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REPORTS

DATE:
1998

ENERCON SERVICES, INC.
An Employee Owned Company

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Dallas, TX 75234
(972) 484-3854
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December 4, 1998

Mr. Kyle Landreneau
Equivia Services
110 Cyprus Station Drive, Suite 255
Houston, TX 77090

RE: ANNUAL GROUNDWATER MONITORING REPORT
DENTON STATION
LEA COUNTY, NEW MEXICO

ENERCON PROJECT # EV-378

Mr. Landreneau:

Enercon Services, Inc., has completed the 1998 Annual Groundwater Monitoring and Sampling operations at the above referenced site. The sampling and monitoring program consists of quarterly monitoring events, as well as frequent site visits to monitor operation of the automated ORS remediation system.

This report contains results from all four of the quarterly monitoring events and includes the collection of groundwater elevation measurements from fifteen onsite monitoring wells. Groundwater samples were collected from all monitoring wells not containing phase-separated hydrocarbons (PSH). Outlined in this report are the gauging, purging, and sampling operations conducted on January 21, April 1, July 7, and October 1, 1998, and PSH recovery data since October 3, 1997.

Field Operations

Extensive repairs were conducted to the ORS remediation system during 1998. All wells serviced by the automated system experienced occasional faults and shutdowns with little operating time and degraded PSH recovery prior to May 1998. A design flaw was found in the mounting of the control cable junction boxes allowing water leakage into the enclosure. All cables were spliced and sealed to prevent further damage. The Tank Full Probe was found to be faulty and was replaced. Following the repairs, a significant increase in PSH recovery resulted.

Previous downwell splices failed for the MW-5 recovery pump on the power cable, control cable, and product recovery line. The cables and product line have been spliced, but oil has seeped into the interior insulation of the cables. The pump for MW-5 has been shutdown to prevent damage due to the oil soaked wires.

On May 4, 1998, a geophysical study using electromagnetic imaging (EM) methods was performed to attempt further delineation of the subsurface hydrocarbon in the affected area. The study proved inconclusive due to a high depth to the affected zone and the caliche soils at the site.

MW-14 was installed on September 29, 1998, to establish a downgradient limit to the dissolved phase plume. Results will be forwarded in a separate report.

Groundwater Gradient

Monitoring wells have been gauged in order to determine the depth to the groundwater table and the thickness of any PSH. A summary of the groundwater elevations and PSH thickness is presented in Appendix B, Table 1. The apparent groundwater flow direction was consistently noted to be from northwest to the southeast and is concurrent with historical data. During the monitoring event on March 1, 1998, a flow direction was noted from the northeast and skewing to the southeast. This had not been noted before and has not recurred. A Groundwater Gradient Map for October 1, 1998 is included in Appendix A, Figure 1.

PSH Recovery

Recovery of PSH on site is accomplished by an automated ORS Remediation System, absorbent booms, and hand bailing. Approximately 2,183 gallons of PSH have been recovered to date with 969.80 gallons by manual means (booms and bailing) and 1,213.07 gallons by the automated ORS system. Between October 3, 1997 and October 1, 1998, 676.61 gallons have been recovered by the ORS system and 47.28 gallons by manual means. A summary of PSH recovery is presented in Appendix B, Tables 3 and 4.

Groundwater Sampling

Monitor wells were sampled in accordance with our proposal for sampling during 1998. MW-2, MW-6, MW-9, MW-11, MW-12, and MW-13 were sampled quarterly for Benzene, Toluene, Ethyl-Benzene, and Total Xylenes (BTEX) using EPA Method 8240. MW-8 and MW-10 were also sampled for BTEX during the April monitoring event. During the January monitoring event MW-2, MW-6, MW-9, MW-11, MW-12, and MW-13 were also sampled for Poly-Aromatic Hydrocarbons (PAH) using EPA Method 8310. All wells were purged a minimum of 3 well volumes, or dry, and samples obtained using dedicated, disposable sample bailers. Samples were then placed on ice and shipped to Southern Petroleum Laboratories, Houston, for analysis.

Groundwater Analytical Results

Dissolved BTEX concentrations have remained relatively stable across the site with minor fluctuations of 0.1 to 0.2 parts per million (ppm). PAH concentrations have generally decreased across the site with the exception of MW-6, which increased from non-detectable in January, 1997 to 0.010 ppm in January, 1998. MW-8, MW-9, and MW-12 continue to have no detectable concentrations of BTEX or PAH. Summaries of groundwater analytical results are presented in Appendix B, Tables 2 and 2a.

Enercon appreciates the opportunity to provide you with our professional consulting services. If you have any questions or concerns, please do not hesitate to contact us at (972) 484-3854.

Sincerely,
Enercon Services, Inc.

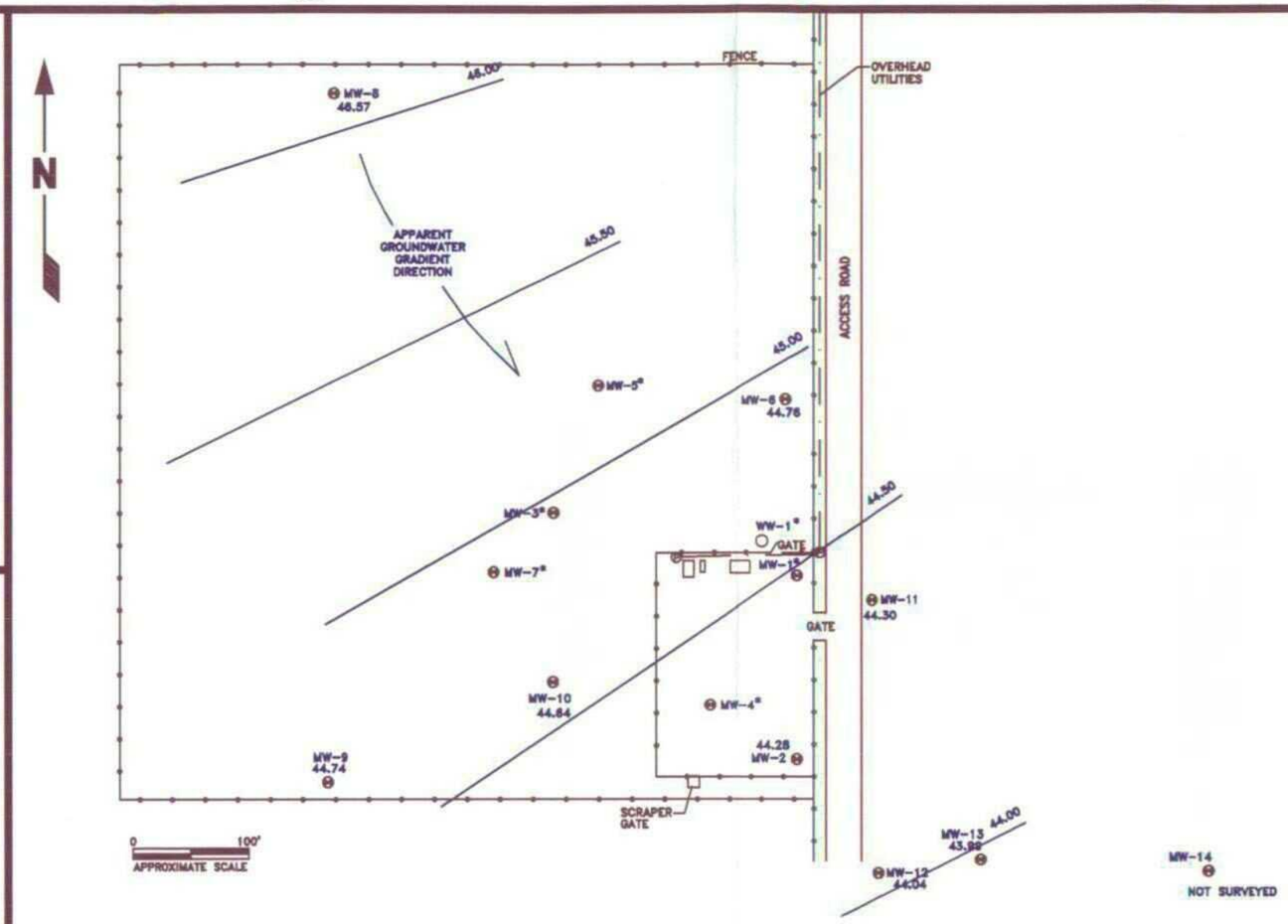
Randall N. Lantz
Environmental Geologist

Charles D. Harlan, C.P.G.
Manager, Environmental Services

APPENDIX A

FIGURE 1 - GROUNDWATER GRADIENT
FIGURE 2 - DISSOLVED BTEX CONCENTRATION
FIGURE 3 - PAH CONCENTRATION MAPS

SHELL PIPELINE CORPORATION
DENTON STATION
LEA COUNTY, NEW MEXICO



MONITOR WELL
44.86 — RELATIVE GROUNDWATER ELEVATION IN WELL
GROUNDWATER ELEVATION CONTOUR (CI = 0.50')

MW-14 INSTALLED ON 9/29/98

GROUNDWATER GRADIENT MAP

*MONITORING WELLS MW-1, MW-3, MW-4, MW-5, AND MW-7 WERE NOT USED TO CONSTRUCT THIS GRADIENT MAP.

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2775 VILLA CREEK, SUITE 120
DALLAS, TEXAS 75234
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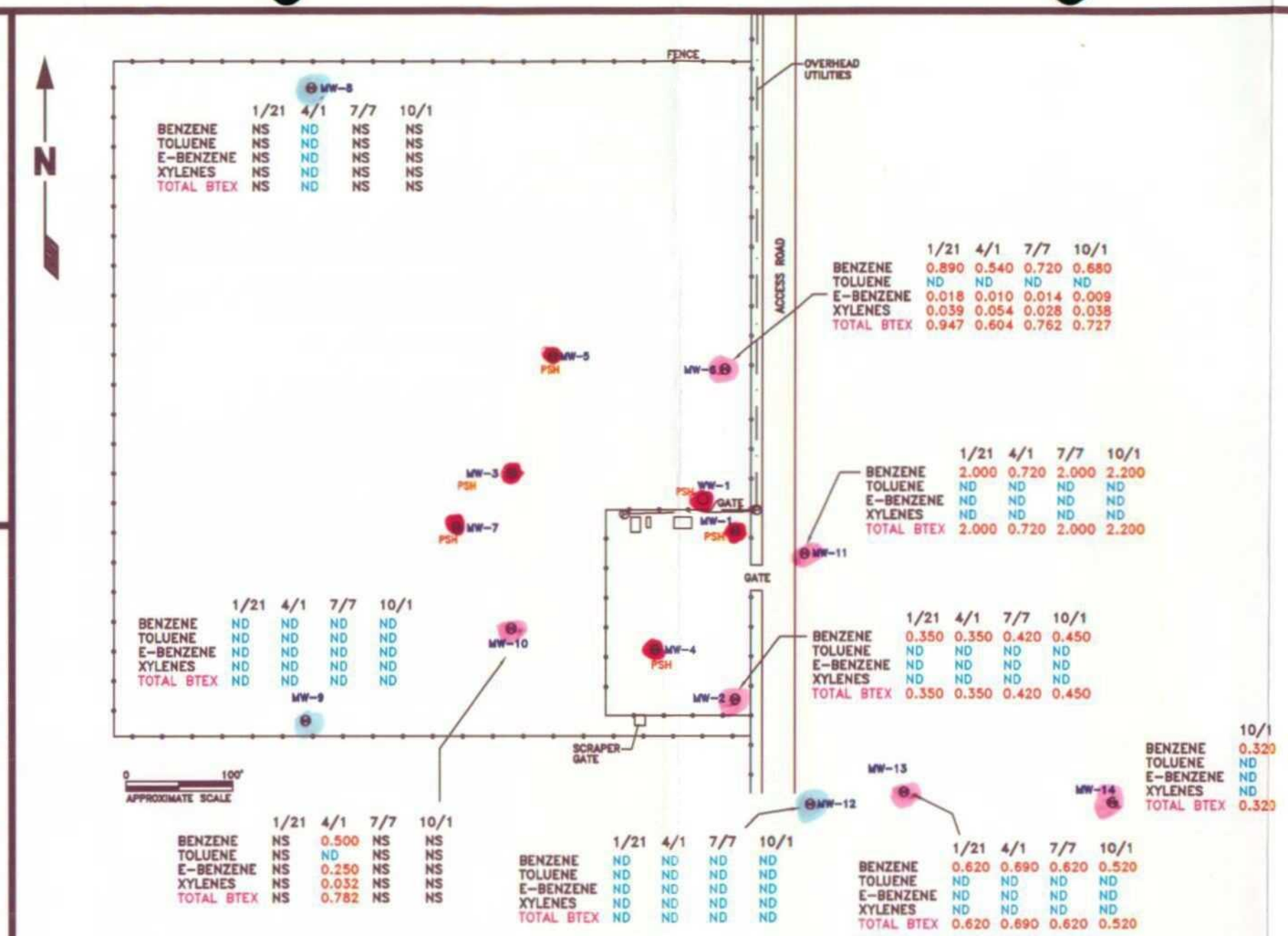
DATE: OCT, 1998
PROJECT NO.: EV-378
FIGURE 1

SHELL PIPELINE CORPORATION
DENTON STATION
LEA COUNTY, NEW MEXICO



⊖ MONITOR WELL

NS – NOT SAMPLED
ND – NOT DETECTED
PSH – PHASE SEPARATED HYDROCARBON

MW-14 INSTALLED ON 9/29/98

DISSOLVED BTEX CONCENTRATION MAP

-SAMPLES OBTAINED DURING 1998
-CONCENTRATIONS LISTED IN mg/l (ppm)

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PROJECT NO. EV-378

DATE OCT, 1998

FIGURE 2

PAH CONCENTRATION MAP

-SAMPLES OBTAINED 1/21/98
-CONCENTRATIONS LISTED IN mg/l (ppm)

● MONITOR WELL

NS - NOT SAMPLED
ND - NONE DETECTED
PSH - PHASE SEPARATED HYDROCARBON

MW-14 INSTALLED ON 9/29/98

SHELL PIPELINE CORPORATION DENTON STATION LEA COUNTY, NEW MEXICO	ENERCON SERVICES, INC. 2775 VILLA CREEK, SUITE 120 DALLAS, TEXAS 75234 972/484-3854	DATE SEPT, 1998 PROJECT NO. EV-378	FIGURE 3

