Quarterly IRM Progress Report
Quarter 5 of IRM Operation
2-PHASE Extraction System
Erdle Perforating Company
Rochester, New York

Prepared for:

Mr. Michael E. Rick
Vice President of Engineering
Erdle Perforating Company
100 Pixley Industrial Parkway
Rochester, New York 14603

Prepared by:

Radian Engineering Inc.
Penn Center West III, Suite 300
Pittsburgh, Pennsylvania 15276

Project No. 801865

June 1999

RADIAN INTERNATIONAL
A DAMES & MOORE GROUP COMPANY

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1. INTRODUCTION

This document presents a summary of the 5th Quarter of 2-PHASE Extraction system operation as the Interim Remedial Measure (IRM) at Erdle Perforating Company (Erdle).

During the 5th Quarter of IRM operation, system operation and analytical data was collected by Radian Engineering Inc. (Radian) to assess progress of the IRM. Analytical results from system vapor/water streams and quarterly groundwater/soil samples are included in this report and serve as the basis for the mass removal calculations and as well as serve as points of comparison with historical (pre-IRM) sampling events. Groundwater samples from the site monitoring wells and soil samples within the source area were collected for laboratory analysis at the completion of the 5th Quarter IRM operation period.

2. SYSTEM OPERATIONAL PERFORMANCE

The 5th Quarter IRM operation reporting period encompasses IRM system operation and monitoring that occurred between October 30, 1998 and February 26, 1999, as well as post monitoring groundwater and soil sampling activities. The post monitoring sampling activities were delayed at the completion of the IRM system operation due to high snowfall and precipitation events that restricted access. Semi-annual groundwater samples were collected on March 24, 1999. Quarterly performance soil sampling activities took place on May 12, 1999.

The system ran for a total of 1,769 hours out of a possible 2,380 hours during the reporting period, and had 74% uptime. The IRM system was inoperable from December 30, 1998 to January 20, 1999 due to mechanical damage sustained by the heat exchangers during freezing conditions which occurred during this period. Other system shutdowns were caused by precipitate blockage of the groundwater filters. The IRM system was repaired and operated from January 20, 1999 to February 26, 1999 to complete the full

quarter of operation. During the reporting period, 42,312 gallons of groundwater were removed from the subsurface at an average of 0.5 gallons per minute (gpm) from the eight (8) extraction wells. An estimated total of 7,339,680 standard cubic feet (scf) of soil gas and aspiration air was treated during the reporting period at an average flow rate of 65 standard cubic feet per minute (scfm).

3. OPERATIONAL EVENTS/MAINTENANCE ACTIVITIES

Operational events, maintenance activities and system down time that occurred during the reporting period are summarized as follows in Table 1.

Table 1
Operational Events/Maintenance Activities
2-Phase Extraction System
Erdle Perforating

Date	Operational Events/Maintenance Actions
10/30/98	Restarted IRM utilizing Skid #2
12/01/98	System vapor and water samples collected
12/30/98 to 01/20/99	System down due to damaged process components (Air to Air Heat Exchanger) resulting from extreme freezing temperatures. Damaged components were removed and replaced. Installed additional heater in treatment trailer. Replaced system filters and performed routine maintenance.
01/20/99	Restarted System.
01/27/99	Collected system vapor and water samples.
01/28/99 to 02/11/99	System down due to groundwater precipitate blockage of the water to air separator filter and associated transfer piping.
02/11/99	Cleared precipitate blockage and restarted system
02/26/99	Collected system vapor and groundwater samples. Shut down system in preparation for Post Shutdown Monitoring groundwater and soil sampling activities.
03/1/99 to 03/24/99	Post Shutdown Monitoring Sampling delayed due to heavy snow cover at facility, preventing vehicle and equipment access.
03/24/99	Conducted semi-annual groundwater sampling of site monitoring wells.
04/12/99	Conducted quarterly soil sampling activities.

4. ANALYTICAL RESULTS

Vapor stream samples were collected on December 1, 1998, January 27, 1999 and February 26, 1999. Samples were collected from:

- The inlet to the first vapor phase Granular Activated Carbon (GAC) unit (Sample V-1 and Duplicate Sample V-4);
- Between the outlet of the first vapor phase GAC unit and the inlet of the second vapor phase GAC unit (Sample V-2); and,
- The outlet of the second vapor phase GAC unit (Sample V-3).

The vapor system samples were submitted to Microseeps laboratory in Pittsburgh, Pennsylvania for analysis of the U.S. EPA Method 601/602 list compounds by gas chromatography using Method AM4.03. Vapor phase analytical results for detected compounds are provided in Table 2. The laboratory analytical reports are contained in Appendix A.

System water samples were collected on December 1, 1998, January 27, 1999 and February 26, 1999. The samples were taken from the following locations:

- Primary carbon inlet (Sample W-1 and Duplicate Sample W-4);
- Primary carbon outlet (Sample W-2); and,
- Secondary carbon outlet prior to sewer discharge (Sample W-3).

The primary carbon outlet samples were composite samples from each parallel train (e.g., the volume of liquid in the tertiary outlet sample is approximately 50% from train 1 and 50 % from train 2). These samples were submitted to Severn Trent Laboratories (formerly RECRA) in Amherst, New York for analysis of VOCs using U.S. EPA Methods 8010/8020. Table 3 provides a summary of the detected compounds. Laboratory analytical reports are provided in Appendix B.

Table 2

Vapor Phase Analytical Results (ppmv)

2-Phase Extraction System

Erdle Perforating

Location/Parameter	12/1/98	1/27/99	2/26/99
Primary Inlet			
1,1-Dichloroethylene	0.01	0.03	0.01
1,1-Dichloroethane	0.04	0.07	0.03
1,1,1-Trichloroethane	ND	0.008	0.005
Trichloroethylene	12.55	15.495	11.921
Perchloroethylene	0.009	0.014	0.012
Primary Outlet			
1,1-Dichloroethylene	0.02	0.06	0.03
Trans-1,2,Dichloroethylene	ND	0.2	0.4
1,1-Dichloroethane	ND	0.05	0.09
1,1,1-Trichloroethane	ND	ND	0.012
Trichloroethylene	ND	0.086	4.009
Perchloroethylene	ND	ND	0.007
Secondary Outlet			
1,1-Dichloroethylene	ND	ND	0.08
Trans-1,2,Dichloroethylene	ND	ND	ND
1,1-Dichloroethane	ND	ND	0.02
1,1,1-Trichloroethane	ND	ND	ND
Trichloroethylene	ND	ND	0.005
Perchloroethylene	ND	ND	ND

Table 3
Liquid Phase Analytical Results (ug/L)
2-Phase Extraction System
Erdle Perforating

Location/Parameter	12/1/98	1/27/99	2/26/99
Primary Inlet			
Trichloroethylene	220	310	300
Trans-1,2,Dichloroethene	11	ND	ND
1,2-Dichloropropane	ND	ND	41
Methylene Chloride	12	ND	18
Vinyl Chloride	11	ND	ND
Primary Outlet			
Trichloroethylene	6.2	9.7	9.4
Chloroethane	ND	1.2	ND
Secondary Outlet			
Trichloroethylene	ND	ND	ND
Trans-1,2,Dichloroethene	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND
Methylene Chloride	ND	ND	ND
Vinyl Chloride	ND	ND	ND
Chloroethane	ND	ND	ND

Note: "ND" = Not Detected.

5. MASS REMOVAL ESTIMATE

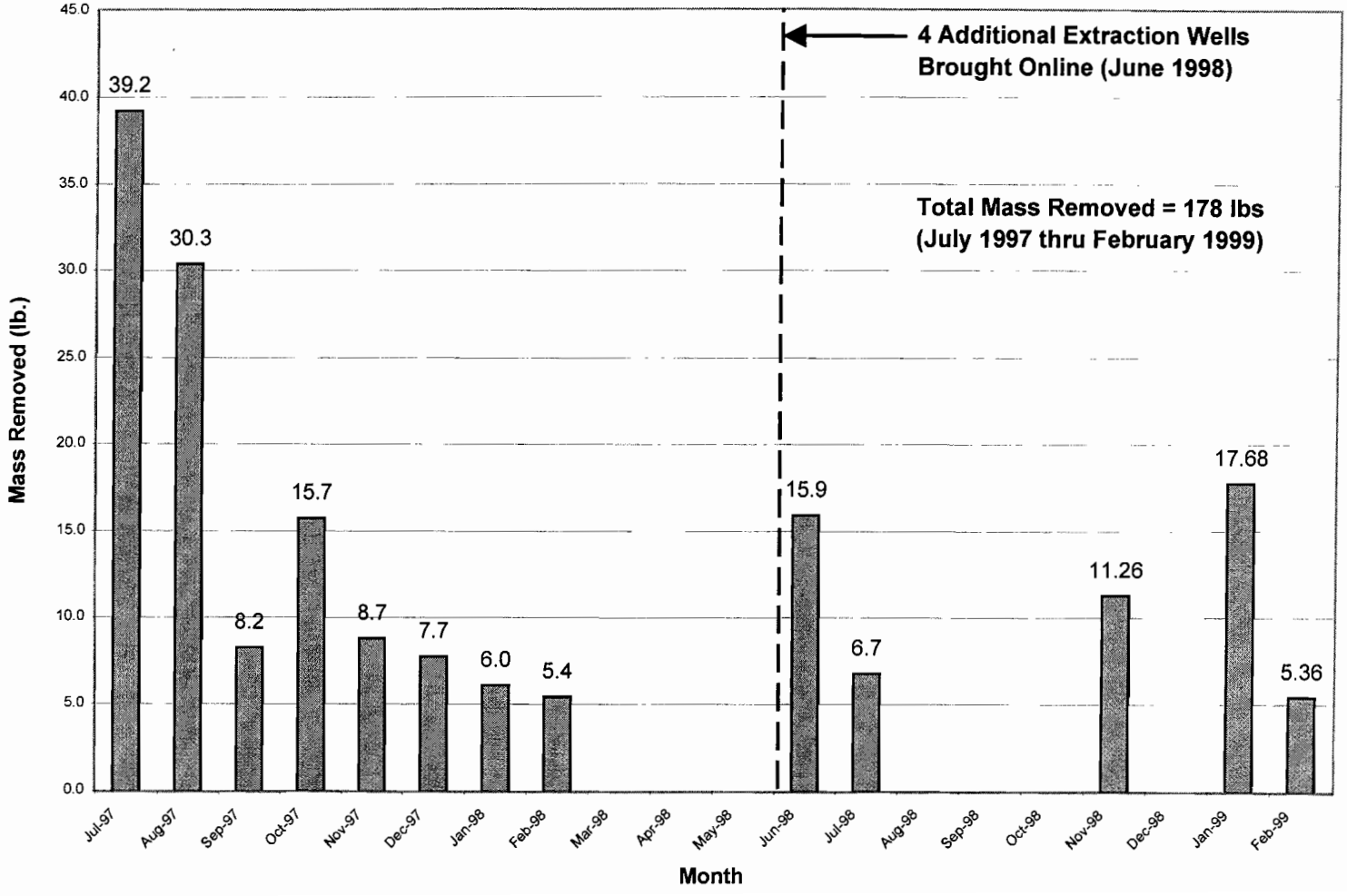
The estimated total mass removal for the operating period via the vapor phase was 34 lb. Vapor phase VOC concentrations in parts per million volume (ppmv) are converted to pounds using compound molecular weights, daily flow rates in standard cubic feet, and the proper unit conversions. Concentration data for each sample event is used to estimate concentrations for the time periods between sampling events.

The estimated total mass removal for the quarter from the liquid phase was 0.11 lb. Liquid phase VOC concentrations in ug/L are converted to pounds using water flow rates

and the proper unit conversions. Concentration data for each sample event is used to estimate concentrations for days between sampling events.

Figure 1 illustrates mass removal data from IRM inception through the end of this reporting period. The estimated total mass removed by vapor/groundwater extraction is 178 lbs.

Figure 1
Erdle Perforating
2-PHASE Extraction System
Mass Removed (lb.)
IRM Operation July 1997- February 1998



6. GROUNDWATER SAMPLING RESULTS

Semi-annual groundwater samples were collected on March 24, 1999 in accordance with the IRM Work Plan from the following monitoring wells: MW-1, MW-1D, MW-2, MW-2D, MW-3, MW-3D, MW-4, MW-4D, MW-6, MW-6D, MW-7 and MW-7D. The groundwater samples were analyzed by Severn Trent Laboratories by EPA Methods SW8010/8020. Analytical results for detected compounds are summarized in Table 4. Table 4 also includes previous sampling event results for comparison purposes. The detected compounds at each well are also shown on Figure 2. Laboratory analytical results are provided in Appendix C.

Shallow Monitoring Wells

Overall, the March 1999 analytical results indicate a decline in the dissolved concentrations for TCE in the shallow wells located within and adjacent to the source area. TCE concentrations show a declining trend between December 1994 and March 1999 at MW-1 (6,400 ug/l to 640 ug/l) , MW-2 (1,600 ug/l to 580 ug/l), and MW-3 (550,000 ug/l to 210,000 ug/l). TCE concentrations have remained relatively stable at MW-4 (2.5 ug/l) compared to previous sampling rounds (Table 4). TCE concentrations were non-detect in downgradient monitoring wells MW-6 and MW-7.

Other compounds historically detected within the shallow monitoring wells also displayed either non-detect concentrations or lower concentrations than documented in previous sampling events as indicated on Table 4. Vinyl chloride was detected at a concentration of 7,000 ug/l at MW-3 in March 1999. This compound was not previously detected at this well prior to it's conversion to an extraction well. The increase in vinyl chloride can potentially be attributed to natural biodegradation of site constituents from the source area. 1,2-Dichloropropane was detected in shallow monitoring wells MW-3 (23,000 ug/l) and MW-6 (1.1 ug/l) during the March 1999 sampling episode. This compound was not detected during any previous sampling episodes.

Bedrock Monitoring Wells

The bedrock monitoring well results have shown decreases in constituent concentrations for the March 1999 sampling episode when compared to previous sampling rounds. TCE reductions were experienced between October 1998 and March 1999 at MW-1D (5,500 ug/l to 1,000 ug/l), MW-2D (6.3 ug/l to 3.8 ug/l), MW-3D (440 ug/l to 65 ug/l), MW-4D (24 ug/l to 7 ug/l) and MW-6D (290 ug/l to 150 ug/l). TCE concentrations remained stabile at downgradient well MW-7D at 39 ug/l in March 1999 compared to 41 ug/l in October 1998.

1,2-Dichloropropane was detected during the March 1999 sampling round at MW-1D (100 ug/l), MW-2D (1.5 ug/l), MW-3D (14 ug/l), MW-4D (1.6 ug/l), MW-6D (32 ug/l) and MW-7D (5.9 ug/l). Other compounds detected for the first time during the March 1999 sampling episode included chloromethane at 29 ug/l in MW-2D, 1,1-Dichloroethane at 1.1 ug/l in MW-4D, and low concentrations for 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene and 1,1,2,2-Tetrachloroethane at MW-2D. Other historically detected compounds have either declined or remained relatively stable at the bedrock monitoring points as presented in Table 4.

Table 4

Groundwater Sampling Results (ug/L)

Erdle Perforating

Well ID	Compound	12/21/94	8/7/96	10/8/97	1/29/98	8/20/98	10/29/98	3/24/99
MW-1	Vinyl Chloride	13,000	2,200	1,400	610	NA	NA	100
	Trichloroethylene	6,400	420	460	64	NA	NA	640
	Methylene Chloride	ND	ND	520	60	NA	NA	ND
	1,1,1-Trichloroethane	ND	ND	ND	ND	NA	NA	ND
	trans-1,2-Dichloroethene	150,000	72	ND	ND	NA	NA	15
	Toluene	ND	ND	ND	ND	NA	NA	ND
	Tetrachloroethene	ND	ND	ND	ND	NA	NA	ND
MW-1D	Vinyl Chloride	ND	ND	16	ND	50	61	58
	Trichloroethylene	6,000	9,900	270	1,300	910	5,500	1,000
	Methylene Chloride	ND	ND	5.7	37	ND	ND	ND
	1,1,1-Trichloroethane	ND	ND	5.6	22	ND	ND	ND
	trans-1,2-Dichloroethene	1,300	ND	ND	ND	ND	ND	ND
	Toluene	20	ND	ND	ND	ND	ND	ND
	Tetrachloroethene	41	ND	ND	ND	ND	ND	ND
	Chloromethane	ND	ND	ND	ND	ND	ND	28
	1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	100
MW-2	Vinyl Chloride	88	98	NS	77	ND	NA	ND
	Trichloroethylene	1,600	1,000	NS	940	410*	NA	580
	Methylene Chloride	ND	ND	NS	64	ND	NA	ND
	1,1,1-Trichloroethane	ND	ND	NS	ND	ND	NA	ND
	trans-1,2-Dichloroethene	ND	ND	NS	ND	ND	NA	ND
	Toluene	ND	ND	NS	ND	ND	NA	ND
	Tetrachloroethene	ND	ND	NS	ND	ND	NA	ND
MW-2D	Vinyl Chloride	NA	ND	NS	0.94	ND	3.9	1.8
	Trichloroethylene	NA	13	NS	1	4.7	6.3	3.8
	Methylene Chloride	NA	ND	NS	0.24	ND	ND	ND
	1,1,1-Trichloroethane	NA	3.9	NS	2.7	4.4	3.6	3.3
	trans-1,2-Dichloroethene	NA	1	NS	0.35	1.4	1.4	1.2
	Toluene	NA	ND	NS	0.25	ND	ND	ND
	Tetrachloroethene	NA	ND	NS	0.23	ND	ND	1
	1,2-Dichlorobenzene	NA	ND	NS	ND	ND	ND	0.31 J
	1,3-Dichlorbenzene	NA	ND	NS	ND	ND	ND	1
	1,4-Dichlorobenzene	NA	ND	NS	ND	ND	ND	0.28 J
	1,1-Dichloroethane	NA	ND	NS	ND	ND	2.1	2.7
	1,1-Dichloroethene	NA	ND	NS	ND	1.5	ND	1.6
	1,2-Dichloropropane	NA	ND	NS	ND	ND	ND	1.5
	1,1,2,2-Tetrachloroethane	NA	ND	NS	ND	ND	ND	0.8

Table 4 (continued)

Groundwater Sampling Results (ug/L)

Erdle Perforating

Well ID	Compound	12/21/94	8/7/96	10/8/97	1/29/98	8/20/98	10/29/98	3/24/99
MW-3	Vinyl Chloride	ND	ND	ND	ND	NA	NA	7,000
	Trichloroethylene	350,000	550,000	310,000	510,000	NA	NA	210,000
	Methylene Chloride	4,280	ND	9,000	ND	NA	NA	1,300
	1,1,1-Trichloroethane	ND	ND	ND	ND	NA	NA	ND
	1,2-Dichloroethene	ND	ND	ND	ND	NA	NA	ND
	Toluene	ND	ND	ND	ND	NA	NA	ND
	Tetrachloroethene	ND	ND	ND	ND	NA	NA	ND
	1,2-Dichloropropane	ND	ND	ND	ND	NA	NA	23,000
MW-3D	Vinyl Chloride	ND	ND	ND	ND	ND	12	8.8
	Trichloroethylene	380	850	51	60	260	440	65
	Methylene Chloride	ND	ND	2.7	ND	ND	ND	ND
	1,1,1-Trichloroethane	ND	ND	ND	1.7	ND	3.9	ND
	trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	2.6	ND
	Toluene	ND	ND	ND	ND	ND	ND	ND
	Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND
	1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	14
MW-4	Vinyl Chloride	37	18	NS	8.0	12	NA	ND
	Trichloroethylene	1.4	2.3	NS	1.1	1.5	NA	2.5
	Methylene Chloride	ND	ND	NS	0.51	ND	NA	ND
	1,1,1-Trichloroethane	ND	ND	NS	ND	ND	NA	ND
	trans-1,2-Dichloroethene	ND	2.6	NS	2.4	3.8	NA	ND
	Toluene	ND	ND	NS	ND	ND	NA	ND
	Tetrachloroethene	ND	ND	NS	ND	ND	NA	ND
MW-4D	Vinyl Chloride	ND	ND	NS	ND	ND	0.46	ND
	Trichloroethylene	13	29	NS	5.1	30	24	7
	Methylene Chloride	ND	ND	NS	0.27	ND	ND	ND
	1,1,1-Trichloroethane	3.3	2.5	NS	0.64	1.1	1.3	1.7
	trans-1,2-Dichloroethene	ND	ND	NS	ND	ND	ND	ND
	Toluene	ND	ND	NS	0.25	ND	ND	ND
	Tetrachloroethene	ND	ND	NS	ND	ND	ND	ND
	1,1-Dichloroethane	ND	ND	NS	ND	ND	ND	1.1
	1,2-Dichloropropane	ND	ND	NS	ND	ND	ND	1.6
MW-6	Vinyl Chloride	NA	2.2	NS	1.5	ND	0.38 J	ND
	Trichloroethylene	NA	ND	NS	ND	ND	ND	ND
	Methylene Chloride	NA	ND	NS	0.29	ND	ND	ND
	1,1,1-Trichloroethane	NA	ND	NS	ND	ND	ND	ND
	trans-1,2-Dichloroethene	NA	ND	NS	ND	ND	ND	ND
	Toluene	NA	ND	NS	ND	ND	ND	ND
	Tetrachloroethene	NA	ND	NS	ND	ND	ND	ND
	1,2-Dichloropropane	NA	ND	ND	ND	ND	ND	1.1

