

GW - 114

MONITORING REPORTS

DATE:

2/2000

**ANNUAL REPORT
SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO**

February 3, 2000

Prepared For:

Schlumberger Oilfield Services
200 Gillingham Lane, MD7
Sugar Land, Texas 77478

Prepared By:



611 Skyline Road
Laramie, Wyoming 82070

1849 Terra Avenue
Sheridan, Wyoming 82801
Phone (307) 672-0761
Fax (307) 674-4265
E-mail: wwcshr@cyberhighway.net

107 East First Street
Gillette, Wyoming 82716
Phone (307) 682-1880
Fax (307) 682-2257
E-mail: wwcgl@vcn.com

701 Antler Drive, Suite 233
Casper, Wyoming 82601
Phone (307) 473-2707
Fax (307) 237-0828
E-mail: wwcsp@aol.com

32 South Ewing, Suite 331
Helena, Montana 59601
Phone (406) 443-3962
Fax (406) 443-3962
E-mail: kehase@mt.net

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
2.0 SUMMARY OF FIELDWORK	2
2.1 Static Water Level	2
2.2 Ground-water Monitoring	2
2.3 Natural Attenuation Monitoring	3
3.0 RESULTS AND DISCUSSION	5
3.1 Biodegradation of Hydrocarbons	5
3.2 Biodegradation of Chlorocarbons	6
4.0 OPERATION AND MAINTENANCE OF SHOP AND WASH BAY SVE SYSTEMS	8
5.0 RECOMMENDATIONS	9

LIST OF FIGURES

Figure

- 1 - Site Map With Potentiometric Surface (10/20/99)
- 2 - Potentiometric Surface and Isoconcentration Map for Total BTEX (10/20/99)
- 3 - Potentiometric Surface and Isoconcentration Map for Total Halocarbons (10/20/99)
- 4 - Dissolved Oxygen Data (10/20/99)
- 5 - Isoconcentration Map for pH (10/19/99)
- 6 - Redox Potential (10/20/99)
- 7 - Nitrate/Nitrite (04/22/99)
- 8 - Sulfate (04/22/99)
- 9 - Total Organic Carbon (04/22/99)
- 10 - Isoconcentration Map for Methane (04/22/99)
- 11 - Carbon Dioxide (04/22/99)
- 12 - Distribution of Chloroethenes (10/19/99)
- 13 - Ethene (04/22/99)
- 14 - Isoconcentration Map for Ethane (04/22/99)

LIST OF TABLES

Table

- 1 - Ground-water Measurements and Elevations
- 2 - Summary of Laboratory Analytical Results - Ground-water Samples
- 3 - Field Parameters at the Schlumberger Facility, Artesia, New Mexico
- 3A - Field Parameters at the Schlumberger Oilfield Services Facility, Artesia, New Mexico
- 4 - Water Quality Results for Natural Attenuation monitoring at the Schlumberger Facility in Artesia, New Mexico

TABLE OF CONTENTS (continued)

- 5 – Analytical Parameters and Weighting for Preliminary Screening for Anaerobic Biodegradation processes
- 6 - Operational Conditions, Maintenance Shop SVE System
- 7 - Operational Conditions, Wash Bay SVE System
- 8 - PID Readings – Volatile Organic Compounds, Maintenance Shop SVE System
- 9 - PID Readings – Volatile Organic Compounds, Wash Bay SVE System
- 10 - Summary of Laboratory Analytical - SVE Soil Vapor Samples, Maintenance Shop and Wash Bay SVE Systems

LIST OF APPENDICES

Appendix

- A – Laboratory Data Sheets
- B – Plots of Total Halocarbons Versus Static Water Levels

1.0 INTRODUCTION

1.0 INTRODUCTION

This report documents ground-water monitoring and remedial activities at the Schlumberger Oilfield Services facility in Artesia, New Mexico in 1999 (Figure 1.). Included in the report are ground-water and air quality monitoring data for 1999, and soil vapor extraction (SVE) system operation and maintenance (O & M) activities.

2.0 SUMMARY OF FIELDWORK

2.0 SUMMARY OF FIELDWORK

Field work conducted by Western Water Consultants, Inc. (WWC) during the four quarters of 1999 consisted of routine ground-water monitoring and O & M of the SVE systems. The analytical data for the first three quarters of 1999 were presented to the New Mexico Oil and Conservation Division (NMOCD) in reports dated March 5, 1999, May 28, 1999, and September 27, 1999. In addition a report titled "Additional Natural Attenuation Monitoring at Dowell, a Division of Schlumberger Technology Corporation Facility in Artesia, New Mexico" dated December 15, 1999 was submitted to the NMOCD concerning natural attenuation monitoring performed in 1999.

2.1 Static Water Level

Static water levels were measured in all monitoring wells with an oil/water interface probe except MW-16 which was not measured due to its close proximity to MW-4. Static water level measurements collected in 1999 are presented in Table 1 along with historic data for comparison.

A map of the potentiometric surface generated from the fourth quarter static water level data is presented on Figure 1. The ground-water flow direction is to the northeast, consistent with earlier determinations of ground-water flow.

2.2 Ground-water Monitoring

Ground-water samples were collected from monitoring wells MW-3, MW-11, MW-13, MW-18, MW-20, MW-21, and MW-25 to MW-30 during the first and third quarter monitoring events in 1999. The second quarter monitoring was performed in conjunction with the additional natural attenuation monitoring. In addition to the monitoring wells above, ground-water samples were collected from MW-2, MW-4, MW-7, MW-8, MW-10, MW-12, MW-19, and MW-22 to 24. During the fourth quarter monitoring event performed October 19-20, 1999 ground-water samples were collected from all monitoring wells except MW-16.

Three well volumes of ground-water were purged from each well using dedicated polyethylene bailers prior to sampling during the first and third quarter monitoring events. During

the second and fourth quarter, monitoring wells were micropurged with a peristaltic pump connected to a flow through cell and Hydrolab mini-sonde 4A water quality instrument until field parameters stabilized. Purge water was placed into two galvanized steel stock tanks located on site and allowed to evaporate.

Ground-water samples were analyzed for volatile organic compounds by EPA Method 8260. During the fourth quarter monitoring event, duplicate samples were collected from MW-2, MW-12 and MW-30. Analytical results along with historical data are presented in Table 2. Laboratory analytical reports for the fourth quarter are presented in Appendix A. Laboratory analytical reports for the other sampling events have been provided in previous reports.

Field parameters collected during the second and fourth monitoring events consisted of pH, conductivity, temperature, dissolved oxygen (D.O.), and redox potential which are presented in Tables 3 and 3A.

2.3 Natural Attenuation Monitoring

On April 22, 1999, Western Water Consultants Inc., (WWC) conducted ground-water sampling at the Artesia facility for the purpose of collecting additional data to evaluate natural attenuation processes. Data collected from the monitoring was used to assess the chemical and environmental conditions of the aquifer in terms of biodegradation. Assessing these conditions involved determining available electron acceptors, environmental parameters that control microbiological activity, and evidence of intermediate and end products of contaminant biodegradation.

Field measurements and ground-water samples were collected using a peristaltic pump connected to a flow through cell and Hydrolab mini-sonde 4A water quality instrument. Field measurements were collected for pH, conductivity, redox potential, temperature, and D.O. Results for the field parameters are presented as Table 3.

Ground-water samples were collected from 17 monitoring wells (MW-2 to MW-4, MW-7, MW-8, MW-10 to MW-13, and MW-18 to MW-25) for natural attenuation parameters. Each monitoring well was micropurged until field parameters (pH, conductivity, temperature, and redox potential) stabilized prior to sample collection. Ground-water samples were analyzed for nitrate-nitrite by EPA Method 353.3, orthophosphate by EPA Method 365.3, sulfate by EPA Method 375.4,

total organic carbon (TOC) by EPA Method 415.1, methane, carbon dioxide, ethane, and ethene. Analytical results are presented as Table 4. Laboratory data reports are presented as Appendix A.

3.0 RESULTS AND DISCUSSION

3.0 RESULTS AND DISCUSSION

Interpretation of the water quality data in Table 2 indicates that contaminant levels are continuing to decline in a majority of the monitoring wells since ground-water sampling began. Levels of BTEX have declined or are no longer detected in monitoring wells MW-1, 2, 3, 4, 5, 9, 11, 12, and 17C. An isoconcentration map for total BTEX (Figure 2) shows that BTEX remains concentrated in the area of MW-3 and MW-12 and does not appear to be migrating down gradient. Low concentrations of toluene detected in ground-water samples from MW-20, 21, 22, 23, 24, and wells MW-26 through MW-30 are due to equipment problems. Future sampling events will verify this constituent is not present in the ground-water at these locations.

Halocarbon concentrations which have either declined or stabilized can also be observed in all monitoring wells except MW-19, MW-22, and MW-26 which have shown a slight increase over the past four quarters. The declines or stabilizations of the halocarbon concentrations are evident on the plots of total halocarbons versus static water levels presented in Appendix B. An isoconcentration map for total halocarbons (Figure 3) indicates the highest concentrations remain in the area of MW-7 and MW-11 which is consistent with previous reports.

3.1 Biodegradation of Hydrocarbons

Field parameters for D.O., pH, and redox potential collected during the fourth quarter monitoring event for 1999 supports data collected during the additional natural attenuation monitoring in April with regard to intrinsic bioremediation. D.O. remains depleted in this area indicating that environmental conditions are in an anaerobic state (Figure 4). PH continues to be depressed in the area with the highest concentrations of dissolved phase constituents around MW-3 to MW-12 (Figure 5). The redox potential of the ground-water across the facility indicates a reducing environment in the core area with oxidizing conditions along the periphery conducive to biodegradation of aromatic hydrocarbons through aerobic metabolism (Figure 6).

Nitrate and sulfate are utilized as electron acceptors under anaerobic conditions to degrade aromatic hydrocarbons through denitrification and sulfate reduction processes (USEPA guidance document 1998). The absence of nitrate in the ground-water from MW-4 northeast across the site to MW-12 indicates aromatic hydrocarbons were biodegraded by anaerobic microorganisms through

denitrification after aerobic respiration of aromatic hydrocarbons created anaerobic conditions (Figure 7). Sulfate concentrations are below background levels in the ground-water at MW-4 and MW-12 and may indicate that anaerobic microorganisms are biodegrading aromatic hydrocarbons through sulfate reduction processes (Figure 8). As shown on Tables 3 and 3A, the redox potential of the ground-water is consistently less than -100mv providing geochemical conditions conducive to the biodegradation of aromatic hydrocarbons through sulfate reduction (USEPA guidance document 1998).

3.2 Biodegradation of Chlorocarbons

Water quality data collected for additional natural attenuation monitoring in April indicated degradation of chlorocarbons is continuing at this facility. As mentioned previously, D.O. values show a distinct inverse correlation with the area containing the highest concentrations of dissolved-phase constituents. Aerobic respiration of aromatic hydrocarbons over a long period of time has created environmental conditions which are now anaerobic. Negative redox potential readings of the ground-water in this same area indicated environmental conditions were in an optimal range for reductive dehalogenation to occur (USEPA Guidance Document 1998). In addition sufficient carbon is available for dechlorination processes to occur as indicated by the highest concentrations of total organic carbon occurring in the ground-water around monitoring wells MW-3 and MW-12 (Figure 9).

Elevated methane levels centered around MW-12 represent direct evidence of highly reducing conditions ideal for the reductive dehalogenation of chlorocarbons (Figure 10). Methane also represents an appropriate carbon source for methanotrophic oxidation of chlorocarbons in the soil and ground-water where aerobic conditions persist.

Carbon dioxide is a byproduct of naturally occurring aerobic and anaerobic biodegradation processes that occur in ground-water (USEPA guidance document 1998). Elevated CO_2 levels in the same distribution as methane indicates greater microbial activity than in the surrounding area (Figure 11). The inverse correlation between the concentration of D.O. and CO_2 also indicates that aerobic metabolism is an important process in the subsurface in this area creating anaerobic conditions important for the biodegradation of chlorocarbon constituents.

Microbial degradation of chlorocarbons such as PCE via the process of reductive dechlorination results in the formation of daughter products TCE, isomers of DCE, VC, ethene and finally CO_2 and H_2O . Evidence that the process of reductive dehalogenation has been and is still actively occurring is shown on the spatial distribution of chloroethenes across the site (Figure 12).

PCE makes up a large percentage of the total chloroethenes present in the ground-water beneath the facility itself. However, the percentage of PCE in the ground-water decreases from MW-12 toward the northeast where daughter products such as TCE and DCE isomers make up the larger percentage of the chlorocarbons. The highest concentrations of ethene and ethane in the area of MW-3 and MW-12 strongly suggests that chlorocarbons such as PCE and TCE have undergone reductive dehalogenation (Figures 13 and 14).

The Environmental Protection Agency (EPA) developed a screening process and weighting system to evaluate anaerobic biodegradation processes (reductive dechlorination) using geochemical data at individual sites (USEPA September 1998). The various parameters used by EPA in their weighting system were compared to the field data collected for the additional NA monitoring. The results of the comparison, shown on Table 5, indicate the Dowell facility in Artesia would receive a score of 24. Under the EPA weighting system, a score greater than 20 indicates strong evidence that biodegradation of chlorocarbons through reductive dechlorination processes is occurring at a site.

***4.0 OPERATION AND MAINTENANCE OF
SHOP AND WASH BY SVE SYSTEMS***

4.0 OPERATION AND MAINTENANCE OF SHOP AND WASH BAY SVE SYSTEMS

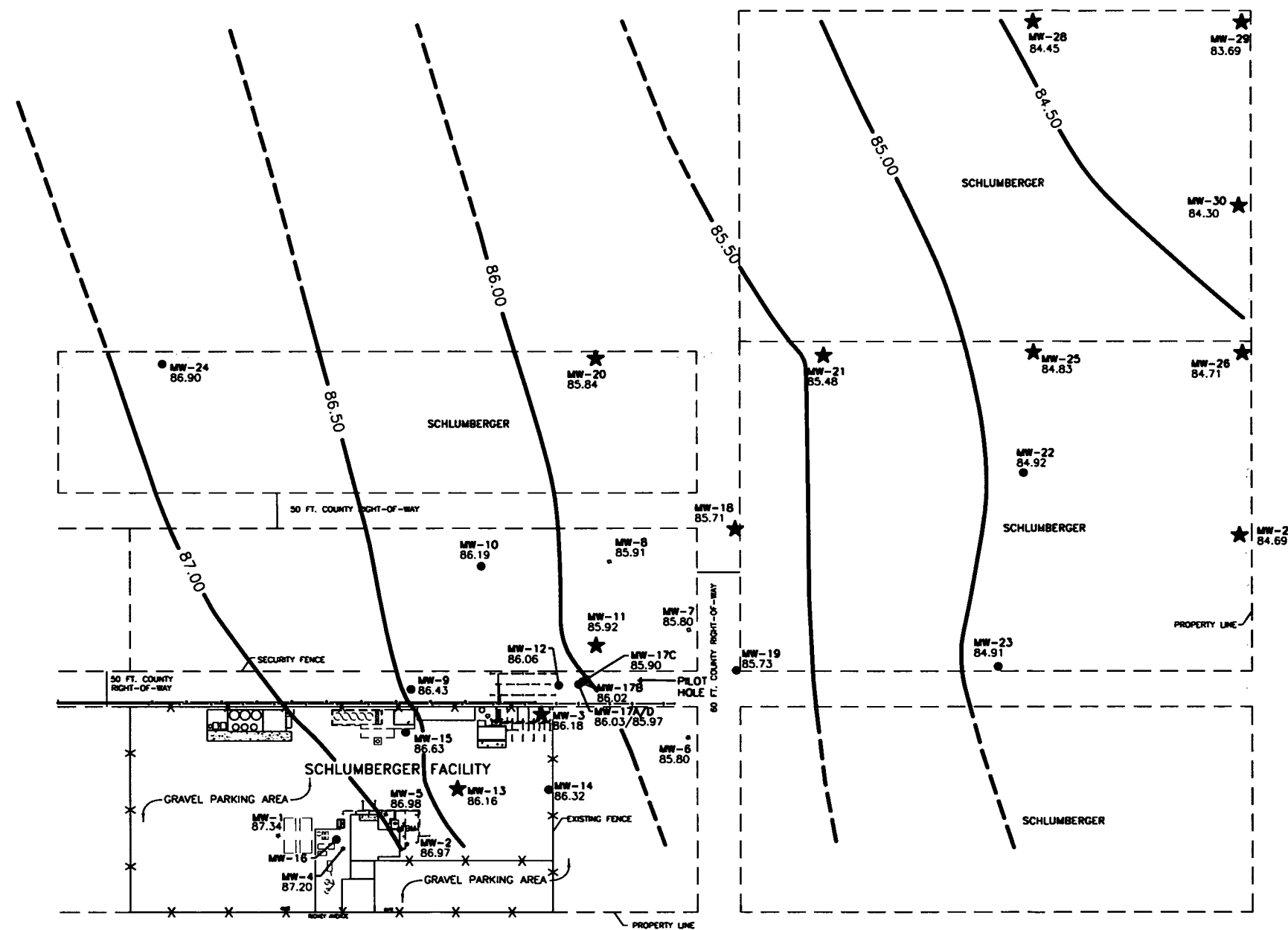
The wash bay SVE system operated almost continuously in 1999 except for minor shutdowns for maintenance. The maintenance shop SVE system was shutdown from July to October in an attempt to increase the concentrations of halocarbons removed. The systems are checked quarterly to monitor vacuum readings and volatile organic vapors in the extracted soil vapor and exhaust. Vacuum readings are presented in Tables 6 (maintenance shop) and 7 (wash bay). Soil vapor monitoring was performed with a PID, results are presented in Tables 8 (maintenance shop) and 9 (wash bay). Air samples are collected quarterly in one liter tedlar bags and submitted to a laboratory for analysis by EPA Method 8260. An air sample was not collected from the maintenance shop system during the fourth quarter due to the system having been shutdown the previous quarter. Analytical data for the air samples are presented in Table 10. Laboratory data sheets for the fourth quarter air samples are presented in Appendix A.

5.0 RECOMMENDATIONS

5.0 RECOMMENDATIONS

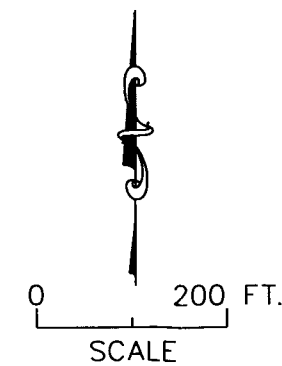
Ground-water data indicates hydrocarbons and chlorocarbons are continuing to decline or stabilize. Additional natural attenuation monitoring supports the initial evaluation that chemical and environmental conditions exist for biodegradation of both hydrocarbon and chlorocarbons. Dowell is proposing that monitoring continue on a quarterly basis as conducted in 1999. Monitoring wells MW-3, MW-11, MW-13, MW-18, MW-20, MW-21, and MW-25 to MW-30 would be sampled quarterly for volatile organics by EPA Method 8260 (Figure 1). All monitoring wells would be sampled during the fourth quarter monitoring event and static water levels would be measured every quarter.

FIGURES



EXPLANATION

- MW-12
84.69 WWC MONITORING WELL LOCATION, IDENTIFICATION, AND POTENTIOMETRIC SURFACE
- MW-6
84.50 REED AND ASSOCIATES MONITORING WELL LOCATION, IDENTIFICATION, AND POTENTIOMETRIC SURFACE
- ★ MONITORING WELLS TO BE SAMPLED QUARTERLY
- 86.00 — POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
- TBM TEMPORARY BENCH MARK
- - - AIR PIPING
- SVE EXTRACTION WELL

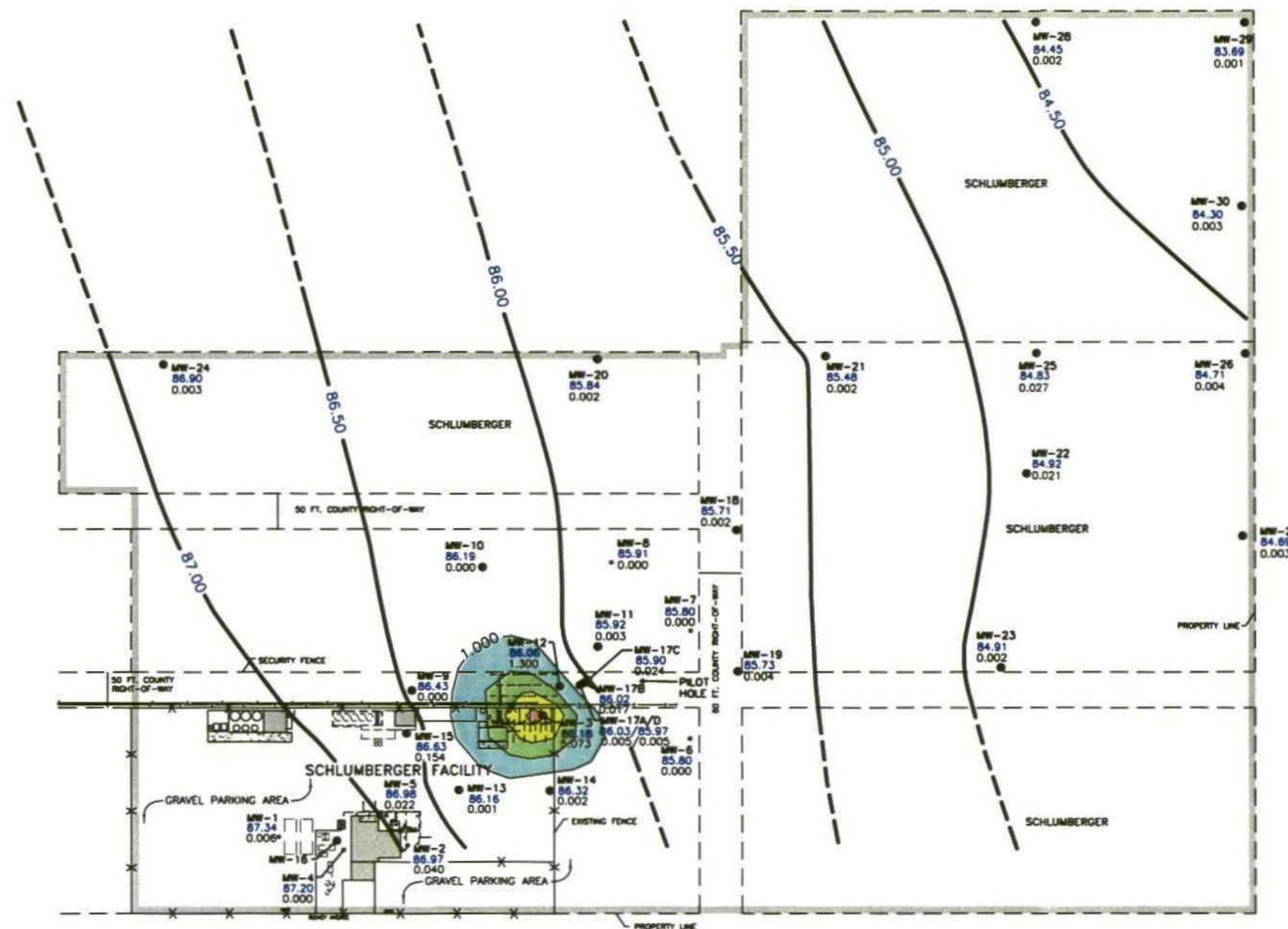


BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 1
SITE MAP WITH
POTENTIOMETRIC SURFACE
(10/20/99)

SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO

Western
Water
Consultants, Inc.  WWC Engineering
Engineering Environmental Mining Water Resources



EXPLANATION

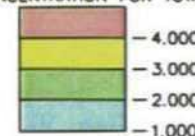
- MW-12
85.33
1.895

WVC MONITORING WELL LOCATION AND IDENTIFICATION
GROUND-WATER ELEVATION
ISOCONCENTRATION FOR TOTAL BTEX
- MW-6
85.07
ND

REED AND ASSOCIATES MONITORING WELL LOCATION AND IDENTIFICATION
GROUND-WATER ELEVATION
ISOCONCENTRATION FOR TOTAL BTEX
- TBM

TEMPORARY BENCH MARK
- AIR PIPING
- SVE EXTRACTION WELL

ISOCONCENTRATION FOR TOTAL BTEX



— 86.00 — POTENTIOMETRIC SURFACE CONTOUR

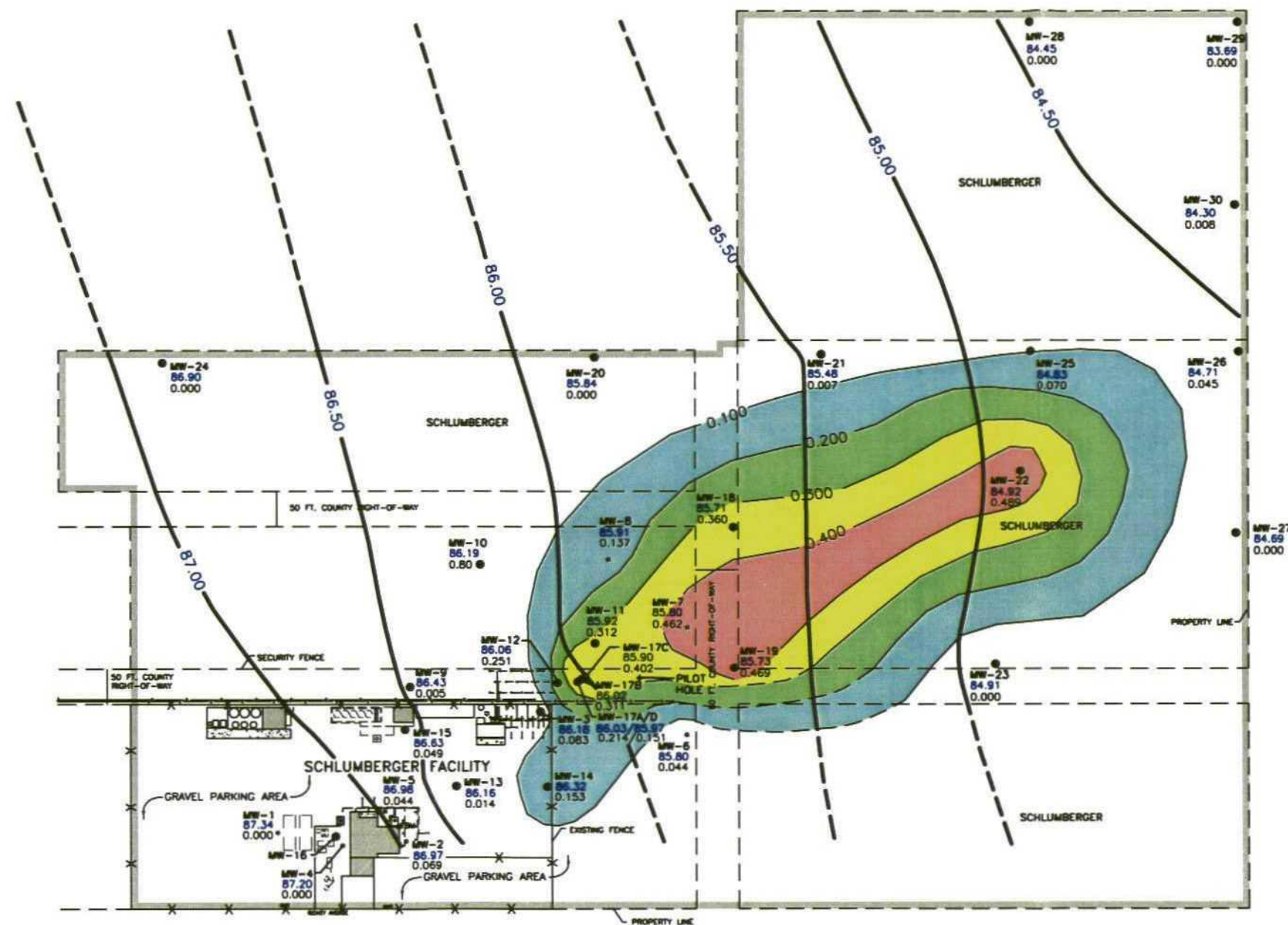


BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 2
POTENTIOMETRIC SURFACE AND
ISOCONCENTRATION MAP FOR
TOTAL BTEX (10/20/99)

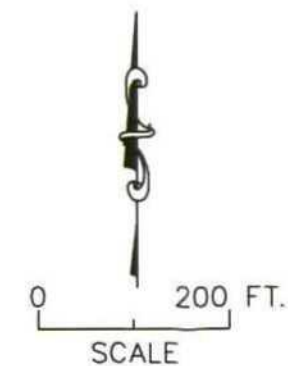
SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO

Western
Water
Consultants, Inc.  WWC Engineering
Engineering Environmental Mining Water Resources



EXPLANATION

- MW-12**
 85.33
 1.895
 WWC MONITORING WELL LOCATION AND IDENTIFICATION
 GROUND-WATER ELEVATION
 ISOCONCENTRATION FOR TOTAL HALOCARBONS
 - MW-6**
 85.07
 ND
 REED AND ASSOCIATES MONITORING WELL LOCATION AND IDENTIFICATION
 GROUND-WATER ELEVATION
 ISOCONCENTRATION FOR TOTAL HALOCARBONS
 - TBM
 TEMPORARY BENCH MARK
 - AIR PIPING
 - SVE EXTRACTION WELL
- ISOCONCENTRATION FOR TOTAL HALOCARBONS
- | | |
|--|-------|
| | 0.400 |
| | 0.300 |
| | 0.200 |
| | 0.100 |
- 86.00 — POTENTIOMETRIC SURFACE CONTOUR

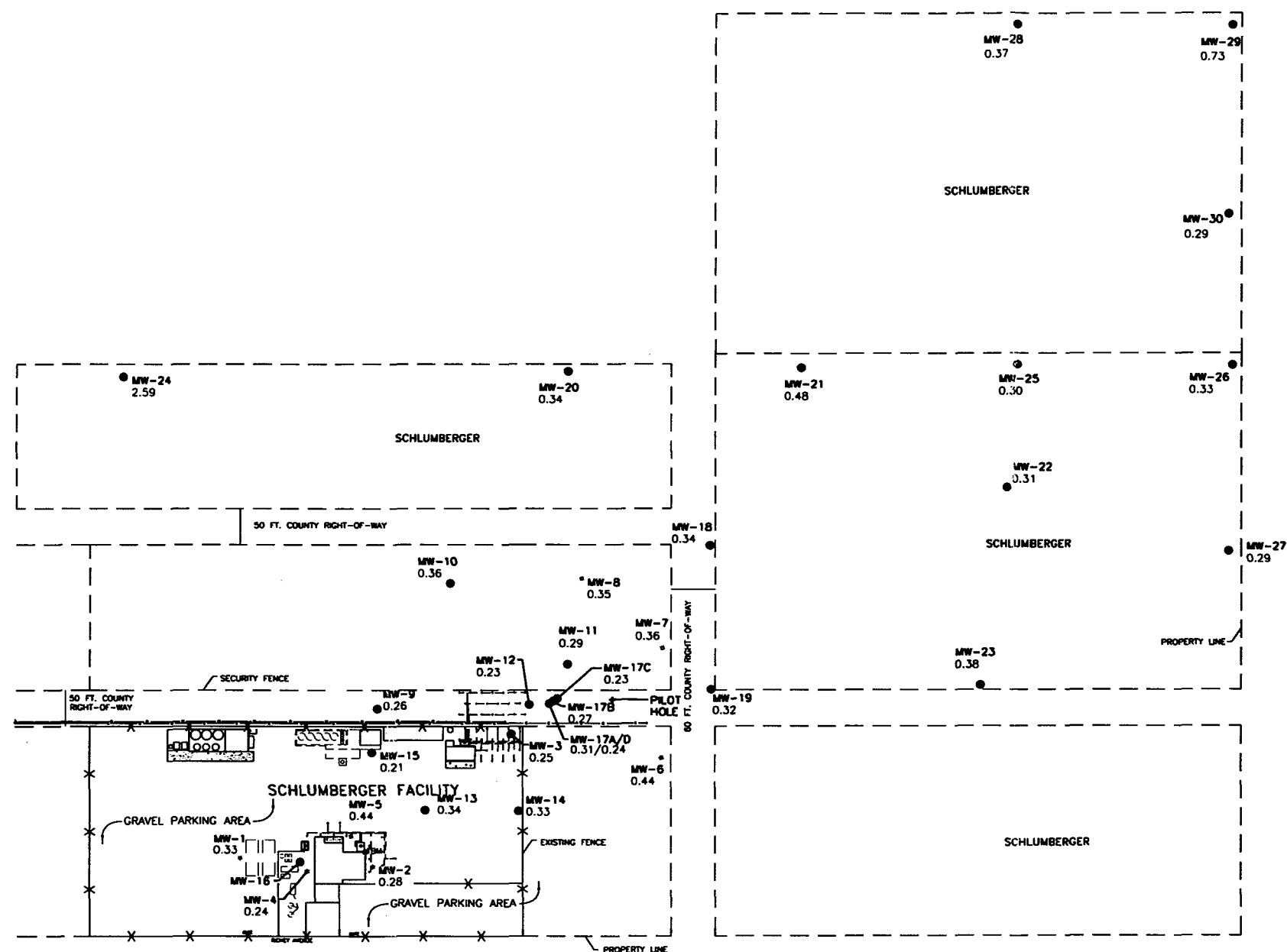


BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 3
 POTENTIOMETRIC SURFACE AND
 ISOCONCENTRATION MAP FOR
 TOTAL HALOCARBONS (10/20/99)

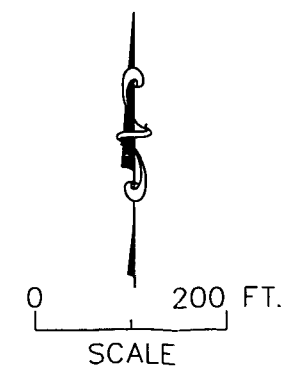
SCHLUMBERGER OILFIELD SERVICES
 ARTESIA, NEW MEXICO

Western
 Water
 Consultants, Inc. WWC Engineering
 Engineering Environmental Mining Water Resources



EXPLANATION

- MW-12 0.09 WWC MONITORING WELL LOCATION AND IDENTIFICATION REDOX POTENTIAL
- MW-6 NS REED AND ASSOCIATES MONITORING WELL LOCATION AND IDENTIFICATION REDOX POTENTIAL
- TBM TEMPORARY BENCH MARK
- AIR PIPING
- SVE EXTRACTION WELL

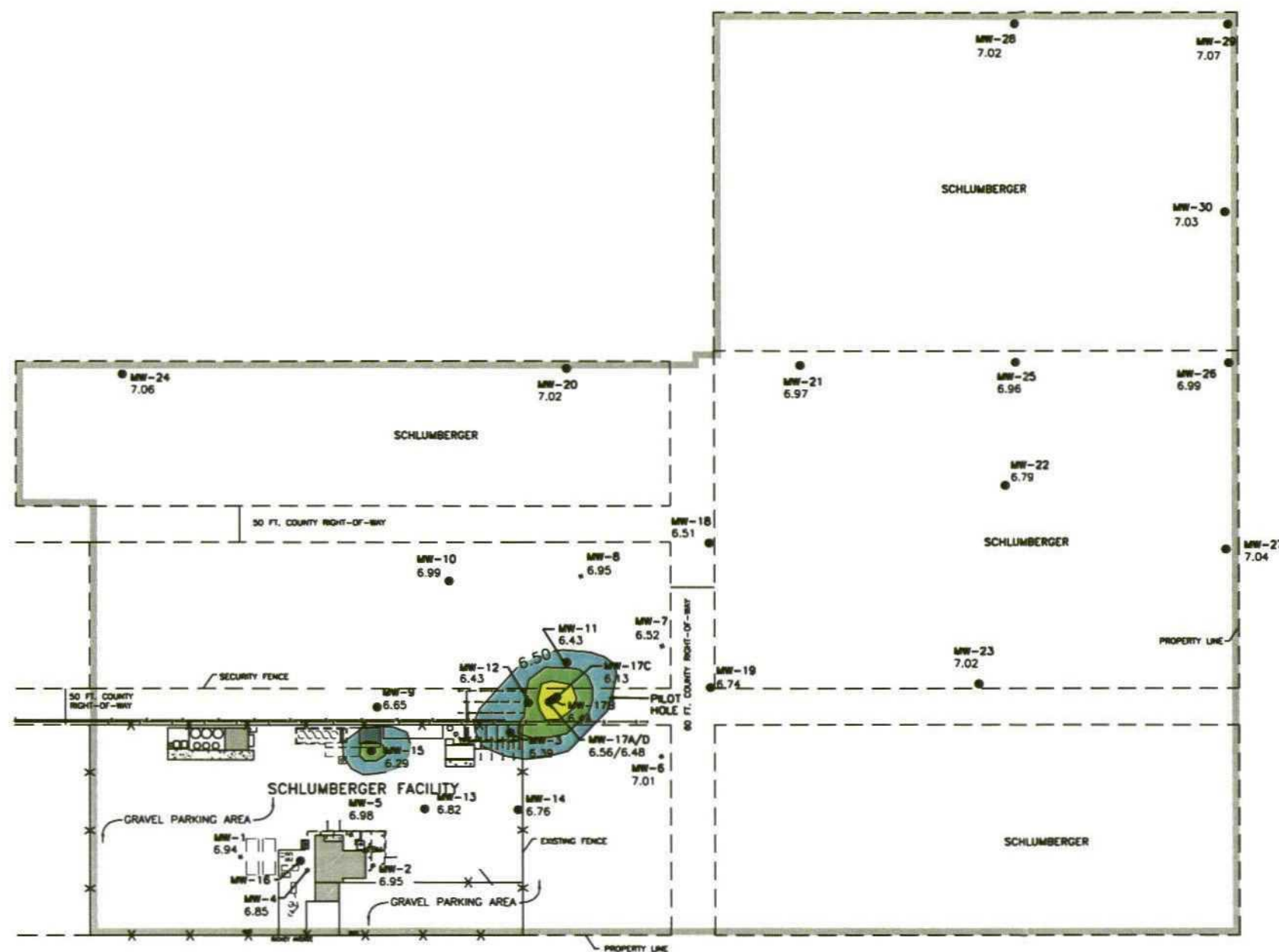


BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 4
DISSOLVED OXYGEN DATA
(10/20/99)

SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO

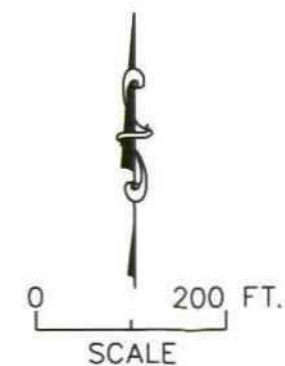
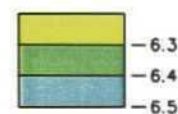
Western
Water
Consultants, Inc.  WWC Engineering
Engineering Environmental Mining Water Resources



EXPLANATION

- MW-12 1.895 WWC MONITORING WELL LOCATION AND IDENTIFICATION
- MW-6 ND REED AND ASSOCIATES MONITORING WELL LOCATION AND IDENTIFICATION
- TBM TEMPORARY BENCH MARK
- AIR PIPING
- SVE EXTRACTION WELL

ISOCONCENTRATION FOR pH

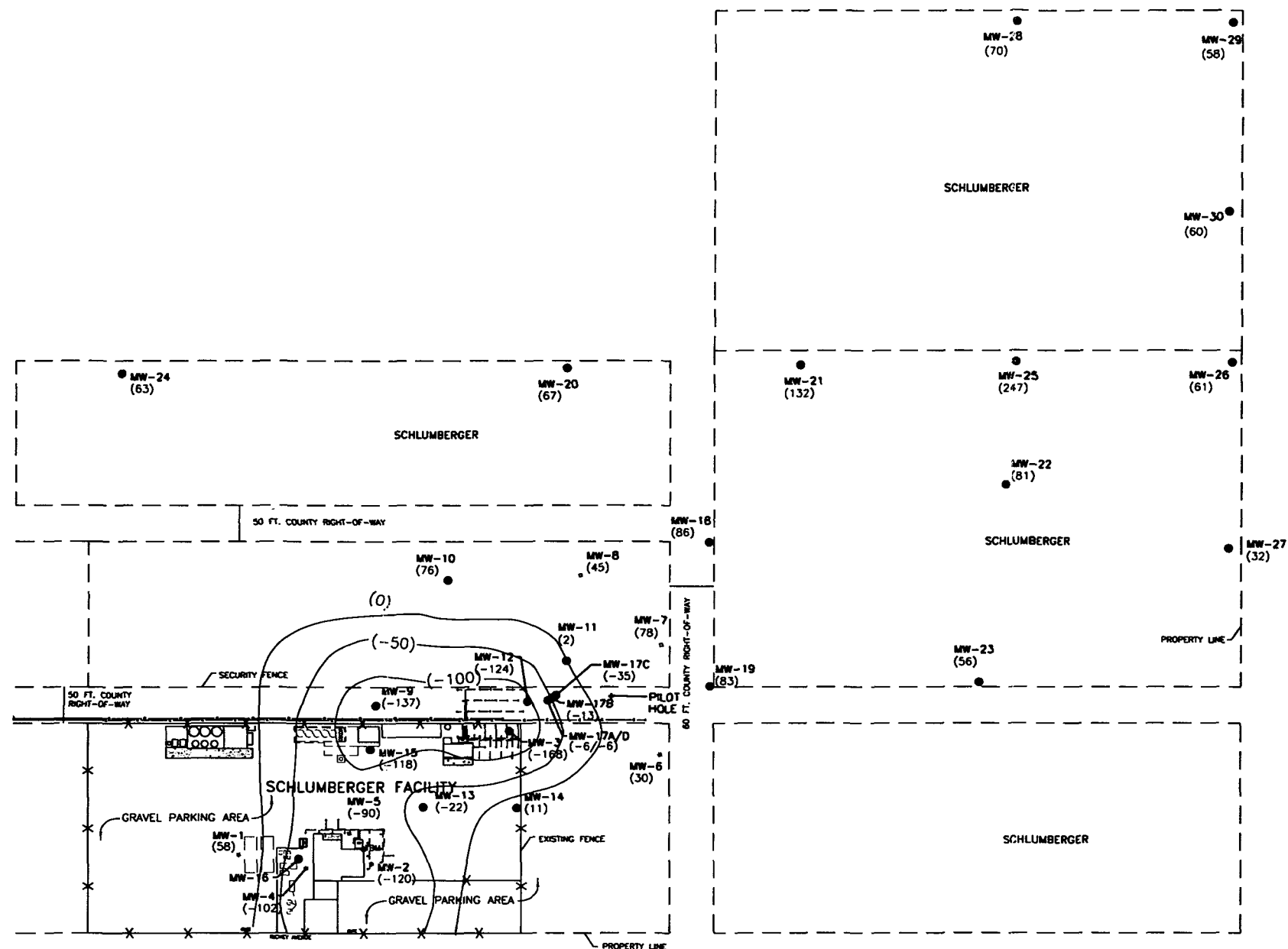


BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 5
ISOCONCENTRATION MAP FOR pH
(10/19/99)

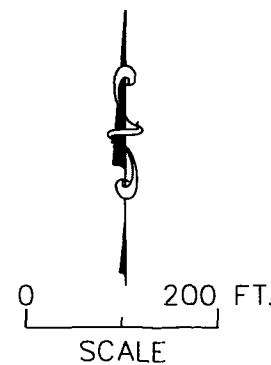
SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO

Western Water Consultants, Inc.  WWC Engineering
Engineering Environmental Mining Water Resources



EXPLANATION

- MW-12 (-216) WWC MONITORING WELL LOCATION AND IDENTIFICATION REDOX POTENTIAL
- MW-6 NS REED AND ASSOCIATES MONITORING WELL LOCATION AND IDENTIFICATION REDOX POTENTIAL
- TBM TEMPORARY BENCH MARK
- AIR PIPING
- SVE EXTRACTION WELL

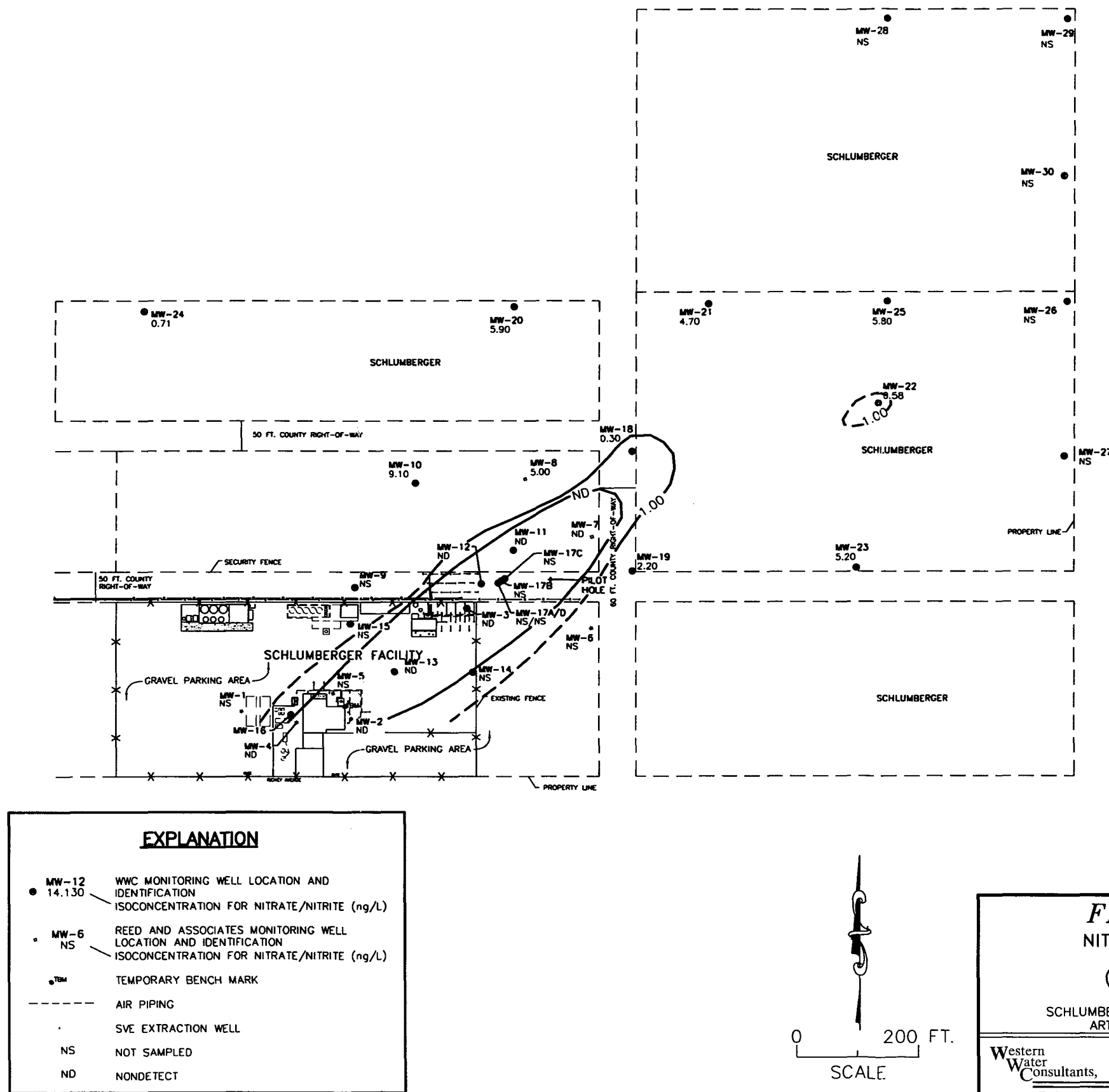


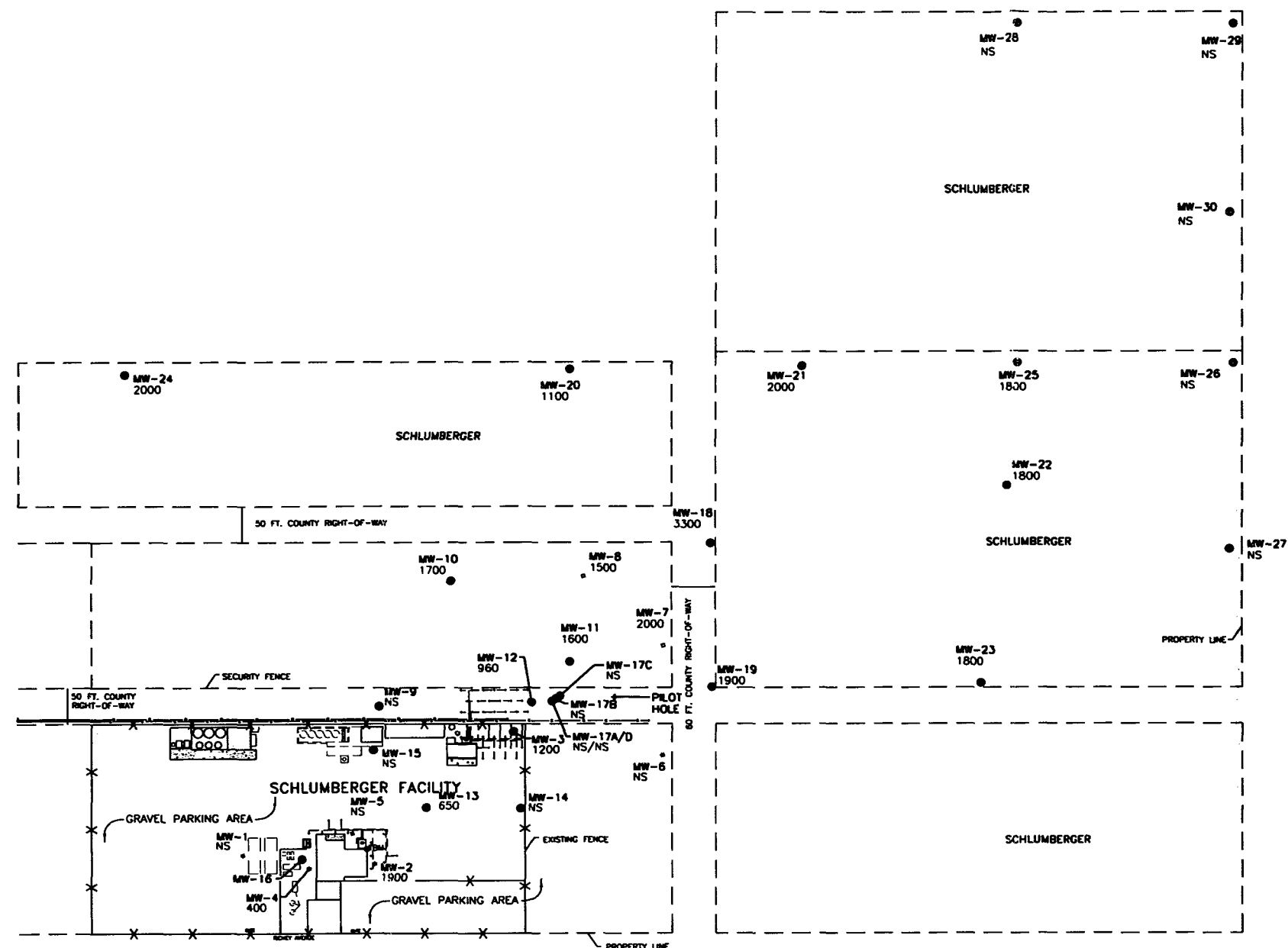
BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 6
REDOX POTENTIAL
(10/20/99)

SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO

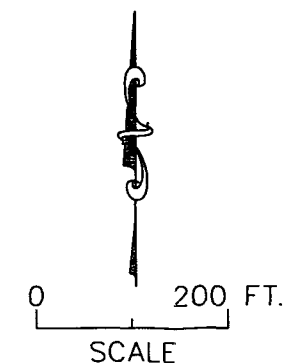
Western
Water
Consultants, Inc.  WWC Engineering
Engineering Environmental Mining Water Resources





EXPLANATION

- MW-12 14.130 WWC MONITORING WELL LOCATION AND IDENTIFICATION ISOCONCENTRATION FOR METHANE
- MW-6 NS REED AND ASSOCIATES MONITORING WELL LOCATION AND IDENTIFICATION ISOCONCENTRATION FOR METHANE
- TBM TEMPORARY BENCH MARK
- AIR PIPING
- SVE EXTRACTION WELL



