FINAL REPORT

INTERIM REMEDIAL MEASURE PROGRAM

SEMI-ANNUAL PROGRESS REPORT
OCTOBER 1999 – MARCH 2000

FORMER GRIFFIN TECHNOLOGY FACILITY
TOWN OF FARMINGTON
ONTARIO COUNTY, NEW YORK
INDEX NO. (B8-315-90-01)

Prepared for
Diebold, Inc.
Canton, Ohio

June 16, 2000

URS Greiner Woodward Clyde
A Division of URS Corporation

800 West St. Clair Avenue
Suite 500
Cleveland, Ohio 44113-1232
216-622-2400
Project No. 38-06E06191.03

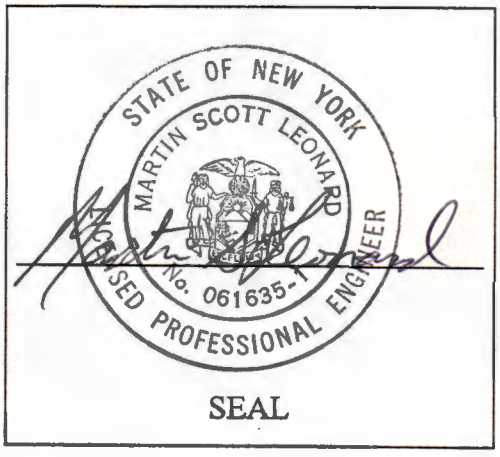
INTERIM REMEDIAL MEASURE SEMI-ANNUAL PROGRESS REPORT
OCTOBER 1999 – MARCH 2000
GRIFFIN TECHNOLOGY, INC. FACILITY
TOWN OF FARMINGTON
ONTARIO COUNTY, NEW YORK

The enclosed Semi-Annual Progress Report has been reviewed by the undersigned and has been found to be consistent with the requirements of the Order on Consent (Index No. B8-315-90-01), entered into by the New York State Department of Environmental Conservation and Griffin Technology, Inc.

Name: Martin S. Leonard, P.E.

Title: Consulting Professional Engineer

Date: June 23, 2000



SEAL

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

TABLE OF CONTENTS

LIST OF APPENDICES

This report presents information collected by URS Greiner Woodward Clyde (URSGWC) between October 1999 and March 2000 during the operation of the Interim Remedial Measure (IRM) system at the Griffin Technology, Inc. (GTI) site located at 6132 Victor-Manchester Road in the Farmington, Ontario County, New York. A general location map is included as Figure 1-1.

The IRM system consists of four wells equipped with groundwater extraction pumps, which have been plumbed to discharge groundwater into the local sanitary sewer system. The IRM system was proposed in the *IRM Work Plan* submitted to the New York State Department of Environmental Conservation (NYSDEC) on July 10, 1996. The Work Plan was prepared in accordance with the Order on Consent agreement (Index No. B8-315-90-01) entered into by GTI and the NYSDEC. Information supporting the selected IRM, such as the Field Sampling Plan (FSP), Quality Assurance Project Plan (QAPP), and Health and Safety Plan (HASP), were included in the Work Plan.

On September 27, 1996, GTI submitted an *Interim Remedial Measure Program, Final Design Document* to the NYSDEC. This document contained the proposed layout and detail drawings for the IRM system and a copy of the letter approving the discharge of recovered groundwater into the local publicly-owned treatment works (POTW) sanitary sewer. In addition, an implementation schedule to construct the system and a proposed two year sample collection and reporting schedule were included in the design document.

During December 1996 and January 1997, the IRM components were installed at the site. The components included three recovery wells and one deep monitoring well with the potential to be converted to a recovery well in the future. Following approval by the NYSDEC and the Canandaguia-Farmington Water and Sewer District to discharge recovery water into the sanitary sewer system, the system was placed on line with three recovery wells. The IRM system began operating on February 18, 1997. Between April and June 1999, one deep monitoring well (MW-2D) was converted to a recovery well (RW-4) and brought on line.

In April 1999, a subsurface soil investigation was conducted at the GTI site to evaluate current soil conditions west of the manufacturing building. The scope of work and results are detailed in the *Soil Investigation Report*, dated June 25, 1999.

The activities performed during this six-month period of operation are described in Section 2.0. Information collected during this period of operation is presented in Section 3.0. Conclusions and recommendations are presented in Section 4.0.

The Scope of Work for the IRM was presented in the Final Design Document presented to the NYSDEC on September 27, 1996. Implementation of the IRM consisted of the following elements:

- Installing an IRM system in the undeveloped parcel of land located downgradient of the source area. The IRM system consisted of installing three groundwater extraction wells, one bedrock monitoring well located in the source area which could potentially be used for additional recovery, two sets of nested piezometers located between each of the three extraction wells to monitor groundwater elevations between each well, a groundwater recovery and collection system to convey water to a central access vault, electrical power supply and controllers for each recovery pump, sample collection and flow monitoring appurtenances, and a force main sewer to discharge effluent from the access vault to a sanitary sewer located on the southeast portion of the site.
- Converting the deep bedrock monitoring well into a fourth recovery well.
- Installing a new sewer main crossing to provide sanitary sewer service to the undeveloped western parcel.
- Monitoring the quantity and quality of groundwater recovered from the system monthly and reporting this data to the local POTW.
- Monitoring the groundwater elevations in all on-site wells and piezometers to evaluate the effectiveness of the IRM as a groundwater extraction system and hydraulic barrier.
- Collecting groundwater samples from all wells located on and off site semi-annually beginning six months after initiation of the system. All groundwater samples collected during these semi-annual activities will be analyzed for volatile organic compounds (VOCs) by NYSDEC Test Method ASP 91-1 (now referenced as NYSDEC Test Method ASP 95-1).
- Preparing progress reports for submission to the NYSDEC. The reports should include data collected during the proceeding months of operation as well as information and activities to be performed during subsequent reporting periods.

2.1 IRM SYSTEM

The IRM installation activities were performed during December 1996 and January 1997. Operation of the IRM system was initiated on February 18, 1997. Modification of the IRM system was performed between April and June 1999. Between December 1999 and March 2000, a new sanitary sewer main crossing was installed beneath Victor-Manchester Road to provide separate service to the IRM system.

The layout of the IRM system, on-site groundwater monitoring wells and piezometers, and other pertinent features discussed in this report are shown in Figure 2-1. The system is currently in operation. The components comprising the IRM system are discussed in greater detail below.

2.1.1 IRM System Configuration

The IRM system originally consisted of a network of three groundwater recovery wells (designated as RW-01, RW-02 and RW-03). Between April and June 1999, one deep monitoring well (MW-2D) was converted to a recovery well (RW-4) and brought on line.

The four recovery wells are constructed with 20-foot screened intervals that straddle the contact between the overburden and the bedrock. The well depths range between approximately 27 and 33 feet below ground surface (bgs).

A Goulds Model 10GS electric, submersible pump was installed in each recovery well. Each pump is connected to a PumpTec® "Load-Sensor" type controller to automate the operation of the pump. The controllers are currently operating on 4-minute reset time intervals.

Underground piping and wiring connect the recovery wells to a Central Access Vault, located on the western side of the facility building. At the Central Access Vault, the individual groundwater conveyance pipe from each recovery well is connected to a manifold, which connects to a common header discharge pipe. Each individual conveyance pipe on the manifold is equipped with a shut-off valve, sample port, and totalizing flow meter to facilitate individual well monitoring. In addition, a shut-off valve, sample port, and totalizing flow meter are located on the common header pipe prior to discharge.

The extracted groundwater flows from the manifold and header in the Central Access Vault through a force main pipe and into a sanitary clean-out located on the southeast portion of the site. The sanitary clean-out was installed in-line with the existing sanitary sewer to facilitate discharges into a gravity sewer. Effluent is discharged into the clean-out riser pipe, down into the sanitary sewer where it is travels by gravity to the Canandaguia-Farmington Water and Sewer District for ultimate disposal. Prior to system start-up, it was necessary for the Canandaguia-Farmington Water and Sewer District to receive permission from the NYSDEC to receive this wastewater.

2.1.2 Installation of Sewer Main Crossing

Between December 1999 and March 2000, a new sanitary sewer main crossing was installed beneath Victor-Manchester Road to provide separate sanitary sewer service to the undeveloped western parcel of the former GTI site on which the recovery system is located. The recovery system will be disconnected from the sanitary sewer on the central parcel of the GTI site (where the former GTI building is located) and connected to the new sanitary sewer main crossing at the clean out on the western parcel.

2.2 IRM SYSTEM MONITORING

During this six-month period of operation, groundwater elevation, discharge volume, and groundwater analytical data were collected to monitor the effectiveness of the IRM system. The data collected are discussed in the following subsections.

2.2.1 Hydraulic Head Measurement

Hydraulic head (groundwater elevation) measurements were collected from each groundwater well and piezometer located on site a minimum of once per month during routine site visits. During some visits, hydraulic head measurements were also collected from nearby monitoring wells MW-6S and MW-6D. On March 28, 2000, prior to the collection of groundwater samples, the water level in each on-site and off-site groundwater monitoring well was measured and recorded to evaluate groundwater flow conditions. All groundwater measurements were collected using an electronic water level indicator capable of measuring the water elevation to the nearest 0.01 ft.

2.2.2 Groundwater Sampling and Analysis

During this six-month period of operation, composite effluent samples were collected monthly from the common header discharge in the Central Access Vault. These samples were submitted to Columbia Analytical Services, Inc. (CASI) of Rochester, New York for analysis of volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) method 8260. The analytical results of these composite samples were used to report estimated loadings to the POTW.

On March 28, 2000, groundwater samples were collected to evaluate regional groundwater quality. Prior to sample collection, the static water level in each well was measured (Section 2.2.1). Using the static water level measurements, the volume of water contained in each well (the well volume) was calculated. The monitoring well was then purged of a minimum of three well volumes of water or until dry using a new, disposable, high density polyethylene (HDPE) bailer equipped with a nylon cord.

Groundwater samples were collected within 24 hours of purging each well. Samples were placed into laboratory supplied containers and placed into a cooler with ice for preservation until delivered to the laboratory for analysis. One duplicate sample was collected from monitoring well MW-4. Groundwater samples were submitted to CASI and analyzed for VOCs by NYSDEC Test Method ASP 95-1. Chain-of-custody procedures were observed throughout the sampling event.

The data collected during this six-month period of IRM system operation and the results of the March 2000 semi-annual groundwater sampling event are presented in the following subsections.

3.1 HYDRAULIC HEAD MEASUREMENT RESULTS

Hydraulic head measurements collected during this operating period from on-site and off-site groundwater monitoring wells and piezometers are presented in Table 3-1.

The elevation data were used to construct monthly groundwater contour maps of the site for the overburden water-bearing zone (Figures 3-1 through 3-7) and the bedrock water-bearing zone (Figures 3-8 through 3-14). Figure 3-7 is a contour map illustrating groundwater flow conditions in the vicinity of the site in the overburden water-bearing zone on March 28, 2000. Figure 3-14 is a contour map illustrating groundwater flow conditions in the vicinity of the site in the bedrock water-bearing zone on March 28, 2000.

The groundwater contour maps from the GTI site indicate that groundwater in the overburden water-bearing zone typically flows to the southwest. In the bedrock water-bearing zone, groundwater typically flows toward a groundwater low area near the southwest corner of the site, in the vicinity of RW-03. The March 28, 2000 data showed the presence of a groundwater low in the vicinity of monitoring well MW-7D, which has been observed previously.

The groundwater elevation data indicate that the IRM system is continuing to influence groundwater flow patterns at the GTI site. These results are consistent with previous observed site conditions.

3.2 EFFLUENT OPERATING DATA AND ANALYTICAL RESULTS

A summary of the operating data and effluent analysis collected during each month of IRM system operation is presented in Table 3-2. The results continue to indicate that groundwater containing chemicals of concern (COCs) is being removed from underneath the GTI site. The COCs detected in the effluent samples consisted of trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), and cis-1,2-dichloroethene (cis-1,2-DCE). These COCs are consistent with earlier results. TCE was consistently the compound with the highest reported concentration.

The concentrations of COCs in the system effluent fluctuated during this operating period. The concentrations of COCs in the system effluent were higher at the beginning of this operating period and decreased toward the end of the operating period, with the exception of February 2000 in which the concentrations rose. The concentrations remained within the range of historical levels during the entire operating period.

The quantity of water removed by the system increased during the latter months (January through March 2000) of this operating period. This appears to be related to higher seasonal groundwater elevations during later winter and spring and is similar to conditions observed during previous years. Laboratory data sheets for effluent samples collected during this period of operation are provided in Appendix A.

3.3 GROUNDWATER ANALYTICAL RESULTS

A summary of groundwater analytical data collected from all wells on March 28, 2000 is presented in Table 3-3. Table 3-3 also summarizes the data from previous sampling events. The laboratory data sheets from CASI for this semi-annual groundwater sampling event, are provided in Appendix B. A data validation report for this data, prepared by URSGWC's QA/QC reviewer, is provided in Appendix C. Results of the validation indicate that the data are acceptable.

Groundwater analytical results obtained from the March 28, 2000 event showed that concentrations of COCs were generally lower than those reported for the previous (September 2, 1999) groundwater sampling event, but were within historical levels. The COCs detected in groundwater samples collected during March 2000 consisted of TCE, 1,1,1-TCA, cis-1,2-DCE, 1,1-dichloroethene (1,1-DCE), acetone, and vinyl chloride. TCE was consistently the compound with the highest reported concentration.

The COCs are consistent with the results of earlier sampling events, with the exception of 1,1-DCE and vinyl chloride, which were each detected for the first time in samples collected from recovery well RW-04 and monitoring well MW-7D, respectively. Vinyl chloride had previously been reported on one occasion (March 1999) in an effluent sample collected from the IRM system. Acetone had previously been detected on several occasions, but was also detected in the associated blank sample. Therefore, its occurrence was attributed to laboratory activities. Analytical results for the March 2000 sampling event reported the presence of acetone at a low concentration in the sample collected from recovery well RW-04. Acetone was not detected in the March 2000 associated blank sample. Therefore, its occurrence on this occasion cannot be attributed with confidence to laboratory activities.

Based on the information collected during this six-month period of IRM system operation, the following summary has been developed regarding environmental conditions at the GTI site:

- Groundwater flow in the overburden and bedrock zones at the site is primarily toward the southwest portion of the site. This is consistent with previous reports for the GTI site.
- The IRM system is influencing groundwater flow patterns in the vicinity of the GTI facility. The groundwater elevation data generally indicate the presence of a groundwater low in the bedrock water-bearing zone in the southwest portion of the site, in the immediate vicinity of the IRM system. The March 28, 2000 bedrock groundwater elevation data indicate the presence of a groundwater low southwest of the site in the vicinity of monitoring well MW-7D, which has been observed previously.
- Groundwater elevations were at low levels at the beginning of the operating period and increased during the latter part of the operating period (January through March).
- The monthly quantity of groundwater removed by the IRM system increased during the latter months (January through March) of the operating period. The quantity of groundwater discharged by the system appears to correlate with seasonal changes in groundwater elevations, with lower discharge and groundwater elevations in late, summer, fall, and early winter and higher discharge and groundwater elevations in late winter, spring, and early summer.
- The concentrations of COCs in the IRM system effluent were highest at the beginning of this operating period and decreased toward the end of the operating period, with the exception of February 2000 in which the concentrations rose. The concentrations of COCs remained within historical levels throughout the operating period. TCE was consistently the COC reported at the highest concentration in the IRM system effluent.
- Groundwater analytical results for samples collected during the March 28, 2000 sampling event indicated that concentrations of COCs were generally lower than those reported for the previous (September 2, 1999) groundwater sampling event, but were within historical levels.
- The COC concentrations in the IRM system effluent and groundwater monitoring well samples appear to be higher during periods of lower groundwater elevations and lower during periods of higher groundwater elevations.

Data collection activities at the site will be continued in the same manner. Continued monitoring of the site will provide additional data to evaluate the long-term effectiveness of the IRM system.

TABLE 3-1
SUMMARY OF MONITORING WELL GROUNDWATER ELEVATION DATA
OCTOBER 1999 - MARCH 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-01	641.79	10/01/99	13.57	628.22
		10/08/99	12.96	628.83
		10/30/99	13.55	628.24
		11/20/99	14.34	627.45
		12/01/99	10.89	630.90
		12/11/99	11.35	630.44
		12/29/99	8.28	633.51
		01/14/00	6.48	635.31
		02/01/00	9.14	632.65
		02/15/00	8.66	633.13
		03/01/00	3.72	638.07
		03/18/00	4.15	637.64
		03/28/00	4.64	637.15
MW-02S	641.28	10/01/99	DRY	DRY
		10/08/99	DRY	DRY
		10/30/99	DRY	DRY
		11/20/99	DRY	DRY
		12/01/99	DRY	DRY
		12/11/99	DRY	DRY
		12/29/99	DRY	DRY
		01/14/00	14.42	626.86
		02/01/00	DRY	DRY
		02/15/00	DRY	DRY
		03/01/00	5.71	635.57
		03/18/00	6.55	634.73
		03/28/00	7.61	633.67
MW-2D	642.37	Monitoring well converted to recovery well RW-4.		