APPENDIX B

TABLES

TABLE 1
DENTON STATION
SUMMARY OF RELATIVE GROUNDWATER LEVEL ELEVATIONS AND PHASE-SEPARATED HYDROCARBON THICKNESSES

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase-Separated Hydrocarbon Thickness (feet)***
MW-1	10/3/97	99.53	101.96	54.60	47.76	0.44
	11/8/97			54.49	47.75	0.31
	1/21/98			61.34	45.14	5.02
	2/17/98			62.03	42.27	2.60
	4/1/98			60.22	44.85	3.46
	5/4/98			60.50	44.80	3.71
	7/7/98			57.01	47.57	2.91
	10/1/98			61.11	44.68	4.26
MW-2	10/3/97	97.68	99.83	NG	NG	NG
	11/8/97			NG	NG	NG
	1/21/98			55.22	44.61	0.00
	2/17/98			NG	NG	NG
	4/1/98			55.22	44.61	0.00
	5/4/98			55.28	44.55	0.00
	7/7/98			55.39	44.44	0.00
	10/1/98			55.55	44.28	0.00
MW-3	10/3/97	99.51	99.53	54.32	45.80	0.65
	11/8/97			54.22	45.99	0.76
	1/21/98			55.25	44.73	0.50
	2/17/98			58.83	45.54	5.38
	4/1/98			59.17	45.38	5.58
	5/4/98			55.92	44.93	1.47
	7/7/98			55.71	44.46	0.71
	10/1/98			53.59	46.38	0.49
MW-4	10/3/97	98.25	99.97	54.58	45.59	0.22
	11/8/97			54.80	45.62	0.50
	1/21/98			57.20	44.89	2.35
	2/17/98			55.80	44.84	0.74
	4/1/98			55.73	44.74	0.56
	5/4/98			55.50	44.70	0.25
	7/7/98			55.75	44.63	0.45
	10/1/98			56.12	44.50	0.72
MW-5	10/3/97	100.21	100.36	54.83	46.95	1.58
	11/8/97			54.68	46.52	0.93
	1/21/98			59.51	45.60	5.28
	2/17/98			59.85	45.40	5.43
	4/1/98			59.65	45.60	5.43
	5/4/98			59.55	45.46	5.17
	7/7/98			59.35	45.29	4.76
	10/1/98			59.71	45.33	5.20
MW-6	10/3/97	99.81	101.86	NG	NG	NG
	11/8/97			NG	NG	NG
	1/21/98			55.81	46.05	0.00
	2/17/98			NG	NG	NG
	4/1/98			56.89	44.97	0.00
	5/4/98			56.90	44.96	0.00
	7/7/98			56.99	44.87	0.00
	10/1/98			57.10	44.76	0.00

TABLE 1
DENTON STATION
SUMMARY OF RELATIVE GROUNDWATER LEVEL ELEVATIONS AND PHASE-SEPARATED HYDROCARBON THICKNESSES

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase-Separated Hydrocarbon Thickness (feet)***
MW-7	10/3/97	99.24	99.16	54.80	46.40	2.27
	11/8/97			54.27	46.33	1.60
	1/21/98			59.45	45.38	6.30
	2/17/98			59.99	45.83	7.40
	4/1/98			59.88	45.54	6.96
	5/4/98			55.51	44.90	1.39
	7/7/98			55.45	44.85	1.27
	10/1/98			55.52	44.56	1.02
MW-8	10/3/97	99.24	101.92	55.21	46.71	0.00
	11/8/97			NG	NG	NG
	1/21/98			56.05	45.87	0.00
	2/17/98			NG	NG	NG
	4/1/98			56.12	45.80	0.00
	5/4/98			56.15	45.77	0.00
	7/7/98			56.24	45.68	0.00
	10/1/98			55.35	46.57	0.00
MW-9	10/3/97	98.16	100.22	54.66	45.56	0.00
	11/8/97			NG	NG	NG
	1/21/98			55.17	45.05	0.00
	2/17/98			NG	NG	NG
	4/1/98			55.24	44.98	0.00
	5/4/98			55.27	44.95	0.00
	7/7/98			52.35	47.87	0.00
	10/1/98			55.48	44.74	0.00
MW-10	10/3/97	98.20	98.28	54.03	44.25	0.00
	11/8/97			NG	NG	NG
	1/21/98			53.32	44.96	0.00
	2/17/98			NG	NG	NG
	4/1/98			53.40	44.88	0.00
	5/4/98			53.42	44.86	0.00
	7/7/98			52.51	45.77	0.00
	10/1/98			53.64	44.64	0.00
MW-11	10/3/97	99.38	99.45	NG	NG	NG
	11/8/97			NG	NG	NG
	1/21/98			54.89	44.56	0.00
	2/17/98			NG	NG	NG
	4/1/98			54.94	44.51	0.00
	5/4/98			54.98	44.47	0.00
	7/7/98			55.06	44.39	0.00
	10/1/98			55.15	44.30	0.00
MW-12	10/3/97	96.96	96.84	52.58	44.26	0.00
	11/8/97			NG	NG	NG
	1/21/98			52.52	44.32	0.00
	2/17/98			NG	NG	NG
	4/1/98			52.60	44.24	0.00
	5/4/98			52.95	43.89	0.00
	7/7/98			52.70	44.14	0.00
	10/1/98			52.80	44.04	0.00

TABLE 1
DENTON STATION
SUMMARY OF RELATIVE GROUNDWATER LEVEL ELEVATIONS AND PHASE-SEPARATED HYDROCARBON THICKNESSES

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase-Separated Hydrocarbon Thickness (feet)***
MW-13	10/3/97	97.52	97.17	52.18	44.99	0.00
	11/8/97			NG	NG	NG
	1/21/98			52.89	44.28	0.00
	2/17/98			NG	NG	NG
	4/1/98			52.94	44.23	0.00
	5/4/98			53.60	43.57	0.00
	7/7/98			53.06	44.11	0.00
	10/1/98			53.18	43.99	0.00
MW-14	10/1/98	NS	NS	53.56	NS	0.00
WW-1	10/3/97	99.11	100.16	NG	NG	NG
	11/8/97			NG	NG	NG
	1/21/98			NG	NG	NG
	2/17/98			62.03	43.78	6.28
	4/1/98			59.05	43.41	2.55
	5/4/98			58.10	43.19	1.25
	7/7/98			56.89	45.60	2.59
	10/1/98			58.12	43.02	1.09

* Measured from a relative datum (benckmark = 100 feet).

** Correction Equation for Phase-Separated Hydrocarbons: Corrected Groundwater Elevation = Top of Casing Elevation - [Depth to Water Below Top of Casing - (SG)(PSH Thickness)].

Specific Gravity (SG) = 0.9 for crude oil.

NG = Not Gauged

NS = Not Surveyed

TABLE 2
DENTON STATION
WATER SAMPLE ANALYTICAL RESULTS

Monitor Well	Date Sampled	BTEX				
		Benzene	Toluene	Ethyl-benzene	Xylenes	Total
MW-1	10/3/97	PSH	PSH	PSH	PSH	PSH
	1/21/98	PSH	PSH	PSH	PSH	PSH
	4/1/98	PSH	PSH	PSH	PSH	PSH
	7/7/98	PSH	PSH	PSH	PSH	PSH
	10/1/98	PSH	PSH	PSH	PSH	PSH
MW-2	10/3/97	NS	NS	NS	NS	NS
	1/21/98	0.350	ND	ND	ND	0.350
	4/1/98	0.350	ND	ND	ND	0.350
	7/7/98	0.420	ND	ND	ND	0.420
	10/1/98	0.450	ND	ND	ND	0.450
MW-3	10/3/97	PSH	PSH	PSH	PSH	PSH
	1/21/98	PSH	PSH	PSH	PSH	PSH
	4/1/98	PSH	PSH	PSH	PSH	PSH
	7/7/98	PSH	PSH	PSH	PSH	PSH
	10/1/98	PSH	PSH	PSH	PSH	PSH
MW-4	10/3/97	PSH	PSH	PSH	PSH	PSH
	1/21/98	PSH	PSH	PSH	PSH	PSH
	4/1/98	PSH	PSH	PSH	PSH	PSH
	7/7/98	PSH	PSH	PSH	PSH	PSH
	10/1/98	PSH	PSH	PSH	PSH	PSH
MW-5	10/3/97	PSH	PSH	PSH	PSH	PSH
	1/21/98	PSH	PSH	PSH	PSH	PSH
	4/1/98	PSH	PSH	PSH	PSH	PSH
	7/7/98	PSH	PSH	PSH	PSH	PSH
	10/1/98	PSH	PSH	PSH	PSH	PSH
MW-6	10/3/97	NS	NS	NS	NS	NS
	1/21/98	0.890	ND	0.018	0.039	0.947
	4/1/98	0.540	ND	0.010	0.054	0.604
	7/7/98	0.720	ND	0.014	0.028	0.762
	10/1/98	0.680	ND	0.009	0.038	0.727
MW-7	10/3/97	PSH	PSH	PSH	PSH	PSH
	1/21/98	PSH	PSH	PSH	PSH	PSH
	4/1/98	PSH	PSH	PSH	PSH	PSH
	7/7/98	PSH	PSH	PSH	PSH	PSH
	10/1/98	PSH	PSH	PSH	PSH	PSH
MW-8	10/3/97	NS	NS	NS	NS	NS
	1/21/98	NS	NS	NS	NS	NS
	4/1/98	ND	ND	ND	ND	ND
	7/7/98	NS	NS	NS	NS	NS
	10/1/98	NS	NS	NS	NS	NS
MW-9	10/3/97	ND	ND	ND	ND	ND
	1/21/98	ND	ND	ND	ND	ND
	4/1/98	ND	ND	ND	ND	ND
	7/7/98	ND	ND	ND	ND	ND
	10/1/98	ND	ND	ND	ND	ND

TABLE 2
DENTON STATION
WATER SAMPLE ANALYTICAL RESULTS

Monitor Well	Date Sampled	BTEX				
		Benzene	Toluene	Ethyl-benzene	Xylenes	Total
MW-10	10/3/97	NS	NS	NS	NS	NS
	1/21/98	NS	NS	NS	NS	NS
	4/1/98	0.500	ND	0.250	0.032	0.782
	7/7/98	NS	NS	NS	NS	NS
	10/1/98	NS	NS	NS	NS	NS
MW-11	10/3/97	NS	NS	NS	NS	NS
	1/21/98	2.000	ND	ND	ND	2.000
	4/1/98	0.720	ND	ND	ND	0.720
	7/7/98	2.000	ND	ND	ND	2.000
	10/1/98	2.200	ND	ND	ND	2.200
MW-12	10/3/97	ND	ND	ND	ND	ND
	1/21/98	ND	ND	ND	ND	ND
	4/1/98	ND	ND	ND	ND	ND
	7/7/98	ND	ND	ND	ND	ND
	10/1/98	ND	ND	ND	ND	ND
MW-13	10/3/97	0.012	ND	ND	ND	0.012
	1/21/98	0.620	ND	ND	ND	0.620
	4/1/98	0.690	ND	ND	ND	0.690
	7/7/98	0.620	ND	ND	ND	0.620
	10/1/98	0.520	ND	ND	ND	0.520
MW-14	10/1/98	0.320	ND	ND	ND	0.320
WW-1	10/3/97	NS	NS	NS	NS	NS
	1/21/98	NS	NS	NS	NS	NS
	4/1/98	PSH	PSH	PSH	PSH	PSH
	7/7/98	PSH	PSH	PSH	PSH	PSH
	10/1/98	PSH	PSH	PSH	PSH	PSH

A total dissolved solids (TDS) concentration of 515 ppm was reported for MW-2 on 9/27/93.

BTEX results listed in mg/l (parts per million; ppm) with method detection limits listed on the certificate of analysis.

Souther Petroleum Laboratories conducted analyes using EPA Method 8240.

NA - Not Analyzed.

NS - Not Sampled

TABLE 2a
DENTON STATION
WATER SAMPLE ANALYTICAL RESULTS

Monitor Well	Date Sampled	PAH			
		1-Methyl	2-Methyl	Benzo(a)	Napth
MW-2	1/22/97	ND	0.003	ND	ND
	1/21/98	0.001	ND	ND	0.000
MW-6	1/22/97	ND	ND	ND	ND
	1/21/98	0.005	0.002	ND	0.003
MW-9	1/22/97	ND	ND	ND	ND
	1/21/98	ND	ND	ND	ND
MW-11	1/22/97	NA	NA	NA	NA
	1/21/98	0.004	0.004	ND	0.001
MW-12	1/22/97	ND	ND	ND	ND
	1/21/98	ND	ND	ND	ND
MW-13	1/22/97	ND	ND	ND	ND
	1/21/98	0.003	0.003	ND	0.004
MW-14	10/1/98	NS	NS	NS	NS

PAH Results listed in mg/l (parts per million, ppm)
1/21/98 analyses were conducted using EPA Method 8310 by Southern Petroleum Laboratory.
1/22/97 analyses were conducted using EPA Method 8310 by RECRA LabNet.
ND- None Detected
NA-Not Analyzed

TABLE 3
DENTON STATION
MANUAL PHASE-SEPARATED HYDROCARBON RECOVERY

Monitor Well	Date	PSH Thickness (feet)	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Total Cumulative Recovery (gallons)	Type of Recovery
WW-1				404.50	404.50	Remediation System (Note 1)
MW-1	10/3/97	0.44	0.50	36.73	405.00	Hand Bailed
	11/8/97	0.31	0.50	37.23	405.50	Hand Bailed
	1/21/98	5.02	5.98	43.21	411.48	Hand Bailed/Boom*
	2/17/98	2.60	3.98	47.19	415.46	Hand Bailed/Boom*
	4/1/98	3.46	5.98	53.17	421.44	Hand Bailed/Boom*
	5/4/98	3.71	5.98	59.15	427.42	Hand Bailed/Boom*
	7/7/98	2.91	0.98	60.13	428.40	Absorption Boom*
	10/1/98	4.26	3.98	64.11	432.38	Absorption Boom*
MW-3				183.00	615.38	Remediation System
MW-4	10/3/97	0.22	0.50	9.68	615.88	Hand Bailed
	11/8/97	0.50	0.50	10.18	616.38	Hand Bailed
	1/21/98	2.35	2.98	13.16	619.36	Hand Bailed/Boom*
	2/17/98	0.74	1.48	14.64	620.84	Hand Bailed/Boom*
	4/1/98	0.56	3.98	18.62	624.82	Hand Bailed/Boom*
	5/4/98	0.25	1.00	19.62	625.82	Hand Bailed/Boom*
	7/7/98	0.45	0.98	20.60	625.80	Absorption Boom*
	10/1/98	0.72	1.98	22.58	627.80	Absorption Boom*
MW-5				165.75	793.55	Remediation System (Note 1)
MW-7				176.25	969.80	Remediation System

As of 8/14/96, recovery from WW-1, MW-3, MW-5 and MW-7 is from operation of the ORS remediation system (see Table 4).

Note 1: On 4/1/98 the ORS system not operating due to damaged control wires, bailed 5 gals. from WW-1 and 2 gals. from MW-5.

* Approximately 0.98 gallons recovered with an absorbent boom.