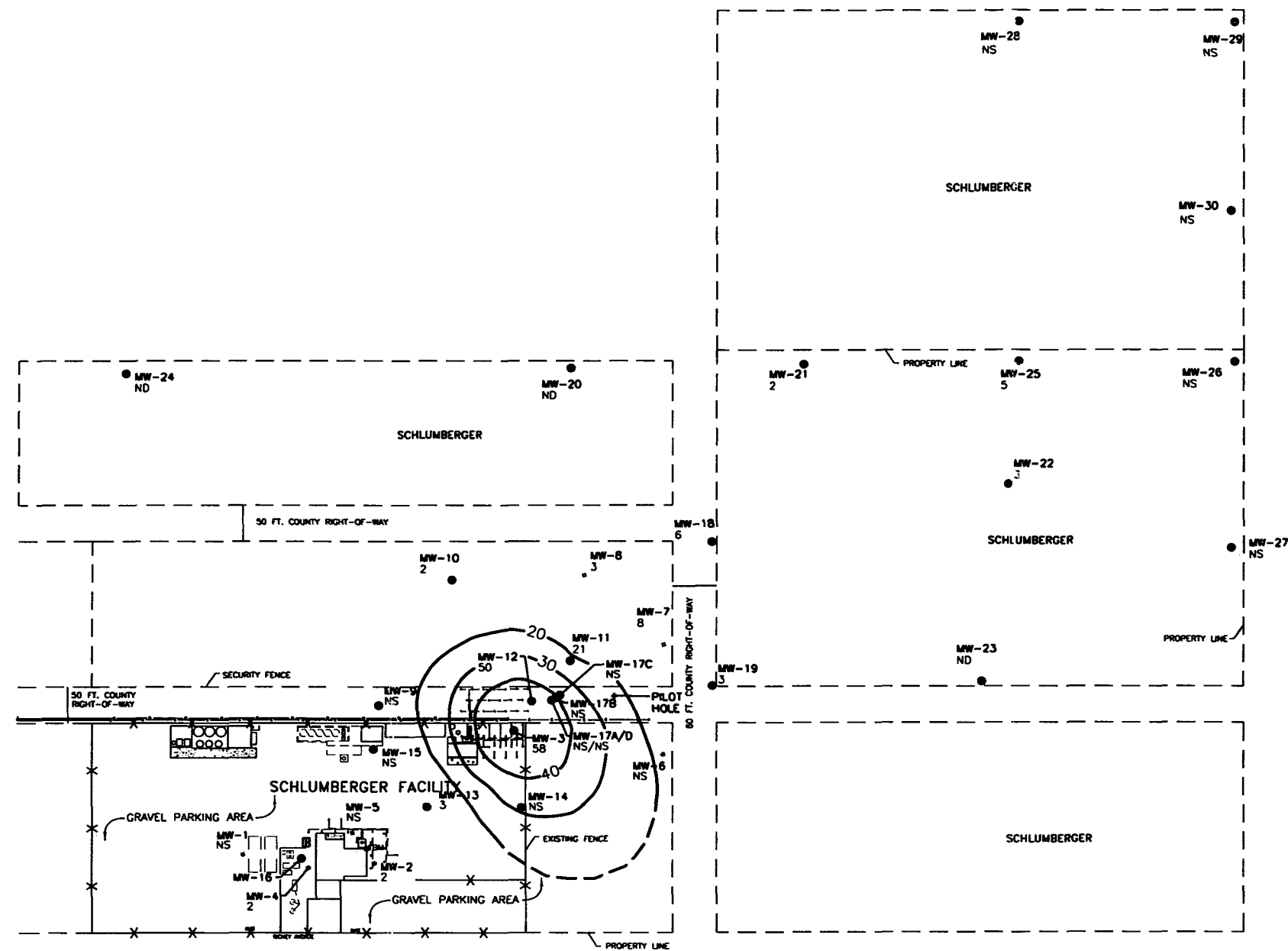
BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 8 SULFATE

(04/22/99)

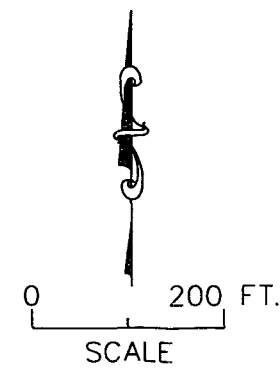
SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO

Western
Water
Consultants, Inc.  Engineering
Engineering Environmental Mining Water Resources



EXPLANATION

- MW-12 14.130 WC MONITORING WELL LOCATION AND IDENTIFICATION
ISOCONCENTRATION FOR TOTAL ORGANIC CARBON (mg/L)
- MW-6 NS REED AND ASSOCIATES MONITORING WELL LOCATION AND IDENTIFICATION
ISOCONCENTRATION FOR TOTAL ORGANIC CARBON (mg/L)
- TBM TEMPORARY BENCH MARK
- AIR PIPING
- SVE EXTRACTION WELL
- NS NOT SAMPLED
- ND NONDETECT

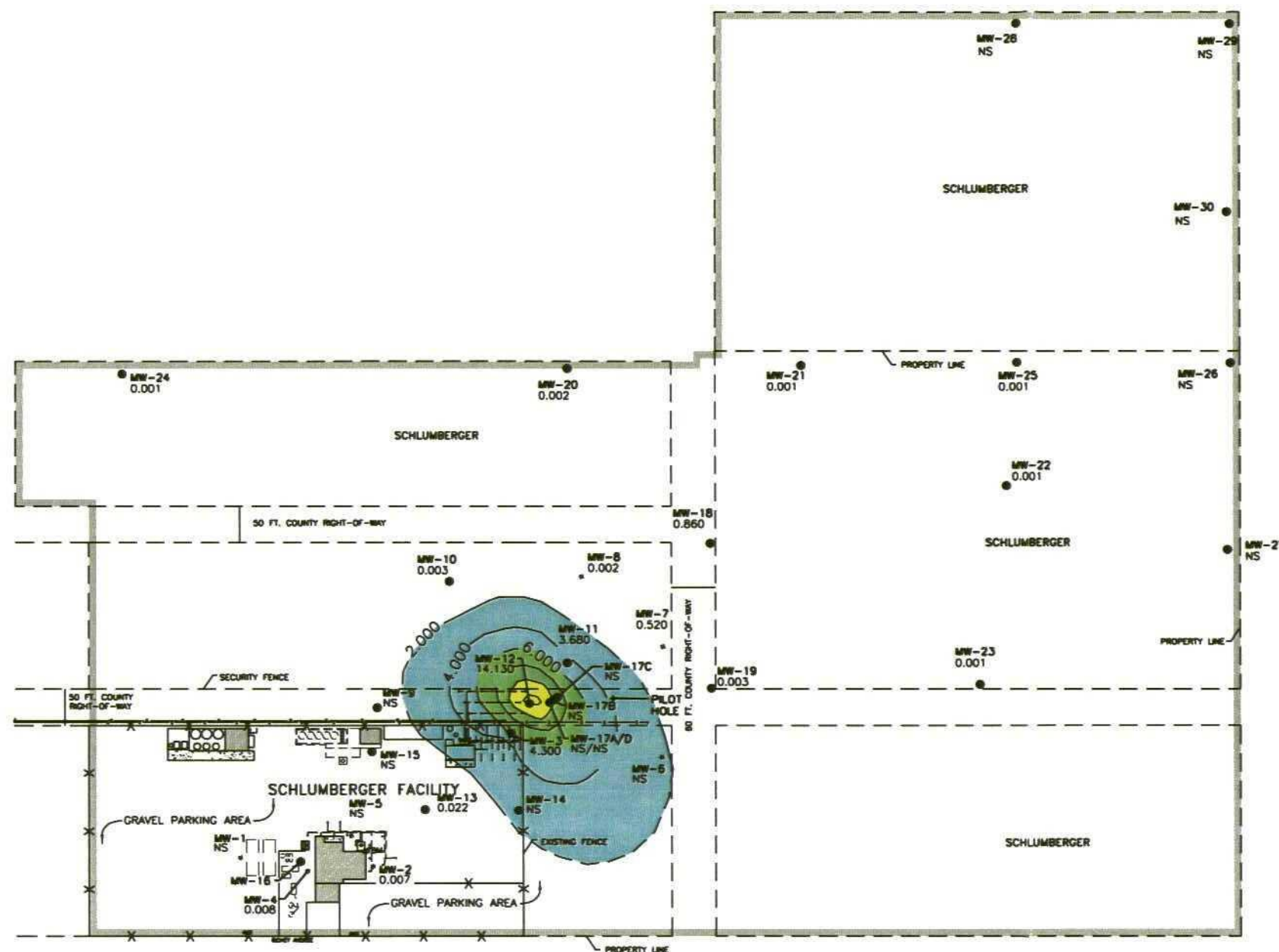


BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 9
TOTAL ORGANIC CARBON
(04/22/99)

SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO

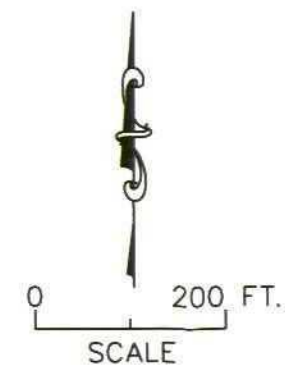
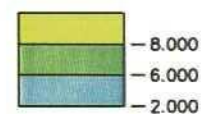
Western
Water
Consultants, Inc.  WWC Engineering
Engineering Environmental Mining Water Resources



EXPLANATION

- MW-12 14.130 WWC MONITORING WELL LOCATION AND IDENTIFICATION
- MW-6 NS REED AND ASSOCIATES MONITORING WELL LOCATION AND IDENTIFICATION
- TBM TEMPORARY BENCH MARK
- AIR PIPING
- SVE EXTRACTION WELL

ISOCONCENTRATION FOR METHANE

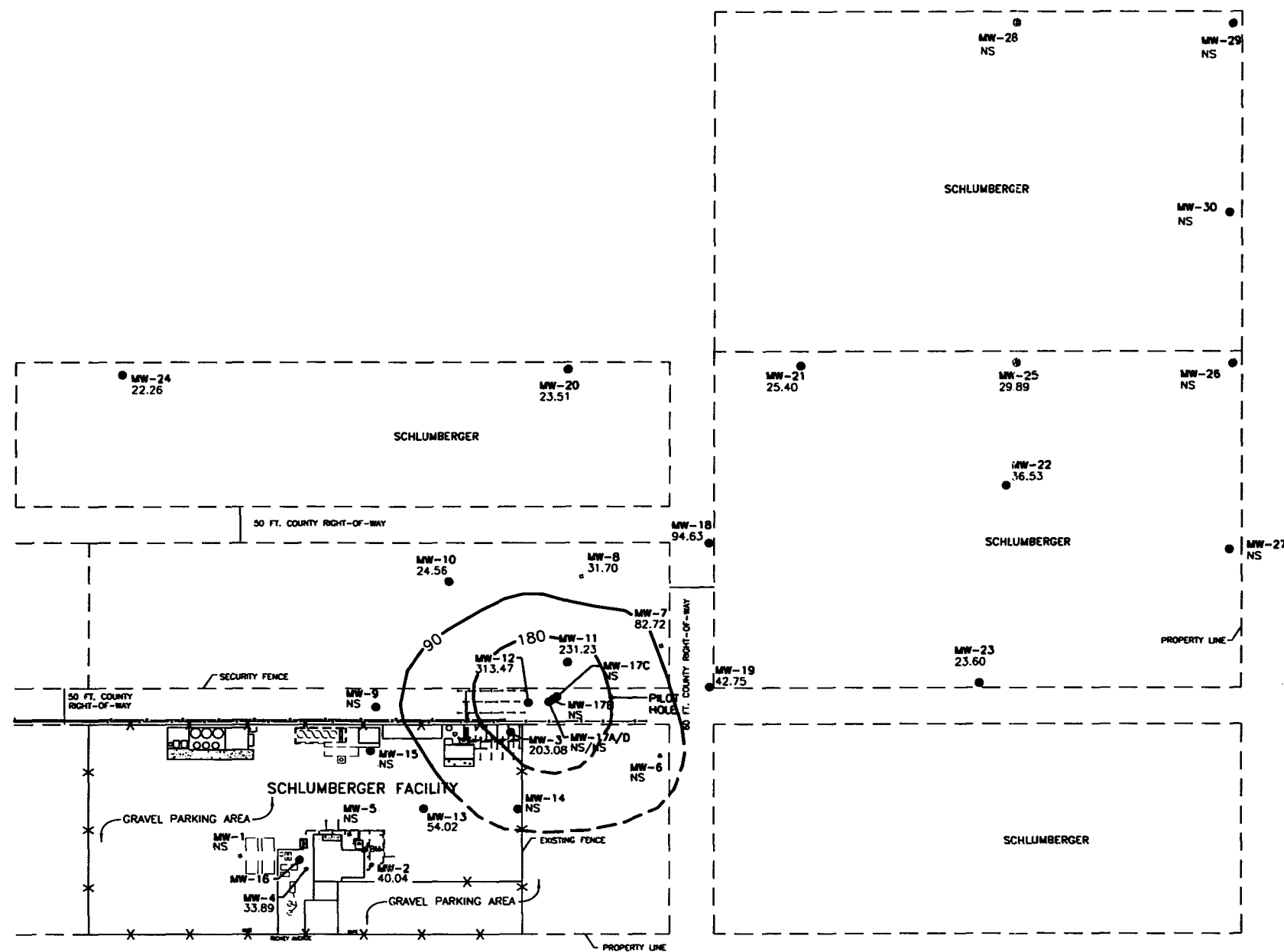


BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 10
ISOCONCENTRATION MAP FOR
METHANE
(04/22/99)

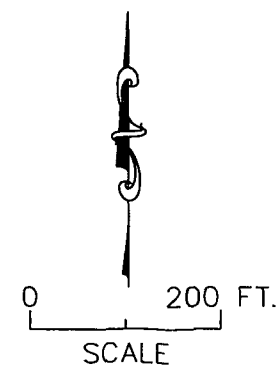
SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO

Western
Water
Consultants, Inc.  WWC Engineering
Engineering Environmental Mining Water Resources



EXPLANATION

- MW-12 14.130 WC MONITORING WELL LOCATION AND IDENTIFICATION ISOCONCENTRATION FOR CARBON DIOXIDE (mg/L)
- MW-6 NS REED AND ASSOCIATES MONITORING WELL LOCATION AND IDENTIFICATION ISOCONCENTRATION FOR CARBON DIOXIDE (mg/L)
- TBM TEMPORARY BENCH MARK
- AIR PIPING
- SVE EXTRACTION WELL
- NS NOT SAMPLED
- ND NONDETECT

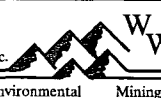


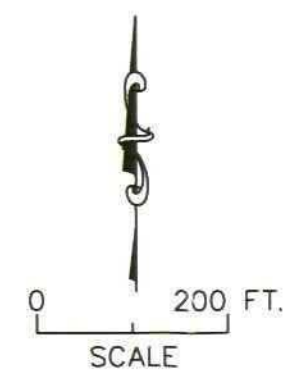
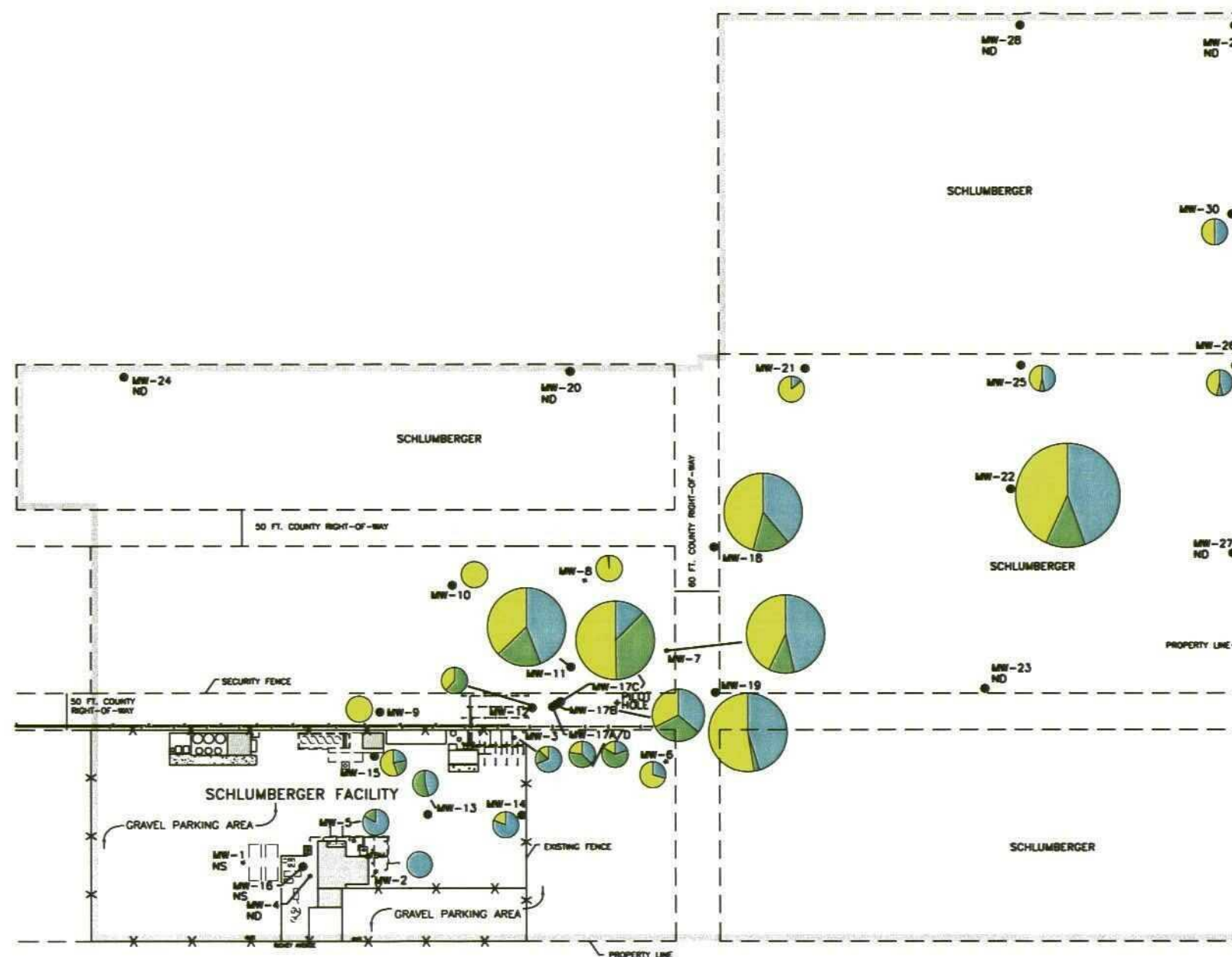
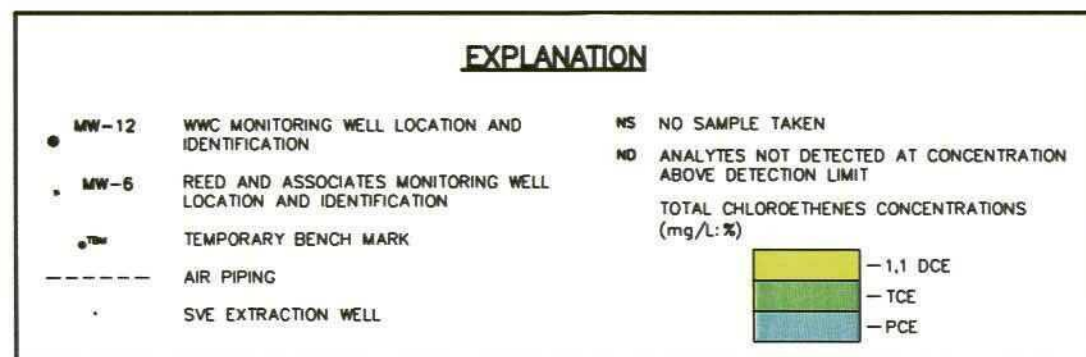
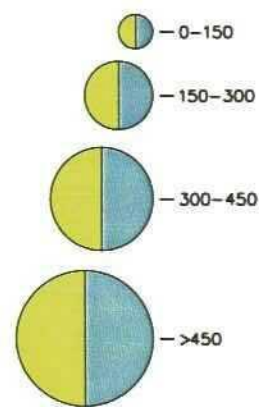
BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 11 CARBON DIOXIDE

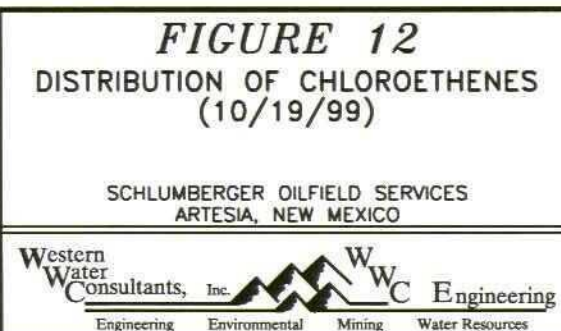
(04/22/99)

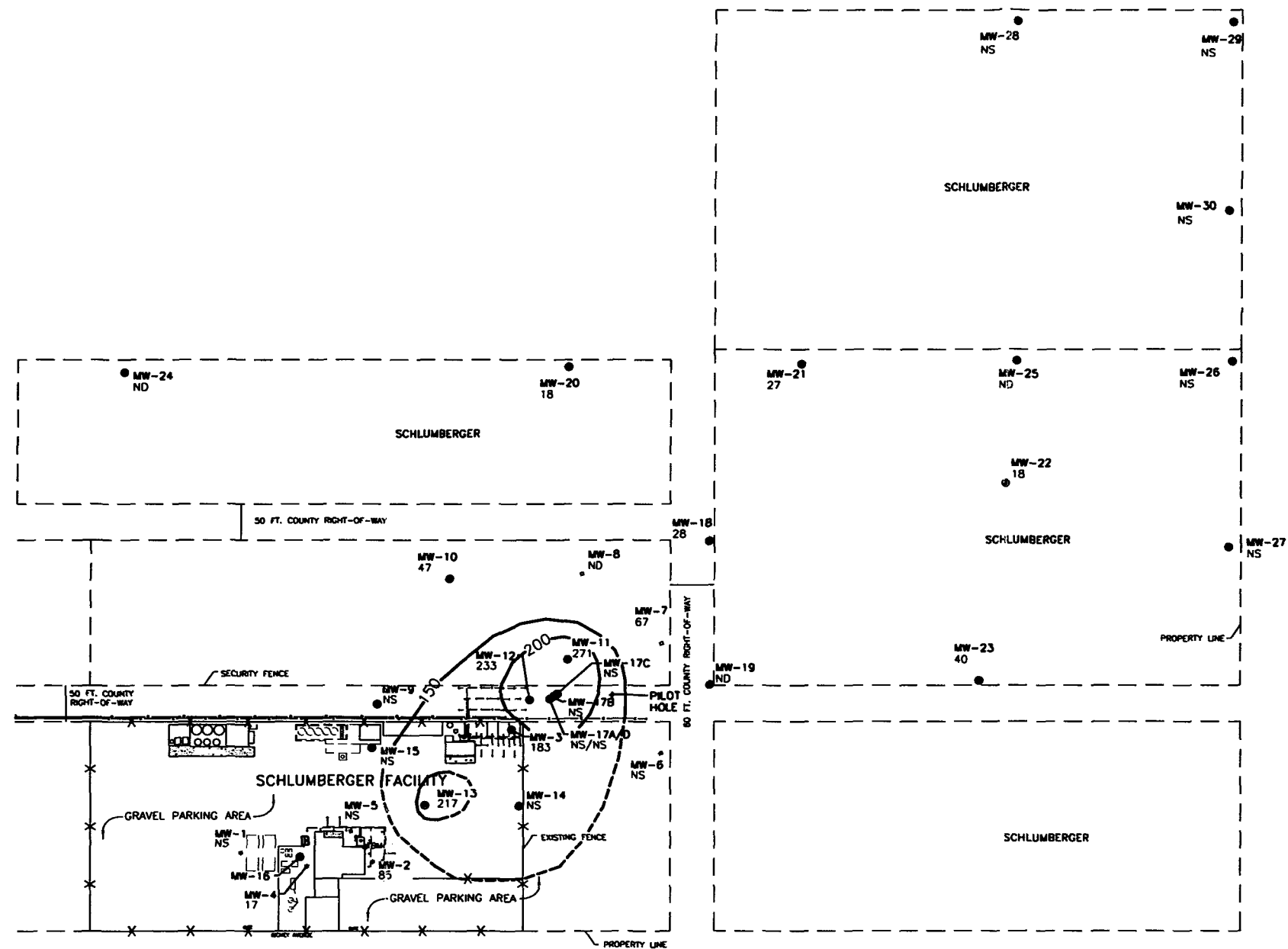
SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO

Western
Water
Consultants, Inc.  WWC Engineering
Engineering Environmental Mining Water Resources



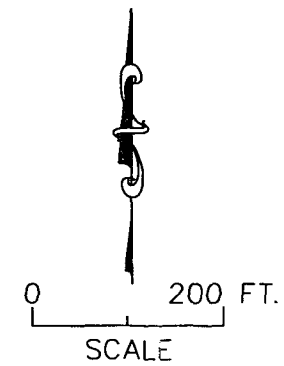
BASE MAP MODIFIED FROM REED & ASSOCIATES





EXPLANATION

- MW-12 14.130 WC MONITORING WELL LOCATION AND IDENTIFICATION ISOCONCENTRATION FOR ETHENE (ng/L)
- MW-6 NS REED AND ASSOCIATES MONITORING WELL LOCATION AND IDENTIFICATION ISOCONCENTRATION FOR ETHENE (ng/L)
- TBM TEMPORARY BENCH MARK
- AIR PIPING
- SVE EXTRACTION WELL
- NS NOT SAMPLED
- ND NONDETECT



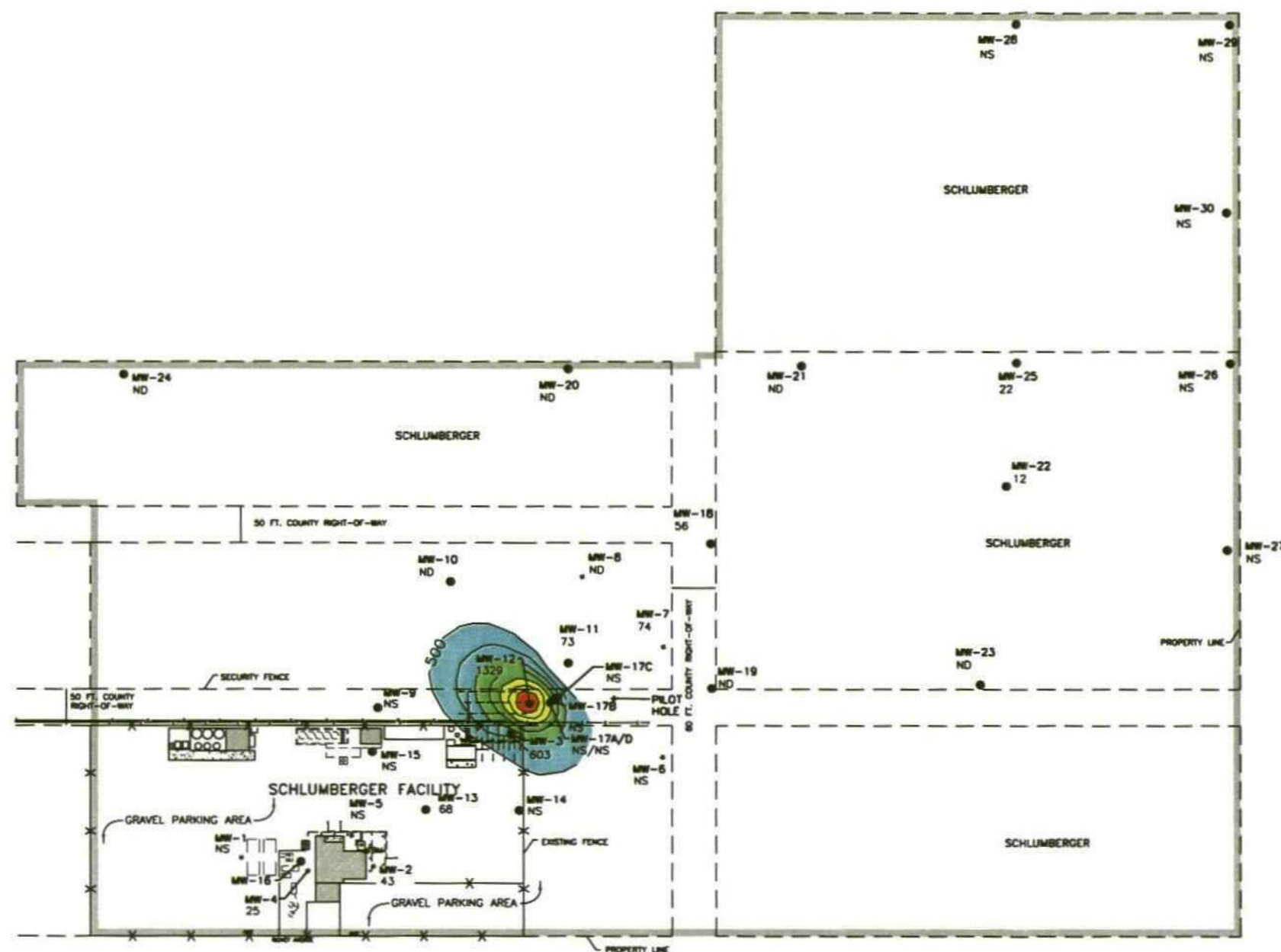
BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 13 ETHENE

(04/22/99)

SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO

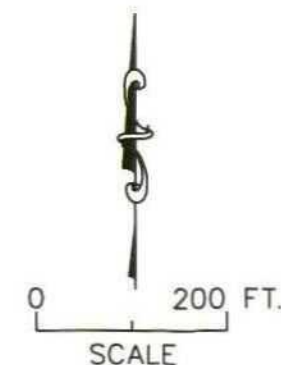
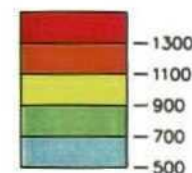
Western
Water
Consultants, Inc.  WWC Engineering
Engineering Environmental Mining Water Resources



EXPLANATION

- MW-12 1329.00 WWC MONITORING WELL LOCATION AND IDENTIFICATION ISOCONCENTRATION FOR ETHANE
- MW-6 NS REED AND ASSOCIATES MONITORING WELL LOCATION AND IDENTIFICATION ISOCONCENTRATION FOR ETHANE
- TEMPORARY BENCH MARK
- AIR PIPING
- SVE EXTRACTION WELL

ISOCONCENTRATION FOR ETHANE



BASE MAP MODIFIED FROM REED & ASSOCIATES

FIGURE 14
ISOCONCENTRATION MAP FOR
ETHANE
(04/22/99)

SCHLUMBERGER OILFIELD SERVICES
ARTESIA, NEW MEXICO

Western
Water
Consultants, Inc. **W** **W** **C** Engineering
Engineering Environmental Mining Water Resources

TABLES

**TABLE 1. GROUND-WATER MEASUREMENTS AND ELEVATIONS,
SCHLUMBERGER OILFIELD SERVICES FACILITY, ARTESIA, NEW MEXICO.**

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH (Ft)	MEASURING POINT	MEASURING POINT ELEVATION* (ft)	DEPTH TO GROUND WATER (ft)	STATIC WATER ELEVATION (Ft)	DIFFERENCE FROM PRIOR MEASUREMENT
MW-1	01/23/91	30.00	Protective Casing	100.56	17.41	83.15	
	09/13/91				16.04	84.52	1.37
	11/22/91				14.50	86.06	1.54
	03/16/93				13.72	86.84	0.78
	01/09/94				14.62	85.94	-0.90
	04/19/94				14.48	86.08	0.14
	07/20/94				14.38	86.18	0.10
	10/24/94				14.73	85.83	-0.35
	01/24/95				14.20	86.36	0.53
	04/02/95				14.37	86.19	-0.17
	07/31/95				14.76	85.80	-0.39
	10/16/95				14.64	85.92	0.12
	01/10/96				14.59	85.97	0.05
	04/09/96				14.77	85.79	-0.18
	07/20/96				15.84	84.72	-1.07
	10/21/96				14.07	86.49	1.77
	01/21/97				13.24	87.32	0.83
	04/08/97				12.97	87.59	0.27
	07/29/97				13.87	86.69	-0.90
	10/16/97				12.26	88.30	1.61
	02/09/99				14.34	86.22	-2.08
	04/21/99				13.91	86.65	0.43
	07/13/99				11.70	88.86	2.21
	10/19/99				13.22	87.34	-1.52
MW-2	01/23/91	30.00	Protective Casing	99.56	16.95	82.61	
	09/13/91				15.01	84.55	1.94
	11/22/91				13.76	85.80	1.25
	03/16/93				13.16	86.40	0.60
	01/09/94				13.91	85.65	-0.75
	04/19/94				13.80	85.76	0.11
	07/20/94				13.65	85.91	0.15
	10/24/94				13.88	85.68	-0.23
	01/24/95				13.41	86.15	0.47
	04/02/95				13.67	85.89	-0.26
	07/31/95				13.81	85.75	-0.14
	10/16/95				13.78	85.78	0.03
	01/10/96				13.80	85.76	-0.02
	04/09/96				13.98	85.58	-0.18
	07/20/96				14.92	84.64	-0.94
	10/21/96				13.15	86.41	1.77
	01/21/97				12.41	87.15	0.74
	04/08/97				12.21	87.35	0.20
	07/29/97				13.15	86.41	-0.94
	10/16/97				11.63	87.93	1.52
	01/06/98				10.92	88.64	0.71
	04/14/98				11.02	88.54	-0.10
	07/17/98				13.03	86.53	-2.01
	10/27/98				13.61	85.95	-0.58
	02/09/99				13.69	85.87	-0.08
	04/21/99				13.24	86.32	0.45
	07/13/99				11.05	88.51	2.19
	10/20/99				12.59	86.97	-1.54
MW-3	01/23/91	30.00	Protective Casing	98.33	17.28	81.05	
	09/13/91				14.66	83.67	2.62
	11/22/91				13.63	84.70	1.03
	03/16/93				12.89	85.44	0.74
	01/09/94				13.66	84.67	-0.77
	04/19/94				NM	NM	NM
	07/20/94				13.18	85.15	na
	10/24/94				13.27	85.06	-0.09
	01/24/95				13.23	85.10	0.04
	04/02/95				13.60	84.73	-0.37
	07/31/95				13.34	84.99	0.26

**TABLE 1. GROUND-WATER MEASUREMENTS AND ELEVATIONS,
SCHLUMBERGER OILFIELD SERVICES FACILITY, ARTESIA, NEW MEXICO.**

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH (Ft)	MEASURING POINT	MEASURING POINT ELEVATION* (ft)	DEPTH TO GROUND WATER (ft)	STATIC WATER ELEVATION (Ft)	DIFFERENCE FROM PRIOR MEASUREMENT
MW-3 Cont.	10/16/95				13.38	84.95	-0.04
	01/10/96				13.85	84.48	-0.47
	04/09/96				13.91	84.42	-0.06
	07/20/96				14.55	83.78	-0.64
	10/21/96				12.90	85.43	1.65
	01/21/97				12.42	85.91	0.48
	04/08/97				12.43	85.90	-0.01
	07/29/97				13.18	85.15	-0.75
	10/16/97				11.83	86.50	1.35
	01/06/98				11.45	86.88	0.38
	04/14/98				11.44	86.89	0.01
	07/17/98				12.81	85.52	-1.37
	10/27/98				12.60	85.73	0.21
	02/09/99				13.44	84.89	-0.84
	04/21/99				12.75	85.58	0.69
	07/13/99				10.57	87.76	2.18
	10/20/99				12.15	86.18	-1.58
MW-4	01/23/91	50.00	Protective Casing	103.18	20.17	83.01	
	09/13/91				18.54	84.64	1.63
	11/22/91				17.15	86.03	1.39
	03/16/93				16.49	86.69	0.66
	01/09/94				17.28	85.90	-0.79
	04/19/94				17.15	86.03	0.13
	07/20/94				16.99	86.19	0.16
	10/24/94				17.25	85.93	-0.26
	01/24/95				16.78	86.40	0.47
	04/02/95				16.98	86.20	-0.20
	07/31/95				17.26	85.92	-0.28
	10/16/95				17.01	86.17	0.25
	01/10/96				16.95	86.23	0.06
	04/09/96				17.15	86.03	-0.20
	07/20/96				18.08	85.10	-0.93
	10/21/96				16.28	86.90	1.80
	01/21/97				15.37	87.81	0.91
	04/08/97				15.14	88.04	0.23
	07/29/97				16.05	87.13	-0.91
	10/16/97				14.44	88.74	1.61
	01/06/98				13.59	89.59	0.85
	04/14/98				13.91	89.27	-0.32
	07/17/98				16.40	86.78	-2.49
	10/27/98				17.05	86.13	-0.65
	02/09/99				17.08	86.10	-0.03
	04/21/99				16.67	86.51	0.41
	07/13/99				14.49	88.69	2.18
	10/20/99				15.98	87.20	-1.49
MW-5	01/23/91	30.00	Protective Casing	99.87	17.20	82.67	
	09/13/91				15.52	84.35	1.68
	11/22/91				14.19	85.68	1.33
	03/16/93				13.47	86.40	0.72
	01/09/94				14.31	85.56	-0.84
	04/19/94				14.17	85.70	0.14
	07/20/94				13.97	85.90	0.20
	10/24/94				14.21	85.66	-0.24
	01/24/95				13.78	86.09	0.43
	04/02/95				14.05	85.82	-0.27
	07/31/95				14.17	85.70	-0.12
	10/16/95				14.07	85.80	0.10
	01/10/96				14.11	85.76	-0.04
	04/09/96				14.31	85.56	-0.20
	07/20/96				15.20	84.67	-0.89
	10/21/96				13.44	86.43	1.76
	01/21/97				12.69	87.18	0.75
	04/08/97				12.52	87.35	0.17
	07/29/97				13.37	86.50	-0.85
	10/16/97				11.82	88.05	1.55

**TABLE 1. GROUND-WATER MEASUREMENTS AND ELEVATIONS,
SCHLUMBERGER OILFIELD SERVICES FACILITY, ARTESIA, NEW MEXICO.**

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH (Ft)	MEASURING POINT	MEASURING POINT ELEVATION* (ft)	DEPTH TO GROUND WATER (ft)	STATIC WATER ELEVATION (Ft)	DIFFERENCE FROM PRIOR MEASUREMENT
MW-5 Cont.	01/06/98				11.09	88.78	0.73
	04/14/98				12.30	87.57	-1.21
	07/17/98				13.32	86.55	-1.02
	10/27/98				13.93	85.94	-0.61
	02/09/99				14.04	85.83	-0.11
	04/21/99				13.54	86.33	0.50
	07/13/99				11.37	88.50	2.17
	10/20/99				12.89	86.98	-1.52
MW-6	01/23/91	35.00	Protective Casing	100.84	19.59	81.25	
	09/13/91				17.43	83.41	2.16
	11/21/91				16.30	84.54	1.13
	03/16/93				15.57	85.27	0.73
	01/09/94				16.42	84.42	-0.85
	04/19/94				16.29	84.55	0.13
	07/19/94				15.79	85.05	0.50
	10/24/94				15.83	85.01	-0.04
	01/24/95				15.94	84.90	-0.11
	04/02/95				16.38	84.46	-0.44
	07/31/95				15.88	84.96	0.50
	10/16/95				16.01	84.83	-0.13
	01/10/96				16.52	84.32	-0.51
	04/09/96				16.70	84.14	-0.18
	07/21/96				17.26	83.58	-0.56
	10/21/96				15.62	85.22	1.64
	01/21/97				15.21	85.63	0.41
	04/08/97				15.30	85.54	-0.09
	07/29/97				16.01	84.83	-0.71
	10/16/97				15.01	85.83	1.00
	01/06/98				14.69	86.15	0.32
	04/14/98				14.45	86.39	0.24
	07/17/98				15.62	85.22	-1.17
	10/27/98				15.77	85.07	-0.15
	02/09/99				16.34	84.50	-0.57
	04/21/99				15.57	85.27	0.77
	07/13/99				13.66	87.18	1.91
	10/19/99				15.04	85.80	-1.38
MW-7	01/23/91	35.00	Protective Casing	100.23	19.01	81.22	
	09/13/91				17.43	82.80	1.58
	11/21/91				16.00	84.23	1.43
	03/16/93				14.91	85.32	1.09
	01/09/94				15.99	84.24	-1.08
	04/19/94				15.83	84.40	0.16
	07/19/94				15.24	84.99	0.59
	10/24/94				15.32	84.91	-0.08
	01/24/95				15.54	84.69	-0.22
	04/02/95				16.00	84.23	-0.46
	07/31/95				15.57	84.66	0.43
	10/16/95				15.61	84.62	-0.04
	01/10/96				16.13	84.10	-0.52
	04/09/96				16.30	83.93	-0.17
	07/21/96				16.81	83.42	-0.51
	10/21/96				15.15	85.08	1.66
	01/21/97				14.81	85.42	0.34
	04/08/97				14.91	85.32	-0.10
	07/29/97				15.48	84.75	-0.57
	10/16/97				14.52	85.71	0.96
	01/06/98				13.27	86.96	1.25
	04/14/98				14.02	86.21	-0.75
	07/17/98				15.10	85.13	-1.08
	10/27/98				15.21	85.02	-0.11
	02/09/99				15.86	84.37	-0.65
	04/21/99				14.96	85.27	0.90
	07/13/99				13.03	87.20	1.93
	10/19/99				14.43	85.80	-1.40

**TABLE 1. GROUND-WATER MEASUREMENTS AND ELEVATIONS,
SCHLUMBERGER OILFIELD SERVICES FACILITY, ARTESIA, NEW MEXICO.**

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH (Ft)	MEASURING POINT	MEASURING POINT ELEVATION* (ft)	DEPTH TO GROUND WATER (ft)	STATIC WATER ELEVATION (Ft)	DIFFERENCE FROM PRIOR MEASUREMENT
MW-8	01/23/91	35.00	Protective Casing	101.47	20.16	81.31	
	09/13/91				18.80	82.67	1.36
	11/21/91				17.29	84.18	1.51
	03/16/93				16.03	85.44	1.26
	01/09/94				17.23	84.24	-1.20
	04/19/94				17.05	84.42	0.18
	07/19/94				16.50	84.97	0.55
	10/24/94				16.56	84.91	-0.06
	01/24/95				16.79	84.68	-0.23
	04/02/95				17.24	84.23	-0.45
	07/31/95				16.94	84.53	0.30
	10/16/95				16.88	84.59	0.06
	01/10/96				17.38	84.09	-0.50
	04/09/96				17.54	83.93	-0.16
	07/21/96				18.10	83.37	-0.56
	10/21/96				16.40	85.07	1.70
	11/22/96				16.42	85.05	-0.02
	01/21/97				16.05	85.42	0.37
	04/08/97				16.11	85.36	-0.06
	07/29/97				16.69	84.78	-0.58
	10/16/97				15.69	85.78	1.00
	01/06/98				15.38	86.09	0.31
	04/14/98				15.15	86.32	0.23
	07/17/98				16.29	85.18	-1.14
	10/27/98				16.39	85.08	-0.10
	02/09/99				17.02	84.45	-0.63
	04/21/99				16.08	85.39	0.94
	07/13/99				14.13	87.34	1.95
	10/19/99				15.56	85.91	-1.43
MW-9	01/26/91	30.00	Protective Casing	102.18	20.08	82.10	
	09/13/91				18.93	83.25	1.15
	11/21/91				17.35	84.83	1.58
	03/16/93				16.19	85.99	1.16
	01/09/94				17.31	84.87	-1.12
	04/19/94				17.33	84.85	-0.02
	07/19/94				16.85	85.33	0.48
	10/24/94				17.05	85.13	-0.20
	01/24/95				16.92	85.26	0.13
	04/02/95				17.23	84.95	-0.31
	07/31/95				17.30	84.88	-0.07
	10/16/95				17.16	85.02	0.14
	01/10/96				17.39	84.79	-0.23
	04/09/96				17.58	84.60	-0.19
	07/21/96				18.38	83.80	-0.80
	10/21/96				16.65	85.53	1.73
	01/21/97				16.12	86.06	0.53
	04/08/97				16.04	86.14	0.08
	07/29/97				16.67	85.51	-0.63
	10/16/97				15.29	86.89	1.38
	01/06/98				14.78	87.40	0.51
	04/14/98				14.89	87.29	-0.11
	07/17/98				16.30	85.88	-1.41
	10/27/98				16.62	85.56	-0.32
	02/09/99				17.14	85.04	-0.52
	04/21/99				16.38	85.80	0.76
	07/13/99				14.27	87.91	2.11
	10/19/99				15.75	86.43	-1.48
MW-10	01/26/91	30.00	Protective Casing	101.34	19.68	81.66	
	09/13/91				18.56	82.78	1.12
	11/21/91				16.96	84.38	1.60
	03/16/93				15.64	85.70	1.32
	01/09/94				16.89	84.45	-1.25
	04/19/94				16.73	84.61	0.16
	07/19/94				16.29	85.05	0.44
	10/24/94				16.39	84.95	-0.10

**TABLE 1. GROUND-WATER MEASUREMENTS AND ELEVATIONS,
SCHLUMBERGER OILFIELD SERVICES FACILITY, ARTESIA, NEW MEXICO.**

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH (Ft)	MEASURING POINT	MEASURING POINT ELEVATION* (ft)	DEPTH TO GROUND WATER (ft)	STATIC WATER ELEVATION (Ft)	DIFFERENCE FROM PRIOR MEASUREMENT
MW-10 Cont.	01/24/95				16.48	84.86	-0.09
	04/02/95				16.88	84.46	-0.40
	07/31/95				16.82	84.52	0.06
	10/16/95				16.65	84.69	0.17
	01/10/96				17.01	84.33	-0.36
	04/09/96				17.20	84.14	-0.19
	07/21/96				17.85	83.49	-0.65
	10/21/96				16.13	85.21	1.72
	01/21/97				15.73	85.61	0.40
	04/08/97				15.70	85.64	0.03
	07/29/97				16.28	85.06	-0.58
	10/16/97				15.16	86.18	1.12
	01/06/98				14.74	86.60	0.42
	04/14/98				14.65	86.69	0.09
	07/17/98				15.90	85.44	-1.25
	10/27/98				16.04	85.30	-0.14
	02/09/99				16.61	84.73	-0.57
	04/21/99				15.68	85.66	0.93
	07/13/99				13.68	87.66	2.00
	10/19/99				15.15	86.19	-1.47
MW-11	01/26/91	30.00	Protective Casing	100.60	19.27	81.33	
	09/13/91				17.81	82.79	1.46
	11/21/91				16.35	84.25	1.46
	03/16/93				15.20	85.40	1.15
	01/09/94				16.31	84.29	-1.11
	04/19/94				16.17	84.43	0.14
	07/19/94				15.63	84.97	0.54
	10/24/94				15.72	84.88	-0.09
	01/24/95				15.89	84.71	-0.17
	04/02/95				16.33	84.27	-0.44
	07/31/95				16.03	84.57	0.30
	10/16/95				16.00	84.60	0.03
	01/10/96				16.45	84.15	-0.45
	04/09/96				16.62	83.98	-0.17
	07/21/96				17.21	83.39	-0.59
	10/21/96				15.52	85.08	1.69
	01/21/97				15.15	85.45	0.37
	04/08/97				15.19	85.41	-0.04
	07/29/97				15.78	84.82	-0.59
	10/16/97				14.75	85.85	1.03
	01/06/98				14.44	86.16	0.31
	04/14/98				14.22	86.38	0.22
	07/17/98				15.41	85.19	-1.19
	10/27/98				15.50	85.10	-0.09
	02/09/99				16.11	84.49	-0.61
	04/21/99				15.21	85.39	0.90
	07/13/99				13.25	87.35	1.96
	10/19/99				14.68	85.92	-1.43
MW-12	01/26/91	34.00	Protective Casing	100.69	19.24	81.45	
	09/13/91				17.59	83.10	1.65
	11/21/91				16.21	84.48	1.38
	03/16/93				15.22	85.47	0.99
	01/09/94				16.25	84.44	-1.03
	04/19/94				16.13	84.56	0.12
	07/19/94				15.63	85.06	0.50
	10/24/94				15.73	84.96	-0.10
	01/24/95				15.80	84.89	-0.07
	04/02/95				16.23	84.46	-0.43
	07/31/95				15.96	84.73	0.27
	10/16/95				15.93	84.76	0.03
	01/10/96				16.35	84.34	-0.42
	04/09/96				16.52	84.17	-0.17
	07/21/96				17.15	83.54	-0.63
	10/21/96				15.48	85.21	1.67
	01/21/97				15.04	85.65	0.44

**TABLE 1. GROUND-WATER MEASUREMENTS AND ELEVATIONS,
SCHLUMBERGER OILFIELD SERVICES FACILITY, ARTESIA, NEW MEXICO.**

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH (Ft)	MEASURING POINT	MEASURING POINT ELEVATION* (ft)	DEPTH TO GROUND WATER (ft)	STATIC WATER ELEVATION (Ft)	DIFFERENCE FROM PRIOR MEASUREMENT
MW-12 Cont.	04/08/97				15.10	85.59	-0.06
	07/29/97				15.73	84.96	-0.63
	10/16/97				14.57	86.12	1.16
	01/06/98				14.22	86.47	0.35
	04/14/98				14.09	86.60	0.13
	07/17/98				15.35	85.34	-1.26
	10/27/98				15.36	85.33	-0.01
	02/09/99				16.00	84.69	-0.64
	04/21/99				15.19	85.50	0.81
	07/13/99				13.12	87.57	2.07
	10/19/99				14.63	86.06	-1.51
MW-13	09/13/91	45.00	Protective Casing	99.25	15.10	84.15	
	11/21/91				13.95	85.30	1.15
	03/16/93				13.22	86.03	0.73
	01/09/94				14.03	85.22	-0.81
	04/19/94				13.90	85.35	0.13
	07/20/94				13.70	85.55	0.20
	10/24/94				13.86	85.39	-0.16
	01/24/95				13.56	85.69	0.30
	04/02/95				13.87	85.38	-0.31
	07/31/95				13.84	85.41	0.03
	10/16/95				13.83	85.42	0.01
	01/10/96				14.02	85.23	-0.19
	04/09/96				14.20	85.05	-0.18
	07/20/96				15.04	84.21	-0.84
	10/21/96				13.31	85.94	1.73
	01/21/97				12.70	86.55	0.61
	04/08/97				12.48	86.77	0.22
	07/29/97				13.43	85.82	-0.95
	10/16/97				12.02	87.23	1.41
	01/06/98				11.44	87.81	0.58
	04/14/98				11.50	87.75	-0.06
	07/17/98				13.10	86.15	-1.60
	10/27/98				13.58	85.67	-0.48
	02/09/99				13.81	85.44	-0.23
	04/21/99				13.22	86.03	0.59
	07/13/99				11.08	88.17	2.14
	10/20/99				12.64	86.61	-1.56
MW-14	09/13/91	35.00	Protective Casing	98.74	14.60	84.14	
	11/21/91				13.61	85.13	0.99
	03/16/93				13.00	85.74	0.61
	01/09/94				13.71	85.03	-0.71
	04/19/94				13.63	85.11	0.08
	07/20/94				13.39	85.35	0.24
	10/24/94				13.48	85.26	-0.09
	01/25/95				13.26	85.48	0.22
	04/02/95				13.61	85.13	-0.35
	07/31/95				13.44	85.30	0.17
	10/16/95				13.52	85.22	-0.08
	01/10/96				13.76	84.98	-0.24
	04/09/96				13.96	84.78	-0.20
	07/20/96				14.74	84.00	-0.78
	10/21/96				13.03	85.71	1.71
	01/21/97				12.47	86.27	0.56
	04/08/97				12.44	86.30	0.03
	07/29/97				13.30	85.44	-0.86
	10/16/97				11.93	86.81	1.37
	01/06/98				11.46	87.28	0.47
	04/14/98				11.48	87.26	-0.02
	07/17/98				12.94	85.80	-1.46
	10/27/98				13.25	85.49	-0.31
	02/09/99				13.59	85.15	-0.34
	04/21/99				12.96	85.78	0.63
	07/13/99				10.85	87.89	2.11
	10/20/99				12.42	86.32	-1.57