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 3-1
SUMMARY OF MONITORING WELL GROUNDWATER ELEVATION DATA
OCTOBER 1999 - MARCH 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-03	642.17	10/01/99	17.28	624.89
		10/08/99	16.91	625.26
		10/30/99	17.58	624.59
		11/20/99	18.44	623.73
		12/01/99	15.35	626.82
		12/11/99	15.19	626.98
		12/29/99	12.68	629.49
		01/14/00	11.14	631.03
		02/01/00	13.45	628.72
		02/15/00	13.55	628.62
		03/01/00	4.80	637.37
		03/18/00	5.87	636.30
		03/28/00	8.08	634.09
MW-04	641.75	10/01/99	18.65	623.10
		10/08/99	19.54	622.21
		10/30/99	19.53	622.22
		11/20/99	19.56	622.19
		12/01/99	17.44	624.31
		12/11/99	17.81	623.94
		12/29/99	18.00	623.75
		01/14/00	17.11	624.64
		02/01/00	18.43	623.32
		02/15/00	18.48	623.27
		03/01/00	7.26	634.49
		03/18/00	7.91	633.84
		03/28/00	6.44	635.31

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 3-1
SUMMARY OF MONITORING WELL GROUNDWATER ELEVATION DATA
OCTOBER 1999 - MARCH 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-05S	640.85	10/01/99	20.53	620.32
		10/08/99	20.58	620.27
		10/30/99	DRY	DRY
		11/20/99	DRY	DRY
		12/01/99	20.10	620.75
		12/11/99	20.44	620.41
		12/29/99	19.12	621.73
		01/14/00	18.12	622.73
		02/01/00	18.83	622.02
		02/15/00	19.14	621.71
		03/01/00	8.63	632.22
		03/18/00	9.25	631.60
		03/28/00	10.77	630.08
MW-05D	641.01	10/01/99	22.61	618.40
		10/08/99	22.55	618.46
		10/30/99	22.82	618.19
		11/20/99	23.20	617.81
		12/01/99	22.29	618.72
		12/11/99	22.32	618.69
		12/29/99	21.30	619.71
		01/14/00	20.40	620.61
		02/01/00	20.98	620.03
		02/15/00	21.03	619.98
		03/01/00	15.05	625.96
		03/18/00	15.31	625.70
		03/28/00	17.58	623.43

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 3-1
SUMMARY OF MONITORING WELL GROUNDWATER ELEVATION DATA
OCTOBER 1999 - MARCH 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-06S	636.61	10/01/99	NM	NM
		10/08/99	15.38	621.23
		10/30/99	NM	NM
		11/20/99	16.42	620.19
		12/01/99	NM	NM
		12/11/99	15.58	621.03
		12/29/99	NM	NM
		01/14/00	13.37	623.24
		02/01/00	NM	NM
		02/15/00	13.97	622.64
		03/01/00	NM	NM
		03/18/00	4.09	632.52
		03/28/00	6.35	630.26
MW-06D	636.83	10/01/99	NM	NM
		10/08/99	15.54	621.29
		10/30/99	NM	NM
		11/20/99	16.65	620.18
		12/01/99	NM	NM
		12/11/99	15.78	621.05
		12/29/99	NM	NM
		01/14/00	13.58	623.25
		02/01/00	NM	NM
		02/15/00	14.22	622.61
		03/01/00	NM	NM
		03/18/00	4.36	632.47
		03/28/00	6.57	630.26

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 3-1
SUMMARY OF MONITORING WELL GROUNDWATER ELEVATION DATA
OCTOBER 1999 - MARCH 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-07S	634.29	10/01/99	NM	NM
		10/08/99	NM	NM
		10/30/99	NM	NM
		11/20/99	NM	NM
		12/01/99	NM	NM
		12/11/99	NM	NM
		12/29/99	NM	NM
		01/14/00	NM	NM
		02/01/00	NM	NM
		02/15/00	NM	NM
		03/01/00	NM	NM
		03/18/00	NM	NM
		03/28/00	6.56	627.73
MW-07D	634.16	10/01/99	NM	NM
		10/08/99	NM	NM
		10/30/99	NM	NM
		11/20/99	NM	NM
		12/01/99	NM	NM
		12/11/99	NM	NM
		12/29/99	NM	NM
		01/14/00	NM	NM
		02/01/00	NM	NM
		02/15/00	NM	NM
		03/01/00	NM	NM
		03/18/00	NM	NM
		03/28/00	31.81	602.35

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 3-1
SUMMARY OF MONITORING WELL GROUNDWATER ELEVATION DATA
OCTOBER 1999 - MARCH 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-09S	630.16	10/01/99	NM	NM
		10/08/99	NM	NM
		10/30/99	NM	NM
		11/20/99	NM	NM
		12/01/99	NM	NM
		12/11/99	NM	NM
		12/29/99	NM	NM
		01/14/00	NM	NM
		02/01/00	NM	NM
		02/15/00	NM	NM
		03/01/00	NM	NM
		03/18/00	NM	NM
		03/28/00	9.68	620.48
MW-09D	630.29	10/01/99	NM	NM
		10/08/99	NM	NM
		10/30/99	NM	NM
		11/20/99	NM	NM
		12/01/99	NM	NM
		12/11/99	NM	NM
		12/29/99	NM	NM
		01/14/00	NM	NM
		02/01/00	NM	NM
		02/15/00	NM	NM
		03/01/00	NM	NM
		03/18/00	NM	NM
		03/28/00	28.21	602.08

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 3-1
SUMMARY OF MONITORING WELL GROUNDWATER ELEVATION DATA
OCTOBER 1999 - MARCH 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-10S	629.00	10/01/99	NM	NM
		10/08/99	NM	NM
		10/30/99	NM	NM
		11/20/99	NM	NM
		12/01/99	NM	NM
		12/11/99	NM	NM
		12/29/99	NM	NM
		01/14/00	NM	NM
		02/01/00	NM	NM
		02/15/00	NM	NM
		03/01/00	NM	NM
		03/18/00	NM	NM
		03/28/00	15.34	613.66
MW-10D	626.80	10/01/99	NM	NM
		10/08/99	NM	NM
		10/30/99	NM	NM
		11/20/99	NM	NM
		12/01/99	NM	NM
		12/11/99	NM	NM
		12/29/99	NM	NM
		01/14/00	NM	NM
		02/01/00	NM	NM
		02/15/00	NM	NM
		03/01/00	NM	NM
		03/18/00	NM	NM
		03/28/00	15.89	610.91

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 3-1
SUMMARY OF MONITORING WELL GROUNDWATER ELEVATION DATA
OCTOBER 1999 - MARCH 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-11D	641.89	10/01/99	18.62	623.27
		10/08/99	18.54	623.35
		10/30/99	18.45	623.44
		11/20/99	18.85	623.04
		12/01/99	18.63	623.26
		12/11/99	18.19	623.70
		12/29/99	15.96	625.93
		01/14/00	14.33	627.56
		02/01/00	15.40	626.49
		02/15/00	15.09	626.80
		03/01/00	6.79	635.10
		03/18/00	7.10	634.79
		03/28/00	8.77	633.12
MW-13D	636.58	10/01/99	NM	NM
		10/08/99	NM	NM
		10/30/99	NM	NM
		11/20/99	NM	NM
		12/01/99	NM	NM
		12/11/99	NM	NM
		12/29/99	NM	NM
		01/14/00	NM	NM
		02/01/00	NM	NM
		02/15/00	NM	NM
		03/01/00	NM	NM
		03/18/00	NM	NM
		03/28/00	6.88	629.70

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 3-1
SUMMARY OF MONITORING WELL GROUNDWATER ELEVATION DATA
OCTOBER 1999 - MARCH 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
PZ-1S	640.50	10/01/99	DRY	DRY
		10/08/99	DRY	DRY
		10/30/99	DRY	DRY
		11/20/99	DRY	DRY
		12/01/99	DRY	DRY
		12/11/99	DRY	DRY
		12/29/99	DRY	DRY
		01/14/00	DRY	DRY
		02/01/00	DRY	DRY
		02/15/00	DRY	DRY
		03/01/00	5.95	634.55
		03/18/00	6.83	633.67
		03/28/00	6.21	634.29
PZ-1D	640.67	10/01/99	DRY	DRY
		10/08/99	DRY	DRY
		10/30/99	DRY	DRY
		11/20/99	DRY	DRY
		12/01/99	DRY	DRY
		12/11/99	DRY	DRY
		12/29/99	DRY	DRY
		01/14/00	DRY	DRY
		02/01/00	DRY	DRY
		02/15/00	DRY	DRY
		03/01/00	6.10	634.57
		03/18/00	7.00	633.67
		03/28/00	7.94	632.73

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 3-1
SUMMARY OF MONITORING WELL GROUNDWATER ELEVATION DATA
OCTOBER 1999 - MARCH 2000
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
PZ-2S	639.73	10/01/99	DRY	DRY
		10/08/99	DRY	DRY
		10/30/99	DRY	DRY
		11/20/99	DRY	DRY
		12/01/99	DRY	DRY
		12/11/99	DRY	DRY
		12/29/99	DRY	DRY
		01/14/00	DRY	DRY
		02/01/00	DRY	DRY
		02/15/00	DRY	DRY
		03/01/00	10.05	629.68
		03/18/00	10.19	629.54
		03/28/00	11.37	628.36
PZ-2D	640.01	10/01/99	20.05	619.96
		10/08/99	20.06	619.95
		10/30/99	20.35	619.66
		11/20/99	20.68	619.33
		12/01/99	19.88	620.13
		12/11/99	20.02	619.99
		12/29/99	19.58	620.43
		01/14/00	18.87	621.14
		02/01/00	19.62	620.39
		02/15/00	19.65	620.36
		03/01/00	11.48	628.53
		03/18/00	11.48	628.53
		03/28/00	12.58	627.43

NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 3-2
SUMMARY OF EFFLUENT DISCHARGES TO POTW
GRIFFIN TECHNOLOGY FACILITY
FARMINGTON, NEW YORK

	DISCHARGE	CONCENTRATIONS				
MONTH	(GAL.)	TCE	1,1,1-TCA	Cis-1,2-DCE	2-BUTANONE	VINYL CHLORIDE
March 1997	320,150	610	14	6.5	ND	ND
April 1997	362,132	240	5.8	6	ND	ND
May 1997	235,601	360	9.8	ND	ND	ND
June 1997	213,976	380	12	10	ND	ND
July 1997	135,320	570	16	15	ND	ND
August 1997	68,270	700	21	13	26.0	ND
September 1997	70,218	810	ND	ND	ND	ND
October 1997	90,717	880	18	10	ND	ND
November 1997	93,914	690	17	12	ND	ND
December 1997	210,268	420	ND	ND	ND	ND
January 1998	456,551	250	ND	ND	ND	ND
February 1998	191,493	180	ND	ND	ND	ND
March 1998	387,910	200	5.4	ND	ND	ND
April 1998	352,742	150	ND	ND	ND	ND
May 1998	191,088	250	ND	ND	ND	ND
June 1998	96,750	320	7.5	ND	ND	ND
July 1998	270,973	200	ND	ND	ND	ND
August 1998	68,147	400	13	12	ND	ND

Notes:

1. All results expressed in micrograms per liter (µg/l).
2. No other VOC compounds detected.
3. ND indicates not detected.

TABLE 3-2
SUMMARY OF EFFLUENT DISCHARGES TO POTW
GRIFFIN TECHNOLOGY FACILITY
FARMINGTON, NEW YORK

	DISCHARGE	CONCENTRATIONS				
MONTH	(GAL.)	TCE	1,1,1-TCA	Cis-1,2-DCE	2-BUTANONE	VINYL CHLORIDE
September 1998	44,030	510	14	15	ND	ND
October 1998	66,160	400	ND	ND	ND	ND
November 1998	44,150	440	12	ND	ND	ND
December 1998	43,580	590	22	19	ND	ND
January 1999	33,531	660	ND	ND	ND	ND
February 1999	144,720	230	ND	ND	ND	ND
March 1999	139,410	140	ND	12.0	ND	17
April 1999	188,610	170	ND	ND	ND	ND
May 1999	199,541	250	ND	ND	ND	ND
June 1999	75,780	370	ND	ND	ND	ND
July 1999	72,359	510	14	ND	ND	ND
August 1999	55,841	490	15	7.5	ND	ND
September 1999	64,019	450	ND	ND	ND	ND
October 1999	64,350	500	ND	ND	ND	ND
November 1999	58,261	450	ND	ND	ND	ND
December 1999	75,250	420	ND	ND	ND	ND
January 2000	107,879	410	10	ND	ND	ND
February 2000	149,221	460	12	5.6	ND	ND
March 2000	333,840	310	ND	ND	ND	ND

Notes:

1. All results expressed in micrograms per liter (µg/l).
2. No other VOC compounds detected.
3. ND indicates not detected.

TABLE 3-3
SUMMARY OF MONITORING WELL GROUNDWATER ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-01	12/19/94	ND	ND	ND	ND	ND	ND	ND
	05/21/96	ND	ND	ND	ND	ND	ND	ND
	08/13/97	ND	ND	ND	ND	ND	ND	ND
	03/18/98	ND	ND	ND	ND	ND	ND	ND
	09/02/98	ND	ND	ND	ND	ND	ND	ND
	03/18/99	ND	ND	ND	ND	ND	ND	ND
	09/02/99	ND	ND	ND	ND	ND	ND	ND
	03/28/00	ND	ND	ND	ND	ND	ND	ND
MW-02S	12/19/94	850	ND	ND	ND	ND	ND	ND
	05/21/96	30	ND	1	ND	ND	ND	ND
	08/13/97	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	03/18/98	17,000	ND	ND	ND	ND	ND	ND
	09/02/98	18,000	210	ND	ND	ND	ND	ND
	03/18/99	28	ND	ND	ND	ND	ND	ND
	09/02/99	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	03/28/00	6	ND	ND	ND	ND	ND	ND
MW-02D	08/13/97	450	23	42	ND	ND	ND	ND
	03/18/98	740	16	28	ND	ND	ND	ND
	09/02/98	680	25	39	ND	ND	ND	ND
	03/18/99	190	5	6	ND	ND	ND	ND
	Monitoring well converted to recovery well RW-4.							
MW-03	12/19/94	190	ND	ND	ND	ND	ND	ND
	05/21/96	120	ND	2	ND	ND	ND	ND
	08/13/97	150	ND	2	ND	ND	ND	ND
	03/18/98	88	ND	ND	ND	ND	ND	ND
	09/02/98	110	ND	ND	ND	ND	ND	ND
	03/18/99	45	ND	ND	ND	ND	ND	ND
	09/02/99	170	ND	ND	ND	ND	ND	ND
	03/28/00	93	ND	ND	ND	ND	ND	ND

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter (µg/l).
3. No other VOC compounds detected at method detection limit.
4. ND indicates not detected.
5. NS indicates no sample collected; unable to locate or access well.
6. DRY indicates well not sampled due to lack of water.

TABLE 3-3
SUMMARY OF MONITORING WELL GROUNDWATER ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-04	12/19/94	710	6.7	23	ND	ND	ND	ND
	05/21/96	16	ND	2	ND	ND	ND	ND
	08/13/97	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	03/18/98	59	ND	2	ND	ND	ND	ND
	09/02/98	450	7	20	ND	ND	ND	ND
	03/18/99	58	ND	1	ND	ND	ND	ND
	09/02/99	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	03/28/00	9	ND	ND	ND	ND	ND	ND
Duplicate	03/28/00	9	ND	ND	ND	ND	ND	ND
MW-05S	12/19/94	580	15	ND	ND	ND	ND	ND
	05/21/96	350	16	ND	ND	ND	ND	ND
	08/13/97	760	31	4	ND	ND	ND	ND
	03/18/98	120	4	ND	1	ND	ND	ND
	09/02/98	390	14	ND	ND	ND	ND	ND
	03/18/99	95	3	ND	ND	ND	ND	ND
	09/02/99	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	03/28/00	140	4	ND	ND	ND	ND	ND
MW-05D	12/19/94	820	23	ND	ND	ND	ND	ND
	05/21/96	1,000	48	8	ND	ND	ND	ND
	08/13/97	250	7	2	ND	ND	ND	ND
	03/18/98	250	7	ND	ND	ND	ND	ND
	09/02/98	300	8	2	ND	ND	ND	ND
	03/18/99	200	7	2	ND	ND	ND	ND
	09/02/99	220	6	2	ND	ND	ND	ND
	03/28/00	190	4	ND	ND	ND	ND	ND
MW-06S	12/19/94	270	7.8	ND	ND	ND	ND	ND
	05/21/96	ND	2	ND	ND	ND	ND	ND
	08/13/97	140	9	3	ND	ND	ND	ND
	03/18/98	5	ND	ND	ND	ND	ND	ND
	09/02/98	140	8	2	ND	ND	ND	ND
	03/17/99	ND	ND	ND	ND	ND	ND	ND
	09/02/99	110	6	4	ND	ND	ND	ND
	03/28/00	3	ND	ND	ND	ND	ND	ND

Notes:
1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter (µg/l).
3. No other VOC compounds detected at method detection limit.
4. ND indicates not detected.
5. NS indicates no sample collected; unable to locate or access well.
6. DRY indicates well not sampled due to lack of water.