TABLE 4
DENTON STATION
CUMULATIVE PHASE-SEPARATED HYDROCARBON RECOVERY
ORS REMEDIATION SYSTEM

Date	PSH Thickness (inches)	Previous PSH Thickness	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Remarks
10/3/97	25.50	24.50	7.01	536.46	Cumulative PSH thickness from 6/18/97
11/8/97	26.50	25.50	7.01	543.47	Cumulative PSH thickness from 6/18/97
1/21/98	26.70	26.50	1.40	544.87	Drained to 21.1"
2/17/98	21.10	21.10	0.00	544.87	Drained to 10.0"
2/26/98	13.80	10.00	26.64	571.51	Drained to 1.0"
4/1/98	7.44	1.00	45.14	616.65	Cumulative PSH thickness from 2/26/98
5/4/98	34.80	7.44	191.79	808.45	Drained to 1.0"
6/5/98	17.50	1.00	115.67	924.11	Cumulative PSH thickness from 5/4/98
6/15/98	18.75	17.50	8.76	932.88	Cumulative PSH thickness from 5/4/98
7/1/98	24.25	18.75	38.56	971.43	Cumulative PSH thickness from 5/4/98
7/7/98	26.25	24.25	14.02	985.45	Cumulative PSH thickness from 5/4/98
7/12/98	26.55	26.25	2.10	987.55	Cumulative PSH thickness from 5/4/98
7/26/98	26.75	26.55	1.40	988.96	Cumulative PSH thickness from 5/4/98
8/9/98	34.25	26.75	52.58	1041.53	Tank Full, Drained to 31.25"
8/12/98	34.25	31.25	21.03	1062.56	Tank Full, Drained to 19.85"
8/23/98	34.25	19.85	100.94	1163.50	Tank Full, Drained to 2.05"
8/30/98	2.55	2.05	3.51	1167.01	Cumulative PSH thickness from 8/23/98
9/6/98	4.25	2.55	11.92	1178.93	Cumulative PSH thickness from 8/23/98
9/13/98	5.25	4.25	7.01	1185.94	Cumulative PSH thickness from 8/23/98
9/20/98	7.25	5.25	14.02	1199.96	Cumulative PSH thickness from 8/23/98
9/27/98	8.00	7.25	5.26	1205.21	Cumulative PSH thickness from 8/23/98
10/1/98	9.12	8.00	7.85	1213.07	Cumulative PSH thickness from 8/23/98

Remarks: Product recovery is calculated from product thickness in tank (dimensions - 60" x 44" x 27").
Initial volume calculated in tank was 92.75 gallons (recovery prior to 8/14/96).
PSH Recovery in gallons = ((delta PSH thickness in inches) x (60" x 27") / 231 in3 / gal)
delta PSH thickness = recorded PSH thickness - previous PSH thickness.

Shell Oil Products Company

Two Shell Plaza
P. O. Box 2099
Houston, TX 77252-2099

July 6, 1998

William Olson
State of New Mexico Oil Conservation Division
Environmental Bureau
2040 S. Pacheco St.
Santa Fe, New Mexico 87504

SUBJECT: INSTALLATION OF MONITORING WELL MW-14, DENTON STATION, LEA COUNTY

Dear Mr. Olson,

The monitoring results of MW-13 at Denton Station, for the past year, indicate that the well was not installed beyond the down gradient edge of the hydrocarbon plume. Therefore I plan to install a new well, MW-14, approximately 150' further to the southeast later this summer or fall. The enclosure is a well construction diagram and the elevations shown are examples. The well will be sampled in October when all of the station wells are sampled. MW-14 will be sampled for BTEX, major cations/anions, heavy metals, and polynuclear aromatic hydrocarbons. The final well construction diagram and geologic log will be included in the 1998 Denton Station Annual Report, with a copy provided the Hobbs OCD office. We will notify the Hobbs Oil Conservation Division at least 1 week prior to well installation. If you have any questions please call me at 713-241-2961.

Sincerely,

Neal Stidham
Staff Engineer
Shell Oil Products Company
Representing Equilon Pipe Line Company LLC

cc: Paul Newman-EOTT Energy Corp.
Jerry Sexton-OCD Hobbs

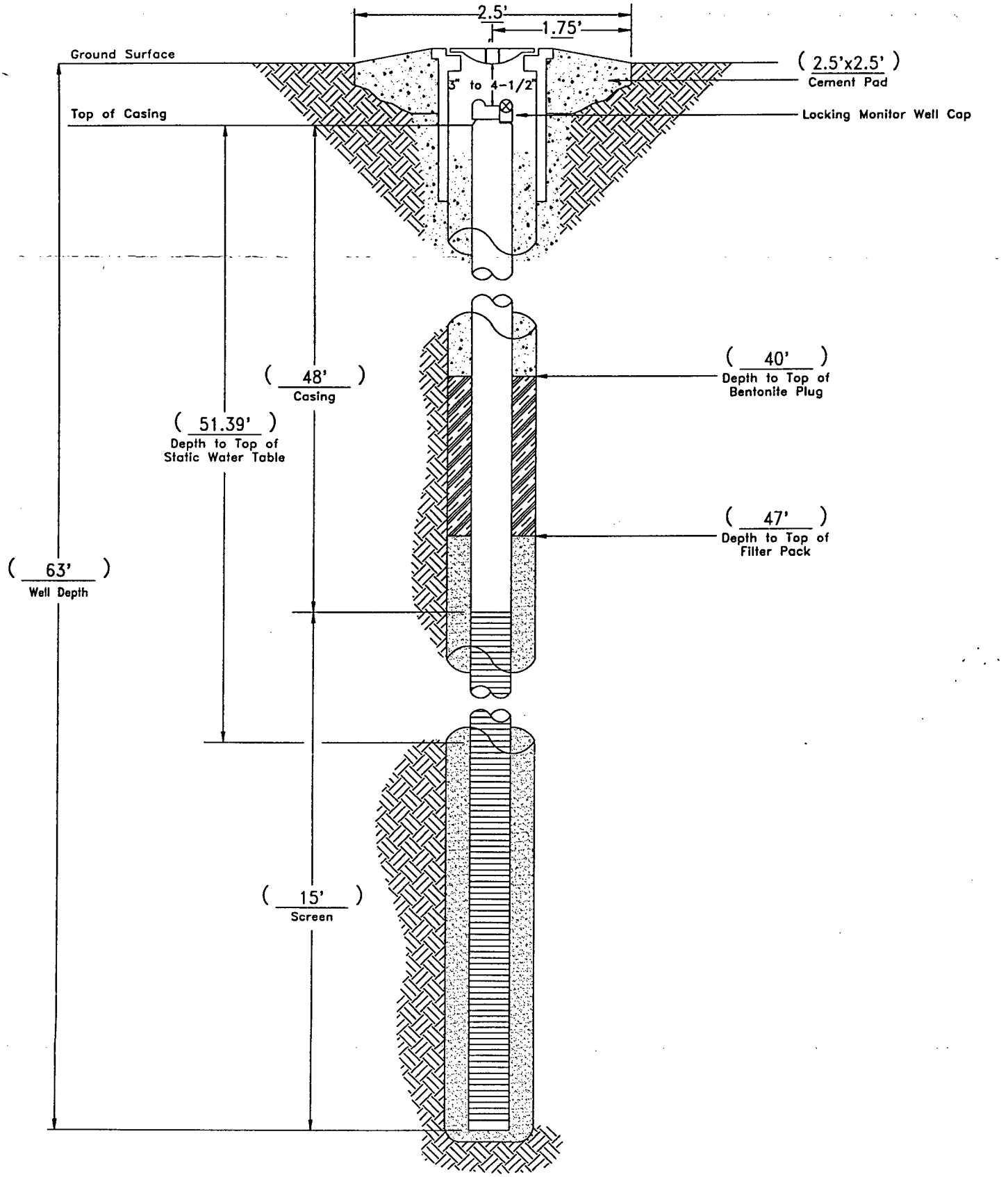
Company Drilled for:

Location: Denton Station
SW4 Sec 15, T19S, R37E
Lea Co., New Mexico

Flush Mount Monitor Well Diagram

Job Number:	Installation Date:	Monitor Well Number:
128		

Depth:	Bore Size:	Casing Size:	Casing Elevation:	Screen Size:	Top of Water Elevation:
	6 Inch	2 Inch		0.02 Inch	



Olson, William

From: Price, Wayne
Sent: Wednesday, May 20, 1998 3:56 PM
To: Roger Anderson; Bill Olson
Cc: Chris Williams
Subject: EOTT Shell-Denton Lease Line

Eott notified our office yesterday of Groundwater Contamination. They will submit notification to you in writing. MW revealed three feet of crude oil PSH on water table. Jack Griffin -NMOCD witnessed drilling.

Shell Oil Products Company

Two Shell Plaza
P. O. Box 2099
Houston, TX 77252-2099

December 4, 1997

William Olson
State of New Mexico Oil Conservation Division
Environmental Bureau
2040 S. Pacheco St.
Santa Fe, New Mexico 87504

SUBJECT: ANNUAL MONITORING REPORT, DENTON STATION, LEA COUNTY, NEW MEXICO

Dear Mr. Olson,

Enclosed is the 1997 Annual Groundwater Monitoring Report for Denton Station. Monitoring and groundwater sampling was conducted quarterly with poly-aromatic hydrocarbons (PAHs) sampling in January. Groundwater samples were taken from wells that did not contain Phase Separated Hydrocarbon (PSH). Monitoring wells MW-9 and MW-12 were sampled each quarter whereas MW-2, MW-6, and MW-11 were only sampled in January and April due to the installation of Oxygen Release Compound (ORC) "socks" in these wells in April. The effectiveness of these materials is about 5-6 months and was removed in November. These wells will be included in the January sampling. All non-PSH impacted wells were sampled in April. Monitoring well MW-13 was installed in March and was sampled for BTEX, PAH's, and metals. MW-13 was installed in an attempt to establish a well down gradient of the groundwater plume. The April and July benzene results were .16 and .23 ppm, which would indicate that the objective had not been met. However the October samples were analyzed by Method 8240 (GCMS) as opposed too earlier samples by Method 8020. The October benzene results were .01 ppm. I tentatively believe that MW-13 is on the down gradient edge of the plume and that additional analysis will demonstrate this. I have instructed my consultant to use Method 8240 for all groundwater analyses at Denton in 1998. As in the past, benzene is the only compound detected in MW-2-, MW-11 and primarily in MW-6. The only PAH detected was 3 ppb of 2-Methylnaphthalene in MW-2.

Approximately 1550 gallons of crude oil have been recovered since 1994 with 230 gallons recovered in the first ten months of 1997. Absorbent booms continue to effectively control the PSH in MW-1 and MW-4. However the quantity of PSH in MW-3, MW-5, MW-7, and WW-1 have not noticeably diminished. Electrical power problems created difficulty this year in keeping the recovery system operating. We replaced two pumps and a control panel due to, apparently electrical spikes. I plan to trouble shoot the system early next year and increase site visits to try and optimize the system operation

I plan to continue our quarterly monitoring program in 1997 with the first sampling event scheduled for January which will include the PAH analyses. If you have any additional questions concerning the information presented in this report, or otherwise, please do not hesitate to call me at 713-241-2961.

Sincerely,

Neal Stidham
Staff Engineer
Shell Oil Products Company
Representing Shell Pipe Line Corporation

cc: Paul Newman-EOTT Energy Corp.
Jerry Sexton-OCD Hobbs

ENERCON SERVICES, INC.
An Employee Owned Company

2775 Villa Creek, Suite 120
Dallas, TX 75234
(972) 484-3854
Fax: (972) 484-8835

November 28, 1997

Mr. Neal D. Stidham
Shell Oil Products Company
Two Shell Plaza, Room 1452
777 Walker Street
Houston, Texas 77002

RE: Annual Groundwater Monitoring Report
Denton Station
Lea County, New Mexico

Mr Stidham:

Enercon Services, Inc. (Enercon) has completed the 1997 Annual Groundwater Monitoring operations at the above referenced site. The monitoring program consisted of four separate quarterly events.

The 1997 Annual Monitoring Report contains results from all four of the quarterly sampling events and includes the collection of groundwater elevation measurements from thirteen monitor wells (MW-1 thru MW-13) and one on-site former water supply well (WW-1). Groundwater samples were collected from all monitor wells which did not contain Phase-separated hydrocarbons (PSH). Outlined in this report are the gauging, purging, and sampling operations conducted on January 22, April 8, July 15, and October 10, 1997.

Groundwater Gradient

All monitor wells were gauged in order to determine the depth to the groundwater table and the thickness of any phase-separated hydrocarbons (PSH). A summary of the groundwater elevations and PSH thicknesses is presented as Table 1. Figure 1 is a groundwater gradient map constructed from gauging data collected during the April 8, 1997 sampling event. The apparent groundwater flow direction is to the southeast and is concurrent with historical data.

PSH Recovery

Monthly visits are made to the site to perform routine maintenance on the automated recovery system and hand bail PSH from monitor wells MW-1 and MW-4. The automated product recovery system is pumping PSH from monitor wells MW-3, MW-5, MW-7 and WW-1. Approximately 1,549 gallons of PSH have been recovered to date (Tables 2 and 3). Approximately 536 gallons of PSH have been recovered by the automated remediation system since it's startup August 14, 1996.

Groundwater Sampling

Monitor wells MW-9 and MW-12 were sampled during each of the four (4) quarterly sampling events. Monitor wells MW-2, MW-6, and MW-11 were sampled during the January and April sampling events only, due to the installation of Oxygen Release Compound (ORC) in these monitor wells during June, 1997. Monitor wells MW-8 and MW-10 were sampled during the April sampling event only because analytical results have historically been below laboratory detection limits. Monitor well MW-13 was installed at the request of the New Mexico Oil Conservation Division (NMOCD) in March, 1997 and was sampled during the April, July, and October sampling events.

All groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX). During the first quarterly sampling event (January 22, 1997) all samples were also analyzed for poly-aromatic hydrocarbons (PAHs). In addition, during the January sampling event each sample was analyzed in the field utilizing a Hach field test kit for dissolved oxygen (DO) concentrations. The sampling was conducted in accordance with the requirements of the NMOCD. The New Mexico Water Quality Control Commission (WQCC) regulations do not contain a groundwater standard for total petroleum hydrocarbons (TPH), therefore, this analysis was not conducted on any of the groundwater samples. Monitor wells MW-1, MW-3, MW-4, MW-5, MW-7, and WW-1 were not sampled due to the presence of PSH. Monitor well MW-13 was also sampled and analyzed for groundwater quality parameters in compliance with NMOCD requirements for new monitor well installations during the April sampling event.

Results of the BTEX and DO analysis are presented in Table 4. Results of the PAH and groundwater quality parameters are presented in Tables 5 and 6, respectively. Figure 2 is a map of dissolved hydrocarbon concentrations for the quarterly sampling events conducted in 1997.

Groundwater Analytical Results

Benzene concentrations for monitoring well MW-2 have ranged from 0.31ppm to 0.33 ppm.

Concentrations of toluene, ethylbenzene, and xylenes were below detection limits. BTEX levels for monitoring well MW-6 were reported between 1.039 and 1.10 ppm. One sample was taken from monitoring well MW-8 on 4/8/97, with the total BTEX concentration being below laboratory detection levels (BDL). Total BTEX concentration for monitoring well MW-9 were below laboratory detection level for all four quarters of 1997. Monitoring well MW-10 was sampled in April 1997, with a total BTEX concentration reported of 1.1 ppm on 4/8/97. BTEX concentrations for monitoring well MW-11 ranged from 1.2 to 2.0 ppm. Total BTEX concentration levels for monitoring well MW-12 were below laboratory detection level (BDL) for all four quarters. Monitoring well MW-13 reported a total BTEX concentration ranging from 0.012 to 0.230 ppm.