**TABLE 1. GROUND-WATER MEASUREMENTS AND ELEVATIONS,
SCHLUMBERGER OILFIELD SERVICES FACILITY, ARTESIA, NEW MEXICO.**

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH (Ft)	MEASURING POINT	MEASURING POINT ELEVATION* (ft)	DEPTH TO GROUND WATER (ft)	STATIC WATER ELEVATION (Ft)	DIFFERENCE FROM PRIOR MEASUREMENT
MW-15	09/13/91	34.00	Protective Casing	100.05	16.30	83.75	
	11/21/91				15.01	85.04	1.29
	03/16/93				13.95	86.10	1.06
	01/09/94				14.91	85.14	-0.96
	04/19/94				14.80	85.25	0.11
	07/20/94				14.56	85.49	0.24
	10/24/94				14.73	85.32	-0.17
	** 01/24/95				16.00	84.05	-1.27
	04/02/95				14.80	85.25	1.20
	07/31/95				14.82	85.23	-0.02
	10/16/95				14.74	85.31	0.08
	01/10/96				14.95	85.10	-0.21
	04/09/96				15.11	84.94	-0.16
	07/20/96				15.96	84.09	-0.85
	10/21/96				14.22	85.83	1.74
	01/21/97				13.64	86.41	0.58
	04/08/97				13.53	86.52	0.11
	07/29/97				14.32	85.73	-0.79
	10/16/97				12.90	87.15	1.42
	01/06/98				12.30	87.75	0.60
	04/14/98				12.38	87.67	-0.08
	07/17/98				13.93	86.12	-1.55
	10/27/98				14.38	85.67	-0.45
	02/09/99				14.68	85.37	-0.30
	04/21/99				14.03	86.02	0.65
	07/13/99				11.90	88.15	2.13
	10/20/99				13.42	86.63	-1.52
MW-17D	04/02/95	19.00	Protective Casing	101.29	16.80	84.49	
	07/31/95				16.48	84.81	0.32
	10/16/95				16.51	84.78	-0.03
	01/10/96				16.90	84.39	-0.39
	04/09/96				17.10	84.19	-0.20
	07/21/96				17.70	83.59	-0.60
	10/21/96				16.02	85.27	1.68
	01/21/97				15.60	85.69	0.42
	04/08/97				15.64	85.65	-0.04
	07/29/97				16.32	84.97	-0.68
	10/16/97				15.11	86.18	1.21
	01/06/98				14.80	86.49	0.31
	04/14/98				14.68	86.61	0.12
	07/17/98				15.92	85.37	-1.24
	10/27/98				15.95	85.34	-0.03
	02/09/99				16.63	84.66	-0.68
	04/21/99				15.82	85.47	0.81
	07/13/99				13.77	87.52	2.05
	10/19/99				15.32	85.97	-1.55
MW-17A	04/02/95	26.00	Protective Casing	100.57	16.05	84.52	
	07/31/95				15.75	84.82	0.30
	10/16/95				15.77	84.80	-0.02
	01/10/96				16.18	84.39	-0.41
	04/09/96				16.37	84.20	-0.19
	07/21/96				16.98	83.59	-0.61
	10/21/96				15.30	85.27	1.68
	01/21/97				14.88	85.69	0.42
	04/08/97				14.92	85.65	-0.04
	07/29/97				15.59	84.98	-0.67
	10/16/97				14.41	86.16	1.18
	01/06/98				14.09	86.48	0.32
	04/14/98				13.95	86.62	0.14
	07/17/98				15.20	85.37	-1.25
	10/27/98				15.23	85.34	-0.03
	02/09/99				15.88	84.69	-0.65
	04/21/99				15.10	85.47	0.78
	07/13/99				13.02	87.55	2.08
	10/19/99				14.54	86.03	-1.52

**TABLE 1. GROUND-WATER MEASUREMENTS AND ELEVATIONS,
SCHLUMBERGER OILFIELD SERVICES FACILITY, ARTESIA, NEW MEXICO.**

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH (Ft)	MEASURING POINT	MEASURING POINT ELEVATION* (ft)	DEPTH TO GROUND WATER (ft)	STATIC WATER ELEVATION (Ft)	DIFFERENCE FROM PRIOR MEASUREMENT
MW-17B	04/02/95	34.00	Protective Casing	101.28	16.79	84.49	
	07/31/95				16.50	84.78	0.29
	10/16/95				16.51	84.77	-0.01
	01/10/96				16.92	84.36	-0.41
	04/09/96				17.10	84.18	-0.18
	07/21/96				17.71	83.57	-0.61
	10/21/96				16.02	85.26	1.69
	01/21/97				15.64	85.64	0.38
	04/08/97				15.67	85.61	-0.03
	07/29/97				16.30	84.98	-0.63
	10/16/97				15.16	86.12	1.14
	01/06/98				14.84	86.44	0.32
	04/14/98				14.70	86.58	0.14
	07/17/98				15.92	85.36	-1.22
	10/27/98				16.00	85.28	-0.08
	02/09/99				16.62	84.66	-0.62
	04/21/99				15.79	85.49	0.83
	07/13/99				13.77	87.51	2.02
	10/19/99				15.26	86.02	-1.49
MW-17C	04/02/95	61.00	Protective Casing	101.33	16.93	84.40	
	07/31/95				16.66	84.67	0.27
	10/16/95				16.64	84.69	0.02
	01/10/96				17.08	84.25	-0.44
	04/09/96				17.25	84.08	-0.17
	07/21/96				17.85	83.48	-0.60
	10/21/96				16.17	85.16	1.68
	01/21/97				15.75	85.58	0.42
	04/08/97				15.80	85.53	-0.05
	07/29/97				16.46	84.87	-0.66
	10/16/97				15.33	86.00	1.13
	01/06/98				15.00	86.33	0.33
	04/14/98				14.85	86.48	0.15
	07/17/98				16.09	85.24	-1.24
	10/27/98				16.17	85.16	-0.08
	02/09/99				16.77	84.56	-0.60
	04/21/99				15.95	85.38	0.82
	07/13/99				13.94	87.39	2.01
	10/19/99				15.43	85.90	-1.49
MW-18	04/02/95	28.00	Protective Casing	98.72	14.77	83.95	
	07/31/95				14.21	84.51	0.56
	10/16/95				14.25	84.47	-0.04
	01/10/96				14.90	83.82	-0.65
	04/09/96				15.05	83.67	-0.15
	07/21/96				15.44	83.28	-0.39
	10/21/96				13.78	84.94	1.66
	11/22/96				13.84	84.88	-0.06
	01/21/97				13.54	85.18	0.30
	04/08/97				13.66	85.06	-0.12
	07/29/97				14.13	84.59	-0.47
	10/16/97				13.34	85.38	0.79
	01/06/98				13.13	85.59	0.21
	04/14/98				12.79	85.93	0.34
	07/17/98				13.75	84.97	-0.96
	10/27/98				13.82	84.90	-0.07
	02/09/99				14.58	84.14	-0.76
	04/21/99				13.58	85.14	1.00
	07/13/99				11.66	87.06	1.92
	10/19/99				13.01	85.71	-1.35
MW-19	04/02/95	28.00	Protective Casing	99.08	14.86	84.22	
	07/31/95				14.29	84.79	0.57
	10/16/95				14.39	84.69	-0.10
	01/10/96				14.98	84.10	-0.59
	04/09/96				15.14	83.94	-0.16
	07/21/96				15.62	83.46	-0.48

**TABLE 1. GROUND-WATER MEASUREMENTS AND ELEVATIONS,
SCHLUMBERGER OILFIELD SERVICES FACILITY, ARTESIA, NEW MEXICO.**

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH (Ft)	MEASURING POINT	MEASURING POINT ELEVATION* (ft)	DEPTH TO GROUND WATER (ft)	STATIC WATER ELEVATION (Ft)	DIFFERENCE FROM PRIOR MEASUREMENT
MW-19 Cont.	10/21/96				14.00	85.08	1.62
	11/22/96				14.03	85.05	-0.03
	01/21/97				13.69	85.39	0.34
	04/08/97				13.76	85.32	-0.07
	07/29/97				14.37	84.71	-0.61
	10/16/97				13.47	85.61	0.90
	01/06/98				13.21	85.87	0.26
	04/14/98				12.90	86.18	0.31
	07/17/98				13.96	85.12	-1.06
	10/27/98				14.11	84.97	-0.15
	02/09/99				14.74	84.34	-0.63
	04/21/99				13.91	85.17	0.83
MW-20	07/13/99				11.99	87.09	1.92
	10/19/99				13.35	85.73	-1.36
	11/22/96	28.00	Protective Casing	101.09	16.28	84.81	
	01/21/97				16.08	85.01	0.20
	04/08/97				16.04	85.05	0.04
	07/29/97				16.46	84.63	-0.42
	10/16/97				15.76	85.33	0.70
	01/06/98				15.61	85.48	0.15
	04/14/98				15.13	85.96	0.48
	07/17/98				16.15	84.94	-1.02
	10/27/98				16.07	85.02	0.08
	02/09/99				16.94	84.15	-0.87
MW-21	04/21/99				15.48	85.61	1.46
	07/13/99				13.50	87.59	1.98
	10/19/99				15.25	85.84	-1.75
	11/22/96	25.00	Protective Casing	98.88	14.36	84.52	
	01/21/97				14.26	84.62	0.10
	04/08/97			98.89	14.41	84.48	-0.14
	07/29/97				14.54	84.35	-0.13
	10/16/97				14.18	84.71	0.36
	01/06/98				14.17	84.72	0.01
	04/14/98				13.60	85.29	0.57
	07/17/98				14.21	84.68	-0.61
	10/27/98				14.22	84.67	-0.01
MW-22	02/09/99				15.29	83.60	-1.07
	04/21/99				13.94	84.95	1.35
	07/13/99				12.03	86.86	1.91
	10/19/99				13.41	85.48	-1.38
	11/22/96	24.50	Protective Casing	97.16	12.88	84.28	
	01/21/97				12.94	84.22	-0.06
	04/08/97			97.14	13.42	83.72	-0.50
	07/29/97				13.16	83.98	0.26
	10/16/97				13.23	83.91	-0.07
	01/06/98				13.46	83.68	-0.23
	04/14/98				12.80	84.34	0.66
	07/17/98				12.65	84.49	0.15
MW-23	10/27/98				12.90	84.24	-0.25
	02/09/99				14.35	82.79	-1.45
	04/21/99				13.15	83.99	1.20
	07/13/99				11.45	85.69	1.70
	10/19/99				12.22	84.92	-0.77
	11/22/96	25.00	Protective Casing	97.33	12.72	84.61	
	01/21/97				12.59	84.74	0.13
	04/08/97			97.30	13.07	84.23	-0.51
	07/29/97				13.14	84.16	-0.07
	10/16/97				13.06	84.24	0.08
	01/06/98				13.13	84.17	-0.07
	04/14/98				12.52	84.78	0.61
MW-23	07/17/98				12.64	84.66	-0.12
	10/27/98				12.84	84.46	-0.20
	02/09/99				14.16	83.14	-1.32

**TABLE 1. GROUND-WATER MEASUREMENTS AND ELEVATIONS,
SCHLUMBERGER OILFIELD SERVICES FACILITY, ARTESIA, NEW MEXICO.**

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH (Ft)	MEASURING POINT	MEASURING POINT ELEVATION* (ft)	DEPTH TO GROUND WATER (ft)	STATIC WATER ELEVATION (Ft)	DIFFERENCE FROM PRIOR MEASUREMENT
MW-23 Cont.	04/21/99				13.25	84.05	0.91
	07/13/99				11.55	85.75	1.70
	10/19/99				12.39	84.91	-0.84
MW-24	11/22/96	27.00	Protective Casing	103.42	17.91	85.51	
	01/21/97				17.56	85.86	0.35
	04/08/97			103.41	17.40	86.01	0.15
	07/29/97				17.72	85.69	-0.32
	10/16/97				16.58	86.83	1.14
	01/06/98				16.01	87.40	0.57
	04/14/98				16.17	87.24	-0.16
	07/17/98				17.49	85.92	-1.32
	10/27/98				17.40	86.01	0.09
	02/09/99				18.09	85.32	-0.69
	04/21/99				16.98	86.43	1.11
	07/13/99				14.88	88.53	2.10
	10/19/99				16.51	86.90	-1.63
MW-25	04/08/97	25.00	Protective Casing	97.64	14.23	83.41	-
	07/29/97				13.77	83.87	0.46
	10/16/97				13.99	83.65	-0.22
	01/06/98				14.37	83.27	-0.38
	04/14/98				13.65	83.99	0.72
	07/17/98				13.26	84.38	0.39
	10/27/98				13.57	84.07	-0.31
	02/09/99				15.17	82.47	-1.60
	04/21/99				13.75	83.89	1.42
	07/13/99				12.16	85.48	1.59
	10/19/99				12.81	84.83	-0.65
MW-26	04/08/97	25.00	Protective Casing	96.11	13.06	83.05	-
	07/29/97				12.23	83.88	0.83
	10/16/97				12.75	83.36	-0.52
	01/06/98				13.40	82.71	-0.65
	04/14/98				12.61	83.50	0.79
	07/17/98				11.64	84.47	0.97
	10/27/98				12.16	83.95	-0.52
	02/09/99				14.13	81.98	-1.97
	04/21/99				12.41	83.70	1.72
	07/13/99				11.11	85.00	1.30
	10/19/99				11.40	84.71	-0.29
MW-27	04/08/97	25.00	Protective Casing	96.17	13.06	83.11	-
	07/29/97				12.21	83.96	0.85
	10/16/97				12.79	83.38	-0.58
	01/06/98				13.56	82.61	-0.77
	04/14/98				12.75	83.42	0.81
	07/17/98				11.53	84.64	1.22
	10/27/98				12.09	84.08	-0.56
	02/09/99				14.29	81.88	-2.20
	04/21/99				12.53	83.64	1.76
	07/13/99				11.41	84.76	1.12
	10/19/99				11.48	84.69	-0.07
MW-28	07/17/98	25.00	Protective Casing	97.93	14.32	83.61	-
	10/27/98				14.43	83.50	-0.11
	02/09/99				15.71	82.22	-1.28
	04/21/99				14.28	83.65	1.43
	07/13/99				12.41	85.52	1.87
	10/19/99				13.48	84.45	-1.07

**TABLE 1. GROUND-WATER MEASUREMENTS AND ELEVATIONS,
SCHLUMBERGER OILFIELD SERVICES FACILITY, ARTESIA, NEW MEXICO.**

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH (Ft)	MEASURING POINT	MEASURING POINT ELEVATION* (ft)	DEPTH TO GROUND WATER (ft)	STATIC WATER ELEVATION (Ft)	DIFFERENCE FROM PRIOR MEASUREMENT
MW-29	07/17/98	25.00	Protective Casing	97.04	14.07	82.97	-
	10/27/98				14.36	82.68	-0.29
	02/09/99				15.83	81.21	-1.47
	04/21/99				14.48	82.56	1.35
	07/13/99				12.84	84.20	1.64
	10/19/99				13.35	83.69	-0.51
MW-30	07/17/98	25.00	Protective Casing	96.58	12.68	83.90	-
	10/27/98				13.12	83.46	-0.44
	02/09/99				14.88	81.70	-1.76
	04/21/99				13.38	83.20	1.50
	07/13/99				11.85	84.73	1.53
	10/19/99				12.28	84.30	-0.43

NOTES:

NM = not measured

* = measured from a temporary benchmark of arbitrary elevation = 100.00 feet.
Benchmark is located on the concrete right up against the east shop wall,
at the northeast corner of the shop.

** = water level measurement may be in error

TABLE 2. SUMMARY OF LABORATORY ANALYTICAL RESULTS - GROUND-WATER SAMPLES,
SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

WELL NUMBER	SAMPLE DATE	BENZENE (mg/L)	ETHYL- BENZENE (mg/L)	TOLUENE (mg/L)	XYLENES (mg/L)	1,1-DCA (mg/L)	1,1-DCE (mg/L)	1,1,1- TCA (mg/L)	TCE (mg/L)	PCE (mg/L)
MW-4 Cont.	01/24/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/09/97	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
	07/30/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/17/97	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
	10/28/98	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
	04/22/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/20/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	01/26/91	0.014	ND(0.001)	ND(0.001)	ND(0.005)	0.004	0.002	0.001	ND(0.001)	0.010
	09/15/91	ND(0.001)	0.001	ND(0.001)	ND(0.005)	0.005	ND(0.001)	ND(0.001)	ND(0.001)	0.018
	11/22/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.005	ND(0.001)	ND(0.001)	ND(0.001)	0.018
dup.	03/16/93	0.078	0.007	ND(0.001)	ND(0.005)	0.013	0.003	ND(0.001)	0.001	0.026
	01/10/94	0.025	ND(0.001)	ND(0.001)	ND(0.005)	0.008	ND(0.001)	ND(0.001)	ND(0.001)	0.026
	04/19/94	0.070	0.011	ND(0.005)	ND(0.005)	0.008	ND(0.005)	ND(0.005)	0.002	0.015
	07/20/94	0.220	0.041	ND(0.005)	ND(0.005)	0.011	ND(0.005)	ND(0.005)	0.004	0.039
	10/25/94	0.320	0.076	ND(0.005)	0.001	0.026	0.002	ND(0.005)	0.006	0.039
	04/03/95	0.240	0.059	ND(0.005)	ND(0.005)	0.020	0.002	ND(0.005)	0.008	0.043
	07/25/95	0.460	0.130	ND(0.005)	ND(0.005)	0.023	0.002	ND(0.005)	0.018	0.093
	04/03/95	0.390	0.087	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.015	0.062
	08/01/95	0.170	0.082	ND(0.005)	ND(0.005)	0.013	ND(0.005)	ND(0.005)	0.018	0.049
	10/18/95	0.200	0.093	ND(0.005)	ND(0.005)	0.011	ND(0.005)	ND(0.005)	0.021	0.054
dup.	01/11/96	0.078	0.012	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.008	0.025
	04/13/96	0.068	0.037	ND(0.005)	0.027	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.025
	07/21/96	0.092	0.057	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.025
	10/22/96	0.066	0.023	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.020
	01/24/97	0.031	0.025	ND(0.001)	ND(0.002)	0.002	ND(0.001)	ND(0.001)	0.003	0.019
	04/09/97	0.040	0.040	ND(0.002)	ND(0.004)	0.003	ND(0.002)	ND(0.002)	0.004	0.028
	07/30/97	0.018	0.044	ND(0.002)	ND(0.004)	0.002	ND(0.002)	ND(0.002)	0.003	0.029
	10/17/97	0.016	0.048	ND(0.002)	ND(0.004)	0.001	ND(0.002)	ND(0.002)	0.004	0.033
	10/28/98	0.006	0.009	ND(0.002)	ND(0.004)	ND(0.002)	ND(0.002)	ND(0.002)	0.006	0.027
	10/20/99	0.012	0.008	0.002	ND(0.002)	0.003	ND(0.001)	ND(0.001)	0.007	0.034
MW-6	01/26/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.007	0.170	0.007	ND(0.001)	0.083
	09/15/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.006	0.084	ND(0.001)	ND(0.001)	0.043
	11/22/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.005	0.064	ND(0.001)	ND(0.001)	0.035
	03/16/93	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.007	0.098	0.001	ND(0.001)	0.056
	01/10/94	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.017	0.140	0.002	ND(0.001)	0.120
	04/19/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.013	0.070	0.002	ND(0.005)	0.072
	07/20/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.009	0.098	0.001	ND(0.005)	0.065
	10/20/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.013	0.110	0.001	ND(0.005)	0.073
	01/25/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.012	0.079	ND(0.005)	ND(0.005)	0.059
	04/03/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.012	0.065	ND(0.005)	ND(0.005)	0.057
dup.	08/01/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.015	0.074	ND(0.005)	ND(0.005)	0.048
	01/18/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.013	0.060	ND(0.005)	ND(0.005)	0.030
	07/11/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.011	0.051	ND(0.005)	ND(0.005)	0.029
	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.012	0.042	ND(0.005)	ND(0.005)	0.022
	07/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.011	0.037	ND(0.005)	ND(0.005)	0.021
	10/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.013	0.041	ND(0.005)	ND(0.005)	0.016
	01/24/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.010	0.025	ND(0.001)	ND(0.001)	0.006
	04/09/97	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	0.010	0.025	ND(0.002)	ND(0.002)	0.009
	01/26/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.007	0.170	0.007	ND(0.001)	0.083
	09/15/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.006	0.084	ND(0.001)	ND(0.001)	0.043

TABLE 2. SUMMARY OF LABORATORY ANALYTICAL RESULTS - GROUND-WATER SAMPLES, SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

WELL NUMBER	SAMPLE DATE	BENZENE (mg/L)	ETHYL-BENZENE (mg/L)	TOLUENE (mg/L)	XYLENES (mg/L)	1,1-DCA (mg/L)	1,2-DCA (mg/L)	1,1-DCE (mg/L)	1,1,1-TCA (mg/L)	TCE (mg/L)	PCE (mg/L)
MW-6 Cont.	07/30/97	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	0.006	ND(0.002)	0.016	ND(0.002)	ND(0.002)	0.008
	10/17/97	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	0.011	ND(0.002)	0.023	ND(0.002)	ND(0.002)	0.007
	10/28/98	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	0.007	ND(0.002)	0.016	ND(0.002)	ND(0.002)	0.008
	10/19/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.010	ND(0.001)	0.024	ND(0.001)	ND(0.001)	0.010
MW-7	01/26/91	0.006	ND(0.001)	ND(0.001)	ND(0.005)	0.021	ND(0.001)	0.260	0.010	0.068	0.200
	09/15/91	0.009	ND(0.001)	ND(0.001)	ND(0.005)	0.038	ND(0.001)	0.320	0.005	0.069	0.270
dup.	09/15/91	0.009	ND(0.001)	ND(0.001)	ND(0.005)	0.034	ND(0.001)	0.310	0.006	0.069	0.280
	11/22/91	0.009	ND(0.005)	ND(0.005)	ND(0.025)	0.035	ND(0.005)	0.360	ND(0.005)	0.053	0.310
	03/16/93	0.007	ND(0.001)	ND(0.001)	ND(0.005)	0.027	ND(0.001)	0.280	0.002	0.050	0.160
	01/10/94	0.005	ND(0.001)	ND(0.001)	ND(0.005)	0.023	ND(0.001)	0.210	0.004	0.046	0.160
	04/19/94	0.007	ND(0.005)	ND(0.005)	ND(0.005)	0.021	ND(0.005)	0.120	0.003	0.038	0.120
	07/20/94	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.018	ND(0.005)	0.220	0.003	0.040	0.160
	10/25/94	0.007	ND(0.005)	ND(0.005)	ND(0.005)	0.033	ND(0.005)	0.230	ND(0.005)	0.050	0.240
dup.	10/25/94	0.006	ND(0.025)	ND(0.025)	ND(0.025)	0.026	ND(0.025)	0.200	ND(0.025)	0.045	0.230
	01/25/95	0.005	ND(0.005)	ND(0.005)	ND(0.005)	0.027	ND(0.005)	0.210	0.002	0.041	0.330
	04/03/95	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.029	ND(0.005)	0.290	ND(0.005)	0.038	0.260
	08/01/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.038	ND(0.005)	0.300	ND(0.005)	0.051	0.250
	10/18/95	0.005	ND(0.005)	ND(0.005)	ND(0.005)	0.024	ND(0.005)	0.300	0.002	0.045	0.300
	01/11/96	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.027	ND(0.005)	0.260	ND(0.005)	0.035	0.250
	04/13/96	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.027	ND(0.005)	0.370	ND(0.005)	0.030	0.260
	07/22/96	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.029	ND(0.005)	0.280	ND(0.005)	0.026	0.220
	10/22/96	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.028	ND(0.010)	0.350	ND(0.010)	0.023	0.260
	01/24/97	0.005	ND(0.001)	ND(0.001)	ND(0.002)	0.021	0.001	0.244	0.002	0.019	0.203
	04/09/97	0.005	ND(0.002)	ND(0.002)	ND(0.004)	0.022	ND(0.002)	0.186	ND(0.002)	0.017	0.148
	07/30/97	0.005	ND(0.010)	ND(0.010)	ND(0.020)	0.023	ND(0.010)	0.236	ND(0.010)	0.019	0.255
	10/17/97	0.005	ND(0.010)	ND(0.010)	ND(0.020)	0.029	ND(0.010)	0.255	ND(0.010)	0.020	0.153
	10/28/98	0.004	ND(0.010)	ND(0.010)	ND(0.020)	0.024	ND(0.010)	0.193	ND(0.010)	0.031	0.251
	04/22/99	0.005	ND(0.005)	ND(0.005)	ND(0.010)	0.034	ND(0.005)	0.255	ND(0.005)	0.043	0.275
	10/19/99	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.010)	0.034	ND(0.005)	0.184	ND(0.005)	0.045	0.198
MW-8	01/26/91	ND(0.001)	ND(0.001)	ND(0.001)	0.005	ND(0.001)	ND(0.001)	0.015	0.004	0.001	0.003
	09/15/91	0.007	ND(0.001)	ND(0.001)	ND(0.005)	0.017	ND(0.001)	0.101	0.007	0.039	0.050
	11/22/91	0.004	ND(0.001)	ND(0.001)	ND(0.005)	0.020	ND(0.001)	0.087	0.003	0.045	0.063
	03/16/93	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.004	ND(0.001)	0.054	0.005	0.006	0.009
	01/10/94	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.004	ND(0.001)	0.054	0.004	0.006	0.006
dup.	01/10/94	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.005	ND(0.001)	0.073	0.004	0.008	0.010
	04/19/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.004	ND(0.005)	0.039	0.004	0.004	0.007
	07/20/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.004	ND(0.005)	0.069	0.005	0.006	0.011
	10/25/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.008	ND(0.005)	0.082	ND(0.005)	0.010	0.019
	01/25/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.007	ND(0.005)	0.076	0.006	0.011	0.022
	04/03/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.006	ND(0.005)	0.074	ND(0.005)	0.008	0.017
	08/01/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.015	ND(0.005)	0.110	ND(0.005)	0.023	0.053
	10/18/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.009	ND(0.005)	0.081	0.002	0.015	0.044
	01/11/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.069	ND(0.005)	0.006	0.019
	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.007	ND(0.005)	0.099	ND(0.005)	0.011	0.036
	07/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.006	ND(0.005)	0.087	ND(0.005)	0.010	0.035
	10/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.022	ND(0.005)	0.150	ND(0.005)	0.035	0.089
dup.	10/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.020	ND(0.005)	0.140	ND(0.005)	0.030	0.072
	01/24/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.019	0.001	0.081	0.002	0.017	0.018
dup.	01/24/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.017	0.001	0.088	0.002	0.014	0.017

TABLE 2. SUMMARY OF LABORATORY ANALYTICAL RESULTS - GROUND-WATER SAMPLES, SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

WELL NUMBER	SAMPLE DATE	BENZENE (mg/L)	ETHYL-BENZENE (mg/L)	TOLUENE (mg/L)	XYLENES (mg/L)	1,1-DCA (mg/L)	1,2-DCA (mg/L)	1,1-DCE (mg/L)	1,1,1-TCA (mg/L)	TCE (mg/L)	PCE (mg/L)
MW-8 Cont.	04/09/97	0.001	ND(0.002)	ND(0.002)	ND(0.004)	0.015	ND(0.002)	0.097	ND(0.002)	0.019	0.028
dup.	07/30/97	0.001	ND(0.002)	ND(0.002)	ND(0.004)	0.012	ND(0.002)	0.105	ND(0.002)	0.015	0.048
	07/30/97	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	0.011	ND(0.002)	0.106	0.002	0.015	0.055
	10/17/97	0.001	ND(0.002)	ND(0.002)	ND(0.004)	0.010	ND(0.002)	0.104	ND(0.002)	0.010	0.026
dup.	10/28/98	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.010)	0.003	ND(0.005)	0.111	ND(0.005)	ND(0.005)	0.010
	10/28/98	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	0.003	ND(0.01)	0.128	ND(0.01)	ND(0.01)	0.009
	04/22/99	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.005)	0.003	ND(0.0025)	0.152	0.002	ND(0.0025)	0.007
	10/19/99	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.005)	ND(0.0025)	ND(0.0025)	0.135	ND(0.0025)	ND(0.0025)	0.002
MW-9	01/26/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.022	ND(0.001)	0.002	ND(0.001)	ND(0.001)	0.001
	09/15/91	0.002	0.032	ND(0.001)	ND(0.005)	0.035	ND(0.001)	0.002	ND(0.001)	ND(0.001)	ND(0.001)
	11/22/91	0.004	0.170	ND(0.001)	ND(0.005)	0.029	ND(0.001)	0.002	ND(0.001)	ND(0.001)	0.001
dup.	03/16/93	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.012	ND(0.001)	0.001	ND(0.001)	ND(0.001)	ND(0.001)
	01/10/94	ND(0.001)	0.002	0.002	ND(0.005)	0.012	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/19/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.010	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	07/20/94	ND(0.005)	ND(0.005)	ND(0.005)	0.001	0.017	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	10/25/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.014	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	01/25/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.014	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	04/03/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.015	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	08/01/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.022	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	10/18/95	ND(0.005)	0.016	ND(0.005)	ND(0.005)	0.017	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
*	01/10/96	ND(0.005)	0.032	ND(0.005)	ND(0.005)	0.020	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
*	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.020	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
#	07/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.021	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	10/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.024	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	01/24/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.019	ND(0.001)	0.002	ND(0.001)	0.002	0.001
	04/09/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.022	ND(0.001)	0.002	ND(0.001)	0.002	0.001
	07/30/97	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	0.020	ND(0.002)	0.001	ND(0.002)	0.001	ND(0.002)
	10/17/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.018	ND(0.001)	0.001	ND(0.001)	0.001	ND(0.001)
	10/28/98	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	0.005	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
	10/19/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.004	ND(0.001)	0.001	ND(0.001)	ND(0.001)	ND(0.001)
MW-10	01/26/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	ND(0.001)	ND(0.001)	0.004	ND(0.001)	ND(0.001)	ND(0.001)
	09/15/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	ND(0.001)	ND(0.001)	0.012	0.002	ND(0.001)	ND(0.001)
	11/22/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	ND(0.001)	ND(0.001)	0.029	0.005	ND(0.001)	ND(0.001)
dup.	03/16/93	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	ND(0.001)	ND(0.001)	0.025	0.001	ND(0.001)	ND(0.001)
	01/10/94	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	ND(0.001)	ND(0.001)	0.021	ND(0.001)	ND(0.001)	ND(0.001)
	04/19/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.022	0.001	ND(0.005)	ND(0.005)
	07/20/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.052	0.004	ND(0.005)	ND(0.005)
	10/25/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.051	ND(0.005)	ND(0.005)	ND(0.005)
	01/25/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.042	ND(0.005)	ND(0.005)	ND(0.005)
	04/03/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.057	0.005	ND(0.005)	ND(0.005)
	08/01/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.070	ND(0.005)	ND(0.005)	ND(0.005)
	10/18/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.130	0.007	ND(0.005)	ND(0.005)
	01/10/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.130	0.006	ND(0.005)	ND(0.005)
	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.063	ND(0.005)	ND(0.005)	ND(0.005)
	07/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.170	ND(0.005)	ND(0.005)	ND(0.005)
	10/22/96	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.170	ND(0.005)	ND(0.005)	ND(0.005)
	01/24/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.001	ND(0.001)	0.181	0.005	ND(0.010)	ND(0.010)
	04/09/97	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	0.001	ND(0.002)	0.158	0.004	ND(0.002)	ND(0.002)

TABLE 2. SUMMARY OF LABORATORY ANALYTICAL RESULTS - GROUND-WATER SAMPLES, SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

WELL NUMBER	SAMPLE DATE	BENZENE (mg/L)	ETHYL- BENZENE (mg/L)	TOLUENE (mg/L)	XYLENES (mg/L)	1,1-DCA (mg/L)	1,2-DCA (mg/L)	1,1-DCE (mg/L)	1,1,1- TCA (mg/L)	TCE (mg/L)	PCE (mg/L)
MW-10 Cont.	07/30/97	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.010)	ND(0.005)	ND(0.005)	0.156	0.004	ND(0.005)	ND(0.005)
	10/17/97	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.010)	0.196	0.004	ND(0.010)	ND(0.010)
	10/28/98	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.010)	0.111	ND(0.010)	ND(0.010)	ND(0.010)
	04/22/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	0.098	0.001	ND(0.001)	ND(0.001)
	10/19/99	ND(0.0025)	ND(0.0025)	0.002	ND(0.005)	ND(0.0025)	ND(0.0025)	0.080	ND(0.0025)	ND(0.0025)	ND(0.0025)
MW-11	01/26/91	0.010	ND(0.005)	ND(0.005)	ND(0.025)	0.045	ND(0.005)	0.310	ND(0.005)	0.140	0.360
	09/15/91	0.056	ND(0.001)	ND(0.001)	ND(0.005)	0.068	ND(0.001)	0.470	0.017	0.120	0.330
	11/22/91	0.048	ND(0.001)	ND(0.001)	ND(0.005)	0.052	ND(0.001)	0.390	0.018	0.110	0.320
	03/16/93	0.005	ND(0.001)	ND(0.001)	ND(0.005)	0.040	ND(0.001)	0.220	0.004	0.074	0.160
	01/10/94	0.005	ND(0.001)	ND(0.001)	ND(0.005)	0.042	ND(0.001)	0.250	ND(0.001)	0.083	0.320
dup.	04/19/94	0.009	ND(0.005)	0.002	ND(0.005)	0.042	ND(0.005)	0.170	0.006	0.079	0.170
	07/20/94	ND(0.0025)	ND(0.025)	ND(0.025)	ND(0.025)	0.057	ND(0.025)	0.460	0.010	0.120	0.360
	10/25/94	0.009	ND(0.005)	ND(0.005)	ND(0.005)	0.067	0.001	0.220	ND(0.005)	0.110	0.300
	01/25/95	0.012	ND(0.005)	ND(0.005)	ND(0.005)	0.072	ND(0.005)	0.240	0.014	0.120	0.360
	04/03/95	0.009	ND(0.005)	ND(0.005)	ND(0.005)	0.062	ND(0.005)	0.410	0.013	0.100	0.430
dup.	08/01/95	0.007	ND(0.005)	ND(0.005)	ND(0.005)	0.050	ND(0.005)	0.360	0.014	0.063	0.330
	08/01/95	0.007	ND(0.005)	ND(0.005)	ND(0.005)	0.051	ND(0.005)	0.310	0.015	0.071	0.340
	10/18/95	0.005	ND(0.005)	ND(0.005)	ND(0.005)	0.043	ND(0.005)	0.270	0.010	0.057	0.330
	01/11/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.033	ND(0.005)	0.230	0.011	0.043	0.310
	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.240	ND(0.005)	0.020	0.230
dup.	07/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.035	ND(0.005)	0.200	0.008	0.036	0.260
	10/22/96	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.034	ND(0.010)	0.230	ND(0.010)	0.029	0.260
	01/24/97	0.002	ND(0.001)	ND(0.001)	ND(0.002)	0.029	0.001	0.157	0.008	0.026	0.212
	04/09/97	0.002	ND(0.002)	ND(0.002)	ND(0.004)	0.033	ND(0.002)	0.128	0.008	0.027	0.180
	07/30/97	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.010)	0.032	ND(0.005)	0.102	0.006	0.032	0.170
dup.	10/17/97	0.003	ND(0.010)	ND(0.010)	ND(0.020)	0.048	ND(0.010)	0.142	0.005	0.031	0.063
	01/07/98	0.004	ND(0.010)	ND(0.010)	ND(0.020)	0.054	ND(0.010)	0.145	0.005	0.049	0.176
	01/07/98	0.004	ND(0.010)	ND(0.010)	ND(0.020)	0.061	ND(0.010)	0.155	0.006	0.053	0.200
	04/15/98	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	0.059	ND(0.010)	0.130	ND(0.010)	0.057	0.151
	07/18/98	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	0.071	ND(0.010)	0.120	ND(0.010)	0.064	0.143
dup.	10/28/98	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	0.072	ND(0.010)	0.110	ND(0.010)	0.065	0.129
	02/09/99	0.004	ND(0.001)	ND(0.001)	ND(0.002)	0.070	0.001	0.130	0.002	0.070	0.157
	02/09/99	0.004	ND(0.001)	ND(0.001)	ND(0.002)	0.083	0.001	0.143	0.002	0.071	0.149
	04/22/99	0.004	ND(0.0025)	ND(0.0025)	ND(0.005)	0.090	ND(0.0025)	0.123	ND(0.0025)	0.067	0.117
	07/13/99	0.004	ND(0.0025)	ND(0.0025)	ND(0.005)	0.069	ND(0.0025)	0.116	ND(0.0025)	0.058	0.130
MW-12	10/19/99	0.003	ND(0.0025)	ND(0.0025)	ND(0.005)	0.059	ND(0.0025)	0.094	ND(0.0025)	0.047	0.112
	01/26/91	0.260	0.950	0.230	4.500	0.140	ND(0.025)	ND(0.025)	0.057	0.073	0.042
	09/15/91	0.150	0.620	0.630	2.200	0.120	ND(0.001)	0.300	0.110	0.200	0.061
	11/22/91	0.110	0.430	0.034	0.810	0.110	0.002	0.240	0.100	0.260	0.051
	03/16/93	0.160	0.800	0.014	1.000	0.120	ND(0.001)	0.039	0.055	0.036	0.018
dup.	01/10/94	0.160	0.870	0.026	0.990	0.150	ND(0.01)	0.075	0.053	0.070	0.024
	04/19/94	0.110	0.110	0.049	0.250	0.110	0.002	0.064	0.065	0.073	0.033
	07/20/94	0.160	0.720	0.071	0.610	0.150	ND(0.025)	0.073	0.075	0.088	0.022
	10/25/94	0.096	0.660	ND(0.025)	0.100	0.160	ND(0.025)	0.085	ND(0.025)	0.120	0.015
	01/25/95	0.160	0.680	0.089	0.660	0.190	ND(0.005)	0.120	0.095	0.076	0.069
dup.	01/25/95	0.140	0.850	0.075	0.860	0.150	ND(0.005)	0.090	0.075	0.062	0.053
	04/03/95	0.150	0.790	0.200	1.100	0.160	ND(0.005)	0.110	0.096	0.043	0.056
	08/01/95	0.130	0.700	0.280	1.400	0.170	ND(0.025)	0.150	0.079	0.098	0.059
	10/18/95	0.140	0.990	0.360	2.030	0.170	ND(0.005)	0.100	0.100	0.058	0.050

TABLE 2. SUMMARY OF LABORATORY ANALYTICAL RESULTS - GROUND-WATER SAMPLES, SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

WELL NUMBER	SAMPLE DATE	BENZENE (mg/L)	ETHYL-BENZENE (mg/L)	TOLUENE (mg/L)	XYLENES (mg/L)	1,1-DCA (mg/L)	1,2-DCA (mg/L)	1,1-DCE (mg/L)	1,1,1-TCA (mg/L)	TCE (mg/L)	PCE (mg/L)
MW-12 Cont. * #	01/11/96	0.100	0.680	0.180	1.840	0.140	ND(0.005)	0.097	0.059	0.060	0.048
	04/13/96	0.098	0.620	0.180	0.690	0.150	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.023
	07/22/96	0.130	0.920	0.310	1.790	0.160	ND(0.005)	0.087	0.170	0.045	0.046
	10/22/96	ND(0.1)	0.830	0.190	1.800	0.190	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
	01/24/97	0.093	0.822	0.133	1.738	0.162	ND(0.010)	0.046	0.060	0.037	0.039
dup. MW-12 Cont.	04/09/97	0.086	0.920	0.138	1.869	0.159	ND(0.020)	0.040	0.051	0.046	0.039
	04/09/97	0.079	0.855	0.129	1.837	0.159	ND(0.010)	0.040	0.054	0.047	0.039
	07/30/97	0.090	0.969	0.127	2.294	0.136	ND(0.020)	0.035	0.062	0.036	0.043
	10/17/97	0.178	1.290	0.853	5.540	0.185	ND(0.050)	0.061	0.186	ND(0.050)	0.045
	10/28/98	0.064	1.150	ND(0.1)	0.745	0.141	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
dup. MW-13	04/22/99	0.063	0.953	ND(0.025)	0.612	0.171	ND(0.025)	0.031	0.040	0.034	0.034
	10/19/99	0.051	1.090	0.008	0.546	0.140	ND(0.005)	0.017	0.039	0.022	0.017
	10/19/99	0.049	1.100	ND(0.025)	0.176	0.207	ND(0.025)	0.017	ND(0.025)	0.027	ND(0.025)
					0.151	0.208	ND(0.025)	0.017	ND(0.025)	0.026	ND(0.025)
	09/15/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.030	0.002	0.038	0.005	0.004	0.240
dup.	11/22/91	0.430	ND(0.001)	ND(0.001)	ND(0.005)	0.016	0.001	0.025	0.002	0.002	0.110
	03/16/93	0.033	ND(0.001)	ND(0.001)	ND(0.005)	0.013	ND(0.001)	0.014	ND(0.001)	0.002	0.062
	03/16/93	0.034	ND(0.001)	ND(0.001)	ND(0.005)	0.013	0.001	0.015	ND(0.001)	0.002	0.066
	01/10/94	0.022	ND(0.001)	ND(0.001)	ND(0.005)	0.016	ND(0.001)	0.007	ND(0.001)	0.003	0.055
	04/19/94	0.013	ND(0.005)	ND(0.005)	ND(0.005)	0.011	0.001	0.003	ND(0.005)	0.003	0.032
dup.	07/20/94	0.016	ND(0.005)	ND(0.005)	ND(0.005)	0.016	0.001	0.005	ND(0.005)	0.004	0.034
	10/25/94	0.011	ND(0.005)	ND(0.005)	ND(0.005)	0.013	ND(0.005)	0.004	ND(0.005)	0.004	0.040
	01/22/95	0.008	ND(0.005)	ND(0.005)	ND(0.005)	0.015	ND(0.005)	0.002	ND(0.005)	0.005	0.029
	04/03/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.013	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.022
	08/01/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.017	ND(0.005)	ND(0.005)	ND(0.005)	0.007	0.025
dup.	10/18/95	0.003	ND(0.005)	ND(0.005)	ND(0.005)	0.015	ND(0.005)	ND(0.005)	ND(0.005)	0.008	0.020
	01/11/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.011	ND(0.005)	ND(0.005)	ND(0.005)	0.005	0.015
	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.005	0.011
	07/21/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.009	ND(0.005)	ND(0.005)	ND(0.005)	0.007	0.013
	10/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.007	ND(0.005)	ND(0.005)	ND(0.005)	0.006	0.010
dup.	01/24/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.005	0.001	0.001	ND(0.001)	0.003	0.003
	04/09/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.004	ND(0.001)	0.001	ND(0.001)	0.005	0.005
	04/09/97	0.002	ND(0.001)	ND(0.001)	ND(0.002)	0.005	ND(0.001)	0.001	ND(0.001)	0.006	0.005
	07/30/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.004	ND(0.001)	ND(0.001)	ND(0.001)	0.007	0.009
	10/17/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.003	ND(0.001)	ND(0.001)	ND(0.001)	0.006	0.009
dup.	10/17/97	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	0.003	ND(0.002)	ND(0.002)	ND(0.002)	0.006	0.007
	01/07/98	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.004	ND(0.001)	ND(0.001)	ND(0.001)	0.008	0.011
	04/15/98	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.003	ND(0.001)	ND(0.001)	ND(0.001)	0.007	0.009
	07/18/98	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.005	ND(0.001)	ND(0.001)	ND(0.001)	0.010	0.016
	10/28/98	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.007	ND(0.001)	0.001	ND(0.001)	0.019	0.015
dup.	02/09/99	0.002	ND(0.001)	ND(0.001)	ND(0.002)	0.003	ND(0.001)	ND(0.001)	ND(0.001)	0.008	0.026
	04/22/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.003	ND(0.001)	ND(0.001)	ND(0.001)	0.008	0.009
	07/13/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.003	ND(0.001)	ND(0.001)	ND(0.001)	0.006	0.008
	10/20/99	ND(0.001)	ND(0.001)	0.001	ND(0.002)	0.003	ND(0.001)	ND(0.001)	ND(0.001)	0.006	0.005
MW-14	09/15/91	0.022	ND(0.001)	ND(0.001)	ND(0.005)	0.130	0.002	0.300	0.014	0.002	0.460
	11/22/91	0.002	ND(0.001)	ND(0.001)	ND(0.005)	0.140	0.002	0.310	0.009	0.002	0.400
	11/22/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.110	0.002	0.320	0.010	ND(0.001)	0.440
	03/16/93	0.020	ND(0.001)	ND(0.001)	ND(0.005)	0.080	0.001	0.180	0.004	0.002	0.210
	01/10/94	0.011	ND(0.001)	ND(0.001)	ND(0.005)	0.057	ND(0.001)	0.100	ND(0.001)	0.002	0.300

TABLE 2. SUMMARY OF LABORATORY ANALYTICAL RESULTS - GROUND-WATER SAMPLES, SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

WELL NUMBER	SAMPLE DATE	BENZENE (mg/L)	ETHYL-BENZENE (mg/L)	TOLUENE (mg/L)	XYLENES (mg/L)	1,1-DCA (mg/L)	1,2-DCA (mg/L)	1,1-DCE (mg/L)	1,1,1-TCA (mg/L)	TCE (mg/L)	PCE (mg/L)
MW-14 Cont.	04/19/94	0.005	ND(0.005)	ND(0.005)	ND(0.005)	0.058	ND(0.005)	0.056	0.001	ND(0.005)	0.160
	07/20/94	0.010	ND(0.025)	ND(0.025)	ND(0.025)	0.072	ND(0.025)	0.110	ND(0.025)	ND(0.025)	0.210
	10/25/94	0.010	ND(0.005)	ND(0.005)	ND(0.005)	0.079	0.001	0.094	ND(0.005)	ND(0.005)	0.230
	01/25/95	0.004	ND(0.005)	ND(0.005)	ND(0.005)	0.083	ND(0.005)	0.070	ND(0.005)	ND(0.005)	0.022
	04/03/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.063	ND(0.005)	0.058	ND(0.005)	ND(0.005)	0.130
	08/01/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.074	ND(0.005)	0.072	ND(0.005)	ND(0.005)	0.098
	10/18/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.062	ND(0.005)	0.044	ND(0.005)	ND(0.005)	0.087
	01/11/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.051	ND(0.005)	0.038	ND(0.005)	ND(0.005)	0.061
	01/11/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.053	ND(0.005)	0.040	ND(0.005)	ND(0.005)	0.064
	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.051	ND(0.005)	0.045	ND(0.005)	ND(0.005)	0.057
dup.	07/21/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.048	ND(0.005)	0.037	ND(0.005)	ND(0.005)	0.055
	07/21/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.052	ND(0.005)	0.043	ND(0.005)	ND(0.005)	0.064
	10/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.056	ND(0.005)	0.049	ND(0.005)	ND(0.005)	0.062
	01/24/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.040	0.001	0.023	ND(0.001)	ND(0.001)	0.014
dup.	01/24/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.045	0.001	0.027	ND(0.001)	ND(0.001)	0.010
	04/09/97	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.010)	0.039	ND(0.005)	0.023	ND(0.005)	ND(0.005)	0.024
	07/30/97	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.010)	0.036	ND(0.005)	0.021	ND(0.005)	ND(0.005)	0.043
	10/17/97	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.010)	0.039	ND(0.005)	0.019	ND(0.005)	ND(0.005)	0.048
MW-15	10/28/98	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.010)	0.045	ND(0.005)	0.019	ND(0.005)	ND(0.005)	0.074
	10/20/99	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.002	0.054	ND(0.0025)	0.019	ND(0.0025)	ND(0.0025)	0.080
	09/15/91	0.002	0.010	ND(0.001)	0.006	0.026	0.001	0.005	ND(0.001)	ND(0.001)	0.004
	11/22/91	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)	0.033	0.001	0.009	ND(0.001)	ND(0.001)	0.006
	03/16/93	0.001	0.002	ND(0.001)	ND(0.005)	0.082	0.001	0.013	ND(0.001)	0.006	0.009
	01/10/94	ND(0.001)	0.008	ND(0.001)	ND(0.005)	0.048	ND(0.001)	0.009	ND(0.001)	0.004	0.013
	01/10/94	0.001	0.009	0.002	ND(0.005)	0.054	ND(0.001)	0.010	ND(0.001)	0.004	0.015
	04/19/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.027	ND(0.005)	0.005	ND(0.005)	0.003	0.008
	07/20/94	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.049	0.001	0.006	ND(0.005)	0.004	0.006
	10/25/94	0.001	ND(0.005)	ND(0.005)	ND(0.005)	0.029	ND(0.005)	0.006	ND(0.005)	0.005	0.008
dup.	01/25/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.027	ND(0.005)	0.006	ND(0.005)	ND(0.005)	ND(0.005)
	04/03/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.020	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	08/01/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.022	ND(0.005)	0.006	ND(0.005)	ND(0.005)	ND(0.005)
	10/18/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.015	ND(0.005)	0.001	ND(0.005)	0.004	0.002
	01/10/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.013	ND(0.005)	0.003	ND(0.005)	ND(0.005)	ND(0.005)
	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.009	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	07/21/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.011	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	10/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.010	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	10/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.010	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
	01/24/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.012	0.001	0.001	ND(0.001)	ND(0.001)	ND(0.001)
MW-17D	04/09/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.012	0.001	0.002	ND(0.001)	0.001	ND(0.001)
	07/30/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.005	ND(0.001)	0.001	ND(0.001)	ND(0.001)	ND(0.001)
	10/17/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.013	0.001	0.001	ND(0.001)	ND(0.001)	ND(0.001)
	10/28/98	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.013	ND(0.001)	0.001	ND(0.001)	ND(0.001)	ND(0.001)
	10/20/99	0.002	0.004	0.003	0.147	0.040	ND(0.001)	0.005	ND(0.001)	0.002	0.002
	04/03/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.062	ND(0.005)	0.018	0.012	0.019	0.014
	08/01/95	0.013	ND(0.005)	ND(0.005)	ND(0.005)	0.095	ND(0.005)	0.058	0.020	0.052	0.028
	10/18/95	0.007	ND(0.005)	ND(0.005)	ND(0.005)	0.067	ND(0.005)	0.044	0.015	0.047	0.054
	01/11/96	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.066	ND(0.005)	0.036	0.012	0.046	0.043
	01/11/96	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.050	ND(0.005)	0.032	0.009	0.036	0.039
#	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.064	ND(0.005)	0.046	0.009	0.049	0.032

TABLE 2. SUMMARY OF LABORATORY ANALYTICAL RESULTS - GROUND-WATER SAMPLES, SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