TABLE 3-3
SUMMARY OF MONITORING WELL GROUNDWATER ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-06D	12/19/94	190	7.5	ND	ND	ND	ND	ND
	05/21/96	240	10	ND	ND	ND	ND	ND
	08/13/97	150	10	2	ND	ND	ND	ND
	03/18/98	6	ND	ND	ND	ND	ND	ND
	09/02/98	140	8	2	ND	ND	ND	ND
	03/17/99	ND	ND	ND	ND	ND	ND	ND
	09/02/99	110	7	2	ND	ND	ND	ND
	03/28/00	89	5	1	ND	ND	ND	ND
MW-07S	12/19/94	250	6.6	8	ND	ND	ND	ND
	05/21/96	310	7	6	ND	ND	ND	ND
	08/13/97	250	6	6	ND	ND	ND	ND
	03/18/98	3	ND	ND	ND	ND	ND	ND
	09/02/98	220	5	4	ND	ND	ND	ND
	03/17/99	ND	ND	ND	ND	ND	ND	ND
	09/02/99	220	4	4	ND	ND	ND	ND
	03/28/00	210	4	3	ND	ND	ND	ND
MW-07D	12/19/94	260	ND	7	ND	ND	ND	ND
	05/21/96	290	4	12	ND	ND	ND	ND
	08/13/97	180	2	13	ND	ND	ND	ND
	03/18/98	150	2	15	ND	ND	ND	ND
	09/02/98	200	2	15	ND	ND	ND	ND
	03/17/99	100	ND	8	ND	ND	ND	ND
	09/02/99	180	2	14	ND	ND	ND	ND
	03/28/00	130	ND	19	ND	ND	ND	4
MW-08S	12/19/94	29	ND	ND	ND	ND	ND	ND
	Well abandoned.							
MW-08D	12/19/94	55	ND	ND	ND	ND	ND	ND
	Well abandoned.							

Notes:
1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter (µg/l).
3. No other VOC compounds detected at method detection limit.
4. ND indicates not detected.
5. NS indicates no sample collected; unable to locate or access well.
6. DRY indicates well not sampled due to lack of water.

TABLE 3-3
SUMMARY OF MONITORING WELL GROUNDWATER ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-09S	12/19/94	ND	ND	ND	ND	ND	ND	ND
	05/21/96	ND	ND	ND	ND	ND	ND	ND
	08/13/97	2	ND	ND	ND	ND	ND	ND
	03/18/98	3	ND	ND	ND	ND	ND	ND
	09/02/98	NS	NS	NS	NS	NS	NS	NS
	03/18/99	ND	ND	ND	ND	ND	ND	ND
	09/02/99	ND	ND	ND	ND	ND	ND	ND
	03/28/00	ND	ND	ND	ND	ND	ND	ND
MW-09D	12/19/94	ND	ND	ND	ND	ND	ND	ND
	05/21/96	ND	ND	ND	ND	ND	ND	ND
	08/13/97	ND	ND	ND	ND	ND	ND	ND
	03/18/98	ND	ND	ND	ND	ND	ND	ND
	09/02/98	NS	NS	NS	NS	NS	NS	NS
	03/18/99	ND	ND	ND	ND	ND	ND	ND
	09/02/99	ND	ND	ND	ND	ND	ND	ND
	03/28/00	ND	ND	ND	ND	ND	ND	ND
MW-10S	12/19/94	7.8	ND	ND	ND	ND	ND	ND
	05/29/96	30	1	ND	ND	ND	ND	ND
	08/13/97	15	ND	ND	ND	ND	ND	ND
	03/18/98	NS	NS	NS	NS	NS	NS	NS
	09/02/98	8	ND	ND	ND	ND	ND	ND
	03/18/99	ND	ND	ND	ND	ND	ND	ND
	09/02/99	7	ND	ND	ND	ND	ND	ND
	03/28/00	1	ND	ND	ND	ND	ND	ND
MW-10D	12/19/94	8.2	ND	ND	ND	ND	ND	ND
	05/29/96	8	ND	ND	ND	ND	ND	ND
	08/13/97	15	ND	ND	ND	ND	ND	ND
	03/18/98	NS	NS	NS	NS	NS	NS	NS
	09/02/98	9	ND	ND	ND	ND	ND	ND
	03/18/99	ND	ND	ND	ND	ND	ND	ND
	09/02/99	7	ND	ND	ND	ND	ND	ND
	03/28/00	3	ND	ND	ND	ND	ND	ND

Notes:

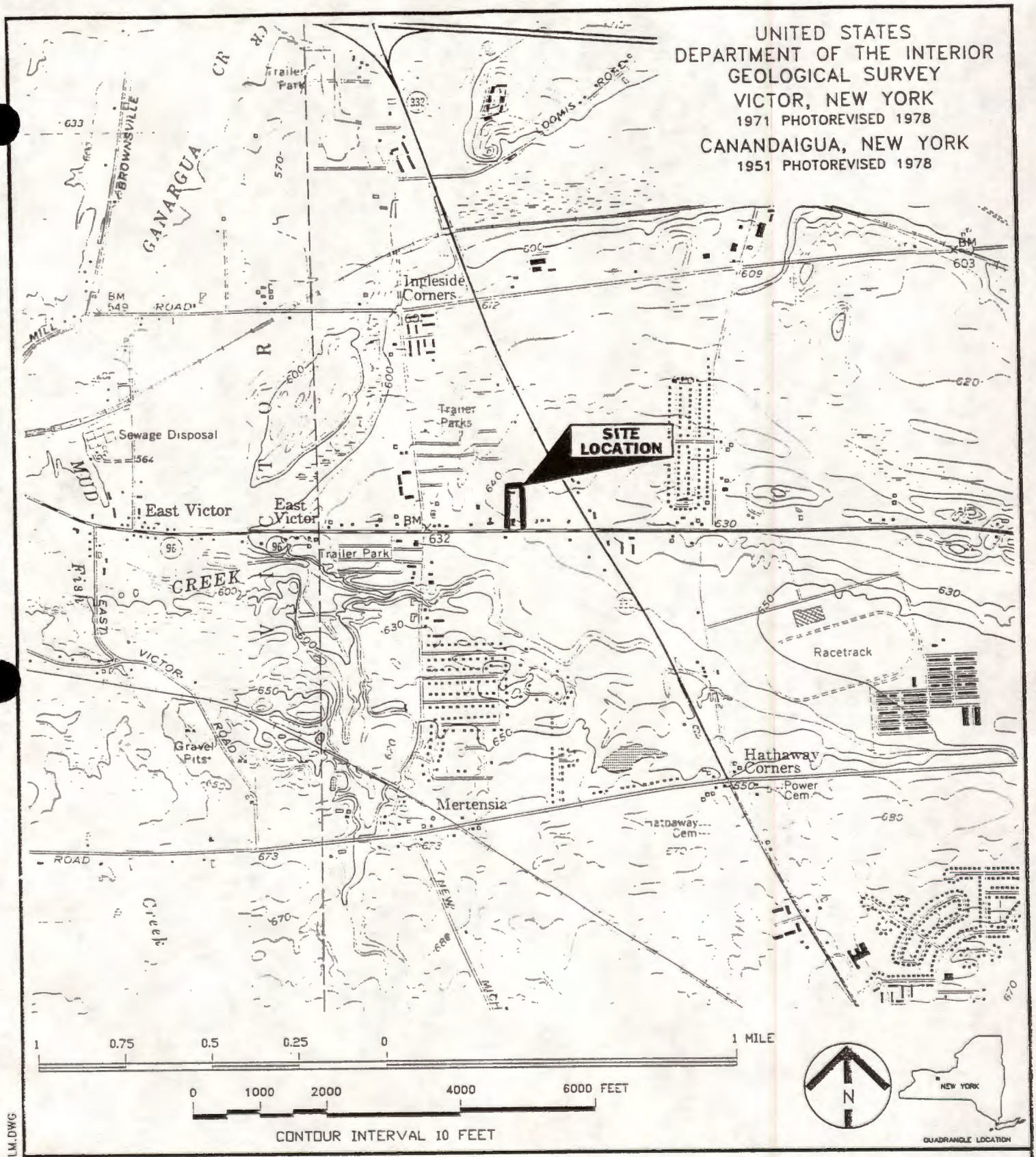
1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter (µg/l).
3. No other VOC compounds detected at method detection limit.
4. ND indicates not detected.
5. NS indicates no sample collected; unable to locate or access well.
6. DRY indicates well not sampled due to lack of water.

TABLE 3-3
SUMMARY OF MONITORING WELL GROUNDWATER ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-11D	04/11/96	ND	ND	ND	ND	ND	ND	ND
	05/21/96	ND	ND	ND	ND	ND	ND	ND
	08/13/97	ND	ND	ND	ND	ND	ND	ND
	03/18/98	ND	ND	ND	ND	ND	ND	ND
	09/02/98	ND	ND	ND	ND	ND	ND	ND
	03/18/99	ND	ND	ND	ND	ND	ND	ND
	09/02/99	ND	ND	ND	ND	ND	ND	ND
	03/28/00	ND	ND	ND	ND	ND	ND	ND
MW-13D	04/11/96	610	5	4	ND	ND	ND	ND
	05/21/96	190	5	4	ND	ND	ND	ND
	08/13/97	160	4	4	ND	ND	ND	ND
	03/18/98	110	2	ND	ND	ND	ND	ND
	09/02/98	140	3	2	ND	ND	ND	ND
	03/17/99	120	2	2	ND	ND	ND	ND
	09/02/99	140	3	2	ND	ND	ND	ND
	03/28/00	85	2	ND	ND	ND	ND	ND
RW-1	03/28/00	140	3	3	ND	ND	ND	ND
RW-2	03/28/00	100	2	ND	ND	ND	ND	ND
RW-3	03/28/00	170	4	ND	ND	ND	ND	ND
RW-4	03/28/00	1,000	22	11	ND	1	5	ND

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter (µg/l).
3. No other VOC compounds detected at method detection limit.
4. ND indicates not detected.
5. NS indicates no sample collected; unable to locate or access well.
6. DRY indicates well not sampled due to lack of water.



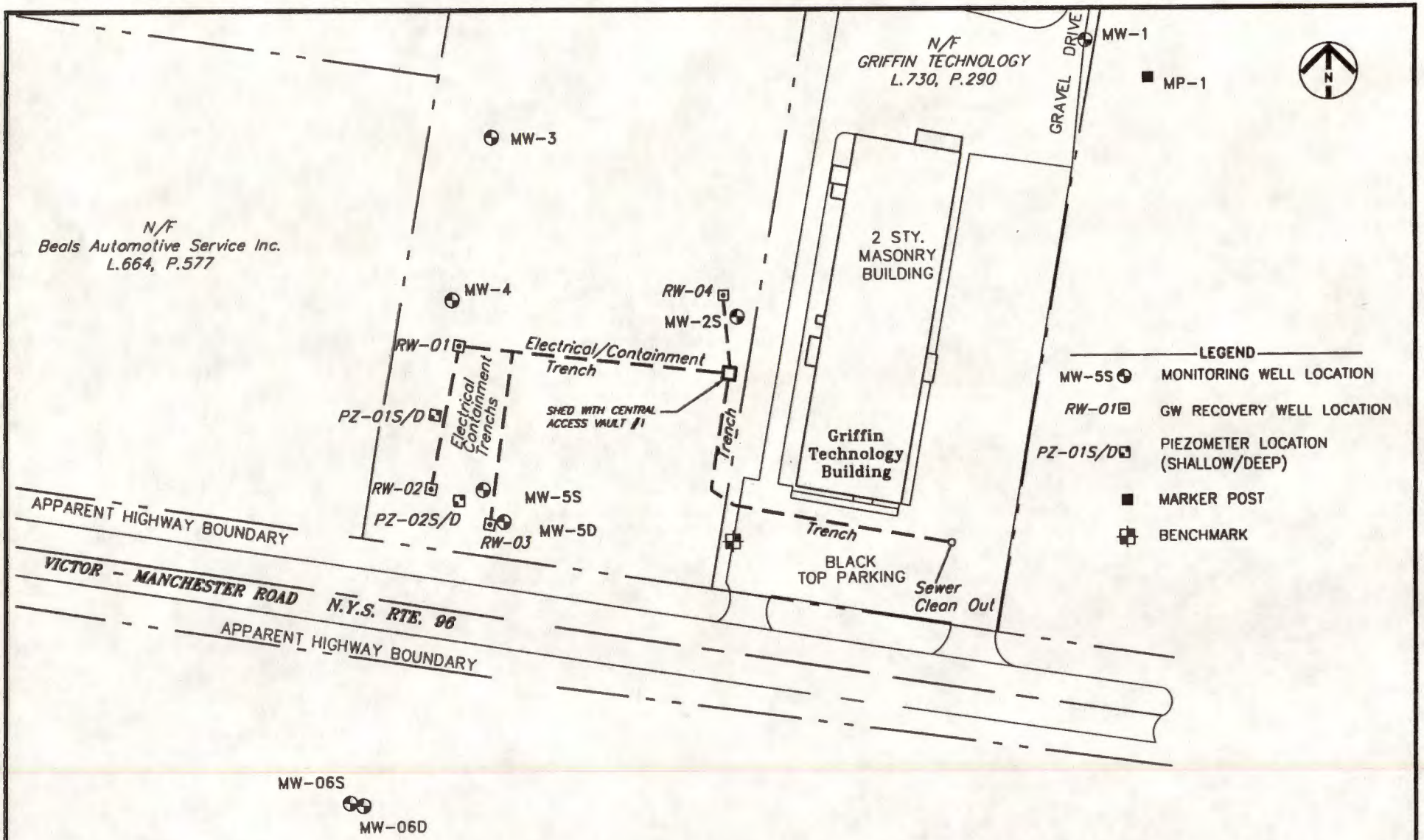
GENERAL LOCATION MAP

FORMER GRIFFIN TECHNOLOGY INC. - ONTARIO COUNTY - FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 6-18-99	FIGURE NO: 1-1

