756) Base/Neutral/Acid Extractables (EPA 8270)
<input type="checkbox"/> (765) Mass Spectrometer Purgeables (EPA 624)	<input type="checkbox"/> (772) Carbamate Pesticides (EPA 531.1)
<input type="checkbox"/> (766) SDWA Total Trihalomethanes (EPA 501.1)	<input type="checkbox"/> (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
<input type="checkbox"/> (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)	<input type="checkbox"/> (759) Herbicides, Triazine (EPA 507)
<input checked="" type="checkbox"/> (775) SDWA VOC's II [EDB & DBCP] (EPA 504)	<input type="checkbox"/> (751) Hydrocarbon Fuel Screen (EPA M-8015)
<input type="checkbox"/> (790) Composite Sample for Analysis No. _____	<input type="checkbox"/> (760) Organochlorine Pesticides (EPA 505)
	<input type="checkbox"/> (761) Organophosphate Pesticides (EPA 507)
	<input type="checkbox"/> (767) Polychlorinated Biphenyls (PCB's) in Oil
	<input type="checkbox"/> (762) SDWA Synthetic Org. Compds. (SLD 758/760)
	<input type="checkbox"/> (782) Total Petroleum Hydrocarbons (EPA 418.1)

Other Specific Compounds or Classes:  
- { }  
- { }

Remarks: 130

Please Fax Results To Me AT (505) 396-2754

*Ernest R. Hart*

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 2, 1995

Request  
ID No. 090058ANALYTICAL REPORT  
SLD Accession No. OR-95-3986Distribution☐ User 64000  
☐ Submitter 68  
☒ Client  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on September 8, 1995

User:SLD Fee For Service - MISC  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700Submitter:Myra Meyers  
ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 7-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 7:10 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☐; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3986
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 475
Level: (low/med) Low	Date Received: 9/8/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 9/14/95
GPC Cleanup: (Y/N) No pH: 3	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	POL
71-43-2	Benzene		U	0.5



ANALYTICAL REPORT  
 SLD Accession No. OR-95-3986  
 Continuation, Page 2 of 4

108-86-1	Bromobenzene		U	0.5
74-97-5	Bromochloromethane		U	0.5
75-27-4	Bromodichloromethane		U	0.5
75-25-2	Bromoform		U	0.5
24-83-9	Bromomethane		U	0.5
78-93-3	2-Butanone (MEK)		U	5.0
104-51-8	n-Butylbenzene		U	0.5
135-98-8	sec-Butylbenzene		U	0.5
98-06-6	tert-Butylbenzene		U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)		U	5.0
56-23-5	Carbon tetrachloride		U	0.5
108-90-7	Chlorobenzene (mono-)		U	0.5
75-00-3	Chloroethane		U	0.5
67-66-3	Chloroform		U	0.5
74-87-3	Chloromethane		U	0.5
95-49-8	2-Chlorotoluene		U	0.5
106-43-4	4-Chlorotoluene		U	0.5
96-12-8	1,2-Dibromo-3-chloropropane		U	0.5
124-48-1	Dibromochloromethane		U	0.5
106-93-4	1,2-Dibromoethane		U	0.5
74-95-3	Dibromomethane		U	0.5
95-50-1	1,2-Dichlorobenzene (ortho-)		U	0.5
541-73-1	1,3-Dichlorobenzene (meta-)		U	0.5
106-46-7	1,4-Dichlorobenzene (para-)		U	0.5
75-71-8	Dichlorodifluoromethane		U	0.5
75-34-3	1,1-Dichloroethane		U	0.5
107-06-2	1,2-Dichloroethane		U	0.5
75-35-4	1,1-Dichloroethene		U	0.5
156-59-4	cis-1,2-Dichloroethene		U	0.5
156-60-5	trans-1,2-Dichloroethene		U	0.5
78-87-5	1,2-Dichloropropane		U	0.5
142-28-9	1,3-Dichloropropane		U	0.5
590-20-7	2,2-Dichloropropane		U	0.5
563-58-6	1,1-Dichloropropene		U	0.5
1006-01-5	cis-1,3-Dichloropropene		U	0.5
1006-02-6	trans-1,3-Dichloropropene		U	0.5
100-41-4	Ethylbenzene		U	0.5
87-68-3	Hexachlorobutadiene		U	0.5
98-82-8	Isopropylbenzene		U	0.5
99-87-6	4-Isopropyltoluene		U	0.5
75-09-2	Methylene chloride (Dichloromethane)		U	0.5
91-20-3	Naphthalene		U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-3986  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).

Equivalent to the "minimum detection limit" defined for regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the standard curve.

J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)

## ANALYTICAL REPORT

SLD Accession No. OR-95-3986

Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
Methylene chloride	0.52
Acetone	1.25
Naphthalene	1.16

## SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	103.
Bromofluorobenzene (HALL Surr)	10.0 ppb	100.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
1,1,2,2-Tetrachloroethane	10.0 ppb	128.
Acetone	10.0 ppb	140.
THF	40.0 ppb	130.

Analyst: 

Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By: 

Richard F. Meyerhein 10/02/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SEP 8 1995

SLD OR95 3986 C

## SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2571

Request ID No. 090058-A

Date Received: SEP 8 1995

2 User Code #: 64000 3 Request ID No. 090058-A 4 Priority Code #: 3

5 Facility Name: SPS-11 6 County: Lea 7 City: Lovington 8 State: N.M.

9 Sample Location: S.P.S. W.E.L.L. TIRE PLANTING SKID

10 Collected By: Ernest R. Richard On: 9/5/95 At: 10:20 hrs. Date: (YY/MM/DD) Time: 24 hr. clock 2000 hrs = 1200 hrs.

11 Codes: 0602 Submitter: WSS # 01001214 Organization: 12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13 Report To: Jay Janica 14 Phone #: (915) 947-9008

Address: Texas New Mexico Pipeline Co PO Box 60028 San Angelo, Texas 76906 15 Sample Purpose: ☐ Compliance ☐ NMED Monitoring ☐ Confirmation ☐ Special ☐ Grab ☐ Composite ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/Permittee ☐ Chain of Custody

6 Field Data: pH Conductivity: umhos/cm Temperature: °C Chlorine Residual: mg/L Flow:

17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☐ Entry Point to Distribution ☐ Well; Depth: ☐ Spring ☐ Distribution ☒ Other: Treating Skid 18 Field Remarks: Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge9 Sample Type: ☒ Water ☐ Soil ☐ Food ☐ Other ☐ Wastewater ☐ Unchlorinated ☐ Chlorinated This form accompanies a single sample consisting of: 2 septum vial(s) (volume = 40 ml ea.) 1 glass jug(s) (volume = ml ea.) 20 Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-Ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☐ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride ☐ Other

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens: ☐ (753) Aliphatic Headspace (Qualitative Screen) ☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2) ☐ (765) Mass Spectrometer Purgeables (EPA 624) ☐ (766) SDWA Total Trihalomethanes (EPA 501.1) ☒ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2) ☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504) ☐ (790) Composite Sample for Analysis No. Other Specific Compounds or Classes: ☐ { } ☐ { } Semivolatile Screens: ☐ (755) Base/Neutral Extractables (EPA 625) ☐ (756) Base/Neutral/Acid Extractables (EPA 8270) ☐ (772) Carbamate Pesticides (EPA 531.1) ☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1) ☐ (759) Herbicides, Triazine (EPA 507) ☐ (751) Hydrocarbon Fuel Screen (EPA M-8015) ☐ (760) Organochlorine Pesticides (EPA 505) ☐ (761) Organophosphate Pesticides (EPA 507) ☐ (767) Polychlorinated Biphenyls (PCB's) in Oil ☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760) ☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Please Fax Results To Me at (505) 396-2754.

Ernest R. Richard

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 18, 1995

Request  
ID No. 090059**ANALYTICAL REPORT**  
**SLD Accession No. OR-95-3987**Distribution☒ User 64000  
☒ Submitter 68  
☒ Client  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Division  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on September 8, 1995

User:SLD Fee For Service - MISC  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700Submitter:Myra Meyers  
ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 7-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 7:10 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-3987
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 490
Level: (low/med) Low	Date Received: 9/8/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 09/18/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 9/19/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1

(Continued on page 2.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3987  
Continuation, Page 2 of 3

CONCENTRATION UNITS:  
(ug/L or ug/Kg): \_\_\_\_\_ ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-3987  
Continuation, Page 3 of 3

environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED  
No Compounds Detected

CONCENTRATION (ug/L)

SURROGATE RECOVERIES  
SURROGATE

CONCENTRATION

%RECOVERY

1,1,2,2,-TTCE

50. ug/L

95.

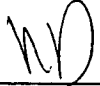
SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 70% to 130% with the exception of the compounds listed below:

COMPOUND  
No exceptions

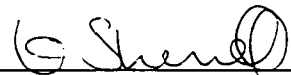
CONCENTRATION  
. ug/L

% RECOVERY  
.

Analyst:

  
Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By:

  
Richard F. Meyerhein 10/04/95  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

**SCIENTIFIC LABORATORY DIVISION**

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

**Organic Chemistry Section • Telephone: (505) 841-2570**

SEP 8 1993

OR95 3987 C

Date  
Received: SEP 8 1995

Request |||| |||| ||  
ID No. 090059-A

4 Priority Code #: 3 [TWT  
ED-510  
Continued]

2	User Code #:	64000	3	Request ID No.:
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5	Facility Name: SPS -11	6	Country: Lea
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7 City:	8 State:
Lovington	N. M.

9 Sample Location: S I P S I W E I L L I I I I T R E A T I N G I S I K I D I I I I

10 Collected By: Ernst R. C. Harter Orc: 95/07/07 At: 07110 hrs.  
First 111111 Date: (YY/MM/DD) Time: 94 hr. above  
7000 m. a. 5000 m.

11	Code: <u>068</u> Submitter	WSS # <u>      </u>	Organization <u>01012114</u>	12	Latitude (DDMMSS) <u>      </u> Longitude (DDMMSS) <u>      </u>	2 Digit ID (if provided) <u>      </u>
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13 Report To: Jay Janica	14 Phone #: (915) 947-9008	15 [Redacted]	16 [Redacted]	17 [Redacted]	18 [Redacted]	19 [Redacted]	20 [Redacted]	21 [Redacted]	22 [Redacted]	23 [Redacted]	24 [Redacted]	25 [Redacted]	26 [Redacted]	27 [Redacted]	28 [Redacted]	29 [Redacted]	30 [Redacted]	31 [Redacted]	32 [Redacted]	33 [Redacted]	34 [Redacted]	35 [Redacted]	36 [Redacted]	37 [Redacted]	38 [Redacted]	39 [Redacted]	40 [Redacted]	41 [Redacted]	42 [Redacted]	43 [Redacted]	44 [Redacted]	45 [Redacted]	46 [Redacted]	47 [Redacted]	48 [Redacted]	49 [Redacted]	50 [Redacted]	51 [Redacted]	52 [Redacted]	53 [Redacted]	54 [Redacted]	55 [Redacted]	56 [Redacted]	57 [Redacted]	58 [Redacted]	59 [Redacted]	60 [Redacted]	61 [Redacted]	62 [Redacted]	63 [Redacted]	64 [Redacted]	65 [Redacted]	66 [Redacted]	67 [Redacted]	68 [Redacted]	69 [Redacted]	70 [Redacted]	71 [Redacted]	72 [Redacted]	73 [Redacted]	74 [Redacted]	75 [Redacted]	76 [Redacted]	77 [Redacted]	78 [Redacted]	79 [Redacted]	80 [Redacted]	81 [Redacted]	82 [Redacted]	83 [Redacted]	84 [Redacted]	85 [Redacted]	86 [Redacted]	87 [Redacted]	88 [Redacted]	89 [Redacted]	90 [Redacted]	91 [Redacted]	92 [Redacted]	93 [Redacted]	94 [Redacted]	95 [Redacted]	96 [Redacted]	97 [Redacted]	98 [Redacted]	99 [Redacted]	100 [Redacted]
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Texas-New Mexico Pipeline Co.  
PO Box 60028

City, State Zip San Angelo, Texas 76906

6 Field Date: pH \_\_\_\_\_, Conductivity: \_\_\_\_\_ umhos/cm • Temperature: \_\_\_\_\_ °C Chlorine Residual: \_\_\_\_\_ mg/L Flow: \_\_\_\_\_

<b>7) Sample Source:</b> <input type="checkbox"/> Stream <input type="checkbox"/> Lake <input type="checkbox"/> Drain <input type="checkbox"/> Pool <input type="checkbox"/> WWTP		<b>18) Field Remarks:</b> Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge
<input type="checkbox"/> -Entry Point to Distribution <input type="checkbox"/> -Well; Depth: _____ <input type="checkbox"/> -Spring <input type="checkbox"/> -Distribution <input checked="" type="checkbox"/> -Other: Treating Skid		

9) Sample Type: ☒ - Water ☐ - Unchlorinated  
☐ - Wastewater ☐ - Chlorinated  
☐ - Soil ☐ - Food ☐ - Other \_\_\_\_\_  
 This form accompanies a single sample consisting of:  
2 - septum vial(s) (volume = 40 ml ea.)  
   - glass jug(s) (volume =    ml ea.)  
   (volume =   )

20) Preservation:  
☐ - NP No Preservation; Sample stored at room temperature  
☒ - P-Ice Sample stored in an ice bath (Not Frozen)  
☐ - P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ - P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ - P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ - Other \_\_\_\_\_

**Analyzes Requested:** Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

<p><b><u>Volatile Screens:</u></b></p> <p><input type="checkbox"/> - (753) Aliphatic Headspace (Qualitative Screen)</p> <p><input type="checkbox"/> - (754) Aromatic &amp; Halogenated Purgeables (EPA 801/2)</p> <p><input type="checkbox"/> - (765) Mass Spectrometer Purgeables (EPA 624)</p> <p><input type="checkbox"/> - (766) SDWA Total Trihalomethanes (EPA 501.1)</p> <p><input type="checkbox"/> - (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)</p> <p><input checked="" type="checkbox"/> - (775) SDWA VOC's II [EDB &amp; DBCP] (EPA 504)</p> <p><input type="checkbox"/> - (790) Composite Sample for Analysis No. _____</p>	<p><b><u>Semivolatile Screens:</u></b></p> <p><input type="checkbox"/> - (755) Base/Neutral Extractables (EPA 625)</p> <p><input type="checkbox"/> - (756) Base/Neutral/Acid Extractables (EPA 8270)</p> <p><input type="checkbox"/> - (772) Carbamate Pesticides (EPA 531.1)</p> <p><input type="checkbox"/> - (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)</p> <p><input type="checkbox"/> - (759) Herbicides, Triazine (EPA 507)</p> <p><input type="checkbox"/> - (751) Hydrocarbon Fuel Screen (EPA M-8015)</p> <p><input type="checkbox"/> - (760) Organochlorine Pesticides (EPA 505)</p>
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**Other Specific Compounds or Classes:**

☐ - (761) Organophosphate Pesticides (EPA 507)

☐ - (787) Polychlorinated Biphenyls (PCB's) in Oil

☐ - (762) SDWA Synthetic Org. Compds. (SLD 758/760)

☐ - (782) Total Petroleum Hydrocarbons (EPA 418.1)

**Remarks:**

Please Fax Results To Me AT (505) 396-2754

Robert G. Kubarko



## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 18, 1995

Request  
ID No. 090062ANALYTICAL REPORT  
SLD Accession No. OR-95-4009Distribution☒ User 64000  
☒ Submitter 68  
☒ Client  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Division  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on September 12, 1995

User:SLD Fee For Service - MISC  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700Submitter:Myra Meyers  
ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 9-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 11:00 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-4009
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 490
Level: (low/med) Low	Date Received: 9/12/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 09/18/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 9/19/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1

(Continued on page 2.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4009  
Continuation, Page 2 of 3

CONCENTRATION UNITS:  
(ug/L or ug/Kg): ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4009  
Continuation, Page 3 of 3

environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.


COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE RECOVERIES	CONCENTRATION	%RECOVERY
SURROGATE		
1,1,2,2,-TTCE	50. ug/L	133.

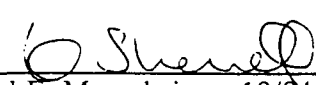
SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 70% to 130% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ug/L	.

Analyst: \_\_\_\_\_

  
Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By: \_\_\_\_\_

  
Richard F. Meyerhein 10/04/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SLD No. OR95 4009 C

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570

Date Received: SEP 12 1995

2 User Code #: 640006 3 Request ID No.: Request ID No. 090062-A 4 Priority Code #: 3

5 Facility Name: SPS -11 6 County: Lea 7 City: Lovington 8 State: N.M.

9 Sample Location: S P I S I W I E I L I L I I L I I T I R I E I A T I T I N I G I I S I K I T I D I I I I I

10 Collected By: Ernest R. L. Charte On: 9/5/95 At: 11:10 hrs. Date: (YY/MM/DD) Time: 94 hr. clock 200 hrs = 1800 hrs.

11 Codes: 12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13 Report To: Jav Janica 14 Phone #: (915) 947-9008

Address: Texas-New Mexico Pipeline Co PO Box 60028

City, State Zip: San Angelo, Texas 76906

16 Field Data: pH Conductivity: umhos/cm Temperature: °C Chlorine Residual: mg/L Flow:

17 Sample Source: 18 Field Remarks: Stream Lake Drain Pool WWTP Entry Point to Distribution Well; Depth: Spring Distribution Other: Treating Skid Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge

19 Sample Type: 20 Preservation: NP No Preservation; Sample stored at room temperature P-ice Sample stored in an ice bath (Not Frozen) P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride Other

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens: (753) Aliphatic Headspace (Qualitative Screen) (754) Aromatic & Halogenated Purgeables (EPA 601/2) (765) Mass Spectrometer Purgeables (EPA 624) (766) SDWA Total Trihalomethanes (EPA 501.1) (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2) (775) SDWA VOC's II [EDB & DBCP] (EPA 504) (790) Composite Sample for Analysis No. Other Specific Compounds or Classes: Semivolatile Screens: (755) Base/Neutral Extractables (EPA 625) (756) Base/Neutral/Acid Extractables (EPA 8270) (772) Carbamate Pesticides (EPA 531.1) (758) Herbicides, Chlorophenoxy Acid (EPA 515.1) (759) Herbicides, Triazine (EPA 507) (751) Hydrocarbon Fuel Screen (EPA M-8015) (760) Organochlorine Pesticides (EPA 505) (761) Organophosphate Pesticides (EPA 507) (767) Polychlorinated Biphenyls (PCB's) in Oil (762) SDWA Synthetic Org. Compds. (SLD 758/760) (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Please Fax Results To Me AT (505) 396-2754

Ernest R. Charte

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 18, 1995

Request  
ID No. 090067ANALYTICAL REPORT  
SLD Accession No. OR-95-4012Distribution☒ User 64000  
☒ Submitter 68  
☒ Client  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Division  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on September 12, 1995

User:SLD Fee For Service - MISC  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700Submitter:Myra Meyers  
ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 11-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 11:00 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-4012
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 490
Level: (low/med) Low	Date Received: 9/12/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 09/18/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 9/19/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1

(Continued on page 2.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4012  
Continuation, Page 2 of 3

CONCENTRATION UNITS:

(ug/L or ug/Kg): \_\_\_\_\_ ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4012  
Continuation, Page 3 of 3

environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE RECOVERIES	CONCENTRATION	%RECOVERY
SURROGATE		
1,1,2,2,-TTCE	50. ug/L	96.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 70% to 130% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ug/L	.

Analyst: \_\_\_\_\_

*Nancy DeWitt*  
Analyst, Organic Chemistry

Reviewed By: \_\_\_\_\_

*Richard F. Meyerhein* 10/04/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

OR95 4012 C

Date

Received: SEP 12 1995

Request |||||

ID No. 090067-A

2 User Code #: 640000

3 Request ID No.:

4 Priority Code #: 3

5 Total and ID-50 Coordinator

5 Facility Name: SPS -11

6 County: Lea

7 City: Lovington

8 State: N.M.

9 Sample

Location: S.P.S. WELLL ILLI ITRIFA TITINIGI ISIKITIDI I I I

10 Collected

By: Ernest R. G. Hartle On: 9/5/95 At: 11:00 hrs.

First

Last

Date: (YY/MM/DD)

Time:

24 hr. clock  
2000 hrs = 1800 hrs.

11 Codes:

0000

Submitter

WSS #

Organization

12 Latitude (DDMMSS)

Longitude (DDMMSS)

2 Digit ID  
(if needed)

13 Report

Name

14 Phone #:

To: Jay Janica

(915) 947-9008

Address

Texas-New Mexico Pipeline Co

PO Box 60028

City, State Zip

San Angelo, Texas 76906

15 Sampling Information:

- Sample Purpose: ☐ Grab ☐ Composite ☐ Flow Proportioned ☐ Composite Time Period
- ☒ Compliance ☐ NMED Monitoring ☐ Equal Aliquot
- ☐ Confirmation ☐ Sample Split w/Permittee
- ☐ Special ☐ Chain of Custody

16 Field

Data: pH

Conductivity:

umhos/cm

Temperature:

Chlorine

Residual:

mg/L

Flow:

17 Sample Source:

- ☐ Stream ☐ Entry Point to Distribution
- ☐ Lake ☐ Well; Depth: \_\_\_\_\_
- ☐ Drain ☐ Spring
- ☐ Pool ☐ Distribution
- ☐ WWTP ☒ Other: Treating Skid

18 Field Remarks:

Sampled from 1/4" Hose Bib from  
activated charcoal filter vessel discharge

19 Sample Type:

- ☒ Water ☐ Unchlorinated
- ☐ Wastewater ☐ Chlorinated
- ☐ Soil ☐ Food ☐ Other

20 Preservation:

- ☐ NP No Preservation; Sample stored at room temperature
- ☒ P-Ice Sample stored in an ice bath (Not Frozen)
- ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual
- ☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)
- ☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride
- ☐ Other

This form accompanies a single sample consisting of:

2 septum vial(s) (volume = 40 ml ea.)

glass jug(s) (volume = ml ea.)

(volume = )

21 Analyses Requested:

Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

## Volatile Screens:

- ☐ (753) Aliphatic Headspace (Qualitative Screen)
- ☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2)
- ☐ (765) Mass Spectrometer Purgeables (EPA 624)
- ☐ (766) SDWA Total Trihalomethanes (EPA 501.1)
- ☐ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)
- ☒ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)
- ☐ (790) Composite Sample for Analysis No. \_\_\_\_\_

## Other Specific Compounds or Classes:

- ☐ - { } \_\_\_\_\_
- ☐ - { } \_\_\_\_\_

## Semivolatile Screens:

- ☐ (755) Base/Neutral Extractables (EPA 625)
- ☐ (756) Base/Neutral/Acid Extractables (EPA 8270)
- ☐ (772) Carbamate Pesticides (EPA 531.1)
- ☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
- ☐ (759) Herbicides, Triazine (EPA 507)
- ☐ (751) Hydrocarbon Fuel Screen (EPA M-8015)
- ☐ (760) Organochlorine Pesticides (EPA 505)
- ☐ (761) Organophosphate Pesticides (EPA 507)
- ☐ (767) Polychlorinated Biphenyls (PCB's) in Oil
- ☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760)
- ☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Please Fax Results To Me AT (505) 396-2754



SCIENTIFIC LABORATORY DIVISION  
P.O. Box 4700 700 Camino de Salud, NE  
Albuquerque, NM 87196-4700 [505]-841-2500  
ORGANIC CHEMISTRY SECTION [505]-841-2570

October 18, 1995

Request  
ID No. 090061

ANALYTICAL REPORT  
SLD Accession No. OR-95-4013

Distribution

(x) User 64000  
(x) Submitter 68  
(x) Client  
(x) SLD Files

To: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Division  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on September 12, 1995

User:

SLD Fee For Service - MISC  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Submitter:

Myra Meyers  
ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 8-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 7:15 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: /A  
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A  
Matrix: (soil/water) Water Lab Sample ID: OR-95-4013  
Sample wt/vol: 35.0 (g/mL) ml SLD Batch No: 490  
Level: (low/med) Low Date Received: 9/12/95  
% Moisture: not dec. N/A dec. N/A Date Extracted: 09/18/95  
Extraction: (SepF/Cont/Sonc) Micro Date Analyzed: 9/19/95  
GPC Cleanup: (Y/N) No pH: N/A Dilution Factor: 1

(Continued on page 2.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4013  
Continuation, Page 2 of 3

CONCENTRATION UNITS:  
(ug/L or ug/Kg) : \_\_\_\_\_ ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory

(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4013  
Continuation, Page 3 of 3

environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE RECOVERIES	CONCENTRATION	%RECOVERY
SURROGATE		
1,1,2,2,-TTCE	50. ug/L	101.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 70% to 130% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
	ug/L	
No exceptions		

Analyst: \_\_\_\_\_

*Nancy DeWitt*  
*Analyst, Organic Chemistry*

Reviewed By: \_\_\_\_\_

*Richard F. Meyerhein* 10/04/95  
*Supervisor, Organic Chemistry Section*

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SLD No. DR95 4013 C

Date Received: SEP 12 1995

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106  
Organic Chemistry Section - Telephone: (505) 841-2570

Request ID No. 090061-A

2 User Code #: 6, 4, 0, 0, 0

3 Request ID No.:

4 Priority Code #: 3

PT-T, ED-SLB Coordinator

5 Facility Name: SPS -11

6 County: Lea

7 City: Lovington

8 State: N.M.

9 Sample Location: S.P.S. (WELL) (TIR) (TIN) (S) (KIT) (ID)

10 Collected By: Ernest R. G. Garte On: 9/5/1995 At: 11:15 hrs.  
First Date: (YY/MM/DD) Time: 24 hr. clock 2000 hrs. - 1800 hrs.

11 Codes: Submitter WSS # Organization

12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13 Report To: Jav Janica 14 Phone #: (915) 947-9008

Address: Texas-New Mexico Pipeline Co.  
PO Box 60028  
City, State Zip: San Angelo, Texas 7690615 Sampling Information:  
Sample Purpose: ☐ Grab ☐ Composite (Time Period)  
☐ Compliance ☐ Flow Proportioned  
☒ NMED Monitoring ☐ Equal Aliquot  
☐ Confirmation ☐ Sample Split w/Permittee  
☐ Special ☐ Chain of Custody

16 Field Data: pH, Conductivity: umhos/cm, Temperature: °C, Chlorine Residual: mg/L, Flow:

17 Sample Source:  
☐ Stream ☐ Entry Point to Distribution  
☐ Lake ☐ Well; Depth:  
☐ Drain ☐ Spring  
☐ Pool ☐ Distribution  
☐ WWTP ☒ Other: Treating Skid18 Field Remarks:  
Sampled from 1/4" Hose Bib from  
activated charcoal filter vessel discharge19 Sample Type: ☒ Water ☐ Unchlorinated  
☐ Wastewater ☐ Chlorinated  
☐ Soil, ☐ Food, ☐ Other  
This form accompanies a single sample consisting of:  
2 septum vial(s) (volume = 40 ml ea.)  
glass jug(s) (volume = ml ea.)  
(volume = )20 Preservation:  
☐ NP No Preservation; Sample stored at room temperature  
☒ P-Ice Sample stored in an ice bath (Not Frozen)  
☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ Other

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

## Volatile Screens:

- ☐ - (753) Aliphatic Headspace (Qualitative Screen)
- ☐ - (754) Aromatic & Halogenated Purgeables (EPA 601/2)
- ☐ - (765) Mass Spectrometer Purgeables (EPA 624)
- ☐ - (766) SDWA Total Trihalomethanes (EPA 501.1)
- ☐ - (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)
- ☒ - (775) SDWA VOC's II [EDB & DBCP] (EPA 504)
- ☐ - (790) Composite Sample for Analysis No.