WELL NUMBER	SAMPLE DATE	BENZENE (mg/L)	ETHYL-BENZENE (mg/L)	TOLUENE (mg/L)	XYLENES (mg/L)	1,1-DCA (mg/L)	1,2-DCA (mg/L)	1,1-DCE (mg/L)	1,1,1-TCA (mg/L)	TCE (mg/L)	PCE (mg/L)
MW-17D Cont.	07/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.077	ND(0.005)	0.053	0.009	0.060	0.037
	10/22/96	0.007	ND(0.005)	ND(0.005)	ND(0.005)	0.066	ND(0.005)	0.041	ND(0.005)	0.059	0.033
	01/24/97	0.004	ND(0.001)	ND(0.001)	ND(0.002)	0.052	0.001	0.023	0.004	0.039	0.022
	04/09/97	0.003	ND(0.001)	ND(0.001)	ND(0.002)	0.030	ND(0.001)	0.020	0.003	0.026	0.022
	07/30/97	0.003	ND(0.002)	ND(0.002)	ND(0.004)	0.029	ND(0.002)	0.013	0.002	0.028	0.018
	10/17/97	0.004	ND(0.002)	ND(0.002)	ND(0.004)	0.056	ND(0.002)	0.015	0.001	0.038	0.011
	10/28/98	0.006	ND(0.005)	ND(0.005)	ND(0.01)	0.050	ND(0.005)	0.009	ND(0.005)	0.045	0.012
	10/19/99	0.005	ND(0.0025)	ND(0.0025)	ND(0.005)	0.091	ND(0.0025)	0.010	ND(0.0025)	0.038	0.012
	04/03/95	0.009	ND(0.005)	ND(0.005)	ND(0.005)	0.079	ND(0.005)	0.061	0.029	0.025	0.066
	08/01/95	0.010	ND(0.005)	ND(0.005)	ND(0.005)	0.085	ND(0.005)	0.075	0.025	0.037	0.064
MW-17A	10/18/95	0.009	ND(0.005)	ND(0.005)	ND(0.005)	0.073	ND(0.005)	0.059	0.019	0.041	0.090
	10/18/95	0.010	ND(0.005)	ND(0.005)	ND(0.005)	0.078	ND(0.005)	0.059	0.019	0.042	0.086
	01/11/96	0.009	ND(0.005)	ND(0.005)	ND(0.005)	0.077	ND(0.005)	0.068	0.019	0.042	0.076
	04/13/96	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.075	ND(0.005)	0.069	ND(0.005)	0.043	0.065
	07/22/96	0.008	ND(0.005)	ND(0.005)	ND(0.005)	0.076	ND(0.005)	0.069	0.012	0.051	0.077
	10/22/96	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.069	ND(0.005)	0.058	ND(0.005)	0.050	0.054
	01/24/97	0.006	ND(0.001)	ND(0.001)	0.001	0.058	ND(0.001)	0.044	0.007	0.045	0.049
	04/09/97	0.007	ND(0.001)	ND(0.001)	ND(0.002)	0.085	ND(0.002)	0.051	0.008	0.051	0.051
	07/30/97	0.004	ND(0.005)	ND(0.005)	ND(0.010)	0.051	ND(0.005)	0.045	0.004	0.045	0.062
	10/17/97	0.006	ND(0.005)	ND(0.005)	ND(0.010)	0.079	ND(0.005)	0.050	0.003	0.052	0.053
MW-17B	10/28/98	0.009	ND(0.005)	ND(0.005)	ND(0.010)	0.075	ND(0.005)	0.018	ND(0.005)	0.044	0.033
	10/19/99	0.005	ND(0.0025)	ND(0.0025)	ND(0.005)	0.134	ND(0.0025)	0.018	ND(0.0025)	0.032	0.030
	04/03/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.036	ND(0.005)	0.180	0.019	ND(0.005)	0.180
	08/01/95	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.040	ND(0.005)	0.190	0.020	0.026	0.180
	08/01/95	0.008	ND(0.005)	ND(0.005)	ND(0.005)	0.049	ND(0.005)	0.250	0.023	0.030	0.320
	10/18/95	0.006	ND(0.005)	ND(0.005)	ND(0.005)	0.046	ND(0.005)	0.210	0.024	0.034	0.370
	01/11/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.034	ND(0.005)	0.170	0.014	0.022	0.190
	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.030	ND(0.005)	0.160	ND(0.005)	0.013	0.270
	07/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.030	ND(0.005)	0.150	ND(0.005)	0.016	0.250
	07/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.030	ND(0.005)	0.150	0.015	0.016	0.280
MW-17C *	10/22/96	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)	0.038	ND(0.01)	0.190	ND(0.01)	0.030	0.250
	01/24/97	0.002	ND(0.001)	ND(0.001)	ND(0.002)	0.038	0.001	0.110	0.008	0.019	0.070
	04/09/97	0.004	ND(0.002)	ND(0.002)	ND(0.002)	0.035	0.001	0.115	0.005	0.021	0.132
	07/30/97	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.010)	0.026	ND(0.005)	0.080	0.004	0.017	0.141
	10/17/97	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	0.053	ND(0.01)	0.103	ND(0.01)	0.027	0.149
	10/28/98	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.02)	0.073	ND(0.01)	0.072	ND(0.01)	0.045	0.178
	10/19/99	0.005	0.012	ND(0.0025)	ND(0.005)	0.143	ND(0.0025)	0.053	0.005	0.051	0.059
	04/03/95	0.032	0.060	0.005	0.054	0.058	ND(0.005)	0.099	ND(0.005)	0.091	0.013
	04/03/95	0.034	0.057	ND(0.005)	0.045	0.063	ND(0.005)	0.110	ND(0.005)	0.095	0.017
	08/01/95	0.022	0.047	ND(0.005)	ND(0.005)	0.073	ND(0.005)	0.140	ND(0.005)	0.120	0.012
	10/18/95	0.019	0.026	ND(0.005)	ND(0.005)	0.063	0.003	0.120	ND(0.005)	0.140	0.024
MW-17C *	01/11/96	0.020	0.035	ND(0.005)	ND(0.005)	0.058	ND(0.005)	0.120	ND(0.005)	0.120	0.015
	04/13/96	0.011	0.009	ND(0.005)	ND(0.005)	0.057	ND(0.005)	0.130	ND(0.005)	0.100	0.013
	07/22/96	0.016	ND(0.005)	ND(0.005)	ND(0.005)	0.058	ND(0.005)	0.130	ND(0.005)	0.120	0.014
	10/22/96	0.015	ND(0.005)	ND(0.005)	ND(0.005)	0.045	ND(0.005)	0.120	ND(0.005)	0.100	0.012
	01/24/97	0.009	ND(0.001)	ND(0.001)	ND(0.002)	0.051	0.003	0.099	ND(0.001)	0.078	0.005
	04/09/97	0.011	ND(0.002)	ND(0.002)	ND(0.004)	0.049	0.002	0.105	ND(0.002)	0.100	0.008
	07/30/97	0.010	ND(0.005)	ND(0.005)	ND(0.010)	0.043	0.003	0.093	ND(0.005)	0.097	0.010
	04/03/95	0.032	0.060	0.005	0.054	0.058	ND(0.005)	0.099	ND(0.005)	0.091	0.013
	04/03/95	0.034	0.057	ND(0.005)	0.045	0.063	ND(0.005)	0.110	ND(0.005)	0.095	0.017
	08/01/95	0.022	0.047	ND(0.005)	ND(0.005)	0.073	ND(0.005)	0.140	ND(0.005)	0.120	0.012
	10/18/95	0.019	0.026	ND(0.005)	ND(0.005)	0.063	0.003	0.120	ND(0.005)	0.140	0.024

TABLE 2. SUMMARY OF LABORATORY ANALYTICAL RESULTS - GROUND-WATER SAMPLES, SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

WELL NUMBER	SAMPLE DATE	BENZENE (mg/L)	ETHYL-BENZENE (mg/L)	TOLUENE (mg/L)	XYLENES (mg/L)	1,1-DCA (mg/L)	1,2-DCA (mg/L)	1,1-DCE (mg/L)	1,1,1-TCA (mg/L)	TCE (mg/L)	PCE (mg/L)
MW-17C Cont.	10/17/97	0.031	ND(0.01)	ND(0.01)	ND(0.02)	0.066	0.003	0.115	ND(0.01)	0.086	0.013
	10/28/98	0.011	ND(0.01)	ND(0.01)	ND(0.02)	0.050	ND(0.01)	0.105	ND(0.01)	0.110	0.018
	10/19/99	0.023	ND(0.0025)	0.002	ND(0.005)	0.080	0.003	0.160	ND(0.0025)	0.119	0.040
MW-18	04/03/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.017	ND(0.005)	0.093	ND(0.005)	0.034	0.071
	08/01/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.024	ND(0.005)	0.170	ND(0.005)	0.039	0.087
	10/18/95	0.003	ND(0.005)	ND(0.005)	ND(0.005)	0.018	ND(0.005)	0.150	ND(0.005)	0.042	0.130
	01/11/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.017	ND(0.005)	0.130	ND(0.005)	0.037	0.097
	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.016	ND(0.005)	0.170	ND(0.005)	0.034	0.120
	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.018	ND(0.005)	0.200	ND(0.005)	0.043	0.110
	07/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.170	ND(0.005)	0.043	0.120
	10/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.020	ND(0.005)	0.190	ND(0.005)	0.042	0.120
	01/24/97	0.003	ND(0.001)	ND(0.001)	ND(0.002)	0.024	0.001	0.180	0.002	0.047	0.097
	04/09/97	0.003	ND(0.001)	ND(0.001)	ND(0.002)	0.022	0.001	0.155	0.002	0.044	0.116
	07/30/97	0.002	ND(0.002)	ND(0.002)	ND(0.004)	0.020	ND(0.002)	0.140	0.001	0.044	0.121
	10/17/97	0.002	ND(0.001)	ND(0.001)	ND(0.002)	0.028	ND(0.001)	0.157	ND(0.001)	0.044	0.071
	01/07/98	0.002	ND(0.001)	ND(0.001)	ND(0.002)	0.029	ND(0.001)	0.163	ND(0.001)	0.054	0.133
	04/15/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.029	ND(0.001)	0.155	ND(0.001)	0.053	0.145
	07/18/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.030	ND(0.001)	0.146	ND(0.001)	0.052	0.151
	10/28/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.028	ND(0.001)	0.142	ND(0.001)	0.052	0.149
	02/09/99	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.030	ND(0.005)	0.143	ND(0.005)	0.052	0.148
	04/22/99	0.002	ND(0.0025)	ND(0.0025)	ND(0.005)	0.031	ND(0.0025)	0.135	ND(0.0025)	0.045	0.121
	07/14/99	0.002	ND(0.0025)	ND(0.0025)	ND(0.005)	0.028	ND(0.0025)	0.127	ND(0.0025)	0.042	0.120
	10/19/99	0.002	ND(0.0025)	0.002	ND(0.005)	0.034	ND(0.0025)	0.149	ND(0.0025)	0.049	0.128
MW-19	04/03/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.011	ND(0.005)	0.150	ND(0.005)	ND(0.005)	0.110
	08/01/95	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.014	ND(0.005)	0.170	ND(0.005)	ND(0.005)	0.140
	10/18/95	0.002	ND(0.005)	ND(0.005)	ND(0.005)	0.010	ND(0.005)	0.170	ND(0.005)	0.004	0.150
	01/11/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.010	ND(0.005)	0.110	ND(0.005)	ND(0.005)	0.100
	04/13/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.150	ND(0.005)	ND(0.005)	0.100
	07/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.009	ND(0.005)	0.150	ND(0.005)	ND(0.005)	0.110
	10/22/96	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	0.008	ND(0.005)	0.130	ND(0.005)	ND(0.005)	0.094
	01/24/97	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.009	ND(0.001)	0.122	0.001	0.003	0.093
	04/09/97	0.002	ND(0.001)	ND(0.001)	ND(0.002)	0.010	ND(0.001)	0.116	0.001	0.004	0.087
	07/30/97	0.002	ND(0.002)	ND(0.002)	ND(0.004)	0.009	ND(0.002)	0.116	ND(0.002)	0.005	0.096
	10/17/97	0.003	ND(0.001)	ND(0.001)	ND(0.002)	0.010	ND(0.001)	0.124	ND(0.001)	0.007	0.066
	10/28/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.017	ND(0.001)	0.167	ND(0.001)	0.009	0.150
	04/22/99	0.003	ND(0.0025)	ND(0.0025)	ND(0.005)	0.023	ND(0.0025)	0.212	ND(0.0025)	0.009	0.182
	10/19/99	0.004	ND(0.005)	ND(0.005)	ND(0.001)	0.020	ND(0.005)	0.236	ND(0.005)	0.010	0.203
MW-20	11/20/95	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	01/24/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/09/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	07/30/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/17/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	01/07/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/15/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	07/18/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/28/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	02/09/99	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.001)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
	04/22/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)

TABLE 2. SUMMARY OF LABORATORY ANALYTICAL RESULTS - GROUND-WATER SAMPLES,
SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

WELL NUMBER	SAMPLE DATE	BENZENE (mg/L)	ETHYL- BENZENE (mg/L)	TOLUENE (mg/L)	XYLENES (mg/L)	1,1-DCA (mg/L)	1,2-DCA (mg/L)	1,1-DCE (mg/L)	1,1,1- TCA (mg/L)	TCE (mg/L)	PCE (mg/L)
MW-20 Cont.	07/13/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/19/99	ND(0.001)	ND(0.001)	0.002	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
MW-21	11/20/96	0.002	ND(0.001)	ND(0.001)	ND(0.001)	0.002	ND(0.001)	0.012	ND(0.001)	0.003	0.006
	01/24/97	0.002	ND(0.001)	ND(0.001)	ND(0.002)	0.003	ND(0.001)	0.019	ND(0.001)	0.004	0.006
	03/04/97	0.002	ND(0.001)	ND(0.001)	ND(0.002)	0.004	ND(0.001)	0.025	ND(0.001)	0.007	0.011
	04/09/97	0.001	ND(0.002)	ND(0.002)	ND(0.004)	0.003	ND(0.002)	0.021	ND(0.002)	0.005	0.008
	07/30/97	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	0.001	ND(0.002)	0.011	ND(0.002)	0.003	0.007
	10/17/97	0.001	ND(0.002)	ND(0.002)	ND(0.004)	0.001	ND(0.002)	0.007	ND(0.002)	0.001	0.004
	01/07/98	0.001	ND(0.002)	ND(0.002)	ND(0.004)	0.002	ND(0.002)	0.021	ND(0.002)	0.003	0.005
	04/15/98	0.001	ND(0.002)	ND(0.002)	ND(0.004)	0.002	ND(0.002)	0.028	ND(0.002)	0.003	0.006
	07/18/98	0.001	ND(0.002)	ND(0.002)	ND(0.004)	0.002	ND(0.002)	0.022	ND(0.002)	0.002	0.005
	10/28/98	0.001	ND(0.002)	ND(0.002)	ND(0.004)	0.001	ND(0.002)	0.015	ND(0.002)	0.001	0.004
	02/09/99	0.001	ND(0.001)	ND(0.001)	ND(0.002)	0.002	ND(0.001)	0.031	ND(0.001)	0.002	0.005
	04/22/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.001	ND(0.001)	0.025	ND(0.001)	0.001	0.003
	07/14/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	0.009	ND(0.001)	ND(0.001)	0.002
	10/19/99	ND(0.001)	ND(0.001)	0.002	ND(0.002)	ND(0.001)	ND(0.001)	0.006	ND(0.001)	ND(0.001)	0.001
MW-22	11/20/96	0.014	ND(0.001)	ND(0.001)	ND(0.001)	0.010	ND(0.001)	0.063	ND(0.001)	0.012	0.053
	01/24/97	0.010	ND(0.001)	ND(0.001)	ND(0.002)	0.009	ND(0.001)	0.065	ND(0.001)	0.013	0.050
dup.	01/24/97	0.011	ND(0.001)	ND(0.001)	ND(0.002)	0.011	ND(0.001)	0.099	ND(0.001)	0.013	0.065
	04/09/97	0.013	ND(0.001)	ND(0.001)	ND(0.002)	0.014	0.001	0.084	ND(0.001)	0.021	0.080
	07/30/97	0.014	ND(0.002)	ND(0.002)	ND(0.004)	0.012	ND(0.002)	0.092	ND(0.002)	0.024	0.104
	10/17/97	0.016	ND(0.005)	ND(0.005)	ND(0.01)	0.014	ND(0.005)	0.107	ND(0.005)	0.028	0.117
	10/28/98	0.016	ND(0.01)	ND(0.01)	ND(0.02)	0.017	ND(0.01)	0.129	ND(0.01)	0.037	0.150
	04/22/99	0.017	ND(0.0025)	ND(0.0025)	ND(0.005)	0.024	ND(0.0025)	0.185	ND(0.0025)	0.053	0.184
	10/19/99	0.019	ND(0.005)	0.002	ND(0.01)	0.026	ND(0.005)	0.200	ND(0.005)	0.056	0.207
MW-23	11/20/96	ND(0.001)	ND(0.001)	0.001	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	01/24/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	03/04/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/09/97	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
	07/30/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/17/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/28/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/22/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/19/99	ND(0.001)	ND(0.001)	0.002	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
MW-24	11/20/96	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	01/24/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/09/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	07/30/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/17/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/28/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/22/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/19/99	ND(0.001)	ND(0.001)	0.003	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
MW-25	03/04/97	0.021	ND(0.001)	ND(0.001)	ND(0.001)	0.014	0.001	0.035	ND(0.001)	ND(0.001)	0.030
	04/09/97	0.015	ND(0.001)	ND(0.001)	ND(0.002)	0.015	0.001	0.035	ND(0.001)	0.006	0.020
dup.	04/09/97	0.014	ND(0.001)	ND(0.001)	ND(0.002)	0.015	0.001	0.034	ND(0.001)	0.005	0.019
	07/30/97	0.023	ND(0.002)	ND(0.002)	ND(0.004)	0.011	0.001	0.031	ND(0.002)	0.005	0.035

TABLE 2. SUMMARY OF LABORATORY ANALYTICAL RESULTS - GROUND-WATER SAMPLES,
SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

WELL NUMBER	SAMPLE DATE	BENZENE (mg/L)	ETHYL- BENZENE (mg/L)	TOLUENE (mg/L)	XYLENES (mg/L)	1,1-DCA (mg/L)	1,2-DCA (mg/L)	1,1-DCE (mg/L)	1,1,1- TCA (mg/L)	TCE (mg/L)	PCE (mg/L)
MW-25 Cont. dup.	10/17/97	0.026	ND(0.002)	ND(0.002)	ND(0.004)	0.011	0.001	0.027	ND(0.002)	0.004	0.035
	10/17/97	0.026	ND(0.002)	ND(0.002)	ND(0.004)	0.013	0.001	0.028	ND(0.002)	0.004	0.028
	01/07/98	0.027	ND(0.002)	ND(0.002)	ND(0.004)	0.014	0.001	0.030	ND(0.002)	0.004	0.033
	04/15/98	0.025	ND(0.002)	ND(0.002)	ND(0.004)	0.013	ND(0.002)	0.028	ND(0.002)	0.004	0.034
	07/18/98	0.022	ND(0.002)	ND(0.002)	ND(0.004)	0.012	ND(0.002)	0.024	ND(0.002)	0.004	0.026
	10/28/98	0.030	ND(0.002)	ND(0.002)	ND(0.004)	0.012	ND(0.002)	0.030	ND(0.002)	0.005	0.038
	02/09/99	0.027	ND(0.001)	ND(0.001)	ND(0.002)	0.013	ND(0.001)	0.031	ND(0.001)	0.003	0.039
	04/22/99	0.030	ND(0.001)	ND(0.001)	ND(0.002)	0.013	ND(0.001)	0.031	ND(0.001)	0.002	0.032
MW-26 dup.	07/14/99	0.022	ND(0.001)	ND(0.001)	ND(0.002)	0.012	ND(0.001)	0.027	ND(0.001)	0.004	0.028
	10/19/99	0.025	ND(0.001)	0.002	ND(0.002)	0.012	ND(0.001)	0.027	ND(0.001)	0.004	0.027
	03/04/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	03/04/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/09/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	07/30/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.001	ND(0.001)	0.004	ND(0.001)	0.001	0.002
	10/17/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.001	ND(0.001)	0.004	ND(0.001)	0.001	0.004
	01/07/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.001	ND(0.001)	0.004	ND(0.001)	0.001	0.004
dup.	04/15/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.002	ND(0.001)	0.006	ND(0.001)	0.001	0.006
	07/18/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.004	ND(0.001)	0.013	ND(0.001)	0.002	0.011
	10/27/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.004	ND(0.001)	0.011	ND(0.001)	0.002	0.013
	02/09/99	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	0.003	ND(0.002)	0.010	ND(0.002)	0.002	0.014
	04/22/99	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.001)	0.003	ND(0.0005)	0.008	ND(0.0005)	0.002	0.011
	07/13/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	0.003	ND(0.001)	0.010	ND(0.001)	0.002	0.010
	10/19/99	0.001	ND(0.001)	0.003	ND(0.002)	0.004	ND(0.001)	0.013	ND(0.001)	0.002	0.014
			ND(0.001)		ND(0.002)	0.006	ND(0.001)	0.018	ND(0.001)	0.003	0.018
MW-27	03/04/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/09/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	07/30/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/17/97	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	01/07/98	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
	04/15/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	07/18/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/27/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
MW-28	02/09/99	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.001)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
	04/22/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	07/13/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/19/99	ND(0.001)	ND(0.001)	0.003	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/15/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	07/18/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/27/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	02/09/99	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.001)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
MW-29	04/22/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	07/13/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	10/19/99	ND(0.001)	ND(0.001)	0.002	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	04/15/98	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
	07/18/98	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.004)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
	10/27/98	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	02/09/99	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.001)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
	04/22/99	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)

Table 3. Field Parameters at the Schlumberger Oilfield Services Facility,
Artesia, New Mexico

Location	Date	pH standard	Conductivity uM/cm	Temperature Celcius	Dissolved Oxygen mg/l	Redox Potential mv
MW-2	4/22/99	6.93	1453	20.13	0.17	70
MW-3	4/22/99	6.46	6430	20.54	0.07	17
MW-4	4/22/99	6.95	1690	20.46	0.30	139
MW-7	4/22/99	6.60	7467	19.05	0.16	360
MW-8	4/22/99	6.88	4148	19.13	0.26	353
MW-10	4/22/99	7.02	4084	18.77	0.36	348
MW-11	4/22/99	6.34	7825	19.47	0.11	256
MW-12	4/22/99	6.46	5575	19.74	0.09	-16
MW-13	4/22/99	6.90	1611	20.70	0.15	226
MW-18	4/22/99	6.59	6150	18.64	0.32	385
MW-19	4/22/99	6.79	6432	19.25	0.20	448
MW-20	4/22/99	6.98	4043	18.11	1.33	424
MW-21	4/22/99	6.98	3954	18.98	0.36	599
MW-22	4/22/99	6.84	6187	18.79	0.16	561
MW-23	4/22/99	6.97	4443	18.62	0.39	743
MW-24	4/22/99	6.98	3102	18.86	2.15	349
MW-25	4/22/99	6.91	4961	19.17	0.15	675
MW-26	4/22/99	7.11	3223	18.93	0.38	239
MW-27	4/22/99	7.10	3702	18.92	0.37	232
MW-28	4/22/99	6.96	4074	19.03	0.38	220
MW-29	4/22/99	7.16	4692	19.12	1.15	237
MW-30	4/22/99	7.09	3925	18.94	0.18	232

Note: mg/l = milligrams per liter
uM/cm = micro moses per centimeter
mv = millivolts

**Table 3A. Field Parameters at the Schlumberger Oilfield Services Facility,
Artesia, New Mexico**

Location	Date	pH standard	Conductivity uM/cm	Temperature Celcius	Dissolved Oxygen mg/l	Redox Potential mv
MW-1	10/19/99	6.94	2340	20.55	0.33	58
MW-2	10/20/99	6.95	1019	19.66	0.28	-120
MW-3	10/20/99	6.39	3440	20.26	0.25	-168
MW-4	10/20/99	6.85	1530	19.32	0.24	-102
MW-5	10/20/99	6.98	965	20.24	0.44	-90
MW-6	10/19/99	7.01	2850	18.40	0.44	30
MW-7	10/19/99	6.52	4950	18.48	0.36	78
MW-8	10/19/99	6.95	2950	18.34	0.35	45
MW-9	10/19/99	6.65	2800	19.25	0.26	-137
MW-10	10/19/99	6.99	2950	18.46	0.36	76
MW-11	10/19/99	6.43	4900	18.30	0.29	2
MW-12	10/19/99	6.43	3250	18.51	0.23	-124
MW-13	10/20/99	6.82	1650	19.97	0.34	-22
MW-14	10/20/99	6.76	2370	19.72	0.33	11
MW-15	10/20/99	6.29	3700	20.00	0.21	-118
MW-17A	10/19/99	6.56	4080	18.66	0.31	-6
MW-17B	10/19/99	6.44	4360	18.47	0.27	-13
MW-17C	10/19/99	6.13	8580	18.25	0.23	-35
MW-17D	10/19/99	6.48	4900	18.90	0.24	-6
MW-18	10/19/99	6.51	4640	18.64	0.34	86
MW-19	10/19/99	6.74	4670	18.66	0.32	83
MW-20	10/19/99	7.02	2890	18.38	0.34	67
MW-21	10/19/99	6.97	2780	19.12	0.48	132
MW-22	10/19/99	6.79	4470	19.07	0.31	81
MW-23	10/19/99	7.02	3210	18.91	0.38	56
MW-24	10/19/99	7.06	2180	18.59	2.59	63

**Table 3A. Field Parameters at the Schlumberger Oilfield Services Facility,
Artesia, New Mexico**

Location	Date	pH standard	Conductivity uM/cm	Temperature Celcius	Dissolved Oxygen mg/l	Redox Potential mv
MW-25	10/19/99	6.96	3530	19.43	0.30	247
MW-26	10/19/99	6.99	2650	19.06	0.33	61
MW-27	10/19/99	7.04	2590	18.74	0.29	32
MW-28	10/19/99	7.02	2920	18.29	0.37	70
MW-29	10/19/99	7.07	3360	18.87	0.73	58
MW-30	10/19/99	7.03	2860	18.88	0.29	60

Note: mg/l = milligrams per liter
uM/cm = micro moses per centimeter
mv = millivolts

TABLE 4. Water Quality Results for Natural Attenuation Monitoring at the Schlumberger Facility in Artesia, New Mexico

WELL NUMBER	SAMPLE DATE	SULFATE (mg/l)	NITRATE NITRITE (mg/l)	TOTAL ORG. CARBON (mg/l)	ORTHO PHOSPHATE (mg/l)	Dissolved Gases		Light Hydrocarbons	
						METHANE (mg/l)	CARBON DIOXIDE (mg/l)	ETHANE (ng/L)	ETHENE (ng/L)
MW-2	4/22/99	1900	ND(0.05)	2	0.39	0.007	40.04	43	85
MW-3	4/22/99	1200	ND(0.05)	58	0.38	4.300	203.08	603	183
MW-4	4/22/99	400	ND(0.05)	2	0.54	0.008	33.89	25	17
MW-7	4/22/99	2000	ND(0.05)	8	1.00	0.520	82.72	74	67
MW-8	4/22/99	1500	5.00	3	0.23	0.002	31.70	ND(5.0)	ND(5.0)
MW-10	4/22/99	1700	9.10	2	0.65	0.003	24.56	ND(5.0)	47
MW-11	4/22/99	1600	ND(0.05)	21	0.55	3.680	231.23	73	271
MW-12	4/22/99	960	ND(0.05)	50	0.86	14.130	313.47	1329	233
MW-13	4/22/99	650	ND(0.05)	3	2.40	0.022	54.02	68	217
MW-18	4/22/99	3300	0.30	6	0.69	0.860	94.63	56	28
MW-19	4/22/99	1900	2.20	3	0.17	0.003	42.75	ND(5.0)	ND(5.0)
MW-20	4/22/99	1100	5.90	ND(2.0)	0.36	0.002	23.51	ND(5.0)	18
MW-21	4/22/99	2000	4.70	2	0.33	0.001	25.40	ND(5.0)	27
MW-22	4/22/99	1800	0.58	3	0.70	0.001	36.53	12	18
MW-23	4/22/99	1800	5.20	ND(2.0)	0.50	0.001	23.60	ND(5.0)	40
MW-24	4/22/99	2000	0.71	ND(2.0)	0.84	0.001	22.26	ND(5.0)	ND(5.0)
MW-25	4/22/99	1800	5.80	5	0.71	0.001	29.89	22	ND(5.0)

Note: ND = not detected at concentrations indicated in parentheses

mg/L = milligrams per liter

ng/L = nanograms per liter

Table 5. Analytical Parameters and Weighting for Preliminary Screening for Anaerobic Biodegradation Processes

Analysis	Concentration in most Contaminated Zone	Interpretation	EPA Value	WWC Value
Oxygen*	<0.5 mg/L	Tolerated, suppresses the reductive pathway at higher concentrations	3	3
Oxygen*	>5 mg/L	Not tolerated, however, VC may be oxidized aerobically	-3	
Nitrate*	<1 mg/L	At higher concentrations may compete with reductive pathway	2	2
Iron II	>1 mg/L	Reductive pathway possible; VC may be oxidized under Fe(III) reducing conditions	3	
Sulfate*	<20 mg/L	At higher concentrations may compete with reductive pathway	2	
Sulfide	>1 mg/L	Reductive pathway possible	3	
Methane*	<0.5 mg/L	VC oxidizes	0	
Methane*	>0.5 mg/L	Ultimate reductive daughter product, VC accumulates	3	3
ORP*	<0.5 mV	Reductive pathway possible	1	1
ORP*	<-100 mV	Reductive pathway likely	2	2
pH*	5<pH<9	Optimal range for reductive pathway	0	
pH*	5>pH>9	Outside optimal range for reductive pathway	-2	
TOC*	>20 mg/L	Carbon and energy source; drives dechlorination; can be natural or anthropogenic	2	2
Temperature*	>20°C	At T>20°C biochemical process is accelerated	1	
Carbon Dioxide*	>2X background	Ultimate oxidative daughter product	1	1
Alkalinity	>2X background	Results from interaction between CO ₂ and aquifer minerals	1	
Chloride	>2X background	Daughter product of organic chloride	2	
Hydrogen	>1 nM	Reductive pathway possible, VC may accumulate	3	
Volatile Fatty Acids	<1 nM	VC oxidizes	0	
	>0.1 mg/L	Intermediates resulting from biodegradation of more complex compounds; carbon and energy source	2	
BTEX*		Carbon and energy source; drives dechlorination	2	2
Tetrachloroethene*	>0.1 mg/L	Material released	0	
Trichloroethene*		Material released	0	
Trichloroethene*		Daughter Product of PCE	2	2
DCE*		Material released	0	
DCE*		Daughter product of TCE; if cis is > 80% of total DCE it is likely a daughter product	2	
		1,1-DCE can be chemical reaction product of TCA		
VC*		Material released	0	
VC*		Daughter product of DCE	2	2
1,1,1-Trichloroethane*		Material released	0	
DCA*		Daughter product of TCA under reducing conditions	2	2
Carbon Tetrachloride*		Material released	0	
Chloroethane*		Daughter product of DCA or VC under reducing conditions	2	2
Ethene*	>0.01 mg/L	Daughter product of VC/ethene	2	
Ethane*	>0.1 mg/L		2	
Chloroform*		Material released	3	
Dichloromethane*		Daughter product of Carbon Tetrachloride	0	
Dichloromethane*		Material released	2	
		Daughter Product of Chloroform	0	
* = parameter's analyzed for by WWC			Total	24
DCE = dichloroethene			DCA = dichloroethane	

Note:

BTEX = benzene, toluene, ethylbenzene, xylenes VC = vinyl chloride
Table adopted from the EPA document "EPA/600/R-98/128, September 1998
Bold = parameters meeting EPA criteria for reductive dechlorination

TABLE 6. OPERATIONAL CONDITIONS, MAINTENANCE SHOP SVE SYSTEM,
SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

SAMPLE DATE	HOUR METER	VACUUM (inches of water)				ALL ZONES MANIFOLD BLOWER	
		ZONE 1 MANIFOLD	ZONE 1 BLOWER	ZONE 2 MANIFOLD	ZONE 2 BLOWER		
01/31/94	0.0						
02/01/94	5.1	44	48	48	50		
02/02/94	23.2			48	50		
02/03/94	47.8			41	46		
02/10/94	219.4			43	45		
02/16/94	362.1	30	35				
02/23/94	531.0			37	41		
03/04/94	748.6	27	32				
03/11/94	915.3			37	41		
03/18/94	1086.1	28	33				
03/28/94	1325.8	29	34				
04/08/94	1583.0			38	42		
04/19/94	1857.6	31	36	33	38		
05/06/94	2256.0	46	48	48	51		
05/18/94				47	49		
06/01/94				51	53		
06/16/94	3099.9	49	52	48	51		
07/06/94	3100.1	50	52	47	49		
07/21/94	3457.6	44	49	52	54		
08/09/94	3899.9	51	54	49	52		
09/07/94	4093.7	48	50	48	49		
09/30/94	4647.1	52	54	49	51		
10/11/94	4911.1	53	55	48	51		
11/03/94	5445.6	58	60	54	57		
12/05/94	6204.9	57	62	57	61		
01/25/95	7397.0	59	62	54	60		
04/05/95	9047.5	50	65	47	58		
05/09/95	9838.5	55	64	50	60		
06/18/95	10783.6	54	63	50	60		
07/11/95	11325.9	54	63	53	63		
10/18/95	13443.2	55	65	56	65		
11/15/95	14119.8	54	65 (60+)	54	65 (60+)		
11/30/95	14445.3	53	60+	54	60+		
01/11/96	15099.6			54	70		
06/17/96	15230.1	51	70	53	70		
07/24/96	16114.7	54	70	51	70		
10/22/96	18271.5	57	70	56	70		
04/09/97	21364.3					55	56
07/29/97	24000.6					39	54
10/17/97	24722.7					55	53
01/06/98	26658.9					58	60
04/15/98	29030.7					52	55
07/18/98	31234.2					54	55
10/28/98						49	54
02/10/99	32094.5					45	48
04/22/99	33058.9					51	53
07/13/99	35022.0					50	52
10/20/99	35025.0					50	52

**TABLE 7. OPERATIONAL CONDITIONS, WASH BAY SVE SYSTEM,
SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO**

SAMPLE DATE	HOUR METER	VACUUM (inches of water)					
		ZONE 1 MANIFOLD	ZONE 1 BLOWER	ZONE 2 MANIFOLD	ZONE 2 BLOWER	ZONE 3 MANIFOLD	ZONE 3 BLOWER
01/31/94	0.0						
02/01/94	5.3	43	44	41	42	43	44
02/02/94	20.6	40	42				
02/03/94	45.3	38	42			43	45
02/10/94	217.7	34	38				
02/16/94	359.7					41	43
02/23/94	528.5					39	42
03/04/94	746.2	32	36				
03/11/94	912.0					39	40
03/18/94	1083.9			33	37		
03/28/94	1322.8	32	36				
04/08/94	1581.2			32	36		
04/19/94	1855.2	31	34	33	36	35	38
05/06/94	2253.8	41	44	45	46	43	44
05/18/94						43	44
06/01/94		44	44				
06/16/94	3241.2	44	45	46	47	46	47
07/06/94	3712.1	43	44	44	45	45	45
07/21/94	3858.3	43	45	48	48	50	51
08/09/94	3859.7	43	44	45	46	45	46
09/07/94	4519.5	44	45	46	47		
09/30/94	5073.4	44	47	44	46	49	50
10/11/94	5328.8	48	50	41	44	48	50
11/03/94	5864.3	39	43	57	58	58	58
12/05/94	6546.8	57	58	57	58	58	59
01/25/95	7738.0	45	50	58	58	60	58

Note: In April 1995, the wash bay SVE system was expanded. Each of the three zones now has a south (S) and a north (N) subzone.

SAMPLE DATE	HOUR METER	VACUUM (inches of water)					
		ZONE 1 MANIFOLD	ZONE 1 BLOWER	ZONE 2 MANIFOLD	ZONE 2 BLOWER	ZONE 3 MANIFOLD	ZONE 3 BLOWER
04/05/95	8682.1	(S)42 (N)40	44	(S)54 (N)52	48	(S)55 (N)55	48
05/09/95	9489.0	(S)47 (N)45	42				
06/18/95	10424.0	(S)26 (N)25	30	(S)44 (N)42	44	(S)58 (N)53	38
07/11/95	10483.6	(S)42 (N)40	40	(S)43 (N)40	40	(S)45 (N)42	41

**TABLE 7. OPERATIONAL CONDITIONS, WASH BAY SVE SYSTEM,
SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO**

Note: Beginning in October 1995, vacuum was measured on the combined south subzones of Zones 1,2, and 3, and on the combined north subzones.

SAMPLE DATE	HOUR METER	VACUUM (inches of water)		
		BLOWER	MANIFOLD (Zones 1,2,3 combined) SOUTH SUBZONES	NORTH SUBZONES
10/20/95	11774.0	46	60	57
11/15/95	12404.2	35	34	26
11/30/95	12756.7	37	35	35
01/11/96	13742.0	42	44	29
07/24/96	18411.0	39	56	42
10/22/96	20572.9	49	41	35
04/09/97	24621.7	41	33	28
07/30/97	27308.7	65	20	18
10/17/97	29169.7	65	20	19
01/06/98	31106.3	59	39	34
04/15/98	33462	60+	32	25
07/18/98	35702.2	60+	40	42
10/28/98	38125.5	60+	22	22
02/10/99	40640.1	38	30	32
04/22/99	42368.7	60+	32	29
07/13/99	44335.1	59	38	36
10/20/99	46690.4	41	60	48

**TABLE 8. PID READINGS - VOLATILE ORGANIC COMPOUNDS,
MAINTENANCE SHOP SVE SYSTEM,
SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO**

SAMPLE DATE	HOUR METER	PID READING (ppm)			ALL ZONES
		EXHAUST	ZONE 1	ZONE 2	
02/03/94	47.8	0	4	35	
02/10/94	219.4	0	1	12	
02/16/94	362.1	0	1	6	
02/23/94	531.0	3	3	8	
03/04/94	748.6	0	1	6	
03/11/94	915.3	3	3	7	
03/18/94	1086.1	0	0	2	
03/28/94	1325.8	0	0	2	
04/08/94	1583.0	0	0	3.5	
05/18/94	---	0	---	---	
07/06/94	3100.1	0	0	0	
07/21/94	3457.6	0	0	0	
08/09/94	3899.9	0	0	1	
09/06/94	4093.7	0	0	1	
09/30/94	4647.1	0	0.5	1	
10/11/94	4911.1	3	1.8	1	
11/03/94	5445.6	22	4.5	6.3	
12/05/94	6204.9	4	2	5	
01/25/95	7397.0	11	0	50	
04/05/95	9047.5	21	5	5	
05/09/95	9838.5	1.4	0	3	
06/18/95	10783.6	3.6	6	8	
07/11/95	11325.9	1.6	2	2	
10/18/95	14119.8	0.6	0.2	0.8	
11/15/95	14445.2	2	1	1	
01/11/96	15099.6	---	0.2	2.3	
06/17/96	15230.1	---	0.5	3.0	
07/24/96	16114.7	2.8	7.3	11.9	
10/22/96	18271.5	2.9	2.7	4.3	
04/09/97	21364.3				1
07/30/97	24000.6				0
10/17/97	24722.7				0
01/07/98	26658.9	0			0
04/15/98	29030.7	0			0
07/18/98	31234.2	0			0
10/28/98		0			0
02/10/99	32094.5	0			2.5
04/22/99	33058.9	0			2.4
07/13/99	35022.0	---			---
10/20/99	35025.0	0			0

NOTES:

PID = photoionization detector
ppm = parts per million
--- = no data available

TABLE 9. PID READINGS - VOLATILE ORGANIC COMPOUNDS,
WASH BAY SVE SYSTEM,
SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

SAMPLE DATE	HOUR METER	PID READING (ppm)			COMMENTS
		EXHAUST	ZONE 1	ZONE 2	ZONE 3
06/17/96				212	combined - all zones
07/24/96				156	combined - all zones
10/22/96				163	combined - all zones
04/09/97		29		38.9	combined - all zones
07/29/97				63	combined - all zones
10/17/97		18		20.5	combined - all zones
01/06/98	31106.3	15		14.4	combined - all zones
04/15/98	33462	0		8	combined - all zones
07/18/98	35702	35.7		38.7	combined - all zones
10/28/98	38125.5	32		41	combined - all zones
02/10/99	40640.1	20		29	combined - all zones
04/22/99	42368.7	31		13.8	combined - all zones
07/13/99	44335.1	---		---	combined - all zones
10/20/99	46690.4	---		5.2	combined - all zones

note --- = no data available

TABLE 10. SUMMARY OF LABORATORY ANALYTICAL - SVE SOIL VAPOR SAMPLES,
MAINTENANCE SHOP AND WASH BAY SVE SYSTEMS,
SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

SVE ZONE	SAMPLE DATE	BENZENE (mg/m ³)	ETHYL- BENZENE (mg/m ³)	TOLUENE (mg/m ³)	XYLENES (mg/m ³)	1,1-DCA (mg/m ³)	1,2-DCA (mg/m ³)	1,1-DCE (mg/m ³)	1,1,1- TCA (mg/m ³)	1,1,2- TCA (mg/m ³)	TCE (mg/m ³)	PCE (mg/m ³)	2- BUTANONE (mg/m ³)
WB-1	02/10/94	ND(1)	3.57	2.98	12.60	ND(2)	ND(2)	ND(2)	4.07	ND(2)	ND(2)	ND(1)	ND(2)
	02/16/94	ND(1)	1.20	1.10	10.40	ND(2)	ND(2)	ND(2)	3.70	ND(2)	ND(2)	14.50	9.10
	02/23/94	ND(0.5)	2.20	2.40	18.30	ND(1)	ND(1)	ND(1)	6.10	ND(1)	ND(1)	ND(0.5)	ND(1)
	03/04/94	ND(0.5)	2.60	2.50	21.20	ND(1)	ND(1)	ND(1)	6.60	ND(1)	ND(1)	ND(0.5)	ND(1)
	03/11/94	ND(0.5)	2.60	2.90	16.10	ND(1)	ND(1)	ND(1)	9.30	ND(1)	ND(1)	17.60	4.10
	03/18/94	ND(0.5)	14.60	1.80	ND(0.5)	ND(1)	ND(1)	ND(1)	3.50	ND(1)	ND(1)	ND(0.5)	21.30
	03/28/94	ND(0.5)	0.90	1.20	8.00	ND(1)	ND(1)	ND(1)	3.40	ND(1)	ND(1)	ND(0.5)	ND(1)
	04/08/94	ND(0.5)	ND(0.5)	ND(0.5)	4.60	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(0.5)	ND(1)
	04/20/94	ND(0.5)	ND(0.5)	ND(0.5)	5.90	ND(1)	ND(1)	ND(1)	2.80	ND(1)	ND(1)	ND(0.5)	1.20
	05/06/94	ND(0.5)	1.10	1.70	5.80	ND(0.5)	ND(0.5)	ND(1)	3.90	ND(0.5)	ND(0.5)	ND(0.5)	ND(10)
	05/18/94	ND(0.5)	0.80	ND(0.5)	8.40	ND(0.5)	ND(0.5)	ND(1)	1.80	ND(0.5)	ND(0.5)	ND(0.5)	ND(10)
	06/01/94	ND(1)	3.00	ND(1)	6.00	ND(1)	ND(1)	ND(1)	4.00	ND(1)	ND(1)	2.00	ND(1)
	07/06/94	ND(1)	5.00	1.00	11.00	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
	08/10/94	NA	NA	NA	NA	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	09/07/94	ND(0.001)	0.24	0.09	0.61	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
WB-2	12/05/94	ND(0.001)	0.19	0.14	NA	ND(0.001)	ND(0.001)	ND(0.001)	0.27	ND(0.001)	ND(0.001)	0.04	NA
	01/25/95	ND(0.04)	0.16	0.12	1.19	ND(0.04)	ND(0.04)	ND(0.04)	ND(0.04)	ND(0.04)	ND(0.04)	ND(0.04)	ND(0.04)
	05/09/95	ND(0.2)	0.78	0.80	8.24	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	0.28	ND(0.2)
	02/10/94	1.67	5.03	10.13	14.90	ND(2)	ND(2)	ND(2)	8.34	ND(2)	ND(2)	ND(2)	14.71
	02/16/94	ND(1)	3.00	4.80	29.90	ND(2)	ND(2)	ND(2)	6.50	ND(2)	ND(2)	14.50	6.70
	02/23/94	1.40	9.30	16.40	53.20	ND(1)	ND(1)	ND(1)	12.60	ND(1)	ND(1)	ND(0.5)	ND(1)
	03/04/94	ND(0.5)	5.30	9.50	39.70	ND(1)	ND(1)	ND(1)	12.10	ND(1)	ND(1)	ND(0.5)	ND(1)
	03/11/94	ND(0.5)	5.40	10.90	23.20	ND(1)	ND(1)	ND(1)	12.10	ND(1)	ND(1)	ND(0.5)	26.70
	03/18/94	0.70	4.80	9.60	28.10	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(0.5)	18.70
	03/28/94	ND(0.5)	1.90	3.50	12.80	ND(1)	ND(1)	ND(1)	5.00	ND(1)	ND(1)	ND(0.5)	ND(1)
	04/08/94	ND(0.5)	1.10	1.50	8.40	ND(1)	ND(1)	ND(1)	2.00	ND(1)	ND(1)	ND(0.5)	1.60
	04/20/94	ND(0.5)	4.10	5.80	27.50	ND(1)	ND(1)	ND(1)	6.80	ND(1)	ND(1)	ND(0.5)	ND(10)
	05/06/94	ND(0.5)	3.70	4.50	30.00	ND(0.5)	ND(0.5)	ND(1)	3.00	ND(0.5)	ND(0.5)	ND(0.5)	ND(10)
	05/18/94	ND(0.5)	5.30	6.00	44.20	ND(0.5)	ND(0.5)	ND(1)	2.80	ND(0.5)	ND(0.5)	ND(0.5)	ND(10)
	06/01/94	ND(1)	7.00	ND(1)	15.00	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
WB-3	07/06/94	ND(1)	5.00	8.00	42.00	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
	08/10/94	NA	NA	NA	NA	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	09/07/94	ND(0.001)	0.45	0.41	4.12	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	1.28
	12/05/94	0.24	1.40	1.66	NA	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	0.23	NA
	01/25/95	ND(0.04)	0.69	0.91	10.67	ND(0.04)	ND(0.04)	ND(0.04)	ND(0.04)	ND(0.04)	ND(0.04)	ND(0.04)	ND(0.04)
	05/09/95	ND(0.2)	0.91	5.44	14.67	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)
	02/03/94	5.50	22.00	78.00	153.00	1.20	ND(0.5)	2.80	26.00	ND(0.5)	ND(0.5)	5.20	ND(2)
	02/10/94	ND(1)	15.60	64.60	46.90	ND(2)	ND(2)	ND(2)	11.40	ND(2)	ND(2)	ND(2)	31.33
	02/16/94	ND(1)	ND(1)	25.70	44.50	ND(2)	ND(2)	ND(2)	11.00	ND(2)	ND(2)	ND(1)	ND(2)
	02/23/94	3.50	17.50	73.20	99.10	ND(1)	ND(1)	ND(1)	19.30	ND(1)	ND(1)	1.60	1.40
	03/04/94	2.10	10.60	44.90	60.90	ND(1)	ND(1)	ND(1)	14.70	ND(1)	ND(1)	ND(0.5)	ND(1)
	03/11/94	ND(0.5)	13.30	ND(0.5)	14.30	ND(1)	ND(1)	ND(1)	17.90	ND(1)	ND(1)	ND(0.5)	3.80
	03/18/94	ND(0.5)	10.10	38.30	57.20	ND(1)	ND(1)	ND(1)	11.00	ND(1)	ND(1)	ND(0.5)	46.40
	03/28/94	1.20	5.70	21.40	30.80	ND(1)	ND(1)	ND(1)	8.10	ND(1)	ND(1)	ND(0.5)	ND(1)
	04/08/94	ND(0.5)	1.50	2.40	9.40	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(0.5)	ND(1)
	04/20/94	ND(0.5)	10.60	27.60	31.80	ND(1)	ND(1)	ND(1)	11.10	ND(1)	ND(1)	ND(0.5)	13.30
	05/06/94	ND(0.5)	6.80	17.50	38.90	ND(0.5)	ND(0.5)	ND(1)	6.00	ND(0.5)	ND(0.5)	ND(0.5)	ND(10)
	05/18/94	ND(0.5)	6.20	8.10	43.90	ND(0.5)	ND(0.5)	ND(1)	1.90	ND(0.5)	ND(0.5)	ND(0.5)	ND(10)
	06/01/94	ND(1)	4.00	7.00	34.00	ND(1)	ND(1)	ND(1)	4.00	ND(1)	ND(1)	ND(1)	ND(1)

TABLE 10. SUMMARY OF LABORATORY ANALYTICAL - SVE SOIL VAPOR SAMPLES, MAINTENANCE SHOP AND WASH BAY SVE SYSTEMS, SCHLUMBERGER FACILITY, ARTESIA, NEW MEXICO

SVE ZONE	SAMPLE DATE	BENZENE (mg/m ³)	ETHYL-BENZENE (mg/m ³)	TOLUENE (mg/m ³)	XYLENES (mg/m ³)	1,1-DCA (mg/m ³)	1,2-DCA (mg/m ³)	1,1-DCE (mg/m ³)	1,1,1-TCA (mg/m ³)	1,1,2-TCA (mg/m ³)	TCE (mg/m ³)	PCE (mg/m ³)	2-BUTANONE (mg/m ³)
WB-3 Cont.	07/06/94	ND(1)	11.00	22.00	73.00	ND(1)	ND(0.001)	ND(1)	3.00	ND(1)	ND(1)	ND(1)	ND(1)
*	08/10/94	NA	NA	NA	NA	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
*	09/07/94	ND(0.001)	1.35	2.90	10.32	ND(0.001)	ND(0.001)	ND(0.001)	0.16	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
	12/05/94	0.54	2.62	5.86	NA	0.06	ND(0.001)	0.03	ND(0.001)	ND(0.001)	ND(0.001)	0.72	NA
	01/25/95	0.08	2.75	1.49	23.23	ND(0.04)	ND(0.04)	ND(0.04)	0.41	ND(0.04)	ND(0.04)	0.37	ND(0.04)
	05/09/95	ND(0.2)	2.30	5.00	25.72	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	0.40	ND(0.2)
WB-N1	05/09/95	1.27	5.43	19.70	80.19	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	1.88	ND(0.2)
WB-N2	05/09/95	2.13	5.57	22.50	51.92	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	1.17	ND(0.2)
WB-N3	05/09/95	0.58	2.38	8.08	18.57	ND(0.2)	ND(0.2)	0.23	ND(0.2)	ND(0.2)	ND(0.2)	0.60	ND(0.2)
WB-COMP	10/20/95	1.03	9.38	18.30	90.90	ND(0.2)	ND(0.2)	0.26	4.41	ND(0.2)	ND(0.2)	2.38	ND(0.2)
	07/24/96	ND(0.3)	0.40	1.00	5.20	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)	NA
	10/22/96	ND(0.2)	0.68	0.70	12.93	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	0.23	ND(0.2)
	01/21/97	ND(1.0)	ND(1.0)	ND(1.0)	5.41	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	NA
	04/09/97	ND(1.0)	ND(1.0)	ND(1.0)	3.75	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	NA
	07/29/97	ND(1.0)	ND(1.0)	ND(1.0)	10.07	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	NA
	01/07/98	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(10.0)
	04/15/98	ND(1.0)	ND(1.0)	ND(1.0)	1.17	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(10.0)
	07/15/98	ND(1.0)	ND(1.0)	ND(1.0)	7.69	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(10.0)
	10/28/98	ND(5.0)	ND(5.0)	ND(5.0)	14.35	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(50.0)
	02/10/99	ND(1.0)	ND(1.0)	ND(1.0)	7.88	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(20.0)
	04/22/99	ND(1.0)	ND(1.0)	ND(1.0)	2.05	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(20.0)
**	07/13/99	ND(0.5)	ND(0.5)	ND(0.5)	ND(1.0)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1.0)
	10/20/99	ND(0.5)	ND(0.5)	ND(0.5)	1.32	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

Prior to January 1995, the laboratory analytical method used was EPA Method 8240.

During and after January 1995, the laboratory analytical method used was EPA Method 8260.

See laboratory reports for concentrations of additional analytes.

In April 1995, the wash bay SVE system was expanded. Each of the three zones now consists of an old south (S) and a new north (N) zone.

NOTES:

mg/m³ = milligrams per cubic meter

* = units reported as "ppm" or "mg/L". Detection limit may be incorrect.