URS Greiner Woodward Clyde

6E06191\GLM.DWG



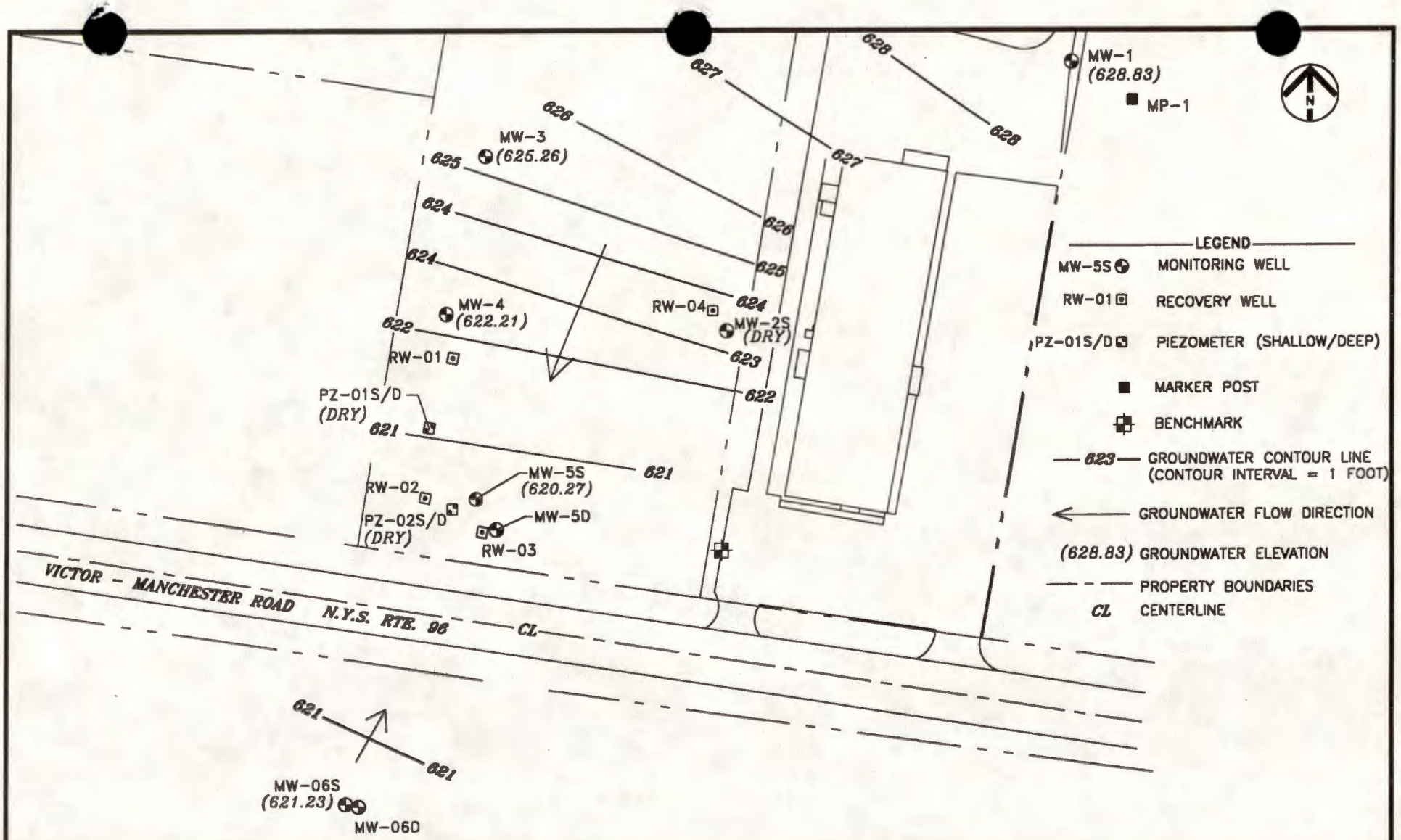
IRM SYSTEM LAYOUT

GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 9-27-99	FIGURE NO: 2-1

O:\6E06191\BASEMAP2.DWG

URS Greiner Woodward Clyde

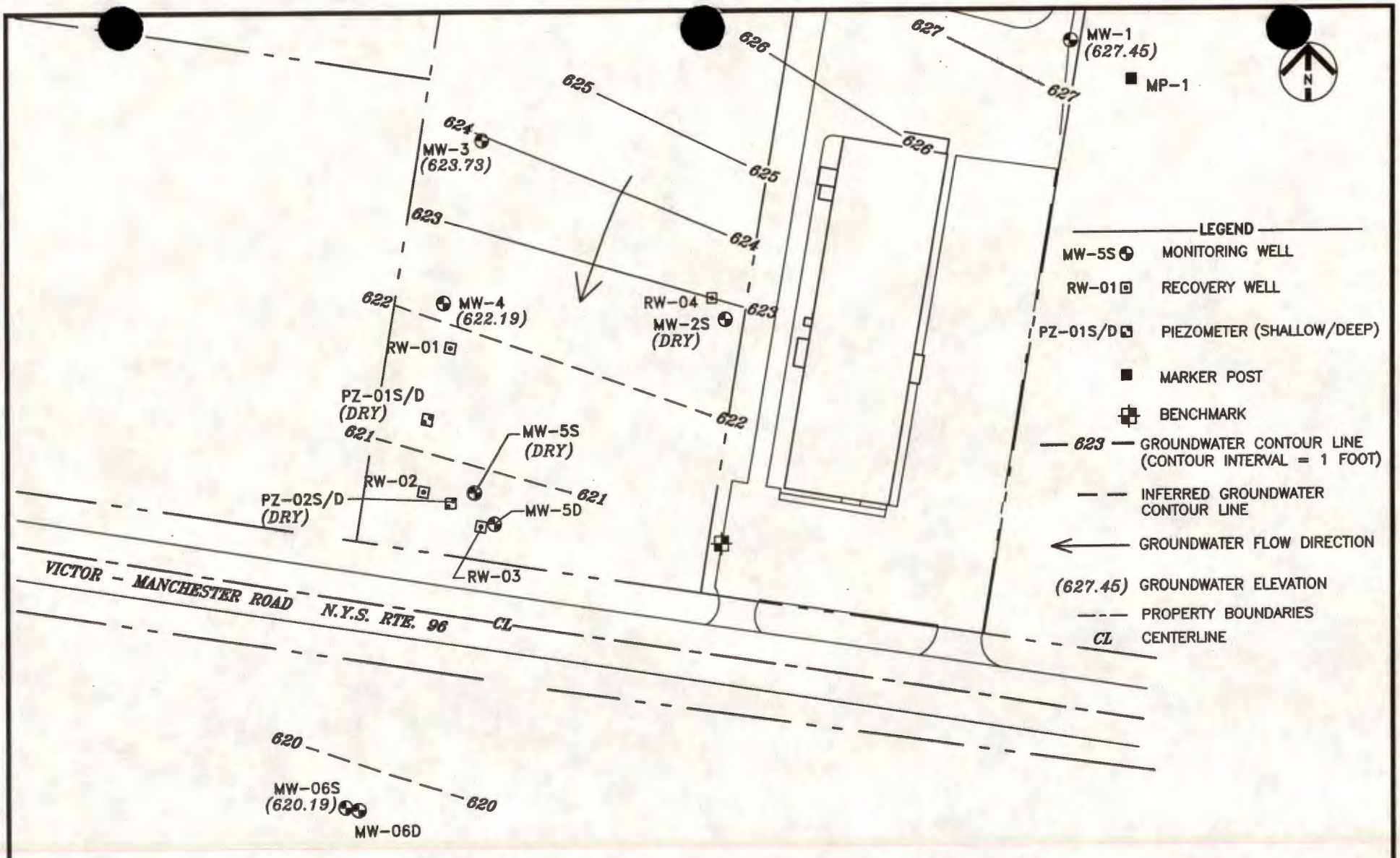


OVERBURDEN GROUNDWATER CONTOUR MAP
OCTOBER 8, 1999
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 03-06-00	FIGURE NO: 3-1

O:\6E06191\3-1.DWG

URS Greiner Woodward Clyde



0 40 80 160

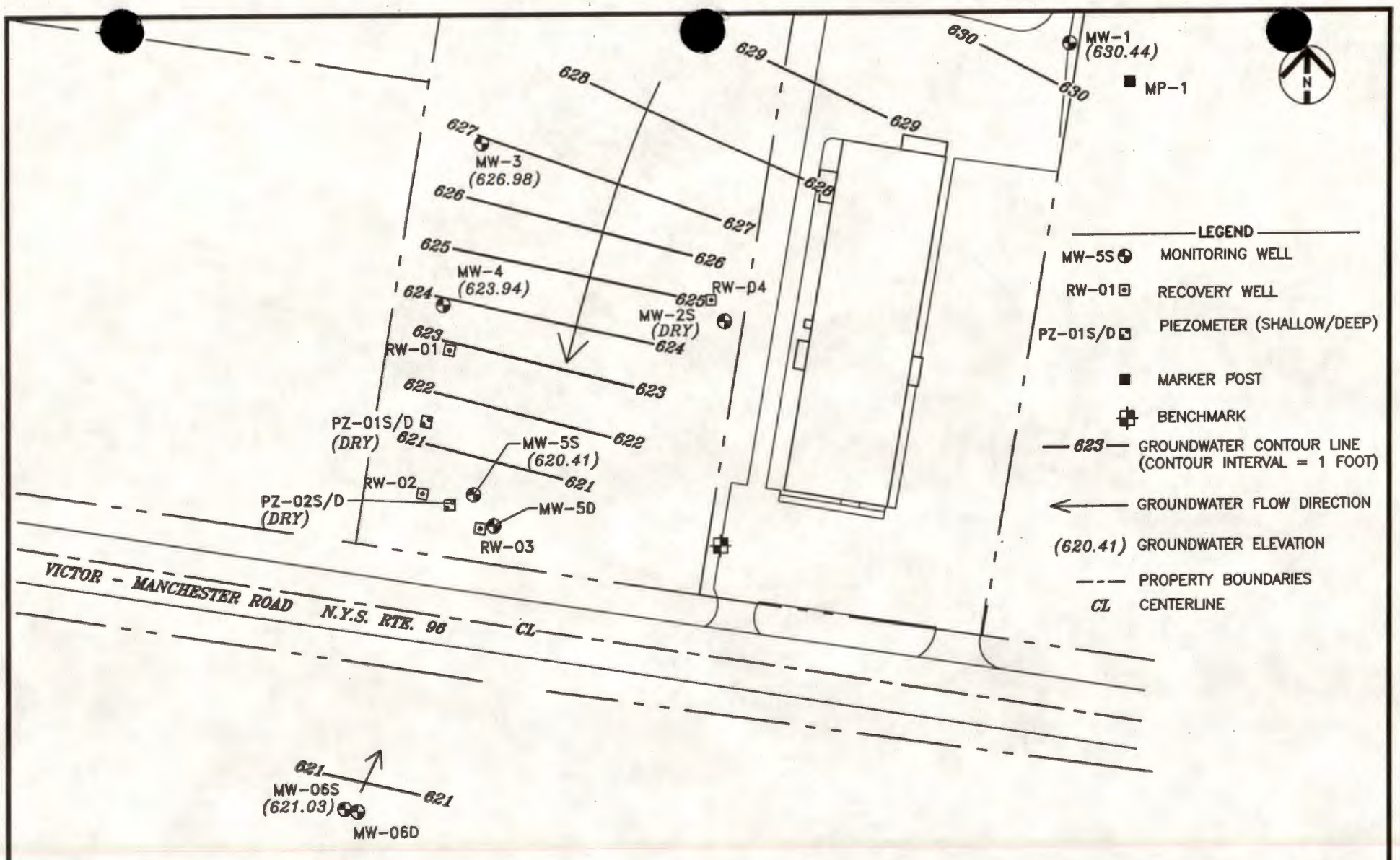
SCALE IN FEET

OVERBURDEN GROUNDWATER CONTOUR MAP
NOVEMBER 20, 1999
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 03-06-00	FIGURE NO: 3-2

Q:\6E06191\112099DF4.DWG

URS Greiner Woodward Clyde



0 40 80 160

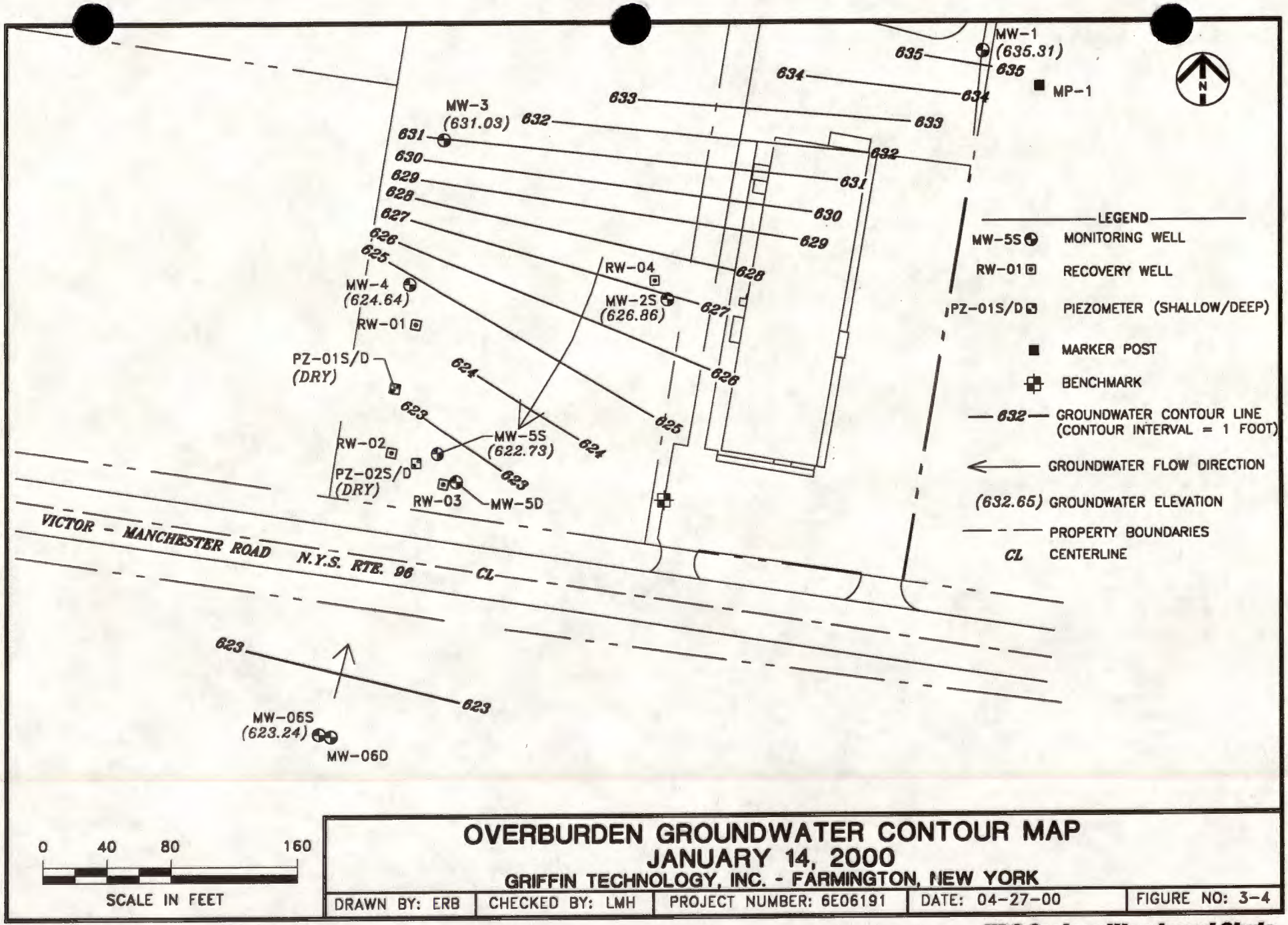
SCALE IN FEET

OVERBURDEN GROUNDWATER CONTOUR MAP
DECEMBER 11, 1999
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 03-07-00	FIGURE NO: 3-3

Q:\6E06191\121199S.DWG

URS Greiner Woodward Clyde

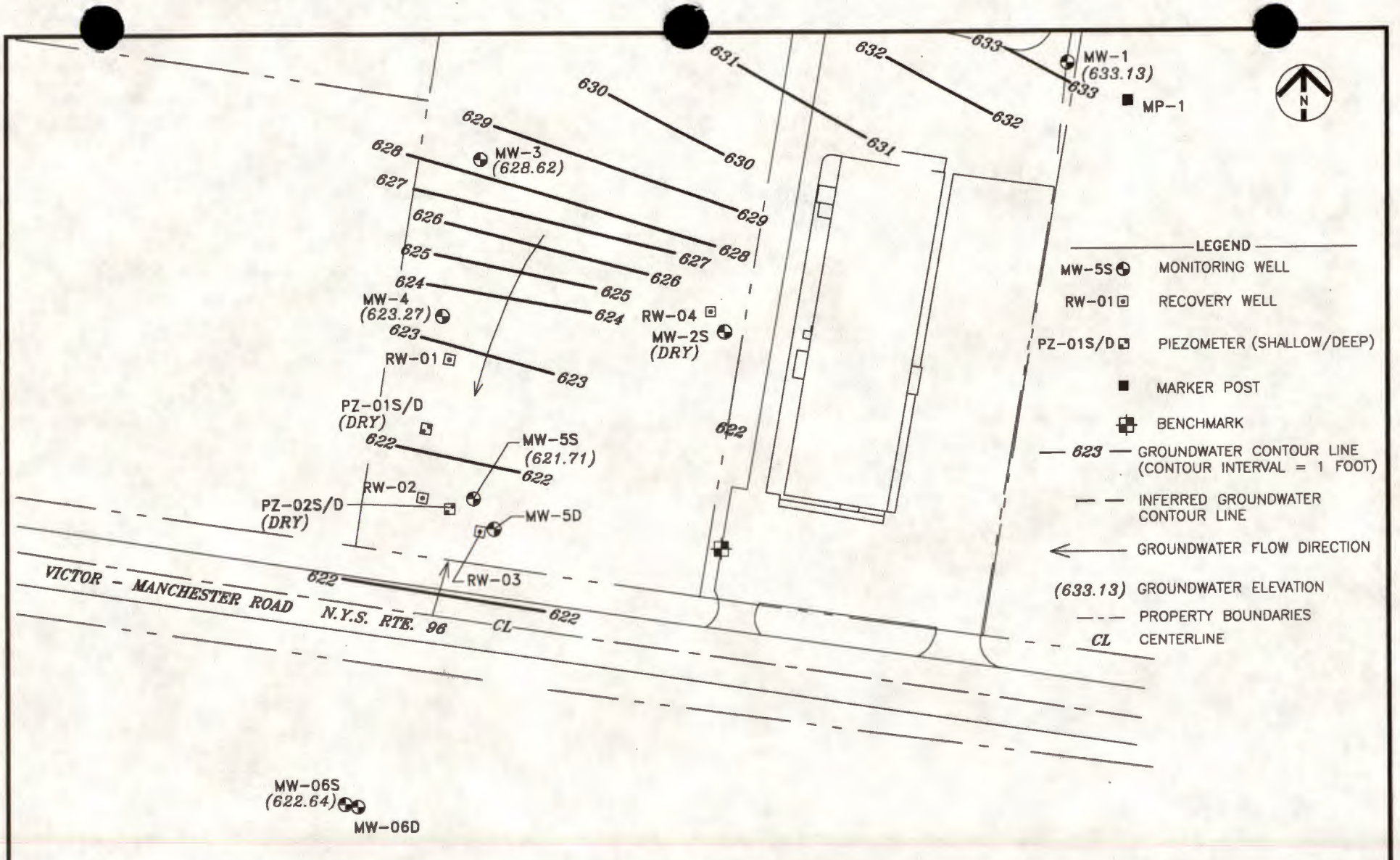


OVERBURDEN GROUNDWATER CONTOUR MAP
JANUARY 14, 2000
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 04-27-00	FIGURE NO: 3-4