Table 4 (continued)

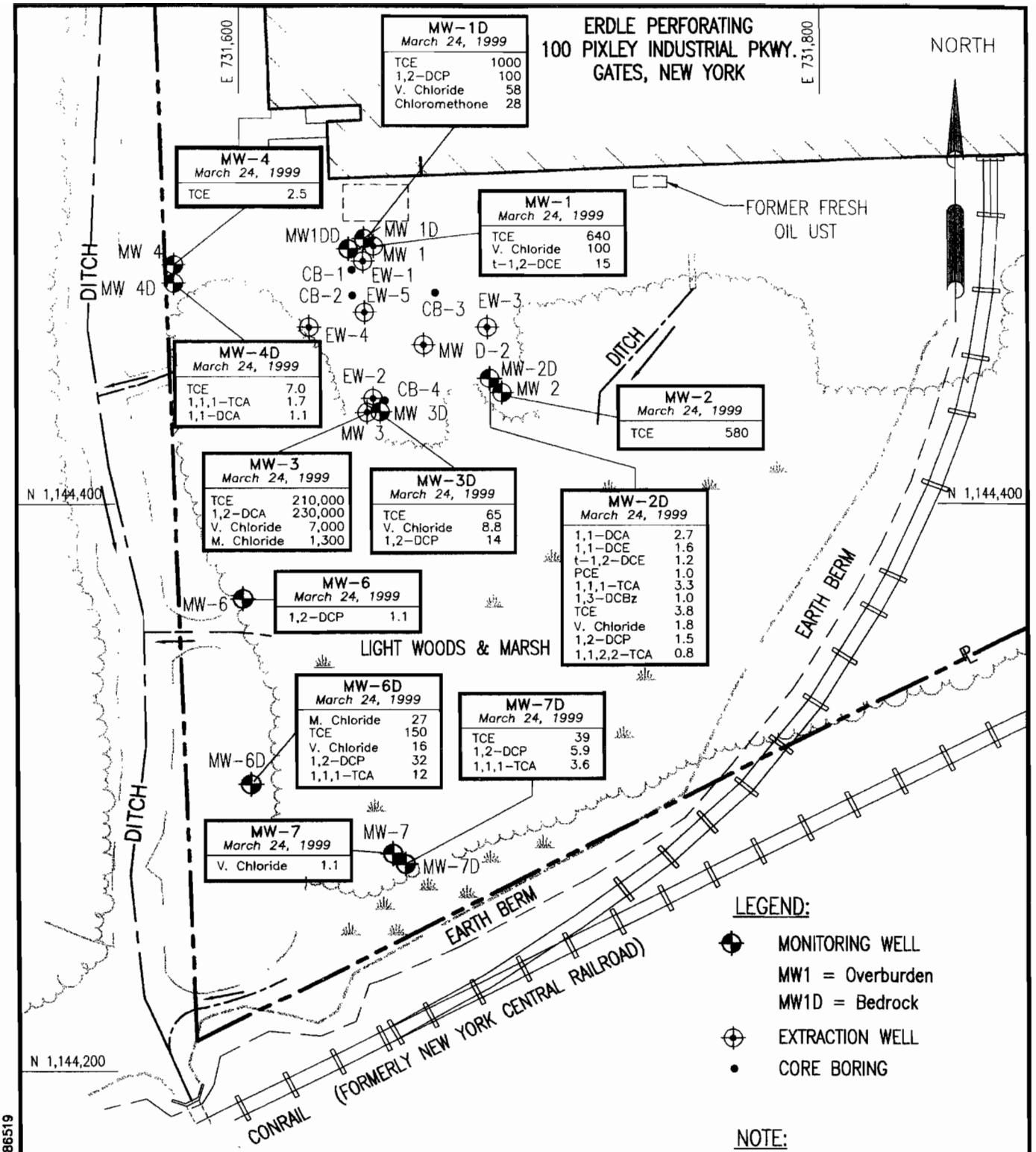
Groundwater Sampling Results (ug/L)

Erdle Perforating

Well ID	Compound	12/21/94	8/7/96	10/8/97	1/29/98	8/20/98	10/29/98	3/24/99
MW-6D	Vinyl Chloride	NA	ND	ND	ND	ND	9.3	16
	Trichloroethylene	NA	1,400	ND	1,000	320	290	150
	Methylene Chloride	NA	ND	ND	27	ND	ND	ND
	1,1,1-Trichloroethane	NA	ND	ND	ND	8	ND	12**
	trans-1,2-Dichloroethene	NA	ND	ND	ND	ND	ND	ND
	Toluene	NA	ND	ND	ND	ND	ND	ND
	Tetrachloroethene	NA	ND	ND	ND	ND	ND	ND
	1,2-Dichloropropane	NA	ND	ND	ND	ND	ND	32
MW-7	Vinyl Chloride	NA	NA	NA	NA	NA	ND	1.1
	Trichloroethylene	NA	NA	NA	NA	NA	ND	ND
	Methylene Chloride	NA	NA	NA	NA	NA	ND	ND
	1,1,1-Trichloroethane	NA	NA	NA	NA	NA	ND	ND
	trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	ND	ND
	Toluene	NA	NA	NA	NA	NA	ND	ND
	Tetrachloroethene	NA	NA	NA	NA	NA	ND	ND
MW-7D	Vinyl Chloride	NA	NA	NA	NA	NA	1.2	ND
	Trichloroethylene	NA	NA	NA	NA	NA	41	39
	Methylene Chloride	NA	NA	NA	NA	NA	ND	ND
	1,1,1-Trichloroethane	NA	NA	NA	NA	NA	3.3	3.6
	trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	ND	ND
	Toluene	NA	NA	NA	NA	NA	ND	ND
	Tetrachloroethene	NA	NA	NA	NA	NA	ND	ND
	1,2-Dichloropropane	NA	NA	NA	NA	NA	ND	5.9

Notes:

ND = Not detected.
NA = Not Analyzed
NS= Not Sampled
* = Well resampled due to unrealistic/unexplainable result
** = Sample Duplicate detection



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Radian Engineering Inc.

GROUNDWATER SAMPLING RESULTS

ERDLE PERFORATING — GATES, NY

CLIENT: ERDLE PERFORATING — JOB NUMBER: 80186505.07

SCALE: AS SHOWN — FIGURE NUMBER 2 — REV 0

7.0 SOIL SAMPLING RESULTS

Quarterly soil sampling activities were conducted on May 12, 1999 in accordance with the IRM Work Plan. Soil samples were collected from the glacial till at previously sampled locations CB-1 through CB-4 utilizing Geoprobe sampling techniques. The recovered soils were logged in accordance with the Unified Soil Classification System (USCS). Each soil sample was split in the field and screened for volatiles utilizing a photoionization detector (PID). Soil samples exhibiting the highest PID readings were selected for laboratory analysis. Samples selected for analysis from the glacial till clay included CB-1 (6 to 8-ft), CB-2 (6 to 7-ft), CB-3 (6 to 8-ft) and CB-4 (4 to 6-ft). One sample at CB-2 (10 to 12-ft) was selected to assess the cleanup of a saturated silt layer corresponding with the lower screened portion of extraction well EW-4.

The samples were analyzed by EPA Methods SW8010/8020 by Severn Trent Laboratories. Analytical results for detected compounds are summarized in Table 5, as well as previous sampling event results for comparison purposes. The detected compounds at each sampling location are also shown on Figure 3. Test boring logs and laboratory analytical results are provided in Appendix D and E, respectively.

Generally, the soil samples collected during the May 1999 sampling round exhibited a reduction in TCE concentrations as compared to the previous sampling episode in August 1998. The TCE concentrations reduction between the two sampling episodes were as follows: CB-1 (1,600 ug/l to 240 ug/l), CB-2 (4,800 ug/l to 82 ug/l), CB-3 (12,000 ug/l to 150 ug/l) and CB-4 (460,000 ug/l to 32,000 ug/l). The 10 to 12-ft sample at CB-2 exhibited a detection for TCE at 1,600 ug/l which is also lower than the previous concentration within the overlying clay of 4,800 ug/l.

Vinyl chloride shows a declining trend at CB-1 (1,700 ug/l to 360 ug/l) corresponding to the reduction of TCE in this area. The concentration for vinyl chloride increased at CB-2 from 81 ug/l in January 1998 to 260 ug/l in May 1999. Vinyl chloride concentrations

increased slightly to 73 ug/l at CB-3 relative to the January 1998 concentration of 50 ug/l. No vinyl chloride has been detected at CB-4.

Other compounds detected within the soils include methylene chloride, 1,1-Dichloroethene, 1,1-Dichloroethane and trans-1,2-Dichloroethane as presented in Table 5.

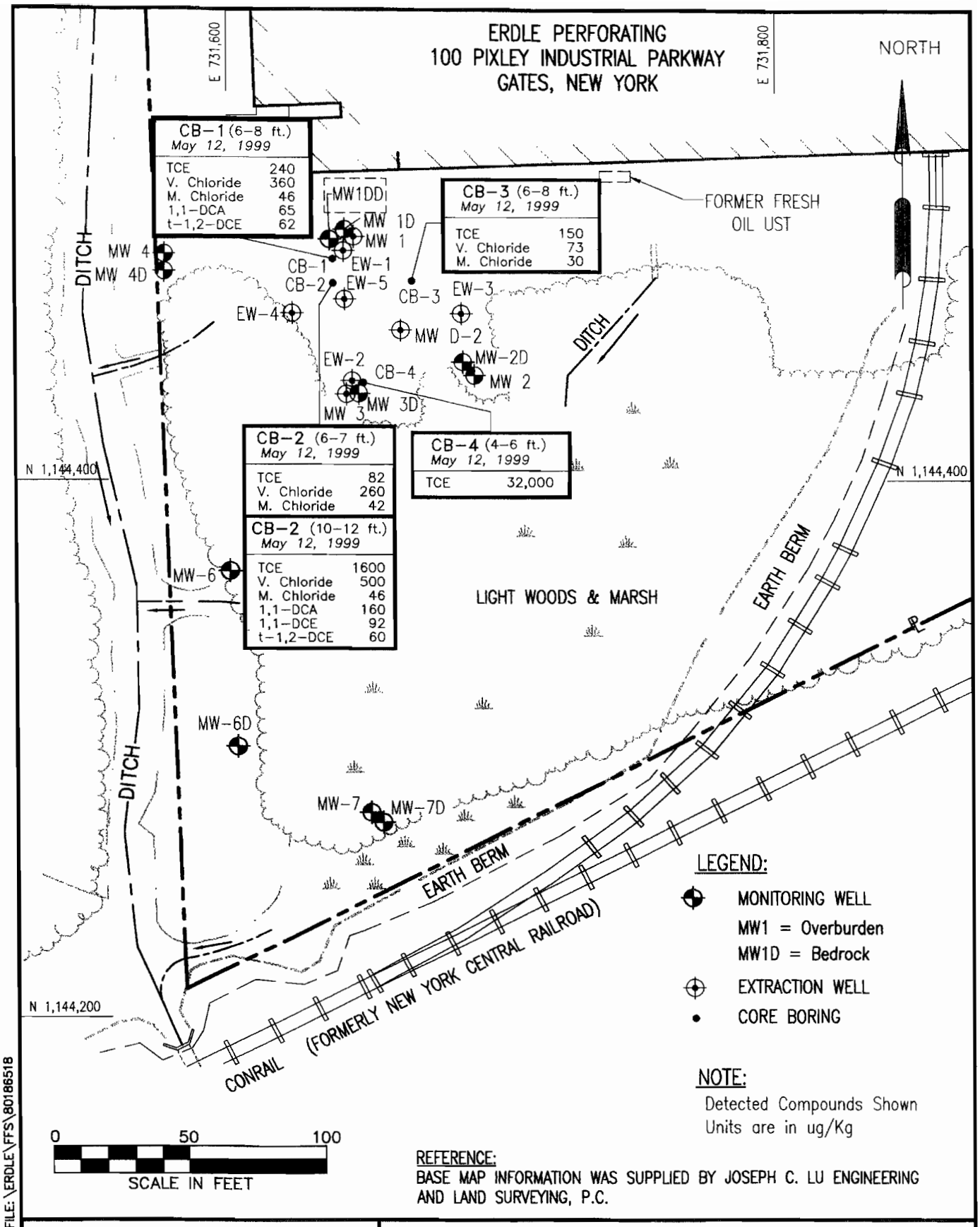
Table 5
Soil Boring Results (ug/kg)
Erdle Perforating

Sample ID	Parameter	4/21/97	10/9/97	1/19/98	8/26/98	5/12/99
(CB-1)	Vinyl Chloride	NA	1,300	1,700	980	360
	Trichloroethylene	NA	1,000	830	1600	240
	Methylene Chloride	NA	22	140	ND	46
	1,1,1-Trichloroethane	NA	ND	ND	ND	ND
	1,1-Dichloroethene	NA	45	ND	ND	ND
	1,2-Dichloroethene	NA	63	ND	ND	ND
	1,1-Dichloroethane	NA	69	ND	ND	65
	Tetrachloroethene	NA	ND	ND	ND	ND
	trans-1,2-Dichloroethane	NA	ND	ND	ND	62
(CB-2)	Vinyl Chloride	NA	ND	81	ND	260/500
	Trichloroethylene	NA	4,000	1,300	4,800	82/1,600
	Methylene Chloride	NA	60	ND	ND	42/46
	1,1,1-Trichloroethane	NA	ND	ND	ND	ND/ND
	1,1-Dichloroethene	NA	ND	ND	ND	ND/92
	1,2-Dichloroethene	NA	ND	ND	ND	ND/ND
	1,1-Dichloroethane	NA	ND	ND	ND	ND/160
	Tetrachloroethene	NA	ND	ND	ND	ND/ND
	trans-1,2-Dichloroethane	NA	ND	ND	ND	ND/60
(CB-3)	Vinyl Chloride	NA	ND	50	ND	73
	Trichloroethylene	NA	77	130	12,000	150
	Methylene Chloride	NA	ND	ND	ND	30
	1,1,1-Trichloroethane	NA	ND	ND	ND	ND
	1,1-Dichloroethene	NA	ND	ND	ND	ND
	1,2-Dichloroethene	NA	ND	ND	ND	ND
	1,1-Dichloroethane	NA	ND	ND	ND	ND
	Tetrachloroethene	NA	ND	ND	ND	ND
(CB-4)	Vinyl Chloride	NA	ND	ND	ND	ND
	Trichloroethylene	NA	340,000	140,000	460,000*	32,000
	Methylene Chloride	NA	6,000	ND	ND	ND
	1,1,1-Trichloroethane	NA	ND	ND	ND	ND
	1,1-Dichloroethene	NA	ND	ND	ND	ND
	1,2-Dichloroethene	NA	ND	ND	ND	ND
	1,1-Dichloroethane	NA	ND	ND	ND	ND
	Tetrachloroethene	NA	ND	ND	29,000*	ND

Table 5 (continued)
Soil Boring Results (ug/kg)
Erdle Perforating

Sample	Compound	4/21/97	10/9/97	1/19/98	8/26/98	5/12/99
CB-5	Vinyl Chloride	NA	ND	NA	NA	NA
	Trichloroethylene	NA	11,000	NA	NA	NA
	Methylene Chloride	NA	160	NA	NA	NA
	1,1,1-Trichloroethane	NA	ND	NA	NA	NA
	1,1-Dichloroethene	NA	ND	NA	NA	NA
	1,2-Dichloroethene	NA	ND	NA	NA	NA
	1,1-Dichloroethane	NA	ND	NA	NA	NA
	Tetrachloroethene	NA	ND	NA	NA	NA
EW-1	Vinyl Chloride	720	NA	NA	NA	NA
	Trichloroethylene	2,200	NA	NA	NA	NA
	Methylene Chloride	ND	NA	NA	NA	NA
	1,1,1-Trichloroethane	ND	NA	NA	NA	NA
	1,1-Dichloroethene	ND	NA	NA	NA	NA
	1,2-Dichloroethene	ND	NA	NA	NA	NA
	1,1-Dichloroethane	ND	NA	NA	NA	NA
	Tetrachloroethene	ND	NA	NA	NA	NA
EW-2	Vinyl Chloride	ND	NA	NA	NA	NA
	Trichloroethylene	170,000	NA	NA	NA	NA
	Methylene Chloride	ND	NA	NA	NA	NA
	1,1,1-Trichloroethane	ND	NA	NA	NA	NA
	1,1-Dichloroethene	ND	NA	NA	NA	NA
	1,2-Dichloroethene	ND	NA	NA	NA	NA
	1,1-Dichloroethane	ND	NA	NA	NA	NA
	Tetrachloroethene	ND	NA	NA	NA	NA
EW-3	Vinyl Chloride	ND	NA	NA	NA	NA
	Trichloroethylene	170	NA	NA	NA	NA
	Methylene Chloride	ND	NA	NA	NA	NA
	1,1,1-Trichloroethane	ND	NA	NA	NA	NA
	1,1-Dichloroethene	ND	NA	NA	NA	NA
	1,2-Dichloroethene	ND	NA	NA	NA	NA
	1,1-Dichloroethane	ND	NA	NA	NA	NA
	Tetrachloroethene	ND	NA	NA	NA	NA
EW-4	Vinyl Chloride	ND	NA	NA	NA	NA
	Trichloroethylene	ND	NA	NA	NA	NA
	Methylene Chloride	ND	NA	NA	NA	NA
	1,1,1-Trichloroethane	ND	NA	NA	NA	NA
	1,1-Dichloroethene	ND	NA	NA	NA	NA
	1,2-Dichloroethene	ND	NA	NA	NA	NA
	1,1-Dichloroethane	ND	NA	NA	NA	NA
	Tetrachloroethene	ND	NA	NA	NA	NA

Notes: ND = Not Detected
NA = Not Available or Not Applicable
* = Highest level reported from duplicate samples
CB-2 5/12/99 Results for (6 to 8-ft)/(10 to 12-ft) intervals



FILE: \ERDLE\FFS\80186518

0066104299 99KKGG

Radian Engineering Inc.

SOIL SAMPLING RESULTS

ERDLE PERFORATING — GATES, NY

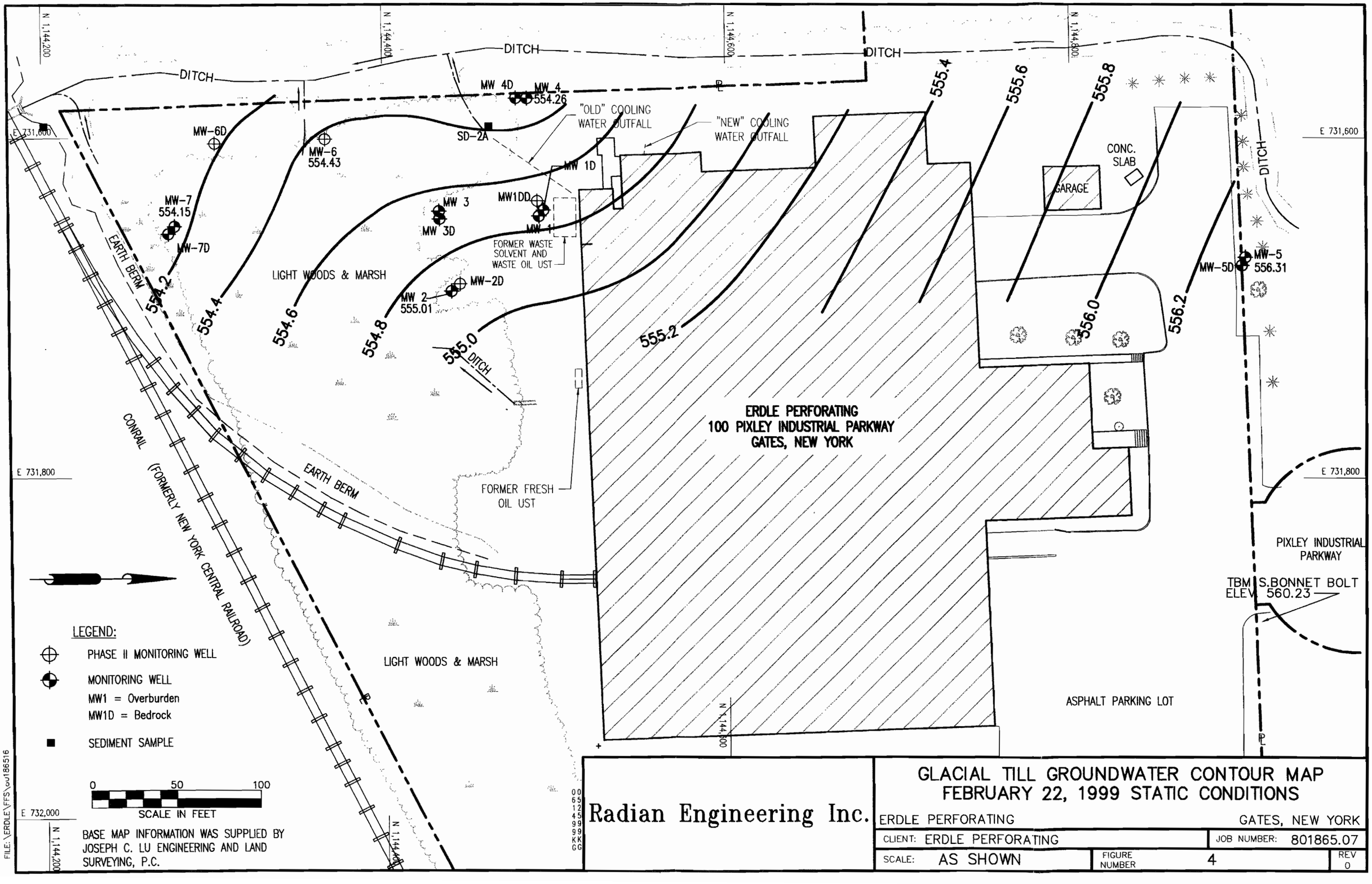
CLIENT: ERDLE PERFORATING — JOB NUMBER: 80186505.07

SCALE: AS SHOWN — FIGURE NUMBER 3 — REV 0

8.0 GROUNDWATER FLOW EVALUATION

Static groundwater conditions recorded on February 22, 1999 within the glacial till and bedrock are presented as Figures 4 and 5. The groundwater flow direction within the glacial till and bedrock is toward the south-southwest across the IRM area. Groundwater levels within the glacial till are present approximately 1 to 2-ft below ground surface in the IRM area; and groundwater is seasonally above ground surface in the southern-most portion of the site south of MW-3. The potentiometric surface of the bedrock water-bearing zone, is typically higher in elevation than the water levels of the shallow water-bearing zone, indicating an upward hydraulic gradient.