**=laboratory results may not be an accurate representation of the emissions

J = chemical present above instrument detection limit but below method detection limit

NA = not analyzed

MS = Maintenance Shop SVE system

WB = Wash Bay SVE system

WB-N1 = north subzone of Wash Bay Zone 1

WB-N2 = north subzone of Wash Bay Zone 2

WB-N3 = north subzone of Wash Bay Zone 3

WB-COMP = composite sample from Wash Bay zones 1, 2, and 3

MS-COMP = composite sample from Maintenance Shop zones 1 and 2

CHEMICAL ABBREVIATIONS:

1,1-DCA = 1,1-dichloroethane

1,2-DCA = 1,2-dichloroethane

1,1-DCE = 1,1-dichloroethene

1,1,1-TCA = 1,1,1-trichloroethane

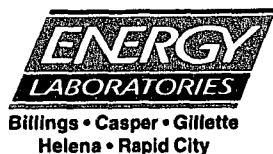
1,1,2-TCA = 1,1,2-trichloroethane

TCE = trichloroethene

PCE = tetrachloroethene

APPENDIX A

Laboratory Data Sheets

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-1.10/99
Laboratory ID: 99-33873-1
Matrix: Water
Dilution Factor: 2

mw-1

Date Sampled: 10-19-99
Time Sampled: 11:15
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	4.16	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	1.74	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1
33873R0000



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-1.10/99
Laboratory ID: 99-33873-1

mw-1

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	4.14	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	2.92	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1376509	1398310	98.4 %	50 - 200 %
Fluorobenzene	2217951	2176194	102 %	50 - 200 %
1,4 - Difluorobenzene	2100719	2090165	101 %	50 - 200 %
Chlorobenzene - d5	1487694	1447589	103 %	50 - 200 %
1,4 - Dichlorobenzene - d4	508833	512571	99.3 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.98	99.8 %	86 - 118 %
Toluene - d8	9.78	97.8 %	88 - 110 %
4 - Bromofluorobenzene	9.62	96.2 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.74	97.4 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ncd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE
33873R0000



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-2.10/99
Laboratory ID: 99-33873-2
Matrix: Water
Dilution Factor: 5

mw-2

Date Sampled: 10-20-99
Time Sampled: 08:25
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	2.5
74-87-3	Chloromethane	ND	2.5
75-01-4	Vinyl chloride (Chloroethene)	ND	2.5
74-83-9	Bromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
75-35-4	1,1 - Dichloroethene	ND	2.5
75-09-2	Methylene chloride (Dichloromethane)	ND	2.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.5
75-34-3	1,1 - Dichloroethane	ND	2.5
78-93-3	2 -Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	ND	2.5
74-97-5	Bromochloromethane	ND	2.5
67-66-3	Chloroform (Trichloromethane)	ND	2.5
594-20-7	2,2 - Dichloropropane	ND	2.5
71-55-6	1,1,1 - Trichloroethane	ND	2.5
107-06-2	1,2 - Dichloroethane	ND	2.5
563-58-6	1,1 - Dichloropropene	ND	2.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.5
71-43-2	Benzene	ND	2.5
74-95-3	Dibromomethane	ND	2.5
78-87-5	1,2 - Dichloropropane	ND	2.5
79-01-6	Trichloroethene	ND	2.5
75-27-4	Bromodichloromethane	ND	2.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.5
79-00-5	1,1,2 - Trichloroethane	ND	2.5
108-88-3	Toluene	2.05	J 2.5
106-93-4	1,2 - Dibromoethane	ND	2.5
142-28-9	1,3 - Dichloropropane	ND	2.5
124-48-1	Dibromochloromethane	ND	2.5
127-18-4	Tetrachloroethene	53.7	2.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
100-41-4	Ethylbenzene	37.7	2.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	5.0
75-25-2	Bromoform (Tribromomethane)	ND	2.5
100-42-5	Styrene (Ethenylbenzene)	ND	2.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.5
96-18-4	1,2,3 - Trichloropropane	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE N
33873R00003



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-2.10/99
Laboratory ID: 99-33873-2

mw-2

Date Sampled: 10-20-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	8.10	2.5
108-86-1	Bromobenzene	ND	2.5
103-65-1	n - Propylbenzene	14.5	2.5
95-49-8	2 - Chlorotoluene	ND	2.5
106-43-4	4 - Chlorotoluene	ND	2.5
108-67-8	1,3,5 - Trimethylbenzene	ND	2.5
98-06-6	tert - Butylbenzene	ND	2.5
95-63-6	1,2,4 - Trimethylbenzene	ND	2.5
135-98-8	sec - Butylbenzene	8.10	2.5
541-73-1	1,3 - Dichlorobenzene	ND	2.5
106-46-7	1,4 - Dichlorobenzene	ND	2.5
99-87-6	4-Isopropyltoluene	ND	2.5
95-50-1	1,2 - Dichlorobenzene	ND	2.5
104-51-8	n - Butylbenzene	ND	2.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	12.5
120-82-1	1,2,4 - Trichlorobenzene	ND	2.5
91-20-3	Naphthalene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
87-61-6	1,2 3 - Trichlorobenzene	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

RUNTIME QUALITY ASSURANCE REPORT

		ICAL / CCAL	PERCENT	ACCEPTANCE
<u>INTERNAL STANDARDS</u>	<u>AREA</u>	<u>AREA</u>	<u>RECOVERY</u>	<u>RANGE</u>
Pentafluorobenzene	1483938	1398310	106%	50 - 200 %
Fluorobenzene	2131665	2176194	98.0%	50 - 200 %
1,4 - Difluorobenzene	2085639	2090165	99.8%	50 - 200 %
Chlorobenzene - d5	1474906	1447589	102%	50 - 200 %
1,4 - Dichlorobenzene - d4	499035	512571	97.4%	50 - 200 %
			PERCENT	ACCEPTANCE
<u>SYSTEM MONITORING COMPOUNDS</u>		<u>CONCENTRATION</u>	<u>RECOVERY</u>	<u>RANGE</u>
Dibromofluoromethane		9.58	95.8%	86 - 118 %
Toluene - d8		9.85	98.5%	88 - 110 %
4 - Bromofluorobenzene		9.39	93.9%	86 - 115 %
1,2 - Dichlorobenzene - d4		9.47	94.7%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-C.10/99
Laboratory ID: 99-33873-35
Matrix: Water
Dilution Factor: 10

*Duplicate of
mw-2*

Date Sampled: 10-20-99
Time Sampled: 07:30
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ($\mu\text{g/L}$)	REPORT LIMIT ($\mu\text{g/L}$)
75-71-8	Dichlorodifluoromethane	ND	5.0
74-87-3	Chloromethane	ND	5.0
75-01-4	Vinyl chloride (Chloroethene)	ND	5.0
74-83-9	Bromomethane	ND	5.0
75-00-3	Chloroethane	ND	5.0
75-69-4	Trichlorofluoromethane	ND	5.0
75-35-4	1,1 - Dichloroethene	ND	5.0
75-09-2	Methylene chloride (Dichloromethane)	ND	5.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	5.0
75-34-3	1,1 - Dichloroethane	ND	5.0
78-93-3	2 -Butanone (MEK)	ND	100
156-59-2	cis - 1,2 - Dichloroethene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
67-66-3	Chloroform (Trichloromethane)	ND	5.0
594-20-7	2,2 - Dichloropropane	ND	5.0
71-55-6	1,1,1 - Trichloroethane	ND	5.0
107-06-2	1,2 - Dichloroethane	ND	5.0
563-58-6	1,1 - Dichloropropene	ND	5.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	5.0
71-43-2	Benzene	ND	5.0
74-95-3	Dibromomethane	ND	5.0
78-87-5	1,2 - Dichloropropane	ND	5.0
79-01-6	Trichloroethene	14.6	5.0
75-27-4	Bromodichloromethane	ND	5.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	5.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	5.0
79-00-5	1,1,2 - Trichloroethane	ND	5.0
108-88-3	Toluene	2.40	5.0
106-93-4	1,2 - Dibromoethane	ND	5.0
142-28-9	1,3 - Dichloropropane	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
127-18-4	Tetrachloroethene	53.7	5.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	5.0
108-90-7	Chlorobenzene	ND	5.0
100-41-4	Ethylbenzene	35.4	5.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	10.0
75-25-2	Bromoform (Tribromomethane)	ND	5.0
100-42-5	Styrene (Ethenylbenzene)	ND	5.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	5.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	5.0
96-18-4	1,2,3 - Trichloropropane	ND	5.0

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE NO.

33873R00069



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-C.10/99
Laboratory ID: 99-33873-35

*Discharged
mww-2*

Date Sampled: 10-20-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	7.10	5.0
108-86-1	Bromobenzene	ND	5.0
103-65-1	n - Propylbenzene	13.2	5.0
95-49-8	2 - Chlorotoluene	ND	5.0
106-43-4	4 - Chlorotoluene	ND	5.0
108-67-8	1,3,5 - Trimethylbenzene	ND	5.0
98-06-6	tert - Butylbenzene	ND	5.0
95-63-6	1,2,4 - Trimethylbenzene	ND	5.0
135-98-8	sec - Butylbenzene	7.90	5.0
541-73-1	1,3 - Dichlorobenzene	ND	5.0
106-46-7	1,4 - Dichlorobenzene	ND	5.0
99-87-6	4-Isopropyltoluene	ND	5.0
95-50-1	1,2 - Dichlorobenzene	ND	5.0
104-51-8	n - Butylbenzene	ND	5.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	25.0
120-82-1	1,2,4 - Trichlorobenzene	ND	5.0
91-20-3	Naphthalene	ND	5.0
87-68-3	Hexachlorobutadiene	ND	5.0
87-61-6	1,2 3 - Trichlorobenzene	ND	5.0

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

RUNTIME QUALITY ASSURANCE REPORT

		ICAL / CCAL	PERCENT	ACCEPTANCE
<u>INTERNAL STANDARDS</u>	<u>AREA</u>	<u>AREA</u>	<u>RECOVERY</u>	<u>RANGE</u>
Pentafluorobenzene	1263031	1398310	90.3%	50 - 200 %
Fluorobenzene	1939520	2176194	89.1%	50 - 200 %
1,4 - Difluorobenzene	1888932	2090165	90.4%	50 - 200 %
Chlorobenzene - d5	1313593	1447589	90.7%	50 - 200 %
1,4 - Dichlorobenzene - d4	476513	512571	93.0%	50 - 200 %
			PERCENT	ACCEPTANCE
<u>SYSTEM MONITORING COMPOUNDS</u>		<u>CONCENTRATION</u>	<u>RECOVERY</u>	<u>RANGE</u>
Dibromofluoromethane		9.49	94.9%	86 - 118 %
Toluene - d8		9.93	99.3%	88 - 110 %
4 - Bromofluorobenzene		9.59	95.9%	86 - 115 %
1,2 - Dichlorobenzene - d4		10.1	101%	80 - 120 %

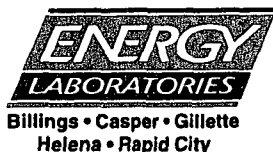
METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ncd\data-gems\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE N
33873R00070



ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-3.10/99
Laboratory ID: 99-33873-3
Matrix: Water
Dilution Factor: 5

mw-3

Date Sampled: 10-20-99
Time Sampled: 10:40
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	2.5
74-87-3	Chloromethane	ND	2.5
75-01-4	Vinyl chloride (Chloroethene)	ND	2.5
74-83-9	Bromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
75-35-4	1,1 - Dichloroethene	4.80	2.5
75-09-2	Methylene chloride (Dichloromethane)	ND	2.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.5
75-34-3	1,1 - Dichloroethane	43.7	2.5
78-93-3	2 -Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	ND	2.5
74-97-5	Bromochloromethane	ND	2.5
67-66-3	Chloroform (Trichloromethane)	ND	2.5
594-20-7	2,2 - Dichloropropane	ND	2.5
71-55-6	1,1,1 - Trichloroethane	ND	2.5
107-06-2	1,2 - Dichloroethane	ND	2.5
563-58-6	1,1 - Dichloropropene	ND	2.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.5
71-43-2	Benzene	12.5	2.5
74-95-3	Dibromomethane	ND	2.5
78-87-5	1,2 - Dichloropropane	ND	2.5
79-01-6	Trichloroethene	6.60	2.5
75-27-4	Bromodichloromethane	ND	2.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.5
79-00-5	1,1,2 - Trichloroethane	ND	2.5
108-88-3	Toluene	23.9	2.5
106-93-4	1,2 - Dibromoethane	ND	2.5
142-28-9	1,3 - Dichloropropane	ND	2.5
124-48-1	Dibromochloromethane	ND	2.5
127-18-4	Tetrachloroethene	27.0	2.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
100-41-4	Ethylbenzene	576	2.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	1,880	5.0
75-25-2	Bromoform (Tribromomethane)	ND	2.5
100-42-5	Styrene (Ethenylbenzene)	ND	2.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	2,580	2.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.5
96-18-4	1,2,3 - Trichloropropane	ND	2.5

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1

33873R0000



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-3.10/99
Laboratory ID: 99-33873-3

Date Sampled: 10-20-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-3

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	344	2.5
108-86-1	Bromobenzene	ND	2.5
103-65-1	n - Propylbenzene	602	2.5
95-49-8	2 - Chlorotoluene	ND	2.5
106-43-4	4 - Chlorotoluene	ND	2.5
108-67-8	1,3,5 - Trimethylbenzene	3,370	2.5
98-06-6	tert - Butylbenzene	ND	2.5
95-63-6	1,2,4 - Trimethylbenzene	3,170	2.5
135-98-8	sec - Butylbenzene	ND	2.5
541-73-1	1,3 - Dichlorobenzene	ND	2.5
106-46-7	1,4 - Dichlorobenzene	ND	2.5
99-87-6	4-Isopropyltoluene	ND	2.5
95-50-1	1,2 - Dichlorobenzene	ND	2.5
104-51-8	n - Butylbenzene	ND	2.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	12.5
120-82-1	1,2,4 - Trichlorobenzene	ND	2.5
91-20-3	Naphthalene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
87-61-6	1,2 3 - Trichlorobenzene	ND	2.5

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1290298	1398310	92.3 %	50 - 200 %
Fluorobenzene	1979513	2176194	91.0 %	50 - 200 %
1,4 - Difluorobenzene	1887590	2090165	90.3 %	50 - 200 %
Chlorobenzene - d5	1332652	1447589	92.1 %	50 - 200 %
1,4 - Dichlorobenzene - d4	477763	512571	93.2 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.41	94.1 %	86 - 118 %
Toluene - d8	10.1	101 %	88 - 110 %
4 - Bromofluorobenzene	9.26	92.6 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.83	98.3 %	80 - 120 %

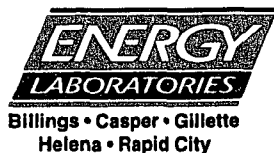
METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecdd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE N
33873R000006

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-4.10/99
Laboratory ID: 99-33873-4
Matrix: Water
Dilution Factor: 2

mw-4

Date Sampled: 10-20-99
Time Sampled: 09:05
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1
33873R0000



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-4.10/99
Laboratory ID: 99-33873-4

Date Sampled: 10-20-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-4

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	3.18	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	4.90	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1433226	1398310	102%	50 - 200 %
Fluorobenzene	2147848	2176194	98.7%	50 - 200 %
1,4 - Difluorobenzene	2077703	2090165	99.4%	50 - 200 %
Chlorobenzene - d5	1431505	1447589	98.9%	50 - 200 %
1,4 - Dichlorobenzene - d4	518051	512571	101%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.30	93.0%	86 - 118 %
Toluene - d8	9.77	97.7%	88 - 110 %
4 - Bromofluorobenzene	9.85	98.5%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.84	98.4%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecdd\data-gems\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE N
33873R0000E



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-5.10/99
Laboratory ID: 99-33873-5
Matrix: Water
Dilution Factor: 2

MW-5

Date Sampled: 10-20-99
Time Sampled: 08:50
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	3.04	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	11.7	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	7.48	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	1.62	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	34.2	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	8.16	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1

33873R0000



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-5.10/99
Laboratory ID: 99-33873-5

Date Sampled: 10-20-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-5

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	8.46	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	7.84	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	7.66	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1454255	1398310	104%	50 - 200 %
Fluorobenzene	2151812	2176194	98.9%	50 - 200 %
1,4 - Difluorobenzene	2111187	2090165	101%	50 - 200 %
Chlorobenzene - d5	1475611	1447589	102%	50 - 200 %
1,4 - Dichlorobenzene - d4	540639	512571	105%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.35	93.5 %	86 - 118 %
Toluene - d8	9.88	98.8 %	88 - 110 %
4 - Bromofluorobenzene	9.77	97.7 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.88	98.8 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B



ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-6.10/99
Laboratory ID: 99-33873-6
Matrix: Water
Dilution Factor: 2

mw-6

Date Sampled: 10-19-99
Time Sampled: 16:15
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	23.9	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	9.72	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	9.70	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1

33873R0001



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-6.10/99
Laboratory ID: 99-33873-6

mw-6

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1472414	1398310	105 %	50 - 200 %
Fluorobenzene	2250509	2176194	103 %	50 - 200 %
1,4 - Difluorobenzene	2154864	2090165	103 %	50 - 200 %
Chlorobenzene - d5	1514004	1447589	105 %	50 - 200 %
1,4 - Dichlorobenzene - d4	527621	512571	103 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.45	94.5 %	86 - 118 %
Toluene - d8	9.94	99.4 %	88 - 110 %
4 - Bromofluorobenzene	9.47	94.7 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.66	96.6 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE 1

33873R0001



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-7.10/99
Laboratory ID: 99-33873-7
Matrix: Water
Dilution Factor: 10

mw-7

Date Sampled: 10-19-99
Time Sampled: 16:45
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	5.0
74-87-3	Chloromethane	ND	5.0
75-01-4	Vinyl chloride (Chloroethene)	ND	5.0
74-83-9	Bromomethane	ND	5.0
75-00-3	Chloroethane	ND	5.0
75-69-4	Trichlorofluoromethane	ND	5.0
75-35-4	1,1 - Dichloroethene	184	5.0
75-09-2	Methylene chloride (Dichloromethane)	ND	5.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	5.0
75-34-3	1,1 - Dichloroethane	34.4	5.0
78-93-3	2 -Butanone (MEK)	ND	100
156-59-2	cis - 1,2 - Dichloroethene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
67-66-3	Chloroform (Trichloromethane)	ND	5.0
594-20-7	2,2 - Dichloropropane	ND	5.0
71-55-6	1,1,1 - Trichloroethane	ND	5.0
107-06-2	1,2 - Dichloroethane	ND	5.0
563-58-6	1,1 - Dichloropropene	ND	5.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	5.0
71-43-2	Benzene	ND	5.0
74-95-3	Dibromomethane	ND	5.0
78-87-5	1,2 - Dichloropropane	ND	5.0
79-01-6	Trichloroethene	44.8	5.0
75-27-4	Bromodichloromethane	ND	5.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	5.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	5.0
79-00-5	1,1,2 - Trichloroethane	ND	5.0
108-88-3	Toluene	ND	5.0
106-93-4	1,2 - Dibromoethane	ND	5.0
142-28-9	1,3 - Dichloropropane	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
127-18-4	Tetrachloroethene	198	5.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	5.0
108-90-7	Chlorobenzene	ND	5.0
100-41-4	Ethylbenzene	ND	5.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	10.0
75-25-2	Bromoform (Tribromomethane)	ND	5.0
100-42-5	Styrene (Ethenylbenzene)	ND	5.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	5.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	5.0
96-18-4	1,2,3 - Trichloropropane	ND	5.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE N

33873R0001



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants

Sample ID: 90125-7.10/99

Laboratory ID: 99-33873-7

Date Sampled: 10-19-99

Date Analyzed: 10-25-99

Date Reported: November 2, 1999

mw-7

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (i-Methylethylbenzene)	ND	5.0
108-86-1	Bromobenzene	ND	5.0
103-65-1	n - Propylbenzene	ND	5.0
95-49-8	2 - Chlorotoluene	ND	5.0
106-43-4	4 - Chlorotoluene	ND	5.0
108-67-8	1,3,5 - Trimethylbenzene	ND	5.0
98-06-6	tert - Butylbenzene	ND	5.0
95-63-6	1,2,4 - Trimethylbenzene	ND	5.0
135-98-8	sec - Butylbenzene	ND	5.0
541-73-1	1,3 - Dichlorobenzene	ND	5.0
106-46-7	1,4 - Dichlorobenzene	ND	5.0
99-87-6	4-Isopropyltoluene	ND	5.0
95-50-1	1,2 - Dichlorobenzene	ND	5.0
104-51-8	n - Butylbenzene	ND	5.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	25.0
120-82-1	1,2,4 - Trichlorobenzene	ND	5.0
91-20-3	Naphthalene	ND	5.0
87-68-3	Hexachlorobutadiene	ND	5.0
87-61-6	1,2 3 - Trichlorobenzene	ND	5.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1420588	1398310	102 %	50 - 200 %
Fluorobenzene	2187832	2176194	101 %	50 - 200 %
1,4 - Difluorobenzene	2085461	2090165	99.8 %	50 - 200 %
Chlorobenzene - d5	1448790	1447589	100 %	50 - 200 %
1,4 - Dichlorobenzene - d4	496147	512571	96.8 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.37	93.7 %	86 - 118 %
Toluene - d8	9.82	98.2 %	88 - 110 %
4 - Bromofluorobenzene	9.07	90.7 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.73	97.3 %	80 - 120 %

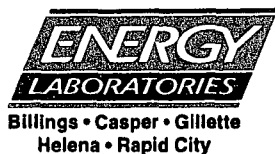
METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecdd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE 1
33873R0001

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-8.10/99
Laboratory ID: 99-33873-8
Matrix: Water
Dilution Factor: 5

mw-8

Date Sampled: 10-19-99
Time Sampled: 16:30
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	2.5
74-87-3	Chloromethane	ND	2.5
75-01-4	Vinyl chloride (Chloroethene)	ND	2.5
74-83-9	Bromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
75-35-4	1,1 - Dichloroethene	135	2.5
75-09-2	Methylene chloride (Dichloromethane)	ND	2.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.5
75-34-3	1,1 - Dichloroethane	ND	2.5
78-93-3	2 -Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	ND	2.5
74-97-5	Bromochloromethane	ND	2.5
67-66-3	Chloroform (Trichloromethane)	ND	2.5
594-20-7	2,2 - Dichloropropane	ND	2.5
71-55-6	1,1,1 - Trichloroethane	ND	2.5
107-06-2	1,2 - Dichloroethane	ND	2.5
563-58-6	1,1 - Dichloropropene	ND	2.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.5
71-43-2	Benzene	ND	2.5
74-95-3	Dibromomethane	ND	2.5
78-87-5	1,2 - Dichloropropane	ND	2.5
79-01-6	Trichloroethene	ND	2.5
75-27-4	Bromodichloromethane	ND	2.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.5
79-00-5	1,1,2 - Trichloroethane	ND	2.5
108-88-3	Toluene	ND	2.5
106-93-4	1,2 - Dibromoethane	ND	2.5
142-28-9	1,3 - Dichloropropane	ND	2.5
124-48-1	Dibromochloromethane	ND	2.5
127-18-4	Tetrachloroethene	2.05	J 2.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
100-41-4	Ethylbenzene	ND	2.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	5.0
75-25-2	Bromoform (Tribromomethane)	ND	2.5
100-42-5	Styrene (Ethenylbenzene)	ND	2.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.5
96-18-4	1,2,3 - Trichloropropane	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE NO
33873R00015



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-8.10/99
Laboratory ID: 99-33873-8

mw-8

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	2.5
108-86-1	Bromobenzene	ND	2.5
103-65-1	n - Propylbenzene	ND	2.5
95-49-8	2 - Chlorotoluene	ND	2.5
106-43-4	4 - Chlorotoluene	ND	2.5
108-67-8	1,3,5 - Trimethylbenzene	ND	2.5
98-06-6	tert - Butylbenzene	ND	2.5
95-63-6	1,2,4 - Trimethylbenzene	ND	2.5
135-98-8	sec - Butylbenzene	ND	2.5
541-73-1	1,3 - Dichlorobenzene	ND	2.5
106-46-7	1,4 - Dichlorobenzene	ND	2.5
99-87-6	4-Isopropyltoluene	ND	2.5
95-50-1	1,2 - Dichlorobenzene	ND	2.5
104-51-8	n - Butylbenzene	ND	2.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	12.5
120-82-1	1,2,4 - Trichlorobenzene	ND	2.5
91-20-3	Naphthalene	11.3	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
87-61-6	1,2 3 - Trichlorobenzene	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

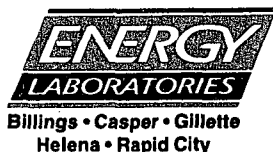
RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1491063	1398310	107%	50 - 200 %
Fluorobenzene	2281155	2176194	105%	50 - 200 %
1,4 - Difluorobenzene	2172902	2090165	104%	50 - 200 %
Chlorobenzene - d5	1524315	1447589	105%	50 - 200 %
1,4 - Dichlorobenzene - d4	527807	512571	103%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.36	93.6 %	86 - 118 %
Toluene - d8	9.89	98.9 %	88 - 110 %
4 - Bromofluorobenzene	9.43	94.3 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.56	95.6 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

**ENERGY LABORATORIES, INC.**

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-9.10/99
Laboratory ID: 99-33873-9
Matrix: Water
Dilution Factor: 2

mw-cj

Date Sampled: 10-19-99
Time Sampled: 15:45
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	1.04	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	3.54	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	ND	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1
33873R0001



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-9.10/99
Laboratory ID: 99-33873-9

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-9

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	5.76	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1499405	1398310	107%	50 - 200 %
Fluorobenzene	2293925	2176194	105%	50 - 200 %
1,4 - Difluorobenzene	2184819	2090165	105%	50 - 200 %
Chlorobenzene - d5	1517689	1447589	105%	50 - 200 %
1,4 - Dichlorobenzene - d4	555891	512571	108%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.37	93.7%	86 - 118 %
Toluene - d8	9.83	98.3%	88 - 110 %
4 - Bromofluorobenzene	9.48	94.8%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.72	97.2%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE
33873R0001



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-10.10/99
Laboratory ID: 99-33873-10
Matrix: Water
Dilution Factor: 5

mw-10

Date Sampled: 10-19-99
Time Sampled: 15:35
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	2.5
74-87-3	Chloromethane	ND	2.5
75-01-4	Vinyl chloride (Chloroethene)	ND	2.5
74-83-9	Bromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
75-35-4	1,1 - Dichloroethene	79.6	2.5
75-09-2	Methylene chloride (Dichloromethane)	ND	2.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.5
75-34-3	1,1 - Dichloroethane	ND	2.5
78-93-3	2 -Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	ND	2.5
74-97-5	Bromochloromethane	ND	2.5
67-66-3	Chloroform (Trichloromethane)	ND	2.5
594-20-7	2,2 - Dichloropropane	ND	2.5
71-55-6	1,1,1 - Trichloroethane	ND	2.5
107-06-2	1,2 - Dichloroethane	ND	2.5
563-58-6	1,1 - Dichloropropene	ND	2.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.5
71-43-2	Benzene	ND	2.5
74-95-3	Dibromomethane	ND	2.5
78-87-5	1,2 - Dichloropropane	ND	2.5
79-01-6	Trichloroethene	ND	2.5
75-27-4	Bromodichloromethane	ND	2.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.5
79-00-5	1,1,2 - Trichloroethane	ND	2.5
108-88-3	Toluene	1.50	J 2.5
106-93-4	1,2 - Dibromoethane	ND	2.5
142-28-9	1,3 - Dichloropropane	ND	2.5
124-48-1	Dibromochloromethane	ND	2.5
127-18-4	Tetrachloroethene	ND	2.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
100-41-4	Ethylbenzene	ND	2.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	5.0
75-25-2	Bromoform (Tribromomethane)	ND	2.5
100-42-5	Styrene (Ethenylbenzene)	ND	2.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.5
96-18-4	1,2,3 - Trichloropropane	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE N

33873R00019



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants

Sample ID: 90125-10.10/99

Laboratory ID: 99-33873-10

Date Sampled: 10-19-99

Date Analyzed: 10-25-99

Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	2.5
108-86-1	Bromobenzene	ND	2.5
103-65-1	n - Propylbenzene	ND	2.5
95-49-8	2 - Chlorotoluene	ND	2.5
106-43-4	4 - Chlorotoluene	ND	2.5
108-67-8	1,3,5 - Trimethylbenzene	ND	2.5
98-06-6	tert - Butylbenzene	ND	2.5
95-63-6	1,2,4 - Trimethylbenzene	ND	2.5
135-98-8	sec - Butylbenzene	ND	2.5
541-73-1	1,3 - Dichlorobenzene	ND	2.5
106-46-7	1,4 - Dichlorobenzene	ND	2.5
99-87-6	4-Isopropyltoluene	ND	2.5
95-50-1	1,2 - Dichlorobenzene	ND	2.5
104-51-8	n - Butylbenzene	ND	2.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	12.5
120-82-1	1,2,4 - Trichlorobenzene	ND	2.5
91-20-3	Naphthalene	11.3	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
87-61-6	1,2 3 - Trichlorobenzene	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1475223	1398310	106%	50 - 200 %
Fluorobenzene	2263685	2176194	104%	50 - 200 %
1,4 - Difluorobenzene	2150389	2090165	103%	50 - 200 %
Chlorobenzene - d5	1503806	1447589	104%	50 - 200 %
1,4 - Dichlorobenzene - d4	526335	512571	103%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.34	93.4%	86 - 118 %
Toluene - d8	9.93	99.3%	88 - 110 %
4 - Bromofluorobenzene	9.48	94.8%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.56	95.6%	80 - 120 %

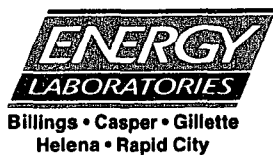
METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecd\data-gems\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE N
33873R00020



ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-11.10/99
Laboratory ID: 99-33873-11
Matrix: Water
Dilution Factor: 5

mw-11

Date Sampled: 10-19-99
Time Sampled: 17:55
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	2.5
74-87-3	Chloromethane	ND	2.5
75-01-4	Vinyl chloride (Chloroethene)	1.05 J	2.5
74-83-9	Bromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
75-35-4	1,1 - Dichloroethene	94.1	2.5
75-09-2	Methylene chloride (Dichloromethane)	ND	2.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.5
75-34-3	1,1 - Dichloroethane	58.7	2.5
78-93-3	2 -Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	5.35	2.5
74-97-5	Bromochloromethane	ND	2.5
67-66-3	Chloroform (Trichloromethane)	ND	2.5
594-20-7	2,2 - Dichloropropane	ND	2.5
71-55-6	1,1,1 - Trichloroethane	ND	2.5
107-06-2	1,2 - Dichloroethane	ND	2.5
563-58-6	1,1 - Dichloropropene	ND	2.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.5
71-43-2	Benzene	2.90	2.5
74-95-3	Dibromomethane	ND	2.5
78-87-5	1,2 - Dichloropropane	ND	2.5
79-01-6	Trichloroethene	46.9	2.5
75-27-4	Bromodichloromethane	ND	2.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.5
79-00-5	1,1,2 - Trichloroethane	ND	2.5
108-88-3	Toluene	ND	2.5
106-93-4	1,2 - Dibromoethane	ND	2.5
142-28-9	1,3 - Dichloropropane	ND	2.5
124-48-1	Dibromochloromethane	ND	2.5
127-18-4	Tetrachloroethene	112	2.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
100-41-4	Ethylbenzene	ND	2.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	5.0
75-25-2	Bromoform (Tribromomethane)	ND	2.5
100-42-5	Styrene (Ethenylbenzene)	ND	2.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.5
96-18-4	1,2,3 - Trichloropropane	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE NO.
33873R00021



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-11.10/99
Laboratory ID: 99-33873-11

mw-11

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	2.5
108-86-1	Bromobenzene	ND	2.5
103-65-1	n - Propylbenzene	ND	2.5
95-49-8	2 - Chlorotoluene	ND	2.5
106-43-4	4 - Chlorotoluene	ND	2.5
108-67-8	1,3,5 - Trimethylbenzene	ND	2.5
98-06-6	tert - Butylbenzene	ND	2.5
95-63-6	1,2,4 - Trimethylbenzene	ND	2.5
135-98-8	sec - Butylbenzene	ND	2.5
541-73-1	1,3 - Dichlorobenzene	ND	2.5
106-46-7	1,4 - Dichlorobenzene	ND	2.5
99-87-6	4-Isopropyltoluene	ND	2.5
95-50-1	1,2 - Dichlorobenzene	ND	2.5
104-51-8	n - Butylbenzene	ND	2.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	12.5
120-82-1	1,2,4 - Trichlorobenzene	ND	2.5
91-20-3	Naphthalene	11.3	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
87-61-6	1,2 3 - Trichlorobenzene	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1461217	1398310	104 %	50 - 200 %
Fluorobenzene	2247574	2176194	103 %	50 - 200 %
1,4 - Difluorobenzene	2138356	2090165	102 %	50 - 200 %
Chlorobenzene - d5	1450968	1447589	100 %	50 - 200 %
1,4 - Dichlorobenzene - d4	519481	512571	101 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.42	94.2 %	86 - 118 %
Toluene - d8	9.65	96.5 %	88 - 110 %
4 - Bromofluorobenzene	9.38	93.8 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.79	97.9 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE NO
33873R00022

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-12.10/99
Laboratory ID: 99-33873-12
Matrix: Water
Dilution Factor: 50

Date Sampled: 10-19-99
Time Sampled: 18:10
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-12

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	25.0
74-87-3	Chloromethane	ND	25.0
75-01-4	Vinyl chloride (Chloroethene)	ND	25.0
74-83-9	Bromomethane	ND	25.0
75-00-3	Chloroethane	ND	25.0
75-69-4	Trichlorofluoromethane	ND	25.0
75-35-4	1,1 - Dichloroethene	17.0	J 25.0
75-09-2	Methylene chloride (Dichloromethane)	ND	25.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	25.0
75-34-3	1,1 - Dichloroethane	207	25.0
78-93-3	2 -Butanone (MEK)	ND	500
156-59-2	cis - 1,2 - Dichloroethene	ND	25.0
74-97-5	Bromochloromethane	ND	25.0
67-66-3	Chloroform (Trichloromethane)	ND	25.0
594-20-7	2,2 - Dichloropropane	ND	25.0
71-55-6	1,1,1 - Trichloroethane	ND	25.0
107-06-2	1,2 - Dichloroethane	ND	25.0
563-58-6	1,1 - Dichloropropene	ND	25.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	25.0
71-43-2	Benzene	50.5	25.0
74-95-3	Dibromomethane	ND	25.0
78-87-5	1,2 - Dichloropropane	ND	25.0
79-01-6	Trichloroethene	27.0	25.0
75-27-4	Bromodichloromethane	ND	25.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	25.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	25.0
79-00-5	1,1,2 - Trichloroethane	ND	25.0
108-88-3	Toluene	ND	25.0
106-93-4	1,2 - Dibromoethane	ND	25.0
142-28-9	1,3 - Dichloropropane	ND	25.0
124-48-1	Dibromochloromethane	ND	25.0
127-18-4	Tetrachloroethene	ND	25.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	25.0
108-90-7	Chlorobenzene	ND	25.0
100-41-4	Ethylbenzene	1,090	25.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	85.5	50.0
75-25-2	Bromoform (Tribromomethane)	ND	25.0
100-42-5	Styrene (Ethenylbenzene)	ND	25.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	90.0	25.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	25.0
96-18-4	1,2,3 - Trichloropropane	ND	25.0

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE 1
33873R0002



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-12.10/99
Laboratory ID: 99-33873-12

MW-12

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	501	25.0
108-86-1	Bromobenzene	ND	25.0
103-65-1	n - Propylbenzene	855	25.0
95-49-8	2 - Chlorotoluene	ND	25.0
106-43-4	4 - Chlorotoluene	ND	25.0
108-67-8	1,3,5 - Trimethylbenzene	ND	25.0
98-06-6	tert - Butylbenzene	ND	25.0
95-63-6	1,2,4 - Trimethylbenzene	471	25.0
135-98-8	sec - Butylbenzene	ND	25.0
541-73-1	1,3 - Dichlorobenzene	ND	25.0
106-46-7	1,4 - Dichlorobenzene	ND	25.0
99-87-6	4-Isopropyltoluene	ND	25.0
95-50-1	1,2 - Dichlorobenzene	ND	25.0
104-51-8	n - Butylbenzene	ND	25.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	125
120-82-1	1,2,4 - Trichlorobenzene	ND	25.0
91-20-3	Naphthalene	116	25.0
87-68-3	Hexachlorobutadiene	ND	25.0
87-61-6	1,2 3 - Trichlorobenzene	ND	25.0

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1461645	1398310	105 %	50 - 200 %
Fluorobenzene	2241806	2176194	103 %	50 - 200 %
1,4 - Difluorobenzene	2131338	2090165	102 %	50 - 200 %
Chlorobenzene - d5	1472814	1447589	102 %	50 - 200 %
1,4 - Dichlorobenzene - d4	549248	512571	107 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.39	93.9 %	86 - 118 %
Toluene - d8	9.85	98.5 %	88 - 110 %
4 - Bromofluorobenzene	9.58	95.8 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.72	97.2 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecd\data-gems\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE 1

33873R0002



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-B.10/99
Laboratory ID: 99-33873-34
Matrix: Water
Dilution Factor: 50

*Duplicate of
mw-12*

Date Sampled: 10-19-99
Time Sampled: 18:30
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	25.0
74-87-3	Chloromethane	ND	25.0
75-01-4	Vinyl chloride (Chloroethene)	ND	25.0
74-83-9	Bromomethane	ND	25.0
75-00-3	Chloroethane	ND	25.0
75-69-4	Trichlorofluoromethane	ND	25.0
75-35-4	1,1 - Dichloroethene	16.5	J 25.0
75-09-2	Methylene chloride (Dichloromethane)	ND	25.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	25.0
75-34-3	1,1 - Dichloroethane	208	25.0
78-93-3	2 -Butanone (MEK)	ND	500
156-59-2	cis - 1,2 - Dichloroethene	ND	25.0
74-97-5	Bromochloromethane	ND	25.0
67-66-3	Chloroform (Trichloromethane)	ND	25.0
594-20-7	2,2 - Dichloropropane	ND	25.0
71-55-6	1,1,1 - Trichloroethane	ND	25.0
107-06-2	1,2 - Dichloroethane	ND	25.0
563-58-6	1,1 - Dichloropropene	ND	25.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	25.0
71-43-2	Benzene	49.0	25.0
74-95-3	Dibromomethane	ND	25.0
78-87-5	1,2 - Dichloropropane	ND	25.0
79-01-6	Trichloroethene	25.5	25.0
75-27-4	Bromodichloromethane	ND	25.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	25.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	25.0
79-00-5	1,1,2 - Trichloroethane	ND	25.0
108-88-3	Toluene	ND	25.0
106-93-4	1,2 - Dibromoethane	ND	25.0
142-28-9	1,3 - Dichloropropane	ND	25.0
124-48-1	Dibromochloromethane	ND	25.0
127-18-4	Tetrachloroethene	ND	25.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	25.0
108-90-7	Chlorobenzene	ND	25.0
100-41-4	Ethylbenzene	1,100	25.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	74.5	50.0
75-25-2	Bromoform (Tribromomethane)	ND	25.0
100-42-5	Styrene (Ethenylbenzene)	ND	25.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	76.0	25.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	25.0
96-18-4	1,2,3 - Trichloropropane	ND	25.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE N

33873R00067



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-B.10/99
Laboratory ID: 99-33873-34

*Duplicate of
mw-12*

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	504	25.0
108-86-1	Bromobenzene	ND	25.0
103-65-1	n - Propylbenzene	852	25.0
95-49-8	2 - Chlorotoluene	ND	25.0
106-43-4	4 - Chlorotoluene	ND	25.0
108-67-8	1,3,5 - Trimethylbenzene	ND	25.0
98-06-6	tert - Butylbenzene	ND	25.0
95-63-6	1,2,4 - Trimethylbenzene	418	25.0
135-98-8	sec - Butylbenzene	ND	25.0
541-73-1	1,3 - Dichlorobenzene	ND	25.0
106-46-7	1,4 - Dichlorobenzene	ND	25.0
99-87-6	4-Isopropyltoluene	ND	25.0
95-50-1	1,2 - Dichlorobenzene	ND	25.0
104-51-8	n - Butylbenzene	ND	25.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	125
120-82-1	1,2,4 - Trichlorobenzene	ND	25.0
91-20-3	Naphthalene	103	25.0
87-68-3	Hexachlorobutadiene	ND	25.0
87-61-6	1,2 3 - Trichlorobenzene	ND	25.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1279305	1398310	91.5 %	50 - 200 %
Fluorobenzene	1967488	2176194	90.4 %	50 - 200 %
1,4 - Difluorobenzene	1889278	2090165	90.4 %	50 - 200 %
Chlorobenzene - d5	1325103	1447589	91.5 %	50 - 200 %
1,4 - Dichlorobenzene - d4	492459	512571	96.1 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.46	94.6 %	86 - 118 %
Toluene - d8	9.97	99.7 %	88 - 110 %
4 - Bromofluorobenzene	9.53	95.3 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.86	98.6 %	80 - 120 %

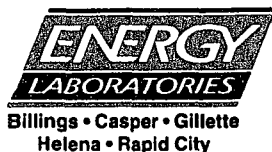
METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE N
33873R0006E



ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-13.10/99
Laboratory ID: 99-33873-13
Matrix: Water
Dilution Factor: 2

Date Sampled: 10-20-99
Time Sampled: 10:05
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-13

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	2.60	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	5.94	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	1.10	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	4.69	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1

33873R00021



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-13.10/99
Laboratory ID: 99-33873-13

Date Sampled: 10-20-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	2.02	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1401467	1398310	100%	50 - 200 %
Fluorobenzene	2149606	2176194	98.8%	50 - 200 %
1,4 - Difluorobenzene	2058453	2090165	98.5%	50 - 200 %
Chlorobenzene - d5	1412182	1447589	97.6%	50 - 200 %
1,4 - Dichlorobenzene - d4	509876	512571	99.5%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.43	94.3%	86 - 118 %
Toluene - d8	9.76	97.6%	88 - 110 %
4 - Bromofluorobenzene	9.53	95.3%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.99	99.9%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ced\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE N
33873R00026



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-14.10/99
Laboratory ID: 99-33873-14
Matrix: Water
Dilution Factor: 5

mw-14

Date Sampled: 10-20-99
Time Sampled: 10:20
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	2.5
74-87-3	Chloromethane	ND	2.5
75-01-4	Vinyl chloride (Chloroethene)	ND	2.5
74-83-9	Bromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
75-35-4	1,1 - Dichloroethene	18.5	2.5
75-09-2	Methylene chloride (Dichloromethane)	ND	2.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.5
75-34-3	1,1 - Dichloroethane	54.2	2.5
78-93-3	2 -Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	ND	2.5
74-97-5	Bromochloromethane	ND	2.5
67-66-3	Chloroform (Trichloromethane)	ND	2.5
594-20-7	2,2 - Dichloropropane	ND	2.5
71-55-6	1,1,1 - Trichloroethane	ND	2.5
107-06-2	1,2 - Dichloroethane	ND	2.5
563-58-6	1,1 - Dichloropropene	ND	2.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.5
71-43-2	Benzene	ND	2.5
74-95-3	Dibromomethane	ND	2.5
78-87-5	1,2 - Dichloropropane	ND	2.5
79-01-6	Trichloroethene	ND	2.5
75-27-4	Bromodichloromethane	ND	2.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.5
79-00-5	1,1,2 - Trichloroethane	ND	2.5
108-88-3	Toluene	ND	2.5
106-93-4	1,2 - Dibromoethane	ND	2.5
142-28-9	1,3 - Dichloropropane	ND	2.5
124-48-1	Dibromochloromethane	ND	2.5
127-18-4	Tetrachloroethene	80.3	2.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
100-41-4	Ethylbenzene	ND	2.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	5.0
75-25-2	Bromoform (Tribromomethane)	ND	2.5
100-42-5	Styrene (Ethenylbenzene)	ND	2.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	2.40	J 2.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.5
96-18-4	1,2,3 - Trichloropropane	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE 1

33873R0002



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-14.10/99
Laboratory ID: 99-33873-14

Date Sampled: 10-20-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-14

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	2.5
108-86-1	Bromobenzene	ND	2.5
103-65-1	n - Propylbenzene	ND	2.5
95-49-8	2 - Chlorotoluene	ND	2.5
106-43-4	4 - Chlorotoluene	ND	2.5
108-67-8	1,3,5 - Trimethylbenzene	ND	2.5
98-06-6	tert - Butylbenzene	ND	2.5
95-63-6	1,2,4 - Trimethylbenzene	7.75	2.5
135-98-8	sec - Butylbenzene	ND	2.5
541-73-1	1,3 - Dichlorobenzene	ND	2.5
106-46-7	1,4 - Dichlorobenzene	ND	2.5
99-87-6	4-Isopropyltoluene	ND	2.5
95-50-1	1,2 - Dichlorobenzene	ND	2.5
104-51-8	n - Butylbenzene	ND	2.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	12.5
120-82-1	1,2,4 - Trichlorobenzene	ND	2.5
91-20-3	Naphthalene	11.8	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
87-61-6	1,2 3 - Trichlorobenzene	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

RUNTIME QUALITY ASSURANCE REPORT

		ICAL / CCAL	PERCENT	ACCEPTANCE
<u>INTERNAL STANDARDS</u>	<u>AREA</u>	<u>AREA</u>	<u>RECOVERY</u>	<u>RANGE</u>
Pentafluorobenzene	1449541	1398310	104%	50 - 200 %
Fluorobenzene	2178561	2176194	100%	50 - 200 %
1,4 - Difluorobenzene	2078686	2090165	99.5%	50 - 200 %
Chlorobenzene - d5	1449584	1447589	100%	50 - 200 %
1,4 - Dichlorobenzene - d4	519691	512571	101%	50 - 200 %
<u>SYSTEM MONITORING COMPOUNDS</u>		<u>CONCENTRATION</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>ACCEPTANCE</u> <u>RANGE</u>
Dibromofluoromethane		9.42	94.2%	86 - 118 %
Toluene - d8		9.95	99.5%	88 - 110 %
4 - Bromofluorobenzene		9.40	94.0%	86 - 115 %
1,2 - Dichlorobenzene - d4		9.60	96.0%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE NO
33873R00028



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-15.10/99
Laboratory ID: 99-33873-15
Matrix: Water
Dilution Factor: 2

mw-15

Date Sampled: 10-20-99
Time Sampled: 09:45
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	4.76	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	39.9	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	1.58	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	1.84	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	2.27	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	2.88	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	1.70	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	3.62	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	63.3	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	83.4	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE

33873R0002



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-15.10/99
Laboratory ID: 99-33873-15

mw-15

Date Sampled: 10-20-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	18.9	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	23.9	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	146	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	163	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	10.3	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1412262	1398310	101 %	50 - 200 %
Fluorobenzene	2177087	2176194	100 %	50 - 200 %
1,4 - Difluorobenzene	2085671	2090165	99.8 %	50 - 200 %
Chlorobenzene - d5	1445352	1447589	99.8 %	50 - 200 %
1,4 - Dichlorobenzene - d4	547085	512571	107 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.54	95.4 %	86 - 118 %
Toluene - d8	9.78	97.8 %	88 - 110 %
4 - Bromofluorobenzene	9.74	97.4 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.72	97.2 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-17A.10/99
Laboratory ID: 99-33873-16
Matrix: Water
Dilution Factor: 5

Date Sampled: 10-19-99
Time Sampled: 17:05
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-17A

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	2.5
74-87-3	Chloromethane	ND	2.5
75-01-4	Vinyl chloride (Chloroethene)	ND	2.5
74-83-9	Bromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
75-35-4	1,1 - Dichloroethene	17.8	2.5
75-09-2	Methylene chloride (Dichloromethane)	ND	2.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.5
75-34-3	1,1 - Dichloroethane	134	2.5
78-93-3	2 -Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	ND	2.5
74-97-5	Bromochloromethane	ND	2.5
67-66-3	Chloroform (Trichloromethane)	ND	2.5
594-20-7	2,2 - Dichloropropane	ND	2.5
71-55-6	1,1,1 - Trichloroethane	ND	2.5
107-06-2	1,2 - Dichloroethane	ND	2.5
563-58-6	1,1 - Dichloropropene	ND	2.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.5
71-43-2	Benzene	4.55	2.5
74-95-3	Dibromomethane	ND	2.5
78-87-5	1,2 - Dichloropropane	ND	2.5
79-01-6	Trichloroethene	31.5	2.5
75-27-4	Bromodichloromethane	ND	2.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.5
79-00-5	1,1,2 - Trichloroethane	ND	2.5
108-88-3	Toluene	ND	2.5
106-93-4	1,2 - Dibromoethane	ND	2.5
142-28-9	1,3 - Dichloropropane	ND	2.5
124-48-1	Dibromochloromethane	ND	2.5
127-18-4	Tetrachloroethene	29.9	2.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
100-41-4	Ethylbenzene	ND	2.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	5.0
75-25-2	Bromoform (Tribromomethane)	ND	2.5
100-42-5	Styrene (Ethenylbenzene)	ND	2.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.5
96-18-4	1,2,3 - Trichloropropane	ND	2.5

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE NO.
33873R00031



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-17A.10/99
Laboratory ID: 99-33873-16

mw-17A

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	4.85	2.5
108-86-1	Bromobenzene	ND	2.5
103-65-1	n - Propylbenzene	ND	2.5
95-49-8	2 - Chlorotoluene	ND	2.5
106-43-4	4 - Chlorotoluene	ND	2.5
108-67-8	1,3,5 - Trimethylbenzene	ND	2.5
98-06-6	tert - Butylbenzene	ND	2.5
95-63-6	1,2,4 - Trimethylbenzene	ND	2.5
135-98-8	sec - Butylbenzene	12.3	2.5
541-73-1	1,3 - Dichlorobenzene	ND	2.5
106-46-7	1,4 - Dichlorobenzene	ND	2.5
99-87-6	4-Isopropyltoluene	ND	2.5
95-50-1	1,2 - Dichlorobenzene	ND	2.5
104-51-8	n - Butylbenzene	ND	2.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	12.5
120-82-1	1,2,4 - Trichlorobenzene	ND	2.5
91-20-3	Naphthalene	8.95	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
87-61-6	1,2 3 - Trichlorobenzene	ND	2.5

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

		ICAL / CCAL	PERCENT	ACCEPTANCE
<u>INTERNAL STANDARDS</u>	<u>AREA</u>	<u>AREA</u>	<u>RECOVERY</u>	<u>RANGE</u>
Pentafluorobenzene	1421591	1398310	102%	50 - 200 %
Fluorobenzene	2133281	2176194	98.0%	50 - 200 %
1,4 - Difluorobenzene	2047172	2090165	97.9%	50 - 200 %
Chlorobenzene - d5	1438563	1447589	99.4%	50 - 200 %
1,4 - Dichlorobenzene - d4	513383	512571	100%	50 - 200 %
			PERCENT	ACCEPTANCE
<u>SYSTEM MONITORING COMPOUNDS</u>		<u>CONCENTRATION</u>	<u>RECOVERY</u>	<u>RANGE</u>
Dibromofluoromethane		9.53	95.3%	86 - 118 %
Toluene - d8		9.95	99.5%	88 - 110 %
4 - Bromofluorobenzene		9.32	93.2%	86 - 115 %
1,2 - Dichlorobenzene - d4		9.97	99.7%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-17B.10/99
Laboratory ID: 99-33873-17
Matrix: Water
Dilution Factor: 5

mw-17B

Date Sampled: 10-19-99
Time Sampled: 17:20
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	2.5
74-87-3	Chloromethane	ND	2.5
75-01-4	Vinyl chloride (Chloroethene)	1.05 J	2.5
74-83-9	Bromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
75-35-4	1,1 - Dichloroethene	52.6	2.5
75-09-2	Methylene chloride (Dichloromethane)	ND	2.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.5
75-34-3	1,1 - Dichloroethane	143	2.5
78-93-3	2 -Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	2.10 J	2.5
74-97-5	Bromochloromethane	ND	2.5
67-66-3	Chloroform (Trichloromethane)	ND	2.5
594-20-7	2,2 - Dichloropropane	ND	2.5
71-55-6	1,1,1 - Trichloroethane	4.65	2.5
107-06-2	1,2 - Dichloroethane	ND	2.5
563-58-6	1,1 - Dichloropropene	ND	2.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.5
71-43-2	Benzene	4.55	2.5
74-95-3	Dibromomethane	ND	2.5
78-87-5	1,2 - Dichloropropane	ND	2.5
79-01-6	Trichloroethene	51.3	2.5
75-27-4	Bromodichloromethane	ND	2.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.5
79-00-5	1,1,2 - Trichloroethane	ND	2.5
108-88-3	Toluene	ND	2.5
106-93-4	1,2 - Dibromoethane	ND	2.5
142-28-9	1,3 - Dichloropropane	ND	2.5
124-48-1	Dibromochloromethane	ND	2.5
127-18-4	Tetrachloroethene	58.8	2.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.5
108-90-7	Chlorobenzene	2.95	2.5
100-41-4	Ethylbenzene	11.5	2.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	5.0
75-25-2	Bromoform (Tribromomethane)	ND	2.5
100-42-5	Styrene (Ethenylbenzene)	ND	2.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.5
96-18-4	1,2,3 - Trichloropropane	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE 1

33873R0003:



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-17B.10/99
Laboratory ID: 99-33873-17

mw-17B

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	101	2.5
108-86-1	Bromobenzene	ND	2.5
103-65-1	n - Propylbenzene	62.3	2.5
95-49-8	2 - Chlorotoluene	ND	2.5
106-43-4	4 - Chlorotoluene	ND	2.5
108-67-8	1,3,5 - Trimethylbenzene	ND	2.5
98-06-6	tert - Butylbenzene	ND	2.5
95-63-6	1,2,4 - Trimethylbenzene	ND	2.5
135-98-8	sec - Butylbenzene	9.75	2.5
541-73-1	1,3 - Dichlorobenzene	ND	2.5
106-46-7	1,4 - Dichlorobenzene	ND	2.5
99-87-6	4-Isopropyltoluene	ND	2.5
95-50-1	1,2 - Dichlorobenzene	ND	2.5
104-51-8	n - Butylbenzene	ND	2.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	12.5
120-82-1	1,2,4 - Trichlorobenzene	ND	2.5
91-20-3	Naphthalene	32.0	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
87-61-6	1,2 3 - Trichlorobenzene	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

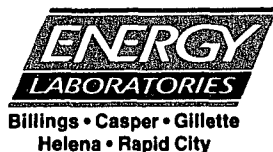
RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1406529	1398310	101%	50 - 200 %
Fluorobenzene	2120792	2176194	97.5%	50 - 200 %
1,4 - Difluorobenzene	2023160	2090165	96.8%	50 - 200 %
Chlorobenzene - d5	1426796	1447589	98.6%	50 - 200 %
1,4 - Dichlorobenzene - d4	527495	512571	103%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.54	95.4%	86 - 118 %
Toluene - d8	10.0	100%	88 - 110 %
4 - Bromofluorobenzene	9.56	95.6%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.88	98.8%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B



ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-17C.10/99
Laboratory ID: 99-33873-18
Matrix: Water
Dilution Factor: 5