O:\6E06191\3-4.DWG

URS Greiner Woodward Clyde



0 40 80 160

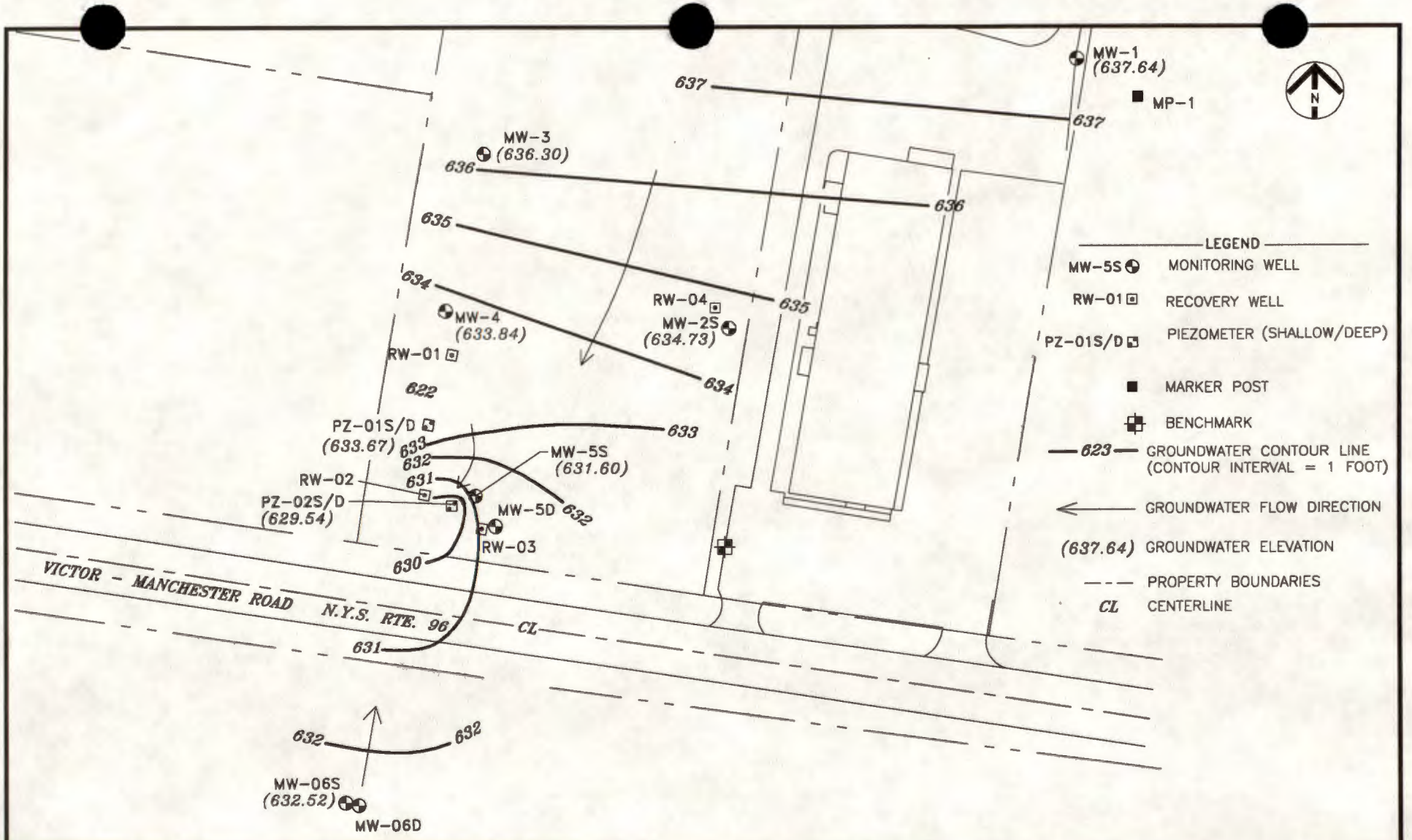
SCALE IN FEET

OVERBURDEN GROUNDWATER CONTOUR MAP
FEBRUARY 15, 2000
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 6/15/00	FIGURE NO: 3-5

Q:\6E06191\3-5.DWG

URS Greiner Woodward Clyde

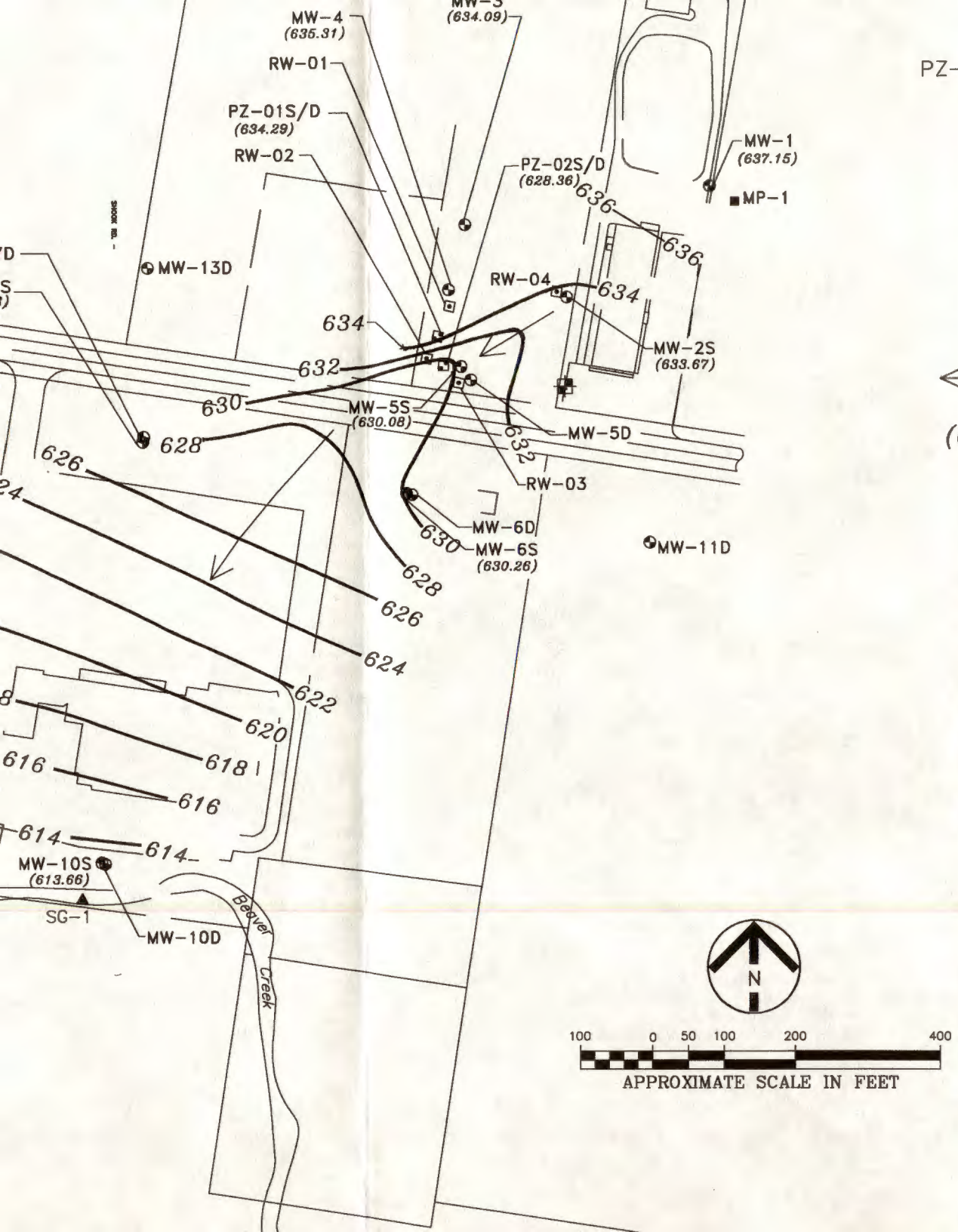


OVERBURDEN GROUNDWATER CONTOUR MAP
MARCH 18, 2000
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 6/15/00	FIGURE NO: 3-6

Q:\6E06191\3-6.DWG

URS Greiner Woodward Clyde



RW-01 ⊡ RECOVERY WELL

PZ-01S/D ⊡ PIEZOMETER (SHALLOW/DEEP)

▲ STAFF GAUGE

■ MARKER POST

BENCHMARK

626 — GROUNDWATER CONTOUR LINE (CONTOUR INTERVAL = 2 FOOT)

← GROUNDWATER FLOW DIRECTION

(637.15) GROUNDWATER ELEVATION

References:

1.) MAP PREPARED BY PAUL V. CRANDALL P.L.S. TITLED "LANDS OF R.D. PRODUCTS INC." LAST DATED JUNE 17, 1983. JOB #83138.

2.) MAP PREPARED BY PAUL V. CRANDALL P.L.S. TITLED "GRIFFIN TECHNOLOGY 6132 VICTOR-MANCHESTER ROAD, SOIL BORINGS & MONITORING WELLS" LAST DATED JUNE 19, 1991. JOB #911767.

3.) MAP PREPARED BY PAUL V. CRANDALL P.L.S. TITLED "MAP SHOWING LANDS OF JAMES V. ALAIMO – ANTHONY S. ALAIMO, M.D. – STEPHEN L. ALAIMO, M.D. – SAMUEL R. ALAIMO & JOSEPH W. ALAIMO ESTATE TO BE CONVEYED" LAST DATED AUGUST 25 1993. JOB #932113.

4.) MAP PREPARED BY BLASLAND & BOUCK ENGINEERS, P.C. TITLED "GRIFFIN TECHNOLOGY INC. VICTOR, NEW YORK OFF-SITE GROUND-WATER EVALUATION PROGRAM – PROPOSED MONITORING WELL LOCATION" LAST DATED JULY 1993.

5.) MAP PREPARED BY CRANDALL SURVEYORS, TITLED "GRIFFIN TECH-NOLOGY INC. – ON – SITE / OFF – SITE GROUND WATER EVAL-UATION PROGRAM – PART OF GRIFFIN TECHNOLOGY PROPERTY NORTH OF N.Y.S. ROUTE 96 & JOHN W. & JANE A. WADE PROP-ERTY SOUTH OF N.Y.S. ROUTE 96. LAST DATED 12-22-1994. JOB #942296

URS Greiner Woodward Clyde

30775 Bainbridge Road, Suite 200
Solon, Ohio 44139

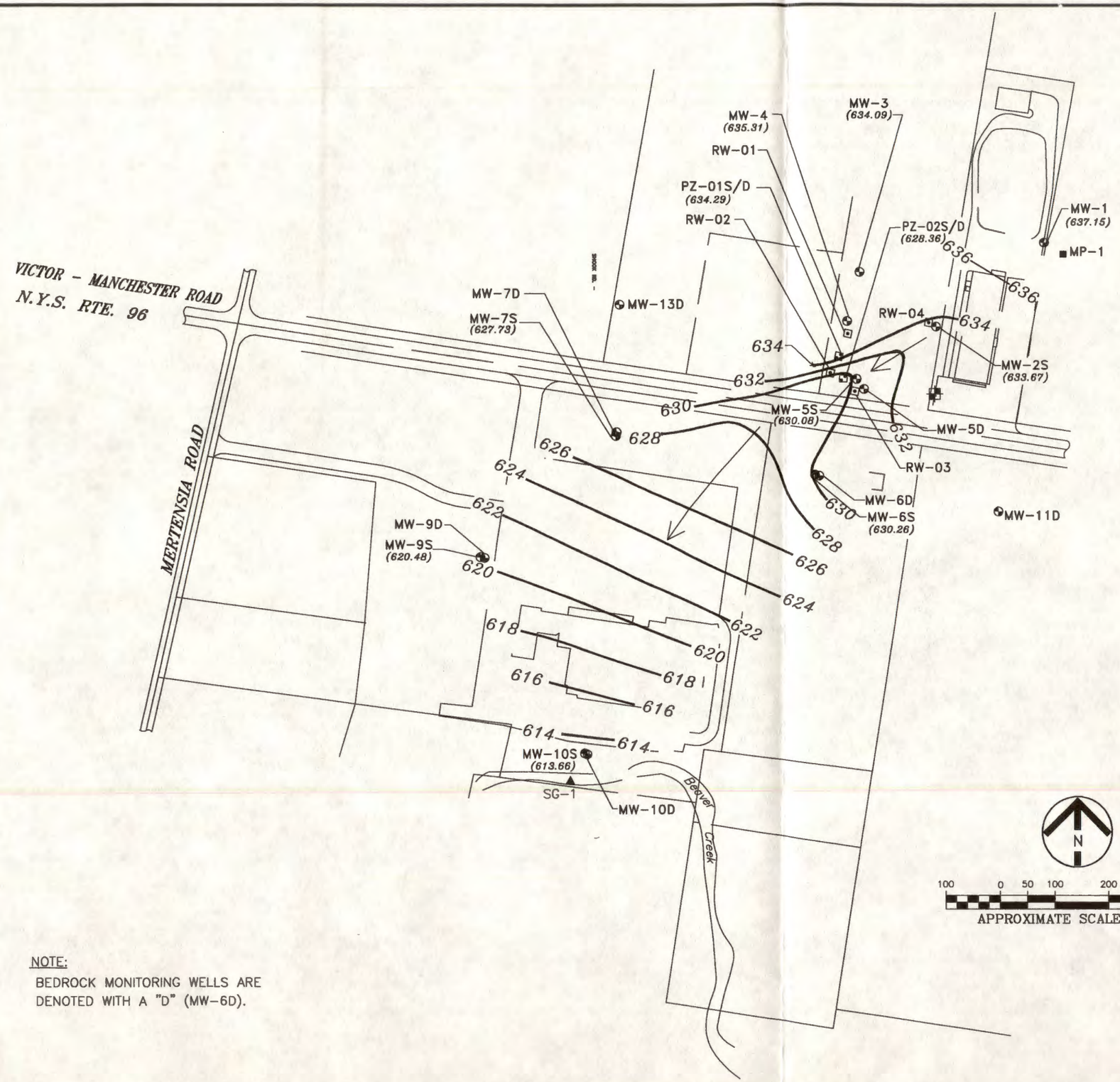
CLIENT: DIEBOLD, INC.

LOCATION: GRIFFIN TECHNOLOGY, INC., NEW YORK

OVERBURDEN GROUNDWATER CONTOUR MAP

MARCH 28, 2000

911\SH000328.DWG



NOTE:
BEDROCK MONITORING WELLS ARE DENOTED WITH A "D" (MW-6D).

LEGEND

- MW-5S — MONITORING WELL
- RW-01 — RECOVERY WELL
- PZ-01S/D — PIEZOMETER (SHALLOW/DEEP)
- ▲ STAFF GAUGE
- ■ MARKER POST
- BENCHMARK
- *626* — GROUNDWATER CONTOUR LINE (CONTOUR INTERVAL = 2 FOOT)
- ← GROUNDWATER FLOW DIRECTION
- *(637.15)* GROUNDWATER ELEVATION

References:

1.) MAP PREPARED BY PAUL V. CRANDALL P.L.S. TITLED "LANDS OF R.D. PRODUCTS INC." LAST DATED JUNE 17, 1983. JOB #83138.

2.) MAP PREPARED BY PAUL V. CRANDALL P.L.S. TITLED "GRIFFIN TECHNOLOGY 6132 VICTOR-MANCHESTER ROAD, SOIL BORINGS & MONITORING WELLS" LAST DATED JUNE 19, 1991. JOB #911767.

3.) MAP PREPARED BY PAUL V. CRANDALL P.L.S. TITLED "MAP SHOWING LANDS OF JAMES V. ALAIMO - ANTHONY S. ALAIMO, M.D. - STEPHEN L. ALAIMO, M.D. - SAMUEL R. ALAIMO & JOSEPH W. ALAIMO ESTATE TO BE CONVEYED" LAST DATED AUGUST 25 1993. JOB #932113.