## Other Specific Compounds or Classes:

☐ - { }  
☐ - { }

## Semivolatile Screens:

- ☐ - (755) Base/Neutral Extractables (EPA 625)
- ☐ - (756) Base/Neutral/Acid Extractables (EPA 8270)
- ☐ - (772) Carbamate Pesticides (EPA 531.1)
- ☐ - (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
- ☐ - (759) Herbicides, Triazine (EPA 507)
- ☐ - (751) Hydrocarbon Fuel Screen (EPA M-8015)
- ☐ - (760) Organochlorine Pesticides (EPA 505)
- ☐ - (761) Organophosphate Pesticides (EPA 507)
- ☐ - (767) Polychlorinated Biphenyls (PCB's) in Oil
- ☐ - (762) SDWA Synthetic Org. Compds. (SLD 758/760)
- ☐ - (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Please Fax Results To Me AT (505) 396-2754

*Ernest R. Garte*

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 29, 1995

Request  
ID No. 090068ANALYTICAL REPORT  
SLD Accession No. OR-95-4061Distribution☐ User 64000  
☒ Submitter 68  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
P.O. Box 60028  
San Angelo TX 76905From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on September 14, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 12-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 19:30 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-4061 ^ [ & @
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 487
Level: (low/med) Low	Date Received: 9/14/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 9/29/95 CS
GPC Cleanup: (Y/N) No pH: _____	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	O	POL
71-43-2	Benzene		U	0.5

(Continued on page 2.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-4061  
 Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene	U	0.5
541-73-1	1,3-Dichlorobenzene	U	0.5
106-46-7	1,4-Dichlorobenzene	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-4061  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well  
 as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the  
 standard curve.

J - Indicates an estimated value for tentatively identified compounds,  
 or for compounds detected and identified but present at  
 a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a  
 concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4061  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	102.
Bromofluorobenzene (HALL Surr)	10.0 ppb	105.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ppb	.

Analyst: SAM  
S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By: Richard F. Meyerhein  
Richard F. Meyerhein 09/29/95  
Supervisor, Organic Chemistry Section



# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

OR95 4061 C

Date

Received: SEP 14 1995

Request ID No. 090068-A

User Code #: 64000

Request ID No.

Facility

Name: SPS-11

County:

Lea

City:

Lovington

State

N.M.

Sample

Location: S.P.S. W.E.L.L. TIRE PLANT NGL S.K.I.D.

Collected

By: Ernest R. Richards

On: 9/5/95

At: 11:00 hrs.

Date: (YY/MM/DD)

Time: 2:00 pm - 1:00 hrs.

Codes:

Submitter: WSS # 0100214 Organization

Latitude (DDMMSS)

Longitude (DDMMSS)

Report

To: Jay Janica

Phone #:

(915) 947-9008

Texas New Mexico Pipeline Co

PO Box 60028

San Angelo, Texas 76906

Sampling Information:

- Sample Purpose: ☐ Grab ☐ Composite ☐ Flow Proportioned ☐ Equal Aliquot ☐ Confirmation ☐ Sample Split w/Permittes ☐ Special ☐ Chain of Custody

Field

Data: pH, Conductivity: umhos/cm @ Temperature: C, Chlorine Residual: mg/L, Flow:

Sample Source:

- ☐ Stream ☐ Entry Point to Distribution  
☐ Lake ☐ Well; Depth:  
☐ Drain ☐ Spring  
☐ Pool ☐ Distribution  
☐ WWTP ☒ Other: Treating Skid

Field

Remarks:

Sampled from 1/4" Hose Bib from  
activated charcoal filter vessel  
discharge

Sample Type:

- ☒ Water ☐ Unchlorinated  
☐ Wastewater ☐ Chlorinated  
☐ Soil, ☐ Food, ☐ Other

This form accompanies a single sample consisting of:

- septum vial(s) (volume = 40 ml ea.)  
glass jug(s) (volume = ml ea.)  
(volume = )

Preservation:

- ☐ NP No Preservation; Sample stored at room temperature  
☐ P-ice Sample stored in an ice bath (Not Frozen)  
☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ Other

Analyses Requested:

Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

## Volatile Screens:

- ☐ (753) Aliphatic Headspace (Qualitative Screen)  
☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2)  
☐ (765) Mass Spectrometer Purgeables (EPA 624)  
☐ (766) SDWA Total Trihalomethanes (EPA 501.1)  
☒ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)  
☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)  
☐ (790) Composite Sample for Analysis No.

## Semivolatile Screens:

- ☐ (755) Base/Neutral Extractables (EPA 625)  
☐ (756) Base/Neutral/Acid Extractables (EPA 8270)  
☐ (772) Carbamate Pesticides (EPA 531.1)  
☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)  
☐ (759) Herbicides, Triazine (EPA 507)  
☐ (751) Hydrocarbon Fuel Screen (EPA M-8015)  
☐ (760) Organochlorine Pesticides (EPA 505)  
☐ (761) Organophosphata Pesticides (EPA 507)  
☐ (787) Polychlorinated Biphenyls (PCB's) in Oil  
☐ (762) SDWA Synthetic Org. Cmpds. (SLD 758/760)  
☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

## Other Specific Compounds or Classes:

- { }  
{ }

Remarks:

Please Fax Results To Me at (505) 396-2754.

*Ernest R. Richards*

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

September 29, 1995

Request  
ID No. 090068ANALYTICAL REPORT  
SLD Accession No. OR-95-4061Distribution☐ User 64000  
☒ Submitter 68  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
P.O. Box 60028  
San Angelo TX 76905From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on September 14, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 12-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 19:30 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-4061 ^ [ & d @
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 487
Level: (low/med) Low	Date Received: 9/14/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 9/19/95 CS
GPC Cleanup: (Y/N) No pH: _____	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): _____ ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	POL
71-43-2	Benzene		U	0.5

(Continued on page 2.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-4061  
 Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene	U	0.5
541-73-1	1,3-Dichlorobenzene	U	0.5
106-46-7	1,4-Dichlorobenzene	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-4061  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well  
 as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the  
 standard curve.

J - Indicates an estimated value for tentatively identified compounds,  
 or for compounds detected and identified but present at  
 a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a  
 concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4061  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	102.
Bromofluorobenzene (HALL Surr)	10.0 ppb	105.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ppb	.

Analyst: SAM

S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By: Richard F. Meyerhein

Richard F. Meyerhein 09/29/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

## SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

OR95 4061 C

Date

Received: SEP 14 1995

Request |||||

ID No. 090068-A

User Code #: 640000

Request ID No. 3

Priority Code #: 3

N.T. or  
S.D. or  
C.D.

Facility Name:

SPS-11

County:

Lea

City:

Lovington

State:

N.M.

Sample

Location: S.P.S. W.E.L.L. T.R.I.E.A.T.I.N.G. S.K.I.D.

Collected

By: Ernest R. Schardt

On: 9/5/95

At: 11:10 hrs.

Codes:

Submitter

WSS #

Organization

Report

Name

To: Jay Janica

Phone #:

(915) 947-9008

Texas New Mexico Pipeline Co.

PO Box 60028

San Angelo, Texas 76906

Latitude (DDMMSS)

Longitude (DDMMSS)

Sampling Information:

- Sample Purpose: ☐ Grab ☐ Composite ☐ Flow Proportioned ☐ Equal Aliquot ☐ Sample Split w/Permittee ☐ Chain of Custody
- ☐ Compliance ☐ NMED Monitoring ☐ Confirmation ☐ Special

Field

Data: pH

Conductivity:

umhos/cm

Temperature:

Chlorine

Residual:

mg/L

Flow:

Sample Source:

- ☐ Stream ☐ Entry Point to Distribution  
☐ Lake ☐ Well; Depth:  
☐ Drain ☐ Spring  
☐ Pool ☐ Distribution  
☐ WWTP ☒ Other: Treating Skid

Sample Type:

- ☒ Water ☐ Unchlorinated  
☐ Wastewater ☐ Chlorinated

Soil, ☐ Food, ☐ Other

This form accompanies a single sample consisting of:

- septum vial(s) (volume = 40 ml ea.)  
- glass jug(s) (volume = ml ea.)  
(volumes = )

Field Remarks:

Sampled from 1/4" Hose Bib from  
activated charcoal filter vessel  
discharge

Preservation:

- ☐ NP No Preservation; Sample stored at room temperature  
☒ P-ice Sample stored in an ice bath (Not Frozen)  
☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☐ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ Other

Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

## Volatile Screens:

- ☐ (753) Aliphatic Headspace (Qualitative Screen)  
☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2)  
☐ (765) Mass Spectrometer Purgeables (EPA 624)  
☐ (766) SDWA Total Trihalomethanes (EPA 501.1)  
☒ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)  
☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)  
☐ (790) Composite Sample for Analysis No.

## Other Specific Compounds or Classes:

- ☐ - { }  
☐ - { }

## Semivolatile Screens:

- ☐ (755) Base/Neutral Extractables (EPA 625)  
☐ (756) Base/Neutral/Acid Extractables (EPA 8270)  
☐ (772) Carbamate Pesticides (EPA 531.1)  
☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)  
☐ (759) Herbicides, Triazine (EPA 507)  
☐ (751) Hydrocarbon Fuel Screen (EPA M-8015)  
☐ (760) Organochlorine Pesticides (EPA 505)  
☐ (761) Organophosphate Pesticides (EPA 507)  
☐ (767) Polychlorinated Biphenyls (PCB's) in Oil  
☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760)  
☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Please Fax Results To Me at (505) 396-2754.

Ernest R. Schardt

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 18, 1995

Request  
ID No. 090069ANALYTICAL REPORT  
SLD Accession No. OR-95-4062Distribution☒ User 64000  
☒ Submitter 68  
☒ Client  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Division  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on September 14, 1995

User:SLD Fee For Service - MISC  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700Submitter:Myra Meyers  
ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 12-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 19:30 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-4062
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 490
Level: (low/med) Low	Date Received: 9/14/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 09/18/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 9/19/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1

(Continued on page 2.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4062  
Continuation, Page 2 of 3

CONCENTRATION UNITS:

(ug/L or ug/Kg): \_\_\_\_\_ ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory

(Continued on page 3.)



ANALYTICAL REPORT  
SLD Accession No. OR-95-4062  
Continuation, Page 3 of 3

environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE RECOVERIES	CONCENTRATION	%RECOVERY
SURROGATE		
1,1,2,2,-TTCE	50. ug/L	91.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 70% to 130% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	. ug/L	.

Analyst: N.D.

Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By: R. F. Meyerhein

Richard F. Meyerhein 10/04/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

OR95 4062 C

Date

Received: SEP 14 1995

Request ID No. 090069-A

County: Lea

Priority Code #: 3

City: Lovington

State: N.M.

User Code #: 6, 4, 0, 0, 0

Request ID No.:

Facility Name: SPS -11

Sample Location:

S P I S I W E I L L I I I I I T I R E A T I T I N I G I S I K I T I D I I I I

Collected By: Ernest R. Charles On: 9/5/95 At: 19:30 hrs.

Date: (YY/MM/DD) Time: 24 hr. clock 200 pm - 1200 hrs.

Codes:

Submitter: WSS # Organization: 10101012114

Latitude (DDMMSS)

Longitude (DDMMSS) 2 Digit ID (if needed)

Report To:

Jay Janica

Phone #:

(915) 947-9008

Address: Texas-New Mexico Pipeline Co.  
PO Box 60028

City, State Zip: San Angelo, Texas 76906

Sampling Information:

Sample Purpose: ☐ Grab ☐ Composite (Composite Time Period)  
☐ Compliance ☐ Flow Proportioned  
☒ NMED Monitoring ☐ Equal Aliquot  
☐ Confirmation ☐ Sample Split w/Permittee  
☐ Special ☐ Chain of Custody

Field Data: pH, Conductivity: umhos/cm @ Temperature: °C, Chlorine Residual: mg/L, Flow:

Sample Source:

☐ Stream ☐ Entry Point to Distribution  
☐ Lake ☐ Well; Depth: \_\_\_\_\_  
☐ Drain ☐ Spring  
☐ Pool ☐ Distribution  
☐ WWTP ☒ Other: Treating Skid

Field Remarks:

Sampled from 1/4" Hose Rib from  
activated charcoal filter vessel dischargeSample Type: ☒ Water ☐ Unchlorinated☐ Wastewater ☐ Chlorinated☐ Soil, ☐ Food, ☐ Other

This form accompanies a single sample consisting of:

2 septum vial(s) (volume = 40 ml ea.)

glass jug(s) (volume = ml ea.)

(volume = )

Preservation:

☐ NP No Preservation; Sample stored at room temperature  
☒ P-Ice Sample stored in an ice bath (Not Frozen)  
☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ Other

1 Analytes Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

## Volatile Screens:

## Semivolatile Screens:

- ☐ (753) Aliphatic Headspace (Qualitative Screen)  
☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2)  
☐ (765) Mass Spectrometer Purgeables (EPA 624)  
☐ (766) SDWA Total Trihalomethanes (EPA 501.1)  
☐ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)  
☒ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)  
☐ (790) Composite Sample for Analysis No. \_\_\_\_\_

- ☐ (755) Base/Neutral Extractables (EPA 625)  
☐ (756) Base/Neutral/Acid Extractables (EPA 8270)  
☐ (772) Carbamate Pesticides (EPA 531.1)  
☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)  
☐ (759) Herbicides, Triazine (EPA 507)  
☐ (751) Hydrocarbon Fuel Screen (EPA M-8015)  
☐ (760) Organochlorine Pesticides (EPA 505)  
☐ (761) Organophosphate Pesticides (EPA 507)  
☐ (767) Polychlorinated Biphenyls (PCB's) in Oil  
☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760)  
☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

## Other Specific Compounds or Classes:

- ☐ ( ) \_\_\_\_\_  
☐ ( ) \_\_\_\_\_

Remarks:

Please Fax Results To Me AT (505) 396-2754

Ernest R. Charles

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 30, 1995

Request  
ID No. 090070ANALYTICAL REPORT  
SLD Accession No. OR-95-4123Distribution☐ User 64000  
☒ Submitter 68  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO BOX 60028  
San Angelo, TX 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on September 19, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 18-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 10:50 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-4123
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 492
Level: (low/med) Low	Date Received: 9/19/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 9/23/95
GPC Cleanup: (Y/N) No pH: 1	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	POL
71-43-2	Benzene		U	0.5

(Continued on page 2.)