PAH compounds were detected in only one of the monitoring wells sampled. Monitoring well MW-2 reported a concentration of 3 ppb (ug/L) for 2-Methylnaphthalene.

ENERCON appreciates the opportunity to provide you with our professional consulting services. If you have any questions or concerns, please do not hesitate to contact us at (972) 484-3854.

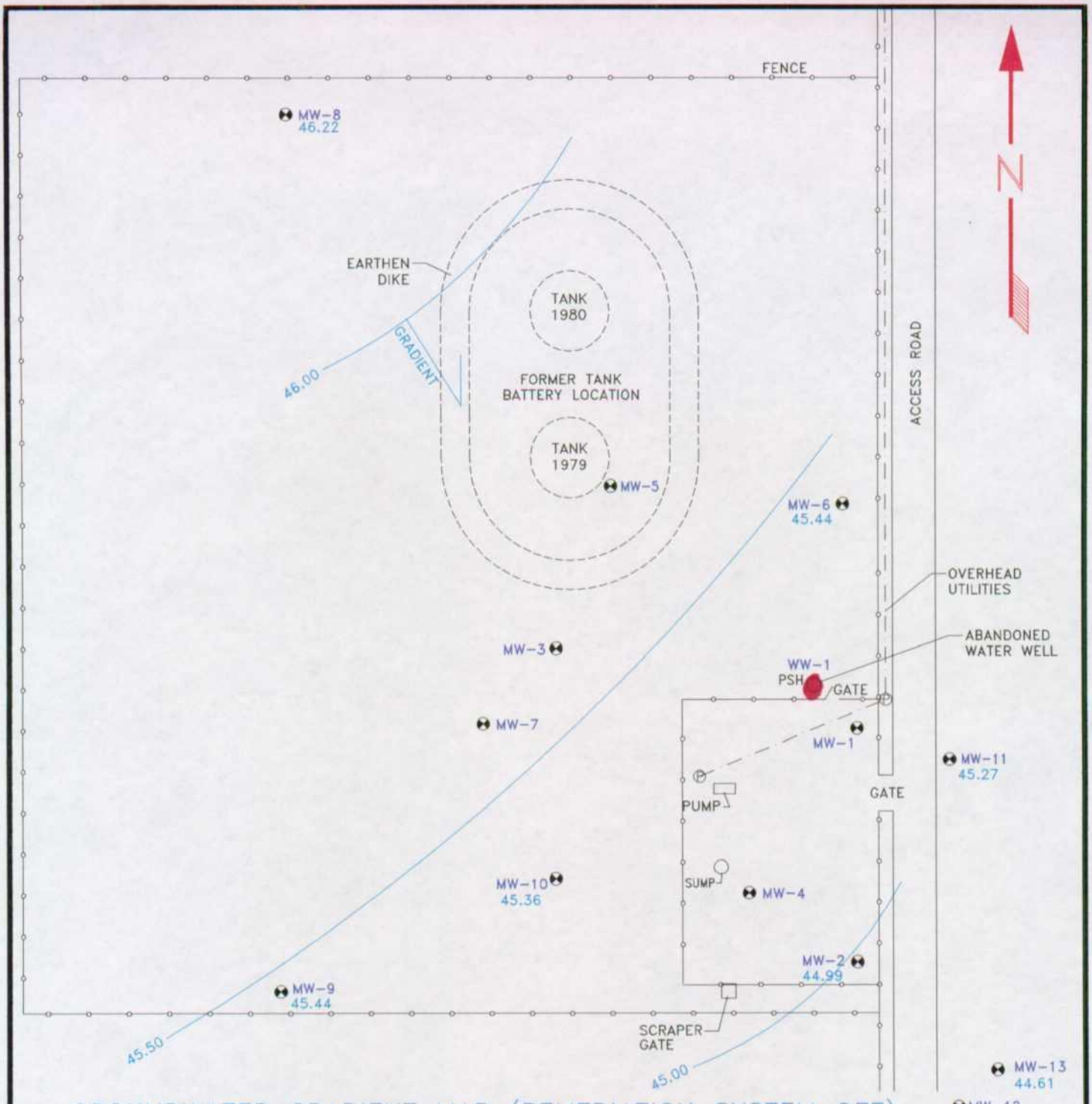
Sincerely,
Enercon Services Inc.

Steve Good
Environmental Specialist

Charles D. Harlan, C.P.G.
Project Manager

Attachments

FIGURES



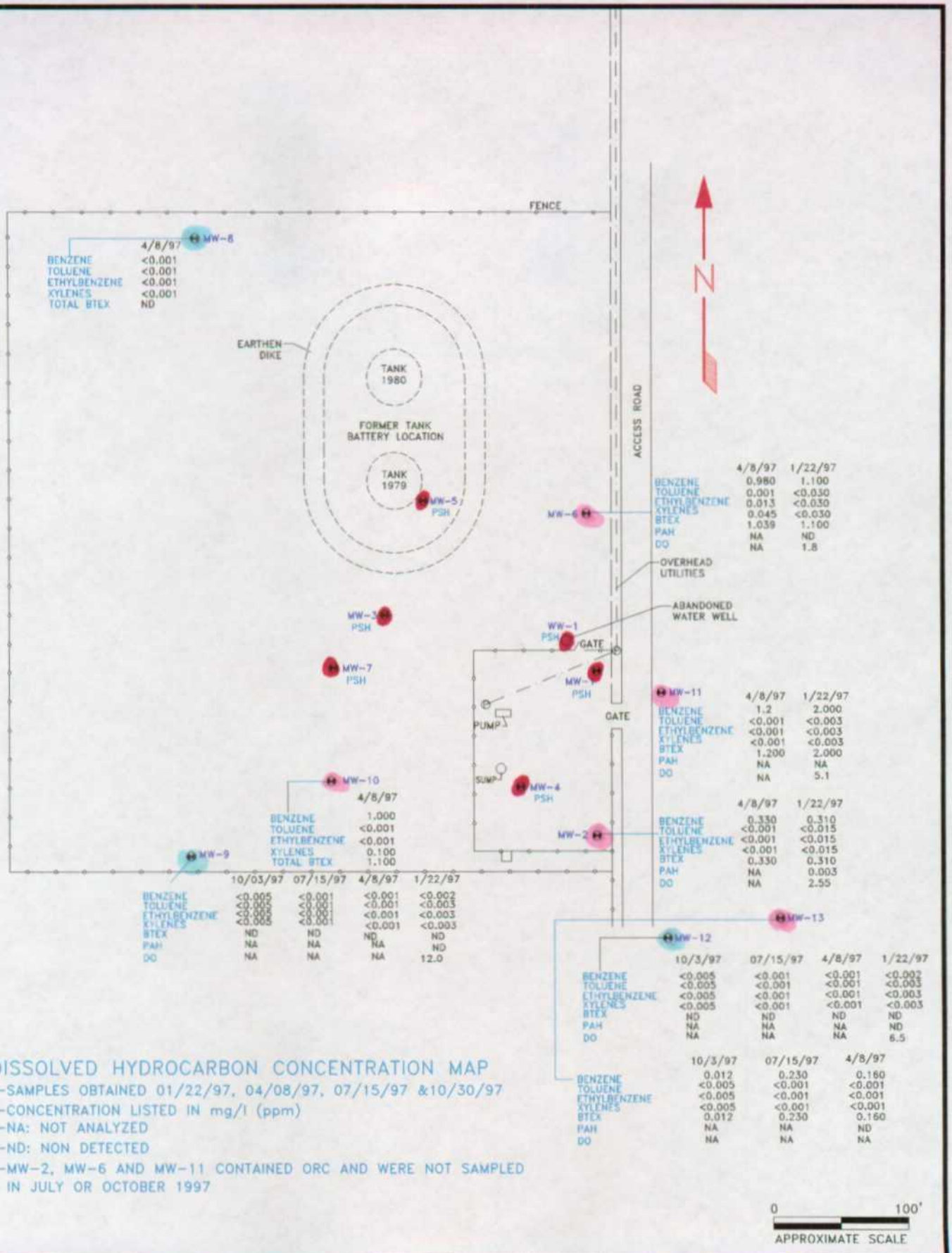
GROUNDWATER GRADIENT MAP (REMEDIATION SYSTEM OFF)

STATIC WATER LEVELS OBTAINED 4/8/97
CONTOUR INTERVAL = 0.50 FEET

Note: The wells containing PSH were not used to construct the elevation contours. In addition, the groundwater elevation in MW-12 was not used due to anomalously high water levels during recent gauging events.

0 100'
APPROXIMATE SCALE

ENERCON SERVICES, INC. 2775 VILLA CREEK ,SUITE 120 DALLAS, TEXAS 75234	DENTON STATION SHELL PIPE LINE CORPORATION LEA COUNTY, NEW MEXICO	DATE: April 1997	SCALE: SEE ABOVE
		PROJECT NO. EV-378	FIGURE NO. 1



DISSOLVED HYDROCARBON CONCENTRATION MAP

- -SAMPLES OBTAINED 01/22/97, 04/08/97, 07/15/97 &10/30/97
- -CONCENTRATION LISTED IN mg/l (ppm)
- -NA: NOT ANALYZED
- -ND: NON DETECTED
- -MW-2, MW-6 AND MW-11 CONTAINED ORC AND WERE NOT SAMPLED IN JULY OR OCTOBER 1997

ENERCON SERVICES, INC. 2775 VILLA CREEK SUITE 120 DALLAS, TEXAS 75234	DENTON STATION SHELL PIPE LINE CORPORATION LEA COUNTY, NEW MEXICO	DATE: OCT. 1997	SCALE: SEE ABOVE
		PROJECT NO. EV-378	FIGURE NO. 2

TABLES

TABLE 1
DENTON STATION
SUMMARY OF RELATIVE GROUNDWATER LEVEL ELEVATIONS AND PHASE-SEPARATED HYDROCARBON THICKNESSES

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase-Separated Hydrocarbon Thickness (feet)***
MW-1	12/23/96	99.53	101.96	57.62	45.71	1.52
	1/10/97	99.53	101.96	57.81	45.35	1.33
	2/13/97	99.53	101.96	56.21	46.88	1.25
	3/13/97	99.53	101.96	55.42	47.94	1.55
	4/8/97	99.53	101.96	55.30	47.75	1.21
	5/7/97	99.53	101.96	57.44	45.12	0.67
	6/18/97	99.53	101.96	56.18	46.29	0.57
	7/15/97	99.53	101.96	56.18	46.29	0.57
	8/4/97	99.53	101.96	55.71	46.66	0.46
	9/1/97	99.53	101.96	55.32	46.98	0.38
	10/3/97	99.53	101.96	54.60	47.76	0.44
MW-2	12/23/96	97.68	99.83	NG	NG	NG
	1/10/97	97.68	99.83	NG	NG	NG
	2/13/97	97.68	99.83	NG	NG	NG
	3/13/97	97.68	99.83	NG	NG	NG
	4/8/97	97.68	99.83	54.84	44.99	0.00
	5/7/97	97.68	99.83	NG	NG	NG
	6/18/97*	97.68	99.83	53.71	46.12	0.00
	7/15/97	97.68	99.83	NG	NG	NG
	8/4/97	97.68	99.83	NG	NG	NG
	9/1/97	97.68	99.83	NG	NG	NG
	10/3/97	97.68	99.83	NG	NG	NG
MW-3	12/23/96	99.51	99.53	54.68	45.32	0.52
	1/10/97	99.51	99.53	55.57	45.69	1.92
	2/13/97	99.51	99.53	55.18	45.64	1.43
	3/13/97	99.51	99.53	54.37	45.93	0.86
	4/8/97	99.51	99.53	54.25	45.96	0.75
	5/7/97	99.51	99.53	57.62	44.21	2.56
	6/18/97	99.51	99.53	55.02	45.27	0.84
	7/15/97	99.51	99.53	54.92	45.34	0.81
	8/4/97	99.51	99.53	54.88	45.28	0.70
	9/1/97	99.51	99.53	54.61	45.69	0.85
	10/3/97	99.51	99.53	54.32	45.80	0.65

TABLE 1
DENTON STATION
SUMMARY OF RELATIVE GROUNDWATER LEVEL ELEVATIONS AND PHASE-SEPARATED HYDROCARBON THICKNESSES

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase-Separated Hydrocarbon Thickness (feet)***
MW-4	12/23/96	98.25	99.97	54.85	45.37	0.28
	1/10/97	98.25	99.97	55.70	44.37	0.11
	2/13/97	98.25	99.97	55.35	44.76	0.15
	3/13/97	98.25	99.97	54.64	45.54	0.23
	4/8/97	98.25	99.97	54.41	45.98	0.47
	5/7/97	98.25	99.97	56.02	44.30	0.39
	6/18/97	98.25	99.97	55.28	45.09	0.44
	7/15/97	98.25	99.97	55.07	45.36	0.51
	8/4/97	98.25	99.97	55.26	44.90	0.21
	9/1/97	98.25	99.97	54.85	45.31	0.21
	10/3/97	98.25	99.97	54.58	45.59	0.22
MW-5	12/23/96	100.21	100.36	55.41	45.63	0.75
	1/10/97	100.21	100.36	55.26	45.67	0.63
	2/13/97	100.21	100.36	54.80	45.93	0.41
	3/13/97	100.21	100.36	56.03	45.65	1.47
	4/8/97	100.21	100.36	55.46	46.25	1.50
	5/7/97	100.21	100.36	56.08	45.22	1.04
	6/18/97	100.21	100.36	56.30	45.64	1.76
	7/15/97	100.21	100.36	55.60	46.22	1.62
	8/4/97	100.21	100.36	56.03	45.99	1.84
	9/1/97	100.21	100.36	55.72	46.10	1.62
	10/3/97	100.21	100.36	54.83	46.95	1.58
MW-6	12/23/96	99.81	101.86	NG	NG	NG
	1/10/97	99.81	101.86	NG	NG	NG
	2/13/97	99.81	101.86	NG	NG	NG
	3/13/97	99.81	101.86	NG	NG	NG
	4/8/97	99.81	101.86	56.42	45.44	0.00
	5/7/97	99.81	101.86	NG	NG	NG
	6/18/97*	99.81	101.86	54.14	47.72	0.00
	7/15/97	99.81	101.86	NG	NG	NG
	8/4/97	99.81	101.86	NG	NG	NG
	9/1/97	99.81	101.86	NG	NG	NG
	10/3/97	99.81	101.86	NG	NG	NG