Figures 6 and 7 represent groundwater conditions within the glacial till and bedrock on February 26, 1999, after the IRM 2-Phase Extraction System was in operation for a 4-day period. The cone of depression within the glacial till water-bearing zone, shown in Figure 6, illustrates capture of the surrounding groundwater within the IRM area. Drawdown of the water table within the glacial till was approximately 1-ft within the source area after 4-days of operation. This indicates subsurface constituent removal is largely due to groundwater extraction from the till, with a minor removal component from soil vapor extraction in the immediate vicinity of the extraction wells.

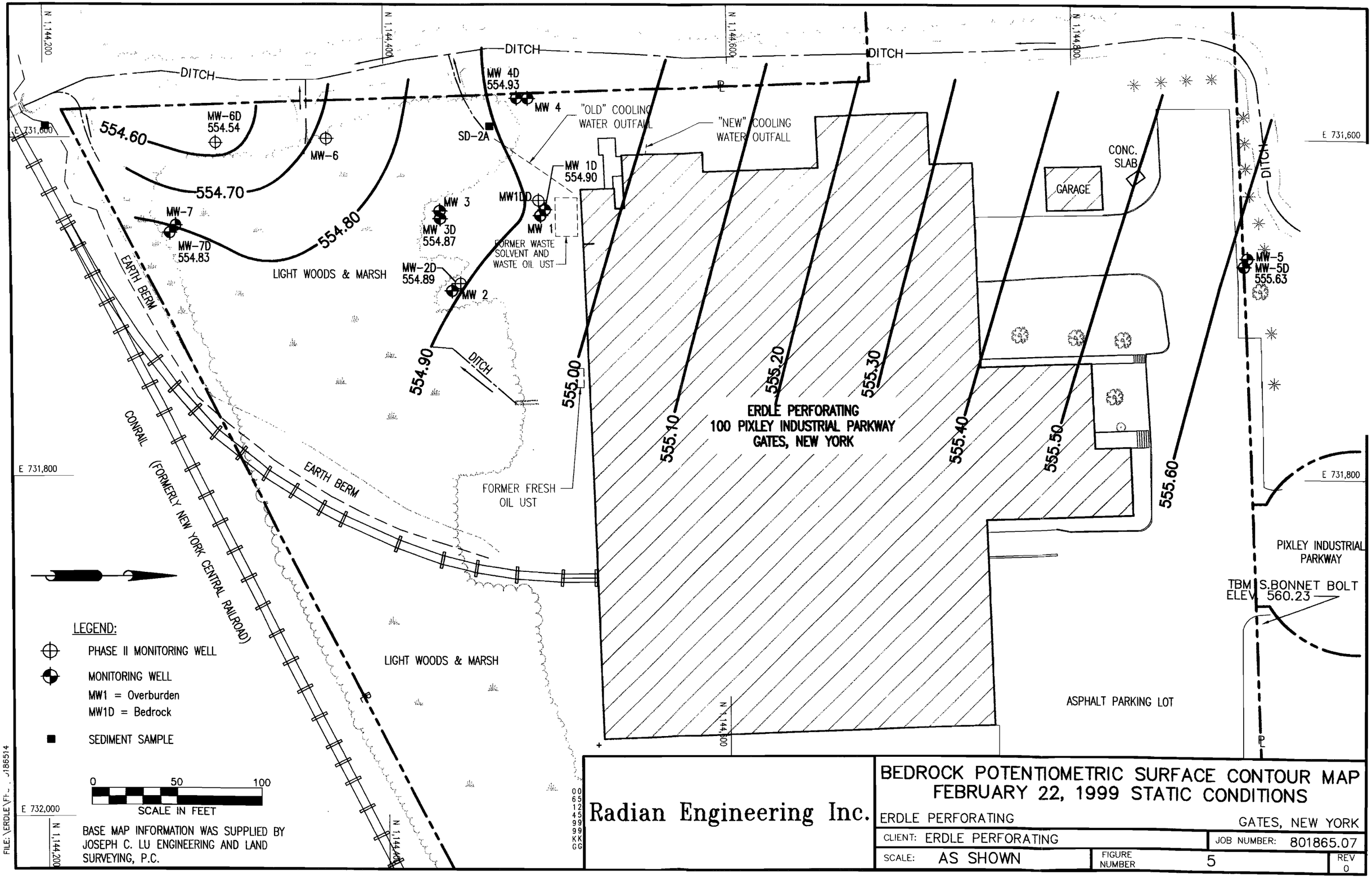


Radian Engineering Inc.

GLACIAL TILL GROUNDWATER CONTOUR MAP FEBRUARY 22, 1999 STATIC CONDITIONS

ERDLE PERFORATING — GATES, NEW YORK

CLIENT: ERDLE PERFORATING		JOB NUMBER: 801865.07	
SCALE: AS SHOWN	FIGURE NUMBER 4		REV 0

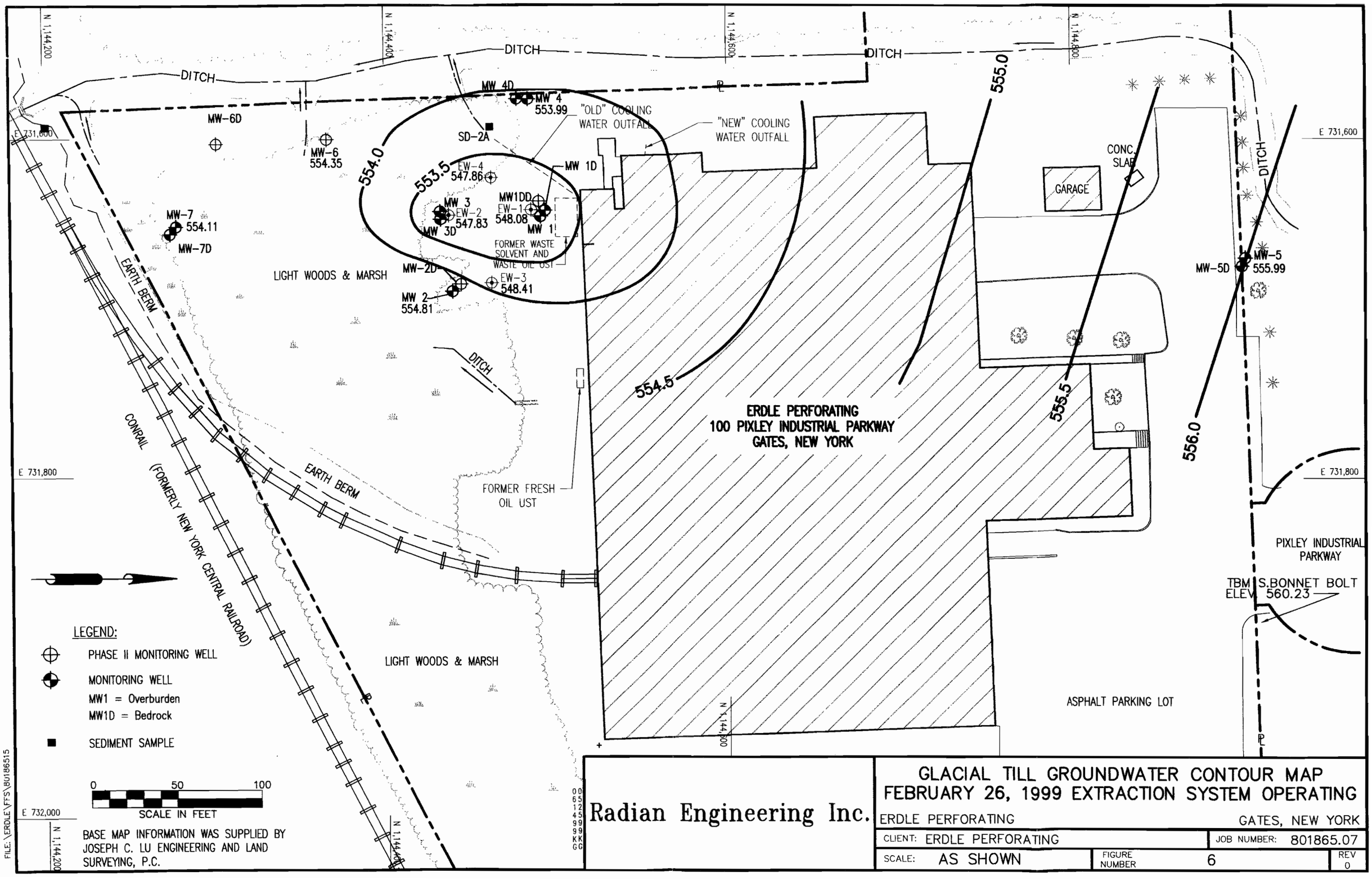


Radian Engineering Inc.

BEDROCK POTENTIOMETRIC SURFACE CONTOUR MAP FEBRUARY 22, 1999 STATIC CONDITIONS

ERDLE PERFORATING — GATES, NEW YORK

CLIENT: ERDLE PERFORATING		JOB NUMBER: 801865.07	
SCALE: AS SHOWN	FIGURE NUMBER 5		REV 0



Radian Engineering Inc.

GLACIAL TILL GROUNDWATER CONTOUR MAP FEBRUARY 26, 1999 EXTRACTION SYSTEM OPERATING

ERDLE PERFORATING — GATES, NEW YORK

CLIENT: ERDLE PERFORATING		JOB NUMBER: 801865.07	
SCALE: AS SHOWN	FIGURE NUMBER 6		REV 0

N 1,144,200
N 1,144,400
N 1,144,600
N 1,144,800
E 731,600
E 731,800
E 732,000
N 1,144,200
N 1,144,000

DITCH
DITCH
DITCH
DITCH

MW-6D
554.26
MW-6
MW-7
MW-7D
554.48
MW 4D
554.59
MW 4
SD-2A
MW 3
MW 3D
554.53
MW-2D
554.53
MW 2
MW1DD
MW 1
MW 1D
554.58

554.30
554.40
554.50
554.60
554.70
554.80
554.90
555.00
555.10
555.20

"OLD" COOLING WATER OUTFALL
"NEW" COOLING WATER OUTFALL
FORMER WASTE SOLVENT AND WASTE OIL UST
FORMER FRESH OIL UST

EARTH BERM
EARTH BERM
CONRAIL (FORMERLY NEW YORK CENTRAL RAILROAD)

LIGHT WOODS & MARSH
LIGHT WOODS & MARSH

ERDLE PERFORATING
100 PIXLEY INDUSTRIAL PARKWAY
GATES, NEW YORK

GARAGE
CONC. SLAB
ASPHALT PARKING LOT

MW-5
MW-5D
555.28

PIXLEY INDUSTRIAL PARKWAY
TBM S.BONNET BOLT
ELEV. 560.23

LEGEND:

- PHASE II MONITORING WELL
- MONITORING WELL
  - MW1 = Overburden
  - MW1D = Bedrock
- SEDIMENT SAMPLE

0 50 100
SCALE IN FEET

BASE MAP INFORMATION WAS SUPPLIED BY JOSEPH C. LU ENGINEERING AND LAND SURVEYING, P.C.

FILE: \ERDLE\FFS\80186517

0065124599999KKGG

Radian Engineering Inc.

BEDROCK POTENTIOMETRIC SURFACE CONTOUR MAP FEBRUARY 26, 1999 EXTRACTION SYSTEM OPERATING

ERDLE PERFORATING — GATES, NEW YORK

CLIENT: ERDLE PERFORATING		JOB NUMBER: 801865.07	
SCALE: AS SHOWN	FIGURE NUMBER 7		REV 0

APPENDICES

Appendix A: Vapor Phase Analytical Results

MICROSEEPS

University of Pittsburgh Applied Research Center
220 William Pitt Way, Pittsburgh, PA 15238
(412) 826-5245
FAX (412) 826-3433

entered opdata4.xls

Tuesday, December 15, 1998

Gary Beswick
Radian International
Penn Center West
Building III, Suite 300
Pittsburgh, PA 15276

Dear Gary:

Attached is the final data listing for the samples we received on December 2, 1998, your project #801865.06.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Microseeps.

Sincerely,

Linda S. Tibensky
Account Manager

LST/lt

Attachment: 983678 - RAD406

MICROSEEPS, Inc.

220 William Pitt Way, Pittsburgh, PA 15238

Phone: (412) 826-5245 Fax: (412) 826-3433

983678-RAD

CHAIN-OF-CUSTODY RECORD

Company Name: Radian International

Address: Penn Center West Bldg 3 Pittsburgh Pa 15276

Proj. Manager: Gary Beswick

Proj. Location: ERIE Perforating Rochester NY

Proj. Number: 801865.06

Phone # (412) 788-2717 Fax # :

Sampler's signature :

Note: Enter proper letters in Requested Analyses columns below.

Note: If analysis D,E,or K is selected, scratch (option) NOT wanted.

Analysis Options

* A	C1 -C4	G	Chlorinated HC
* B	Hydrogen & Helium	H	BTEX
* C	Permanent Gases (CH4, CO, CO2, N2, O2)	J	BTEX & C5 - C10
D	Mercury (Soil) or (Air **)	K	TPH (C5 - C10) or (C4 -C12)
E	TO-14 by GC/MS (Ambient) or (Source **)	L	C11 - C18
F	601 & 602 Compounds	Other	Specify below.

* An additional 22 ml vial of sample is required when requested in combination with another analysis.

** Available upon request.

Collection Date	Collection Time	Number of Containers	"Summa" # if Can. used	Sample Type	Sample Identification	Requested Analyses					(Other)	Remarks
12-1-98	1785	2			V-1 - 14	F						
12-1-98	1730	2			V-2 - 14	F						
12-1-98	1740	2			V-3 - 14	F						
12-1-98	1720	2			V-4 - 14	F						
					Air							

Results to : Gary Beswick
Radian International Penn Center West Bldg 3 suite 300 Pittsburgh Pa 15276

Invoice to :

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
	Radian International	12-2-98	2:30PM		Microseeps	12/2/98	2:30pm
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY - Laboratory YELLOW COPY - Laboratory PINK COPY - Submitter

MICROSEEPS

RAD406-983678

----- RADIAN INTERNATIONAL -----
----- PROJECT LOC: ERDLE PERFORATING/ROCHESTER, NY -----
----- PROJECT NO: 801865.06 -----
----- 601/602 SCAN -----
----- CONCENTRATIONS IN PPMV -----

COMPOUND NAME	SAMPLE ID V-1-14	SAMPLE ID V-2-14	SAMPLE ID V-3-14	SAMPLE ID V-4-14	LOWER DETECTION LIMITS
CHLOROMETHANE	< 1	< 1	< 1	< 1	1
VINYL CHLORIDE	< 3	< 3	< 3	< 3	3
BROMOMETHANE/CHLOROETHANE*	< 1	< 1	< 1	< 1	1
FLUOROTRICHLOROMETHANE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
1,1 DICHLOROETHYLENE	0.01	0.02	< 0.01	< 0.01	0.01
METHYLENE CHLORIDE	< 2	< 2	< 2	< 2	2
TRANS-1,2 DICHLOROETHYLENE	< 0.1	< 0.1	< 0.1	< 0.1	0.1
1,1 DICHLOROETHANE	0.03	< 0.01	< 0.01	0.04	0.01
CHLOROFORM	< 0.005	< 0.005	< 0.005	< 0.005	0.005
1,1,1 TRICHLOROETHANE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
CARBON TETRACHLORIDE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
BENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
1,2 DICHLOROETHANE	< 0.01	< 0.01	< 0.01	< 0.01	0.01
TRICHLOROETHYLENE	12.551	< 0.005	< 0.005	11.496	0.005
1,2 DICHLOROPROPANE	< 0.01	< 0.01	< 0.01	< 0.01	0.01
BROMODICHLOROMETHANE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
CIS-1,3 DICHLOROPROPYLENE	< 0.01	< 0.01	< 0.01	< 0.01	0.01
TOLUENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
TRANS-1,3 DICHLOROPROPYLENE	< 0.01	< 0.01	< 0.01	< 0.01	0.01
1,1,2 TRICHLOROETHANE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
TETRACHLOROETHYLENE	0.009	< 0.005	< 0.005	0.007	0.005
CHLORODIBROMOMETHANE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
CHLOROBENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
ETHYL BENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
BROMOFORM	< 0.005	< 0.005	< 0.005	< 0.005	0.005
1,1,2,2 TETRACHLOROETHANE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
1,3 DICHLOROBENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
1,4 DICHLOROBENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
1,2 DICHLOROBENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
FILE NAME	B21 118	B21 119	B21 120	B21 121	
DATE SAMPLED	12/01/98	12/01/98	12/01/98	12/01/98	
DATE RECEIVED	12/02/98	12/02/98	12/02/98	12/02/98	
DATE ANALYZED	12/02/98	12/02/98	12/02/98	12/02/98	

* COMPOUNDS ELUTE TOGETHER ON ECD: VALUES REPRESENT EITHER OR A COMBINATION OF BOTH.

05-Dec-98

ANALYST INITIALS

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MICROSEEPS

RAD406-983678

**** QUALITY CONTROL ****

----- RADIAN INTERNATIONAL -----
----- PROJECT LOC: ERDLE PERFORATING/ROCHESTER, NY -----
----- PROJECT NO: 801865.06 -----
----- 601/602 SCAN -----
----- CONCENTRATIONS IN PPMV -----

CONTINUING CALIBRATION CHECK

STANDARDS:"624"(LEVEL 3), "624"(LEVEL 2), "624"(LEVEL 1), "VC-996", "MS21"(LEVEL 4)
REFERENCE: B21AB105, B21A/AB106, B21AB107, B21A103, B21A/AB104

COMPOUND	KNOWN	RESULT	PERCENT DIFFERENCE
CHLOROMETHANE	20.1	21.0	4.58
VINYL CHLORIDE	1000.0	1022.8	2.28
BROMOMETHANE/CHLOROETHANE*	2.7	2.6	3.70
FLUOROTRICHLOROMETHANE	0.077	0.075	2.60
1,1 DICHLOROETHYLENE	1.09	1.03	5.07
METHYLENE CHLORIDE	1.24	1.19	3.88
TRANS-1,2 DICHLOROETHYLENE	1.09	1.04	4.15
1,1 DICHLOROETHANE	1.06	1.01	4.99
CHLOROFORM	0.881	0.843	4.31
1,1,1 TRICHLOROETHANE	0.788	0.780	1.02
CARBON TETRACHLORIDE	0.684	0.665	2.78
BENZENE	1.25	1.29	3.20
1,2 DICHLOROETHANE	1.06	0.96	9.31
TRICHLOROETHYLENE	0.800	0.768	4.00
1,2 DICHLOROPROPANE	0.93	0.92	1.18
BROMODICHLOROMETHANE	0.642	0.619	3.58
CIS-1,3 DICHLOROPROPYLENE	0.95	0.93	1.90
TOLUENE	1.14	1.07	6.22
TRANS-1,3 DICHLOROPROPYLENE	0.95	0.92	2.95
1,1,2 TRICHLOROETHANE	0.788	0.766	2.79
TETRACHLOROETHYLENE	0.634	0.608	4.10
CHLORODIBROMOMETHANE	0.505	0.492	2.57
CHLOROBENZENE	0.93	0.89	4.71
ETHYL BENZENE	0.99	0.98	1.01
BROMOFORM	0.416	0.408	1.92
1,1,2,2 TETRACHLOROETHANE	0.626	0.601	3.99
1,3 DICHLOROBENZENE	0.72	0.69	3.50
1,4 DICHLOROBENZENE	0.72	0.71	0.70
1,2 DICHLOROBENZENE	0.72	0.68	4.90

* COMPOUNDS ELUTE TOGETHER ON ECD - VALUES REPRESENT EITHER OR A COMBINATION OF BOTH.