## ANALYTICAL REPORT

SLD Accession No. OR-95-4123

Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene (mono-)	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene (ortho-)	U	0.5
541-73-1	1,3-Dichlorobenzene (meta-)	U	0.5
106-46-7	1,4-Dichlorobenzene (para-)	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride (Dichloromethane)	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-4123  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well  
 as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the  
 standard curve.

J - Indicates an estimated value for tentatively identified compounds,  
 or for compounds detected and identified but present at  
 a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a  
 concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4123  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	101.
Bromofluorobenzene (HALL Surr)	10.0 ppb	100.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
1,1,2,2-Tetrachloroethane	10.0 ppb	126.0

Analyst: S. Azhar Mustafa

S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By: Richard F. Meyerhein

Richard F. Meyerhein 10/13/95  
Supervisor, Organic Chemistry Section

Wm. H. Kilbort

**SCIENTIFIC LABORATORY DIVISION**  
P.O. Box 4700 700 Camino de Salud, NE  
Albuquerque, NM 87196-4700 [505]-841-2500  
ORGANIC CHEMISTRY SECTION [505]-841-2570

SAN ANGELO OFFICE

FILE

NOV 6 1995

November 1, 1995

Request  
ID No. 090073

**ANALYTICAL REPORT**  
**SLD Accession No. OR-95-4350**

	Distribution	Note	%
EHG	( ) User	64000	
DDH	(X) Submitter	68	
BDH	(X) SLD Files		
CBK			
AER			
JH			

To: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906

From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on October 5, 1995

**DEMOGRAPHIC DATA**

<u>COLLECTION</u>		<u>LOCATION</u>
On: 29-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 15:00 hrs.	In/Near: Lovington	

**ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}**

<u>Parameter</u>	<u>Value</u>	<u>Qual</u>	<u>POL</u>	<u>Units</u>
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

Laboratory Remarks:

**SAFE DRINKING WATER ACT VOLATILES-II**

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-4350
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 548
Level: (low/med) Low	Date Received: 10/05/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 10/25/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 10/27/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	O	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

(Continued on page 2.)



ANALYTICAL REPORT  
SLD Accession No. OR-95-4350  
Continuation, Page 2 of 3

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
1,2-Dibromoethane (EDB)	0.05

SURROGATE	CONCENTRATION	%RECOVERY
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(Continued on page 3.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4350  
Continuation, Page 3 of 3

1,1,2,2,-TCEa

50. ug/L

116.0

SPIKE RECOVERY: The % recoveries for compounds in the batch  
spike were from 70% to 130% with the exception of the compounds  
listed below:

COMPOUND	CONCENTRATION	% RECOVERY
	ug/L	
No exceptions		

Analyst:



Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By:



Richard F. Meyerhein 11/01/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SLD No. **OR95 4350 C**Date Received: **OCT 05 1995**SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570Request ID No.: **090073-A**2 User Code #: **640009** 3 Request ID No.: **090073-A** 4 Priority Code #: **3** 5 State: **N.M.**5 Facility Name: **SPS -11** 6 County: **Lea** 7 City: **Lovington** 8 State: **N.M.**9 Sample Location: **S.P.S. 11 WELLS 11111 TIRIEA TITINIGI ISIKITIDI 11111**10 Collected By: **Ernest S. R. L. Charles** On: **9/5/95** At: **15:00** hrs. Date: (YY/MM/DD) Time: 24 hr. clock 2:00 pm - 12:00 am11 Codes: **0613** 12 Latitude (DDMMSS) **31 10 10** Longitude (DDMMSS) **107 00 14** 2 Digit ID (if needed) **14**13 Report To: **Jay Janica** 14 Phone #: **(915) 947-9008**Address: **Texas-New Mexico Pipeline Co**  
**PO Box 60028**City, State Zip: **San Angelo, Texas 76906**16 Field Data: pH: **7.5** Conductivity: **150** umhos/cm @ Temperature: **25** °C Chlorine Residual: **0.1** mg/L Flow: **1.0** gpm17 Sample Source: ☐ Stream ☐ Entry Point to Distribution  
☐ Lake ☐ Well; Depth: **10**  
☐ Drain ☐ Spring  
☐ Pool ☐ Distribution  
☐ WWTP ☒ Other: **Treating Skid**18 Field Remarks: **Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge**  
19 Sample Type: ☒ Water ☐ Unchlorinated ☐ Chlorinated  
☐ Soil ☐ Food ☐ Other ☐ Wastewater  
This form accompanies a single sample consisting of:  
**2** - septum vial(s) (volume = **40** ml ea.)  
**1** - glass jug(s) (volume = **1** ml ea.)  
(volume = **41**)20 Preservation: ☐ NP No Preservation; Sample stored at room temperature  
☒ P-Ice Sample stored in an ice bath (Not Frozen)  
☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ Other21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.  
**Volatile Screens:**  
☐ (753) Aliphatic Headspace (Qualitative Screen)  
☐ (754) Aromatic & Halogenated Purgeables (EPA 801/2)  
☐ (765) Mass Spectrometer Purgeables (EPA 824)  
☐ (766) SDWA Total Trihalomethanes (EPA 501.1)  
☐ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)  
☒ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)  
☐ (790) Composite Sample for Analysis No. **\_\_\_\_\_**  
**Other Specific Compounds or Classes:**  
☐ - { **\_\_\_\_\_** }  
☐ - { **\_\_\_\_\_** }  
**Semivolatile Screens:**  
☐ (755) Base/Neutral Extractables (EPA 825)  
☐ (756) Base/Neutral/Acid Extractables (EPA 8270)  
☐ (772) Carbamate Pesticides (EPA 531.1)  
☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)  
☐ (759) Herbicides, Triazine (EPA 507)  
☐ (751) Hydrocarbon Fuel Screen (EPA M-8015)  
☐ (760) Organochlorine Pesticides (EPA 505)  
☐ (761) Organophosphate Pesticides (EPA 507)  
☐ (767) Polychlorinated Biphenyls (PCB's) in Oil  
☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760)  
☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)Remarks: **Please Fax Results To Me AT (505) 396-2754**  
**40***Ernest S. R. L. Charles*

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

WATER SUPPLY

SYSTEM (wss):



Jay Janica

Texas New Mexico Pipeline

P.O. Box 60028

San Angelo, TX 76906

REQUEST ID No.:

90072

SLD No.:

9504348

RECEIVED AT SLD:

10/5/95

☐ SLD COPY

N.M.E.D. DRINKING

WATER BUREAU:



ED FIELD OFFICE:



ED Field Office, Hobbs

726 E. Michigan Ave

Suite 165

Hobb, NM 88240

SAMPLE COLLECTION DATE:

9/29/95

TIME: 1500

BY: Ric

SAMPLE LOCATION:

SPS Well 11 Treating Skid

WSS #:

0

REPORTING UNITS: ug/L

Remarks:

Sample preserved with Hydrochloric Acid:

## EPA METHOD 502.2 SDWA VOLATILES BY GAS CHROMATOGRAPHY (PID/ELCD)

DATE EXTRACTED:

N/A

DATE ANALYZED:

10/12/95

13 Days: Within EPA Analysis Time

SAMPLE VOL (ml):

5

Being Analyzed by GC/MS

ANALYSIS No.: OR- 9504348

SLD BATCH No.:

528A

DILUTION FACTOR:

1.00

REQUEST ID No.:

90072

SAMPLE PRESERVATION: Sample Temperature when received: 6 Degrees C.; pH = 4

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL	SDL	MCL
71-43-2	Benzene		U	0.50	5
108-86-1	Bromobenzene		U	0.50	
74-97-5	Bromochloromethane		U	0.50	
75-27-4	Bromodichloromethane*		U	0.50	80
75-25-2	Bromoform*		U	0.50	80
24-83-9	Bromomethane		U	0.50	
78-93-3	2-Butanone (MEK)		U	0.50	
104-51-8	n-Butylbenzene		U	0.50	
135-98-8	sec-Butylbenzene		U	0.50	
98-06-6	tert-Butylbenzene		U	0.50	
1634-04-4	tert-Butyl methyl ether (MTBE)		U	0.50	
56-23-5	Carbon tetrachloride		U	0.50	5
108-90-7	Chlorobenzene (monochlorobenzene)		U	0.50	100
75-00-3	Chloroethane		U	0.50	
67-66-3	Chloroform*		U	0.50	80
74-87-3	Chloromethane		U	0.50	
95-49-8	2-Chlorotoluene		U	0.50	
106-43-4	4-Chlorotoluene		U	0.50	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.50	0.2
124-48-1	Dibromochloromethane*		U	0.50	80
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	0.50	0.05
74-95-3	Dibromomethane		U	0.50	
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	0.50	600
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	0.50	600
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	0.50	75
75-71-8	Dichlorodifluoromethane		U	0.50	
75-34-3	1,1-Dichloroethane		U	0.50	
107-06-2	1,2-Dichloroethane		U	0.50	5
75-35-4	1,1-Dichloroethene		U	0.50	7
156-59-4	cis-1,2-Dichloroethene		U	0.50	70
156-60-5	trans-1,2-Dichloroethene		U	0.50	100

78-87-5	1,2-Dichloropropane		U	0.50	5
142-28-9	1,3-Dichloropropane		U	0.50	
590-20-7	2,2-Dichloropropane		U	0.50	
563-58-6	1,1-Dichloropropene		U	0.50	
1006-01-5	cis-1,3-Dichloropropene		U	0.50	
1006-02-6	trans-1,3-Dichloropropene		U	0.50	
100-41-4	Ethylbenzene		U	0.50	700
87-68-3	Hexachlorobutadiene		U	0.50	
98-82-8	Isopropylbenzene		U	0.50	
99-87-6	4-Isopropyltoluene		U	0.50	
75-09-2	Methylene chloride (Dichloromethane)		U	0.50	5
91-20-3	Naphthalene		U	0.50	
103-65-1	Propylbenzene		U	0.50	
100-42-5	Styrene		U	0.50	100
630-20-6	1,1,1,2-Tetrachloroethane		U	0.50	
79-34-5	1,1,2,2-Tetrachloroethane		U	0.50	
127-18-4	Tetrachloroethene		U	0.50	5
109-99-9	Tetrahydrofuran (THF)		U	2.00	
108-88-3	Toluene		U	0.50	1000
87-61-5	1,2,3-Trichlorobenzene		U	0.50	
120-82-1	1,2,4-Trichlorobenzene		U	0.50	70
71-55-6	1,1,1-Trichloroethane		U	0.50	200
79-00-5	1,1,2-Trichloroethane		U	0.50	5
79-01-6	Trichloroethene		U	0.50	5
75-69-4	Trichlorofluoromethane		U	0.50	
96-18-4	1,2,3-Trichloropropane		U	0.50	
95-63-6	1,2,4-Trimethylbenzene		U	0.50	
108-67-8	1,3,5-Trimethylbenzene		U	0.50	
75-01-4	Vinyl chloride		U	0.50	2
95-47-6	o-Xylene*		U	0.50	
N/A	p- & m-Xylene*		U	0.50	
N/A	*Total Xylenes*	0	U	0.50	10000
N/A	*Total Trihalomethanes*	0	U	0.50	100

**Laboratory Remarks:** An unidentified compound was detected with the Photoionization Detector at about 8 ug/L.  
The sample was analyzed by GC/MS and Trimethylsilanol was tentatively identified.

LABORATORY BATCH QUALITY CONTROL SUMMARY			
SURROGATE	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
RECOVERIES:	2-Bromochlorobenzene (PID Surr)	0	0.0% Low
	2-Bromochlorobenzene (ELCD Surr)	0	0.0% Low
LABORATORY FORTIFIED	The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:		
BLANK RECOVERIES	COMPOUND	CONCENTRATION (mg/L)	% RECOVERY
	1,2-Dichloroethane	10	126
LABORATORY BLANKS	No target compounds were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:		
	COMPOUND	CONCENTRATION (mg/L)	
	1,2-Dichloroethane	3.5	

ANALYST: Nancy DeWitt QC APPROVED BY: Ken Sherrell

#### DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quantitation can be given (-5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. OR95 4348 C

Date Received: OCT 05 1995

2 User Code #: 64000	3 Request ID No.:	Request ID No. 090072-A	4 Priority Code #: 3	5 Facility Name: SPS-11	6 County: Lea	7 City: Lovington	8 State: N.M.
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9 Sample Location: S.P.S. W.E.L.L. TREATING SKID

10 Collected By: Ernest R. Charter On: 9/5/95 At: 11:50 hrs.  
First Last Date (YY/MM/DD) Time: 24 hr. clock 2000 hrs. = 1200 hrs.