TABLE 1
DENTON STATION
SUMMARY OF RELATIVE GROUNDWATER LEVEL ELEVATIONS AND PHASE-SEPARATED HYDROCARBON THICKNESSES

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase-Separated Hydrocarbon Thickness (feet)***
MW-7	12/23/96	99.24	99.16	58.03	45.29	4.62
	1/10/97	99.24	99.16	56.33	45.67	3.16
	2/13/97	99.24	99.16	55.67	44.80	1.45
	3/13/97	99.24	99.16	54.84	45.45	1.25
	4/8/97	99.24	99.16	54.58	45.42	0.93
	5/7/97	99.24	99.16	57.33	43.78	2.17
	6/18/97	99.24	99.16	55.27	46.46	2.86
	7/15/97	99.24	99.16	55.47	46.17	2.76
	8/4/97	99.24	99.16	55.33	46.22	2.66
	9/1/97	99.24	99.16	55.21	46.11	2.40
	10/3/97	99.24	99.16	54.80	46.40	2.27
MW-8	12/23/96	99.24	101.92	NG	NG	NG
	1/10/97	99.24	101.92	NG	NG	NG
	2/13/97	99.24	101.92	NG	NG	NG
	3/13/97	99.24	101.92	NG	NG	NG
	4/8/97	99.24	101.92	55.70	46.22	0.00
	5/7/97	99.24	101.92	NG	NG	NG
	6/18/97	99.24	101.92	NG	NG	NG
	7/15/97	99.24	101.92	55.82	46.10	0.00
	8/4/97	99.24	101.92	NG	NG	NG
	9/1/97	99.24	101.92	NG	NG	NG
	10/3/97	99.24	101.92	55.21	46.71	0.00
MW-9	12/23/96	98.16	100.22	NG	NG	NG
	1/10/97	98.16	100.22	NG	NG	NG
	2/13/97	98.16	100.22	NG	NG	NG
	3/13/97	98.16	100.22	NG	NG	NG
	4/8/97	98.16	100.22	54.78	45.44	0.00
	5/7/97	98.16	100.22	NG	NG	NG
	6/18/97	98.16	100.22	NG	NG	NG
	7/15/97	98.16	100.22	55.07	45.15	0.00
	8/4/97	98.16	100.22	NG	NG	NG
	9/1/97	98.16	100.22	NG	NG	NG
	10/3/97	98.16	100.22	54.66	45.56	0.00

TABLE 1
DENTON STATION
SUMMARY OF RELATIVE GROUNDWATER LEVEL ELEVATIONS AND PHASE-SEPARATED HYDROCARBON THICKNESSES

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase-Separated Hydrocarbon Thickness (feet)***
MW-10	12/23/96	98.20	98.28	NG	NG	NG
	1/10/97	98.20	98.28	NG	NG	NG
	2/13/97	98.20	98.28	NG	NG	NG
	3/13/97	98.20	98.28	NG	NG	NG
	4/8/97	98.20	98.28	52.92	45.36	0.00
	5/7/97	98.20	98.28	NG	NG	NG
	6/18/97	98.20	98.28	NG	NG	NG
	7/15/97	98.20	98.28	54.16	44.12	0.00
	8/4/97	98.20	98.28	NG	NG	NG
	9/1/97	98.20	98.28	NG	NG	NG
	10/3/97	98.20	98.28	54.03	44.25	0.00
MW-11	12/23/96	99.38	99.45	NG	NG	NG
	1/10/97	99.38	99.45	NG	NG	NG
	2/13/97	99.38	99.45	NG	NG	NG
	3/13/97	99.38	99.45	NG	NG	NG
	4/8/97	99.38	99.45	54.18	45.27	0.00
	5/7/97	99.38	99.45	NG	NG	NG
	6/18/97*	99.38	99.45	53.55	45.90	0.00
	7/15/97	99.38	99.45	NG	NG	NG
	8/4/97	99.38	99.45	NG	NG	NG
	9/1/97	99.38	99.45	NG	NG	NG
	10/3/97	99.38	99.45	NG	NG	NG
MW-12	12/23/96	96.69	98.84	NG	NG	NG
	1/10/97	96.69	98.84	NG	NG	NG
	2/13/97	96.69	98.84	NG	NG	NG
	3/13/97	96.69	98.84	NG	NG	NG
	4/8/97	96.69	98.84	52.22	46.62	0.00
	5/7/97	96.69	98.84	NG	NG	NG
	6/18/97	96.69	98.84	NG	NG	NG
	7/15/97	96.69	98.84	52.77	46.07	0.00
	8/4/97	96.69	98.84	NG	NG	NG
	9/1/97	96.69	98.84	NG	NG	NG
	10/3/97	96.69	98.84	52.58	46.26	0.00

TABLE 1
DENTON STATION
SUMMARY OF RELATIVE GROUNDWATER LEVEL ELEVATIONS AND PHASE-SEPARATED HYDROCARBON THICKNESSES

Monitor Well	Date Gauged	Relative Ground Surface Elevation (feet)	Relative Top of Casing Elevation (feet)*	Depth to Water Below Top of Casing (feet)	Corrected Relative Groundwater Elevation (feet)**	Phase-Separated Hydrocarbon Thickness (feet)***
MW-13	4/8/97	97.52	97.17	52.56	44.61	0.00
	5/7/97	97.52	97.17	NG	NG	NG
	6/18/97	97.52	97.17	NG	NG	NG
	7/15/97	97.52	97.17	53.20	43.97	0.00
	8/4/97	97.52	97.17	NG	NG	NG
	9/1/97	97.52	97.17	53.28	43.89	0.00
	10/3/97	97.52	97.17	52.18	44.99	0.00
WW-1	12/23/96	99.11	100.16	57.34	43.80	1.09
	1/10/97	99.11	100.16	56.77	43.71	0.36
	2/13/97	99.11	100.16	55.77	44.57	0.20
	3/13/97	99.11	100.16	54.97	45.74	0.61
	4/8/97	99.11	100.16	54.88	46.36	1.20
	5/7/97	99.11	100.16	61.04	40.95	2.03
	6/18/97	99.11	100.16	56.40	46.10	2.60
	7/15/97	99.11	100.16	56.21	46.27	2.58
	8/4/97	99.11	100.16	56.24	46.08	2.40
	9/1/97	99.11	100.16	55.80	46.40	2.27
	10/3/97	99.11	100.16	NG	NG	NG

* Measured from the concrete pad located at the southwest corner of the remediation building.

** Correction Equation for Phase-Separated Hydrocarbons: Corrected Groundwater Elevation = Top of Casing Elevation - (Depth to Water Below Top of Casing - [SG][PSH Thickness]).

Specific Gravity (SG) = 0.9 for crude oil.

NG = Not Gauged

MW-13 Installed 3/5/97.

TABLE 3
DENTON STATION
CUMULATIVE PHASE-SEPARATED HYDROCARBON RECOVERY
ORS REMEDIATION SYSTEM

Date	Meter Reading (gallons)	PSH Thickness (inches)	Previous PSH Thickness	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Remarks
12/23/96	N/A	28	25	21.03	315.59	Cumulative PSH thickness from 9/5/96
1/10/97	N/A	28.5	28	3.51	319.10	Cumulative PSH thickness from 9/5/96 - Drained to 20"
1/22/97	N/A	25.5	20	38.57	357.67	Cumulative PSH thickness from 1/10/97
2/13/97	N/A	29	25.5	24.55	382.22	Cumulative PSH thickness from 1/10/97
3/13/97	N/A	34.5	29	38.57	420.79	Cumulative PSH thickness from 1/10/97
4/8/97	N/A	36	34.5	10.52	431.31	Cumulative PSH thickness from 1/10/97 - Drained to 30"
5/7/97	N/A	32.5	30	17.53	448.84	Cumulative PSH thickness from 4/8/97 - Drained to 26"
6/18/97	N/A	31	26	35.05	483.89	Cumulative PSH thickness from 5/7/97 - Drained to 18"
7/15/97	N/A	19	18	7.01	490.90	Cumulative PSH thickness from 6/18/97
8/4/97	N/A	22.5	19	24.54	515.43	Cumulative PSH thickness from 6/18/97
9/1/97	N/A	24.5	22.5	14.02	529.45	Cumulative PSH thickness from 6/18/97
10/3/97	N/A	25.5	24.5	7.01	536.46	Cumulative PSH thickness from 6/18/97

Note: Total estimated recovery as of 10/3/97 = 1,549.06 gallons. As of 8/14/96, recovery from WW-1, MW-3, MW-5, and MW-7 is from oeration of the ORS Product Recovery System.

Remarks: Product recovery is calculated from product thickness in tank (dimensions - 60" x 44" x 27").

Initial volume calculated in tank was 92.75 gallons (recovery prior to 8/14/96).

PSH Recovery in gallons = ((delta PSH thickness in inches) x (60" x 27") / 231 in3 / gal)

delta PSH thickness = recorded PSH thickness - previous PSH thickness.

TABLE 2
DENTON STATION
MANUAL PHASE-SEPARATED HYDROCARBON RECOVERY

Monitor Well	Date	PSH Thickness (feet)	PSH Recovery (gallons)	PSH Cumulative Recovery (gallons)	Type of Recovery
WW-1	12/23/96	1.09	18	399.5	*(See Note)
MW-1	12/23/96	1.52	1.5	27.25	Hand Bailed
	1/10/97	1.33	1.5	28.75	Hand Bailed
	1/22/97	0.4	1.98	30.73	Hand Bailed/Boom
	2/13/97	1.25	1	31.73	Hand Bailed
	3/13/97	1.55	1	32.73	Absorbent Boom/Hand Bailed
	4/8/97	1.21	1	33.73	Hand Bailed
	6/18/97	0.57	1	34.73	Hand Bailed
	7/15/97	0.43	0	34.73	Not Bailed
	8/4/97	0.46	1	35.73	Hand Bailed
	9/1/97	0.38	0.5	36.23	Hand Bailed
	10/3/97	0.44	0.5	36.73	Hand Bailed
MW-3	7/17/96	6.67	12.5	183	Hand Bailed
	8/14/97	N/A	N/A	183	Remediation System
MW-4	12/23/97	0.28	0.5	2.7	Hand Bailed
	1/10/97	0.11	0.5	3.2	Hand Bailed
	1/22/97	2.48	2.98	6.18	Hand Bailed/Boom
	2/13/97	0.15	0.5	6.68	Hand Bailed
	3/13/97	0.23	0.5	7.18	Absorbent Boom/Hand Bailed
	4/8/97	0.47	0.5	7.68	Hand Bailed
	6/18/97	0.44	0.5	8.18	Hand Bailed
	7/15/97	0.51	0	8.18	Not Bailed
	8/4/97	0.21	0.5	8.68	Hand Bailed
	9/1/97	0.21	0.5	9.18	Hand Bailed
	10/3/97	0.22	0.5	9.68	Hand Bailed
MW-5	7/17/96	3.43	3	163.75	Hand Bailed
	8/14/97	N/A	N/A	163.75	Remediation System
MW-7	7/17/96	8.28	12	176.25	Remediation System
	8/14/97	N/A	N/A	176.25	Remediation System

As of 8/14/96, recovery from WW-1, MW-3, MW-5 and MW-7 is from operation of the ORS remediation system (See Table 3).

* Because of a clogged discharge line for WW-1, discovered during the 12/23/96 event, PSH was pumped into a bucket and discharged into the on-site sump.

TABLE 4
DENTON STATION
WATER SAMPLE ANALYTICAL RESULTS

Monitor Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	Total BTEX	Dissolved Oxygen
MW-1	10/1/96	PSH	PSH	PSH	PSH	PSH	NA
	1/22/97	PSH	PSH	PSH	PSH	PSH	NA
	4/8/97	PSH	PSH	PSH	PSH	PSH	NA
	7/15/97	PSH	PSH	PSH	PSH	PSH	NA
	10/3/97	PSH	PSH	PSH	PSH	PSH	NA
MW-2	10/1/96	0.560	<0.003	<0.003	<0.003	0.560	4.0
	1/22/97	0.310	<0.015	<0.015	<0.015	0.310	2.55
	4/8/97	0.330	<0.001	<0.001	<0.001	0.330	NA
	7/15/97*	NS	NS	NS	NS	NS	NS
	10/3/97*	NS	NS	NS	NS	NS	NS
MW-3	10/1/96	PSH	PSH	PSH	PSH	PSH	NA
	1/22/97	PSH	PSH	PSH	PSH	PSH	NA
	4/8/97	PSH	PSH	PSH	PSH	PSH	NA
	7/15/97	PSH	PSH	PSH	PSH	PSH	NA
	10/3/97	PSH	PSH	PSH	PSH	PSH	NA
MW-4	10/1/96	PSH	PSH	PSH	PSH	PSH	NA
	1/22/97	PSH	PSH	PSH	PSH	PSH	NA
	4/8/97	PSH	PSH	PSH	PSH	PSH	NA
	7/15/97	PSH	PSH	PSH	PSH	PSH	NA
	10/3/97	PSH	PSH	PSH	PSH	PSH	NA
MW-5	10/1/96	PSH	PSH	PSH	PSH	PSH	NA
	1/22/97	PSH	PSH	PSH	PSH	PSH	NA
	4/8/97	PSH	PSH	PSH	PSH	PSH	NA
	7/15/97	PSH	PSH	PSH	PSH	PSH	NA
	10/3/97	PSH	PSH	PSH	PSH	PSH	NA
MW-6	10/1/96	0.990	<0.003	<0.002	0.120	1.110	1.65
	1/22/97	1.100	<0.030	<0.030	<0.030	1.100	1.8
	4/8/97	0.980	0.001	0.013	0.045	1.039	NA
	7/15/97*	NS	NS	NS	NS	NS	NS
	10/3/97*	NS	NS	NS	NS	NS	NS
MW-7	10/1/96	PSH	PSH	PSH	PSH	PSH	NA
	1/22/97	PSH	PSH	PSH	PSH	PSH	NA
	4/8/97	PSH	PSH	PSH	PSH	PSH	NA
	7/15/97	PSH	PSH	PSH	PSH	PSH	NA
	10/3/97	PSH	PSH	PSH	PSH	PSH	NA
MW-8	10/1/96	NS	NS	NS	NS	NS	NS
	1/22/97	NS	NS	NS	NS	NS	NS
	4/8/97	<0.001	<0.001	<0.001	<0.001	BDL	NA
	7/15/97	NS	NS	NS	NS	NS	NS
	10/3/97	NS	NS	NS	NS	NS	NS

TABLE 4
DENTON STATION
WATER SAMPLE ANALYTICAL RESULTS

Monitor Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	Total BTEX	Dissolved Oxygen
MW-9	10/1/96	<0.002	<0.003	<0.003	<0.003	BDL	9.4
	1/22/97	<0.002	<0.003	<0.003	<0.003	BDL	12
	4/8/97	<0.001	<0.001	<0.001	<0.001	BDL	NA
	7/15/97	<0.001	<0.001	<0.001	<0.001	BDL	NA
	10/3/97	<0.005	<0.005	<0.005	<0.005	BDL	NA
MW-10	10/1/96	NS	NS	NS	NS	NS	NS
	1/22/97	NS	NS	NS	NS	NS	NS
	4/8/97	1.000	<0.001	<0.001	0.100	1.100	NA
	7/15/97	NS	NS	NS	NS	NS	NS
	10/3/97	NS	NS	NS	NS	NS	NS
MW-11	10/1/96	1.400	<0.003	<0.003	<0.003	1.400	2.3
	1/22/97	2.000	<0.003	<0.003	<0.003	2.000	5.1
	4/8/97	1.200	<0.001	<0.001	<0.001	1.200	NA
	7/15/97*	NS	NS	NS	NS	NS	NS
	10/3/97*	NS	NS	NS	NS	NS	NS
MW-12	10/1/96	0.023	<0.003	<0.003	<0.003	0.023	5.8
	1/22/97	<0.002	<0.003	<0.003	<0.003	BDL	6.5
	4/8/97	<0.001	<0.001	<0.001	<0.001	BDL	NA
	7/15/97	<0.001	<0.001	<0.001	<0.001	BDL	NA
	10/3/97	<0.005	<0.005	<0.005	<0.005	BDL	NA
MW-13	4/8/97	0.160	<0.001	<0.001	<0.001	0.160	NA
	7/15/97	0.230	<0.001	<0.001	<0.001	0.230	NA
	10/3/97	0.012	<0.005	<0.005	<0.005	0.012	NA

A total dissolved solids (TDS) concentration of 515 ppm was reported for MW-2 on 9/27/93.