4.) MAP PREPARED BY BLASLAND & BOUCK ENGINEERS, P.C. TITLED "GRIFFIN TECHNOLOGY INC. VICTOR, NEW YORK OFF-SITE GROUND-WATER EVALUATION PROGRAM - PROPOSED MONITORING WELL LOCATION" LAST DATED JULY 1993.

5.) MAP PREPARED BY CRANDALL SURVEYORS, TITLED "GRIFFIN TECHNOLOGY INC. - ON - SITE / OFF - SITE GROUND WATER EVALUATION PROGRAM - PART OF GRIFFIN TECHNOLOGY PROPERTY NORTH OF N.Y.S. ROUTE 96 & JOHN W. & JANE A. WADE PROPERTY SOUTH OF N.Y.S. ROUTE 96. LAST DATED 12-22-1994. JOB #942296

URS Greiner Woodward Clyde
30775 Bainbridge Road, Suite 200
Solon, Ohio 44139

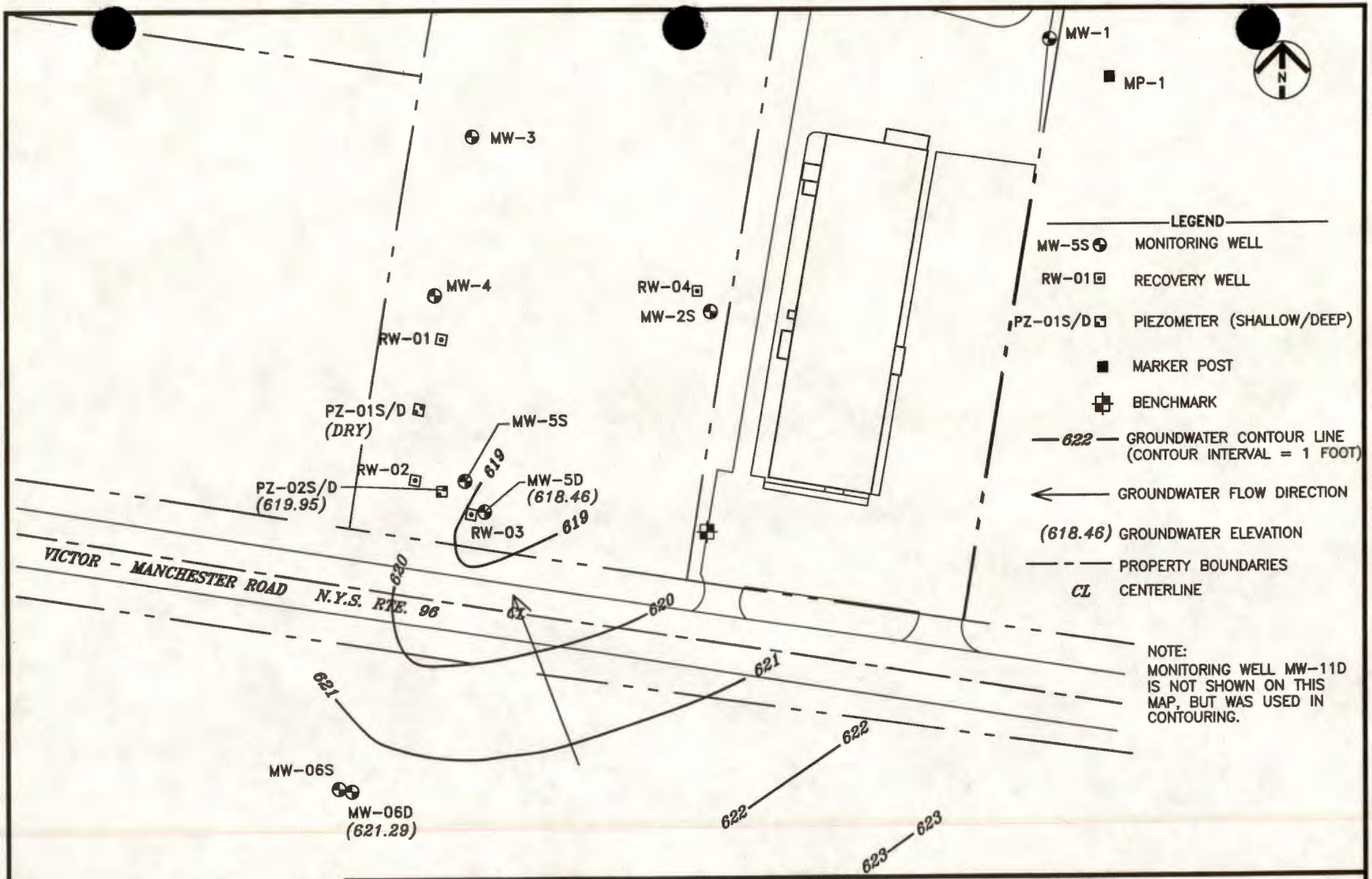
CLIENT: DIEBOLD, INC.

LOCATION: GRIFFIN TECHNOLOGY, INC., NEW YORK

OVERBURDEN GROUNDWATER CONTOUR MAP MARCH 28, 2000

DRAWN BY:	CHECKED BY:	PROJECT NO:	DATE:	FIGURE NO:
ERB	LMH	6E06191	6/15/00	3-7

Q:\6E06191\SH000328.DWG

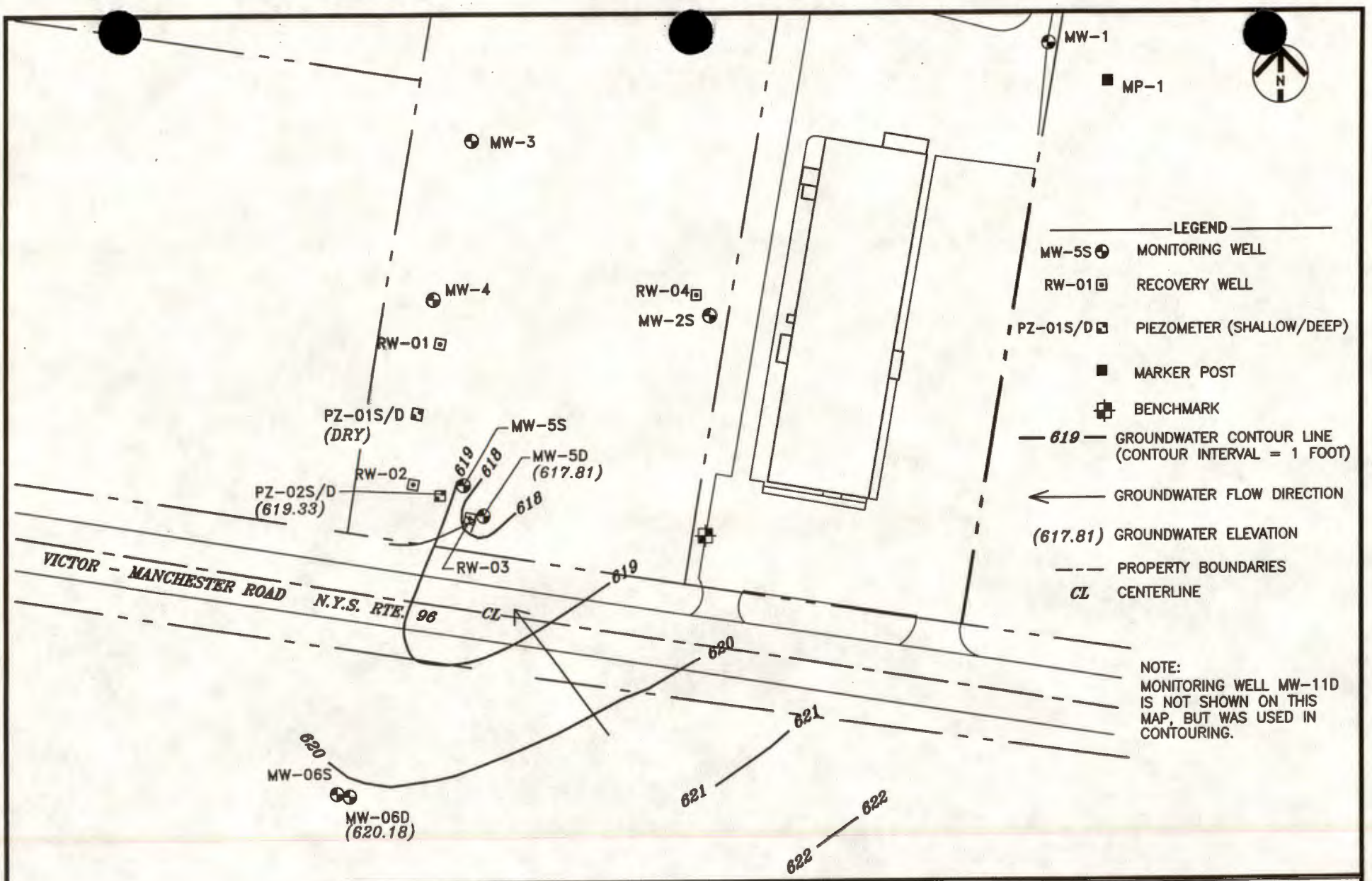


BEDROCK GROUNDWATER CONTOUR MAP
OCTOBER 8, 1999
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 03-06-00	FIGURE NO: 3-8

Q:\6E06191\10899D.DWG

URS Greiner Woodward Clyde



0 40 80 160

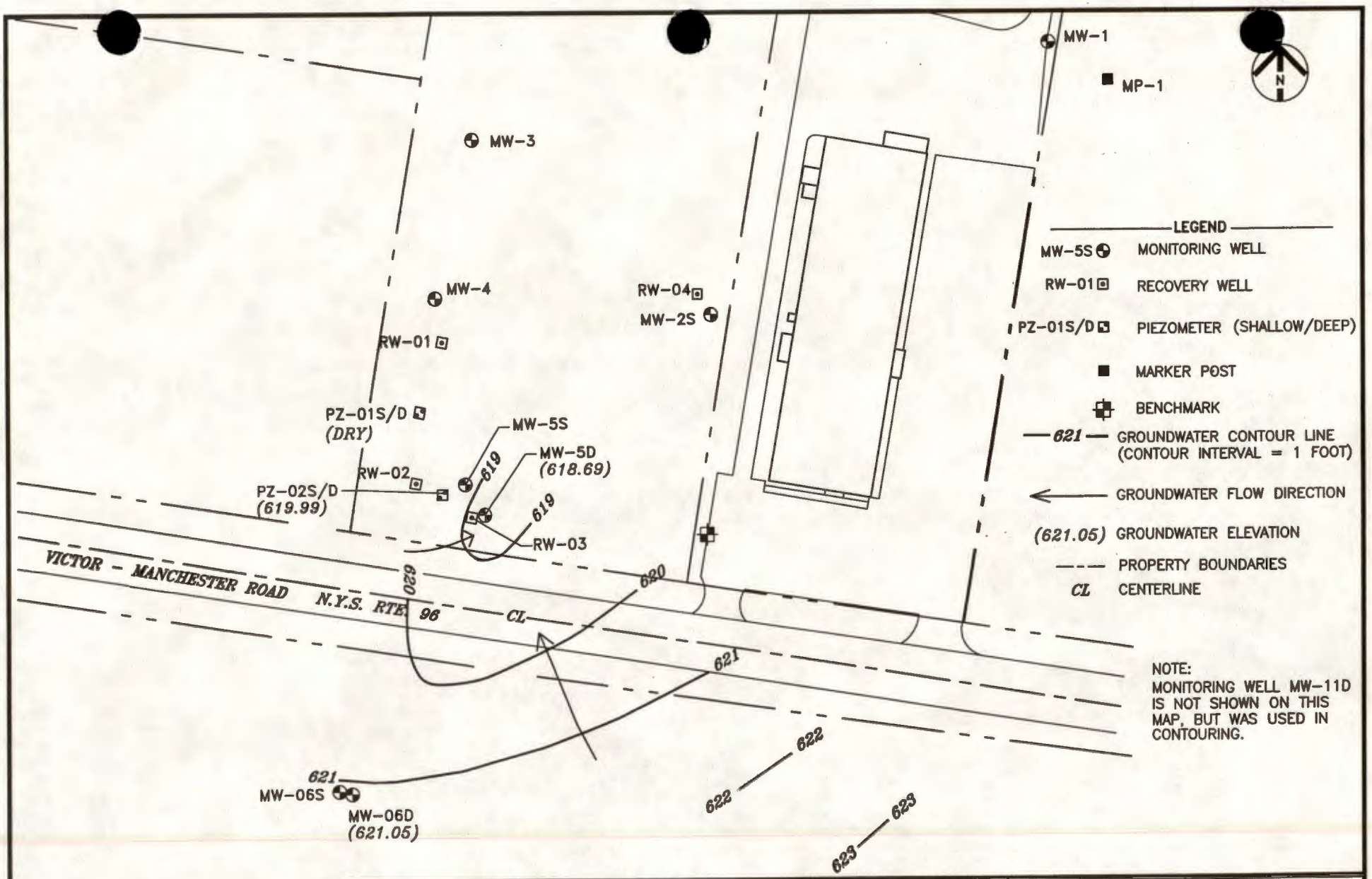
SCALE IN FEET

BEDROCK GROUNDWATER CONTOUR MAP
NOVEMBER 20, 1999
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 03-06-00	FIGURE NO: 3-9

Q:\6E06191\112099D.DWG

URS Greiner Woodward Clyde

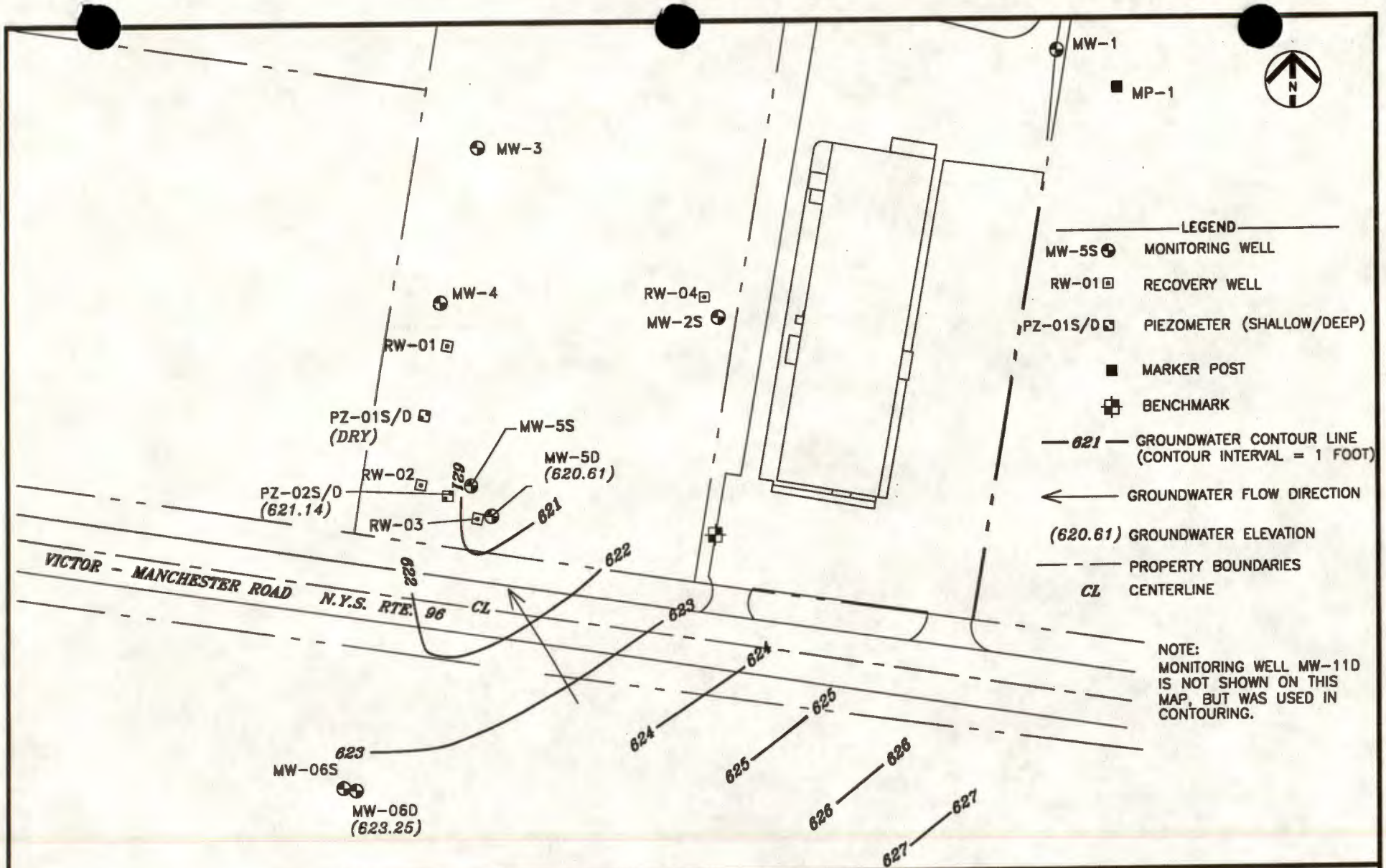


BEDROCK GROUNDWATER CONTOUR MAP
DECEMBER 11, 1999
GRIFFIN TECHNOLOGY, INC - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 03-06-00	FIGURE NO: 3-10