11 Codes: Submitter WSS # Organization 12 Latitude (DDMMSS) Longitude (DDMMSS)

13 Report To: Jay Janica 14 Phone #: (915) 947-9008

Address: Texas New Mexico Pipeline Co  
PO Box 60028  
City, State Zip: San Angelo, Texas 76906

16 Field Data: pH Conductivity umhos/cm @ Temperature: °C Chlorine Residual: mg/L Flow:

17 Sample Source: ☐ Stream ☐ Entry Point to Distribution  
☐ Lake ☐ Well; Depth:  
☐ Drain ☐ Spring  
☐ Pool ☐ Distribution  
☐ WWTP ☒ Other: Treating Skid  
18 Field Remarks: Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge19 Sample Type: ☒ Water ☐ Unchlorinated ☐ Chlorinated  
☐ Wastewater ☐ Soil ☐ Food ☐ Other  
This form accompanies a single sample consisting of:  
2 septum vial(s) (volume = 40 ml ea.)  
glass jug(s) (volume = ml ea.)  
(volume = )  
20 Preservation: ☐ NP No Preservation; Sample stored at room temperature  
☒ P-Ice Sample stored in an ice bath (Not Frozen)  
☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ Other

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens:	Semivolatile Screens:
<input type="checkbox"/> (753) Aliphatic Headspace (Qualitative Screen)	<input type="checkbox"/> (755) Base/Neutral Extractables (EPA 625)
<input type="checkbox"/> (754) Aromatic & Halogenated Purgeables (EPA 601/2)	<input type="checkbox"/> (756) Base/Neutral/Acid Extractables (EPA 8270)
<input type="checkbox"/> (765) Mass Spectrometer Purgeables (EPA 624)	<input type="checkbox"/> (772) Carbamate Pesticides (EPA 531.1)
<input type="checkbox"/> (766) SDWA Total Trihalomethanes (EPA 501.1)	<input type="checkbox"/> (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
<input checked="" type="checkbox"/> (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)	<input type="checkbox"/> (759) Herbicides, Triazine (EPA 507)
<input type="checkbox"/> (775) SDWA VOC's II [EDB & DBCP] (EPA 504)	<input type="checkbox"/> (751) Hydrocarbon Fuel Screen (EPA M-8015)
<input type="checkbox"/> (790) Composite Sample for Analysis No. _____	<input type="checkbox"/> (760) Organochlorine Pesticides (EPA 505)
Other Specific Compounds or Classes:	<input type="checkbox"/> (761) Organophosphate Pesticides (EPA 507)
<input type="checkbox"/> { } _____	<input type="checkbox"/> (767) Polychlorinated Biphenyls (PCB's) in Oil
<input type="checkbox"/> { } _____	<input type="checkbox"/> (762) SDWA Synthetic Org. Compds. (SLD 758/760)
	<input type="checkbox"/> (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Please Fax Results To Me at (505) 396-2754.

69

Ernest R. Charter

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

November 1, 1995

Request  
ID No. 090075ANALYTICAL REPORT  
SLD Accession No. OR-95-4351Distribution( ) User 64000  
(X) Submitter 68  
(X) SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on October 5, 1995

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 4-Oct-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 10:10 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromoethane (EDB)	0.00	U	0.02	ppb
1,2-Dibromo-3-chloropropane	0.00	U	0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-4351
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 548
Level: (low/med) Low	Date Received: 10/05/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: 10/25/95
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 10/27/95
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

(Continued on page 2.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4351  
Continuation, Page 2 of 3

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
1,2-Dibromoethane (EDB)	0.05

SURROGATE RECOVERIES		
SURROGATE	CONCENTRATION	%RECOVERY

(Continued on page 3.)



ANALYTICAL REPORT  
SLD Accession No. OR-95-4351  
Continuation, Page 3 of 3

1,1,2,2,-TCEa


50. ug/L

114.0%

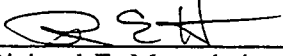
SPIKE RECOVERY: The % recoveries for compounds in the batch  
spike were from 70% to 130% with the exception of the compounds  
listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No exceptions	ug/L	.

Analyst:

  
Nancy DeWitt  
Analyst, Organic Chemistry

Reviewed By:

  
Richard F. Meyerhein 11/01/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

OR95 4351 C

Date

Received: OCT 05 1995

Request ||||| |||||  
ID No. 090075-A

2 User Code #: 64000	3 Request ID No.:	4 Priority Code #: 3	5 Facility Name: SPS -11	6 County: Lea	7 City: Lovington	8 State: N.M.
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Sample Location: S.P.S. W.F.L.L.L. I.L.L.L. I.T.R.I.A.I.T.I.N.I.G.I. I.S.I.K.I.T.I.D.I. I.L.L.L.

Collected By: Ernest R. Buchart Jr. On: 9/5/10/04 At: 11:01:10 hrs.  
Date: (YY/MM/DD) Time: 84 hr. clock 200 psi = 1400 lbs.

11 Codes: 0608 Submitter: WSS # 00002114 Organization: 12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13 Report To: Jay Janica (915) 947-9008 14 Phone #:

Texas-New Mexico Pipeline Co.  
PO Box 60028

San Angelo, Texas 76906

18 Field Data: pH Conductivity: umhos/cm @ Temperature: °C Chlorine Residual: mg/L Flow:

2 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☐ Entry Point to Distribution ☐ Well; Depth: ☐ Spring ☐ Distribution ☒ Other: Treating Skid 18 Field Remarks: Sampled from 1/4" Hose Rib from activated charcoal filter vessel discharge3 Sample Type: ☒ Water ☐ Wastewater ☐ Soil ☐ Food ☐ Other ☐ Unchlorinated ☐ Chlorinated 20 Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-Ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride ☐ Other

1 Analytes Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens:	Semivolatile Screens:
<input type="checkbox"/> (753) Aliphatic Headspace (Qualitative Screen)	<input type="checkbox"/> (755) Base/Neutral Extractables (EPA 825)
<input type="checkbox"/> (754) Aromatic & Halogenated Purgeables (EPA 601/2)	<input type="checkbox"/> (756) Base/Neutral/Acid Extractables (EPA 8270)
<input type="checkbox"/> (765) Mass Spectrometer Purgeables (EPA 624)	<input type="checkbox"/> (772) Carbamate Pesticides (EPA 531.1)
<input type="checkbox"/> (766) SDWA Total Trihalomethanes (EPA 501.1)	<input type="checkbox"/> (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
<input type="checkbox"/> (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)	<input type="checkbox"/> (759) Herbicides, Triazine (EPA 507)
<input checked="" type="checkbox"/> (775) SDWA VOC's II [EDB & DBCP] (EPA 504)	<input type="checkbox"/> (751) Hydrocarbon Fuel Screen (EPA M-8015)
<input type="checkbox"/> (790) Composite Sample for Analysis No. _____	<input type="checkbox"/> (760) Organochlorine Pesticides (EPA 505)
Other Specific Compounds or Classes:	<input type="checkbox"/> (761) Organophosphate Pesticides (EPA 507)
<input type="checkbox"/> { } _____	<input type="checkbox"/> (767) Polychlorinated Biphenyls (PCB's) in Oil
<input type="checkbox"/> { } _____	<input type="checkbox"/> (762) SDWA Synthetic Org. Compds. (SLD 758/760)
	<input type="checkbox"/> (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Please Fax Results To Me AT (505) 396-2754

4°C

Ernest R. Buchart Jr.

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700

700 Camino de Salud, NE  
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

## WATER SUPPLY

## SYSTEM (wss):



Jay Janica  
Texas New Mexico Pipeline  
PO Box 60028  
San Angelo, TX 76906

REQUEST ID No.:

90074

SLD No.:

9504349

RECEIVED AT SLD:

10/5/95

☐ SLD COPY

## N.M.E.D. DRINKING

## WATER BUREAU:



ED FIELD OFFICE:



ED Field Office, Hobbs  
726 E. Michigan Ave, Suite 165  
Hobbs, NM 88240

SAMPLE COLLECTION DATE:

10/4/95

TIME: 1010

BY: Ric

SAMPLE LOCATION:

SPS Well 11 Treating Skid

WSS #:

0

REPORTING UNITS: ug/L

Remarks:

Sample preserved with Hydrochloric Acid:

## EPA METHOD 502.2 SDWA VOLATILES BY GAS CHROMATOGRAPHY (PID/ELCD)

DATE EXTRACTED:

N/A

DATE ANALYZED:

10/12/95

8 Days: Within EPA Analysis Time

SAMPLE VOL (ml):

5

0

ANALYSIS No.: OR- 9504349

SLD BATCH No.:

528A

DILUTION FACTOR:

1.00

REQUEST ID No.:

90074

SAMPLE PRESERVATION: Sample Temperature when received: 7 Degrees C.; pH = 2

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL	SDL	MCL
71-43-2	Benzene		U	0.50	5
108-86-1	Bromobenzene		U	0.50	
74-97-5	Bromochloromethane		U	0.50	
75-27-4	Bromodichloromethane*		U	0.50	80
75-25-2	Bromoform*		U	0.50	80
24-83-9	Bromomethane		U	0.50	
78-93-3	2-Butanone (MEK)		U	0.50	
104-51-8	n-Butylbenzene		U	0.50	
135-98-8	sec-Butylbenzene		U	0.50	
98-06-6	tert-Butylbenzene		U	0.50	
1634-04-4	tert-Butyl methyl ether (MTBE)		U	0.50	
56-23-5	Carbon tetrachloride		U	0.50	5
108-90-7	Chlorobenzene (monochlorobenzene)		U	0.50	100
75-00-3	Chloroethane		U	0.50	
67-66-3	Chloroform*		U	0.50	80
74-87-3	Chloromethane		U	0.50	
95-49-8	2-Chlorotoluene		U	0.50	
106-43-4	4-Chlorotoluene		U	0.50	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.50	0.2
124-48-1	Dibromochloromethane*		U	0.50	80
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	0.50	0.05
74-95-3	Dibromomethane		U	0.50	
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	0.50	600
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	0.50	600
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	0.50	75
75-71-8	Dichlorodifluoromethane		U	0.50	
75-34-3	1,1-Dichloroethane		U	0.50	
107-06-2	1,2-Dichloroethane		U	0.50	5
75-35-4	1,1-Dichloroethene		U	0.50	7

156-59-4	cis-1,2-Dichloroethene		U	0.50	70
156-60-5	trans-1,2-Dichloroethene		U	0.50	100
78-87-5	1,2-Dichloropropane		U	0.50	5
142-28-9	1,3-Dichloropropane		U	0.50	
590-20-7	2,2-Dichloropropane		U	0.50	
563-58-6	1,1-Dichloropropene		U	0.50	
1006-01-5	cis-1,3-Dichloropropene		U	0.50	
1006-02-6	trans-1,3-Dichloropropene		U	0.50	
100-41-4	Ethylbenzene		U	0.50	700
87-68-3	Hexachlorobutadiene		U	0.50	
98-82-8	Isopropylbenzene		U	0.50	
99-87-6	4-Isopropyltoluene		U	0.50	
75-09-2	Methylene chloride (Dichloromethane)		U	0.50	5
91-20-3	Naphthalene		U	0.50	
103-65-1	Propylbenzene		U	0.50	
100-42-5	Styrene		U	0.50	100
630-20-6	1,1,1,2-Tetrachloroethane		U	0.50	
79-34-5	1,1,2,2-Tetrachloroethane		U	0.50	
127-18-4	Tetrachloroethene		U	0.50	5
109-99-9	Tetrahydrofuran (THF)		U	2.00	
108-88-3	Toluene		U	0.50	1000
87-61-5	1,2,3-Trichlorobenzene		U	0.50	
120-82-1	1,2,4-Trichlorobenzene		U	0.50	70
71-55-6	1,1,1-Trichloroethane		U	0.50	200
79-00-5	1,1,2-Trichloroethane		U	0.50	5
79-01-6	Trichloroethene		U	0.50	5
75-69-4	Trichlorofluoromethane		U	0.50	
96-18-4	1,2,3-Trichloropropane		U	0.50	
95-63-6	1,2,4-Trimethylbenzene		U	0.50	
108-67-8	1,3,5-Trimethylbenzene		U	0.50	
75-01-4	Vinyl chloride		U	0.50	2
95-47-6	o-Xylene*		U	0.50	
N/A	p- & m-Xylene*		U	0.50	
N/A	*Total Xylenes*	0	U	0.50	10000
N/A	*Total Trihalomethanes*	0	U	0.50	100

LABORATORY BATCH QUALITY CONTROL SUMMARY			
SURROGATE	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
RECOVERIES:	2-Bromochlorobenzene (PID Surr)	9.6	96.0%
	2-Bromochlorobenzene (ELCD Surr)	8.6	86.0%
LABORATORY FORTIFIED	The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:		
BLANK	COMPOUND	CONCENTRATION (mg/L)	% RECOVERY
RECOVERIES	1,2-Dichloroethane	10	126
LABORATORY BLANKS	No target compounds were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:		
	COMPOUND	CONCENTRATION (mg/L)	
	1,2-Dichloroethane	3.5	

ANALYST: Nancy DeWitt ✓

QC APPROVED BY: Ken Sherrill

#### DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quantitation can be given (-5 * SDL)
	U No analyte was detected above the Sample Detection Limit
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. **OR95 4349 C**  
Date Received: **OCT 05 1995**

2 User Code #: <b>6,4,0,0,0</b>	3 Request ID No.:	4 Priority Code #: <b>3</b>	5 Facility Name: <b>SPS-11</b>	6 Country: <b>Lea</b>	7 City: <b>Lovington</b>	8 State: <b>N.M.</b>
---------------------------------	-------------------	-----------------------------	--------------------------------	-----------------------	--------------------------	----------------------

9 Sample Location: **S.P.S. W.E.L.L. 1111 TIRE PLANTING (Skiid)**

10 Collected By: **Ernest J. Richard** On: **9/20/94** At: **11:10** hrs.  
Date: (YY/MM/DD) Time: 24 hr. clock 2000 hrs = 1200 hrs.