05-Dec-98

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RAD406-983678

**** QUALITY CONTROL ****

----- RADIAN INTERNATIONAL -----
----- PROJECT LOC: ERDLE PERFORATING/ROCHESTER, NY -----
----- PROJECT NO: 801865.06 -----
----- 601/602 SCAN -----
----- CONCENTRATIONS IN PPMV -----

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
REFERENCE: B21A/AB117

COMPOUND	BLANK	LOWER DETECTION LIMIT
CHLOROMETHANE	ND	1
VINYL CHLORIDE	ND	3
BROMOMETHANE/CHLOROETHANE*	ND	1
FLUOROTRICHLOROMETHANE	ND	0.005
1,1 DICHLOROETHYLENE	ND	0.01
METHYLENE CHLORIDE	ND	2
TRANS-1,2 DICHLOROETHYLENE	ND	0.10
1,1 DICHLOROETHANE	ND	0.01
CHLOROFORM	ND	0.005
1,1,1 TRICHLOROETHANE	ND	0.005
CARBON TETRACHLORIDE	ND	0.005
BENZENE	ND	0.07
1,2 DICHLOROETHANE	ND	0.01
TRICHLOROETHYLENE	ND	0.005
1,2 DICHLOROPROPANE	ND	0.01
BROMODICHLOROMETHANE	ND	0.005
CIS-1,3 DICHLOROPROPYLENE	ND	0.01
TOLUENE	ND	0.07
TRANS-1,3 DICHLOROPROPYLENE	ND	0.01
1,1,2 TRICHLOROETHANE	ND	0.005
TETRACHLOROETHYLENE	ND	0.005
CHLORODIBROMOMETHANE	ND	0.005
CHLOROBENZENE	ND	0.07
ETHYL BENZENE	ND	0.07
BROMOFORM	ND	0.005
1,1,2,2 TETRACHLOROETHANE	ND	0.005
1,3 DICHLOROBENZENE	ND	0.07
1,4 DICHLOROBENZENE	ND	0.07
1,2 DICHLOROBENZENE	ND	0.07

* COMPOUNDS ELUTE TOGETHER ON ECD - VALUES REPRESENT EITHER OR A COMBINATION OF BOTH.

05-Dec-98

ANALYST INITIALS

REVIEW

MICROSEEPS

University of Pittsburgh Applied Research Center
220 William Pitt Way, Pittsburgh, PA 15238
(412) 826-5245
FAX (412) 826-3433

February 3, 1999

Mr. Gary Beswick
Radian International LLC
Penn Center West, Building III
Suite 300
Pittsburgh, PA 15276

Dear Mr. Beswick:

Attached is the final data listing for the samples we received on January 28, 1999, your project #801865.03.

Please give me call if you have questions or I can be of further assistance. Thank you for using MICROSEEPS.

Sincerely,

Rebecca J. Hans

Rebecca J. Hans

RJH/lsp

Attachment: RAD425-992129

MICROSEEPS

RAD425-992129

----- RADIAN INTERNATIONAL LLC ----
----- PROJECT LOC: ERDLE PERFORATING -----
----- PROJECT NO: 801865.03 -----
----- 601/602 SCAN -----
----- CONCENTRATIONS IN PPMV -----

COMPOUND NAME	SAMPLE ID V-1-15	SAMPLE ID V-2-15	SAMPLE ID V-3-15	SAMPLE ID V-4-15	LDLs
CHLOROMETHANE	<1	<1	<1	<1	1
VINYL CHLORIDE	<3	<3	<3	<3	3
BROMOMETHANE/CHLOROETHANE*	<1	<1	<1	<1	1
FLUOROTRICHLOROMETHANE	<.005	<.005	<.005	<.005	0.005
1,1 DICHLOROETHYLENE	0.03	0.06	<.01	0.03	0.01
METHYLENE CHLORIDE	<2	<2	<2	<2	2
TRANS-1,2 DICHLOROETHYLENE	<.1	0.2	<.1	<.1	0.1
1,1 DICHLOROETHANE	0.07	0.05	<.01	0.05	0.01
CHLOROFORM	<.005	<.005	<.005	<.005	0.005
1,1,1 TRICHLOROETHANE	0.007	<.005	<.005	0.008	0.005
CARBON TETRACHLORIDE	<.005	<.005	<.005	<.005	0.005
BENZENE	<.07	<.07	<.07	<.07	0.07
1,2 DICHLOROETHANE	<.01	<.01	<.01	<.01	0.01
TRICHLOROETHYLENE	14.563	0.086	<.005	15.495	0.005
1,2 DICHLOROPROPANE	<.01	<.01	<.01	<.01	0.01
BROMODICHLOROMETHANE	<.005	<.005	<.005	<.005	0.005
CIS-1,3 DICHLOROPROPYLENE	<.01	<.01	<.01	<.01	0.01
TOLUENE	<.07	<.07	<.07	<.07	0.07
TRANS-1,3 DICHLOROPROPYLENE	<.01	<.01	<.01	<.01	0.01
1,1,2 TRICHLOROETHANE	<.005	<.005	<.005	<.005	0.005
TETRACHLOROETHYLENE	0.011	<.005	<.005	0.014	0.005
CHLORODIBROMOMETHANE	<.005	<.005	<.005	<.005	0.005
CHLOROBENZENE	<.07	<.07	<.07	<.07	0.07
ETHYL BENZENE	<.07	<.07	<.07	<.07	0.07
BROMOFORM	<.005	<.005	<.005	<.005	0.005
1,1,2,2 TETRACHLOROETHANE	<.005	<.005	<.005	<.005	0.005
1,3 DICHLOROBENZENE	<.07	<.07	<.07	<.07	0.07
1,4 DICHLOROBENZENE	<.07	<.07	<.07	<.07	0.07
1,2 DICHLOROBENZENE	<.07	<.07	<.07	<.07	0.07
FILE NAME	W88 228	W88 229	W88 230	W88 231	
DATE SAMPLED	01/27/99	01/27/99	01/27/99	01/27/99	
DATE RECEIVED	01/28/99	01/28/99	01/28/99	01/28/99	
DATE ANALYZED	01/29/99	01/29/99	01/29/99	01/29/99	

* COMPOUNDS ELUTE TOGETHER ON ECD: VALUES REPRESENT EITHER OR A COMBINATION OF BOTH.

ANALYST INITIALS

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MICROSEEPS

RAD425-992129

**** QUALITY CONTROL ****

----- RADIAN INTERNATIONAL LLC ----
----- PROJECT LOC: ERDLE PERFORATING -----
----- PROJECT NO: 801865.03 -----
----- 601/602 SCAN -----
----- CONCENTRATIONS IN PPMV -----

CONTINUING CALIBRATION CHECK

STANDARDS: "624"(LEVEL 3), "624"(LEVEL 2), "VC-996", "MS21"(R4)
REFERENCE: W88A/B225, W88A/B226, W88A227, W88A224

COMPOUND	KNOWN	RESULT	PERCENT DIFFERENCE
CHLOROMETHANE	2.1	2.2	5.88
VINYL CHLORIDE	1000.0	1013.0	1.28
BROMOMETHANE/CHLOROETHANE*	2.7	2.6	2.08
FLUOROTRICHLOROMETHANE	0.076	0.079	3.80
1,1 DICHLOROETHYLENE	1.09	1.05	3.24
METHYLENE CHLORIDE	1.24	1.26	1.43
TRANS-1,2 DICHLOROETHYLENE	1.09	1.05	3.04
1,1 DICHLOROETHANE	1.06	1.05	1.14
CHLOROFORM	0.881	0.874	0.80
1,1,1 TRICHLOROETHANE	0.788	0.782	0.77
CARBON TETRACHLORIDE	0.680	0.768	11.46
BENZENE	1.25	1.18	5.93
1,2 DICHLOROETHANE	1.06	0.97	9.36
TRICHLOROETHYLENE	0.800	0.788	1.52
1,2 DICHLOROPROPANE	0.93	0.83	12.05
BROMODICHLOROMETHANE	0.642	0.658	2.43
CIS-1,3 DICHLOROPROPYLENE	0.95	0.96	1.25
TOLUENE	1.14	1.05	8.77
TRANS-1,3 DICHLOROPROPYLENE	0.95	0.96	1.25
1,1,2 TRICHLOROETHANE	0.788	0.757	4.10
TETRACHLOROETHYLENE	0.630	0.630	0.00
CHLORODIBROMOMETHANE	0.505	0.53	4.72
CHLOROBENZENE	0.93	0.90	3.78
ETHYL BENZENE	0.99	0.96	3.02
BROMOFORM	0.416	0.445	6.52
1,1,2,2 TETRACHLOROETHANE	0.626	0.628	0.32
1,3 DICHLOROBENZENE	0.72	0.72	0.56
1,4 DICHLOROBENZENE	0.72	0.72	0.00
1,2 DICHLOROBENZENE	0.72	0.72	0.84

* COMPOUNDS ELUTE TOGETHER ON ECD: VALUES REPRESENT EITHER OR A COMBINATION OF BOTH.

02-Feb-99

ANALYST INITIALS

REVIEW

MICROSEEPS

RAD425-992129

**** QUALITY CONTROL ****

----- RADIAN INTERNATIONAL LLC ----
----- PROJECT LOC: ERDLE PERFORATING -----
----- PROJECT NO: 801865.03 -----
----- 601/602 SCAN -----
----- CONCENTRATIONS IN PPMV -----

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
REFERENCE: W88A/B223

COMPOUND	BLANK	LOWER DETECTION LIMIT
CHLOROMETHANE	ND	1.0
VINYL CHLORIDE	ND	3.0
BROMOMETHANE/CHLOROETHANE*	ND	1.0
FLUOROTRICHLOROMETHANE	ND	0.005
1,1 DICHLOROETHYLENE	ND	0.01
METHYLENE CHLORIDE	ND	2.0
TRANS-1,2 DICHLOROETHYLENE	ND	0.10
1,1 DICHLOROETHANE	ND	0.01
CHLOROFORM	ND	0.005
1,1,1 TRICHLOROETHANE	ND	0.005
CARBON TETRACHLORIDE	ND	0.005
BENZENE	ND	0.07
1,2 DICHLOROETHANE	ND	0.01
TRICHLOROETHYLENE	ND	0.005
1,2 DICHLOROPROPANE	ND	0.01
BROMODICHLOROMETHANE	ND	0.005
CIS-1,3 DICHLOROPROPYLENE	ND	0.01
TOLUENE	ND	0.07
TRANS-1,3 DICHLOROPROPYLENE	ND	0.01
1,1,2 TRICHLOROETHANE	ND	0.005
TETRACHLOROETHYLENE	ND	0.005
CHLORODIBROMOMETHANE	ND	0.005
CHLOROBENZENE	ND	0.07
ETHYL BENZENE	ND	0.07
BROMOFORM	ND	0.005
1,1,2,2 TETRACHLOROETHANE	ND	0.005
1,3 DICHLOROBENZENE	ND	0.07
1,4 DICHLOROBENZENE	ND	0.07
1,2 DICHLOROBENZENE	ND	0.07

* COMPOUNDS ELUTE TOGETHER ON ECD - VALUES REPRESENT EITHER OR A COMBINATION OF BOTH.

02-Feb-99

ANALYST INITIALS

REVIEW

MICROSEEPS, Inc.

220 William Pitt Way, Pittsburgh, PA 15238

Phone: (412) 826-5245 Fax: (412) 826-3433

992129-RAD425

CHAIN-OF-CUSTODY RECORD

Company Name: Radian International LLC

Address: Penn Center West Bldg 3 Suite 300 Pitts Pa 15276

Proj. Manager: Gary Beswick

Proj. Location: ERDLE Perforating

Proj. Number: 801865.03

Phone # : (412) 788-2717 Fax # :

Sampler's signature :

Note: Enter proper letters in Requested Analyses columns below.

Analysis Options Note: If analysis D,E,or K is selected, scratch (option) NOT wanted.

* A	C1 -C4	G	Chlorinated HC
* B	Hydrogen & Helium	H	BTEX
* C	Permanent Gases (CH4, CO, CO2, N2, O2)	J	BTEX & C5 - C10
D	Mercury (Soil) or (Air **)	K	TPH (C5 - C10) or (C4 -C12)
E	TO-14 by GC/MS (Ambient) or (Source **)	L	C11 - C18
F	601 & 602 Compounds	Other	Specify below.

* An additional 22 ml vial of sample is required when requested in combination with another analysis.

** Available upon request.

Collection Date	Collection Time	Number of Containers	"Summa" # if Can. used	Sample Type	Sample Identification	Requested Analyses					(Other)	Remarks
1-27-99	1240	2		grab	V-1-15	F						
1-27-99	1245	2		grab	V-2-15	F						
1-27-99	1250	2		grab	V-3-15	F						
1-27-99	1255	2		grab	V-4-15							
					AIR							

Results to :

Invoice to :

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
[signature]	Radian	1-28-99	1540	[signature]	MICROSEEPS	1-28-99	340 pm
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

MICROSEEPS

University of Pittsburgh Applied Research Center
220 William Pitt Way, Pittsburgh, PA 15238
(412) 826-5245
FAX (412) 826-3433

Tuesday, March 09, 1999

Mr. Keith Dodrill
Radian International LLC
Penn Center West
Bldg 3, Suite 300
Pittsburgh, PA 15276

Dear Mr. Dodril:

Attached is the final data listing for the samples we received on February 26, 1999 for your project #801865.06 and Work Order #752227.UA.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Microseeps.

Sincerely,

Linda S. Tibensky
Account Manager

LST/lt

Attachment: 992288/RAD430

RAD430-992288

----- RADIAN INTERNATIONAL -----
----- PROJECT LOC: ROCHESTER, NY -----
----- PROJECT: ERDLE PERFORATING -----
----- 601/602 SCAN -----
----- CONCENTRATIONS IN PPMV -----

COMPOUND NAME	SAMPLE ID V-1	SAMPLE ID V-2	SAMPLE ID V-3	SAMPLE ID V-4	LDLs
CHLOROMETHANE	< 1	< 1	< 1	< 1	1
VINYL CHLORIDE	< 3	< 3	< 3	< 3	3
BROMOMETHANE/CHLOROETHANE*	< 1	< 1	< 1	< 1	1
FLUOROTRICHLOROMETHANE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
1,1 DICHLOROETHYLENE	0.01	0.03	0.08	0.01	0.01
METHYLENE CHLORIDE	< 2	< 2	< 2	< 2	2
TRANS-1,2 DICHLOROETHYLENE	< 0.1	0.4	< 0.1	< 0.1	0.1
1,1 DICHLOROETHANE	0.03	0.09	0.02	0.03	0.01
CHLOROFORM	< 0.005	< 0.005	< 0.005	< 0.005	0.005
1,1,1 TRICHLOROETHANE	0.005	0.012	< 0.005	0.005	0.005
CARBON TETRACHLORIDE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
BENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
1,2 DICHLOROETHANE	< 0.01	< 0.01	< 0.01	< 0.01	0.01
TRICHLOROETHYLENE	11.416	4.009	0.005	11.921	0.005
1,2 DICHLOROPROPANE	< 0.01	< 0.01	< 0.01	< 0.01	0.01
BROMODICHLOROMETHANE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
CIS-1,3 DICHLOROPROPYLENE	< 0.01	< 0.01	< 0.01	< 0.01	0.01
TOLUENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
TRANS-1,3 DICHLOROPROPYLENE	< 0.01	< 0.01	< 0.01	< 0.01	0.01
1,1,2 TRICHLOROETHANE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
TETRACHLOROETHYLENE	0.011	0.007	< 0.005	0.012	0.005
CHLORODIBROMOMETHANE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
CHLOROBENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
ETHYL BENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
BROMOFORM	< 0.005	< 0.005	< 0.005	< 0.005	0.005
1,1,2,2 TETRACHLOROETHANE	< 0.005	< 0.005	< 0.005	< 0.005	0.005
1,3 DICHLOROBENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
1,4 DICHLOROBENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
1,2 DICHLOROBENZENE	< 0.07	< 0.07	< 0.07	< 0.07	0.07
FILE NAME	B22 296	B22 297	B22 298	B22 299	
DATE SAMPLED	02/26/99	02/26/99	02/26/99	02/26/99	
DATE RECEIVED	02/26/99	02/26/99	02/26/99	02/26/99	
DATE ANALYZED	02/26/99	02/26/99	02/26/99	02/26/99	

* COMPOUNDS ELUTE TOGETHER ON ECD: VALUES REPRESENT EITHER OR A COMBINATION OF BOTH.

05-Mar-99

ANALYST INITIALS nlb.

REVIEW BC

MICROSEEPS

RAD430-992288

**** QUALITY CONTROL ****

----- RADIAN INTERNATIONAL -----
----- PROJECT LOC: ROCHESTER, NY -----
----- PROJECT: ERDLE PERFORATING -----
----- 601/602 SCAN -----
----- CONCENTRATIONS IN PPMV -----

CONTINUING CALIBRATION CHECK

STANDARDS:"624"(LEVEL 3), "624"(LEVEL 2), "624"(LEVEL 1), "VC-996", "MS21" (LEVEL 4)
REFERENCE: B22AB287, B22A/AB288, B22AB289, B22A285, B22A291

COMPOUND	KNOWN	RESULT	PERCENT DIFFERENCE
CHLOROMETHANE	20.8	20.6	0.96
VINYL CHLORIDE	1000.0	932.2	6.78
BROMOMETHANE/CHLOROETHANE*	2.7	2.6	3.70
FLUOROTRICHLOROMETHANE	0.077	0.073	5.19
1,1 DICHLOROETHYLENE	1.09	1.04	4.59
METHYLENE CHLORIDE	1.34	1.18	11.94
TRANS-1,2 DICHLOROETHYLENE	1.09	1.04	4.59
1,1 DICHLOROETHANE	1.06	1.01	4.72
CHLOROFORM	0.881	0.841	4.54
1,1,1 TRICHLOROETHANE	0.788	0.754	4.31
CARBON TETRACHLORIDE	0.684	0.650	4.97
BENZENE	1.25	1.30	4.00
1,2 DICHLOROETHANE	1.06	1.03	2.83
TRICHLOROETHYLENE	0.800	0.766	4.25
1,2 DICHLOROPROPANE	0.93	0.91	2.15
BROMODICHLOROMETHANE	0.642	0.612	4.67
CIS-1,3 DICHLOROPROPYLENE	0.95	0.89	6.32
TOLUENE	1.14	1.11	2.63
TRANS-1,3 DICHLOROPROPYLENE	0.95	0.92	3.16
1,1,2 TRICHLOROETHANE	0.788	0.758	3.81
TETRACHLOROETHYLENE	0.634	0.607	4.26
CHLORODIBROMOMETHANE	0.505	0.485	3.96
CHLOROBENZENE	0.93	0.90	3.23
ETHYL BENZENE	0.99	0.95	4.04
BROMOFORM	0.416	0.402	3.37
1,1,2,2 TETRACHLOROETHANE	0.626	0.605	3.35
1,3 DICHLOROBENZENE	0.72	0.71	1.39
1,4 DICHLOROBENZENE	0.72	0.71	1.39
1,2 DICHLOROBENZENE	0.72	0.71	1.39

* COMPOUNDS ELUTE TOGETHER ON ECD - VALUES REPRESENT EITHER OR A COMBINATION OF BOTH.