BTEX results listed in mg/l (parts per million; ppm) with method detection limits listed on the certificate of analysis.

Analyses were conducted using EPA Method 8020 (BTEX).

NA - Not Analyzed.

NS - Not Sampled

D.O. readings obtained with a Hach field test kit.

TABLE 5
DENTON STATION
PAH ANALYTICAL RESULTS

Monitor Well	Date Sampled	1-Methylnaphthalene	2-Methylnaphthalene	Benzo(a)pyrene	Napthalene
MW-2	2/8/96 1/22/97	0.002 ND	0.002 0.003	ND ND	ND ND
MW-6	2/8/96 1/22/97	ND ND	ND ND	ND ND	0.005 ND
MW-9	2/8/96 1/22/97	ND ND	ND ND	ND ND	ND ND
MW-11	2/8/96 1/22/97	ND NA	ND NA	ND NA	0.014 NA
MW-12	2/8/96 1/22/97	ND ND	ND ND	ND ND	ND ND
MW-13	4/8/97	ND	ND	ND	ND

PAH results listed in mg/l (parts per million; ppm).
2/8/96 and 4/8/97 analyses were conducted using EPA Method 8310 by Southern Petroleum Laboratory.
1/22/97 analyses were conducted using EPA Method 8310 by RECRA LabNet.
ND - None Detect.
NA - Not Analyzed.

TABLE 6
DENTON STATION
WATER QUALITY PARAMETERS
FOR MW-13

DATE SAMPLED	PARAMETERS	RESULTS	DETECTION LIMIT	UNITS	METHOD
4/08/97	CHLORIDE	45	1.0	mg/L	325.3
4/08/97	CARBONATE	ND	1.0	mg/L	SM 4500-CO2D
4/08/97	SPECIFIC CONDUCTANCE	625	10.0	umhos/cm	120.1
4/08/97	BICARBONATE	430	1.0	mg/L	SM 4500-CO2D
4/08/97	NITRATE NITROGEN	.09	0.05	mg/L	353.3
4/08/97	pH	7.3		pH units	150.1
4/08/97	SULFATE	65	5.0	mg/L	375.4
4/08/97	TOTAL DISSOLVED SOLIDS	408	1.0	mg/L	160.1
4/08/97	TOTAL MERCURY	ND	0.0002	mg/L	7470 A
4/08/97	TOTAL ARSENIC	<.200	0.200	mg/L	EPA 6010
4/08/97	TOTAL BARIUM	1.92	0.040	mg/L	EPA 6010
4/08/97	TOTAL CADIUM	<0.020	0.040	mg/L	EPA 6010
4/08/97	TOTAL CHROMIUM	0.074	0.050	mg/L	EPA 6010
4/08/97	TOTAL LEAD	<0.100	0.10	mg/L	EPA 6010
4/08/97	TOTAL SILVER	<0.080	0.080	mg/L	EPA 6010
4/08/97	TOTAL SELENIUM	<0.200	0.200	mg/L	EPA 6010
4/08/97	CALCIUM	62.9	0.10	mg/L	EPA 6010
4/08/97	MAGNESIUM	16.0	0.10	mg/L	EPA 6010
4/08/97	POTASSIUM	2.83	0.10	mg/L	EPA 6010
4/08/97	SODIUM	41.5	0.10	mg/L	EPA 6010

LABORATORY REPORTS

Report
Prepared
for

ENERCON SERVICES, INC.
1221 River Bend, Suite 259
Dallas, Texas 75247

Attention: Charles Harlan

by

RECRA LabNet - Houston
8300 Westpark Drive
Houston, Texas 77063
(713) 266-6800

Certified by: Gerardo Uría

J. Gerardo Uría
Project Manager

Project ID : Shell Pipeline Corp Denton Station (EV-378) **Work Order : H97-0279**
P.O. Number :NA **Date Received : 24-Jan-1997**

REVISED
03/10/97 GU

Date: 02/11/97
Time: 11:32

Shell Pipeline Corporation
SHELL PIPELINE CORPORATION
SAMPLE DESCRIPTION INFORMATION

Lab Sample ID	Client Sample ID	Laboratory Job Number	Sample Type	Matrix	Sample Date	Receive Date
H7027906	BLANK SPIKE	H97-0279	MSB	Aqueous	22-Jan-97	24-Jan-97
H7027907	BLANK SPIKE DUP	H97-0279	MSBD	Aqueous	22-Jan-97	24-Jan-97
H7027908	METHOD BLANK	H97-0279	MBLK	Aqueous	22-Jan-97	24-Jan-97
H7027904	MW-11	H97-0279	FS	Aqueous	22-Jan-97	24-Jan-97
H7027905	MW-12	H97-0279	FS	Aqueous	22-Jan-97	24-Jan-97
H7027903	MW-2	H97-0279	FS	Aqueous	22-Jan-97	24-Jan-97
H7027902	MW-6	H97-0279	FS	Aqueous	22-Jan-97	24-Jan-97
H7027901	MW-9	H97-0279	FS	Aqueous	22-Jan-97	24-Jan-97

Shell Pipeline Corporation
Shell Pipeline / Enercon Services (Water S[redacted]es)
[redacted]ple Summary Excluding Internal Standards/Surrogates
Recra LabNet

Sample ID: MW-9
Lab ID: H7027901
Date Collected: 01/22/97
Time Collected: 13:00

Date Received: 01/24/97
Project No: TX6A6130
Client No: L80036
P.O. No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
AQUEOUS-SW8463 8020 - BTEX							
Benzene	<2.0	U	2.0	UG/L	8020	01/29/9718:28	MS
Toluene	<3.0	U	3.0	UG/L	8020	01/29/9718:28	MS
Ethylbenzene	<3.0	U	3.0	UG/L	8020	01/29/9718:28	MS
Total Xylenes	<3.0	U	3.0	UG/L	8020	01/29/9718:28	MS
AQUEOUS-SW8463 8310 - PAHS BY METHOD 8310							
Benzo(a)pyrene	<0.0200	U	0.0200	UG/L	8310	01/29/9719:50	AY
Naphthalene	<2.00	U	2.00	UG/L	8310	01/29/9719:50	AY
1-Methylnapthalene	<2.00	U	2.00	UG/L	8310	01/29/9719:50	AY
2-Methylnaphthalene	<2.00	U	2.00	UG/L	8310	01/29/9719:50	AY

Sample ID: MW-6
Lab ID: H7027902
Date Collected: 01/22/97
Time Collected: 13:15

Date Received: 01/24/97
Project No: TX6A6130
Client No: L80036
P.O. No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
AQUEOUS-SW8463 8020 - BTEX							
Benzene	1100		20	UG/L	8020	01/24/9702:53	MS
Toluene	<30	U	30	UG/L	8020	01/24/9702:53	MS
Ethylbenzene	<30	U	30	UG/L	8020	01/24/9702:53	MS
Total Xylenes	<30	U	30	UG/L	8020	01/24/9702:53	MS
AQUEOUS-SW8463 8310 - PAHS BY METHOD 8310							
Benzo(a)pyrene	<0.0200	U	0.0200	UG/L	8310	01/29/9720:29	AY
Naphthalene	<2.00	U	2.00	UG/L	8310	01/29/9720:29	AY
1-Methylnapthalene	<2.00	U	2.00	UG/L	8310	01/29/9720:29	AY
2-Methylnaphthalene	<2.00	U	2.00	UG/L	8310	01/29/9720:29	AY

Sample ID: MW-2
Lab ID: H7027903
Date Collected: 01/22/97
Time Collected: 13:30

Date Received: 01/24/97
Project No: TX6A6130
Client No: L80036
P.O. No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
AQUEOUS-SW8463 8020 - BTEX							
Benzene	310		10	UG/L	8020	01/25/9704:15	MS
Toluene	<15	U	15	UG/L	8020	01/25/9704:15	MS
Ethylbenzene	<15	U	15	UG/L	8020	01/25/9704:15	MS
Total Xylenes	<15	U	15	UG/L	8020	01/25/9704:15	MS
AQUEOUS-SW8463 8310 - PAHS BY METHOD 8310							
Benzo(a)pyrene	<0.0200	U	0.0200	UG/L	8310	01/29/9721:09	AY
Naphthalene	<2.00	U	2.00	UG/L	8310	01/29/9721:09	AY
1-Methylnapthalene	<2.00	U	2.00	UG/L	8310	01/29/9721:09	AY
2-Methylnaphthalene	3.20		2.00	UG/L	8310	01/29/9721:09	AY

Sample ID: MW-11
Lab ID: H7027904
Date Collected: 01/22/97
Time Collected: 14:00

Date Received: 01/24/97
Project No: TX6A6130
Client No: L80036
P.O. No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
AQUEOUS-SW8463 8020 - BTEX							
Benzene	2000		20	UG/L	8020	01/24/9703:34	MS
Toluene	<30	U	30	UG/L	8020	01/24/9703:34	MS
Ethylbenzene	<30	U	30	UG/L	8020	01/24/9703:34	MS
Total Xylenes	<30	U	30	UG/L	8020	01/24/9703:34	MS

Sample ID: MW-12
Lab ID: H7027905
Date Collected: 01/22/97
Time Collected: 14:15

Date Received: 01/24/97
Project No: TX6A6130
Client No: L80036
P.O. No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
AQUEOUS-SW8463 8020 - BTEX							
Benzene	<2.0	U	2.0	UG/L	8020	01/29/9719:04	MS
Toluene	<3.0	U	3.0	UG/L	8020	01/29/9719:04	MS
Ethylbenzene	<3.0	U	3.0	UG/L	8020	01/29/9719:04	MS
Total Xylenes	<3.0	U	3.0	UG/L	8020	01/29/9719:04	MS
AQUEOUS-SW8463 8310 - PAHS BY METHOD 8310							
Benzo(a)pyrene	<0.0200	U	0.0200	UG/L	8310	01/29/9721:49	AY
Naphthalene	<2.00	U	2.00	UG/L	8310	01/29/9721:49	AY
1-Methylnapthalene	<2.00	U	2.00	UG/L	8310	01/29/9721:49	AY
2-Methylnaphthalene	<2.00	U	2.00	UG/L	8310	01/29/9721:49	AY

Sample ID: METHOD BLANK
Lab ID: H7027908
Date Collected: 01/22/97
Time Collected: 14:15

Date Received: 01/24/97
Project No: TX6A6130
Client No: L80036
P.O. No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
AQUEOUS-SW8463 8020 - BTEX							
Benzene	<2.0	U	2.0	UG/L	8020	01/24/9710:58	MS
Toluene	<3.0	U	3.0	UG/L	8020	01/24/9710:58	MS
Ethylbenzene	<3.0	U	3.0	UG/L	8020	01/24/9710:58	MS
Total Xylenes	<3.0	U	3.0	UG/L	8020	01/24/9710:58	MS
AQUEOUS-SW8463 8310 - PAHS BY METHOD 8310							
Benzo(a)pyrene	<0.0200	U	0.0200	UG/L	8310	01/29/9719:10	AY
Naphthalene	<2.00	U	2.00	UG/L	8310	01/29/9719:10	AY
1-Methylnapthalene	<2.00	U	2.00	UG/L	8310	01/29/9719:10	AY
2-Methylnaphthalene	<2.00	U	2.00	UG/L	8310	01/29/9719:10	AY

Sample ID: BLANK SPIKE
Lab ID: H7027906
Date Collected: 01/22/97
Time Collected: 14:15

Date Received: 01/24/97
Project No: TX6A6130
Client No: L80036
P.O. No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
AQUEOUS-SW8463 8020 - BTEX							
Benzene	40		2.0	UG/L	8020	01/24/9706:17	MS
Toluene	43		3.0	UG/L	8020	01/24/9706:17	MS
Ethylbenzene	43		3.0	UG/L	8020	01/24/9706:17	MS
Total Xylenes	120		3.0	UG/L	8020	01/24/9706:17	MS
AQUEOUS-SW8463 8310 - PAHS BY METHOD 8310							
Acenaphthene	15.0		2.00	UG/L	8310	01/29/9722:29	AY
Acenaphthylene	14.0		2.00	UG/L	8310	01/29/9722:29	AY
Anthracene	17.0		0.100	UG/L	8310	01/29/9722:29	AY
Benzo(a)anthracene	15.0		0.0200	UG/L	8310	01/29/9722:29	AY
Benzo(a)pyrene	15.0		0.0200	UG/L	8310	01/29/9722:29	AY
Benzo(b)fluoranthene	14.0		0.0200	UG/L	8310	01/29/9722:29	AY
Benzo(ghi)perylene	14.0		0.0500	UG/L	8310	01/29/9722:29	AY
Chrysene	15.0		0.150	UG/L	8310	01/29/9722:29	AY
Benzo(k)fluoranthene	14.0		0.0200	UG/L	8310	01/29/9722:29	AY
Dibenzo(a,h)anthracene	11.0		0.0300	UG/L	8310	01/29/9722:29	AY
Fluoranthene	16.0		0.200	UG/L	8310	01/29/9722:29	AY
Fluorene	15.0		0.200	UG/L	8310	01/29/9722:29	AY
Indeno(1,2,3-cd)pyrene	12.0		0.0500	UG/L	8310	01/29/9722:29	AY
Naphthalene	18.0		2.00	UG/L	8310	01/29/9722:29	AY
Phenanthrene	17.0		0.500	UG/L	8310	01/29/9722:29	AY
Pyrene	16.0		0.200	UG/L	8310	01/29/9722:29	AY

Sample ID: BLANK SPIKE DUP
Lab ID: H7027907
Date Collected: 01/22/97
Time Collected: 14:15