Date Sampled: 10-19-99
Time Sampled: 17:30
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	2.5
74-87-3	Chloromethane	ND	2.5
75-01-4	Vinyl chloride (Chloroethene)	4.70	2.5
74-83-9	Bromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
75-35-4	1,1 - Dichloroethene	160	2.5
75-09-2	Methylene chloride (Dichloromethane)	ND	2.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.5
75-34-3	1,1 - Dichloroethane	80.4	2.5
78-93-3	2 -Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	3.30	2.5
74-97-5	Bromochloromethane	ND	2.5
67-66-3	Chloroform (Trichloromethane)	ND	2.5
594-20-7	2,2 - Dichloropropane	ND	2.5
71-55-6	1,1,1 - Trichloroethane	ND	2.5
107-06-2	1,2 - Dichloroethane	2.60	2.5
563-58-6	1,1 - Dichloropropene	ND	2.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.5
71-43-2	Benzene	23.1	2.5
74-95-3	Dibromomethane	ND	2.5
78-87-5	1,2 - Dichloropropane	ND	2.5
79-01-6	Trichloroethene	119	2.5
75-27-4	Bromodichloromethane	ND	2.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.5
79-00-5	1,1,2 - Trichloroethane	ND	2.5
108-88-3	Toluene	1.45	2.5
106-93-4	1,2 - Dibromoethane	ND	2.5
142-28-9	1,3 - Dichloropropane	ND	2.5
124-48-1	Dibromochloromethane	ND	2.5
127-18-4	Tetrachloroethene	39.6	2.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
100-41-4	Ethylbenzene	ND	2.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	5.0
75-25-2	Bromoform (Tribromomethane)	ND	2.5
100-42-5	Styrene (Ethenylbenzene)	ND	2.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.5
96-18-4	1,2,3 - Trichloropropane	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE 1

33873R0003



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-17C.10/99
Laboratory ID: 99-33873-18

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	2.55	2.5
108-86-1	Bromobenzene	ND	2.5
103-65-1	n - Propylbenzene	ND	2.5
95-49-8	2 - Chlorotoluene	ND	2.5
106-43-4	4 - Chlorotoluene	ND	2.5
108-67-8	1,3,5 - Trimethylbenzene	ND	2.5
98-06-6	tert - Butylbenzene	ND	2.5
95-63-6	1,2,4 - Trimethylbenzene	ND	2.5
135-98-8	sec - Butylbenzene	ND	2.5
541-73-1	1,3 - Dichlorobenzene	ND	2.5
106-46-7	1,4 - Dichlorobenzene	ND	2.5
99-87-6	4-Isopropyltoluene	ND	2.5
95-50-1	1,2 - Dichlorobenzene	ND	2.5
104-51-8	n - Butylbenzene	ND	2.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	12.5
120-82-1	1,2,4 - Trichlorobenzene	ND	2.5
91-20-3	Naphthalene	14.3	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
87-61-6	1,2 3 - Trichlorobenzene	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1395668	1398310	99.8%	50 - 200 %
Fluorobenzene	2139598	2176194	98.3%	50 - 200 %
1,4 - Difluorobenzene	2022861	2090165	96.8%	50 - 200 %
Chlorobenzene - d5	1408863	1447589	97.3%	50 - 200 %
1,4 - Dichlorobenzene - d4	509920	512571	99.5%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.48	94.8%	86 - 118 %
Toluene - d8	9.98	99.8%	88 - 110 %
4 - Bromofluorobenzene	9.41	94.1%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.85	98.5%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE N
33873R00036



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-17D.10/99
Laboratory ID: 99-33873-19
Matrix: Water
Dilution Factor: 5

mw-17D

Date Sampled: 10-19-99
Time Sampled: 17:10
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	2.5
74-87-3	Chloromethane	ND	2.5
75-01-4	Vinyl chloride (Chloroethene)	ND	2.5
74-83-9	Bromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
75-35-4	1,1 - Dichloroethene	9.80	2.5
75-09-2	Methylene chloride (Dichloromethane)	ND	2.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.5
75-34-3	1,1 - Dichloroethane	90.8	2.5
78-93-3	2 -Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	ND	2.5
74-97-5	Bromochloromethane	ND	2.5
67-66-3	Chloroform (Trichloromethane)	ND	2.5
594-20-7	2,2 - Dichloropropane	ND	2.5
71-55-6	1,1,1 - Trichloroethane	ND	2.5
107-06-2	1,2 - Dichloroethane	ND	2.5
563-58-6	1,1 - Dichloropropene	ND	2.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.5
71-43-2	Benzene	4.60	2.5
74-95-3	Dibromomethane	ND	2.5
78-87-5	1,2 - Dichloropropane	ND	2.5
79-01-6	Trichloroethene	38.3	2.5
75-27-4	Bromodichloromethane	ND	2.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.5
79-00-5	1,1,2 - Trichloroethane	ND	2.5
108-88-3	Toluene	ND	2.5
106-93-4	1,2 - Dibromoethane	ND	2.5
142-28-9	1,3 - Dichloropropane	ND	2.5
124-48-1	Dibromochloromethane	ND	2.5
127-18-4	Tetrachloroethene	11.7	2.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
100-41-4	Ethylbenzene	ND	2.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	5.0
75-25-2	Bromoform (Tribromomethane)	ND	2.5
100-42-5	Styrene (Ethenylbenzene)	ND	2.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.5
96-18-4	1,2,3 - Trichloropropane	ND	2.5

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1

33873R0003



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-17D.10/99
Laboratory ID: 99-33873-19

mw-17D

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	4.00	2.5
108-86-1	Bromobenzene	ND	2.5
103-65-1	n - Propylbenzene	ND	2.5
95-49-8	2 - Chlorotoluene	ND	2.5
106-43-4	4 - Chlorotoluene	ND	2.5
108-67-8	1,3,5 - Trimethylbenzene	ND	2.5
98-06-6	tert - Butylbenzene	ND	2.5
95-63-6	1,2,4 - Trimethylbenzene	ND	2.5
135-98-8	sec - Butylbenzene	13.2	2.5
541-73-1	1,3 - Dichlorobenzene	ND	2.5
106-46-7	1,4 - Dichlorobenzene	ND	2.5
99-87-6	4-Isopropyltoluene	ND	2.5
95-50-1	1,2 - Dichlorobenzene	ND	2.5
104-51-8	n - Butylbenzene	ND	2.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	12.5
120-82-1	1,2,4 - Trichlorobenzene	ND	2.5
91-20-3	Naphthalene	9.35	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
87-61-6	1,2 3 - Trichlorobenzene	ND	2.5

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1396985	1398310	99.9%	50 - 200 %
Fluorobenzene	2102416	2176194	96.6%	50 - 200 %
1,4 - Difluorobenzene	2019733	2090165	96.6%	50 - 200 %
Chlorobenzene - d5	1407081	1447589	97.2%	50 - 200 %
1,4 - Dichlorobenzene - d4	514358	512571	100%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.40	94.0%	86 - 118 %
Toluene - d8	9.92	99.2%	88 - 110 %
4 - Bromofluorobenzene	9.59	95.9%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.95	99.5%	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\ecdh\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE N
33873R00038



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-18.10/99
Laboratory ID: 99-33873-20
Matrix: Water
Dilution Factor: 5

mw-18

Date Sampled: 10-19-99
Time Sampled: 15:00
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION ($\mu\text{g/L}$)	REPORT LIMIT ($\mu\text{g/L}$)
75-71-8	Dichlorodifluoromethane	ND	2.5
74-87-3	Chloromethane	ND	2.5
75-01-4	Vinyl chloride (Chloroethene)	ND	2.5
74-83-9	Bromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
75-35-4	1,1 - Dichloroethene	149	2.5
75-09-2	Methylene chloride (Dichloromethane)	ND	2.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	2.5
75-34-3	1,1 - Dichloroethane	33.5	2.5
78-93-3	2 -Butanone (MEK)	ND	50.0
156-59-2	cis - 1,2 - Dichloroethene	ND	2.5
74-97-5	Bromochloromethane	ND	2.5
67-66-3	Chloroform (Trichloromethane)	ND	2.5
594-20-7	2,2 - Dichloropropane	ND	2.5
71-55-6	1,1,1 - Trichloroethane	ND	2.5
107-06-2	1,2 - Dichloroethane	ND	2.5
563-58-6	1,1 - Dichloropropene	ND	2.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	2.5
71-43-2	Benzene	2.05	J 2.5
74-95-3	Dibromomethane	ND	2.5
78-87-5	1,2 - Dichloropropane	ND	2.5
79-01-6	Trichloroethene	49.2	2.5
75-27-4	Bromodichloromethane	ND	2.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	2.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	2.5
79-00-5	1,1,2 - Trichloroethane	ND	2.5
108-88-3	Toluene	1.85	2.5
106-93-4	1,2 - Dibromoethane	ND	2.5
142-28-9	1,3 - Dichloropropane	ND	2.5
124-48-1	Dibromochloromethane	ND	2.5
127-18-4	Tetrachloroethene	128	2.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
100-41-4	Ethylbenzene	ND	2.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	5.0
75-25-2	Bromoform (Tribromomethane)	ND	2.5
100-42-5	Styrene (Ethenylbenzene)	ND	2.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	2.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	2.5
96-18-4	1,2,3 - Trichloropropane	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE NO.

33873R00039



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-18.10/99
Laboratory ID: 99-33873-20

mw-18

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(µg/L)	LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	2.5
108-86-1	Bromobenzene	ND	2.5
103-65-1	n - Propylbenzene	ND	2.5
95-49-8	2 - Chlorotoluene	ND	2.5
106-43-4	4 - Chlorotoluene	ND	2.5
108-67-8	1,3,5 - Trimethylbenzene	ND	2.5
98-06-6	tert - Butylbenzene	ND	2.5
95-63-6	1,2,4 - Trimethylbenzene	ND	2.5
135-98-8	sec - Butylbenzene	ND	2.5
541-73-1	1,3 - Dichlorobenzene	ND	2.5
106-46-7	1,4 - Dichlorobenzene	ND	2.5
99-87-6	4-Isopropyltoluene	ND	2.5
95-50-1	1,2 - Dichlorobenzene	ND	2.5
104-51-8	n - Butylbenzene	ND	2.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	12.5
120-82-1	1,2,4 - Trichlorobenzene	ND	2.5
91-20-3	Naphthalene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
87-61-6	1,2 3 - Trichlorobenzene	ND	2.5

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1348287	1398310	96.4%	50 - 200 %
Fluorobenzene	2082036	2176194	95.7%	50 - 200 %
1,4 - Difluorobenzene	1994620	2090165	95.4%	50 - 200 %
Chlorobenzene - d5	1417863	1447589	97.9%	50 - 200 %
1,4 - Dichlorobenzene - d4	497705	512571	97.1%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.63	96.3%	86 - 118 %
Toluene - d8	10.1	101%	88 - 110 %
4 - Bromofluorobenzene	9.40	94.0%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.88	98.8%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE NO
33873R00040



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-19.10/99
Laboratory ID: 99-33873-21
Matrix: Water
Dilution Factor: 10

Date Sampled: 10-19-99
Time Sampled: 15:15
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	5.0
74-87-3	Chloromethane	ND	5.0
75-01-4	Vinyl chloride (Chloroethene)	ND	5.0
74-83-9	Bromomethane	ND	5.0
75-00-3	Chloroethane	ND	5.0
75-69-4	Trichlorofluoromethane	ND	5.0
75-35-4	1,1 - Dichloroethene	236	5.0
75-09-2	Methylene chloride (Dichloromethane)	ND	5.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	5.0
75-34-3	1,1 - Dichloroethene	20.1	5.0
78-93-3	2 -Butanone (MEK)	ND	100
156-59-2	cis - 1,2 - Dichloroethene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
67-66-3	Chloroform (Trichloromethane)	ND	5.0
594-20-7	2,2 - Dichloropropane	ND	5.0
71-55-6	1,1,1 - Trichloroethane	ND	5.0
107-06-2	1,2 - Dichloroethane	ND	5.0
563-58-6	1,1 - Dichloropropene	ND	5.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	5.0
71-43-2	Benzene	3.60	J 5.0
74-95-3	Dibromomethane	ND	5.0
78-87-5	1,2 - Dichloropropane	ND	5.0
79-01-6	Trichloroethene	10.4	5.0
75-27-4	Bromodichloromethane	ND	5.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	5.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	5.0
79-00-5	1,1,2 - Trichloroethane	ND	5.0
108-88-3	Toluene	ND	5.0
106-93-4	1,2 - Dibromoethane	ND	5.0
142-28-9	1,3 - Dichloropropane	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
127-18-4	Tetrachloroethene	203	5.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	5.0
108-90-7	Chlorobenzene	ND	5.0
100-41-4	Ethylbenzene	ND	5.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	10.0
75-25-2	Bromoform (Tribromomethane)	ND	5.0
100-42-5	Styrene (Ethenylbenzene)	ND	5.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	5.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	5.0
96-18-4	1,2,3 - Trichloropropane	ND	5.0

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE N

33873R00041



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-19.10/99
Laboratory ID: 99-33873-21

WW-19

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(µg/L)	LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	5.0
108-86-1	Bromobenzene	ND	5.0
103-65-1	n - Propylbenzene	ND	5.0
95-49-8	2 - Chlorotoluene	ND	5.0
106-43-4	4 - Chlorotoluene	ND	5.0
108-67-8	1,3,5 - Trimethylbenzene	ND	5.0
98-06-6	tert - Butylbenzene	ND	5.0
95-63-6	1,2,4 - Trimethylbenzene	ND	5.0
135-98-8	sec - Butylbenzene	ND	5.0
541-73-1	1,3 - Dichlorobenzene	ND	5.0
106-46-7	1,4 - Dichlorobenzene	ND	5.0
99-87-6	4-Isopropyltoluene	ND	5.0
95-50-1	1,2 - Dichlorobenzene	ND	5.0
104-51-8	n - Butylbenzene	ND	5.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	25.0
120-82-1	1,2,4 - Trichlorobenzene	ND	5.0
91-20-3	Naphthalene	ND	5.0
87-68-3	Hexachlorobutadiene	ND	5.0
87-61-6	1,2 3 - Trichlorobenzene	ND	5.0

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1325913	1398310	94.8%	50 - 200 %
Fluorobenzene	2066986	2176194	95.0%	50 - 200 %
1,4 - Difluorobenzene	1977342	2090165	94.6%	50 - 200 %
Chlorobenzene - d5	1382067	1447589	95.5%	50 - 200 %
1,4 - Dichlorobenzene - d4	494259	512571	96.4%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.68	96.8%	86 - 118 %
Toluene - d8	9.97	99.7%	88 - 110 %
4 - Bromofluorobenzene	9.46	94.6%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.70	97.0%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecdd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE 1
33873R0004



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-20.10/99
Laboratory ID: 99-33873-22
Matrix: Water
Dilution Factor: 2

mw-20

Date Sampled: 10-19-99
Time Sampled: 12:00
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	1.90	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1

33873R0004



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-20.10/99
Laboratory ID: 99-33873-22

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

MW-20

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(µg/L)	LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1371796	1398310	98.1 %	50 - 200 %
Fluorobenzene	2117579	2176194	97.3 %	50 - 200 %
1,4 - Difluorobenzene	2008981	2090165	96.1 %	50 - 200 %
Chlorobenzene - d5	1408910	1447589	97.3 %	50 - 200 %
1,4 - Dichlorobenzene - d4	500901	512571	97.7 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.59	95.9 %	86 - 118 %
Toluene - d8	9.92	99.2 %	88 - 110 %
4 - Bromofluorobenzene	9.43	94.3 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.51	95.1 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

wen: \\ecdl\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE NO.
33873R000044



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-21.10/99
Laboratory ID: 99-33873-23
Matrix: Water
Dilution Factor: 2

Date Sampled: 10-19-99
Time Sampled: 14:45
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-21

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	6.40	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	1.74	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	1.24	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE

33873R0004



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-21.10/99
Laboratory ID: 99-33873-23

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-21

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1340361	1398310	95.9%	50 - 200 %
Fluorobenzene	2075221	2176194	95.4%	50 - 200 %
1,4 - Difluorobenzene	1988498	2090165	95.1%	50 - 200 %
Chlorobenzene - d5	1398966	1447589	96.6%	50 - 200 %
1,4 - Dichlorobenzene - d4	498101	512571	97.2%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.59	95.9%	86 - 118 %
Toluene - d8	9.94	99.4%	88 - 110 %
4 - Bromofluorobenzene	9.53	95.3%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.73	97.3%	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\cedd\data-gcms\november_99\33873.xls

Analyst: _____ wen

TRACKING NO. PAGE
33873R0001



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-22.10/99
Laboratory ID: 99-33873-24
Matrix: Water
Dilution Factor: 10

mw-22

Date Sampled: 10-19-99
Time Sampled: 14:15
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	5.0
74-87-3	Chloromethane	ND	5.0
75-01-4	Vinyl chloride (Chloroethene)	ND	5.0
74-83-9	Bromomethane	ND	5.0
75-00-3	Chloroethane	ND	5.0
75-69-4	Trichlorofluoromethane	ND	5.0
75-35-4	1,1 - Dichloroethene	200	5.0
75-09-2	Methylene chloride (Dichloromethane)	ND	5.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	5.0
75-34-3	1,1 - Dichloroethane	25.7	5.0
78-93-3	2 -Butanone (MEK)	ND	100
156-59-2	cis - 1,2 - Dichloroethene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
67-66-3	Chloroform (Trichloromethane)	ND	5.0
594-20-7	2,2 - Dichloropropane	ND	5.0
71-55-6	1,1,1 - Trichloroethane	ND	5.0
107-06-2	1,2 - Dichloroethane	ND	5.0
563-58-6	1,1 - Dichloropropene	ND	5.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	5.0
71-43-2	Benzene	18.8	5.0
74-95-3	Dibromomethane	ND	5.0
78-87-5	1,2 - Dichloropropane	ND	5.0
79-01-6	Trichloroethene	55.7	5.0
75-27-4	Bromodichloromethane	ND	5.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	5.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	5.0
79-00-5	1,1,2 - Trichloroethane	ND	5.0
108-88-3	Toluene	2.30	5.0
106-93-4	1,2 - Dibromoethane	ND	5.0
142-28-9	1,3 - Dichloropropane	ND	5.0
124-48-1	Dibromochloromethane	ND	5.0
127-18-4	Tetrachloroethene	207	5.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	5.0
108-90-7	Chlorobenzene	ND	5.0
100-41-4	Ethylbenzene	ND	5.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	10.0
75-25-2	Bromoform (Tribromomethane)	ND	5.0
100-42-5	Styrene (Ethenylbenzene)	ND	5.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	5.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	5.0
96-18-4	1,2,3 - Trichloropropane	ND	5.0

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

TRACKING NO. PAGE

33873R0004



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-22.10/99
Laboratory ID: 99-33873-24

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-22

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	5.0
108-86-1	Bromobenzene	ND	5.0
103-65-1	n - Propylbenzene	ND	5.0
95-49-8	2 - Chlorotoluene	ND	5.0
106-43-4	4 - Chlorotoluene	ND	5.0
108-67-8	1,3,5 - Trimethylbenzene	ND	5.0
98-06-6	tert - Butylbenzene	ND	5.0
95-63-6	1,2,4 - Trimethylbenzene	ND	5.0
135-98-8	sec - Butylbenzene	ND	5.0
541-73-1	1,3 - Dichlorobenzene	ND	5.0
106-46-7	1,4 - Dichlorobenzene	ND	5.0
99-87-6	4-Isopropyltoluene	ND	5.0
95-50-1	1,2 - Dichlorobenzene	ND	5.0
104-51-8	n - Butylbenzene	ND	5.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	25.0
120-82-1	1,2,4 - Trichlorobenzene	ND	5.0
91-20-3	Naphthalene	ND	5.0
87-68-3	Hexachlorobutadiene	ND	5.0
87-61-6	1,2 3 - Trichlorobenzene	ND	5.0

ND - Analyte not detected at stated limit of detection

J - Analyte passes MS identification criteria, but is less than stated detection limit

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1320712	1398310	94.5%	50 - 200 %
Fluorobenzene	2049232	2176194	94.2%	50 - 200 %
1,4 - Difluorobenzene	1952808	2090165	93.4%	50 - 200 %
Chlorobenzene - d5	1378186	1447589	95.2%	50 - 200 %
1,4 - Dichlorobenzene - d4	495798	512571	96.7%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.71	97.1%	86 - 118 %
Toluene - d8	9.98	99.8%	88 - 110 %
4 - Bromofluorobenzene	9.54	95.4%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.69	96.9%	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\cccd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE NO
33873R00048



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-23.10/99
Laboratory ID: 99-33873-25
Matrix: Water
Dilution Factor: 2

mw-23

Date Sampled: 10-19-99
Time Sampled: 14:00
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	2.46	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1

33873R0004



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-23.10/99
Laboratory ID: 99-33873-25

mw-23

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(µg/L)	LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1352096	1398310	96.7%	50 - 200 %
Fluorobenzene	2028735	2176194	93.2%	50 - 200 %
1,4 - Difluorobenzene	1931270	2090165	92.4%	50 - 200 %
Chlorobenzene - d5	1383539	1447589	95.6%	50 - 200 %
1,4 - Dichlorobenzene - d4	491456	512571	95.9%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.18	91.8%	86 - 118 %
Toluene - d8	10.1	101%	88 - 110 %
4 - Bromofluorobenzene	9.57	95.7%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.66	96.6%	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE
33873R0005



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-24.10/99
Laboratory ID: 99-33873-26
Matrix: Water
Dilution Factor: 2

mw-24

Date Sampled: 10-19-99
Time Sampled: 11:35
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	2.50	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1

33873R0005



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-24.10/99
Laboratory ID: 99-33873-26

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-24

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1358838	1398310	97.2 %	50 - 200 %
Fluorobenzene	2032150	2176194	93.4 %	50 - 200 %
1,4 - Difluorobenzene	1939328	2090165	92.8 %	50 - 200 %
Chlorobenzene - d5	1349519	1447589	93.2 %	50 - 200 %
1,4 - Dichlorobenzene - d4	486298	512571	94.9 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.27	92.7 %	86 - 118 %
Toluene - d8	9.91	99.1 %	88 - 110 %
4 - Bromofluorobenzene	9.41	94.1 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.69	96.9 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\ced\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE NO
33873R00052



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-25.10/99
Laboratory ID: 99-33873-27
Matrix: Water
Dilution Factor: 2

mw-25

Date Sampled: 10-19-99
Time Sampled: 14:25
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	26.7	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethene	12.2	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	24.7	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	4.00	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	2.00	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	27.0	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1

33873R0005



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-25.10/99
Laboratory ID: 99-33873-27

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-25

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1361459	1398310	97.4 %	50 - 200 %
Fluorobenzene	2011126	2176194	92.4 %	50 - 200 %
1,4 - Difluorobenzene	1946671	2090165	93.1 %	50 - 200 %
Chlorobenzene - d5	1392217	1447589	96.2 %	50 - 200 %
1,4 - Dichlorobenzene - d4	500986	512571	97.7 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.37	93.7 %	86 - 118 %
Toluene - d8	10.1	101 %	88 - 110 %
4 - Bromofluorobenzene	9.68	96.8 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.80	98.0 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\ced\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE 1
33873R0005



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-26.10/99
Laboratory ID: 99-33873-28
Matrix: Water
Dilution Factor: 2

mw-26

Date Sampled: 10-19-99
Time Sampled: 13:25
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	17.7	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	5.58	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	1.00	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	3.16	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	2.66	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	18.4	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE NO
33873R00055



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-26.10/99
Laboratory ID: 99-33873-28

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

MW-26

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1361858	1398310	97.4%	50 - 200 %
Fluorobenzene	2012824	2176194	92.5%	50 - 200 %
1,4 - Difluorobenzene	1933716	2090165	92.5%	50 - 200 %
Chlorobenzene - d5	1348643	1447589	93.2%	50 - 200 %
1,4 - Dichlorobenzene - d4	485415	512571	94.7%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.35	93.5%	86 - 118 %
Toluene - d8	9.94	99.4%	88 - 110 %
4 - Bromofluorobenzene	9.56	95.6%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.66	96.6%	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\ecdd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE N
33873R00056



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-27.10/99
Laboratory ID: 99-33873-29
Matrix: Water
Dilution Factor: 2

mw-27

Date Sampled: 10-19-99
Time Sampled: 13:45
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(µg/L)	LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	2.50	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE NO
33873R00057



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-27.10/99
Laboratory ID: 99-33873-29

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

MW-27

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1331964	1398310	95.3 %	50 - 200 %
Fluorobenzene	2042818	2176194	93.9 %	50 - 200 %
1,4 - Difluorobenzene	1951481	2090165	93.4 %	50 - 200 %
Chlorobenzene - d5	1375379	1447589	95.0 %	50 - 200 %
1,4 - Dichlorobenzene - d4	495633	512571	96.7 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.46	94.6 %	86 - 118 %
Toluene - d8	9.94	99.4 %	88 - 110 %
4 - Bromofluorobenzene	9.59	95.9 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.65	96.5 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\ecdh\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE N
33873R00058



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-28.10/99
Laboratory ID: 99-33873-30
Matrix: Water
Dilution Factor: 2

mw-28

Date Sampled: 10-19-99
Time Sampled: 12:35
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	2.20	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1

33873R0005



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-28.10/99
Laboratory ID: 99-33873-30

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-28

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(µg/L)	LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1309976	1398310	93.7 %	50 - 200 %
Fluorobenzene	1989961	2176194	91.4 %	50 - 200 %
1,4 - Difluorobenzene	1895727	2090165	90.7 %	50 - 200 %
Chlorobenzene - d5	1309809	1447589	90.5 %	50 - 200 %
1,4 - Dichlorobenzene - d4	471991	512571	92.1 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.55	95.5 %	86 - 118 %
Toluene - d8	9.82	98.2 %	88 - 110 %
4 - Bromofluorobenzene	9.54	95.4 %	86 - 115 %
1,2 - Dichlorobenzene - d4	9.72	97.2 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE 1
33873R00061



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-29.10/99
Laboratory ID: 99-33873-31
Matrix: Water
Dilution Factor: 2

mw-29

Date Sampled: 10-19-99
Time Sampled: 12:55
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	ND	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	ND	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	1.44	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE 1

33873R0006



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-29.10/99
Laboratory ID: 99-33873-31

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-29

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(µg/L)	LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1285234	1398310	91.9%	50 - 200 %
Fluorobenzene	2003480	2176194	92.1%	50 - 200 %
1,4 - Difluorobenzene	1914934	2090165	91.6%	50 - 200 %
Chlorobenzene - d5	1315221	1447589	90.9%	50 - 200 %
1,4 - Dichlorobenzene - d4	467103	512571	91.1%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.57	95.7%	86 - 118 %
Toluene - d8	9.78	97.8%	88 - 110 %
4 - Bromofluorobenzene	9.47	94.7%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.72	97.2%	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\ecdd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE
33873R0006



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-30.10/99
Laboratory ID: 99-33873-32
Matrix: Water
Dilution Factor: 2

mw-30

Date Sampled: 10-19-99
Time Sampled: 13:10
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	2.84	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	1.52	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	2.78	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	2.98	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE NO.

33873R00063



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-30.10/99
Laboratory ID: 99-33873-32

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

mw-30

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1281195	1398310	91.6%	50 - 200 %
Fluorobenzene	1992640	2176194	91.6%	50 - 200 %
1,4 - Difluorobenzene	1901493	2090165	91.0%	50 - 200 %
Chlorobenzene - d5	1329601	1447589	91.8%	50 - 200 %
1,4 - Dichlorobenzene - d4	477209	512571	93.1%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.54	95.4%	86 - 118 %
Toluene - d8	10.1	101%	88 - 110 %
4 - Bromofluorobenzene	9.53	95.3%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.86	98.6%	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE N
33873R00064



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-A.10/99
Laboratory ID: 99-33873-33
Matrix: Water
Dilution Factor: 2

*Duplicate
mw-30*

Date Sampled: 10-19-99
Time Sampled: 10:30
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	1.0
74-87-3	Chloromethane	ND	1.0
75-01-4	Vinyl chloride (Chloroethene)	ND	1.0
74-83-9	Bromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
75-35-4	1,1 - Dichloroethene	2.88	1.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.0
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.0
75-34-3	1,1 - Dichloroethane	1.50	1.0
78-93-3	2 -Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	1.0
563-58-6	1,1 - Dichloropropene	ND	1.0
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.0
71-43-2	Benzene	ND	1.0
74-95-3	Dibromomethane	ND	1.0
78-87-5	1,2 - Dichloropropane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.0
79-00-5	1,1,2 - Trichloroethane	ND	1.0
108-88-3	Toluene	2.98	1.0
106-93-4	1,2 - Dibromoethane	ND	1.0
142-28-9	1,3 - Dichloropropane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
127-18-4	Tetrachloroethene	3.02	1.0
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.0
75-25-2	Bromoform (Tribromomethane)	ND	1.0
100-42-5	Styrene (Ethenylbenzene)	ND	1.0
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.0
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.0
96-18-4	1,2,3 - Trichloropropane	ND	1.0

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE NO

33873R00065



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-A.10/99
Laboratory ID: 99-33873-33

Date Sampled: 10-19-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

*Asphalt of
mw-30*

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	1.0
108-86-1	Bromobenzene	ND	1.0
103-65-1	n - Propylbenzene	ND	1.0
95-49-8	2 - Chlorotoluene	ND	1.0
106-43-4	4 - Chlorotoluene	ND	1.0
108-67-8	1,3,5 - Trimethylbenzene	ND	1.0
98-06-6	tert - Butylbenzene	ND	1.0
95-63-6	1,2,4 - Trimethylbenzene	ND	1.0
135-98-8	sec - Butylbenzene	ND	1.0
541-73-1	1,3 - Dichlorobenzene	ND	1.0
106-46-7	1,4 - Dichlorobenzene	ND	1.0
99-87-6	4-Isopropyltoluene	ND	1.0
95-50-1	1,2 - Dichlorobenzene	ND	1.0
104-51-8	n - Butylbenzene	ND	1.0
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	5.0
120-82-1	1,2,4 - Trichlorobenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
87-61-6	1,2 3 - Trichlorobenzene	ND	1.0

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1284192	1398310	91.8%	50 - 200 %
Fluorobenzene	1997671	2176194	91.8%	50 - 200 %
1,4 - Difluorobenzene	1900403	2090165	90.9%	50 - 200 %
Chlorobenzene - d5	1286913	1447589	88.9%	50 - 200 %
1,4 - Dichlorobenzene - d4	452686	512571	88.3%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.52	95.2%	86 - 118 %
Toluene - d8	9.72	97.2%	88 - 110 %
4 - Bromofluorobenzene	9.37	93.7%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.84	98.4%	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: wen

TRACKING NO. PAGE 1
33873R000061



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: TRIP BLANK
Laboratory ID: 99-33873-36
Matrix: Water
Dilution Factor: 1

Date Sampled: 10-12-99
Time Sampled: 12:00
Date Received: 10-21-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
75-71-8	Dichlorodifluoromethane	ND	0.5
74-87-3	Chloromethane	ND	0.5
75-01-4	Vinyl chloride (Chloroethene)	ND	0.5
74-83-9	Bromomethane	ND	0.5
75-00-3	Chloroethane	ND	0.5
75-69-4	Trichlorofluoromethane	ND	0.5
75-35-4	1,1 - Dichloroethene	ND	0.5
75-09-2	Methylene chloride (Dichloromethane)	ND	0.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	0.5
75-34-3	1,1 - Dichloroethane	ND	0.5
78-93-3	2 -Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	0.5
74-97-5	Bromochloromethane	ND	0.5
67-66-3	Chloroform (Trichloromethane)	ND	0.5
594-20-7	2,2 - Dichloropropane	ND	0.5
71-55-6	1,1,1 - Trichloroethane	ND	0.5
107-06-2	1,2 - Dichloroethane	ND	0.5
563-58-6	1,1 - Dichloropropene	ND	0.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	0.5
71-43-2	Benzene	ND	0.5
74-95-3	Dibromomethane	ND	0.5
78-87-5	1,2 - Dichloropropane	ND	0.5
79-01-6	Trichloroethene	ND	0.5
75-27-4	Bromodichloromethane	ND	0.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	0.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	0.5
79-00-5	1,1,2 - Trichloroethane	ND	0.5
108-88-3	Toluene	ND	0.5
106-93-4	1,2 - Dibromoethane	ND	0.5
142-28-9	1,3 - Dichloropropane	ND	0.5
124-48-1	Dibromochloromethane	ND	0.5
127-18-4	Tetrachloroethene	ND	0.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	0.5
108-90-7	Chlorobenzene	ND	0.5
100-41-4	Ethylbenzene	ND	0.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	1.0
75-25-2	Bromoform (Tribromomethane)	ND	0.5
100-42-5	Styrene (Ethenylbenzene)	ND	0.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	0.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	0.5
96-18-4	1,2,3 - Trichloropropane	ND	0.5

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE N

33873R00071



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: TRIP BLANK
Laboratory ID: 99-33873-36

Date Sampled: 10-12-99
Date Analyzed: 10-25-99
Date Reported: November 2, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	REPORT LIMIT (µg/L)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	0.5
108-86-1	Bromobenzene	ND	0.5
103-65-1	n - Propylbenzene	ND	0.5
95-49-8	2 - Chlorotoluene	ND	0.5
106-43-4	4 - Chlorotoluene	ND	0.5
108-67-8	1,3,5 - Trimethylbenzene	ND	0.5
98-06-6	tert - Butylbenzene	ND	0.5
95-63-6	1,2,4 - Trimethylbenzene	ND	0.5
135-98-8	sec - Butylbenzene	ND	0.5
541-73-1	1,3 - Dichlorobenzene	ND	0.5
106-46-7	1,4 - Dichlorobenzene	ND	0.5
99-87-6	4-Isopropyltoluene	ND	0.5
95-50-1	1,2 - Dichlorobenzene	ND	0.5
104-51-8	n - Butylbenzene	ND	0.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	2.5
120-82-1	1,2,4 - Trichlorobenzene	ND	0.5
91-20-3	Naphthalene	ND	0.5
87-68-3	Hexachlorobutadiene	ND	0.5
87-61-6	1,2 3 - Trichlorobenzene	ND	0.5

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1323332	1398310	94.6%	50 - 200 %
Fluorobenzene	2031956	2176194	93.4%	50 - 200 %
1,4 - Difluorobenzene	1938284	2090165	92.7%	50 - 200 %
Chlorobenzene - d5	1353662	1447589	93.5%	50 - 200 %
1,4 - Dichlorobenzene - d4	483677	512571	94.4%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.45	94.5%	86 - 118 %
Toluene - d8	9.96	99.6%	88 - 110 %
4 - Bromofluorobenzene	9.56	95.6%	86 - 115 %
1,2 - Dichlorobenzene - d4	9.83	98.3%	80 - 120 %

METHODS USED IN THIS ANALYSIS:
EPA 5030B, EPA 8260B

wen: \\ecd\data-gcms\november_99\33873.xls

Analyst: _____ wen

TRACKING NO. PAGE NO
33873R00072



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601

MAILING: P.O. BOX 3258 • CASPER, WY 82602

E-mail: energy@trib.com • FAX: (307) 234-1639

PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Project: None
Sample ID: 90125-WB.10/99
Laboratory ID: 99-33877-1
Matrix: Air
Dilution Factor: 1

*Wash Bay
SVE system input*

Date Sampled: 10-20-99
Time Sampled: 11:25
Date Received: 10-21-99
Date Analyzed: 10-21-99
Date Reported: November 4, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m ³)	REPORT LIMIT (mg/m ³)
75-71-8	Dichlorodifluoromethane	ND	0.5
74-87-3	Chloromethane	ND	0.5
75-01-4	Vinyl chloride (Chloroethene)	ND	0.5
74-83-9	Bromomethane	ND	0.5
75-00-3	Chloroethane	ND	0.5
75-69-4	Trichlorofluoromethane	ND	0.5
75-35-4	1,1 - Dichloroethene	ND	0.5
75-09-2	Methylene chloride (Dichloromethane)	ND	0.5
156-60-5	trans - 1, 2 - Dichloroethene	ND	0.5
75-34-3	1,1 - Dichloroethane	ND	0.5
78-93-3	2 - Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
67-66-3	Chloroform (Trichloromethane)	ND	1.0
594-20-7	2,2 - Dichloropropane	ND	1.0
71-55-6	1,1,1 - Trichloroethane	ND	1.0
107-06-2	1,2 - Dichloroethane	ND	0.5
563-58-6	1,1 - Dichloropropene	ND	0.5
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	0.5
71-43-2	Benzene	ND	0.5
74-95-3	Dibromomethane	ND	0.5
78-87-5	1,2 - Dichloropropane	ND	0.5
79-01-6	Trichloroethene	ND	0.5
75-27-4	Bromodichloromethane	ND	0.5
10061-01-5	cis - 1,3 - Dichloropropene	ND	0.5
10061-02-6	trans - 1,3 - Dichloropropene	ND	0.5
79-00-5	1,1,2 - Trichloroethane	ND	0.5
108-88-3	Toluene	ND	0.5
106-93-4	1,2 - Dibromoethane	ND	0.5
142-28-9	1,3 - Dichloropropane	ND	0.5
124-48-1	Dibromochloromethane	ND	0.5
127-18-4	Tetrachloroethene	ND	0.5
630-20-6	1,1,1,2 - Tetrachloroethane	ND	0.5
108-90-7	Chlorobenzene	ND	0.5
100-41-4	Ethylbenzene	ND	0.5
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	1.0
75-25-2	Bromoform (Tribromomethane)	ND	0.5
100-42-5	Styrene (Ethenylbenzene)	ND	0.5
95-47-6	o - Xylene (1,2-Dimethylbenzene)	1.32	0.5
79-34-5	1,1,2,2 - Tetrachloroethane	ND	0.5
96-18-4	1,2,3 - Trichloropropane	ND	0.5

ND - Analyte not detected at stated limit of detection

TRACKING NO. PAGE NO.

33877R00001



LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Western Water Consultants
Sample ID: 90125-WB.10/99
Laboratory ID: 99-33877-1

*Wash Bay SVE
system input*

Date Sampled: 10-20-99
Date Analyzed: 10-21-99
Date Reported: November 4, 1999

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m ³)	REPORT LIMIT (mg/m ³)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	0.5
108-86-1	Bromobenzene	ND	0.5
103-65-1	n - Propylbenzene	ND	0.5
95-49-8	2 - Chlorotoluene	ND	0.5
106-43-4	4 - Chlorotoluene	ND	0.5
108-67-8	1,3,5 - Trimethylbenzene	1.60	0.5
98-06-6	tert - Butylbenzene	ND	0.5
95-63-6	1,2,4 - Trimethylbenzene	2.82	0.5
135-98-8	sec - Butylbenzene	ND	0.5
541-73-1	1,3 - Dichlorobenzene	ND	0.5
106-46-7	1,4 - Dichlorobenzene	ND	0.5
99-87-6	4-Isopropyltoluene	ND	0.5
95-50-1	1,2 - Dichlorobenzene	ND	0.5
104-51-8	n - Butylbenzene	ND	0.5
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	2.5
120-82-1	1,2,4 - Trichlorobenzene	ND	0.5
91-20-3	Naphthalene	ND	0.5
87-68-3	Hexachlorobutadiene	ND	0.5
87-61-6	1,2 3 - Trichlorobenzene	ND	0.5

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	1293537	1283813	101 %	50 - 200 %
Fluorobenzene	2037152	2044683	99.6 %	50 - 200 %
1,4 - Difluorobenzene	1907716	1932913	98.7 %	50 - 200 %
Chlorobenzene - d5	1389304	1341681	104 %	50 - 200 %
1,4 - Dichlorobenzene - d4	525448	509208	103 %	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10.1	101 %	86 - 118 %
Toluene - d8	10.2	102 %	88 - 110 %
4 - Bromofluorobenzene	10.0	100 %	86 - 115 %
1,2 - Dichlorobenzene - d4	10.2	102 %	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