1 Codes: **0,0,0,0,0** Submitter: **WSS #** Organization: **0,0,0,0,2,1,1,4**

12 Latitude (DDMMSS): Longitude (DDMMSS): 2 Digit ID (if needed):

3 Report To: **Jay Janica** 14 Phone #: **(915) 947-9008**

Address: **Texas New Mexico Pipeline Co**

**PO Box 60028**

City, State Zip: **San Angelo, Texas 76906**

15 Sampling Information:  
Sample Purpose: ☐ Grab ☐ Composite (Time Period)  
☐ Compliance ☐ Flow Proportioned  
☒ NMED Monitoring ☐ Equal Aliquot  
☐ Confirmation ☐ Sample Split w/Permittee  
☐ Special ☐ Chain of Custody

6 Field Data: pH: Conductivity: umhos/cm @ Temperature: °C Chlorine Residual: mg/L Flow:

7 Sample Source:  
☐ Stream ☐ Entry Point to Distribution  
☐ Lake ☐ Well; Depth:  
☐ Drain ☐ Spring  
☐ Pool ☐ Distribution  
☐ WWTP ☒ Other: **Treating Skid**

18 Field Remarks: **Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge**

9 Sample Type: ☒ Water ☐ Unchlorinated ☐ Chlorinated  
☐ Soil ☐ Food ☐ Other ☐ Wastewater

20 Preservation:  
☐ NP No Preservation; Sample stored at room temperature  
☒ P-Ice Sample stored in an ice bath (Not Frozen)  
☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ Other

This form accompanies a single sample consisting of:  
- septum vial(s) (volume = **20** ml ea.)  
- glass jug(s) (volume = **1** ml ea.)  
(volume = )

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

<b>Volatile Screens:</b> <input type="checkbox"/> (753) Aliphatic Headspace (Qualitative Screen) <input type="checkbox"/> (754) Aromatic & Halogenated Purgeables (EPA 601/2) <input type="checkbox"/> (765) Mass Spectrometer Purgeables (EPA 624) <input type="checkbox"/> (766) SDWA Total Trihalomethanes (EPA 501.1) <input checked="" type="checkbox"/> (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2) <input type="checkbox"/> (775) SDWA VOC's II [EDB & DBCP] (EPA 504) <input type="checkbox"/> (790) Composite Sample for Analysis No. _____	<b>Semivolatile Screens:</b> <input type="checkbox"/> (755) Base/Neutral Extractables (EPA 625) <input type="checkbox"/> (756) Base/Neutral/Acid Extractables (EPA 8270) <input type="checkbox"/> (772) Carbamate Pesticides (EPA 531.1) <input type="checkbox"/> (758) Herbicides, Chlorophenoxy Acid (EPA 515.1) <input type="checkbox"/> (759) Herbicides, Triazine (EPA 507) <input type="checkbox"/> (751) Hydrocarbon Fuel Screen (EPA M-8015) <input type="checkbox"/> (760) Organochlorine Pesticides (EPA 505) <input type="checkbox"/> (761) Organophosphate Pesticides (EPA 507) <input type="checkbox"/> (767) Polychlorinated Biphenyls (PCB's) in Oil <input type="checkbox"/> (762) SDWA Synthetic Org. Compds. (SLD 758/760) <input type="checkbox"/> (782) Total Petroleum Hydrocarbons (EPA 418.1)
---	---

**Other Specific Compounds or Classes:**  
☐ - { }  
☐ - { }

Remarks:

Please Fax Results To Me at (505) 396-2754.

79c

*Ernest J. Richard*

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 4, 1995

Request  
ID No. 090063ANALYTICAL REPORT  
SLD Accession No. OR-95-4010

## Distribution

- ☐ User 64000  
☐ Submitter 68  
☒ Client  
☒ SLD Files

To: Jay Janica  
 Texas New Mexico Pipeline Co.  
 PO Box 60028  
 San Angelo, Texas 76906

From: Organic Chemistry Section  
 Scientific Laboratory Div.  
 700 Camino de Salud, N.E.  
 P.O. Box 4700  
 Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on September 12, 1995

## User:

SLD Fee For Service - MISC  
 700 Camino de Salud, NE  
 P.O. Box 4700  
 Albuquerque, NM 87196-4700

## Submitter:

Myra Meyers  
 ED Field Office, Hobbs  
 Suite 165  
 726 E. Michigan Avenue  
 Hobbs, NM 88240

SAN ANGELO OFFICE  
FILE

## DEMOGRAPHIC DATA

COLLECTION		LOCATION		OCT 16 1995	
On: 9-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid		Note	%
At: 0:00 hrs.	In/Near: Lovington			Note	%
ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}					
Parameter	Value	Qual	POL	Units	
SDWA VOC's-I	0.00	U	0.50	ppb	
See Laboratory Remarks for Additional Information					
Notations & Comments:					
Evidentiary Seals: Not Sealed <input checked="" type="checkbox"/> ; Intact: No <input type="checkbox"/> , Yes <input type="checkbox"/> & Broken By: _____ Date: _____					

## Laboratory Remarks:

SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A  
 Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A  
 Matrix: (soil/water) Water Lab Sample ID: OR-95-4010  
 Sample wt/vol: 5.0 (g/mL) mL SLD Batch No: 487  
 Level: (low/med) Low Date Received: 9/12/95  
 % Moisture: not dec. N/A dec. N/A Date Extracted: N/A  
 Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 9/16/95  
 GPC Cleanup: (Y/N) No pH: 2 Dilution Factor: 1  
 CONCENTRATION UNITS:  
 (ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
 using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	POL
71-43-2	Benzene		U	0.5

## ANALYTICAL REPORT

SLD Accession No. OR-95-4010

Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene (mono-)	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene (ortho-)	U	0.5
541-73-1	1,3-Dichlorobenzene (meta-)	U	0.5
106-46-7	1,4-Dichlorobenzene (para-)	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride (Dichloromethane)	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-4010  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well  
 as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the  
 standard curve.

J - Indicates an estimated value for tentatively identified compounds,  
 or for compounds detected and identified but present at  
 a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a  
 concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)



ANALYTICAL REPORT  
SLD Accession No. OR-95-4010  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	100.
Bromofluorobenzene (HALL Surr)	10.0 ppb	113.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
THF	40.0 ppb	127.

Analyst: S-AM  
S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By: Richard F. Meyerhein  
Richard F. Meyerhein 10/04/95  
Supervisor, Organic Chemistry Section

# ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106  
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No. **OR95 4010 C**

Date Received: **SEP 12 1995**

1 User Code #: <b>64009</b>	3 Request ID No.: <b>090063-A</b>	4 Priority Code #: <b>3</b>	5 State: <b>N.M.</b>
5 Facility Name: <b>SPS-11</b>	6 County: <b>Lea</b>	7 City: <b>Lovington</b>	8 State: <b>N.M.</b>

9 Sample Location: **S.P.S. WELLS ILL. TREATING ISLAND**

10 Collected By: **Ernest J. Schantz** On: **8/29/95** At: **11:00** hrs.

11 Date: (YY/MM/DD) **09/12/95** Time: **11:00** hrs.

12 Latitude (DDMMSS) **31 40 00 N**

13 Longitude (DDMMSS) **104 02 14 W**

14 2 Digit ID (if needed) **01**

15 Report To: **Jay Janica** Phone #: **(915) 947-9008**

16 Address: **Texas New Mexico Pipeline Co**

17 PO Box **60028**

18 City, State Zip: **San Angelo, Texas 76906**

19 Field Data: pH **7.5**, Conductivity: **150** umhos/cm, Temperature: **25** °C, Chlorine Residual: **0.5** mg/L, Flow: **100** gpm

20 Sample Source:

☐ Stream ☐ Entry Point to Distribution

☐ Lake ☐ Well; Depth: **10**

☐ Drain ☐ Spring

☐ Pool ☐ Distribution

☐ WWTP ☒ Other: **Treating Skid**

21 Sample Type: ☒ Water ☐ Unchlorinated

☐ Soil ☐ Food ☐ Other

☐ Wastewater ☐ Chlorinated

22 This form accompanies a single sample consisting of:

**2** septum vial(s) (volume = **40** ml ea.)

**1** glass jug(s) (volume = **1** ml ea.)

23 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatiles Screens:	Semivolatile Screens:
<input type="checkbox"/> (753) Aliphatic Headspace (Qualitative Screen)	<input type="checkbox"/> (755) Base/Neutral Extractables (EPA 625)
<input type="checkbox"/> (754) Aromatic & Halogenated Purgeables (EPA 601/2)	<input type="checkbox"/> (756) Base/Neutral/Acid Extractables (EPA 8270)
<input type="checkbox"/> (765) Mass Spectrometer Purgeables (EPA 624)	<input type="checkbox"/> (772) Carbamate Pesticides (EPA 531.1)
<input type="checkbox"/> (766) SDWA Total Trihalomethanes (EPA 501.1)	<input type="checkbox"/> (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
<input checked="" type="checkbox"/> (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)	<input type="checkbox"/> (759) Herbicides, Triazine (EPA 507)
<input type="checkbox"/> (775) SDWA VOC's II [EDB & DBCP] (EPA 504)	<input type="checkbox"/> (751) Hydrocarbon Fuel Screen (EPA M-8015)
<input type="checkbox"/> (790) Composite Sample for Analysis No. <b>1</b>	<input type="checkbox"/> (760) Organochlorine Pesticides (EPA 505)
<b>Other Specific Compounds or Classes:</b>	<input type="checkbox"/> (761) Organophosphate Pesticides (EPA 507)
<b>None</b>	<input type="checkbox"/> (757) Polychlorinated Biphenyls (PCB's) in Oil
	<input type="checkbox"/> (762) SDWA Synthetic Org. Compds. (SLD 758/760)
	<input type="checkbox"/> (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks: **Air & soil present**

Please Fax Results To Me at (505) 396-2754.

*Ernest J. Schantz*

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 4, 1995

Request  
ID No. 090066ANALYTICAL REPORT  
SLD Accession No. OR-95-4011Distribution☐ User 64000  
☐ Submitter 68  
☒ Client  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on September 12, 1995

User:SLD Fee For Service - MISC  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700Submitter:Myra Meyers  
ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 11-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 11:00 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	PQL	Units
SDWA VOC's - I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-4011
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 487
Level: (low/med) Low	Date Received: 9/12/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 9/17/95
GPC Cleanup: (Y/N) No pH: 1	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	PQL
71-43-2	Benzene		U	0.5

ANALYTICAL REPORT  
 SLD Accession No. OR-95-4011  
 Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene (mono-)	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene (ortho-)	U	0.5
541-73-1	1,3-Dichlorobenzene (meta-)	U	0.5
106-46-7	1,4-Dichlorobenzene (para-)	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride (Dichloromethane)	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-4011  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well  
 as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the  
 standard curve.

J - Indicates an estimated value for tentatively identified compounds,  
 or for compounds detected and identified but present at  
 a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a  
 concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4011  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	102.
Bromofluorobenzene (HALL Surr)	10.0 ppb	119.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
THF	40.0 ppb	127.

Analyst: SAM  
S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By: Richard F. Meyerhein  
Richard F. Meyerhein 10/04/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

## SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

OR95 4011 C

Date Received:

SEP 12 1995

Request ID No. 090066-A

2 User Code #: 6,4,0,0,0

3 Request ID No.:

4 Priority Code #: 3

5 Facility Name: SPS-11

6 County: Lea

7 City: Lovington

8 State: N.M.

9 Sample Location: S.P.S. 1 W.E.L.L. 1111 Treated Skid

10 Collected By: Ernest R. Chantre On: 9/5/95 At: 11:00 hrs. Date: (YY/MM/DD) Time: 24 hr. clock 2000 hrs. - 1900 hrs.

11 Codes: Submitter: WSS # 0101012114 Organization:

12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13 Report To: Jay Janica (915) 947-9008

Address: Texas New Mexico Pipeline Co PO Box 60028 San Angelo, Texas 76906

15 Sampling Information: Sample Purpose: ☐ Grab ☐ Composite ☐ Compliance ☐ Flow Proportioned ☒ NMED Monitoring ☐ Equal Aliquot ☐ Confirmation ☐ Sample Split w/Permittee ☐ Special ☐ Chain of Custody

16 Field Data: pH, Conductivity, umhos/cm @ Temperature, Chlorine Residual, mg/L, Flow:

17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☐ Entry Point to Distribution ☐ Well; Depth: ☐ Spring ☐ Distribution ☒ Other: Treating Skid

18 Field Remarks: Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge

19 Sample Type: ☒ Water ☐ Soil ☐ Food ☐ Other ☐ Wastewater ☐ Unchlorinated ☐ Chlorinated This form accompanies a single sample consisting of: 2 septum vial(s) (volume = 40 ml ea.) glass jug(s) (volume = ml ea.) (volume = )20 Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-Ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride ☐ Other

21 Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

## Volatile Screens:

- ☐
- (753) Aliphatic Headspace (Qualitative Screen)
- 
- ☐
- (754) Aromatic & Halogenated Purgeables (EPA 601/2)
- 
- ☐
- (765) Mass Spectrometer Purgeables (EPA 624)
- 
- ☐
- (766) SDWA Total Trihalomethanes (EPA 501.1)
- 
- ☒
- (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)
- 
- ☐
- (775) SDWA VOC's II [EDB & DBCP] (EPA 504)
- 
- ☐
- (790) Composite Sample for Analysis No.

## Other Specific Compounds or Classes:

☐ - { }  
☐ - { }

## Semivolatile Screens:

- ☐
- (755) Base/Neutral Extractables (EPA 625)
- 
- ☐
- (756) Base/Neutral/Acid Extractables (EPA 8270)
- 
- ☐
- (772) Carbamate Pesticides (EPA 531.1)
- 
- ☐
- (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
- 
- ☐
- (759) Herbicides, Triazine (EPA 507)
- 
- ☐
- (751) Hydrocarbon Fuel Screen (EPA M-8015)
- 
- ☐
- (760) Organochlorine Pesticides (EPA 505)
- 
- ☐
- (761) Organophosphate Pesticides (EPA 507)
- 
- ☐
- (767) Polychlorinated Biphenyls (PCB's) in Oil
- 
- ☐
- (762) SDWA Synthetic Org. Compds. (SLD 758/760)
- 
- ☐
- (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Please Fax Results To Me at (505) 396-2754.