Date Received: 01/24/97
Project No: TX6A6130
Client No: L80036
P.O. No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
AQUEOUS-SW8463 8020 - BTEX							
Benzene	41		2.0	UG/L	8020	01/30/9704:34	MS
Toluene	38		3.0	UG/L	8020	01/30/9704:34	MS
Ethylbenzene	42		3.0	UG/L	8020	01/30/9704:34	MS
Total Xylenes	130		3.0	UG/L	8020	01/30/9704:34	MS
AQUEOUS-SW8463 8310 - PAHS BY METHOD 8310							
Acenaphthene	17.0		2.00	UG/L	8310	01/29/9723:09	AY
Acenaphthylene	16.0		2.00	UG/L	8310	01/29/9723:09	AY
Anthracene	19.0		0.100	UG/L	8310	01/29/9723:09	AY
Benzo(a)anthracene	18.0		0.0200	UG/L	8310	01/29/9723:09	AY
Benzo(a)pyrene	18.0		0.0200	UG/L	8310	01/29/9723:09	AY
Benzo(b)fluoranthene	17.0		0.0200	UG/L	8310	01/29/9723:09	AY
Benzo(ghi)perylene	18.0		0.0500	UG/L	8310	01/29/9723:09	AY
Chrysene	18.0		0.150	UG/L	8310	01/29/9723:09	AY
Benzo(k)fluoranthene	18.0		0.0200	UG/L	8310	01/29/9723:09	AY
Dibenzo(a,h)anthracene	15.0		0.0300	UG/L	8310	01/29/9723:09	AY
Fluoranthene	19.0		0.200	UG/L	8310	01/29/9723:09	AY
Fluorene	17.0		0.200	UG/L	8310	01/29/9723:09	AY
Indeno(1,2,3-cd)pyrene	18.0		0.0500	UG/L	8310	01/29/9723:09	AY
Naphthalene	19.0		2.00	UG/L	8310	01/29/9723:09	AY
Phenanthrene	20.0		0.500	UG/L	8310	01/29/9723:09	AY
Pyrene	19.0		0.200	UG/L	8310	01/29/9723:09	AY

RECRA LabNet-Houston

LABORATORY QA/QC DATA

A RECRA Environmental Company

SHELL PIPELINE CORPORATION
SHELL PIPELINE CORPORATION
METHOD 8020 - BTEX
WATER SURROGATE RECOVERY

Laboratory: Recra LabNet - RECTX
Lab Job No: H97-0279
SDG No: EV-38

Client Sample ID	Lab Sample ID	S1 TFT #
BLANK SPIKE	H7027906	76
BLANK SPIKE DUP	H7027907	76
METHOD BLANK	H7027908	120
MW-11	H7027904	82
MW-12	H7027905	110
MW-2	H7027903	97
MW-6	H7027902	86
MW-9	H7027901	120

QC Limits

S1 TFT = a,a,a-Trifluorotoluene (66 - 131)

\# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

SHELL PIPELINE CORPORATION
SHELL PIPELINE CORPORATION
AQUEOUS- 8310 - PAHS
WATER SURROGATE RECOVERY

Laboratory: Recra LabNet - RECTX
Lab Job No: H97-0279
SDG No: EV-38

Client Sample ID	Lab Sample ID	S1 DFBP #
BLANK SPIKE	H7027906	73
BLANK SPIKE DUP	H7027907	66
METHOD BLANK	H7027908	54
MW-12	H7027905	47
MW-2	H7027903	54
MW-6	H7027902	56
MW-9	H7027901	75

QC Limits

S1 DFBP = Decafluorobiphenyl (35 - 115)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

Date : 02/11/97 11:27
Job No: H97-0279

SHELL PIPELINE CORPORATION
SHELL PIPELINE CORPORATION
SAMPLE DATE 01/22/97

Rept: AN0364

SDG: EV-38
Client Sample ID: METHOD BLANK | BLANK SPIKE | BLANK SPIKE DUP
Lab Sample ID: H7027908 | H7027906 | H7027907

Analyte	Units of Measure	Concentration		Spike Amount		% Recovery			% RPD	QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SBD	SB	SBD	Avg		RPD	REC.
AQUEOUS- 8310 - PAHS											
Naphthalene	UG/L	18.0	19.0	20.0	20.0	90	95	93	5	35.0	32-120
Acenaphthylene	UG/L	14.0	16.0	20.0	20.0	70	80	75	13	35.0	32-120
Acenaphthene	UG/L	15.0	17.0	20.0	20.0	75	85	80	12	35.0	32-120
Fluorene	UG/L	15.0	17.0	20.0	20.0	75	85	80	12	35.0	32-120
Phenanthrene	UG/L	17.0	20.0	20.0	20.0	85	100	93	16	35.0	32-120
Anthracene	UG/L	17.0	19.0	20.0	20.0	85	95	90	11	35.0	32-120
Fluoranthene	UG/L	16.0	19.0	20.0	20.0	80	95	88	17	35.0	32-120
Pyrene	UG/L	16.0	19.0	20.0	20.0	80	95	88	17	35.0	32-120
Benzo(a)anthracene	UG/L	15.0	18.0	20.0	20.0	75	90	83	18	35.0	32-120
Chrysene	UG/L	15.0	18.0	20.0	20.0	75	90	83	18	35.0	32-120
Benzo(b)fluoranthene	UG/L	14.0	17.0	20.0	20.0	70	85	78	19	35.0	32-120
Benzo(k)fluoranthene	UG/L	14.0	18.0	20.0	20.0	70	90	80	25	35.0	32-120
Benzo(a)pyrene	UG/L	15.0	18.0	20.0	20.0	75	90	83	18	35.0	32-120
Dibenzo(a,h)anthracene	UG/L	11.0	15.0	20.0	20.0	55	75	65	31	35.0	32-120
Benzo(ghi)perylene	UG/L	14.0	18.0	20.0	20.0	70	90	80	25	35.0	32-120
Indeno(1,2,3-cd)pyrene	UG/L	12.0	18.0	20.0	20.0	60	90	75	40 *	35.0	32-120
METHOD 8020 - BTEX											
Benzene	UG/L	40	41	40	40	100	102	101	2	20.0	73-123
Ethylbenzene	UG/L	43	42	40	40	108	105	107	3	19.0	72-124
Toluene	UG/L	43	38	40	40	108	95	102	13	21.0	69-127
Total Xylenes	UG/L	120	130	120	120	100	108	104	8	26.0	70-130

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Recra LabNet

RECRA LabNet

☐ Amherst
☒ Houston
☐ Monroeville

CHAIN-OF-CUSTODY RECORD

Project Manager: Charles D. Harlan
Project Name: Denton Station
Purchase Order No.: EV-378
Sampler(s): Steph S. [illegible]

Company: Enercon Services, Inc.
Address: 1221 River Bend Dr., Ste. 259
Dallas, TX 75247
Phone #: (214) 631-7693 Fax: (214) 631-7699
Mail Report To: Charles D. Harlan

Requested Turn Around Time: Normal

COMMENTS:

Preservative codes: 1. HNO3 2. H2SO4 3. H3PO4 4. HCl 5. NaOH 6. Na2SO3 7. None 8. Other(s)

SAMPLE IDENTITY	Date Sample	Time Sampled	Matrix: Soil	Matrix: Water	Matrix: Air	Matrix: Other	Preservative	Volatile Organics	Semi-Volatile Organics	Pesticides	PCB's	Herbicides	Btex 8020	Metals	TPH	Other Analyses: PAH-8310	Other Analyses	Other Analyses	Other Analyses	No. of Containers	REMARKS
MW-9	1/22/97	1:00		X			4/7						X			X				3	
MW-6	1/22/97	1:15		X			4/7						X			X				3	
MW-2	1/22/97	1:30		X			4/7						X			X				3	
MW-11	1/22/97	2:00		X			7						X							2	
MW-12	1/22/97	2:15		X			4/7						X			X				3	

Stamp: Chester LabNet-Houston
Lab ID: H97-0279
Iced: Yes
pH: -
Temperature: 4°C
Date: 1/24/97

Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Date	Time
Steph S. [illegible]	1/23/97	11:30	D. [illegible]	01/24/[illegible]	10:30

Delivery Method:
Airbill #

☐ In Person
☐ Common Carrier ______ specify
☐ Lab Courier
☒ Other

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

May 1, 1997

Mr. Neal Stidham
Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252

The following report contains analytical results for samples received at Southern Petroleum Laboratories (SPL) on April 12, 1997. The samples were assigned to Work Order No.9704621 and analyzed for the parameters specified on the chain of custody.

Due to our ICP Spectroscopy instrument being down for two weeks we had to subcontract the Dissolved Calcium, Potassium, Magnesium, Sodium, and Total Silver, Arsenic, Barium, Cadmium, Chromium, Lead, and Selenium (6010) analysis to Xenco Laboratories for completion.

The Relative Percent Difference (%RPD) recovery was out of QC limits for Indeno (1,2,3-CD) Pyrene in the Polynuclear Aromatic Hydrocarbon (8310) analysis, due to matrix interference. However the Matrix Spike and Matrix Spike Duplicate were within QC limits.

Your sample MW-2 (SPL ID# 9704621-01) was randomly selected for the use in SPL's quality in the Volatile Aromatic Hydrocarbon (8020) analysis. The Relative Percent Difference (%RPD) recovery was out of QC limits for M & P Xylene in the Volatile Aromatic Hydrocarbon (8020) analysis, due to matrix interference. The laboratory control sample and standard recoveries are in, verifying that the calibration is still valid.

Due to a computer problem 1 & 2-Methylnaphthalene will not print the Method Blank results in our QC report. I have confirmed that the result are Non Detected for both compounds.

If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Work Order Number during any inquiries.

Again, SPL is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Southern Petroleum Laboratories

Bernadette A. Fini
Project Manager

HOUSTON LABORATORY
6880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

SOUTHERN PETROLEUM LABORATORIES, INC.

Certificate of Analysis Number: 97-04-621

Approved for Release by:

Bernadette A. Fini, Project Manager

Date: 5-1-97

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

Certificate of Analysis No. H9-9704621-01

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-2

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 14:00:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	330	1.0 P	µg/L
TOLUENE	ND	1.0 P	µg/L
ETHYLBENZENE	ND	1.0 P	µg/L
TOTAL XYLENE	ND	1.0 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	330		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	100

Method 8020A ***
Analyzed by: RL
Date: 04/14/97

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Bernadette A. Fini
SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9704621-02

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-6

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 13:45:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	980	10 P	µg/L
TOLUENE	1.1	1.0 P	µg/L
ETHYLBENZENE	13	1.0 P	µg/L
TOTAL XYLENE	45	1.0 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	1039.1		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	100

Method 8020A ***
Analyzed by: RL
Date: 04/14/97

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Bernadette G. Fini
SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9704621-03

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.#
MESA-CAO-B-131201-PX-4204-NS
DATE: 11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-8

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 13:15:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	**RESULTS**	**DETECTION LIMIT**	**UNITS**
BENZENE	ND	1.0 P	µg/L
TOLUENE	ND	1.0 P	µg/L
ETHYLBENZENE	ND	1.0 P	µg/L
TOTAL XYLENE	ND	1.0 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L

Surrogate	**% Recovery**
1,4-Difluorobenzene	100
4-Bromofluorobenzene	103

Method 8020A ***
Analyzed by: RL
Date: 04/14/97

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9704621-04

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-9

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 13:30:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	1.0 P	µg/L
TOLUENE	ND	1.0 P	µg/L
ETHYLBENZENE	ND	1.0 P	µg/L
TOTAL XYLENE	ND	1.0 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	97

Method 8020A ***
Analyzed by: RL
Date: 04/14/97

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9704621-05

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-10

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 14:30:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	1000	10 P	µg/L
TOLUENE	ND	1.0 P	µg/L
ETHYLBENZENE	ND	1.0 P	µg/L
TOTAL XYLENE	100	1.0 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	1100		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	100

Method 8020A ***
Analyzed by: RL
Date: 04/14/97

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Bernadette G. Fini
SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9704621-06

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-11

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 15:00:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	1200	10 P	µg/L
TOLUENE	ND	1.0 P	µg/L
ETHYLBENZENE	ND	1.0 P	µg/L
TOTAL XYLENE	ND	1.0 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	1200		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	100

Method 8020A ***
Analyzed by: RL
Date: 04/14/97

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Bernadette G. Fuentes
SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9704621-07

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-12

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 14:40:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	1.0 P	µg/L
TOLUENE	ND	1.0 P	µg/L
ETHYLBENZENE	ND	1.0 P	µg/L
TOTAL XYLENE	ND	1.0 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	103

Method 8020A ***
Analyzed by: RL
Date: 04/14/97

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9704621-08

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-13

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 15:15:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	160	1.0 P	µg/L
TOLUENE	ND	1.0 P	µg/L
ETHYLBENZENE	ND	1.0 P	µg/L
TOTAL XYLENE	ND	1.0 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	160		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	93		
Method 8020A ***			
Analyzed by: RL			
Date: 04/14/97			
Chloride	45	1	mg/L
Method 325.3 *			
Analyzed by: PT			
Date: 04/12/97			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Benedette A. Jim
SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9704621-08

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.#
MESA-CAO-B-131201-PX-4204-NS
DATE: 11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-13

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 15:15:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Outside Lab Compound List Method: See Enclosure Analyzed by: XEN Date:	ENCLOSURE		
Carbonate, as CaCO3 Method SM 4500-CO2D ** Analyzed by: JS Date: 04/14/97	ND	1	mg/L
Specific Conductance @ 25°C Method 120.1 * Analyzed by: LAR Date: 04/14/97	625	10	umhos/cm
Bicarbonate, as CaCO3 Method SM 4500-CO2D ** Analyzed by: JS Date: 04/14/97	430	1	mg/L

ENCLOSURE - Defined in COMMENTS below ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

[signature]
SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9704621-08

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-13

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 15:15:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Nitrate nitrogen(as N) Method 353.3 * Analyzed by: EM Date: 04/14/97	0.09	0.05	mg/L
pH Method 150.1 * Analyzed by: LAR Date: 04/14/97	7.30		pH units
Sulfate Method 375.4 * Analyzed by: EM Date: 04/15/97	65	5	mg/L
Total Dissolved Solids Method 160.1 * Analyzed by: PT Date: 04/12/97	408	1	mg/L

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9704621-08

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-13

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 15:15:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Outside Lab Compound List Method: See Enclosure Analyzed by: XEN Date:	ENCLOSURE		
Mercury, Total Method 7470 A*** Analyzed by: PB Date: 04/17/97	ND	0.0002	mg/L
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: MM Date: 04/14/97	04/14/97		

ENCLOSURE - Defined in COMMENTS below ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Bernadette G. Fini
SPL, Inc., - Project Manager

Certificate of Analysis No. H9-9704621-08

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
11/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services Inc.
SAMPLE ID: MW-13

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 04/08/97 15:15:00
DATE RECEIVED: 04/12/97

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	ND	2.5	ug/L
Benzo (a) pyrene	ND	2.5	ug/L
1-Methylnaphthalene	ND	5.0	ug/L
2-Methylnaphthalene	ND	5.0	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1-Fluoronaphthalene	0.20 ug/L	80	50	150
Phenanthrene d-10	0.20 ug/L	90	50	150

ANALYZED BY: KA DATE/TIME: 04/17/97 03:02:04
EXTRACTED BY: DL DATE/TIME: 04/14/97 13:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL, Inc., - Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

July 28, 1997

Mr. Neal Stidham
SHELL PIPE LINE CORPORATION
P.O. Box 2648
Houston, TX 77252

The following report contains analytical results for samples received at Southern Petroleum Laboratories (SPL) on July 18, 1997. The samples were assigned to Certificate of Analysis No(s).9707873 and analyzed for the parameters specified on the chain of custody.