sec: r:\reports\clients\western_water_consultants\casper_org\33877-1_8260_a.xls

Analyst: yw

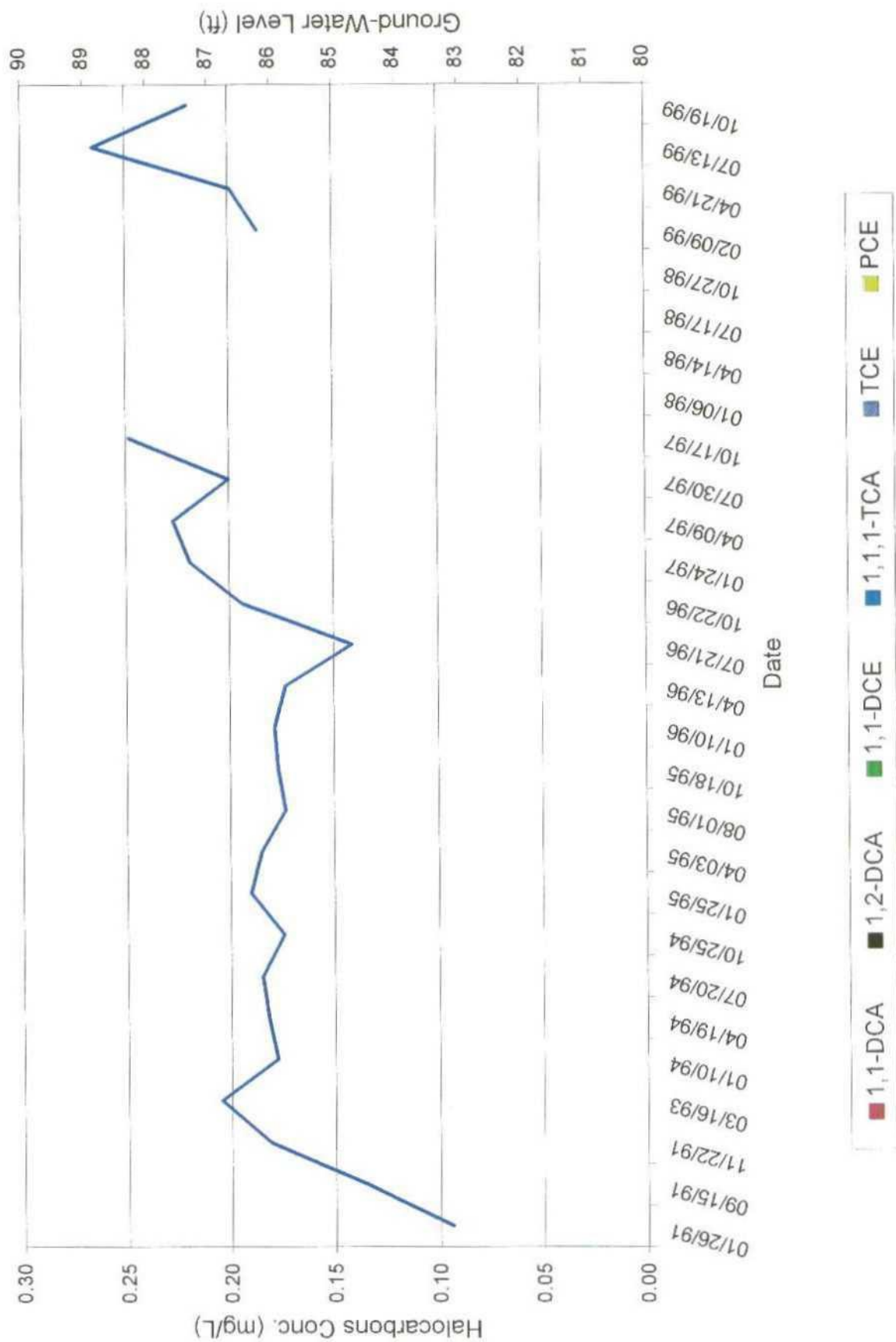
TRACKING NO. PAGE NO
33877R00002

APPENDIX B

Plots of Total Halocarbons Versus Static Water Levels

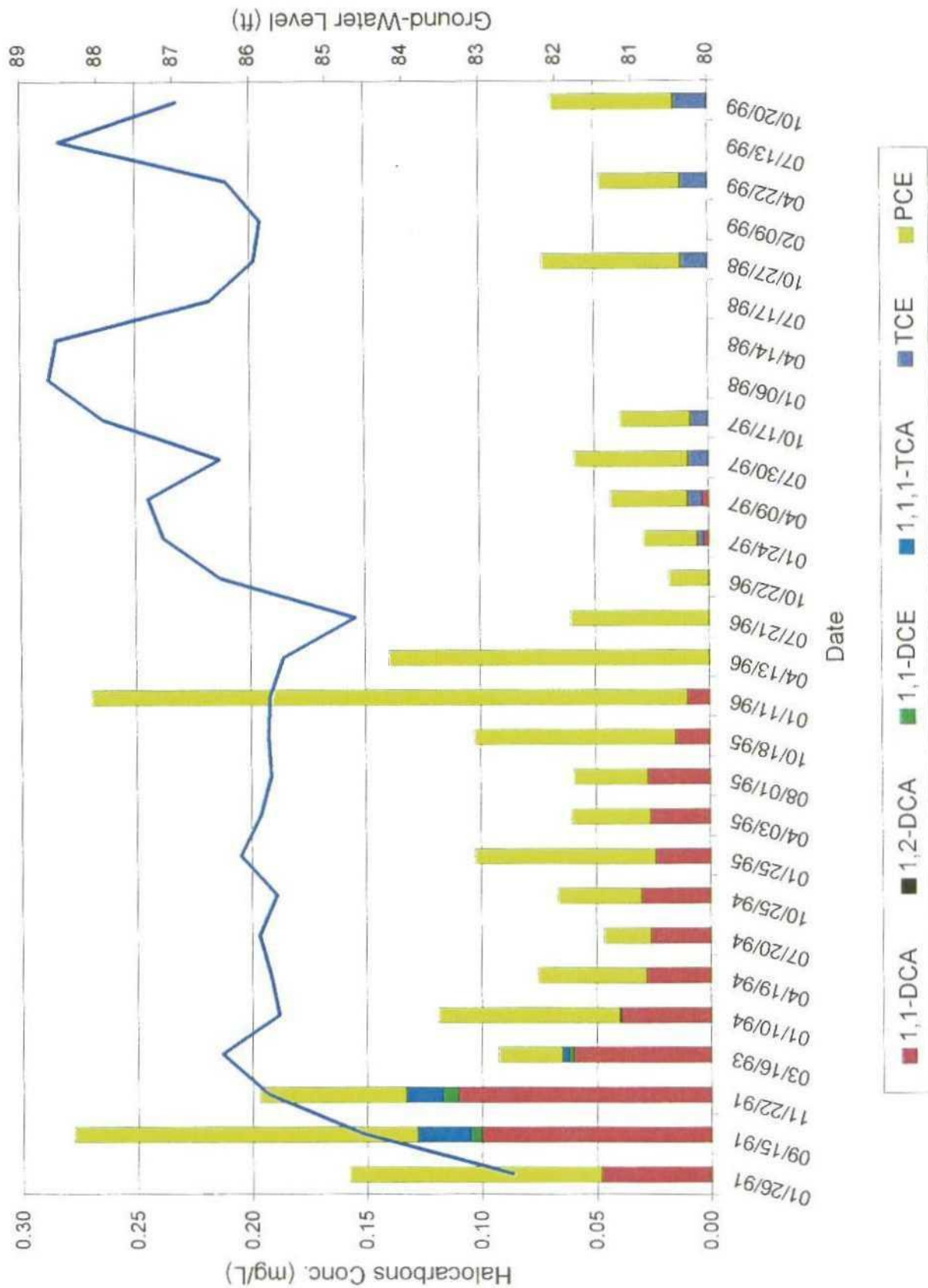
Monitoring Well MW-1

Halocarbons & Ground-Water Level

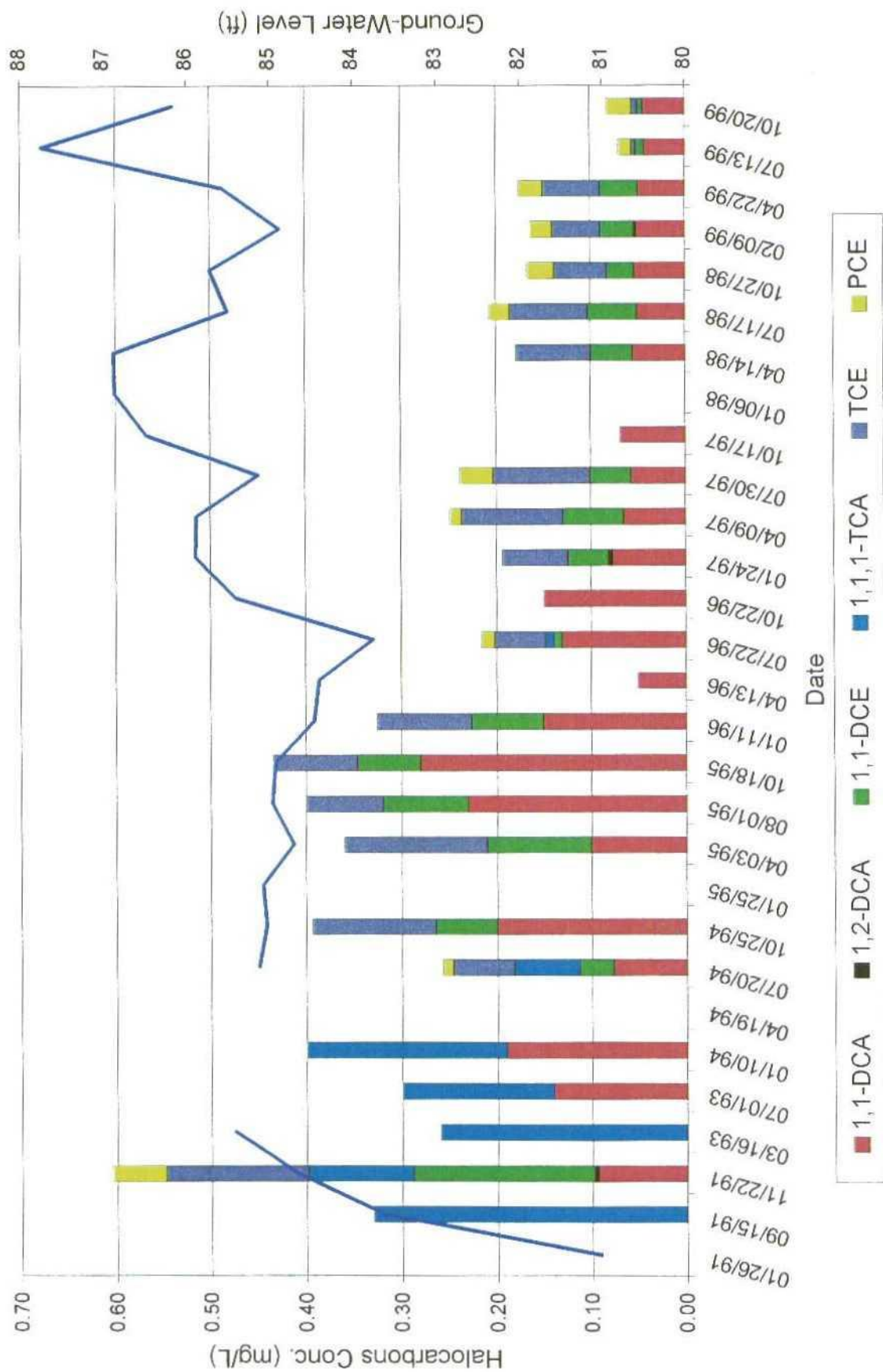


Monitoring Well MW-2

Halocarbons & Ground-Water Level

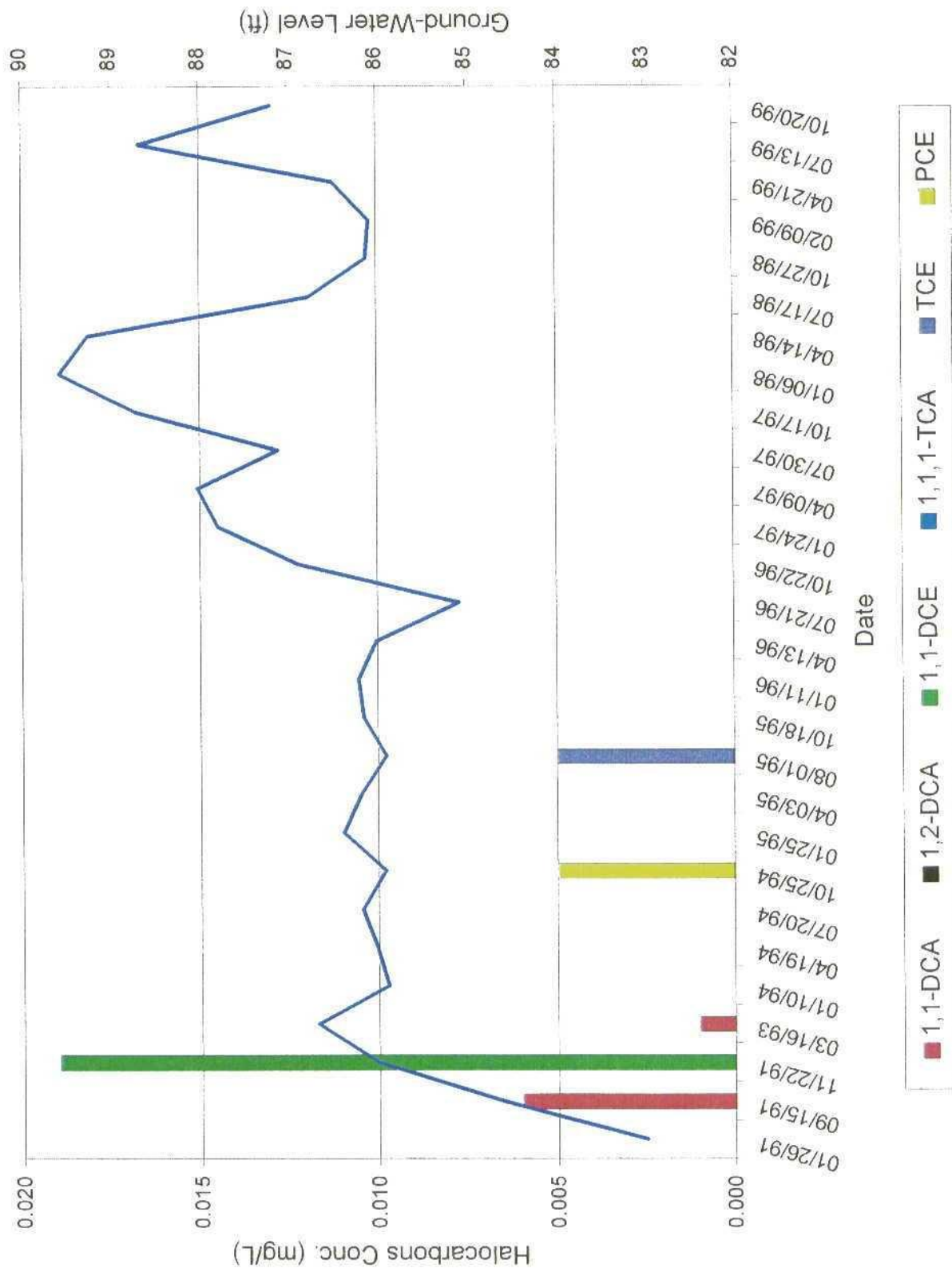


Monitoring Well MW-3

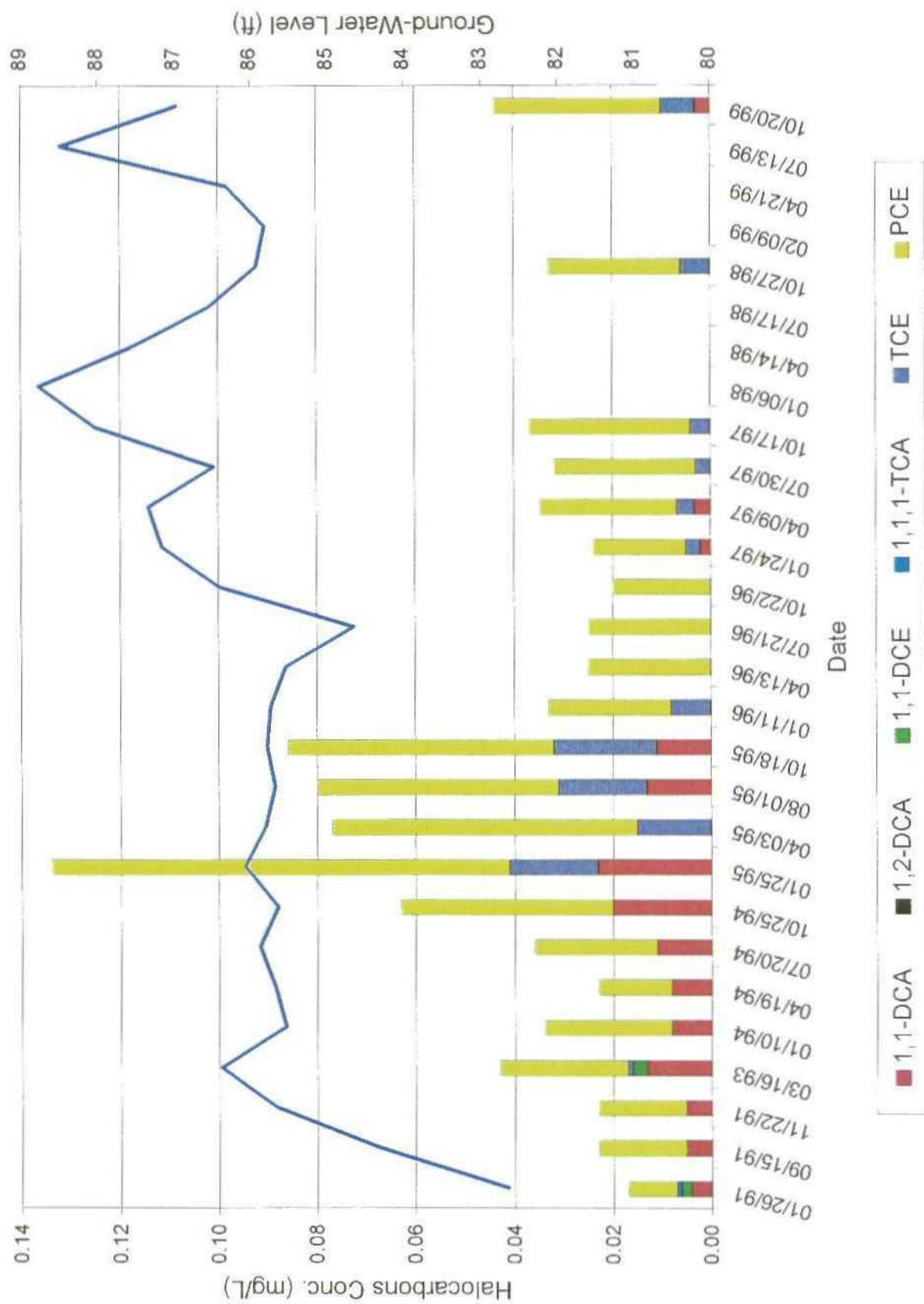


Monitoring Well MW-4

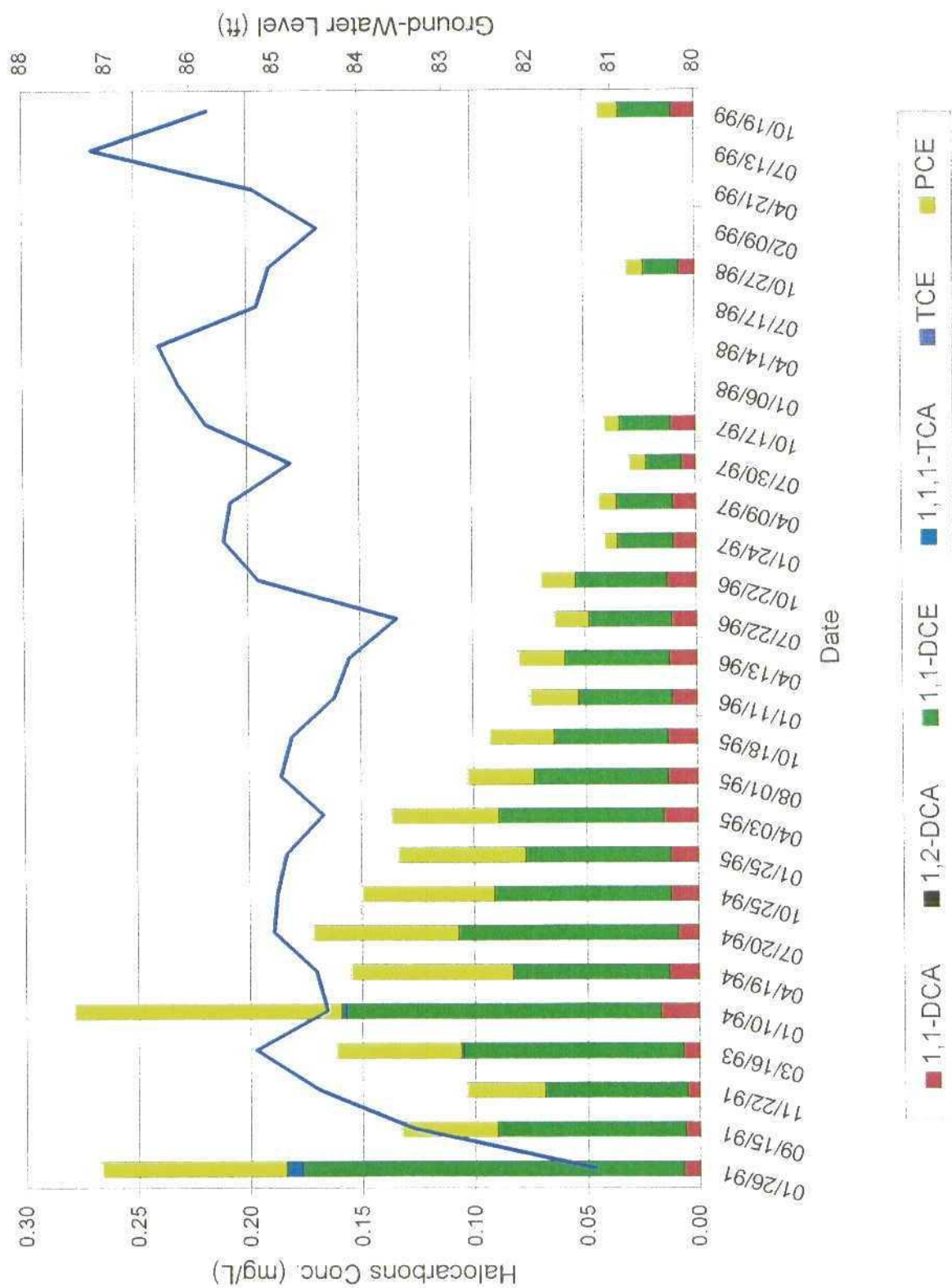
Halocarbons & Ground-Water Level



Monitoring Well MW-5 Halocarbons & Ground-Water Level

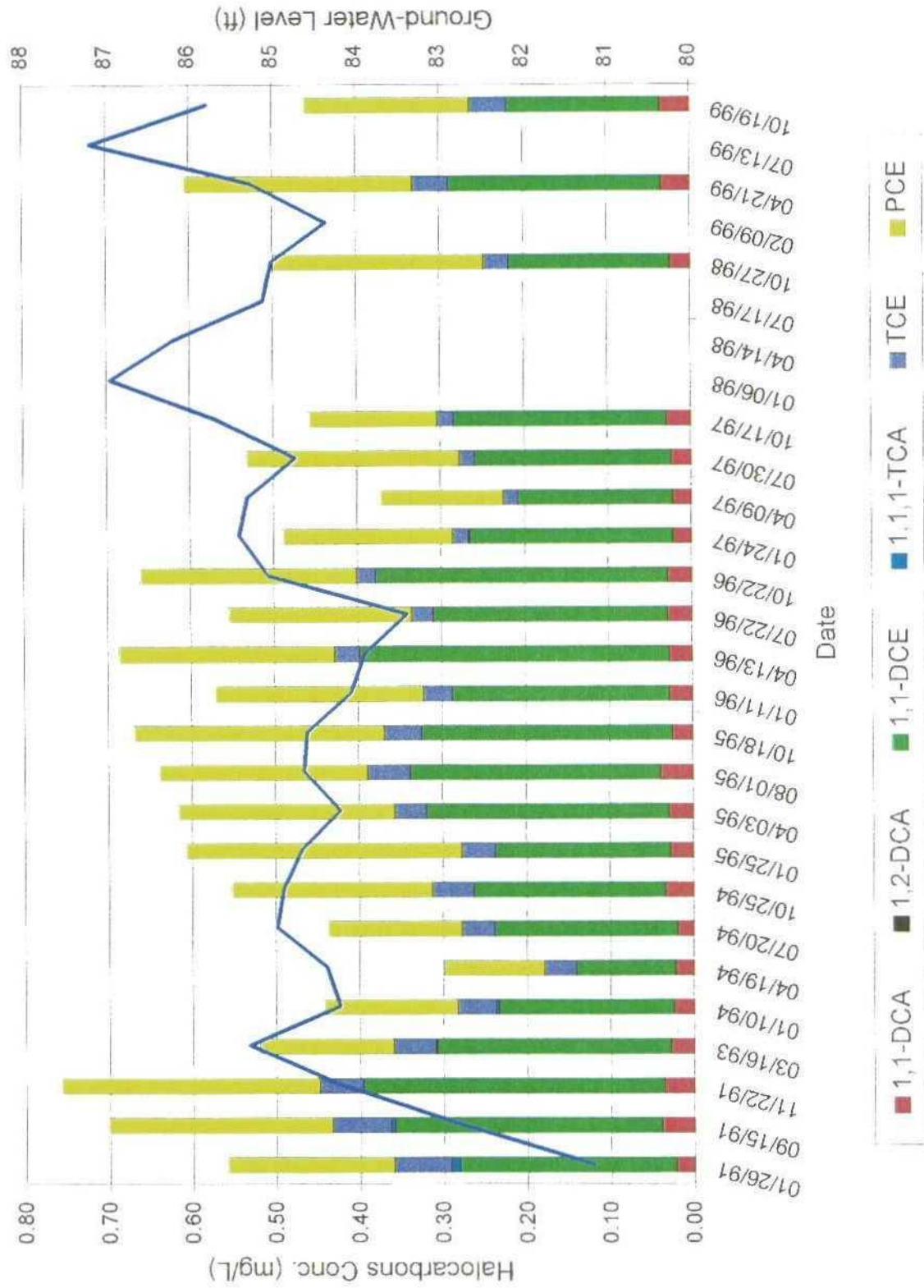


Monitoring Well MW-6 Halocarbons & Ground-Water Level

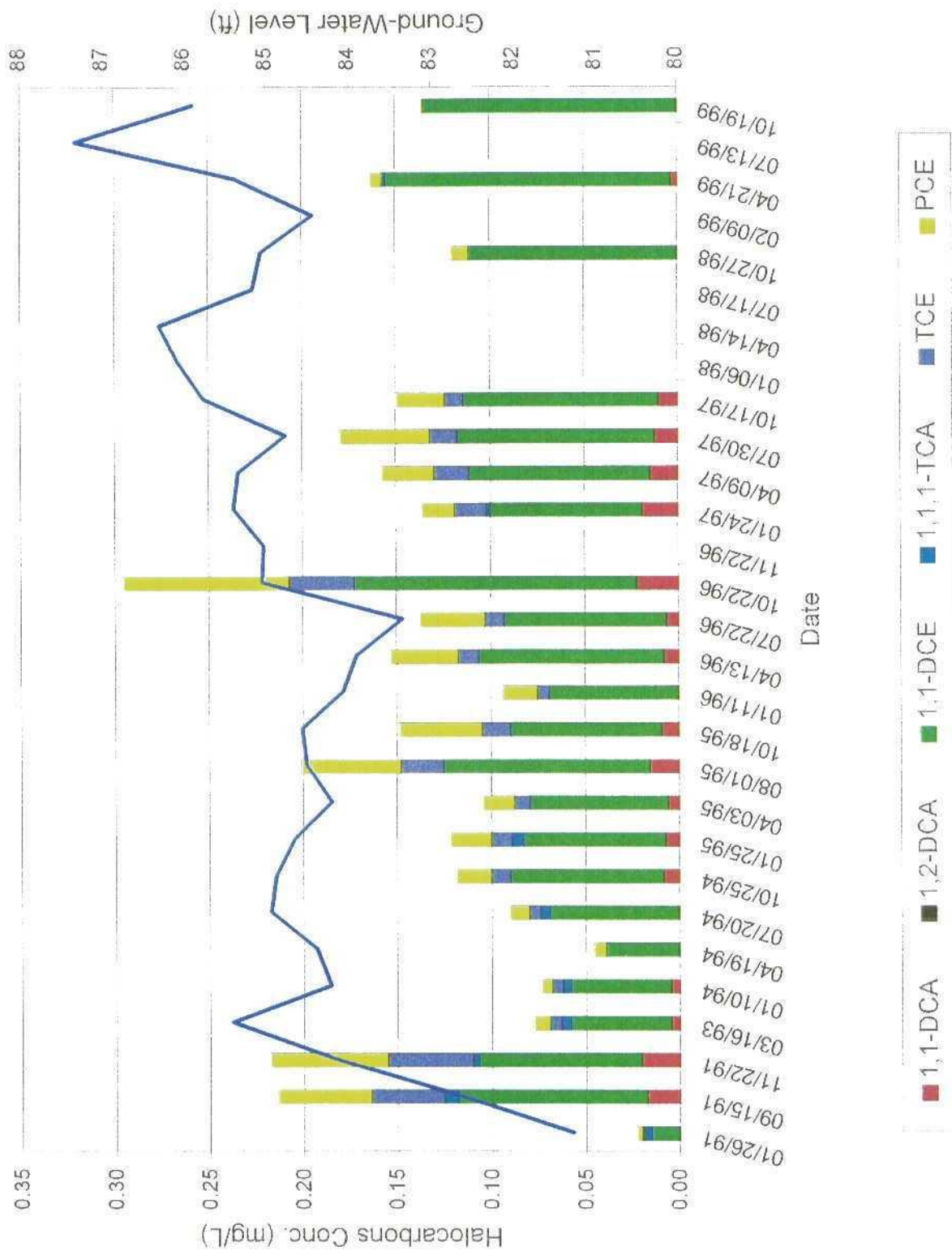


Monitoring Well MW-7

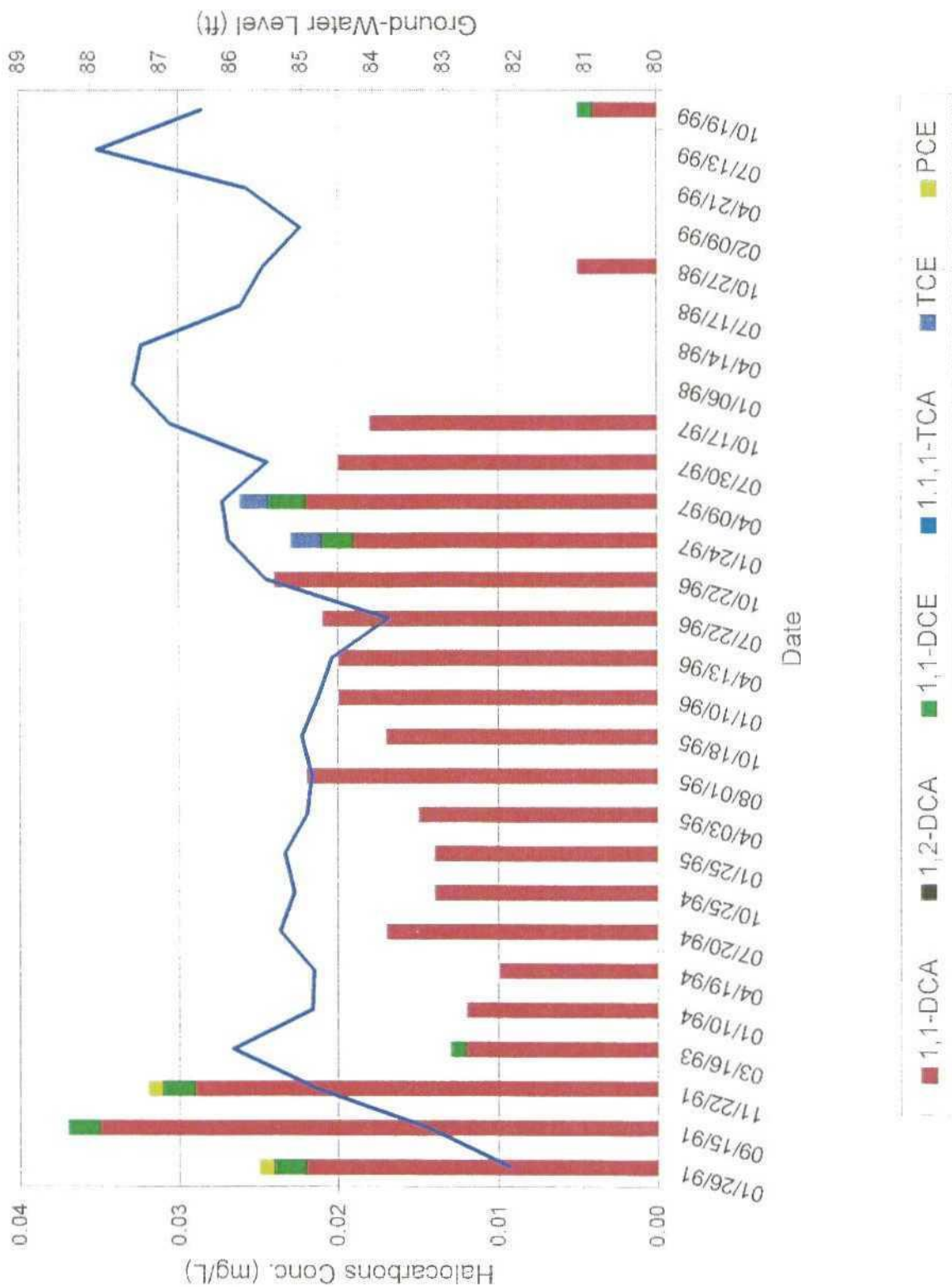
Halocarbons & Ground-Water Level



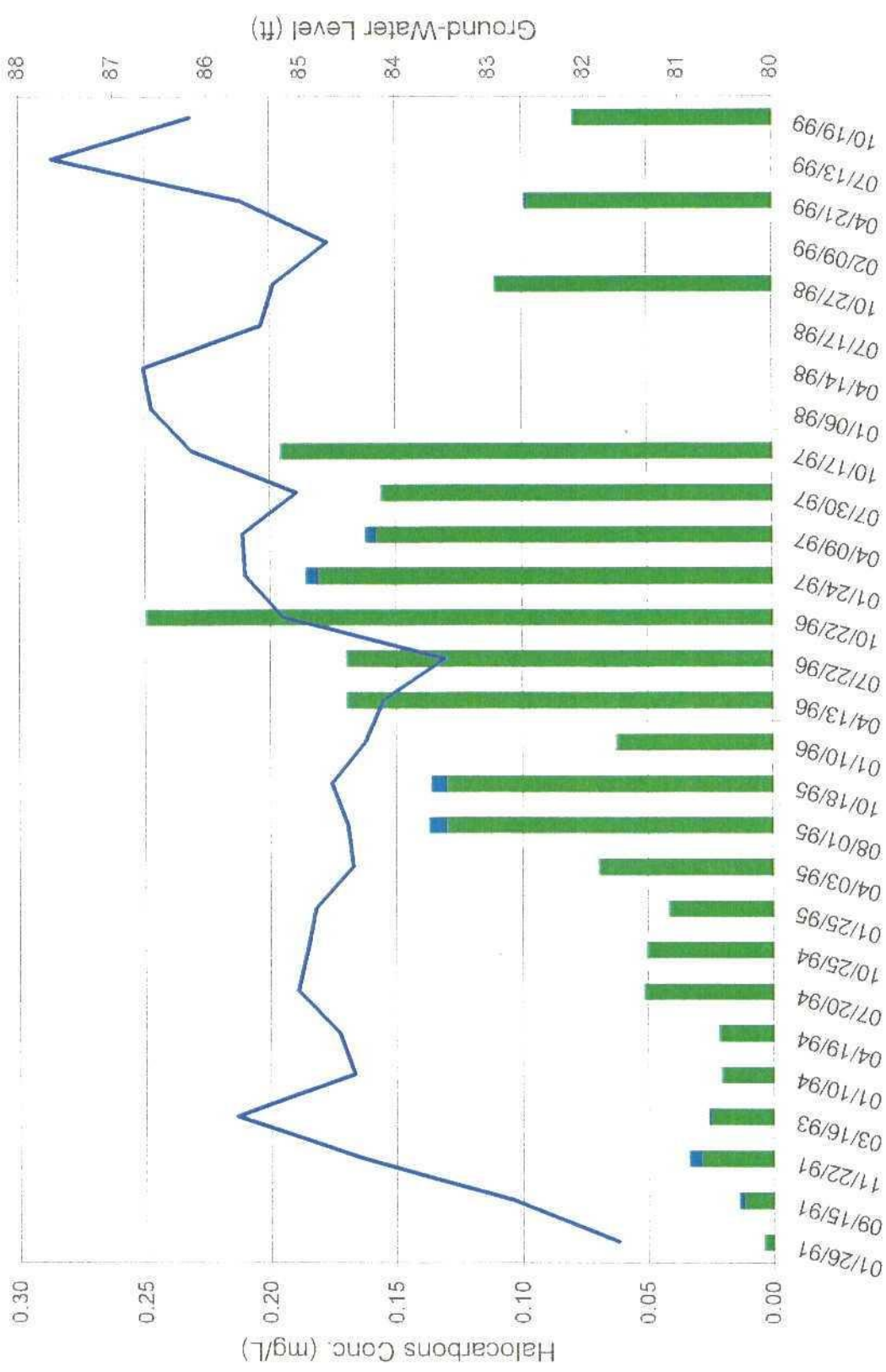
Monitoring Well MW-8 Halocarbons & Ground-Water Level



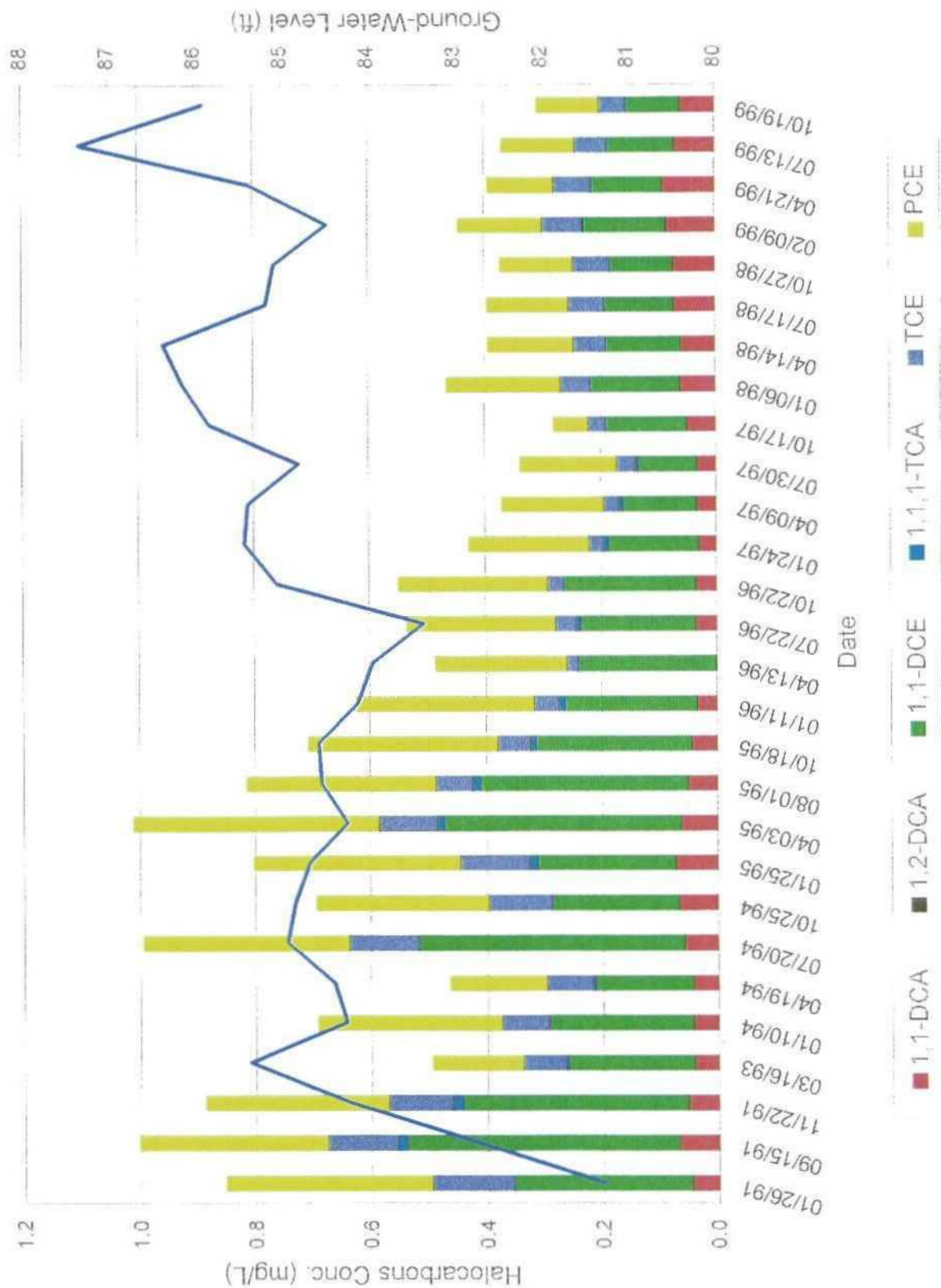
Monitoring Well MW-9 Halocarbons & Ground-Water Level



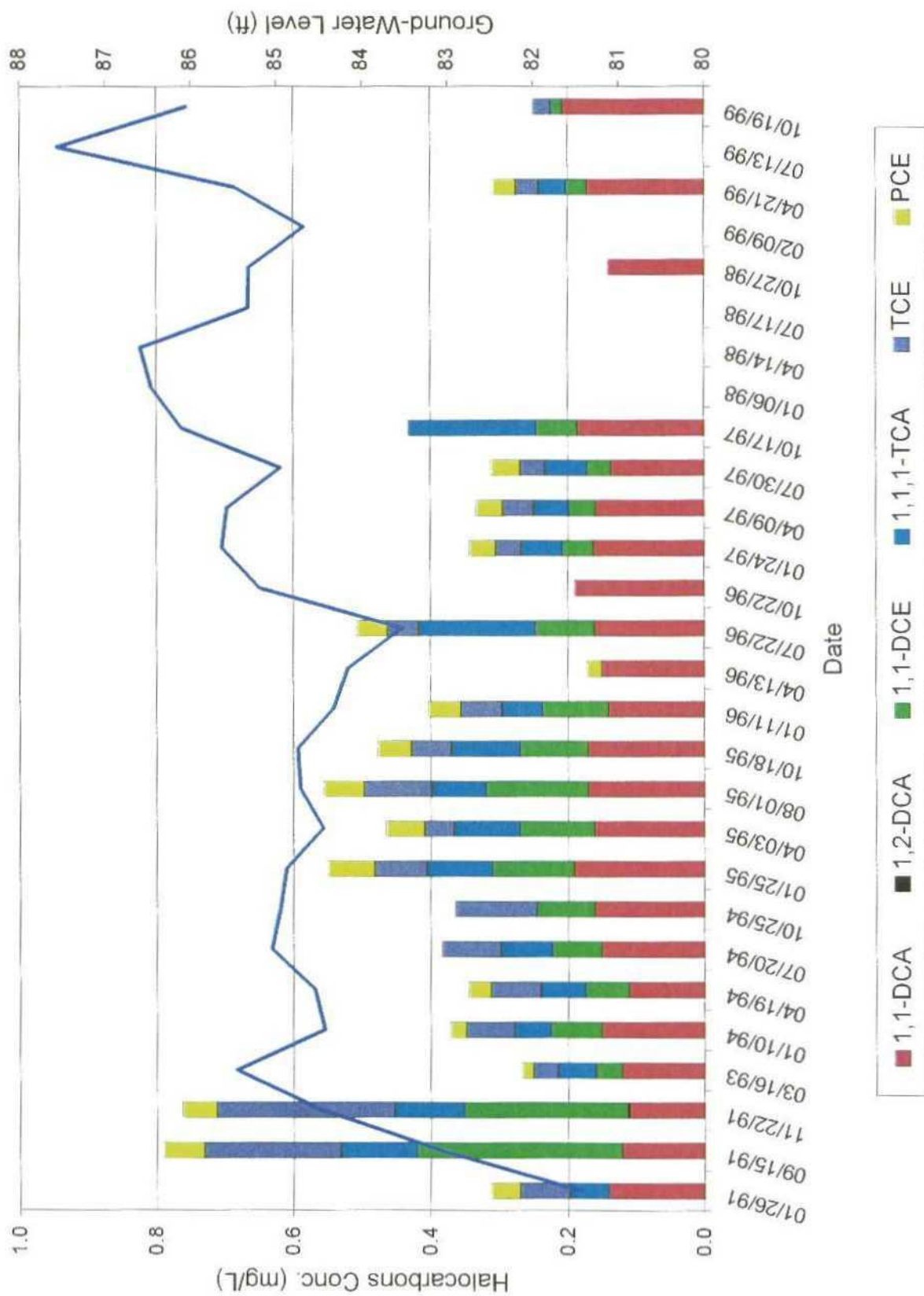
Monitoring Well MW-10



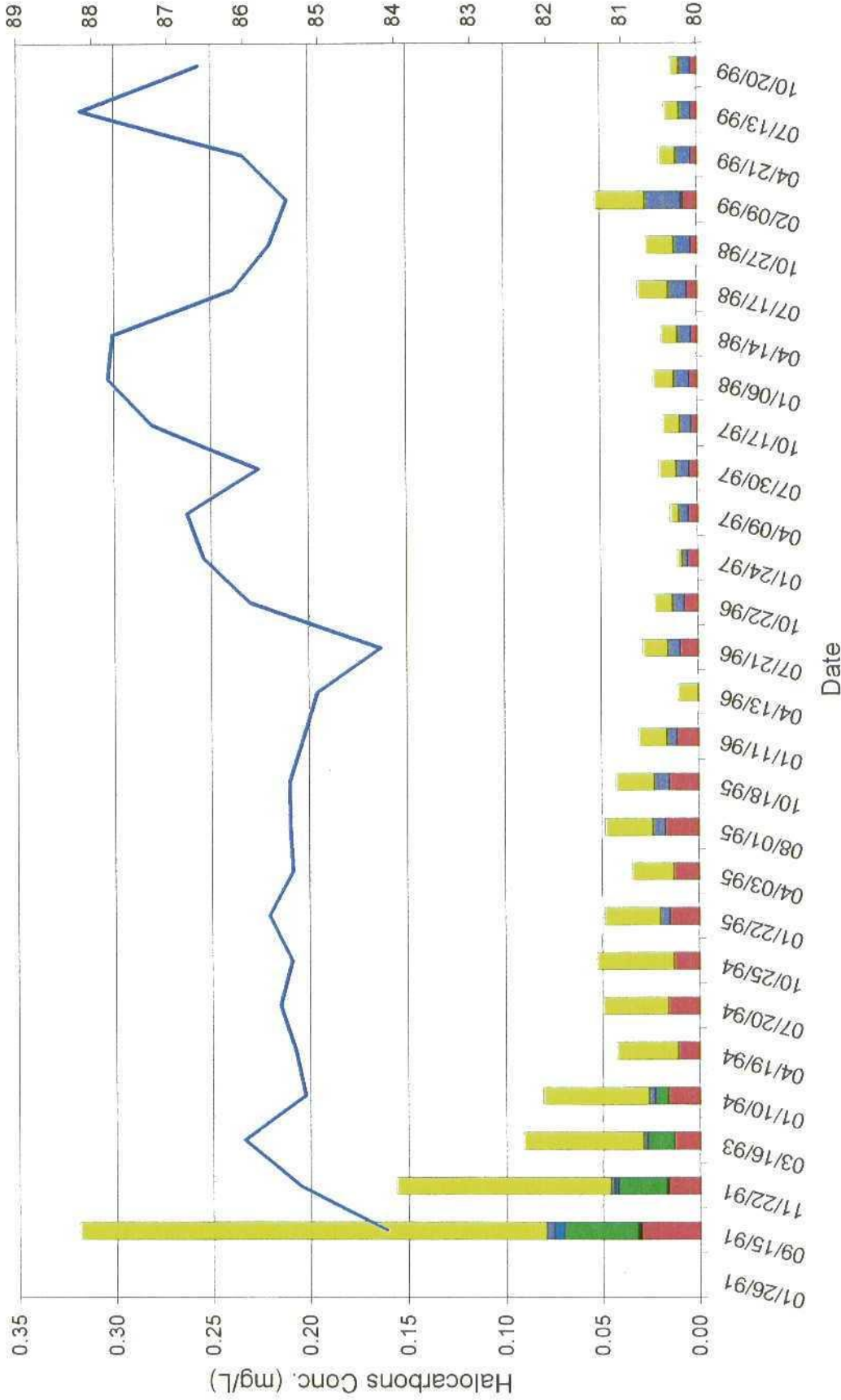
Monitoring Well MW-11 Halocarbons & Ground-Water Level



Halocarbons & Ground-Water Level

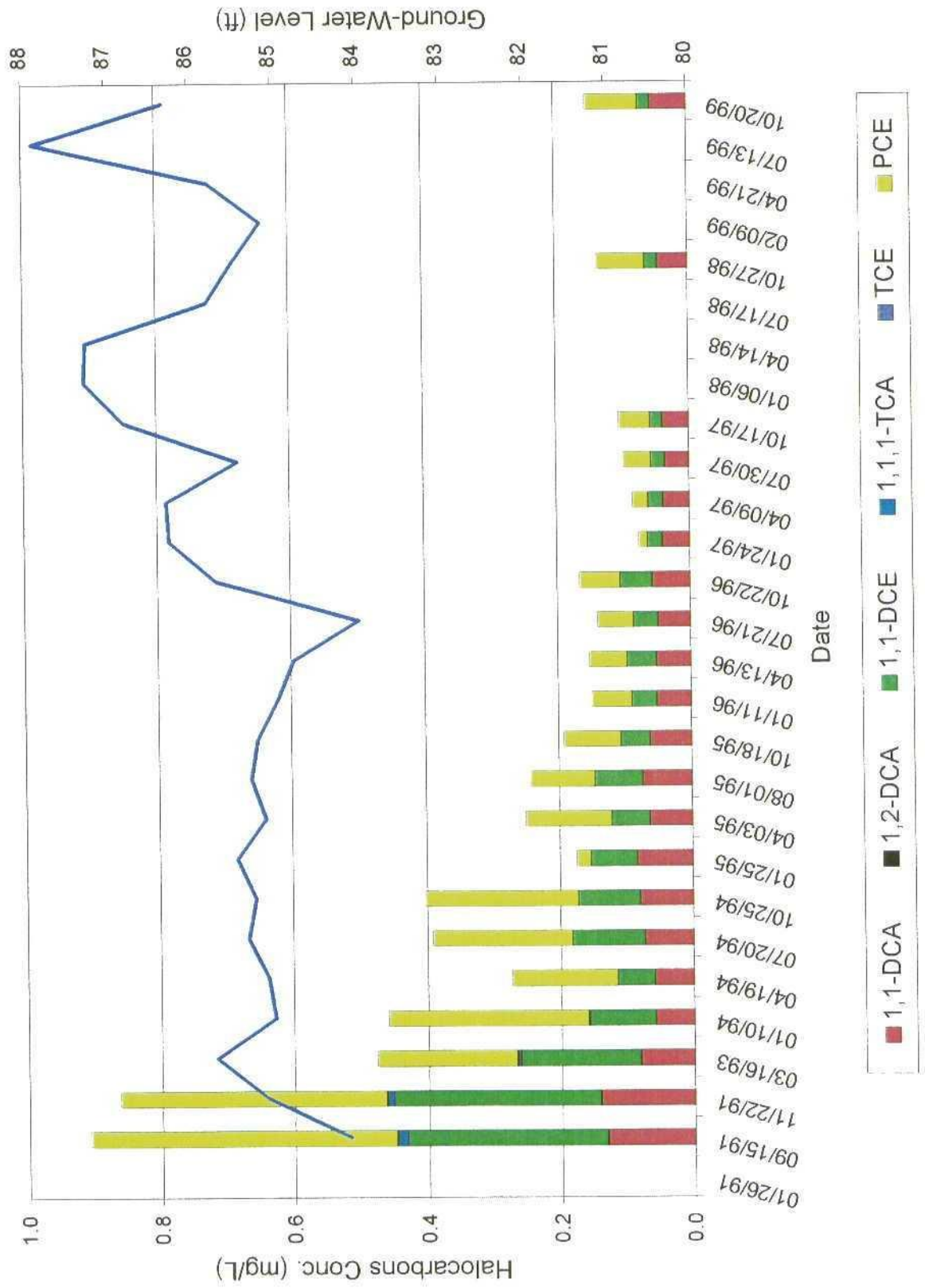


Monitoring Well MW-13

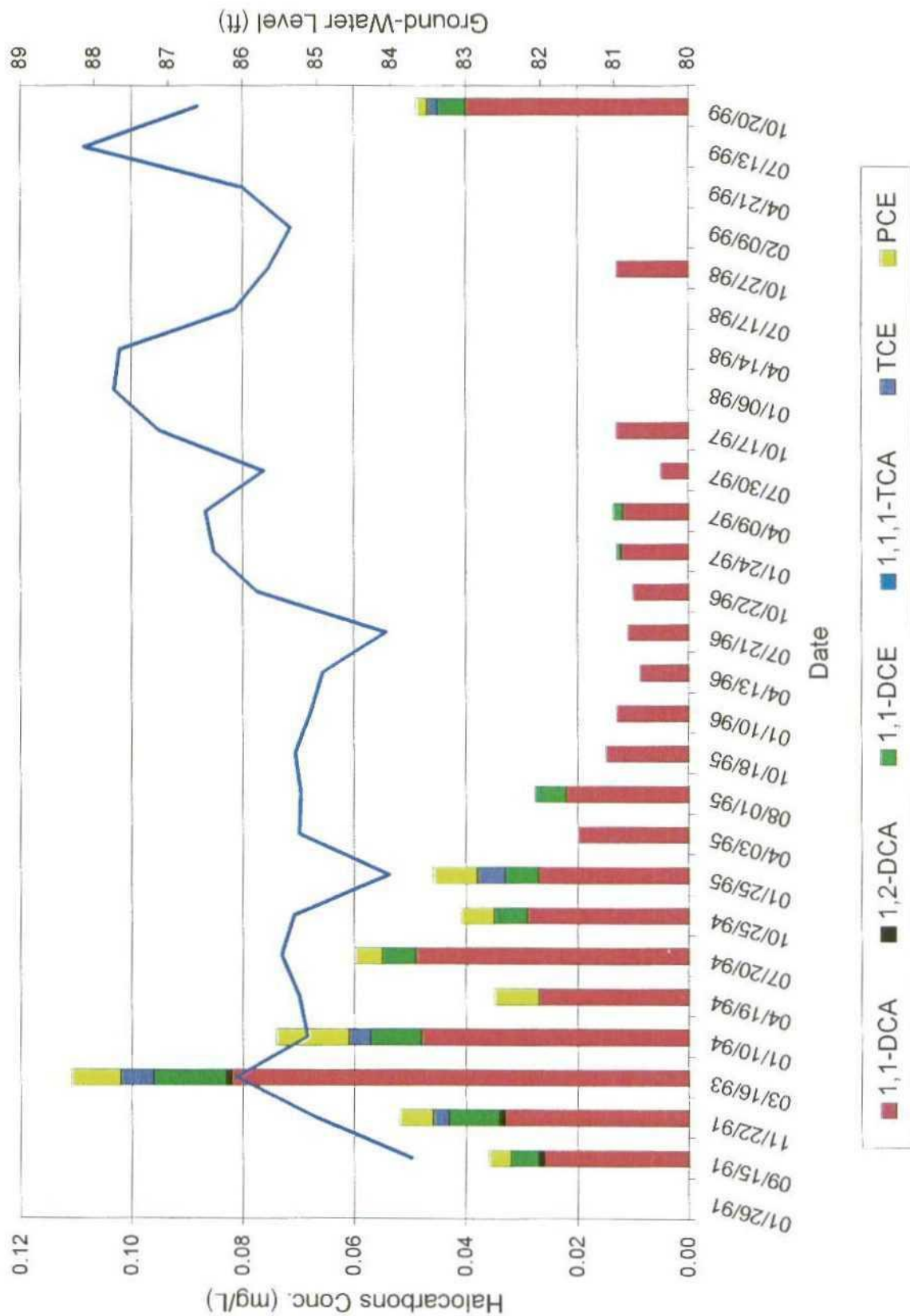


Monitoring Well MW-14

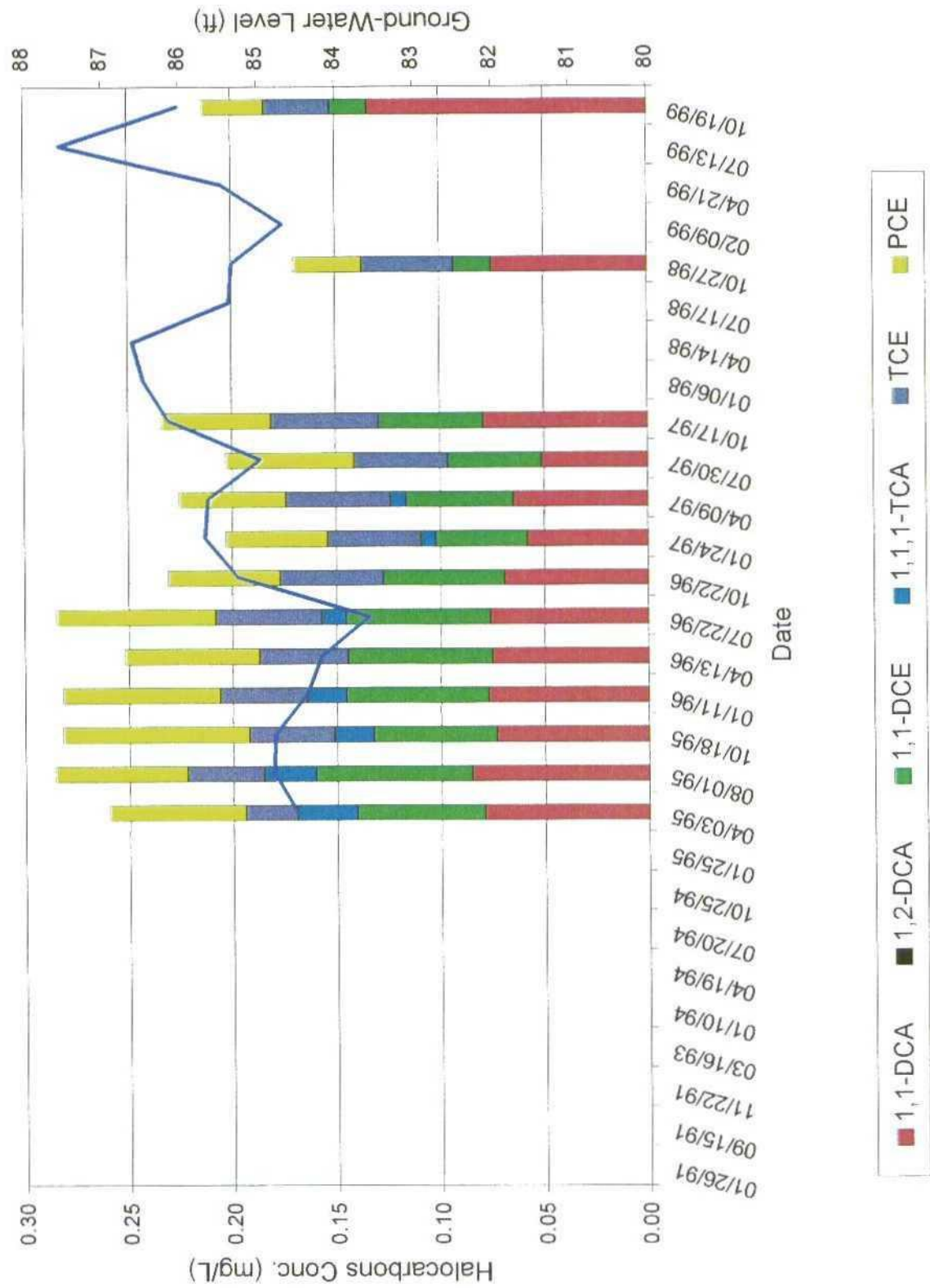
Halocarbons & Ground-Water Level



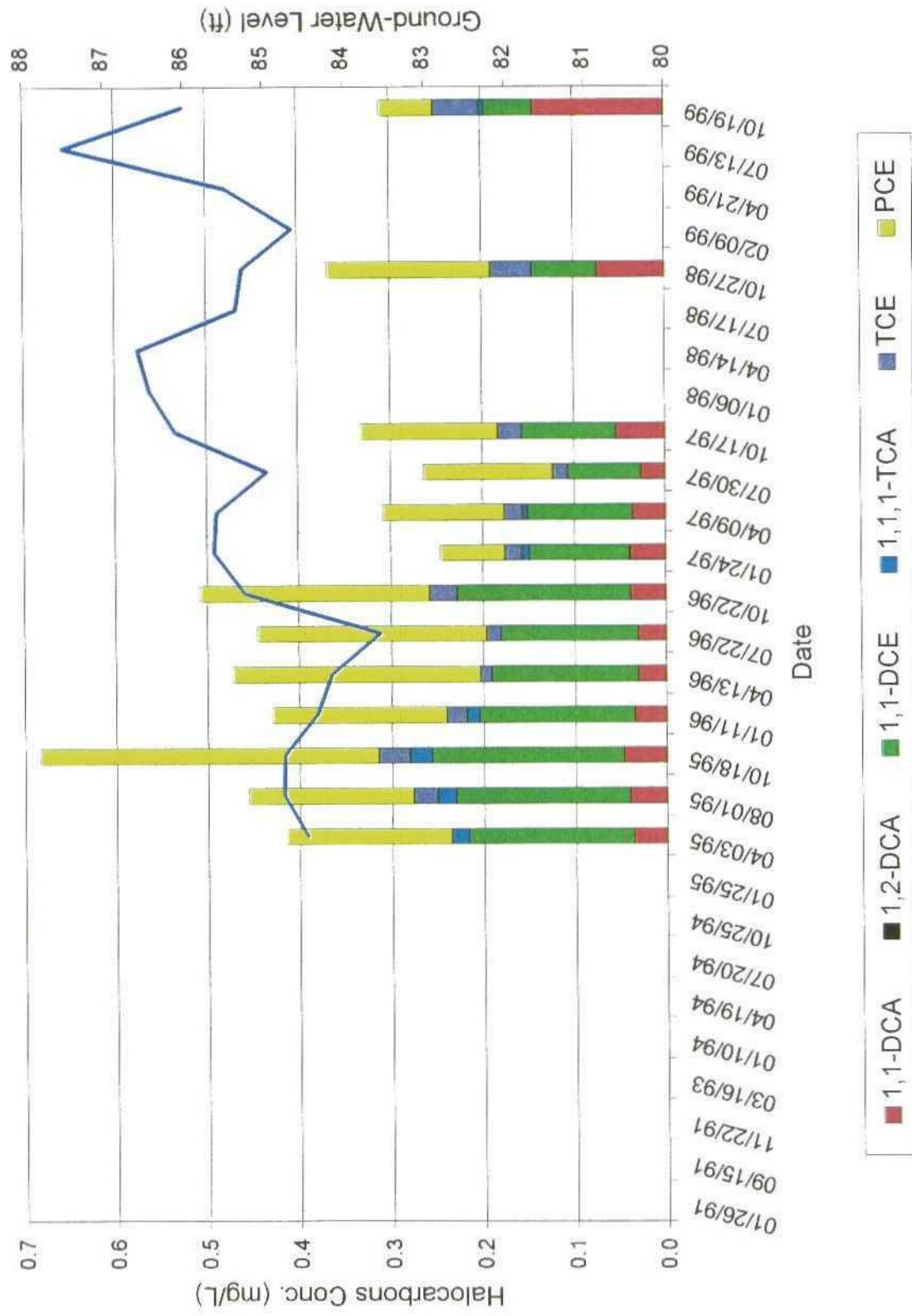
Monitoring Well MW-15 Halocarbons & Ground-Water Level