05-Mar-99

ANALYST INITIALS 

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RAD430-992288

**** QUALITY CONTROL ****

----- RADIAN INTERNATIONAL -----
----- PROJECT LOC: ROCHESTER, NY -----
----- PROJECT: ERDLE PERFORATING -----
----- 601/602 SCAN -----
----- CONCENTRATIONS IN PPMV -----

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
REFERENCE: B22A/AB295

COMPOUND	BLANK	LOWER DETECTION LIMIT
CHLOROMETHANE	ND	1
VINYL CHLORIDE	ND	3
BROMOMETHANE/CHLOROETHANE*	ND	1
FLUOROTRICHLOROMETHANE	ND	0.005
1,1 DICHLOROETHYLENE	ND	0.01
METHYLENE CHLORIDE	ND	2
TRANS-1,2 DICHLOROETHYLENE	ND	0.1
1,1 DICHLOROETHANE	ND	0.01
CHLOROFORM	ND	0.005
1,1,1 TRICHLOROETHANE	ND	0.005
CARBON TETRACHLORIDE	ND	0.005
BENZENE	ND	0.07
1,2 DICHLOROETHANE	ND	0.01
TRICHLOROETHYLENE	ND	0.005
1,2 DICHLOROPROPANE	ND	0.01
BROMODICHLOROMETHANE	ND	0.005
CIS-1,3 DICHLOROPROPYLENE	ND	0.01
TOLUENE	ND	0.07
TRANS-1,3 DICHLOROPROPYLENE	ND	0.01
1,1,2 TRICHLOROETHANE	ND	0.005
TETRACHLOROETHYLENE	ND	0.005
CHLORODIBROMOMETHANE	ND	0.005
CHLOROBENZENE	ND	0.07
ETHYL BENZENE	ND	0.07
BROMOFORM	ND	0.005
1,1,2,2 TETRACHLOROETHANE	ND	0.005
1,3 DICHLOROBENZENE	ND	0.07
1,4 DICHLOROBENZENE	ND	0.07
1,2 DICHLOROBENZENE	ND	0.07

* COMPOUNDS ELUTE TOGETHER ON ECD - VALUES REPRESENT EITHER OR A COMBINATION OF BOTH.

05-Mar-99

ANALYST INITIALS

REVIEW

992288- A 430

MICROSEEPS, Inc.

220 William Pitt Way, Pittsburgh, PA 15238

Phone: (412) 826-5245 Fax: (412) 826-3433

CHAIN-OF-CUSTODY RECORD

Company Name: Radian International

Address: Penn Center West Bldg 3 Suite 300 Pittsburgh, Pa 15276

Proj. Manager: Keith Dodrill

Proj. Location: ERDLE Perforating Rochester NY

Proj. Number: 60165.06

Phone #: (412) 788-2717 Fax #: (412) 788-1316

Sampler's signature:

Note: Enter proper letters in Requested Analyses columns below.

Analysis Options

Note: If analysis D,E,or K is selected, scratch (option) NOT wanted.

* A	C1 -C4	G	Chlorinated HC
* B	Hydrogen & Helium	H	BTEX
* C	Permanent Gases (CH4, CO, CO2, N2, O2)	J	BTEX & C5 - C10
D	Mercury (Soil) or (Air **)	K	TPH (C5 - C10) or (C4 -C12)
E	TO-14 by GC/MS (Ambient) or (Source **)	L	C11 - C18
F	601 & 602 Compounds	Other	Specify below.

* An additional 22 ml vial of sample is required when requested in combination with another analysis.

** Available upon request.

Collection Date	Collection Time	Number of Containers	"Summa" # if Can. used	Sample Type	Sample Identification	Requested Analyses					(Other)	Remarks
2-26-99	0720	2		Air	V-1	F						
2-26-99	0723	2		Air	V-2	F						
2-26-99	0728	2		Air	V-3	F						
2-26-99	0735	2		Air	V-4	F						

Results to : Keith Dodrill Radian International Penn Center West Bldg 3 Suite 300 Pittsburgh Pa 15220

Invoice to :

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
	Radian	2-26-99	1445			2-26-99	1445
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

YELLOW COPY - Laboratory PINK COPY - Submitter

Appendix B: Liquid Phase Analytical Results

Committed To *Your* Success

January 12, 1999

Severn Trent Laboratories
10 Hazelwood Drive
Amherst, NY 14228

Tel: (716) 691-2600
Fax: (716) 691-7991
www.stl-inc.com

Mr. Gary Beswick
Penn Center West
Building 3
Pittsburgh, PA 15276

RE: Analytical Results

Dear Mr. Beswick:

Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #:	NY95-008
Project Name:	Erdle Perforating
Matrix:	Water
Samples Received:	12/02/98
Sample Date:	12/01/98

If you have any questions concerning this data, please contact Ms. Candace L. Fox, Program Manager, at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Radian Corporation with environmental testing services. We look forward to serving you in the future.

Sincerely,

SEVERN TRENT LABORATORIES, INC.

C. Fox

Candace L. Fox
Program Manager

Kenneth E. Kasperek
Laboratory Director

CLF/KEK/ltb
Enclosure

I.D.#A98-5647
#NY5A5205

This report contains 257 pages, which are individually numbered.

SAMPLE DATA SUMMARY PACKAGE

Committed To *Your* Success

CASE NARRATIVE

Laboratory Name: Severn Trent Laboratories, Inc.

Laboratory Code: RECNY

Contract Number: NY95-008

Sample Identifications:
W-1-14
W-2-14
W-3-14
W-4-14
TRIP BLANK

METHODOLOGY

The specific methodology employed in obtaining the enclosed analytical results are indicated on the specific data tables. The method numbers presented refer to the following U.S. Environmental Protection Agency reference:

- U.S. Environmental Protection Agency "Test Methods for Evaluating Solid Waste-Physical/Chemical Methods." Office of Solid Waste and Emergency Response. September 1994, SW-846, Third Edition.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing data qualifiers (Q) as defined on the Organic Data Comment Page.

METHOD 8010/8020 DATA

Sample W-1-14 was analyzed at a dilution of twenty due to high concentrations of target compounds.

Sample W-4-14 was analyzed at a dilution of ten due to high concentrations of target compounds.

The Continuing Calibration Verification acquired on 12/12/98 @ 07:36 yielded a recovery for Bromomethane which was outside of the method Q-range. Bromomethane was not detected in any associated field samples.

Committed To *Your* Success

" I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature."

Kenneth E. Kasperek
Laboratory Director

11/2/99
Date

ORGANIC DATA COMMENT PAGE

Laboratory Name: SEVERN TRENT LABORATORIES INC.

USEPA Defined Organic Data Qualifiers:

U	-	Indicates compound was analyzed for but not detected.
J	-	Indicates an estimate value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	-	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	-	This flag is used when the analyte is found in the associated blank as well as in the sample.
E	-	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
D	-	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
T	-	This flag is used when the analyte is found in the associated TCLP extraction blank as well as in the sample.
N	-	Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.
P	-	This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
A	-	This flag indicates that a TIC is a suspected aldol-condensation product.

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No: W-1-14

Lab Name: Recra LabNet Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A8564701

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3B07142.TX0

Level: (low/med) Low Date Samp/Recv: 12/01/98 12/02/9

% Moisture: not dec. _____ Date Analyzed: 12/09/98

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 20.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	4.0	U
75-25-2	Bromoform	20	U
74-83-9	Bromomethane	20	U
56-23-5	Carbon Tetrachloride	4.0	U
108-90-7	Chlorobenzene	8.0	U
75-00-3	Chloroethane	20	U
110-75-8	2-Chloroethylvinyl ether	10	U
67-66-3	Chloroform	4.0	U
74-87-3	Chloromethane	10	U
124-48-1	Dibromochloromethane	4.0	U
95-50-1	1,2-Dichlorobenzene	8.0	U
541-73-1	1,3-Dichlorobenzene	8.0	U
106-46-7	1,4-Dichlorobenzene	8.0	U
75-34-3	1,1-Dichloroethane	4.0	U
107-06-2	1,2-Dichloroethane	4.0	U
75-35-4	1,1-Dichloroethene	4.0	U
156-60-5	trans-1,2-Dichloroethene	4.0	U
78-87-5	1,2-Dichloropropane	4.0	U
10061-01-5	cis-1,3-Dichloropropene	4.0	U
10061-02-6	trans-1,3-Dichloropropene	4.0	U
75-09-2	Methylene chloride	12	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U
127-18-4	Tetrachloroethene	4.0	U
71-55-6	1,1,1-Trichloroethane	4.0	U
79-00-5	1,1,2-Trichloroethane	4.0	U
79-01-6	Trichloroethene	220	
75-69-4	Trichlorofluoromethane	20	U
75-01-4	Vinyl chloride	4.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000006

Client No

W-1-14

Lab Name: Recra LabNet Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A8564701

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3A07142.TX0

Level: (low/med) Low Date Samp/Recv: 12/01/98 12/02/9

% Moisture: not dec. _____ Date Analyzed: 12/09/98

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 20.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	4.0	U
108-90-7	Chlorobenzene	4.0	U
95-50-1	1,2-Dichlorobenzene	8.0	U
541-73-1	1,3-Dichlorobenzene	8.0	U
106-46-7	1,4-Dichlorobenzene	8.0	U
100-41-4	Ethylbenzene	4.0	U
108-88-3	Toluene	4.0	U
108-38-3	m-Xylene	4.0	U
95-47-6	o-Xylene	4.0	U
106-42-3	p-Xylene	4.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000007

Client No.

W-2-14

Lab Name: Recra LabNet Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A8564702

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3B07141.TX0

Level: (low/med) Low Date Samp/Recv: 12/01/98 12/02/98

% Moisture: not dec. _____ Date Analyzed: 12/09/98

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
10-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	6.2	
75-69-4	Trichlorofluoromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000008

Client No

W-2-14

Lab Name: Recra LabNet Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A8564702

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3A07141.TX0

Level: (low/med) Low Date Samp/Recv: 12/01/98 12/02/98

% Moisture: not dec. _____ Date Analyzed: 12/09/98

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No: W-3-14

Lab Name: Recra LabNet Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A8564703

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3B07208.TX0

Level: (low/med) Low Date Samp/Recv: 12/01/98 12/02/9

% Moisture: not dec. _____ Date Analyzed: 12/12/98

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	0.20	U
75-69-4	Trichlorofluoromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.: W-3-14

Lab Name: Recra LabNet Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A8564703

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3A07208.TX0

Level: (low/med) Low Date Samp/Recv: 12/01/98 12/02/98

% Moisture: not dec. _____ Date Analyzed: 12/12/98

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000011

Client No.

W-4-14

Lab Name: Recra LabNet Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A8564704

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3B07155.TX0

Level: (low/med) Low Date Samp/Recv: 12/01/98 12/02/98

% Moisture: not dec. _____ Date Analyzed: 12/10/98

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 10.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	2.0	U
75-25-2	Bromoform	10	U
74-83-9	Bromomethane	10	U
56-23-5	Carbon Tetrachloride	2.0	U
108-90-7	Chlorobenzene	4.0	U
75-00-3	Chloroethane	10	U
110-75-8	2-Chloroethylvinyl ether	5.0	U
67-66-3	Chloroform	2.0	U
74-87-3	Chloromethane	5.0	U
124-48-1	Dibromochloromethane	2.0	U
95-50-1	1,2-Dichlorobenzene	4.0	U
541-73-1	1,3-Dichlorobenzene	4.0	U
106-46-7	1,4-Dichlorobenzene	4.0	U
75-34-3	1,1-Dichloroethane	2.0	U
107-06-2	1,2-Dichloroethane	2.0	U
75-35-4	1,1-Dichloroethene	2.0	U
156-60-5	trans-1,2-Dichloroethene	11	
78-87-5	1,2-Dichloropropane	2.0	U
10061-01-5	cis-1,3-Dichloropropene	2.0	U
10061-02-6	trans-1,3-Dichloropropene	2.0	U
75-09-2	Methylene chloride	2.0	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U
127-18-4	Tetrachloroethene	2.0	U
71-55-6	1,1,1-Trichloroethane	2.0	U
79-00-5	1,1,2-Trichloroethane	2.0	U
79-01-6	Trichloroethene	190	
75-69-4	Trichlorofluoromethane	10	U
75-01-4	Vinyl chloride	11	

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000012

Client No.

W-4-14

Lab Name: Recra LabNet Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A8564704

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3A07155.TX0

Level: (low/med) Low Date Samp/Recv: 12/01/98 12/02/98

% Moisture: not dec. _____ Date Analyzed: 12/10/98

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 10.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	2.0	U
108-90-7	Chlorobenzene	2.0	U
95-50-1	1,2-Dichlorobenzene	4.0	U
541-73-1	1,3-Dichlorobenzene	4.0	U
106-46-7	1,4-Dichlorobenzene	4.0	U
100-41-4	Ethylbenzene	2.0	U
108-88-3	Toluene	2.0	U
108-38-3	m-Xylene	2.0	U
95-47-6	o-Xylene	2.0	U
106-42-3	p-Xylene	2.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

C00013

Client No.

TRIP BLANK

Lab Name: Recra LabNet Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A8564705

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3B07138.TX0

Level: (low/med) Low Date Samp/Recv: 12/01/98 12/02/98

% Moisture: not dec. _____ Date Analyzed: 12/09/98

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	0.20	U
75-69-4	Trichlorofluoromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000014

Client No

TRIP BLANK

Lab Name: Recra LabNet Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A8564705

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3A07138.TX0

Level: (low/med) Low Date Samp/Recv: 12/01/98 12/02/98

% Moisture: not dec. _____ Date Analyzed: 12/09/98

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

NY5A5205/1

RECRA LABNET, a division of Recra Environmental, Inc. — CHAIN OF CUSTODY RECORD

PROJECT NO: 801865.06
SITE NAME: ERDLE Perforating
SAMPLERS (SIGNATURE): [signature]

STATION NO	DATE	TIME	COMP	GRAB	STATION LOCATION	NO OF CONTAINERS	~~8021~~	8010	8020				REMARKS
	12/1	1530		✓	W-1-14	4		2	2				
	12/1	1540		✓	W-2-14	4		2	2				
	12/1	1550		✓	W-3-14	4		2	2				
	12/1	1535		✓	W-4-14	4		2	2				
	12/1	–		–	Trip Blank	2		1	1				
						(18)							

RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)
[signature]	12-1-98 1600	Fed-x			
RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)

RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE/TIME	REMARKS
		[signature]	12/02/98 0930	Cooler @ 5°C

Distribution: Original accompanies shipment copy to coordinator field files

000049

Committed To *Your* Success

Severn Trent Laboratories
10 Hazelwood Drive
Amherst, NY 14228

Tel: (716) 691-2600
Fax: (716) 691-7991
www.stl-inc.com

February 18, 1999

Mr. Gary Beswick
Penn Center West
Building 3
Pittsburgh, PA 15276

RE: Analytical Results

Dear Mr. Beswick:

Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY95-008
Project Name: Erdle Perforating
Matrix: Water
Samples Received: 01/28/99
Sample Date: 01/27/99

If you have any questions concerning this data, please contact Ms. Candace L. Fox, Program Manager, at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Radian Corporation with environmental testing services. We look forward to serving you in the future.

Sincerely,

SEVERN TRENT LABORATORIES

Candace L. Fox
Program Manager

Susan Tinsmith
Laboratory Manager

CLF/ST/dms
Enclosure

I.D. #A99-0404
#NY5A5205

This report contains 172 pages, which are individually numbered.

SAMPLE DATA SUMMARY PACKAGE

STL
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CASE NARRATIVE

Laboratory Name: Severn Trent Laboratories

Laboratory Code: STL Buffalo

Contract Number: NY95-008

Sample Identifications:
TRIP BLANK
W-1-15
W-2-15
W-3-15
W-4-15

METHODOLOGY

The specific methodology employed in obtaining the enclosed analytical results are indicated on the specific data tables. The method numbers presented refer to the following U.S. Environmental Protection Agency reference:

- U.S. Environmental Protection Agency "Test Methods for Evaluating Solid Waste-Physical/Chemical Methods." Office of Solid Waste and Emergency Response. September 1994, SW-846, Third Edition.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing data qualifiers (Q) as defined on the Organic Data Comment Page.

Results were sent on February 17, 1999 via facsimile to Mr. Keith Dodrill by Mr. Kenneth Kasperek.

METHOD 8020/8010 DATA

Samples W-1-15 and W-4-15 were analyzed at an initial dilution factor of 40 due to the high concentration of Trichloroethene.

Chromographically, compounds m-Xylene and p-Xylene coelute. When detected, all results should be considered an and/or value. Samples have been flagged with the (1) qualifier where applicable.

STL
Committed To *Your* Success

" I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or her designee, as verified by the following signature."

Susan L Tinsmith

Susan Tinsmith
Laboratory Manager

2/18/99

Date

ORGANIC DATA COMMENT PAGE

Laboratory Name: SEVERN TRENT LABORATORIES INC.

USEPA Defined Organic Data Qualifiers:

U - Indicates compound was analyzed for but not detected.

J - Indicates an estimate value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

T - This flag is used when the analyte is found in the associated TCLP extraction blank as well as in the sample.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

A - This flag indicates that a TIC is a suspected aldol-condensation product.

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.

TRIP BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9040405

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3B08284.TX0

Level: (low/med) Low Date Samp/Recv: 01/27/99 01/28/99

% Moisture: not dec. _____ Date Analyzed: 02/08/99

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
10-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	0.20	U
75-69-4	Trichlorofluoromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000006

Client No.

TRIP BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9040405

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3A08284.TX0

Level: (low/med) Low Date Samp/Recv: 01/27/99 01/28/99

% Moisture: not dec. _____ Date Analyzed: 02/08/99

GC Column: RTX 502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
00-41-4	Ethylbenzene	0.20	U
08-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000007

Client No.

W-1-15

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9040401

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3B08280.TX0

Level: (low/med) Low Date Samp/Recv: 01/27/99 01/28/99

% Moisture: not dec. _____ Date Analyzed: 02/08/99

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 40.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	8.0	U
75-25-2	Bromoform	40	U
74-83-9	Bromomethane	40	U
56-23-5	Carbon Tetrachloride	8.0	U
108-90-7	Chlorobenzene	16	U
75-00-3	Chloroethane	40	U
10-75-8	2-Chloroethylvinyl ether	20	U
67-66-3	Chloroform	8.0	U
74-87-3	Chloromethane	20	U
124-48-1	Dibromochloromethane	8.0	U
95-50-1	1,2-Dichlorobenzene	16	U
541-73-1	1,3-Dichlorobenzene	16	U
106-46-7	1,4-Dichlorobenzene	16	U
75-34-3	1,1-Dichloroethane	8.0	U
107-06-2	1,2-Dichloroethane	8.0	U
75-35-4	1,1-Dichloroethene	8.0	U
156-60-5	trans-1,2-Dichloroethene	8.0	U
78-87-5	1,2-Dichloropropane	8.0	U
10061-01-5	cis-1,3-Dichloropropene	8.0	U
10061-02-6	trans-1,3-Dichloropropene	8.0	U
75-09-2	Methylene chloride	8.0	U
79-34-5	1,1,2,2-Tetrachloroethane	8.0	U
127-18-4	Tetrachloroethene	8.0	U
71-55-6	1,1,1-Trichloroethane	8.0	U
79-00-5	1,1,2-Trichloroethane	8.0	U
79-01-6	Trichloroethene	260	
75-69-4	Trichlorofluoromethane	40	U
75-01-4	Vinyl chloride	8.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000008

Client No.

W-1-15

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9040401

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3A08280.TX0

Level: (low/med) Low Date Samp/Recv: 01/27/99 01/28/99

% Moisture: not dec. _____ Date Analyzed: 02/08/99

GC Column: RTX 502.2 Dia: 0.53 (mm) Dilution Factor: 40.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	8.0	U
108-90-7	Chlorobenzene	8.0	U
95-50-1	1,2-Dichlorobenzene	16	U
541-73-1	1,3-Dichlorobenzene	16	U
106-46-7	1,4-Dichlorobenzene	16	U
100-41-4	Ethylbenzene	8.0	U
108-88-3	Toluene	8.0	U
108-38-3	m-Xylene	8.0	U
95-47-6	o-Xylene	8.0	U
106-42-3	p-Xylene	8.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000009

Client No.

W-2-15

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9040402

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3B08281.TX0

Level: (low/med) Low Date Samp/Recv: 01/27/99 01/28/99

% Moisture: not dec. _____ Date Analyzed: 02/08/99

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.2	
10-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	9.7	
75-69-4	Trichlorofluoromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000010

Client No.

W-2-15

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9040402

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3A08281.TX0

Level: (low/med) Low Date Samp/Recv: 01/27/99 01/28/99

% Moisture: not dec. _____ Date Analyzed: 02/08/99

GC Column: RTX 502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000011
Client No.

W-3-15

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9040403

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3B08282.TX0

Level: (low/med) Low Date Samp/Recv: 01/27/99 01/28/99

% Moisture: not dec. _____ Date Analyzed: 02/08/99

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	0.20	U
75-69-4	Trichlorofluoromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000012

Client No.

W-3-15

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9040403

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3A08282.TX0

Level: (low/med) Low Date Samp/Recv: 01/27/99 01/28/99

% Moisture: not dec. _____ Date Analyzed: 02/08/99

GC Column: RTX 502.2 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000013

Client No.