Ernest R. Chantre

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 4, 1995

Request  
ID No. 090060ANALYTICAL REPORT  
SLD Accession No. OR-95-4014Distribution☐ User 64000  
☐ Submitter 68  
☒ Client  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on September 12, 1995

User:SLD Fee For Service - MISC  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700Submitter:Myra Meyers  
ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 8-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 7:15 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-4014
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 487
Level: (low/med) Low	Date Received: 9/12/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 9/17/95
GPC Cleanup: (Y/N) No pH: 2	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	Q	POL
71-43-2	Benzene		U	0.5



## ANALYTICAL REPORT

SLD Accession No. OR-95-4014

Continuation, Page 2 of 4

108-86-1	Bromobenzene		U	0.5
74-97-5	Bromochloromethane		U	0.5
75-27-4	Bromodichloromethane		U	0.5
75-25-2	Bromoform		U	0.5
24-83-9	Bromomethane		U	0.5
78-93-3	2-Butanone (MEK)		U	5.0
104-51-8	n-Butylbenzene		U	0.5
135-98-8	sec-Butylbenzene		U	0.5
98-06-6	tert-Butylbenzene		U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)		U	5.0
56-23-5	Carbon tetrachloride		U	0.5
108-90-7	Chlorobenzene (mono-)		U	0.5
75-00-3	Chloroethane		U	0.5
67-66-3	Chloroform		U	0.5
74-87-3	Chloromethane		U	0.5
95-49-8	2-Chlorotoluene		U	0.5
106-43-4	4-Chlorotoluene		U	0.5
96-12-8	1,2-Dibromo-3-chloropropane		U	0.5
124-48-1	Dibromochloromethane		U	0.5
106-93-4	1,2-Dibromoethane		U	0.5
74-95-3	Dibromomethane		U	0.5
95-50-1	1,2-Dichlorobenzene (ortho-)		U	0.5
541-73-1	1,3-Dichlorobenzene (meta-)		U	0.5
106-46-7	1,4-Dichlorobenzene (para-)		U	0.5
75-71-8	Dichlorodifluoromethane		U	0.5
75-34-3	1,1-Dichloroethane		U	0.5
107-06-2	1,2-Dichloroethane		U	0.5
75-35-4	1,1-Dichloroethene		U	0.5
156-59-4	cis-1,2-Dichloroethene		U	0.5
156-60-5	trans-1,2-Dichloroethene		U	0.5
78-87-5	1,2-Dichloropropane		U	0.5
142-28-9	1,3-Dichloropropane		U	0.5
590-20-7	2,2-Dichloropropane		U	0.5
563-58-6	1,1-Dichloropropene		U	0.5
1006-01-5	cis-1,3-Dichloropropene		U	0.5
1006-02-6	trans-1,3-Dichloropropene		U	0.5
100-41-4	Ethylbenzene		U	0.5
87-68-3	Hexachlorobutadiene		U	0.5
98-82-8	Isopropylbenzene		U	0.5
99-87-6	4-Isopropyltoluene		U	0.5
75-09-2	Methylene chloride (Dichloromethane)		U	0.5
91-20-3	Naphthalene		U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-4014  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well  
 as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the  
 standard curve.

J - Indicates an estimated value for tentatively identified compounds,  
 or for compounds detected and identified but present at  
 a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a  
 concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4014  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	103.
Bromofluorobenzene (HALL Surr)	10.0 ppb	103.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
THF	40.0 ppb	127.

Analyst: SAM  
S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By: (Signature)  
Richard F. Meyerhein 10/04/95  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

OR95 4014 C

## SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

Date Received: SEP 12 1995

User Code #: 640000 Request ID No.: 090060-A

Priority Code #: 3

Facility Name: SPS-11 County: Lea City: Lovington State: N.M.

Sample Location: S.P.S. W.E.L.L. 1111 Trrrelatitnig ISklid 1111

Collected By: Ernest R. C. Harter On: 9/10/95 At: 2:15 hrs.

Code: 0000 Submitter: WSS # 01010214 Organization: Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

Report To: Jay Janica Phone #: (915) 947-9008

Address: Texas New Mexico Pipeline Co PO Box 60028

City, State Zip: San Angelo, Texas 76906

Field Data: pH Conductivity: umhos/cm Temperature: Chlorine Residual: mg/L Flow:

Sample Source: Stream Lake Drain Pool WWTP Entry Point to Distribution Well; Depth: Spring Distribution Other: Treating Skid

Sample Type: Water Wastewater Soil Food Other Unchlorinated Chlorinated

This form accompanies a single sample consisting of: septum vial(s) (volume = 40 ml ea.) glass jug(s) (volume = ml ea.)

Analyses Requested: Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens: (753) Aliphatic Headspace (Qualitative Screen) (754) Aromatic &amp; Halogenated Purgeables (EPA 601/2) (765) Mass Spectrometer Purgeables (EPA 624) (766) SDWA Total Trihalomethanes (EPA 501.1) (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2) (775) SDWA VOC's II [EDB &amp; DBCP] (EPA 504) (780) Composite Sample for Analysis No. Other Specific Compounds or Classes: Semivolatile Screens: (755) Base/Neutral Extractables (EPA 625) (756) Base/Neutral/Acid Extractables (EPA 8270) (772) Carbamate Pesticides (EPA 531.1) (758) Herbicides, Chlorophenoxy Acid (EPA 515.1) (759) Herbicides, Triazine (EPA 507) (751) Hydrocarbon Fuel Screen (EPA M-8015) (760) Organochlorine Pesticides (EPA 505) (761) Organophosphate Pesticides (EPA 507) (767) Polychlorinated Biphenyls (PCB's) in Oil (762) SDWA Synthetic Org. Compds. (SLD 758/760) (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Please Fax Results To Me at (505) 396-2754.

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

October 4, 1995

Request  
ID No. 090064ANALYTICAL REPORT  
SLD Accession No. OR-95-4015Distribution☐ User 64000  
☐ Submitter 68  
☒ Client  
☒ SLD FilesTo: Jay Janica  
Texas New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Purgeable sample submitted to this laboratory on September 12, 1995

User:SLD Fee For Service - MISC  
700 Camino de Salud, NE  
P.O. Box 4700  
Albuquerque, NM 87196-4700Submitter:Myra Meyers  
ED Field Office, Hobbs  
Suite 165  
726 E. Michigan Avenue  
Hobbs, NM 88240

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 10-Sep-95	By: Ric . . .	SPS Well 11 Treating Skid
At: 17:15 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-I [EPA-502.2] Screen {774}

Parameter	Value	Qual	POL	Units
SDWA VOC's-I	0.00	U	0.50	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:SAFE DRINKING WATER ACT  
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: N/A
Lab Code: N/A Case No.: N/A	SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-95-4015
Sample wt/vol: 5.0 (g/mL) mL	SLD Batch No: 487
Level: (low/med) Low	Date Received: 9/12/95
% Moisture: not dec. N/A dec. N/A	Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A	Date Analyzed: 9/17/95
GPC Cleanup: (Y/N) No pH: 2	Dilution Factor: 1
	CONCENTRATION UNITS:
	(ug/L or ug/Kg): ug/L

This sample was analyzed for the following compounds  
using EPA Method 502.2

CAS NO.	COMPOUND	CONC.	O	POL
71-43-2	Benzene		U	0.5

## ANALYTICAL REPORT

SLD Accession No. OR-95-4015

Continuation, Page 2 of 4

108-86-1	Bromobenzene	U	0.5
74-97-5	Bromochloromethane	U	0.5
75-27-4	Bromodichloromethane	U	0.5
75-25-2	Bromoform	U	0.5
24-83-9	Bromomethane	U	0.5
78-93-3	2-Butanone (MEK)	U	5.0
104-51-8	n-Butylbenzene	U	0.5
135-98-8	sec-Butylbenzene	U	0.5
98-06-6	tert-Butylbenzene	U	0.5
1634-04-4	tert-Butyl methyl ether (MTBE)	U	5.0
56-23-5	Carbon tetrachloride	U	0.5
108-90-7	Chlorobenzene (mono-)	U	0.5
75-00-3	Chloroethane	U	0.5
67-66-3	Chloroform	U	0.5
74-87-3	Chloromethane	U	0.5
95-49-8	2-Chlorotoluene	U	0.5
106-43-4	4-Chlorotoluene	U	0.5
96-12-8	1,2-Dibromo-3-chloropropane	U	0.5
124-48-1	Dibromochloromethane	U	0.5
106-93-4	1,2-Dibromoethane	U	0.5
74-95-3	Dibromomethane	U	0.5
95-50-1	1,2-Dichlorobenzene (ortho-)	U	0.5
541-73-1	1,3-Dichlorobenzene (meta-)	U	0.5
106-46-7	1,4-Dichlorobenzene (para-)	U	0.5
75-71-8	Dichlorodifluoromethane	U	0.5
75-34-3	1,1-Dichloroethane	U	0.5
107-06-2	1,2-Dichloroethane	U	0.5
75-35-4	1,1-Dichloroethene	U	0.5
156-59-4	cis-1,2-Dichloroethene	U	0.5
156-60-5	trans-1,2-Dichloroethene	U	0.5
78-87-5	1,2-Dichloropropane	U	0.5
142-28-9	1,3-Dichloropropane	U	0.5
590-20-7	2,2-Dichloropropane	U	0.5
563-58-6	1,1-Dichloropropene	U	0.5
1006-01-5	cis-1,3-Dichloropropene	U	0.5
1006-02-6	trans-1,3-Dichloropropene	U	0.5
100-41-4	Ethylbenzene	U	0.5
87-68-3	Hexachlorobutadiene	U	0.5
98-82-8	Isopropylbenzene	U	0.5
99-87-6	4-Isopropyltoluene	U	0.5
75-09-2	Methylene chloride (Dichloromethane)	U	0.5
91-20-3	Naphthalene	U	0.5

(Continued on page 3.)

ANALYTICAL REPORT  
 SLD Accession No. OR-95-4015  
 Continuation, Page 3 of 4

103-65-1	Propylbenzene		U	0.5
100-42-5	Styrene		U	0.5
630-20-6	1,1,1,2-Tetrachloroethane		U	0.5
79-34-5	1,1,2,2-Tetrachloroethane		U	0.5
127-18-4	Tetrachloroethene		U	0.5
109-99-9	Tetrahydrofuran (THF)		U	5.0
108-88-3	Toluene		U	0.5
87-61-5	1,2,3-Trichlorobenzene		U	0.5
120-82-1	1,2,4-Trichlorobenzene		U	0.5
71-55-6	1,1,1-Trichloroethane		U	0.5
79-00-5	1,1,2-Trichloroethane		U	0.5
79-01-6	Trichloroethene		U	0.5
75-69-4	Trichlorofluoromethane		U	0.5
96-18-4	1,2,3-Trichloropropane		U	0.5
95-63-6	1,2,4-Trimethylbenzene		U	0.5
108-67-8	1,3,5-Trimethylbenzene		U	0.5
75-01-4	Vinyl chloride		U	0.5
95-47-6	o-Xylene		U	0.5
N/A	p- & m-Xylene		U	0.5
N/A	Total Xylenes		U	1.0

\* Q = Qualifier Definitions:

CONC = CONCENTRATION DETERMINED

PQL = Practical Quantitation Limit (Approximately 5 times MDL).  
 Equivalent to the "minimum detection limit" defined for  
 regulated VOC-1 compounds in 40 CFR 141.25(c).

B - Indicates compound was detected in the Lab Blank as well  
 as in the sample.

D - Indicates value taken from a secondary (diluted) sample analysis.

E - Indicates compound concentration exceeded the range of the  
 standard curve.

J - Indicates an estimated value for tentatively identified compounds,  
 or for compounds detected and identified but present at  
 a concentration less than the PQL listed.

N - Indicates that more than one peak was used for quantitation.

U - Indicates compound was analyzed for, but not detected at a  
 concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with

(Continued on page 4.)

ANALYTICAL REPORT  
SLD Accession No. OR-95-4015  
Continuation, Page 4 of 4

this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (PPB)
No Compounds Detected	

SURROGATE RECOVERIES:

SURROGATE	CONCENTRATION	% RECOVERY
Bromofluorobenzene (PID Surr)	10.0 ppb	102.
Bromofluorobenzene (HALL Surr)	10.0 ppb	101.

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
THF	40.0 ppb	127.

Analyst: SAM

S. Azhar Mustafa  
Analyst, Organic Chemistry

Reviewed By: W. Sherrill

Richard F. Meyerhein 10/04/95  
Supervisor, Organic Chemistry Section



## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

OR95 4015 C

SCIENTIFIC LABORATORY DIVISION  
700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108  
Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

Date Received: SEP 12 1995

2 User Code #: 164000 3 Request ID No.: Request ID No. 090064-A 4 Priority Code #: 3

5 Facility Name: SPS-11 6 County: Lea 7 City: Lovington 8 State: N.M.

9 Sample Location: S.P.S. W.E.L.L. 1111 T.R.I.E.A.L.T.I.N.G. I.S.K.I.L.D. 1111

10 Collected By: Ernest R. G. Hart On: 9/5/95 At: 11:15 hrs. Date: (YY/MM/DD) Time: 24 hr. clock 2000 hrs. = 1900 hrs.

11 Codes: Submitter WSS # Organization 12 Latitude (DDMMSS) Longitude (DDMMSS) 2 Digit ID (if needed)

13 Report To: Jay Janica 14 Phone #: (915) 947-9008

Address: Texas New Mexico Pipeline Co PO Box 60028

City, State Zip: San Angelo, Texas 76906

16 Field Data: pH Conductivity: umhos/cm @ Temperature: °C Chlorine Residual: mg/L Flow:

17 Sample Source: ☐ Stream ☐ Lake ☐ Drain ☐ Pool ☐ WWTP ☐ Entry Point to Distribution ☐ Well; Depth: ☐ Spring ☐ Distribution ☒ Other: Treating Skid 18 Field Remarks: Sampled from 1/4" Hose Bib from activated charcoal filter vessel discharge

19 Sample Type: ☒ Water ☐ Wastewater ☐ Soil ☐ Food ☐ Other ☐ Unchlorinated ☐ Chlorinated 20 Preservation: ☐ NP No Preservation; Sample stored at room temperature ☒ P-Ice Sample stored in an ice bath (Not Frozen) ☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual ☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml) ☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride ☐ Other

21 Analytes Requested: This form accompanies a single sample consisting of: 2 septum vial(s) (volume = 40 ml ea.) - glass [ug(s) (volume = ml ea.) (volume = ) Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

Volatile Screens: ☐ (753) Aliphatic Headspace (Qualitative Screen) ☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2) ☐ (765) Mass Spectrometer Purgeables (EPA 624) ☐ (766) SDWA Total Trihalomethanes (EPA 501.1) ☒ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2) ☐ (775) SDWA VOC's II [EDB & DBCP] (EPA 504) ☐ (790) Composite Sample for Analysis No. Semivolatile Screens: ☐ (755) Base/Neutral Extractables (EPA 625) ☐ (756) Base/Neutral/Acid Extractables (EPA 8270) ☐ (772) Carbamate Pesticides (EPA 531.1) ☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1) ☐ (759) Herbicides, Triazine (EPA 507) ☐ (751) Hydrocarbon Fuel Screen (EPA M-8015) ☐ (760) Organochlorine Pesticides (EPA 505) ☐ (761) Organophosphate Pesticides (EPA 507) ☐ (767) Polychlorinated Biphenyls (PCB's) in Oil ☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760) ☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

Other Specific Compounds or Classes: ☐ - { } ☐ - { }

Remarks:

Please Fax Results To Me at (505) 396-2754.