Q:\6E06191\121199D.DWG

URS Greiner Woodward Clyde

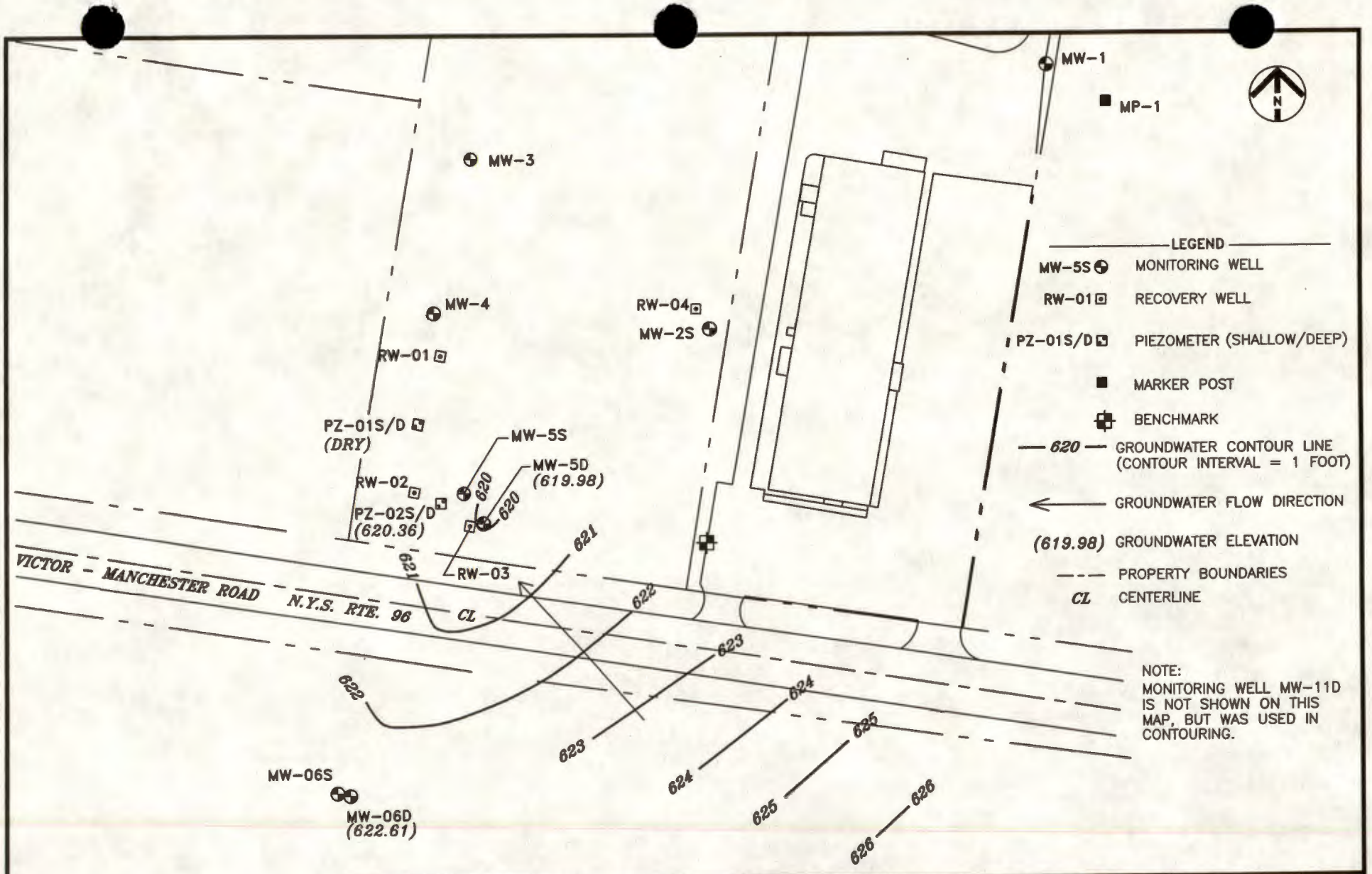


BEDROCK GROUNDWATER CONTOUR MAP
JANUARY 14, 2000
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 4/26/00	FIGURE NO: 3-11

Q:\6E06191\3-11.DWG

URS Greiner Woodward Clyde

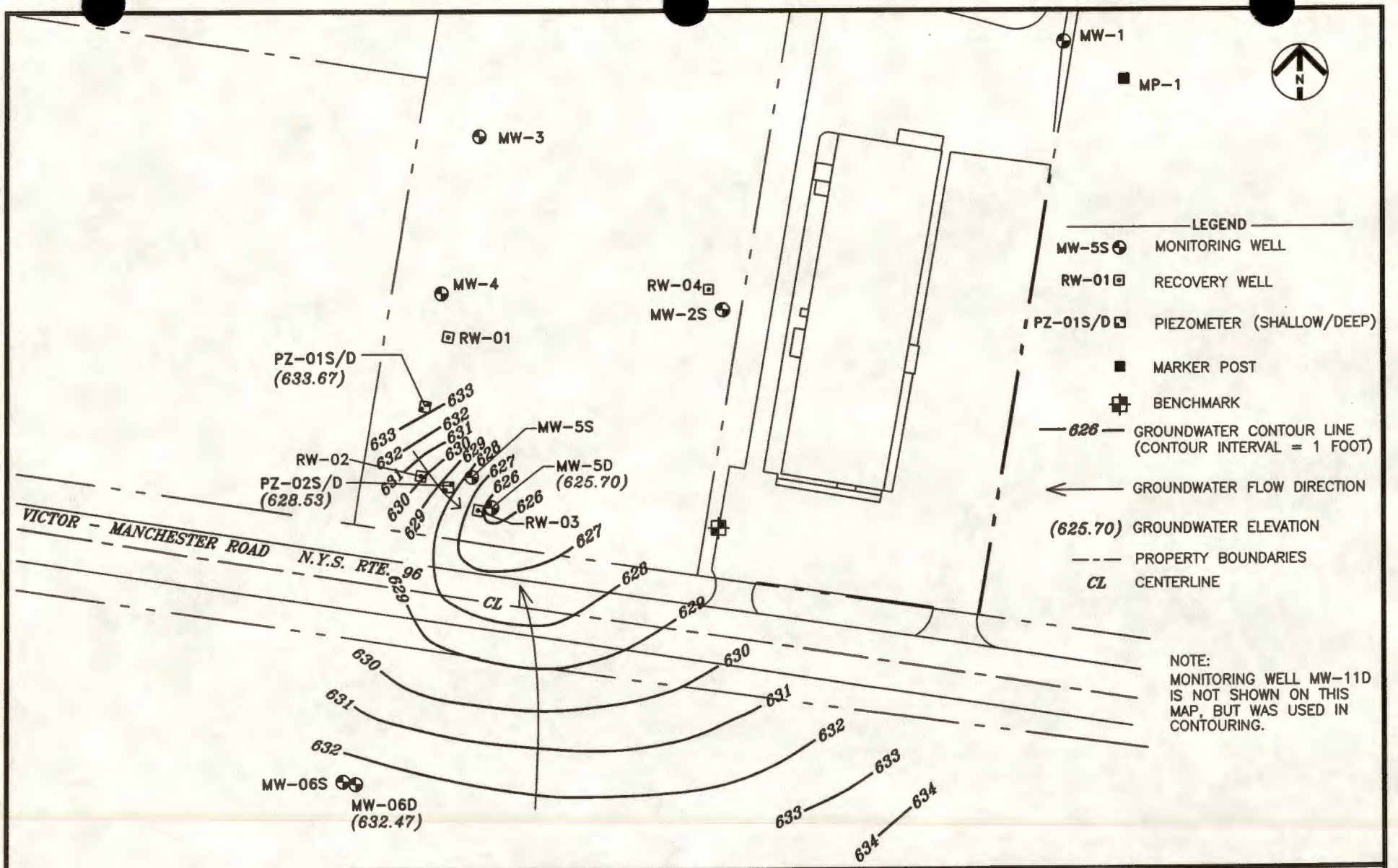


BEDROCK GROUNDWATER CONTOUR MAP
FEBRUARY 15, 2000
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 05-24-00	FIGURE NO: 3-12

O:\6E06191\3-12.DWG

URS Greiner Woodward Clyde

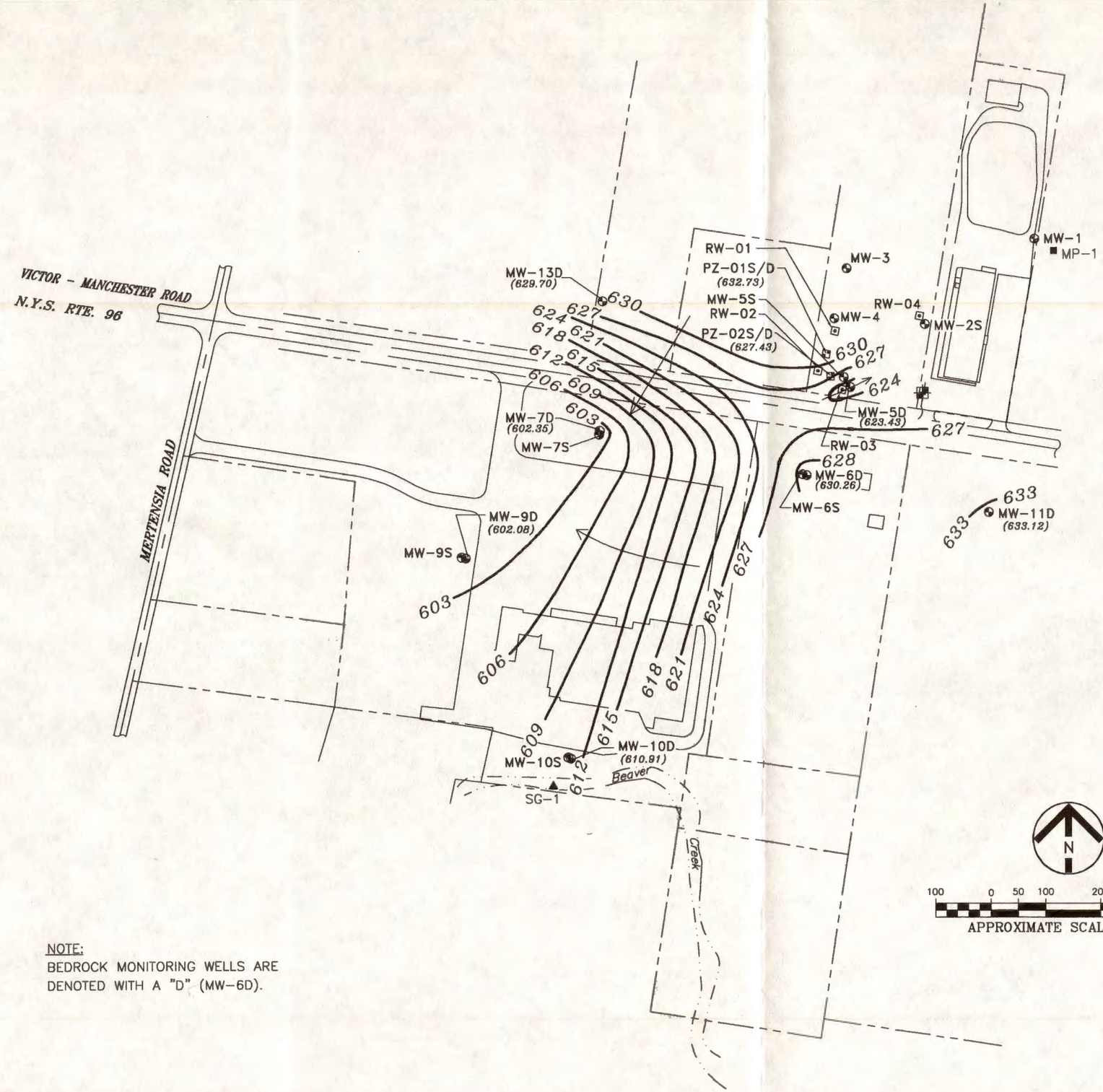


BEDROCK GROUNDWATER CONTOUR MAP
MARCH 18, 2000
GRIFFIN TECHNOLOGY, INC - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 4/28/00	FIGURE NO: 3-13

Q:\6E06191\3-13.DWG

URS Greiner Woodward Clyde



NOTE:
BEDROCK MONITORING WELLS ARE DENOTED WITH A "D" (MW-6D).

LEGEND

- MW-5S — MONITORING WELL
- RW-01 — RECOVERY WELL
- PZ-01S/D — PIEZOMETER (SHALLOW/DEEP)
- ▲ STAFF GAUGE
- ■ MARKER POST
- BENCHMARK
- *618* — GROUNDWATER CONTOUR LINE (CONTOUR INTERVAL = 3 FOOT)
- ← GROUNDWATER FLOW DIRECTION
- *(633.12)* GROUNDWATER ELEVATION

References:

1.) MAP PREPARED BY PAUL V. CRANDALL P.L.S. TITLED "LANDS OF R.D. PRODUCTS INC." LAST DATED JUNE 17, 1983. JOB #83138.

2.) MAP PREPARED BY PAUL V. CRANDALL P.L.S. TITLED "GRIFFIN TECHNOLOGY 6132 VICTOR-MANCHESTER ROAD, SOIL BORINGS & MONITORING WELLS" LAST DATED JUNE 19, 1991. JOB #911767.

3.) MAP PREPARED BY PAUL V. CRANDALL P.L.S. TITLED "MAP SHOWING LANDS OF JAMES V. ALAIMO - ANTHONY S. ALAIMO, M.D. - STEPHEN L. ALAIMO, M.D. - SAMUEL R. ALAIMO & JOSEPH W. ALAIMO ESTATE TO BE CONVEYED" LAST DATED AUGUST 25 1993. JOB #932113.

4.) MAP PREPARED BY BLASLAND & BOUCK ENGINEERS, P.C. TITLED "GRIFFIN TECHNOLOGY INC. VICTOR, NEW YORK OFF-SITE GROUND-WATER EVALUATION PROGRAM - PROPOSED MONITORING WELL LOCATION" LAST DATED JULY 1993.

5.) MAP PREPARED BY CRANDALL SURVEYORS, TITLED "GRIFFIN TECHNOLOGY INC. - ON - SITE / OFF - SITE GROUND WATER EVALUATION PROGRAM - PART OF GRIFFIN TECHNOLOGY PROPERTY NORTH OF N.Y.S. ROUTE 96 & JOHN W. & JANE A. WADE PROPERTY SOUTH OF N.Y.S. ROUTE 96. LAST DATED 12-22-1994. JOB #942296

URS Greiner Woodward Clyde

30775 Bainbridge Road, Suite 200
Solon, Ohio 44139

CLIENT: DIEBOLD, INC.

LOCATION: GRIFFIN TECHNOLOGY, INC. , NEW YORK

BEDROCK GROUNDWATER CONTOUR MAP MARCH 28, 2000

DRAWN BY:	CHECKED BY:	PROJECT NO:	DATE:	FIGURE NO:
ERB	LMH	6E06191	6/15/00	3-14

Q:\6E06191\032800DP

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

April 6, 2000

Mr. Mark Schmidt
URS Greiner Woodward Clyde
30775 Bainbridge Road
Suite 200
Solon, OH 44139

PROJECT:GRIFFIN IRM
Submission #:R2001319

Dear Mr. Schmidt

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson
Client Service Manager

Enc.

Columbia Analytical Services inc.

1 Mustard ST.
Suite 250
Rochester, NY 14609

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Greiner Woodward Clyde
Project Reference: GRIFFIN IRM
Lab Submission # : R2001319
Reported : 04/06/00

Report Contains a total of 7 pages

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal.

Columbia Analytical Services Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2001319

Lab ID	Client ID
365967	EFF-3-18-00

All samples were received in good condition.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

Columbia Analytical Services Inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

(The basis of this proposal are the EPA-CLP Qualifiers)

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. For further explanation see case narrative / cover letter.

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.