W-4-15

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9040404

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3B08283.TX0

Level: (low/med) Low Date Samp/Recv: 01/27/99 01/28/99

% Moisture: not dec. _____ Date Analyzed: 02/08/99

GC Column: RTX502.2 Dia: 0.53 (mm) Dilution Factor: 40.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	8.0	U
75-25-2	Bromoform	40	U
74-83-9	Bromomethane	40	U
56-23-5	Carbon Tetrachloride	8.0	U
108-90-7	Chlorobenzene	16	U
75-00-3	Chloroethane	40	U
110-75-8	2-Chloroethylvinyl ether	20	U
67-66-3	Chloroform	8.0	U
74-87-3	Chloromethane	20	U
124-48-1	Dibromochloromethane	8.0	U
95-50-1	1,2-Dichlorobenzene	16	U
541-73-1	1,3-Dichlorobenzene	16	U
106-46-7	1,4-Dichlorobenzene	16	U
75-34-3	1,1-Dichloroethane	8.0	U
107-06-2	1,2-Dichloroethane	8.0	U
75-35-4	1,1-Dichloroethene	8.0	U
156-60-5	trans-1,2-Dichloroethene	8.0	U
78-87-5	1,2-Dichloropropane	8.0	U
10061-01-5	cis-1,3-Dichloropropene	8.0	U
10061-02-6	trans-1,3-Dichloropropene	8.0	U
75-09-2	Methylene chloride	8.0	U
79-34-5	1,1,2,2-Tetrachloroethane	8.0	U
127-18-4	Tetrachloroethene	8.0	U
71-55-6	1,1,1-Trichloroethane	8.0	U
79-00-5	1,1,2-Trichloroethane	8.0	U
79-01-6	Trichloroethene	310	
75-69-4	Trichlorofluoromethane	40	U
75-01-4	Vinyl chloride	8.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000014

Client No.

W-4-15

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9040404

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 3A08283.TX0

Level: (low/med) Low Date Samp/Recv: 01/27/99 01/28/99

% Moisture: not dec. _____ Date Analyzed: 02/08/99

GC Column: RTX 502.2 Dia: 0.53 (mm) Dilution Factor: 40.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	8.0	U
108-90-7	Chlorobenzene	8.0	U
95-50-1	1,2-Dichlorobenzene	16	U
541-73-1	1,3-Dichlorobenzene	16	U
106-46-7	1,4-Dichlorobenzene	16	U
100-41-4	Ethylbenzene	8.0	U
108-88-3	Toluene	8.0	U
108-38-3	m-Xylene	8.0	U
95-47-6	o-Xylene	8.0	U
106-42-3	p-Xylene	8.0	U

RECRA LABNET, a division of Recra Environmental, Inc.

CHAIN OF CUSTODY RECORD

PROJECT NO: 801865.03

SITE NAME: ERDLE Perforating

SAMPLERS (SIGNATURE):

STATION NO	DATE	TIME	COMP	GRAB	STATION LOCATION	NO OF CONTAINERS	SW-8010	SW-8020					REMARKS
1	1-27	1200		✓	W-1-15	4	2	2					
2	1-27	1210	✓		W-2-15	4	2	2					
3	1-27	1220		✓	W-3-15	4	2	2					
4	1-27	1230		✓	W-4-15	4	2	2					
	1-27				TB-15	2	1	1					
						18							
					WATER Samples								

RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)
	1-27-99 1700	Fed-X			
RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE/TIME	REMARKS	
			1/28/99 0945	Cool- 4°C	

Distribution: Original accompanies shipment copy to coordinator field files

000028

Committed To *Your* Success

March 4, 1999

Severn Trent Laboratories
10 Hazelwood Drive
Amherst, NY 14228

Tel: (716) 691-2600
Fax: (716) 691-7991
www.stl-inc.com

Mr. Gary Beswick
Penn Center West
Building 3
Pittsburgh, PA 15276

RE: Analytical Results

Dear Mr. Beswick:

Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #:	NY95-008
Project Name:	Erdle Perforating
Matrix:	Water
Samples Received:	02/27/99
Sample Date:	02/26/99

If you have any questions concerning this data, please contact Ms. Candace L. Fox, Program Manager, at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Radian Corporation with environmental testing services. We look forward to serving you in the future.

Sincerely,

SEVERN TRENT LABORATORIES, INC.

(for) Corey M. Williams
Candace L. Fox
Program Manager

Susan L. Tinsmith
Laboratory Manager

CLF/SLT/ltb
Enclosure

I.D.#A99-1053
#NY5A5205

This report contains 150 pages, which are individually numbered.

SAMPLE DATA SUMMARY PACKAGE

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CASE NARRATIVE

Laboratory Name: Severn Trent Laboratories, Inc.

Laboratory Code: RECNY

Contract Number: NY95-008

Sample Identifications:
W-1
W-2
W-3
W-4
TRIP BLANK

METHODOLOGY

The specific methodology employed in obtaining the enclosed analytical results are indicated on the specific data tables. The method numbers presented refer to the following U.S. Environmental Protection Agency reference:

- U.S. Environmental Protection Agency "Test Methods for Evaluating Solid Waste-Physical/Chemical Methods." Office of Solid Waste and Emergency Response. September 1994, SW-846, Third Edition.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing data qualifiers (Q) as defined on the Organic Data Comment Page.

METHOD 8010 DATA

Samples W-1 and W-4 were analyzed at dilutions of forty due to high concentrations of target compounds.

METHOD 8020 DATA

Samples W-1 and W-4 were analyzed at dilutions of forty due to high concentrations of target compounds.

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" I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or her designee, as verified by the following signature."

Susan L. Tinsmith
Laboratory Manager

3/4/99
Date

ORGANIC DATA COMMENT PAGE

Laboratory Name: SEVERN TRENT LABORATORIES INC.

USEPA Defined Organic Data Qualifiers:

U	-	Indicates compound was analyzed for but not detected.
J	-	Indicates an estimate value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	-	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	-	This flag is used when the analyte is found in the associated blank as well as in the sample.
E	-	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
D	-	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
T	-	This flag is used when the analyte is found in the associated TCLP extraction blank as well as in the sample.
N	-	Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.
P	-	This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
A	-	This flag indicates that a TIC is a suspected aldol-condensation product.

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000005

Client No.

TRIP BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9105305

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B08220.TX0

Level: (low/med) Low Date Samp/Recv: 02/26/99 02/27/99

% Moisture: not dec. _____ Date Analyzed: 03/01/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
10-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	0.20	U
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000006

Client No.

W-1

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9105301

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B08221.TX0

Level: (low/med) Low Date Samp/Recv: 02/26/99 02/27/99

% Moisture: not dec. _____ Date Analyzed: 03/01/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 40.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	8.0	U
75-25-2	Bromoform	32	U
74-83-9	Bromomethane	32	U
56-23-5	Carbon Tetrachloride	8.0	U
108-90-7	Chlorobenzene	16	U
75-00-3	Chloroethane	32	U
110-75-8	2-Chloroethylvinyl ether	20	U
67-66-3	Chloroform	8.0	U
74-87-3	Chloromethane	20	U
124-48-1	Dibromochloromethane	8.0	U
95-50-1	1,2-Dichlorobenzene	8.0	U
541-73-1	1,3-Dichlorobenzene	8.0	U
106-46-7	1,4-Dichlorobenzene	8.0	U
75-34-3	1,1-Dichloroethane	8.0	U
107-06-2	1,2-Dichloroethane	8.0	U
75-35-4	1,1-Dichloroethene	8.0	U
156-60-5	trans-1,2-Dichloroethene	8.0	U
78-87-5	1,2-Dichloropropane	41	
10061-01-5	cis-1,3-Dichloropropene	8.0	U
10061-02-6	trans-1,3-Dichloropropene	8.0	U
75-09-2	Methylene chloride	14	
79-34-5	1,1,2,2-Tetrachloroethane	8.0	U
127-18-4	Tetrachloroethene	8.0	U
71-55-6	1,1,1-Trichloroethane	8.0	U
79-00-5	1,1,2-Trichloroethane	8.0	U
79-01-6	Trichloroethene	290	
75-69-4	Trichlorofluoromethane	8.0	U
75-01-4	Vinyl chloride	32	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000007

Client No.

W-2

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9105302

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B08222.TX0

Level: (low/med) Low Date Samp/Recv: 02/26/99 02/27/99

% Moisture: not dec. _____ Date Analyzed: 03/01/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
10-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	9.4	
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000008

Client No.

W-3

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9105303

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B08223.TX0

Level: (low/med) Low Date Samp/Recv: 02/26/99 02/27/99

% Moisture: not dec. _____ Date Analyzed: 03/01/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	0.20	U
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000009

Client No.

W-4

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9105304

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B08224.TX0

Level: (low/med) Low Date Samp/Recv: 02/26/99 02/27/99

% Moisture: not dec. _____ Date Analyzed: 03/01/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 40.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	8.0	U
75-25-2	Bromoform	32	U
74-83-9	Bromomethane	32	U
56-23-5	Carbon Tetrachloride	8.0	U
108-90-7	Chlorobenzene	16	U
75-00-3	Chloroethane	32	U
110-75-8	2-Chloroethylvinyl ether	20	U
67-66-3	Chloroform	8.0	U
74-87-3	Chloromethane	20	U
124-48-1	Dibromochloromethane	8.0	U
95-50-1	1,2-Dichlorobenzene	8.0	U
541-73-1	1,3-Dichlorobenzene	8.0	U
106-46-7	1,4-Dichlorobenzene	8.0	U
75-34-3	1,1-Dichloroethane	8.0	U
107-06-2	1,2-Dichloroethane	8.0	U
75-35-4	1,1-Dichloroethene	8.0	U
156-60-5	trans-1,2-Dichloroethene	8.0	U
78-87-5	1,2-Dichloropropane	41	
10061-01-5	cis-1,3-Dichloropropene	8.0	U
10061-02-6	trans-1,3-Dichloropropene	8.0	U
75-09-2	Methylene chloride	18	
79-34-5	1,1,2,2-Tetrachloroethane	8.0	U
127-18-4	Tetrachloroethene	8.0	U
71-55-6	1,1,1-Trichloroethane	8.0	U
79-00-5	1,1,2-Trichloroethane	8.0	U
79-01-6	Trichloroethene	300	
75-69-4	Trichlorofluoromethane	8.0	U
75-01-4	Vinyl chloride	32	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

006010

Client No.

TRIP BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9105305

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A08220.TX0

Level: (low/med) Low Date Samp/Recv: 02/26/99 02/27/99

% Moisture: not dec. _____ Date Analyzed: 03/01/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

600011

Client No.

W-1

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9105301

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A08221.TX0

Level: (low/med) Low Date Samp/Recv: 02/26/99 02/27/99

% Moisture: not dec. _____ Date Analyzed: 03/01/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 40.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	8.0	U
108-90-7	Chlorobenzene	8.0	U
95-50-1	1,2-Dichlorobenzene	8.0	U
541-73-1	1,3-Dichlorobenzene	8.0	U
106-46-7	1,4-Dichlorobenzene	8.0	U
00-41-4	Ethylbenzene	8.0	U
108-88-3	Toluene	8.0	U
108-38-3	m-Xylene	8.0	U
95-47-6	o-Xylene	8.0	U
106-42-3	p-Xylene	8.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.: W-2

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9105302

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A08222.TX0

Level: (low/med) Low Date Samp/Recv: 02/26/99 02/27/99

% Moisture: not dec. _____ Date Analyzed: 03/01/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
00-41-4	Ethylbenzene	0.20	U
08-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000013

Client No.

W-3

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9105303

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A08223.TX0

Level: (low/med) Low Date Samp/Recv: 02/26/99 02/27/99

% Moisture: not dec. _____ Date Analyzed: 03/01/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000014

Client No.

W-4

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9105304

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A08224.TX0

Level: (low/med) Low Date Samp/Recv: 02/26/99 02/27/99

% Moisture: not dec. _____ Date Analyzed: 03/01/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 40.00

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	8.0	U
108-90-7	Chlorobenzene	8.0	U
95-50-1	1,2-Dichlorobenzene	8.0	U
541-73-1	1,3-Dichlorobenzene	8.0	U
106-46-7	1,4-Dichlorobenzene	8.0	U
00-41-4	Ethylbenzene	8.0	U
108-88-3	Toluene	8.0	U
108-38-3	m-Xylene	8.0	U
95-47-6	o-Xylene	8.0	U
106-42-3	p-Xylene	8.0	U

RECRA LABNET, a division of Recra Environmental, Inc.

CHAIN OF CUSTODY RECORD

PROJECT NO: 801865.06
SITE NAME: ERDLE Perforating
SAMPLERS (SIGNATURE):

STATION NO	DATE	TIME	COMP	GRAB	STATION LOCATION	NO OF CONTAINERS	8010	8020					REMARKS
	2-26	0705		✓	W-1	4	2	2					SYSTEM INFLUENT Water Samples
	2-26	0708		✓	W-2	4	2	2					SECONDARY GAC INFLUENT
	2-26	0711		✓	W-3	4	2	2					SYSTEM EFFLUENT TO SEWER SYSTEM
	2-26	0715		✓	W-4	4	2	2					DUPLICATE OF W-1 Received Trip blank 2/27/99 TD

RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)
	2-26-99 1700	Fed-X			
RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE/TIME	REMARKS	
		Jinny Ao	2/27/99 10:30	Air bill # 806915437863 Cooler temp 4°C	

Distribution: Original accompanies shipment) copy to coordinator field files

000030

Appendix C: Groundwater Analytical Results

Committed To *Your* Success

Severn Trent Laboratories
10 Hazelwood Drive
Amherst, NY 14228

Tel: (716) 691-2600
Fax: (716) 691-7991
www.stl-inc.com

April 19, 1999

Mr. Gary Beswick
Penn Center West
Building 3
Pittsburgh, PA 15276

RE: Analytical Results

Dear Mr. Beswick:

Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #:	NY95-008
Project Name:	Erdle Perforating
Matrix:	Water
Samples Received:	03/24/99
Sample Date:	03/24/99

If you have any questions concerning this data, please contact Ms. Candace L. Fox, Program Manager, at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Radian Corporation with environmental testing services. We look forward to serving you in the future.

Sincerely,

SEVERN TRENT LABORATORIES, INC.

Candace L. Fox
Program Manager

Susan L. Tinsmith
Laboratory Manager

CLF/SLT/ltb
Enclosure

I.D.#A99-1604
#NY5A5205

This report contains 35 pages, which are individually numbered.

SAMPLE DATA SUMMARY PACKAGE

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CASE NARRATIVE

Laboratory Name: Severn Trent Laboratories, Inc.

Laboratory Code: STL Buffalo

Contract Number: NY95-008

Sample Identifications:

MW-1
MW-1D
MW-2
MW-2D
MW-3
MW-3D
MW-4
MW-4D
MW-6
MW-6D
MW-7
MW-7D
DUP
RINSE BLANK
TRIP BLANK

METHODOLOGY

The specific methodology employed in obtaining the enclosed analytical results are indicated on the specific data tables. The method numbers presented refer to the following U.S. Environmental Protection Agency reference:

- U.S. Environmental Protection Agency "Test Methods for Evaluating Solid Waste-Physical/Chemical Methods." Office of Solid Waste and Emergency Response. September 1994, SW-846, Third Edition.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing data qualifiers (Q) as defined on the Organic Data Comment Page.

The sample cooler was received at a temperature of 3°C.

Committed To *Your* Success

METHOD 8010/8020 DATA

Sample MW-7D required a dilution of two due to high levels of target compounds.

Samples MW-3D and DUP required dilutions of eight due to high levels of target compounds.

Samples MW-6D, MW-1D and MW-2 required dilutions of twenty, fifty, and eighty respectively due to high levels of target compounds.

Sample MW-1 was analyzed at a dilution of ten and contained concentrations of Trichloroethene in amounts exceeding the instrument calibration range ("E" qualifiers). The sample was reanalyzed at a dilution of eighty, outside of analytical holding time. Both sets of data are reported.

Sample MW-3 was analyzed at a dilution of 5500 and contained concentrations of Trichloroethene in amounts exceeding the instrument calibration range ("E" qualifiers). The sample was reanalyzed at a dilution of 20000, outside of analytical holding time. Both sets of data are reported.

Sample MW-4 was initially analyzed within holding time at a dilution of five due to high levels of Trichloroethene in the previous sample. The sample was reanalyzed at a dilution of one, outside of holding time. Both sets of data are reported.

The Matrix Spike Blank yielded a recovery outside of quality control limits for Chloroform. All other corresponding QC is compliant.

" I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or her designee, as verified by the following signature."

Susan L. Tinsmith
Laboratory Manager

4/14/99
Date

ORGANIC DATA COMMENT PAGE

Laboratory Name: SEVERN TRENT LABORATORIES INC.

USEPA Defined Organic Data Qualifiers:

U - Indicates compound was analyzed for but not detected.

J - Indicates an estimate value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

T - This flag is used when the analyte is found in the associated TCLP extraction blank as well as in the sample.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

A - This flag indicates that a TIC is a suspected aldol-condensation product.

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000005

Client No.

DUP

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160413

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10303.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 8.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	1.6	U
75-25-2	Bromoform	6.4	U
74-83-9	Bromomethane	6.4	U
56-23-5	Carbon Tetrachloride	1.6	U
108-90-7	Chlorobenzene	3.2	U
75-00-3	Chloroethane	6.4	U
110-75-8	2-Chloroethylvinyl ether	4.0	U
67-66-3	Chloroform	1.6	U
74-87-3	Chloromethane	4.0	U
124-48-1	Dibromochloromethane	1.6	U
95-50-1	1,2-Dichlorobenzene	1.6	U
541-73-1	1,3-Dichlorobenzene	1.6	U
106-46-7	1,4-Dichlorobenzene	1.6	U
75-34-3	1,1-Dichloroethane	1.6	U
107-06-2	1,2-Dichloroethane	1.6	U
75-35-4	1,1-Dichloroethene	1.6	U
156-60-5	trans-1,2-Dichloroethene	1.6	U
78-87-5	1,2-Dichloropropane	1.6	U
10061-01-5	cis-1,3-Dichloropropene	1.6	U
10061-02-6	trans-1,3-Dichloropropene	1.6	U
75-09-2	Methylene chloride	2.3	
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U
127-18-4	Tetrachloroethene	1.6	U
71-55-6	1,1,1-Trichloroethane	12	
79-00-5	1,1,2-Trichloroethane	1.6	U
79-01-6	Trichloroethene	140	
75-69-4	Trichlorofluoromethane	1.6	U
75-01-4	Vinyl chloride	13	

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000006

Client No.

MW-1

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160401

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10300.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 10.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	2.0	U
75-25-2	Bromoform	8.0	U
74-83-9	Bromomethane	8.0	U
56-23-5	Carbon Tetrachloride	2.0	U
108-90-7	Chlorobenzene	4.0	U
75-00-3	Chloroethane	8.0	U
110-75-8	2-Chloroethylvinyl ether	5.0	U
67-66-3	Chloroform	2.0	U
74-87-3	Chloromethane	5.0	U
124-48-1	Dibromochloromethane	2.0	U
95-50-1	1,2-Dichlorobenzene	2.0	U
541-73-1	1,3-Dichlorobenzene	2.0	U
106-46-7	1,4-Dichlorobenzene	2.0	U
75-34-3	1,1-Dichloroethane	2.0	U
107-06-2	1,2-Dichloroethane	2.0	U
75-35-4	1,1-Dichloroethene	2.0	U
156-60-5	trans-1,2-Dichloroethene	15	
78-87-5	1,2-Dichloropropane	2.0	U
10061-01-5	cis-1,3-Dichloropropene	2.0	U
10061-02-6	trans-1,3-Dichloropropene	2.0	U
75-09-2	Methylene chloride	2.0	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U
127-18-4	Tetrachloroethene	2.0	U
71-55-6	1,1,1-Trichloroethane	2.0	U
79-00-5	1,1,2-Trichloroethane	2.0	U
79-01-6	Trichloroethene	430	E
75-69-4	Trichlorofluoromethane	2.0	U
75-01-4	Vinyl chloride	100	

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000007

Client No.

MW-1

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160401DL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B11014.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/08/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 80.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	16	U
75-25-2	Bromoform	64	U
74-83-9	Bromomethane	64	U
56-23-5	Carbon Tetrachloride	16	U
108-90-7	Chlorobenzene	32	U
75-00-3	Chloroethane	64	U
110-75-8	2-Chloroethylvinyl ether	40	U
67-66-3	Chloroform	16	U
74-87-3	Chloromethane	40	U
124-48-1	Dibromochloromethane	16	U
95-50-1	1,2-Dichlorobenzene	16	U
541-73-1	1,3-Dichlorobenzene	16	U
106-46-7	1,4-Dichlorobenzene	16	U
75-34-3	1,1-Dichloroethane	16	U
107-06-2	1,2-Dichloroethane	16	U
75-35-4	1,1-Dichloroethene	16	U
156-60-5	trans-1,2-Dichloroethene	16	U
78-87-5	1,2-Dichloropropane	16	U
10061-01-5	cis-1,3-Dichloropropene	16	U
10061-02-6	trans-1,3-Dichloropropene	16	U
75-09-2	Methylene chloride	16	U
79-34-5	1,1,2,2-Tetrachloroethane	16	U
127-18-4	Tetrachloroethene	16	U
71-55-6	1,1,1-Trichloroethane	16	U
79-00-5	1,1,2-Trichloroethane	16	U
79-01-6	Trichloroethene	640	
75-69-4	Trichlorofluoromethane	16	U
75-01-4	Vinyl chloride	150	

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000008

Client No.