Monitoring Well MW-17A

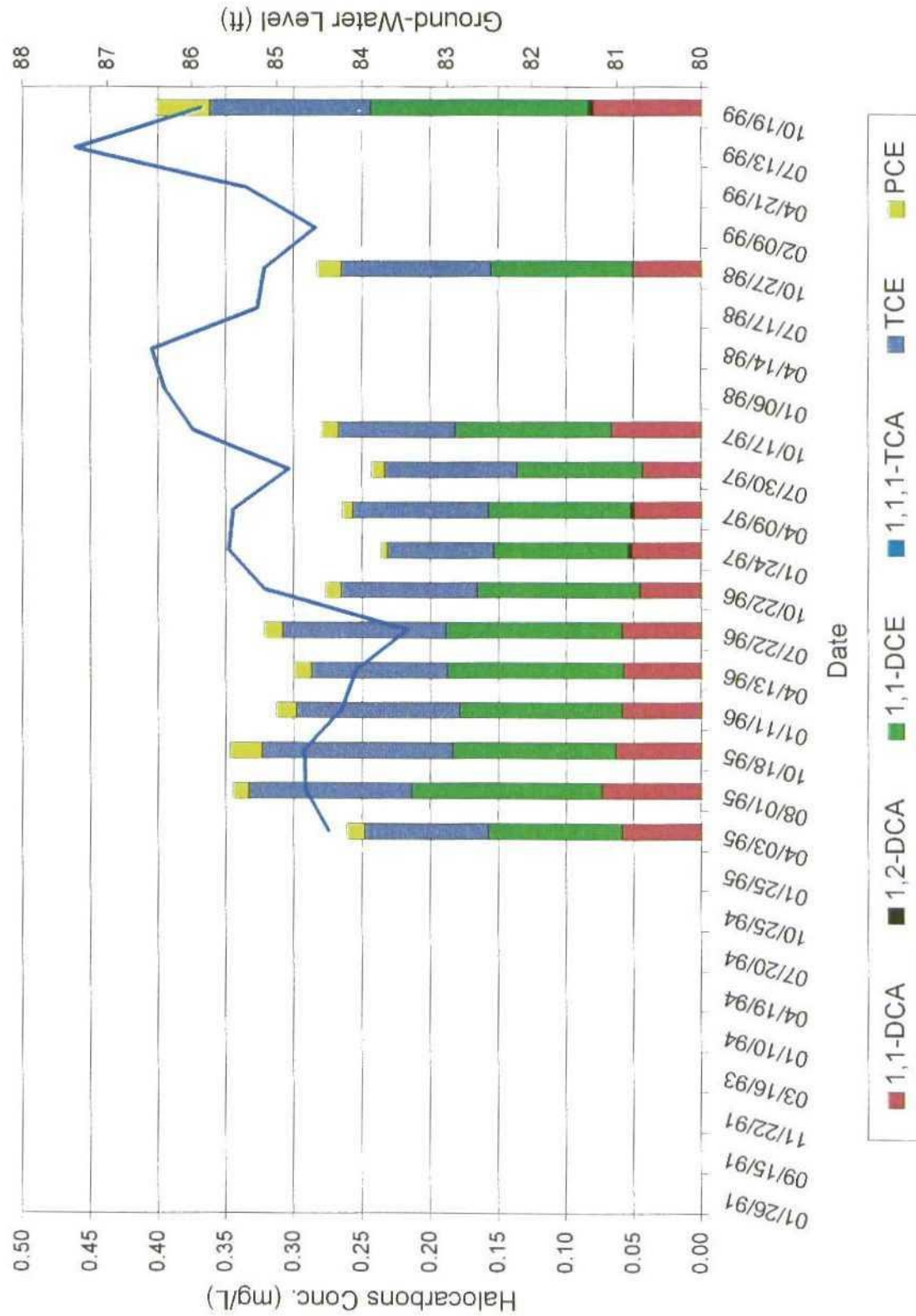


Monitoring Well MW-17B



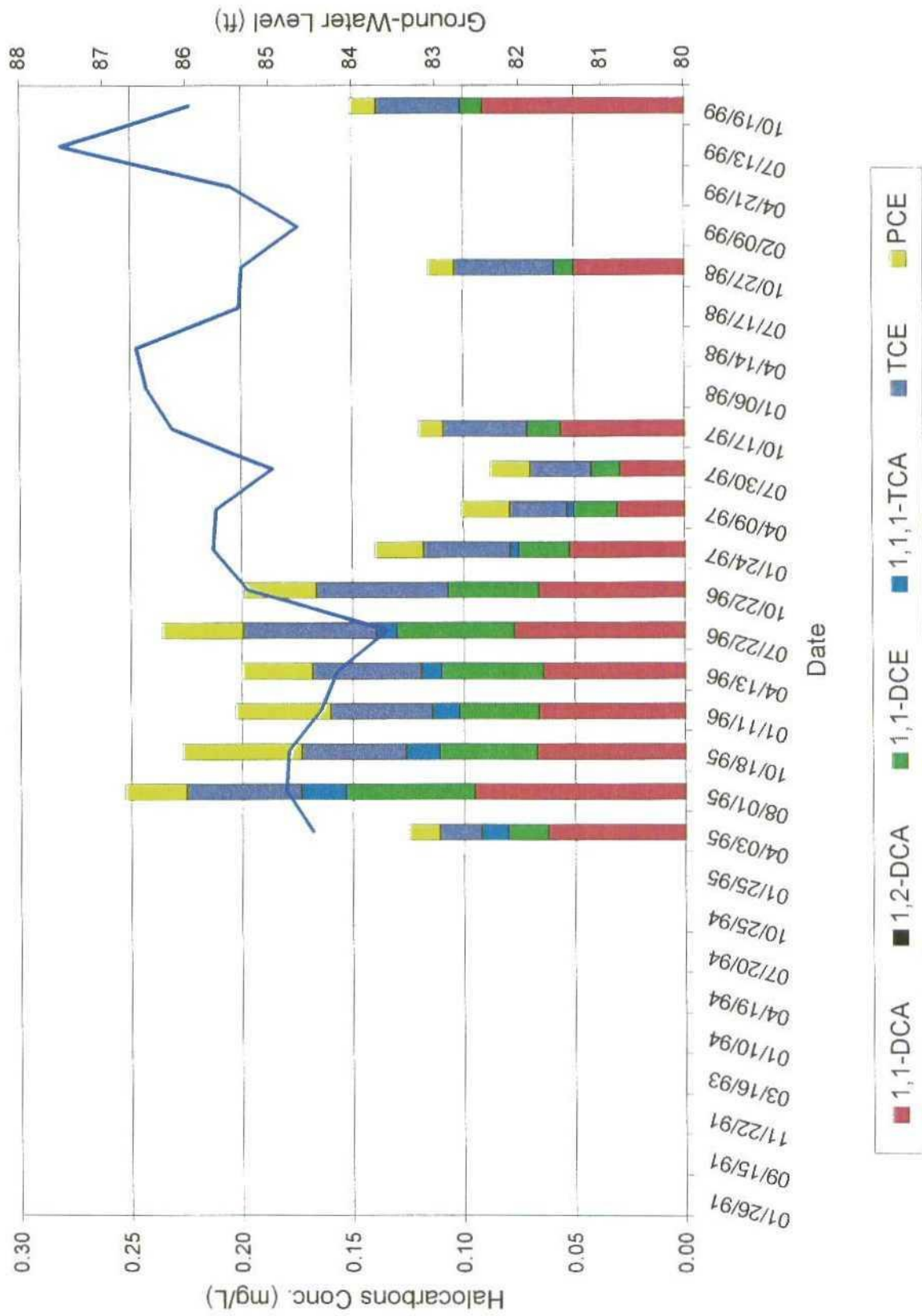
Monitoring Well MW-17C

Halocarbons & Ground-Water Level

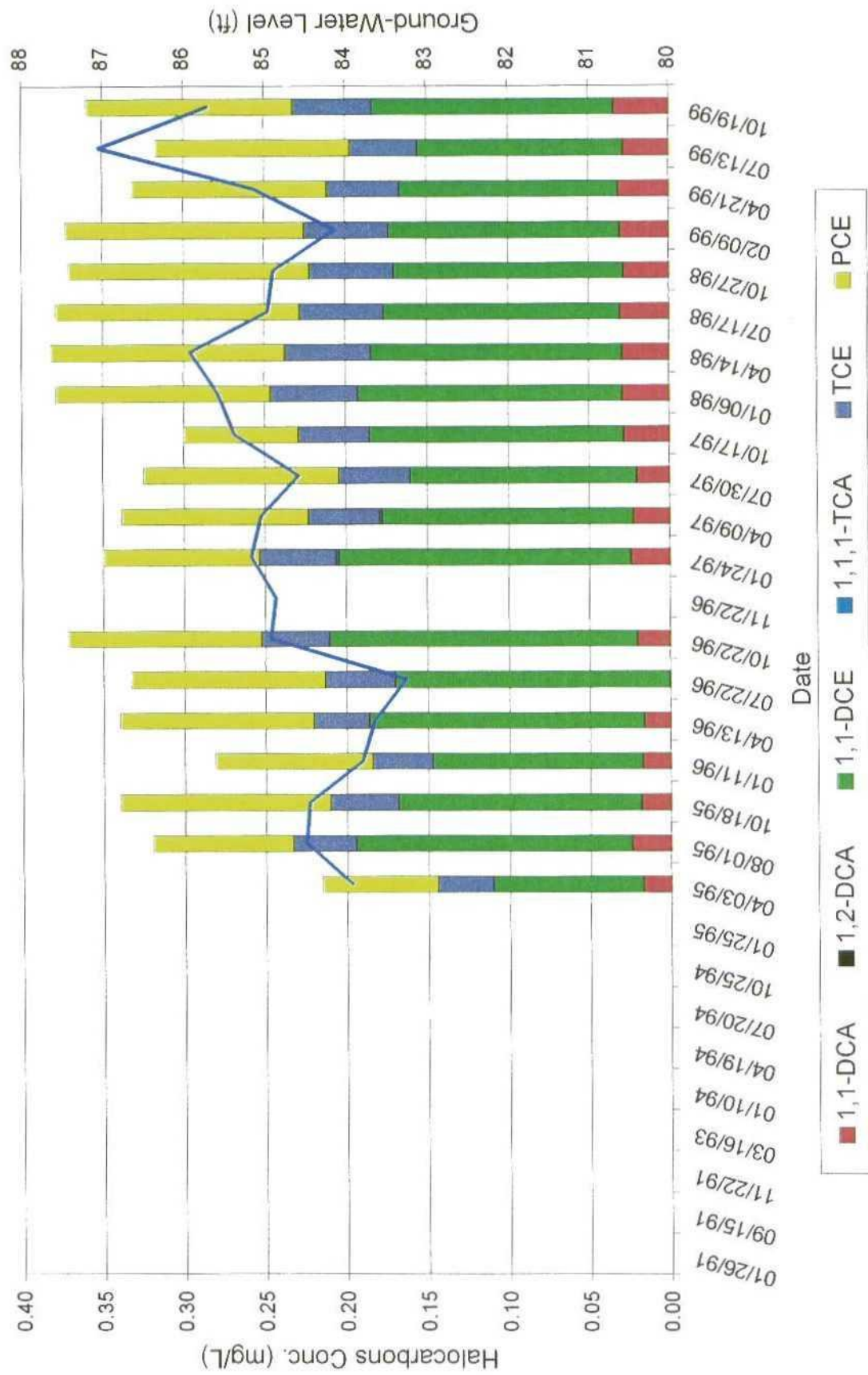


Monitoring Well MW-17D

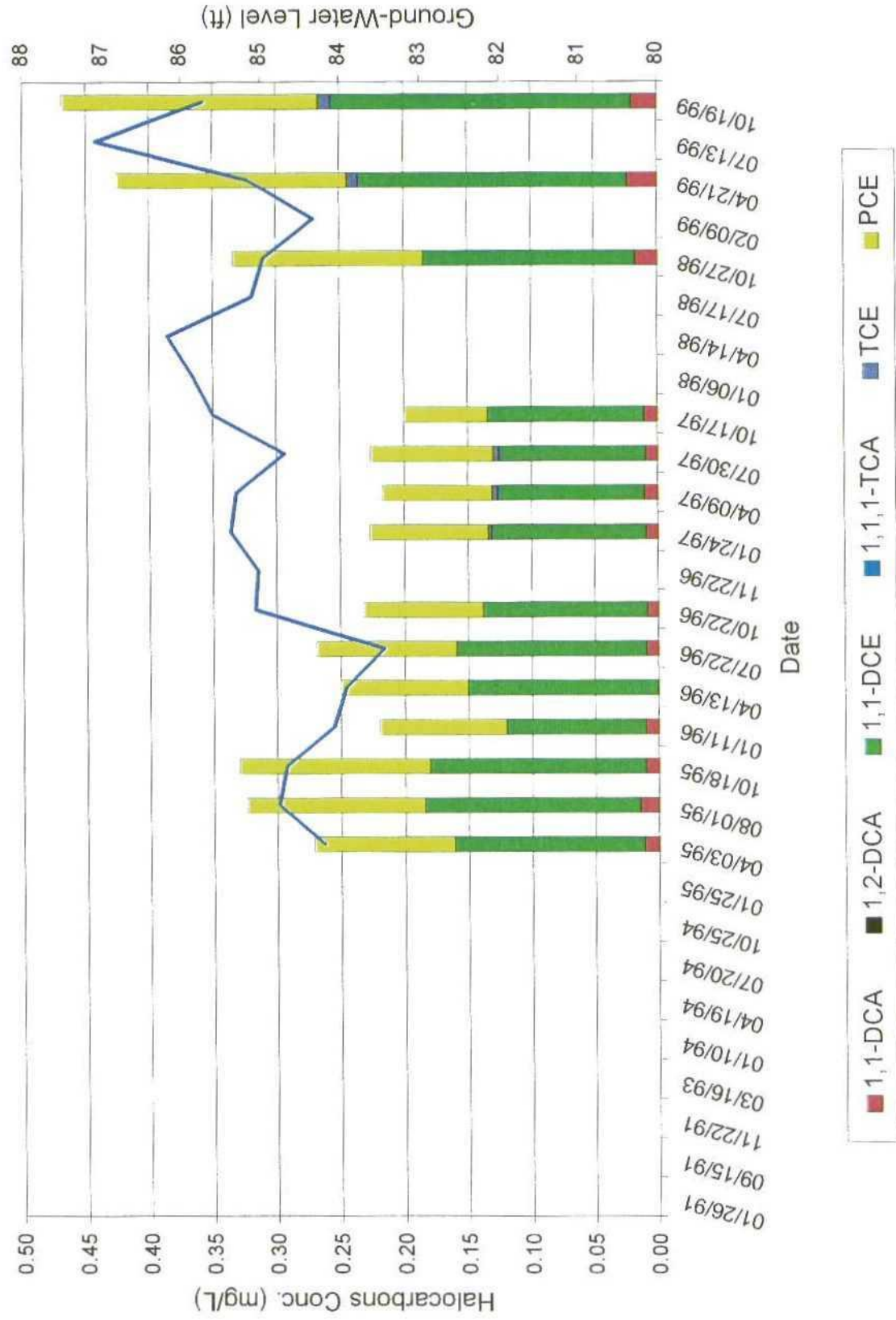
Halocarbons & Ground-Water Level



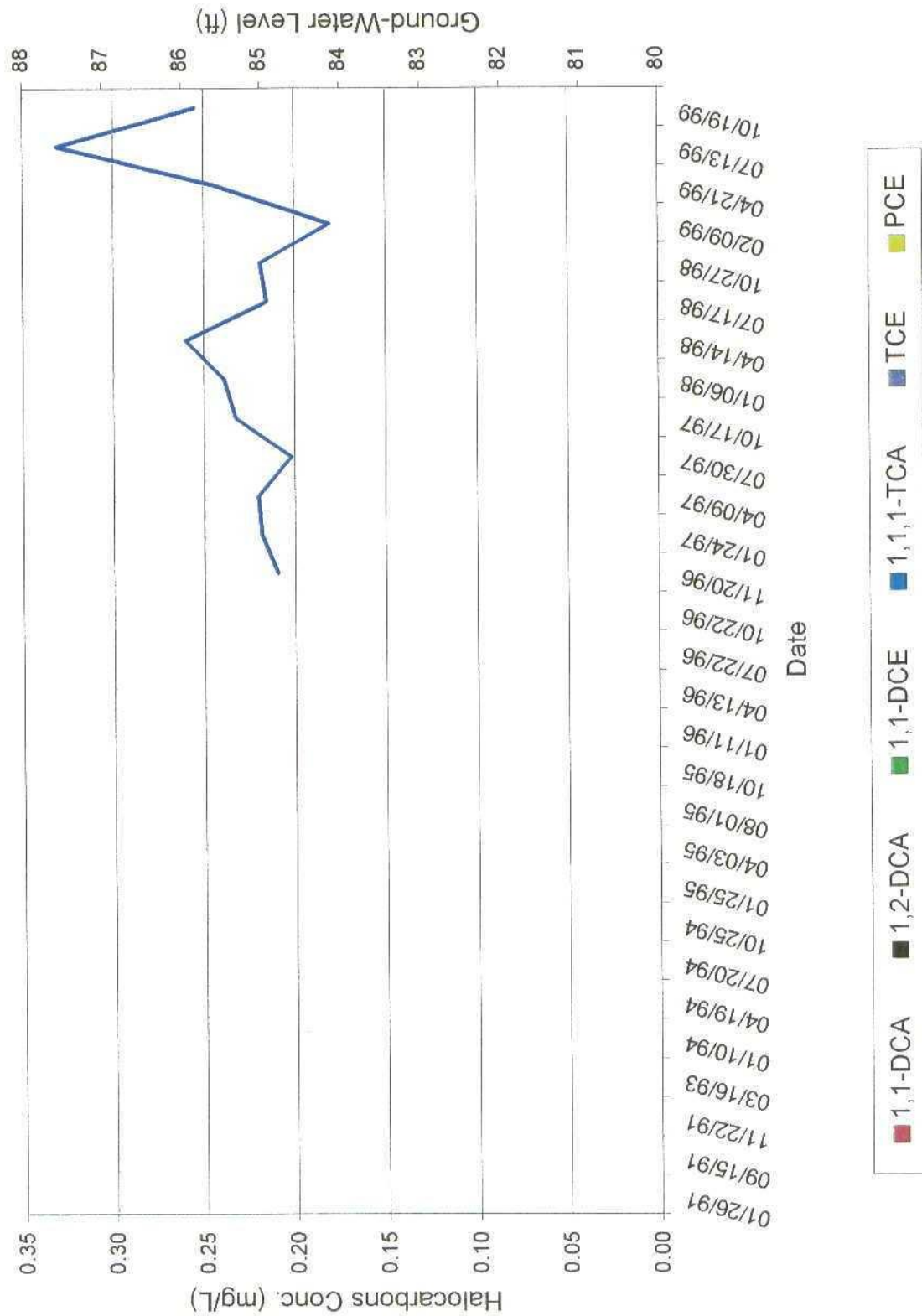
Monitoring Well MW-18 Halocarbons & Ground-Water Level



Monitoring Well MW-19 Halocarbons & Ground-Water Level

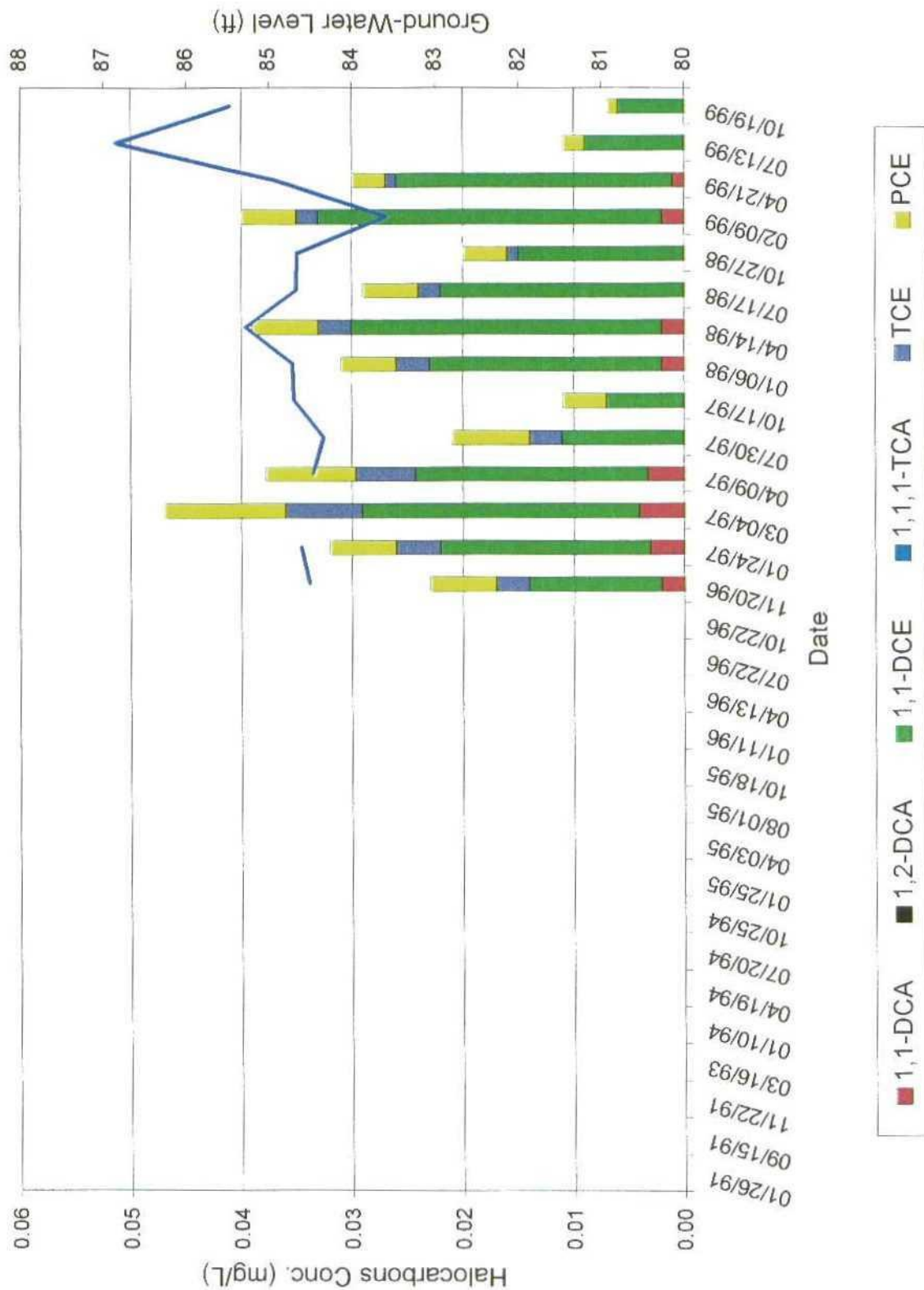


Monitoring Well MW-20 Halocarbons & Ground-Water Level



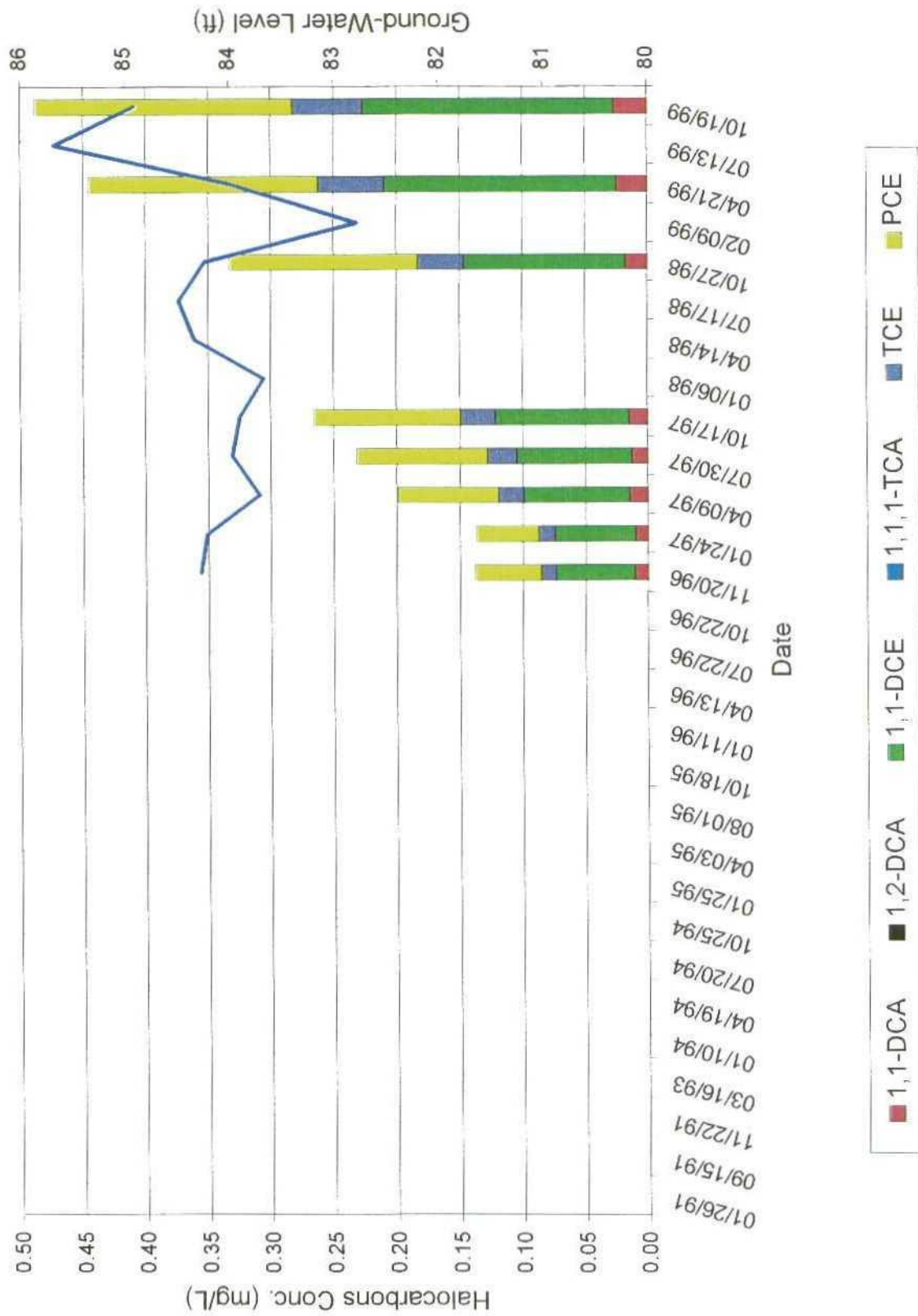
Monitoring Well MW-21

Halocarbons & Ground-Water Level

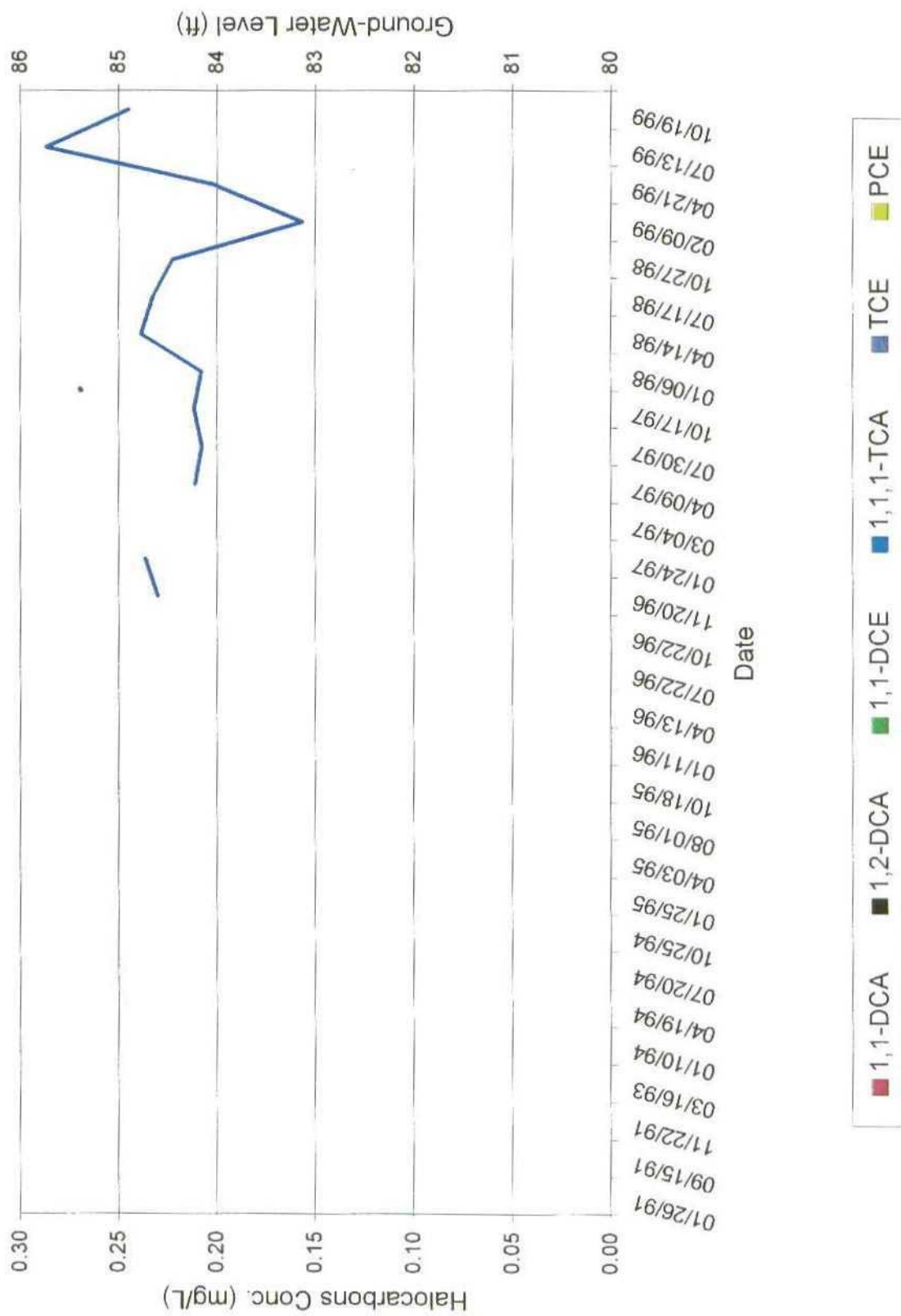


Monitoring Well MW-22

Halocarbons & Ground-Water Level

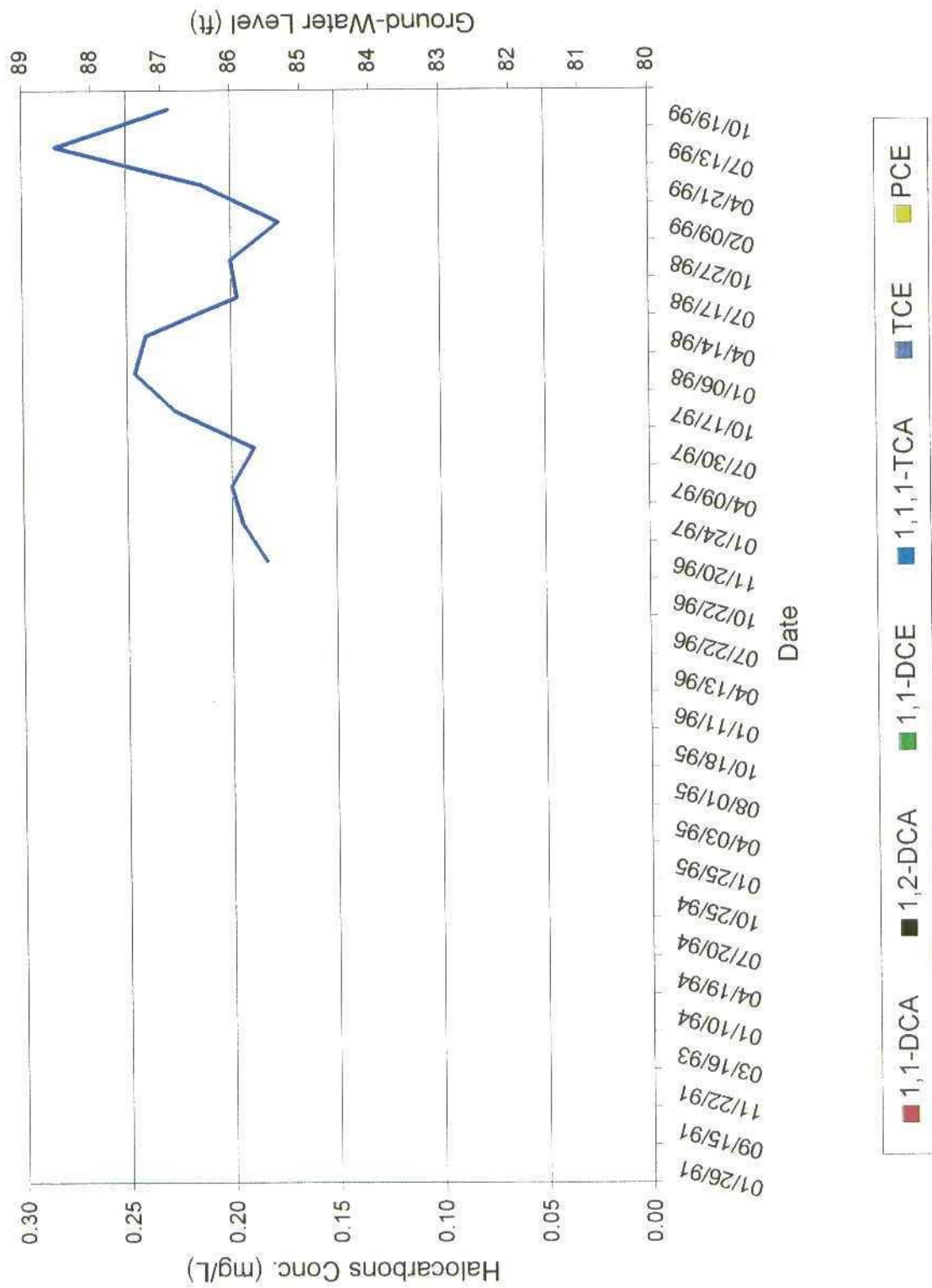


Halocarbons & Ground-Water Level



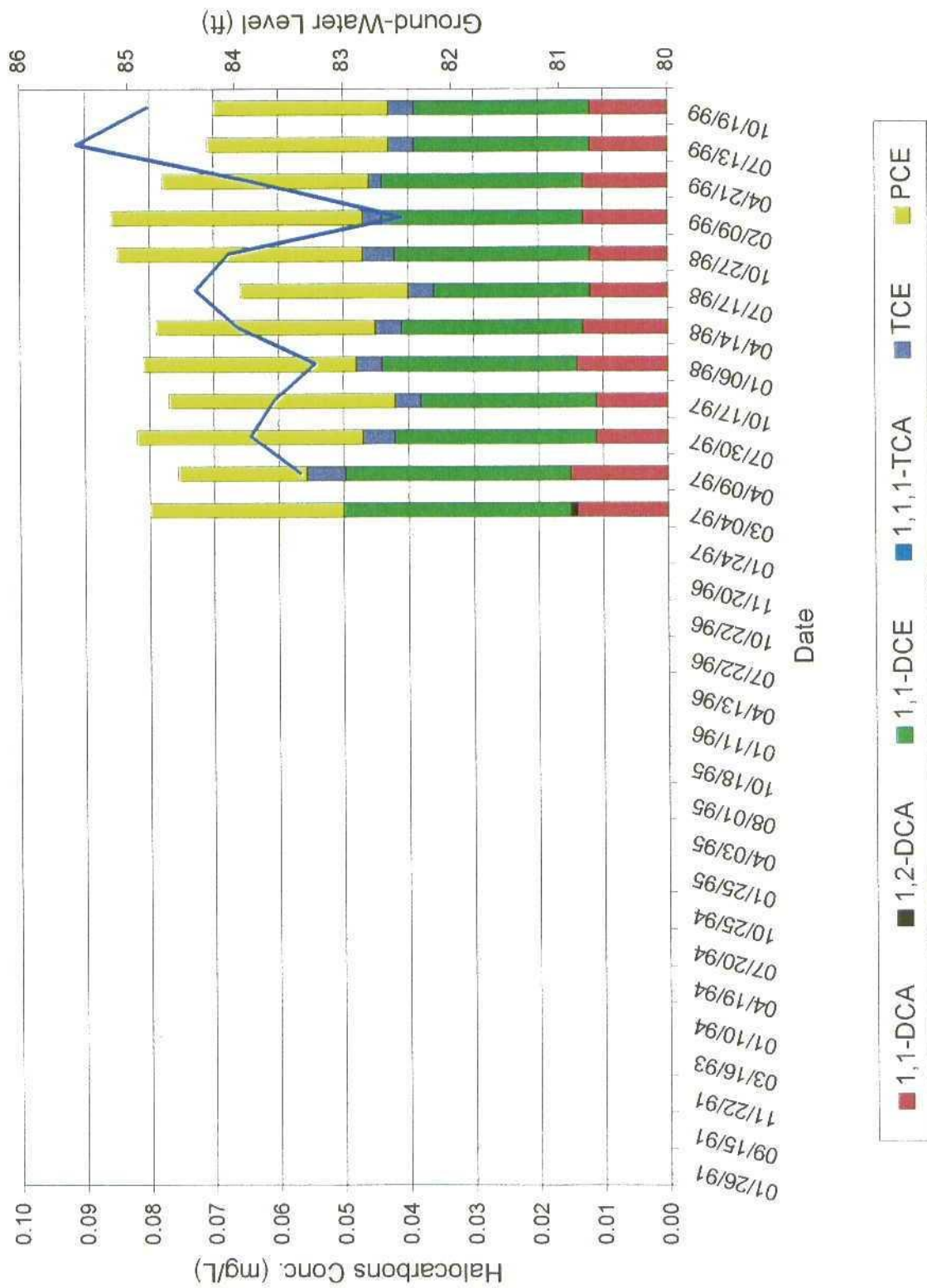
Monitoring Well MW-24

Halocarbons & Ground-Water Level



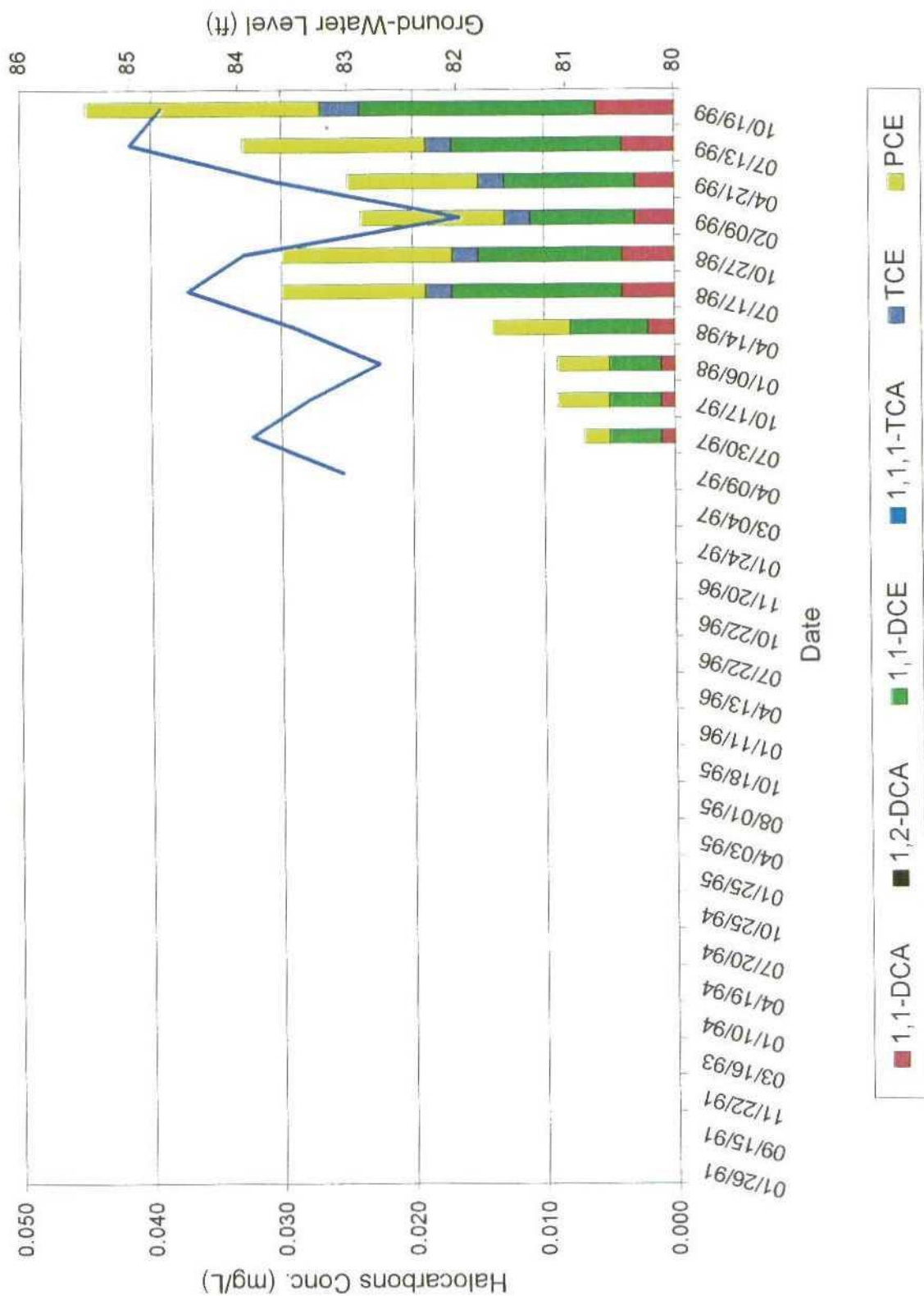
Monitoring Well MW-25

Halocarbons & Ground-Water Level



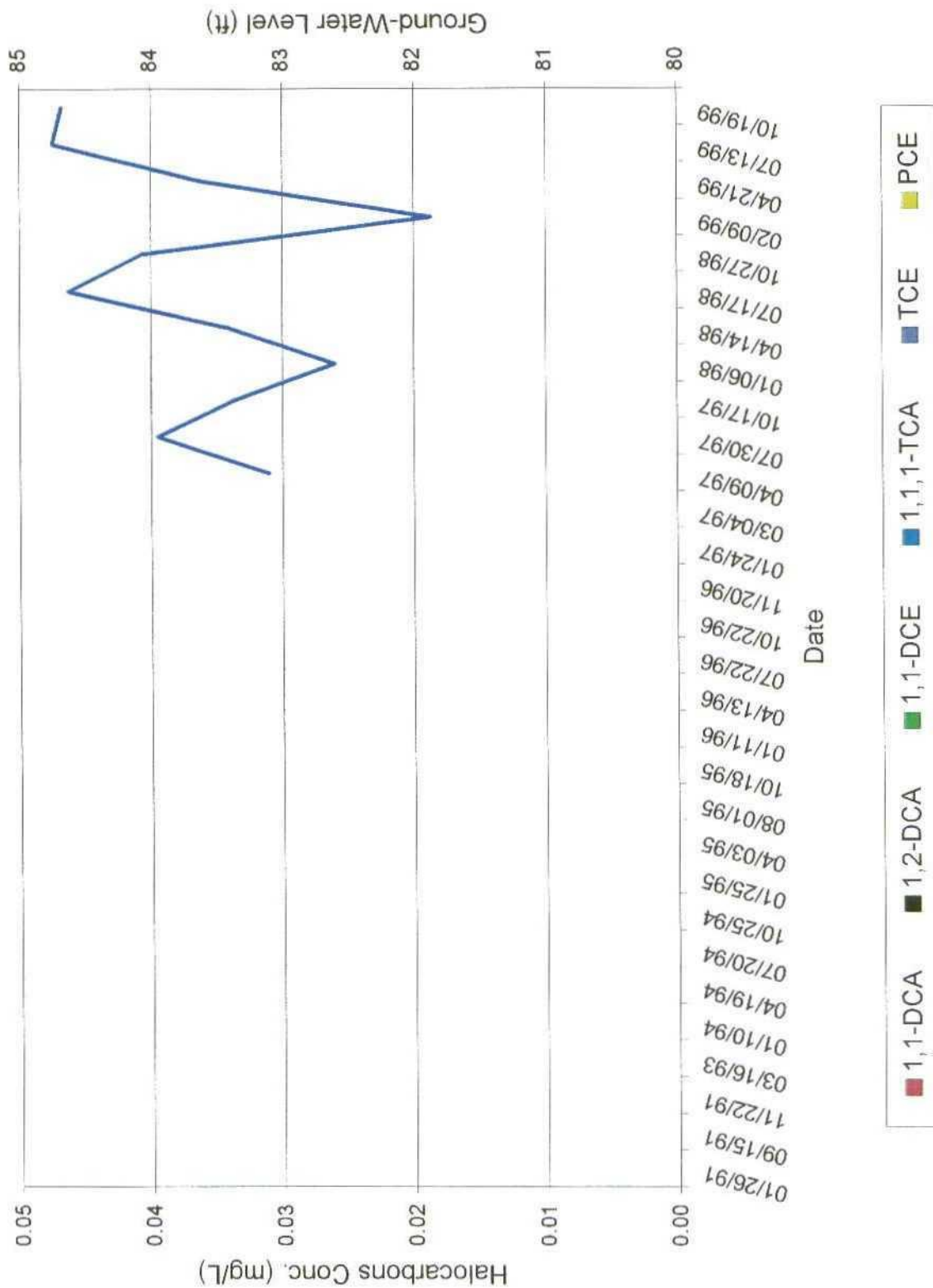
Monitoring Well MW-26

Halocarbons & Ground-Water Level



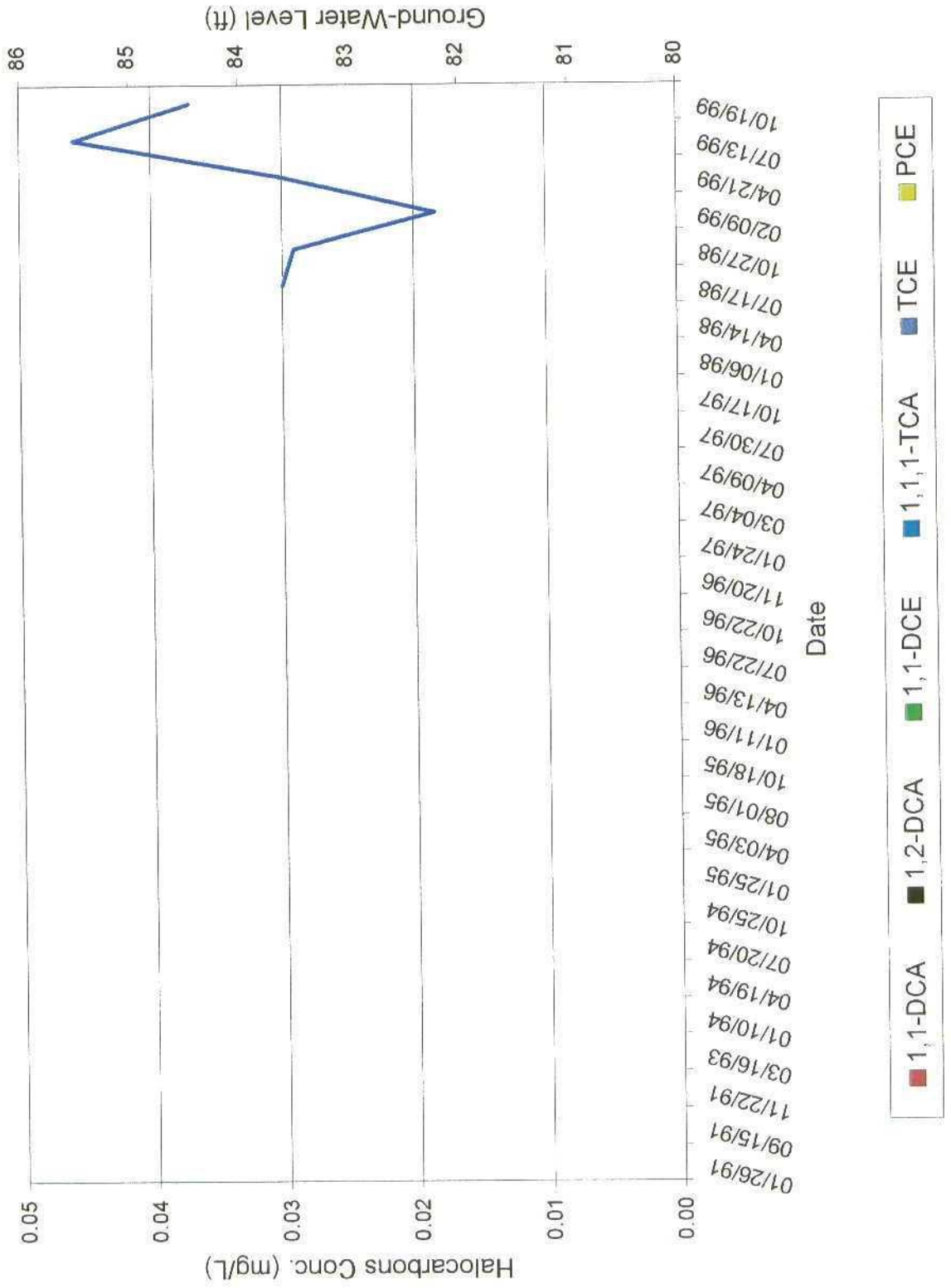
Monitoring Well MW-27

Halocarbons & Ground-Water Level

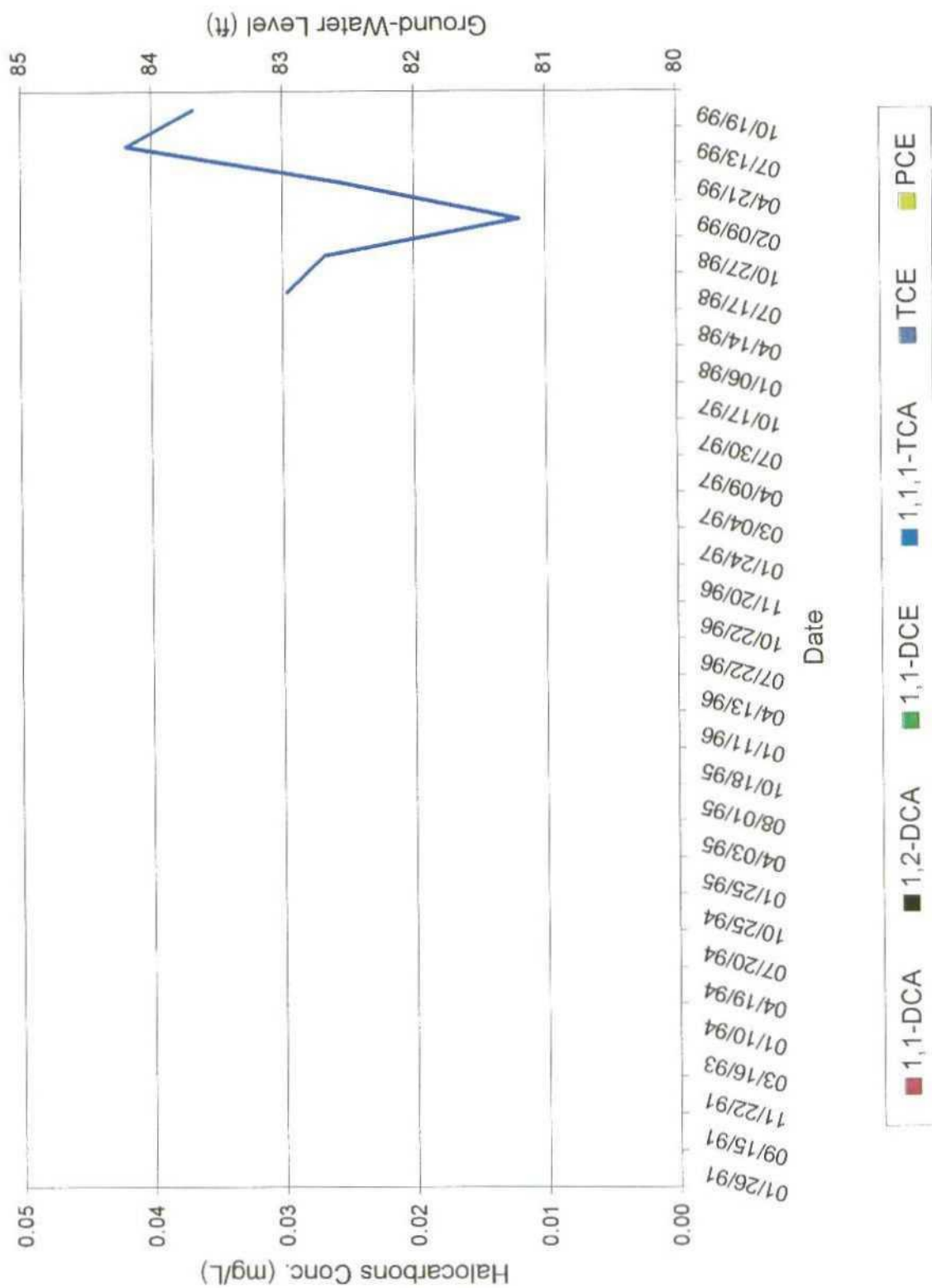


Monitoring Well MW-28

Halocarbons & Ground-Water Level



Monitoring Well MW-29



Monitoring Well MW-30