There were no analytical problems encountered with this group of samples and all quality control data was within acceptance limits.

If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis Number(s) during any inquiries.

Again, SPL is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Southern Petroleum Laboratories

Bernadette A. Fini
Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

SOUTHERN PETROLEUM LABORATORIES, INC.

Certificate of Analysis Number: 97-07-873

Approved for Release by:

Bernadette A. Fini, Project Manager

Date: 7/28/97

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

****SUMMARY REPORT*****

07/28/97

Company: Shell Pipe Line Corporation
Site: New Mexico
Project No: EV-378
Project: Denton Station

ANALYTICAL DATA
NOTE: ND - Not Detected

SPL ID MATRIX	CLIENT ID DATE SAMPLED	BENZENE PQL	TOLUENE PQL	ETHYLBENZ. PQL	XYLENE PQL	TPH-IR	TPH-GC	LEAD	MTBE
9707873-01 WATER	MW-9 07/15/97 14:30:00	ND 1.0µg/L	ND 1.0µg/L	ND 1.0µg/L	ND 1.0µg/L				
9707873-02 WATER	MW-12 07/15/97 14:00:00	ND 1.0µg/L	ND 1.0µg/L	ND 1.0µg/L	ND 1.0µg/L				
9707873-03 WATER	MW-13 07/15/97 13:00:00	230 1.0µg/L	ND 1.0µg/L	ND 1.0µg/L	ND 1.0µg/L				

BTEX - Method 8020A ***

SPL, Inc., - Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

Certificate of Analysis No. H9-9707873-01

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 07/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon
SAMPLE ID: MW-9

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 07/15/97 14:30:00
DATE RECEIVED: 07/18/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	1.0 P	µg/L
TOLUENE	ND	1.0 P	µg/L
ETHYLBENZENE	ND	1.0 P	µg/L
TOTAL XYLENE	ND	1.0 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	57		

Method 8020A ***
Analyzed by: RL
Date: 07/24/97

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

Certificate of Analysis No. H9-9707873-02

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 07/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon
SAMPLE ID: MW-12

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 07/15/97 14:00:00
DATE RECEIVED: 07/18/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	1.0 P	µg/L
TOLUENE	ND	1.0 P	µg/L
ETHYLBENZENE	ND	1.0 P	µg/L
TOTAL XYLENE	ND	1.0 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	57		

Method 8020A ***
Analyzed by: RL
Date: 07/24/97

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

Certificate of Analysis No. H9-9707873-03

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
DATE: 07/28/97

PROJECT: Denton Station
SITE: New Mexico
SAMPLED BY: Enercon
SAMPLE ID: MW-13

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 07/15/97 13:00:00
DATE RECEIVED: 07/18/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	230	1.0 P	µg/L
TOLUENE	ND	1.0 P	µg/L
ETHYLBENZENE	ND	1.0 P	µg/L
TOTAL XYLENE	ND	1.0 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	230		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	123
4-Bromofluorobenzene	63

Method 8020A ***
Analyzed by: RL
Date: 07/24/97

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

QUALITY CONTROL

DOCUMENTATION

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_P970724073400

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	46	92.0	63 - 120
Benzene	ND	50	40	80.0	62 - 121
Toluene	ND	50	45	90.0	66 - 136
EthylBenzene	ND	50	42	84.0	70 - 136
O Xylene	ND	50	45	90.0	74 - 134
M & P Xylene	ND	100	93	93.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20	25	125	27	135	7.69	20	39 - 150
BENZENE	ND	20	18	90.0	20	100	10.5	25	39 - 150
TOLUENE	ND	20	18	90.0	20	100	10.5	26	56 - 134
ETHYLBENZENE	ND	20	16	80.0	18	90.0	11.8	38	61 - 128
O XYLENE	ND	20	18	90.0	19	95.0	5.41	29	40 - 130
M & P XYLENE	ND	40	36	90.0	40	100	10.5	20	43 - 152

Analyst: RL
Sequence Date: 07/24/97
SPL ID of sample spiked: 9707803-02A
Sample File ID: P_G7457.TXO
Method Blank File ID:
Blank Spike File ID: P_G7454.TXO
Matrix Spike File ID: P_G7455.TXO
Matrix Spike Duplicate File ID: P_G7456.TXO

* = Values Outside QC Range. « = Data outside Method Specification limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (3rd Q '95)
(***) = Source: SPL-Houston Historical Data (2nd Q '95)

SAMPLES IN BATCH(SPL ID):

9707873-03A 9707747-06A 9707747-05A 9707839-07A
9707847-03A 9707839-05A 9707839-04A 9707839-03A
9707839-2A 9707803-05A 9707794-04A 9707803-02A
9707803-03A 9707803-04A 9707873-01A 9707873-02A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No: 9707873

13086

page 1 of 1

Client Name: ENERCON SERVICES, INC.

Address/Phone: 2775 Villa Creek, Ste. 120, Dallas TX

Client Contact: Charles Harlan (972) 484-3854

Project Name: Shell Pipe Line - Denton Station

Project Number: EV-378

Project Location: NEW MEXICO

Invoice To:

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil SL=sludge O=other:)	bottle (P=plastic A=amber glass G=glass V=vial)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz)	pres. (1=HCl 2=HNO3 3=H2SO4 O=other:)	Number of Containers	Requested Analysis: BTEX (8020)
MW-9	7-15-97	1430		✓	W	V	40	1	3	✓
MW-12	7-15-97	1400		✓	W	V	40	1	3	✓
MW-13	7-15-97	~~1300~~ 1300		✓	W	V	40	1	3	✓

Client/Consultant Remarks:

FAX result to (972) 484-8835

Laboratory remarks:

FED EX: 4995 7770 54

Intact? ☑ Y ☐ N

Temp: 3c

Requested TAT

24hr ☐ 72hr ☐

48hr ☐ Standard ☐

Other ☐ _____

Special Reporting Requirements: Fax Results ☑ Raw Data ☐ Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐

Special Detection Limits (specify):

PM review (initial):

	date	time	
1. Relinquished by Sampler: Bill D. Sanders	7-17-97	1045	2. Received by: 7/18/97 1000
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	date	time	6. Received by Laboratory:

☐ 8880 Interchange Drive, Houston, TX 77054 (713) 660-0901

☐ 459 Hughes Drive, Traverse City, MI 49684 (616) 947-5777

☐ 500 Ambassador Caffery Parkway, Scott, LA 70583 (318) 237-4775

☐ 1511 E. Orangethorpe Avenue, Fullerton, CA 92631 (714) 447-6868

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 7/18/97	Time: 1500

SPL Sample ID:
9707873

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		3 C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	499577054	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name: Amber Stell	Date: 7/18/97

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

October 29, 1997

Mr. Neal Stidman
Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252

The following report contains analytical results for samples received at Southern Petroleum Laboratories (SPL) on October 15, 1997. The samples were assigned to Certificate of Analysis No.(s) 9710738 and analyzed for all parameters as listed on the chain of custody.

There were no analytical problems encountered with this group of samples and all quality control data was within acceptance limits.

If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis No. during any inquiries.

Again, SPL is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Southern Petroleum Laboratories

Bernedette A Fini
Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

SOUTHERN PETROLEUM LABORATORIES, INC.

Certificate of Analysis Number: 97-10-738

Approved for Release by:

Bernadette A. Fini, Project Manager

Date: 10-29-97

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9710738-01

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
10/29/97

PROJECT: Shell Pipeline-Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services
SAMPLE ID: MW-9

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 10/10/97 12:10:00
DATE RECEIVED: 10/15/97

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Toluene	ND	5	ug/L
Xylenes (total)	ND	5	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	100	76	114
Toluene-d8	50 ug/L	104	88	110
4-Bromofluorobenzene	50 ug/L	108	86	115

ANALYZED BY: JC
DATE/TIME: 10/17/97 04:40:00
METHOD: 8240, Volatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL, Inc., - Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9710738-02

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
10/29/97

PROJECT: Shell Pipeline-Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services
SAMPLE ID: MW-12

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 10/10/97 13:00:00
DATE RECEIVED: 10/15/97

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Toluene	ND	5	ug/L
Xylenes (total)	ND	5	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	96	76	114
Toluene-d8	50 ug/L	104	88	110
4-Bromofluorobenzene	50 ug/L	108	86	115

ANALYZED BY: JC
DATE/TIME: 10/17/97 05:05:00
METHOD: 8240, Volatile Organics - Water
NOTES: * - Practical Quantitation Limit
ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL, Inc., - Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9710738-03

Shell Pipe Line Corporation
P.O. Box 2648
Houston, TX 77252
ATTN: Neal Stidham

P.O.# MESA-CAO-B-131201-PX-4204-NS
10/29/97

PROJECT: Shell Pipeline-Denton Station
SITE: New Mexico
SAMPLED BY: Enercon Services
SAMPLE ID: MW-13

PROJECT NO: EV-378
MATRIX: WATER
DATE SAMPLED: 10/10/97 12:30:00
DATE RECEIVED: 10/15/97

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	12	5	ug/L
Ethylbenzene	ND	5	ug/L
Toluene	ND	5	ug/L
Xylenes (total)	ND	5	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	96	76	114
Toluene-d8	50 ug/L	104	88	110
4-Bromofluorobenzene	50 ug/L	106	86	115

ANALYZED BY: JC
DATE/TIME: 10/17/97 05:30:00
METHOD: 8240, Volatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Benedetta G. Fini
SPL, Inc., - Project Manager

QUALITY CONTROL

DOCUMENTATION

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL Contract:

Lab Code: Case No.: 9710738 SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: MW-13

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	55	110	61-145
Trichloroethene	50	0	60	120	71-120
Benzene	50	12	73	122	76-127
Toluene	50	0	60	120	76-125
Chlorobenzene	50	0	58	116	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	56	112	2	14	61-145
Trichloroethene	50	57	114	5	14	71-120
Benzene	50	74	124	2	11	76-127
Toluene	50	59	118	2	13	76-125
Chlorobenzene	50	58	116	0	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

SPL Labs

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: LCS
Level: LOW
Data Type: MS DATA
SpikeList File: 8260_water.spk
Method File: /chem/n.i/n971016.b/n8260wq.m
Misc Info: N289W1//N289CW2

Client SDG: n971016
Fraction: VOA
Operator: JC
SampleType: METHSPIKE
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 1,1-Dichloroethene	50	55	110.27	61-145
29 Trichloroethene	50	56	112.62	71-120
25 Benzene	50	59	117.31	76-127
37 Toluene	50	56	111.90	76-125
45 Chlorobenzene	50	57	114.32	75-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 21 1,2-Dichloroethane	50	50	101.10	76-114
$ 36 Toluene-d8	50	51	102.95	88-110
$ 56 Bromofluorobenzene	50	54	107.94	86-115

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

SPL Blank QC Report

Matrix: Aqueous
Sample ID: VLBLK
Batch: N971016122720

Reported on: 10/20/97 14:03
Analyzed on: 10/16/97 21:54
Analyst: JC

METHOD 8260/8240 N289B01

Compound	Result	Detection Limit	Units
Benzene	ND	5	ug/L
Toluene	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	102	76-114	% Recovery
Toluene-d8	106	88-110	% Recovery
Bromofluorobenzene	108	86-115	% Recovery

Samples in Batch 9710738-01 9710738-02 9710738-03

Notes

ND - Not detected.

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

R

9710738

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING

CHAIN OF CUSTODY RECORD NO. H 22433

Date: 10-13-97
Page 1 of 1

SITE ADDRESS: Shell Pipe Line
Denton Station
~~WIC~~ VIC # EV-378

CONSULTANT NAME & ADDRESS: ENERCON SERVICES, INC.
2775 Villa Creek, Ste. 120, Dallas TX 75234

CONSULTANT CONTACT: Charles Harlan

PHONE: (972)484-3854 FAX: (972)484-8835

SAMPLED BY: Bill D. Smith

CHECK ONE BOX ONLY CT/DT

- QUARTERLY MONITORING ☐ 5461
- SITE INVESTIGATION ☐ 5441
- SOIL FOR DISPOSAL ☐ 5442
- WATER FOR DISPOSAL ☐ 5443
- AIR SAMPLER - SYS O+M ☐ 5452
- WATER SAMPLE - SYS O+M ☐ 5453
- OTHER _____ ☐

SAMPLE I.D.	DATE	TIME	COMP.	GRAB	MATRIX: H2O	SOIL	AIR	SLUDGE	OTHER	METHOD PRESERVED: HCl	HNO3	H2SO4	NONE	OTHER (LCE)	NO. OF CONTAINERS	CONTAINER SIZE	ANALYSIS REQUEST (CHECK APPROPRIATE BOX): BTEX 602 ☐ 8020 ☐ WITH MTBE ☐	BTEX/GAS HYDROCARBONS PID/FID ☐ WITH MTBE	VOL 624/PPL ☐ 8240/TAL ☐ NBS (+15) ☐	PNA/PAH 8310 ☐ 8100 ☐ 610 ☐	SEMI - VOL 625/PPL ☐ 8270/TAL ☐ NBS (+25) ☐	TPH/IR 418.1 ☐ SM503 ☐ ☐ ☐	TPH/GC 8015 Mod. GAS ☐ 8015 Mod DIESEL ☐	TCLP METALS ☐ VOL ☐ SEMI-VOL ☐ PEST ☐ HERB ☐	EP TOX METALS ☐ PESTICIDES ☐ HERBICIDES ☐	REACTIVITY ☐ CORROSIVITY ☐ IGNITABLITY ☐	OTHER: LCMS BTEX only (8240)	REMARKS
MW-9	10-10-97	1210		✓	✓					✓				✓	3	40 ml											✓	
MW-12	10-10-97	1300		✓	✓					✓				✓	3	40 ml											✓	
MW-13	10-10-97	1230		✓	✓					✓				✓	3	40 ml											✓	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
Bill D. Smith	10-13-97	0800	[signature]	10/15/97	1000
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

BILL NO.: 40C PST

LABORATORY: _____

SHELL CONTACT: Neil Stidham PHONE: _____ FAX: _____

TURN AROUND TIME (CHECK ONE)

7 DAYS ☐ (NORMAL) 14 DAYS ☐

48 HOURS ☐ OTHER ☐ _____

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN OF CUSTODY WITH INVOICE AND RESULTS

DISTRIBUTION: PINK Sampling Coordinator - WHITE & YELLOW Accompanies Shipment - WHITE Returned with Report

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
10/15/97	1000

SPL Sample ID:
9710738

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		4° C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	499574 5036	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
[signature]	10/15/97