*Ernest R. G. Hart*

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

February 13, 1996

Request  
ID No. 090079ANALYTICAL REPORT  
SLD Accession No. OR-96-0437Distribution( ) User 64000  
(X) Submitter 68  
(X) SLD FilesTo: Jay Janica  
Texas-New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on January 30, 1996

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 24-Jan-96	By: Ric . . .	SPS Well 11 Treating Skid
At: 11:00 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	PQL	Units
1,2-Dibromoethane (EDB)	0.00		0.02	ppb
1,2-Dibromo-3-chloropropane	0.00		0.02	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A		
Lab Code: N/A	Case No.: N/A	SAS No.: N/A	SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-96-0437		
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 65		
Level: (low/med) Low	Date Received: 1/30/96		
% Moisture: not dec. N/A dec. N/A	Date Extracted: 2/6/96		
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 2/7/96		
GPC Cleanup: (Y/N) No	pH: N/A	Dilution Factor: 1	
CONCENTRATION UNITS:			
(ug/L or ug/Kg): ug/L			

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration

(Continued on page 2.)

ANALYTICAL REPORT  
SLD Accession No. OR-96-0437  
Continuation, Page 2 of 3

of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE	CONCENTRATION	%RECOVERY
1,1,2,2,-TCEA	.57 ug/L	107

(Continued on page 3.)

SLD Accession No. OR-96-0437

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

MJR

Mary Lou LaCasse  
*Analyst, Organic Chemistry*

Q 24

Richard F. Meyerhein 02/12/96  
Supervisor, Organic Chemistry Section

## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87108

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

OR96-0437-C

Date

JAN 30 1996

Received:

Request |||||

ID No. 090079-A

User  
Code #:

6,4,0,0,0

Request  
ID No.:Priority  
Code #:

3

EST. 10-10-95  
ContinuedFacility  
Name:

SPS 11

County:

Lea

City:

Lovington

State

N.M.

Sample  
Location:

S.P.S. Well 111 Treating Skid

Collected  
By:

Ernest R. Gharde

On:

7/6/94 At 11:10 hrs.

Codes:

Submitter

WSB #

Organization

14 Phone #:

Report  
To:

Jay Janica

Address

Texas-New Mexico Pipe Line Co.

P.O. Box 60028

City, State Zip

San Angelo, Texas 76906

Field  
Data:

pH

Conductivity:

umhos/cm

Temperature:

Chlorine

mg/L

Residual:

17 Sample Source:

- ☐ Stream  
☐ Lake  
☐ Drain  
☐ Pool  
☐ WWTP

- ☐ Entry Point to Distribution  
☐ Well; Depth:  
☐ Spring  
☐ Distribution  
☒ Other: Treating Skid

18 Field  
Remarks:Sampled before activated charcoal  
filter

19 Sample Type:

☒ Water☐ Unchlorinated☐ Wastewater☐ Chlorinated☐ Soil, ☐ Food, ☐ Other

This form accompanies a single sample consisting of:

2 - septum vial(s) (volume = 40 ml ea.)

- glass jug(s) (volume = ml ea.)

(volume = )

20 Preservation:

- ☐ NP No Preservation; Sample stored at room temperature  
☒ P-Ice Sample stored in an ice bath (Not Frozen)  
☐ P-TS Sample Preserved with Sodium Thiosulfate to remove chlorine residual  
☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)  
☐ P-HgCl<sub>2</sub> Sample Preserved with 20 mg/l Mercuric Chloride  
☐ Other

1 Analytes Requested:

Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

## Volatile Screens:

- ☐ (753) Aliphatic Headspace (Qualitative Screen)  
☐ (754) Aromatic & Halogenated Purgeables (EPA 601/2)  
☐ (765) Mass Spectrometer Purgeables (EPA 624)  
☐ (766) SDWA Total Trihalomethanes (EPA 501.1)  
☐ (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)  
☒ (775) SDWA VOC's II [EDB & DBCP] (EPA 504)  
☐ (790) Composite Sample for Analysis No.

## Other Specific Compounds or Classes:

- ☐ - { }  
☐ - { }  
88-5 1/4 06 NAF 50

## Semi-volatile Screens:

- ☐ (755) Base/Neutral Extractables (EPA 625)  
☐ (756) Base/Neutral/Acid Extractables (EPA 8270)  
☐ (772) Carbamate Pesticides (EPA 531.1)  
☐ (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)  
☐ (759) Herbicides, Triazine (EPA 507)  
☐ (751) Hydrocarbon Fuel Screen (EPA M-8015)  
☐ (760) Organochlorine Pesticides (EPA 505)  
☐ (761) Organophosphate Pesticides (EPA 507)  
☐ (767) Polychlorinated Biphenyls (PCB's) In Oil  
☐ (762) SDWA Synthetic Org. Compds. (SLD 758/760)  
☐ (782) Total Petroleum Hydrocarbons (EPA 418.1)

Remarks:

Sweet Spicincta - Please fax results to me at  
(505) 396-2754

## SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700  
Albuquerque, NM 87196-4700700 Camino de Salud, NE  
[505]-841-2500

ORGANIC CHEMISTRY SECTION [505]-841-2570

February 13, 1996

Request  
ID No. 090077ANALYTICAL REPORT  
SLD Accession No. OR-96-0438

## Distribution

☐ User 64000  
☒ Submitter 68  
☒ SLD FilesTo: Jay Janica  
Texas-New Mexico Pipeline Co.  
PO Box 60028  
San Angelo, Texas 76906From: Organic Chemistry Section  
Scientific Laboratory Div.  
700 Camino de Salud, N.E.  
P.O. Box 4700  
Albuquerque, NM 87196-4700

Re: A water, Extractable sample submitted to this laboratory on January 30, 1996

## DEMOGRAPHIC DATA

COLLECTION		LOCATION
On: 24-Jan-96	By: Ric . . .	SPS Well 11 Treating Skid
At: 11:00 hrs.	In/Near: Lovington	

## ANALYTICAL RESULTS: SDWA VOC-II [EPA-504] Screen {775}

Parameter	Value	Qual	POL	Units
1,2-Dibromo-3-chloropropane	0.00		0.02	ppb
1,2-Dibromoethane (EDB)	0.00		0.02	ppb

See Laboratory Remarks for Additional Information

## Notations &amp; Comments:

Evidentiary Seals: Not Sealed ☒; Intact: No ☐, Yes ☐ & Broken By: \_\_\_\_\_ Date: \_\_\_\_\_

## Laboratory Remarks:

## SAFE DRINKING WATER ACT VOLATILES-II

Lab Name: NM SCIENTIFIC LABORATORY DIVISION	Contract: /A		
Lab Code: N/A	Case No.: N/A	SAS No.: N/A	SDG No.: N/A
Matrix: (soil/water) Water	Lab Sample ID: OR-96-0438		
Sample wt/vol: 35.0 (g/mL) ml	SLD Batch No: 65		
Level: (low/med) Low	Date Received: 1/30/96		
% Moisture: not dec. N/A dec. N/A	Date Extracted: 2/6/96		
Extraction: (SepF/Cont/Sonc) Micro	Date Analyzed: 2/7/96		
GPC Cleanup: (Y/N) No pH: N/A	Dilution Factor: 1		
CONCENTRATION UNITS:			
(ug/L or ug/Kg): ug/L			

EPA Method 504 was used to analyze for the following compounds

CAS NO.	COMPOUND	CONC.	Q	MDL
106-93-4	1,2-Dibromoethane (EDB)		U	0.02
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	0.02

\* CONC = CONCENTRATION DETERMINED

MDL= The Method Detection Level (Limit) is the minimum concentration

(Continued on page 2.)

ANALYTICAL REPORT  
SLD Accession No. OR-96-0438  
Continuation, Page 2 of 3

of a compound that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (FR 23703, June 1986). If a sample is diluted (usually due to high levels of contaminants) during analysis, the actual "sample detection limit" can be obtained by multiplying the MDL by the dilution factor reported above.

PQL= Practical Quantitation Limit (Approximately 5-10 times MDL) is the concentration of the lowest standard routinely analyzed. Concentrations determined between the MDL and the PQL will be qualified with a "J" indicating an approximate concentration.

\* Q = Qualifier Definitions:

- B - Indicates compound was detected in the Lab Blank as well as in the sample.
- D - Indicates value taken from a secondary (diluted) sample analysis.
- E - Indicates compound concentration exceeded the range of the standard curve.
- J - Indicates an estimated value for tentatively identified compounds, or for compounds detected and identified but present at a concentration less than the quantitation limit.
- N - Indicates that more than one peak was used for quantitation.
- U - Indicates compound was analyzed for, but not detected at a concentration greater than the concentration listed.

QUALITY CONTROL SUMMARY FOR VOLATILES II SCREEN

METHOD BLANK: A laboratory method blank was analyzed along with this sample to assure the absence of interfering contaminants from lab reagents, instruments, or the general laboratory environment. Unless listed below, no contaminants were detected in this blank above the reported detection limit.

COMPOUND DETECTED	CONCENTRATION (ug/L)
No Compounds Detected	

SURROGATE RECOVERIES		
SURROGATE	CONCENTRATION	%RECOVERY
1,1,2,2,-TCEA	.57 ug/L	103.3

(Continued on page 3.)

ANALYTICAL REPORT

SLD Accession No. OR-96-0438

Continuation, Page 3 of 3

SPIKE RECOVERY: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

Analyst: 

Mary Lou LaCasse  
Analyst, Organic Chemistry

Reviewed By: 

Richard F. Meyerhein 02/12/96  
Supervisor, Organic Chemistry Section



## ORGANIC CHEMISTRY ANALYTICAL REQUEST FORM

SCIENTIFIC LABORATORY DIVISION

700 CAMINO DE SALUD N.E., ALBUQUERQUE, NM 87106

Organic Chemistry Section - Telephone: (505) 841-2570

SLD No.

OR96-0438-C

Date

Received:

JAN 30 1996

2 User  
Code #:

64000

3 Request  
ID No.:

Request ID No. 090077-A

4 Priority  
Code #:

3

5 State  
Code #:

N.M.

5 Facility  
Name:

SPS -11

6 County:

Lea

7 City:

Lovington

9 Sample  
Location:

S.P.S. WELLS 1111 TIRIA TITINIGI ISIKITID 1111

10 Collected  
By:

J. Janica

R. J. Janica

On:

96/01/24

At:

11/14

hrs.

11 Codes:

Submitter

WSS #

Organization

12 Latitude (DDMMSS)

Longitude (DDMMSS)

2 Digit ID (if needed)

13 Report  
To:

Jav Janica

14 Phone #:

(915) 947-9008

Address  
Texas-New Mexico Pipeline Co  
PO Box 60028

City, State Zip

San Angelo, Texas 76906

18 Field  
Data:

pH

Conductivity:

umhos/cm

Temperature:

Chlorine  
Residual:

mg/L

Flow:

17 Sample Source:

- ☐
- Stream
- 
- ☐
- Lake
- 
- ☐
- Drain
- 
- ☐
- Pool
- 
- ☐
- WWTP

- ☐
- Entry Point to Distribution
- 
- ☐
- Well; Depth:
- 
- ☐
- Spring
- 
- ☐
- Distribution
- 
- ☒
- Other: Treating Skid

18 Field  
Remarks:Sampled from 1/4" Hose Bib from  
activated charcoal filter vessel discharge

19 Sample Type:

☒ Water☐ Wastewater☐ Soil☐ Food☐ Other☐ Unchlorinated☐ Chlorinated

20 Preservation:

☐ NP

No Preservation; Sample stored at room temperature

☒ P-Ice

Sample stored in an ice bath (Not Frozen)

☐ P-TS

Sample Preserved with Sodium Thiosulfate to remove chlorine residual

☒ P-HCl

Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

☐ P-HgCl<sub>2</sub>

Sample Preserved with 20 mg/l Mercuric Chloride

☐ Other

21 Analyses Requested:

Please check the appropriate box(es) below to indicate the type of analytical screen(s) required. Whenever possible, list specific compounds suspected or required, and note below whenever highly contaminated samples are suspected.

## Volatile Screens:

- ☐
- (753) Aliphatic Headspace (Qualitative Screen)
- 
- ☐
- (754) Aromatic & Halogenated Purgeables (EPA 601/2)
- 
- ☐
- (765) Mass Spectrometer Purgeables (EPA 624)
- 
- ☐
- (766) SDWA Total Trihalomethanes (EPA 501.1)
- 
- ☐
- (774) SDWA VOC's I [21 REGULATED +] (EPA 502.2)
- 
- ☒
- (775) SDWA VOC's II [EDB & DBCP] (EPA 504)
- 
- ☐
- (790) Composite Sample for Analysis No.

## Semivolatile Screens:

- ☐
- (755) Base/Neutral Extractables (EPA 625)
- 
- ☐
- (756) Base/Neutral/Acid Extractables (EPA 8270)
- 
- ☐
- (772) Carbamate Pesticides (EPA 531.1)
- 
- ☐
- (758) Herbicides, Chlorophenoxy Acid (EPA 515.1)
- 
- ☐
- (759) Herbicides, Triazine (EPA 507)
- 
- ☐
- (751) Hydrocarbon Fuel Screen (EPA M-8015)
- 
- ☐
- (760) Organochlorine Pesticides (EPA 505)
- 
- ☐
- (761) Organophosphata Pesticides (EPA 507)
- 
- ☐
- (767) Polychlorinated Biphenyls (PCB's) In Oil
- 
- ☐
- (762) SDWA Synthetic Org. Compds. (SLD 758/760)
- 
- ☐
- (782) Total Petroleum Hydrocarbons (EPA 418.1)

## Other Specific Compounds or Classes:

- ☐
- { }
- 
- ☐
- { }

Remarks:

70 JAN 30 AM 9:37

Please Fax Results To Me AT (505) 396-2754

Monte Roberts

70