MW-1D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160402

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10237.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/03/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 50.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	10	U
75-25-2	Bromoform	40	U
74-83-9	Bromomethane	40	U
56-23-5	Carbon Tetrachloride	10	U
108-90-7	Chlorobenzene	20	U
75-00-3	Chloroethane	40	U
110-75-8	2-Chloroethylvinyl ether	25	U
67-66-3	Chloroform	10	U
74-87-3	Chloromethane	28	
124-48-1	Dibromochloromethane	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
75-34-3	1,1-Dichloroethane	10	U
107-06-2	1,2-Dichloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
78-87-5	1,2-Dichloropropane	100	
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-09-2	Methylene chloride	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
127-18-4	Tetrachloroethene	10	U
71-55-6	1,1,1-Trichloroethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
79-01-6	Trichloroethene	1000	
75-69-4	Trichlorofluoromethane	10	U
75-01-4	Vinyl chloride	58	

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000009

Client No.

MW-2

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160403

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10238.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/03/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 80.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	16	U
75-25-2	Bromoform	64	U
74-83-9	Bromomethane	64	U
56-23-5	Carbon Tetrachloride	16	U
108-90-7	Chlorobenzene	32	U
75-00-3	Chloroethane	64	U
110-75-8	2-Chloroethylvinyl ether	40	U
67-66-3	Chloroform	16	U
74-87-3	Chloromethane	40	U
124-48-1	Dibromochloromethane	16	U
95-50-1	1,2-Dichlorobenzene	16	U
541-73-1	1,3-Dichlorobenzene	16	U
106-46-7	1,4-Dichlorobenzene	16	U
75-34-3	1,1-Dichloroethane	16	U
107-06-2	1,2-Dichloroethane	16	U
75-35-4	1,1-Dichloroethene	16	U
156-60-5	trans-1,2-Dichloroethene	16	U
78-87-5	1,2-Dichloropropane	16	U
10061-01-5	cis-1,3-Dichloropropene	16	U
10061-02-6	trans-1,3-Dichloropropene	16	U
75-09-2	Methylene chloride	16	U
79-34-5	1,1,2,2-Tetrachloroethane	16	U
127-18-4	Tetrachloroethene	16	U
71-55-6	1,1,1-Trichloroethane	16	U
79-00-5	1,1,2-Trichloroethane	16	U
79-01-6	Trichloroethene	580	
75-69-4	Trichlorofluoromethane	16	U
75-01-4	Vinyl chloride	64	U

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ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000010

Client No.

MW-2D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160404

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10241.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.31	J
541-73-1	1,3-Dichlorobenzene	1.0	
106-46-7	1,4-Dichlorobenzene	0.28	J
75-34-3	1,1-Dichloroethane	2.7	
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	1.6	
156-60-5	trans-1,2-Dichloroethene	1.2	
78-87-5	1,2-Dichloropropane	1.5	
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.80	
127-18-4	Tetrachloroethene	1.0	
71-55-6	1,1,1-Trichloroethane	3.3	
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	3.8	
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl chloride	1.8	

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ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000011
Client No.

MW-3

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160405

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10304.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 5500.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	1100	U
75-25-2	Bromoform	4400	U
74-83-9	Bromomethane	4400	U
56-23-5	Carbon Tetrachloride	1100	U
108-90-7	Chlorobenzene	2200	U
75-00-3	Chloroethane	4400	U
110-75-8	2-Chloroethylvinyl ether	2800	U
67-66-3	Chloroform	1100	U
74-87-3	Chloromethane	2800	U
124-48-1	Dibromochloromethane	1100	U
95-50-1	1,2-Dichlorobenzene	1100	U
541-73-1	1,3-Dichlorobenzene	1100	U
106-46-7	1,4-Dichlorobenzene	1100	U
75-34-3	1,1-Dichloroethane	1100	U
107-06-2	1,2-Dichloroethane	1100	U
75-35-4	1,1-Dichloroethene	1100	U
156-60-5	trans-1,2-Dichloroethene	1100	U
78-87-5	1,2-Dichloropropane	23000	
10061-01-5	cis-1,3-Dichloropropene	1100	U
10061-02-6	trans-1,3-Dichloropropene	1100	U
75-09-2	Methylene chloride	1300	
79-34-5	1,1,2,2-Tetrachloroethane	1100	U
127-18-4	Tetrachloroethene	1100	U
71-55-6	1,1,1-Trichloroethane	1100	U
79-00-5	1,1,2-Trichloroethane	1100	U
79-01-6	Trichloroethene	270000	E
75-69-4	Trichlorofluoromethane	1100	U
75-01-4	Vinyl chloride	7000	

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ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000012

Client No.

MW-3

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160405DL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B11015.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/08/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 20000.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	4000	U
75-25-2	Bromoform	16000	U
74-83-9	Bromomethane	16000	U
56-23-5	Carbon Tetrachloride	4000	U
108-90-7	Chlorobenzene	8000	U
75-00-3	Chloroethane	16000	U
110-75-8	2-Chloroethylvinyl ether	10000	U
67-66-3	Chloroform	4000	U
74-87-3	Chloromethane	10000	U
124-48-1	Dibromochloromethane	4000	U
95-50-1	1,2-Dichlorobenzene	4000	U
541-73-1	1,3-Dichlorobenzene	4000	U
106-46-7	1,4-Dichlorobenzene	4000	U
75-34-3	1,1-Dichloroethane	4000	U
107-06-2	1,2-Dichloroethane	4000	U
75-35-4	1,1-Dichloroethene	4000	U
156-60-5	trans-1,2-Dichloroethene	4000	U
78-87-5	1,2-Dichloropropane	4000	U
10061-01-5	cis-1,3-Dichloropropene	4000	U
10061-02-6	trans-1,3-Dichloropropene	4000	U
75-09-2	Methylene chloride	4000	U
79-34-5	1,1,2,2-Tetrachloroethane	4000	U
127-18-4	Tetrachloroethene	4000	U
71-55-6	1,1,1-Trichloroethane	4000	U
79-00-5	1,1,2-Trichloroethane	4000	U
79-01-6	Trichloroethene	210000	
75-69-4	Trichlorofluoromethane	4000	U
75-01-4	Vinyl chloride	16000	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000013

Client No.

MW-3D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160406

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10242.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 8.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	1.6	U
75-25-2	Bromoform	6.4	U
74-83-9	Bromomethane	6.4	U
56-23-5	Carbon Tetrachloride	1.6	U
108-90-7	Chlorobenzene	3.2	U
75-00-3	Chloroethane	6.4	U
110-75-8	2-Chloroethylvinyl ether	4.0	U
67-66-3	Chloroform	1.6	U
74-87-3	Chloromethane	4.0	U
124-48-1	Dibromochloromethane	1.6	U
95-50-1	1,2-Dichlorobenzene	1.6	U
541-73-1	1,3-Dichlorobenzene	1.6	U
106-46-7	1,4-Dichlorobenzene	1.6	U
75-34-3	1,1-Dichloroethane	1.6	U
107-06-2	1,2-Dichloroethane	1.6	U
75-35-4	1,1-Dichloroethene	1.6	U
156-60-5	trans-1,2-Dichloroethene	1.6	U
78-87-5	1,2-Dichloropropane	14	
10061-01-5	cis-1,3-Dichloropropene	1.6	U
10061-02-6	trans-1,3-Dichloropropene	1.6	U
75-09-2	Methylene chloride	1.6	U
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U
127-18-4	Tetrachloroethene	1.6	U
71-55-6	1,1,1-Trichloroethane	1.6	U
79-00-5	1,1,2-Trichloroethane	1.6	U
79-01-6	Trichloroethene	65	
75-69-4	Trichlorofluoromethane	1.6	U
75-01-4	Vinyl chloride	8.8	

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000014

Client No.

MW-4

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160407

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10301.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 5.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	4.0	U
74-83-9	Bromomethane	4.0	U
56-23-5	Carbon Tetrachloride	1.0	U
108-90-7	Chlorobenzene	2.0	U
75-00-3	Chloroethane	4.0	U
110-75-8	2-Chloroethylvinyl ether	2.5	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	2.5	U
124-48-1	Dibromochloromethane	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
75-09-2	Methylene chloride	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	6.8	
75-69-4	Trichlorofluoromethane	1.0	U
75-01-4	Vinyl chloride	4.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000015

Client No.

MW-4

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160407RE

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B11013.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/08/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	2.5	
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000016

Client No.

MW-4D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160408

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10243.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	1.1	
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	1.6	
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	1.7	
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	7.0	
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000017

Client No.

MW-6

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160409

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10244.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	1.1	
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	0.20	U
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000018

Client No.

MW-6D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160410

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10245.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 20.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	4.0	U
75-25-2	Bromoform	16	U
74-83-9	Bromomethane	16	U
56-23-5	Carbon Tetrachloride	4.0	U
108-90-7	Chlorobenzene	8.0	U
75-00-3	Chloroethane	16	U
110-75-8	2-Chloroethylvinyl ether	10	U
67-66-3	Chloroform	4.0	U
74-87-3	Chloromethane	10	U
124-48-1	Dibromochloromethane	4.0	U
95-50-1	1,2-Dichlorobenzene	4.0	U
541-73-1	1,3-Dichlorobenzene	4.0	U
106-46-7	1,4-Dichlorobenzene	4.0	U
75-34-3	1,1-Dichloroethane	4.0	U
107-06-2	1,2-Dichloroethane	4.0	U
75-35-4	1,1-Dichloroethene	4.0	U
156-60-5	trans-1,2-Dichloroethene	4.0	U
78-87-5	1,2-Dichloropropane	32	
10061-01-5	cis-1,3-Dichloropropene	4.0	U
10061-02-6	trans-1,3-Dichloropropene	4.0	U
75-09-2	Methylene chloride	4.0	U
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U
127-18-4	Tetrachloroethene	4.0	U
71-55-6	1,1,1-Trichloroethane	4.0	U
79-00-5	1,1,2-Trichloroethane	4.0	U
79-01-6	Trichloroethene	150	
75-69-4	Trichlorofluoromethane	4.0	U
75-01-4	Vinyl chloride	16	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000019
Client No.

MW-7

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160411

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10246.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	0.20	U
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl chloride	1.1	

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000020

Client No.

MW-7D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160412

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10302.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 2.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.40	U
75-25-2	Bromoform	1.6	U
74-83-9	Bromomethane	1.6	U
56-23-5	Carbon Tetrachloride	0.40	U
108-90-7	Chlorobenzene	0.80	U
75-00-3	Chloroethane	1.6	U
110-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.40	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.40	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.40	U
107-06-2	1,2-Dichloroethane	0.40	U
75-35-4	1,1-Dichloroethene	0.40	U
156-60-5	trans-1,2-Dichloroethene	0.40	U
78-87-5	1,2-Dichloropropane	5.9	
10061-01-5	cis-1,3-Dichloropropene	0.40	U
10061-02-6	trans-1,3-Dichloropropene	0.40	U
75-09-2	Methylene chloride	0.40	U
79-34-5	1,1,2,2-Tetrachloroethane	0.40	U
127-18-4	Tetrachloroethene	0.40	U
71-55-6	1,1,1-Trichloroethane	3.6	
79-00-5	1,1,2-Trichloroethane	0.40	U
79-01-6	Trichloroethene	39	
75-69-4	Trichlorofluoromethane	0.40	U
75-01-4	Vinyl chloride	1.6	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.

RINSE BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160414

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10298.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
5-00-3	Chloroethane	1.0	U
10-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	0.20	U
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

090022

Client No.

TRIP BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160415

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B10299.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	0.20	U
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.: DUP

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160413

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10303.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 8.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.6	U
108-90-7	Chlorobenzene	1.6	U
95-50-1	1,2-Dichlorobenzene	1.6	U
541-73-1	1,3-Dichlorobenzene	1.6	U
106-46-7	1,4-Dichlorobenzene	1.6	U
100-41-4	Ethylbenzene	1.6	U
108-88-3	Toluene	1.6	U
108-38-3	m-Xylene	1.6	U
95-47-6	o-Xylene	1.6	U
106-42-3	p-Xylene	1.6	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000024
Client No.

MW-1

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160401

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10300.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 10.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	2.0	U
108-90-7	Chlorobenzene	2.0	U
95-50-1	1,2-Dichlorobenzene	2.0	U
541-73-1	1,3-Dichlorobenzene	2.0	U
106-46-7	1,4-Dichlorobenzene	2.0	U
100-41-4	Ethylbenzene	2.0	U
108-88-3	Toluene	2.0	U
108-38-3	m-Xylene	2.0	U
95-47-6	o-Xylene	2.0	U
106-42-3	p-Xylene	2.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000025

Client No.

MW-1D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160402

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10237.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/03/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 50.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	10	U
108-90-7	Chlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
00-41-4	Ethylbenzene	10	U
08-88-3	Toluene	10	U
108-38-3	m-Xylene	10	U
95-47-6	o-Xylene	10	U
106-42-3	p-Xylene	10	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000026
Client No.

MW-2

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160403

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10238.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/03/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 80.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	16	U
108-90-7	Chlorobenzene	16	U
95-50-1	1,2-Dichlorobenzene	16	U
541-73-1	1,3-Dichlorobenzene	16	U
106-46-7	1,4-Dichlorobenzene	16	U
100-41-4	Ethylbenzene	16	U
108-88-3	Toluene	16	U
108-38-3	m-Xylene	16	U
95-47-6	o-Xylene	16	U
106-42-3	p-Xylene	16	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000027

Client No.

MW-2D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160404

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10241.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.35	J
541-73-1	1,3-Dichlorobenzene	0.34	J
106-46-7	1,4-Dichlorobenzene	0.34	J
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000028

Client No.

MW-3

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160405

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10304.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 5500.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1100	U
108-90-7	Chlorobenzene	1100	U
95-50-1	1,2-Dichlorobenzene	1100	U
541-73-1	1,3-Dichlorobenzene	1100	U
106-46-7	1,4-Dichlorobenzene	1100	U
100-41-4	Ethylbenzene	1100	U
108-88-3	Toluene	1100	U
108-38-3	m-Xylene	1100	U
95-47-6	o-Xylene	1100	U
106-42-3	p-Xylene	1100	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000029

Client No.

MW-3D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160406

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10242.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 8.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.6	U
108-90-7	Chlorobenzene	1.6	U
95-50-1	1,2-Dichlorobenzene	1.6	U
541-73-1	1,3-Dichlorobenzene	1.6	U
106-46-7	1,4-Dichlorobenzene	1.6	U
100-41-4	Ethylbenzene	1.6	U
108-88-3	Toluene	1.6	U
108-38-3	m-Xylene	1.6	U
95-47-6	o-Xylene	1.6	U
106-42-3	p-Xylene	1.6	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000030

Client No.

MW-4

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160407

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10301.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 5.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	1.0	U
108-90-7	Chlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
108-88-3	Toluene	1.0	U
108-38-3	m-Xylene	1.0	U
95-47-6	o-Xylene	1.0	U
106-42-3	p-Xylene	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000031

Client No.

MW-4

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160407RE

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A11013.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/08/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000032

Client No.

MW-4D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160408

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10243.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
00-41-4	Ethylbenzene	0.20	U
08-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000033

Client No.

MW-6

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160409

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10244.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000034

Client No.

MW-6D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160410

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10245.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 20.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	4.0	U
108-90-7	Chlorobenzene	4.0	U
95-50-1	1,2-Dichlorobenzene	4.0	U
541-73-1	1,3-Dichlorobenzene	4.0	U
106-46-7	1,4-Dichlorobenzene	4.0	U
100-41-4	Ethylbenzene	4.0	U
108-88-3	Toluene	4.0	U
108-38-3	m-Xylene	4.0	U
95-47-6	o-Xylene	4.0	U
106-42-3	p-Xylene	4.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000035

Client No.

MW-7

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160411

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10246.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/04/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000036

Client No.

MW-7D

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160412

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10302.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 2.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.40	U
108-90-7	Chlorobenzene	0.40	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.40	U
108-88-3	Toluene	0.40	U
108-38-3	m-Xylene	0.40	U
95-47-6	o-Xylene	0.40	U
106-42-3	p-Xylene	0.40	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000037

Client No.

RINSE BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160414

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10298.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.

TRIP BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9160415

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A10299.TX0

Level: (low/med) Low Date Samp/Recv: 03/24/99 03/24/99

% Moisture: not dec. _____ Date Analyzed: 04/07/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

Appendix D: Test Boring Logs

TEST BORING CB-1-4 PAGE 1 OF 1

PROJECT NAME ERDLE PERFORATING PROJECT NO. 801865

LOCATION ADJACENT TO EW-1 GEOLOGIST KEITH DODRILL

BY KD DRILLING CONTRACTOR MARCOR DRILLER DAVID ENGERT

DATE 5-12-99 DRILLING METHOD GEOPROBE RIG TYPE GEOPROBE VAN

CHK BY _____ DRILLING START DATE 5-12-99 DRILLING COMPLETION DATE 5-12-99

DATE _____ SURFACE ELEVATION N/A STICK-UP ELEVATION N/A

DEPTH FEET	SOIL SAMPLE NO.	REC. (IN.)	BL/6"	VISUAL CLASSIFICATION AND REMARKS	PROFILE	STATIC WATER LEVEL (FT)	OVA READING	DEPTH (FEET)	REMARKS
0	SS-1			TOPSOIL LOOSE BROWN FINE SAND, TRACE SILT DAMP	SW			0	PID = 3.5 ppm
2	SS-2			3.0 DARK BROWN SILT DAMP - STIFF	ML			2	PID = 112 ppm
4	SS-3			4.0 SOFT BROWN SILT, TRACE COARSE SAND AND GRAVEL (1/4-IN) - MOIST TO WET	ML			4	PID = 141 ppm
6	SS-4							6	PID = 142 ppm *SELECTED FOR LAB ANALYSIS
8	SS-5			8.0 STIFF REDDISH BROWN SILTY CLAY - DAMP	CL			8	PID = 85 ppm
10	SS-6			10.5 AS ABOVE, MED STIFF - SATURATED	CL			10	PID = 24 ppm
12				TOTAL DEPTH, NO RECOVERY BELOW 12-FT				12	

ADDITIONAL REMARKS: BORE HOLE CAVED TO 4.0 FT W/ RUNNING SANDS FROM 3.0 TO 4 FT

FILE: \FORMATS\TB

TEST BORING CB-2-4

PAGE 1 OF 1

PROJECT NAME ERDLE PERFORATING — PROJECT NO. 801865

LOCATION BETWEEN EW-1 & EW-4 — GEOLOGIST KEITH DODRILL

BY KD — DRILLING CONTRACTOR MARCOR — DRILLER DAVID ENGERT

DATE 5/12/99 — DRILLING METHOD GEOPROBE — RIG TYPE GEOPROBE VAN

CHK BY ____ — DRILLING START DATE 5-12-99 — DRILLING COMPLETION DATE 5-12-99

DATE ____ — SURFACE ELEVATION N/A — STICK-UP ELEVATION N/A

DEPTH FEET	SOIL SAMPLE NO.	REC. (IN.)	BL./ 6"	VISUAL CLASSIFICATION AND REMARKS	PROFILE	STATIC WATER LEVEL (FT)	OVA READING	DEPTH (FEET)	REMARKS
0	SS-1			TOPSOIL, LOOSE, DARK BROWN FINE SAND, TRACE SILT DAMP SLIGHT ODOR	SW			0	PID = 5 PPM
				2.0					
2	SS-2			AS ABOVE NO ODOR WET AT 3-FT	SW			2	PID = 3 PPM
				4.0					
4	SS-3			MED. STIFF BROWN SILTY CLAY, TRACE FINE SAND, GRAY MOTTLING - WET	CL			4	PID = 44 PPM
6	SS-4			5.0 TO 7.0 AS ABOVE, STIFF - DAMP				6	PID = 134 PPM * SELECTED FOR LAB SAMPLE
				7.0					
	SS-5			STIFF REDDISH BROWN CLAY, TRACE SILT - DAMP	CL			7	PID = 29 PPM
8				8.0				8	
	SS-6			SOFT GRAY SILT, TRACE FINE SAND - SATURATED	ML				PID = 10 PPM
10	SS-7							10	PID = 38 PPM * SELECTED FOR LAB SAMPLE
12				12.0 NO RECOVERY BELOW 12-FT				12	

ADDITIONAL REMARKS: BOREHOLE CAVED TO 4.0 FT FROM ABOVE

ILE:\FORMATS\TB

TEST BORING CB-3-4 PAGE 1 OF 1

PROJECT NAME EIDLE PERFORATING PROJECT NO. 801865

LOCATION ADJACENT TO EW-3 GEOLOGIST KEITH DODRILL

BY KD DRILLING CONTRACTOR MARCOR DRILLER DAVID EWERT

DATE 5-12-99 DRILLING METHOD GEOPROBE RIG TYPE GEOPROBE VAN

CHK BY _____ DRILLING START DATE 5-12-99 DRILLING COMPLETION DATE 5-12-99

DATE _____ SURFACE ELEVATION N/A STICK-UP ELEVATION N/A

DEPTH FEET	SOIL SAMPLE NO.	REC. (IN.)	BL./6"	VISUAL CLASSIFICATION AND REMARKS	PROFILE	STATIC WATER LEVEL (FT)	OVA READING	DEPTH (FEET)	REMARKS
0	S-1			TOPSOIL, LOOSE BROWN TO TAN FINE SAND, TRACE SILT - DAMP	SW			0	PID = 2 PPM
				2.0					
2	S-2			LOOSE DARK BROWN SILTY FINE SAND WOOD DEBRIS AT 3-FT - WET	SW			2	PID = 24 PPM
				4.0					
4	S-3			STIFF REDDISH BROWN SILTY CLAY, TRACE FINE SAND, GRAY MOTTLING - DAMP	CL			4	PID = 32 PPM
6	S-4							6	PID = 47 PPM * SELECTED FOR LAB SAMPLE
				8.0					
8	S-5			STIFF REDDISH BROWN CLAY, TRACE SILT WITH COARSE SAND AND GRAVEL - DAMP	CL			8	PID = 43 PPM
10				10.5 NO RECOVERY 10.5 TO 12.0				10.5	
12				TOTAL DEPTH					

ADDITIONAL REMARKS

ILE:\FORMATS\TB

TEST BORING CB-4-4 PAGE 1 OF 1

PROJECT NAME ERDLE PERFORMING PROJECT NO. 801865

LOCATION ADJACENT TO EW-2 GEOLOGIST KEITH DODRILL

BY KD DRILLING CONTRACTOR MARCOZ DRILLER DAVID ENGERT

DATE 5-12-99 DRILLING METHOD GEOPROBE RIG TYPE GEOPROBE VAN

CHK BY _____ DRILLING START DATE 5-12-99 DRILLING COMPLETION DATE 5-12-99

DATE _____ SURFACE ELEVATION N/A STICK-UP ELEVATION N/A

DEPTH FEET	SOIL SAMPLE NO.	REC. (IN.)	BL./ 6"	VISUAL CLASSIFICATION AND REMARKS	PROFILE	STATIC WATER LEVEL (FT)	OVA READING	DEPTH (FEET)	REMARKS
	SS-1			TOPSOIL, SOFT DARK BROWN SILT, LITTLE FINE SAND - DAMP	ML				PID = 418 PPM
2	SS-2			SOFT DARK BROWN TO BLACK SILT, LITTLE ORGANIC MATTER - MOIST	ML			2	PID = 54 PPM
3.5	SS-3			SOFT BROWN TO TAN SANDY SILT - WET, ODOR				3.5	PID = 64 PPM
4	SS-4			STIFF REDDISH BROWN CLAY, TRACE SILT GRAY MOTTLING - DAMP	CL			4	PID = 3700 PPM * SELECTED FOR LAB ANALYSIS
6	SS-5							6	PID = 1400 PPM
8				NO RECOVERY 8 TO 12				8	
10									
12				TOTAL DEPTH					

ADDITIONAL REMARKS

ILE: \FORMATS\TB

Appendix E: Soil Analytical Results

Committed To *Your* Success

May 24, 1999

Severn Trent Laboratories
10 Hazelwood Drive
Amherst, NY 14228

Tel: (716) 691-2600
Fax: (716) 691-7991
www.stl-inc.com

Mr. Gary Beswick
Penn Center West
Building 3
Pittsburgh, PA 15276

RE: Analytical Results

Dear Mr. Beswick:

Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #:	NY95-008
Project Name:	Erdle Perforating
Matrix:	Water
Samples Received:	05/12/99
Sample Date:	05/12/99

If you have any questions concerning this data, please contact Ms. Candace L. Fox, Program Manager, at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Radian Corporation with environmental testing services. We look forward to serving you in the future.

Sincerely,

SEVERN TRENT LABORATORIES, INC.

(for) Corey M. Williams
Candace L. Fox
Program Manager

Susan L. Tinsmith
Laboratory Manager

CLF/SLT/ltb
Enclosure

I.D.#A99-2779
#NY5A5205

This report contains 103 pages, which are individually numbered.

SAMPLE DATA SUMMARY PACKAGE

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CASE NARRATIVE

Laboratory Name: Severn Trent Laboratories, Inc.

Laboratory Code: STL Buffalo

Contract Number: NY95-008

Sample Identifications:
CB-1-4 (6-8')
CB-2-4 (6-7')
CB-2-4 (10-12')
CB-3-4 (6-8')
CB-4-4 (4-6')
DUP-1-4
TRIP BLANK

METHODOLOGY

The specific methodology employed in obtaining the enclosed analytical results are indicated on the specific data tables. The method numbers presented refer to the following U.S. Environmental Protection Agency reference:

- U.S. Environmental Protection Agency "Test Methods for Evaluating Solid Waste-Physical/Chemical Methods." Office of Solid Waste and Emergency Response. September 1994, SW-846, Third Edition.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing data qualifiers (Q) as defined on the Organic Data Comment Page.

The sample cooler was received at a temperature of 4°C.

METHOD 8010/8020 DATA

Sample CB-4-4 (4-6') required a dilution of twenty due to high levels of Trichloroethene.

The relative percent difference between spike recoveries of samples CB-2-4 (10-12') Matrix Spike and Matrix Spike Duplicate was outside of quality control limits for 1,1-Dichloroethane, Trichloroethene, and Vinyl chloride. The Matrix Spike was non-compliant for Chloroform. The Matrix Spike Duplicate was non-compliant for 1,1,1-Trichloroethane, Trichloroethene, and Vinyl chloride. All other associated QC was compliant.

STL
Committed To *Your* Success

"I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or her designee, as verified by the following signature."

Susan L. Tinsmith
Laboratory Manager

5/24/99
Date

ORGANIC DATA COMMENT PAGE

Laboratory Name: SEVERN TRENT LABORATORIES INC.

USEPA Defined Organic Data Qualifiers:

U	-	Indicates compound was analyzed for but not detected.
J	-	Indicates an estimate value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	-	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	-	This flag is used when the analyte is found in the associated blank as well as in the sample.
E	-	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
D	-	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
T	-	This flag is used when the analyte is found in the associated TCLP extraction blank as well as in the sample.
N	-	Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.
P	-	This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
A	-	This flag indicates that a TIC is a suspected aldol-condensation product.

INORGANIC DATA COMMENT PAGE

Laboratory Name: SEVERN TRENT LABORATORIES, INC.

USEPA Defined Inorganic Data Qualifiers:

B	-	Indicates a value greater than or equal to the instrument detection limit, but less than the contract required detection limit.
U	-	Indicates compound was analyzed for but not detected. Report with the detection limit value (e.g., 100).
N	-	Indicates spike sample recovery is not within the control limits.
K	-	Indicates the post digestion spike recovery is not within the control limits.
*	-	Indicates duplicate analysis is not within the control limits.
S	-	Indicates value determined by the Method of Standard Addition.
+	-	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.
M	-	Indicates duplicate injection results exceeded control limits.
W	-	Post digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.
E	-	Indicates a value estimated or not reported due to the presence of interference.

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000006

Client No.

CB-1-4 (6-8')

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277901

Sample wt/vol: 5.12 (g/mL) G Lab File ID: 0B12139.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 17.5 Date Analyzed: 05/13/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-27-4	Bromodichloromethane	12	U
75-25-2	Bromoform	50	U
74-83-9	Bromomethane	50	U
56-23-5	Carbon Tetrachloride	12	U
108-90-7	Chlorobenzene	24	U
75-00-3	Chloroethane	50	U
10-75-8	2-Chloroethylvinyl ether	50	U
67-66-3	Chloroform	12	U
74-87-3	Chloromethane	50	U
124-48-1	Dibromochloromethane	12	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
75-34-3	1,1-Dichloroethane	65	
107-06-2	1,2-Dichloroethane	12	U
75-35-4	1,1-Dichloroethene	12	U
156-60-5	trans-1,2-Dichloroethene	62	
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-09-2	Methylene chloride	46	
79-34-5	1,1,2,2-Tetrachloroethane	12	U
127-18-4	Tetrachloroethene	12	U
71-55-6	1,1,1-Trichloroethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
79-01-6	Trichloroethene	240	
75-69-4	Trichlorofluoromethane	12	U
75-01-4	Vinyl chloride	360	

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000007

Client No.

CB-2-4 (6-7')

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277902

Sample wt/vol: 5.20 (g/mL) G Lab File ID: 0B12140.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 15.0 Date Analyzed: 05/13/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-27-4	Bromodichloromethane	11	U
75-25-2	Bromoform	50	U
74-83-9	Bromomethane	50	U
56-23-5	Carbon Tetrachloride	11	U
108-90-7	Chlorobenzene	23	U
75-00-3	Chloroethane	50	U
10-75-8	2-Chloroethylvinyl ether	50	U
67-66-3	Chloroform	11	U
74-87-3	Chloromethane	50	U
124-48-1	Dibromochloromethane	11	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
75-34-3	1,1-Dichloroethane	11	U
107-06-2	1,2-Dichloroethane	11	U
75-35-4	1,1-Dichloroethene	11	U
156-60-5	trans-1,2-Dichloroethene	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-09-2	Methylene chloride	42	
79-34-5	1,1,2,2-Tetrachloroethane	11	U
127-18-4	Tetrachloroethene	11	U
71-55-6	1,1,1-Trichloroethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
79-01-6	Trichloroethene	82	
75-69-4	Trichlorofluoromethane	11	U
75-01-4	Vinyl chloride	260	

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.

CB-2-4 (10-12')

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277903

Sample wt/vol: 5.11 (g/mL) G Lab File ID: 0B12141.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 12.8 Date Analyzed: 05/13/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-27-4	Bromodichloromethane	11	U
75-25-2	Bromoform	50	U
74-83-9	Bromomethane	50	U
56-23-5	Carbon Tetrachloride	11	U
108-90-7	Chlorobenzene	22	U
75-00-3	Chloroethane	50	U
110-75-8	2-Chloroethylvinyl ether	50	U
67-66-3	Chloroform	11	U
74-87-3	Chloromethane	50	U
124-48-1	Dibromochloromethane	11	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
75-34-3	1,1-Dichloroethane	160	
107-06-2	1,2-Dichloroethane	11	U
75-35-4	1,1-Dichloroethene	92	
156-60-5	trans-1,2-Dichloroethene	60	
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-09-2	Methylene chloride	46	
79-34-5	1,1,2,2-Tetrachloroethane	11	U
127-18-4	Tetrachloroethene	11	U
71-55-6	1,1,1-Trichloroethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
79-01-6	Trichloroethene	1600	
75-69-4	Trichlorofluoromethane	11	U
75-01-4	Vinyl chloride	500	

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000009

Client No.

CB-3-4 (6-8')

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277904

Sample wt/vol: 5.04 (g/mL) G Lab File ID: 0B12144.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 20.0 Date Analyzed: 05/14/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-27-4	Bromodichloromethane	12	U
75-25-2	Bromoform	50	U
74-83-9	Bromomethane	50	U
56-23-5	Carbon Tetrachloride	12	U
108-90-7	Chlorobenzene	25	U
75-00-3	Chloroethane	50	U
110-75-8	2-Chloroethylvinyl ether	50	U
67-66-3	Chloroform	12	U
74-87-3	Chloromethane	50	U
124-48-1	Dibromochloromethane	12	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
75-34-3	1,1-Dichloroethane	12	U
107-06-2	1,2-Dichloroethane	12	U
75-35-4	1,1-Dichloroethene	12	U
156-60-5	trans-1,2-Dichloroethene	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-09-2	Methylene chloride	30	
79-34-5	1,1,2,2-Tetrachloroethane	12	U
127-18-4	Tetrachloroethene	12	U
71-55-6	1,1,1-Trichloroethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
79-01-6	Trichloroethene	150	
75-69-4	Trichlorofluoromethane	12	U
75-01-4	Vinyl chloride	73	

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000010

Client No.

CB-4-4 (4-6')

Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277905

Sample wt/vol: 5.18 (g/mL) G Lab File ID: 0B12148.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 15.5 Date Analyzed: 05/14/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 20.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-27-4	Bromodichloromethane	230	U
75-25-2	Bromoform	910	U
74-83-9	Bromomethane	910	U
56-23-5	Carbon Tetrachloride	230	U
108-90-7	Chlorobenzene	460	U
75-00-3	Chloroethane	910	U
10-75-8	2-Chloroethylvinyl ether	570	U
7-66-3	Chloroform	230	U
74-87-3	Chloromethane	570	U
124-48-1	Dibromochloromethane	230	U
95-50-1	1,2-Dichlorobenzene	230	U
541-73-1	1,3-Dichlorobenzene	230	U
106-46-7	1,4-Dichlorobenzene	230	U
75-34-3	1,1-Dichloroethane	230	U
107-06-2	1,2-Dichloroethane	230	U
75-35-4	1,1-Dichloroethene	230	U
156-60-5	trans-1,2-Dichloroethene	230	U
78-87-5	1,2-Dichloropropane	230	U
10061-01-5	cis-1,3-Dichloropropene	230	U
10061-02-6	trans-1,3-Dichloropropene	230	U
75-09-2	Methylene chloride	230	U
79-34-5	1,1,2,2-Tetrachloroethane	230	U
127-18-4	Tetrachloroethene	230	U
71-55-6	1,1,1-Trichloroethane	230	U
79-00-5	1,1,2-Trichloroethane	230	U
79-01-6	Trichloroethene	32000	
75-69-4	Trichlorofluoromethane	230	U
75-01-4	Vinyl chloride	910	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000011

Client No.

DUP-1-4

Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277906

Sample wt/vol: 5.15 (g/mL) G Lab File ID: 0B12146.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 15.7 Date Analyzed: 05/14/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000(uL) Soil Aliquot Volume: 100.00(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-27-4	Bromodichloromethane	12	U
75-25-2	Bromoform	50	U
74-83-9	Bromomethane	50	U
56-23-5	Carbon Tetrachloride	12	U
108-90-7	Chlorobenzene	23	U
75-00-3	Chloroethane	50	U
10-75-8	2-Chloroethylvinyl ether	50	U
67-66-3	Chloroform	12	U
74-87-3	Chloromethane	50	U
124-48-1	Dibromochloromethane	12	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
75-34-3	1,1-Dichloroethane	62	
107-06-2	1,2-Dichloroethane	12	U
75-35-4	1,1-Dichloroethene	12	U
156-60-5	trans-1,2-Dichloroethene	58	
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-09-2	Methylene chloride	38	
79-34-5	1,1,2,2-Tetrachloroethane	12	U
127-18-4	Tetrachloroethene	12	U
71-55-6	1,1,1-Trichloroethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
79-01-6	Trichloroethene	190	
75-69-4	Trichlorofluoromethane	12	U
75-01-4	Vinyl chloride	260	

RADIAN CORPORATION
ERDLE SITE
METHOD 8010 - HALOGENATED VOLATILE ORGANICS
ANALYSIS DATA SHEET

000012

Client No.

TRIP BLANK

Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9277907

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0B12166.TX0

Level: (low/med) Low Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. _____ Date Analyzed: 05/18/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-27-4	Bromodichloromethane	0.20	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	1.0	U
56-23-5	Carbon Tetrachloride	0.20	U
108-90-7	Chlorobenzene	0.40	U
75-00-3	Chloroethane	1.0	U
10-75-8	2-Chloroethylvinyl ether	1.0	U
67-66-3	Chloroform	0.20	U
74-87-3	Chloromethane	1.0	U
124-48-1	Dibromochloromethane	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
75-34-3	1,1-Dichloroethane	0.20	U
107-06-2	1,2-Dichloroethane	0.20	U
75-35-4	1,1-Dichloroethene	0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	U
78-87-5	1,2-Dichloropropane	0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	U
75-09-2	Methylene chloride	0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	U
127-18-4	Tetrachloroethene	0.20	U
71-55-6	1,1,1-Trichloroethane	0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	U
79-01-6	Trichloroethene	0.20	U
75-69-4	Trichlorofluoromethane	0.20	U
75-01-4	Vinyl chloride	1.0	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000013

Client No.

CB-1-4 (6-8')

Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277901

Sample wt/vol: 5.12 (g/mL) G Lab File ID: 0A12139.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 17.5 Date Analyzed: 05/13/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	12	U
108-90-7	Chlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
100-41-4	Ethylbenzene	12	U
08-88-3	Toluene	12	U
108-38-3	m-Xylene	70	1
95-47-6	o-Xylene	12	U
106-42-3	p-Xylene	12	1U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000014

Client No.

CB-2-4 (6-7')

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277902

Sample wt/vol: 5.20 (g/mL) G Lab File ID: 0A12140.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 15.0 Date Analyzed: 05/13/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	11	U
108-90-7	Chlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
100-41-4	Ethylbenzene	11	U
108-88-3	Toluene	11	U
108-38-3	m-Xylene	11	U
95-47-6	o-Xylene	11	U
106-42-3	p-Xylene	11	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.

CB-2-4 (10-12')

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277903

Sample wt/vol: 5.11 (g/mL) G Lab File ID: 0A12141.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 12.8 Date Analyzed: 05/13/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	11	U
108-90-7	Chlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
100-41-4	Ethylbenzene	11	U
108-88-3	Toluene	11	U
108-38-3	m-Xylene	11	U
95-47-6	o-Xylene	11	U
106-42-3	p-Xylene	11	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000016

Client No.

CB-3-4 (6-8')

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277904

Sample wt/vol: 5.04 (g/mL) G Lab File ID: 0A12144.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 20.0 Date Analyzed: 05/14/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	12	U
108-90-7	Chlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
100-41-4	Ethylbenzene	12	U
108-88-3	Toluene	12	U
108-38-3	m-Xylene	12	U
95-47-6	o-Xylene	12	U
106-42-3	p-Xylene	12	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000017

Client No.

CB-4-4 (4-6')

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277905

Sample wt/vol: 5.18 (g/mL) G Lab File ID: 0A12145.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 15.5 Date Analyzed: 05/14/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	11	U
108-90-7	Chlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
100-41-4	Ethylbenzene	11	U
108-88-3	Toluene	11	U
108-38-3	m-Xylene	11	U
95-47-6	o-Xylene	11	U
106-42-3	p-Xylene	11	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.

DUP-1-4

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A9277906

Sample wt/vol: 5.15 (g/mL) G Lab File ID: 0A12146.TX0

Level: (low/med) Med Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. 15.7 Date Analyzed: 05/14/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-43-2	Benzene	12	U
108-90-7	Chlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
100-41-4	Ethylbenzene	12	U
108-88-3	Toluene	12	U
108-38-3	m-Xylene	12	U
95-47-6	o-Xylene	12	U
106-42-3	p-Xylene	12	U

RADIAN CORPORATION
ERDLE SITE
METHOD 8020 - AROMATIC VOLATILE ORGANICS
ANALYSIS DATA SHEET

000019

Client No.

TRIP BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A9277907

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: 0A12166.TX0

Level: (low/med) Low Date Samp/Recv: 05/12/99 05/12/99

% Moisture: not dec. _____ Date Analyzed: 05/18/99

GC Column: DB624 Dia: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-43-2	Benzene	0.20	U
108-90-7	Chlorobenzene	0.20	U
95-50-1	1,2-Dichlorobenzene	0.40	U
541-73-1	1,3-Dichlorobenzene	0.40	U
106-46-7	1,4-Dichlorobenzene	0.40	U
100-41-4	Ethylbenzene	0.20	U
108-88-3	Toluene	0.20	U
108-38-3	m-Xylene	0.20	U
95-47-6	o-Xylene	0.20	U
106-42-3	p-Xylene	0.20	U

STL
Committed To *Your* Success

Report To:
Contact: KEITH DODRILL
Company: RADIAN INTERNATIONAL
Address: PENNCENTER WEST BLDG STE 300 PITTSBURGH PA 15276
Phone: (412) 788-2717
Fax: (412) 788-1316
E-Mail:

Bill To:
Contact: ACCOUNTS PAYABLE
Company: RADIAN INTERNATIONAL
Address: PO BOX 201088 AUSTIN TX 78720
Phone:
Fax:
PO: Quote:

Internal Use Only

Sampler Name: KEITH DODRILL
Signature:
Project Name: ERDLE PERFORATING
Project Number: 801865.07
Project Location: ROCHESTER NY
Date Required: NORMAL TA

STL Sample No.	Client Sample ID	Sampling Date	Sampling Time	MATRIX	COMP / GRAB	8020	6010												Additional Analyses / Remarks
	CB-1-4(6-8FT)	5-12-99	1310	SOIL	G	1	1												
	CB-2-4(6-7FT)	5-12-99	1450	SOIL	G	1	1												
	CB-2-4(10-12FT)	5-12-99	1500	SOIL	G	1	1												
	CB-3-4(6-8FT)	5-12-99	1600	SOIL	G	1	1												
	CB-4-4(4-6FT)	5-12-99	1710	SOIL	G	1	1												
	DUP-1-4	5-12-99	—	SOIL	G	1	1												CB-1-4 DUPLICATE
	TRIP BLK	—	—	H_2O	✓	1	1												

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
	RADIAN	5-12-99	11:34 PM				
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
	STL	5-18-99	2:30 pm				
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

cc:

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous Solids
OL = Oil
A = Air

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn Acetate, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:
cooler @ 4°C

Courier:
Bill of Lading:

0000035