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

N - Spiked sample recovery not within control limits.
(Flag the entire batch - Inorganic analysis only)

* - Duplicate analysis not within control limits.
(Flag the entire batch - Inorganic analysis only)

- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

S - Reported value determined by Method of Standard Additions. (MSA)

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

NY ID # in Rochester:	10145	NJ ID # in Rochester:	73004
CT ID # in Rochester:	PH0556	RI ID # in Rochester:	158
MA ID # in Rochester:	M-NY032	NH ID # in Rochester:	294198-A
OH EPA # in Rochester:	VAP	AIHA # in Rochester:	7889

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 04/06/00

URS Greiner Woodward Clyde
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-3-18-00

Date Sampled : 03/18/00 10:45 **Order #:** 365967 **Sample Matrix:** WATER
Date Received: 03/18/00 **Submission #:** R2001319 **Analytical Run** 49090

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 03/30/00			
ANALYTICAL DILUTION: 2.00			
ACETONE	20	40 U	UG/L
BENZENE	5.0	10 U	UG/L
BROMODICHLOROMETHANE	5.0	10 U	UG/L
BROMOFORM	5.0	10 U	UG/L
BROMOMETHANE	5.0	10 U	UG/L
2-BUTANONE (MEK)	10	20 U	UG/L
CARBON DISULFIDE	10	20 U	UG/L
CARBON TETRACHLORIDE	5.0	10 U	UG/L
CHLOROBENZENE	5.0	10 U	UG/L
CHLOROETHANE	5.0	10 U	UG/L
CHLOROFORM	5.0	10 U	UG/L
CHLOROMETHANE	5.0	10 U	UG/L
DIBROMOCHLOROMETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHANE	5.0	10 U	UG/L
1,2-DICHLOROETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHENE	5.0	10 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/L
1,2-DICHLOROPROPANE	5.0	10 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
ETHYLBENZENE	5.0	10 U	UG/L
2-HEXANONE	10	20 U	UG/L
METHYLENE CHLORIDE	5.0	10 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/L
STYRENE	5.0	10 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/L
TETRACHLOROETHENE	5.0	10 U	UG/L
TOLUENE	5.0	10 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/L
TRICHLOROETHENE	5.0	310	UG/L
VINYL CHLORIDE	5.0	10 U	UG/L
O-XYLENE	5.0	10 U	UG/L
M+P-XYLENE	5.0	10 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	98	%
TOLUENE-D8	(88 - 110 %)	99	%
BROMOFLUOROMETHANE	(86 - 118 %)	99	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 04/06/00

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 369563 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 49090

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 03/30/00			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	101	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

Columbia Analytical Services, Inc.
An Employee Owned Company
1 Mustard St., Suite 250, Rochester, NY 14609-6925
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE 3-18-00 PAGE 1 OF 1

PROJECT NAME Griffin IRM
PROJECT MANAGER/CONTACT Mark Schmidt
COMPANY/ADDRESS 30795 Bainbridge St.
Solon, Ohio
TEL (440) 349-2708 FAX (440) 349-1514
SAMPLER'S SIGNATURE

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ 95-1	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	8240							PRESERVATIO pH < 2.0	pH > 12	Other
EFF-3-18-00	3-18-00	10:45		WATER	2											X									

RELINQUISHED BY:
Signature: Bob Fabian
Printed Name: Bob Fabian
Firm: ORSWC
Date/Time: 3-18-00 11:32

RECEIVED BY:
Signature: Brian Callon
Printed Name: Brian Callon
Firm: CAS
Date/Time: 3/18/00 1132

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature: Rachelle Bognet
Printed Name: Rachelle Bognet
Firm: CAS
Date/Time: 3/18/00 1132

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: Client
Shipping #:
Temperature: 4°
Submission No: R200/319

SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Check Form

Project/Client IRM Submission Number R2-1319

Cooler received on 3/18/00 by: BC COURIER: CAS UPS FEDEX CD&L (CLIENT)

1.	Were custody seals on outside of cooler?	YES (NO)	Date___	: Signature		
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES) NO				
3.	Did all bottles arrive in good condition (unbroken)?	(YES) NO				
4.	Were VOA vials checked for absence of air bubbles, and noted if so?	(YES) NO				
5.	Were **Ice** or **Ice packs** present?	(YES) NO				
6.	Where did the bottles originate?	CAS/ROC, (CLIENT)				
7.	Temperature of cooler(s) upon receipt:	4°				
	Is the temperature within 0° - 6° C?:	Yes ☒	Yes ☐	Yes ☐	Yes ☐	Yes ☐
	If No, Explain Below	No ☐	No ☐	No ☐	No ☐	No ☐

Date/Time Temperatures Taken: 3/18/00 1130

Thermometer ID: 161 (Temp Blank) Sample Bottle Cooler Temp. IR. Gun

If out of Temperature, Client Approval to Run Samples_____

Cooler Breakdown: Date: 3/21/00 by: RB

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct bottles used for the tests indicated?	(YES)	NO

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
5-9*	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH_____

*If pH adjustment is required, use NaOH and/or H_2SO_4

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

Other Comments:

00007

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

March 1, 2000

Mr. Mark Schmidt
URS Greiner Woodward Clyde
30775 Bainbridge Road
Suite 200
Solon, OH 44139

PROJECT:GRIFFIN IRM
Submission #:R2000885

Dear Mr. Schmidt

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson
Client Service Manager

Enc.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director prior to report submittal.

1 Mustard St.• Suite 250 • Rochester, NY 14609 • Tele:(716)288-5380 • Fax:(716)288-8475

Columbia Analytical Services Inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

(The basis of this proposal are the EPA-CLP Qualifiers)

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. For further explanation see case narrative / cover letter.

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.

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

N - Spiked sample recovery not within control limits.
(Flag the entire batch - Inorganic analysis only)

* - Duplicate analysis not within control limits.
(Flag the entire batch - Inorganic analysis only)

- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

S - Reported value determined by Method of Standard Additions. (MSA)

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

NY ID # in Rochester:	10145	NJ ID # in Rochester:	73004
CT ID # in Rochester:	PH0556	RI ID # in Rochester:	158
MA ID # in Rochester:	M-NY032	NH ID # in Rochester:	294198-A
OH EPA # in Rochester:	VAP	AIHA # in Rochester:	7889

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 03/01/00

URS Greiner Woodward Clyde
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-2-15-00

Date Sampled : 02/14/00 **Order #:** 359541 **Sample Matrix:** WATER
Date Received: 02/15/00 **Submission #:** R2000885 **Analytical Run** 48021

DATE ANALYZED : 02/25/00
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.6	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	12	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	400 E	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	103	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 03/01/00

URS Greiner Woodward Clyde
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-2-15-00

Date Sampled : 02/14/00 **Order #:** 359541 **Sample Matrix:** WATER
Date Received: 02/15/00 **Submission #:** R2000885 **Analytical Run** 48021

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 02/28/00			
ANALYTICAL DILUTION: 2.50			
ACETONE	20	50 U	UG/L
BENZENE	5.0	13 U	UG/L
BROMODICHLOROMETHANE	5.0	13 U	UG/L
BROMOFORM	5.0	13 U	UG/L
BROMOMETHANE	5.0	13 U	UG/L
2-BUTANONE (MEK)	10	25 U	UG/L
CARBON DISULFIDE	10	25 U	UG/L
CARBON TETRACHLORIDE	5.0	13 U	UG/L
CHLOROBENZENE	5.0	13 U	UG/L
CHLOROETHANE	5.0	13 U	UG/L
CHLOROFORM	5.0	13 U	UG/L
CHLOROMETHANE	5.0	13 U	UG/L
DIBROMOCHLOROMETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHANE	5.0	13 U	UG/L
1,2-DICHLOROETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHENE	5.0	13 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/L
1,2-DICHLOROPROPANE	5.0	13 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
ETHYLBENZENE	5.0	13 U	UG/L
2-HEXANONE	10	25 U	UG/L
METHYLENE CHLORIDE	5.0	13 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	25 U	UG/L
STYRENE	5.0	13 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/L
TETRACHLOROETHENE	5.0	13 U	UG/L
TOLUENE	5.0	13 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	13	UG/L
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/L
TRICHLOROETHENE	5.0	460	UG/L
VINYL CHLORIDE	5.0	13 U	UG/L
O-XYLENE	5.0	13 U	UG/L
M+P-XYLENE	5.0	13 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	105	%
TOLUENE-D8	(88 - 110 %)	102	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 03/01/00

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 361655 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 48021

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 02/25/00			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
-BROMOFLUOROBENZENE	(86 - 115 %)	101	%
OLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

Columbia Analytical Services, Inc.
An Employee-Owned Company
1 Mustard St., Suite 250, Rochester, NY 14609-6925
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE 2-15-00 PAGE 1 OF 1

PROJECT NAME Griffin IRM
PROJECT MANAGER/CONTACT Mark Schmidt
COMPANY/ADDRESS 30775 Bainbridge Rd. Solon, Ohio
TEL (440) 349-2708 FAX (440) 349-1514
SAMPLER'S SIGNATURE Bob Fabian

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ 95-1	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	8240							PRESERVATION pH < 2.0	PRESERVATION pH > 12	PRESERVATION Other
EFF-2-15-00	2-15-00	12:30	35954	WATER	2											X									

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm URSGWC
Date/Time 2-15-00 13:15

RECEIVED BY:
Signature Rachelle Bogart
Printed Name Rachelle Bogart
Firm CAS
Date/Time 2/15/00 1314

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature Gregory D. Emerich
Printed Name Gregory D. Emerich
Firm CAS
Date/Time 2-15-00 13:14

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: Client
Shipping #:
Temperature: 8°
Submission No: R2000885

SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Check Form

Project/Client_____ Submission Number R2-885

Cooler received on 2-15-00 by: ME COURIER: CAS UPS FEDEX CD&L (CLIENT)

1. Were custody seals on outside of cooler? YES (NO): Date___ : Signature
2. Were custody papers properly filled out (ink, signed, etc.)? (YES) NO
3. Did all bottles arrive in good condition (unbroken)? (YES) NO
4. Were VOA vials checked for absence of air bubbles, and noted if so? (YES) NO
5. Were **Ice or Ice packs** present? YES (NO)
6. Where did the bottles originate? (CAS/ROC) CLIENT
7. Temperature of cooler(s) upon receipt: 8e* 4 hour Rule

Is the temperature within 0° - 6° C?:	Yes ☐	Yes ☐	Yes ☐	Yes ☐	Yes ☐
If No, Explain Below	No ☒	No ☐	No ☐	No ☐	No ☐

Date/Time Temperatures Taken: 2-15-00 13:15

Thermometer ID: IR-Gun Temp Blank Sample Bottle Cooler Temp. (IR. Gun)

If out of Temperature, Client Approval to Run Samples_____

Cooler Breakdown: Date: 2-16-00 by: ME

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct bottles used for the tests indicated? (YES) NO

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
5-9*	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH_____

*If pH adjustment is required, use NaOH and/or H_2SO_4

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

Other Comments:

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

January 27, 2000

Mr. Mark Schmidt
URS Greiner Woodward Clyde
30775 Bainbridge Road
Suite 200
Solon, OH 44139

PROJECT:GRIFFIN IRM
Submission #:R2000527

Dear Mr. Schmidt

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson
Client Service Manager

Enc.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director prior to report submittal.

1 Mustard St. • Suite 250 • Rochester, NY 14609 • Tele:(716)288-5380 • Fax:(716)288-8475

Columbia Analytical Services Inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

(The basis of this proposal are the EPA-CLP Qualifiers)

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. For further explanation see case narrative / cover letter.

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.

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

N - Spiked sample recovery not within control limits.
(Flag the entire batch - Inorganic analysis only)

* - Duplicate analysis not within control limits.
(Flag the entire batch - Inorganic analysis only)

\- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

S - Reported value determined by Method of Standard Additions. (MSA)

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

NY ID # in Rochester:	10145	NJ ID # in Rochester:	73004
CT ID # in Rochester:	PH0556	RI ID # in Rochester:	158
MA ID # in Rochester:	M-NY032	NH ID # in Rochester:	294198-A
OH EPA # in Rochester:	VAP	AIHA # in Rochester:	7889

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/27/00

URS Greiner Woodward Clyde
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-1-14-00

Date Sampled : 01/14/00 **Order #:** 354251 **Sample Matrix:** WATER
Date Received: 01/14/00 **Submission #:** R2000527 **Analytical Run** 47070

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 01/17/00			
ANALYTICAL DILUTION: 2.00			
ACETONE	20	40 U	UG/L
BENZENE	5.0	10 U	UG/L
BROMODICHLOROMETHANE	5.0	10 U	UG/L
BROMOFORM	5.0	10 U	UG/L
BROMOMETHANE	5.0	10 U	UG/L
2-BUTANONE (MEK)	10	20 U	UG/L
CARBON DISULFIDE	10	20 U	UG/L
CARBON TETRACHLORIDE	5.0	10 U	UG/L
CHLOROBENZENE	5.0	10 U	UG/L
CHLOROETHANE	5.0	10 U	UG/L
CHLOROFORM	5.0	10 U	UG/L
CHLOROMETHANE	5.0	10 U	UG/L
DIBROMOCHLOROMETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHANE	5.0	10 U	UG/L
1,2-DICHLOROETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHENE	5.0	10 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/L
1,2-DICHLOROPROPANE	5.0	10 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
ETHYLBENZENE	5.0	10 U	UG/L
2-HEXANONE	10	20 U	UG/L
METHYLENE CHLORIDE	5.0	10 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/L
STYRENE	5.0	10 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/L
TETRACHLOROETHENE	5.0	10 U	UG/L
TOLUENE	5.0	10 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	10	UG/L
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/L
TRICHLOROETHENE	5.0	410	UG/L
VINYL CHLORIDE	5.0	10 U	UG/L
O-XYLENE	5.0	10 U	UG/L
M+P-XYLENE	5.0	10 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	92	%
TOLUENE-D8	(88 - 110 %)	96	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	91	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/27/00

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled :
Date Received:
Order #: 355646
Submission #:
Sample Matrix: WATER
Analytical Run 47070

DATE ANALYZED : 01/17/00
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	92	%
TOLUENE-D8	(88 - 110 %)	92	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

Columbia Analytical Services, Inc.
An Employee-Owned Company

Mustard St., Suite 250, Rochester, NY 14609-69245
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE 1-14-00 PAGE 1 OF 1

PROJECT NAME Griffin IRM
PROJECT MANAGER/CONTACT Mark Schmidt
COMPANY/ADDRESS 30775 Bainbridge Rd.
Solon, Ohio
TEL (440) 349-2704 FAX (440) 349-1514
SAMPLER'S SIGNATURE Bob Fabian

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ 95-1	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	8240							PRESERVATION pH < 2.0	pH > 12	Other
EFF-1-14-00	1-14-00	12:55	354251	WATER	2											X								

RELINQUISHED BY:
Signature: Bob Fabian
Printed Name: Bob Fabian
Firm: URS
Date/Time: 1-14-00 14:05

RECEIVED BY:
Signature:
Printed Name: Gregory O. Esmerian
Firm: CAS Roch.
Date/Time: 1-14-00 14:05

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: Client
Shipping #:
Temperature: 5°C
Submission No: R2000527

SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Check Form

Project/Client WCC4 Submission Number R2527

Cooler received on 1-14-00 by: AC **COURIER:** CAS UPS FEDEX CD&L (CLIENT)

1. Were custody seals on outside of cooler? YES (NO) : Date___ : Signature
2. Were custody papers properly filled out (ink, signed, etc.)? (YES) NO
3. Did all bottles arrive in good condition (unbroken)? (YES) NO
4. Were VOA vials checked for absence of air bubbles, and noted if so? (YES) NO
5. Were (Ice) or **Ice packs** present? (YES) NO
6. Where did the bottles originate? (CAS/ROC,) CLIENT
7. Temperature of cooler(s) upon receipt: 5°C ____ ____ ____ ____

Is the temperature within 0° - 6° C?:	Yes ☒	Yes ☐	Yes ☐	Yes ☐	Yes ☐
If No, Explain Below	No ☐	No ☐	No ☐	No ☐	No ☐

Date/Time Temperatures Taken: 1-14-00 14:05

Thermometer ID: IR-Gun Temp Blank Sample Bottle Cooler Temp. (IR Gun)

If out of Temperature, Client Approval to Run Samples________

Cooler Breakdown: Date: 1-14-00 by: AC

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct bottles used for the tests indicated? (YES) NO

Explain any discrepancies: ________

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
5-9*	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH________

*If pH adjustment is required, use NaOH and/or H_2SO_4

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

Columbia Analytical Services Inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

(The basis of this proposal are the EPA-CLP Qualifiers)

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. For further explanation see case narrative / cover letter.

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.

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

N - Spiked sample recovery not within control limits.
(Flag the entire batch - Inorganic analysis only)

* - Duplicate analysis not within control limits.
(Flag the entire batch - Inorganic analysis only)

- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

S - Reported value determined by Method of Standard Additions. (MSA)

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

NY ID # in Rochester:	10145	NJ ID # in Rochester:	73004
CT ID # in Rochester:	PH0556	RI ID # in Rochester:	158
MA ID # in Rochester:	M-NY032	NH ID # in Rochester:	294198-A
OH EPA # in Rochester:	VAP	AIHA # in Rochester:	7889

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

January 3, 2000

Mr. Mark Schmidt
URS Greiner Woodward Clyde
30775 Bainbridge Road
Suite 200
Solon, OH 44139

PROJECT:GRIFFIN IRM
Submission #:9912000177

Dear Mr. Schmidt

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson
Client Service Manager

Enc.

For reports

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director prior to report submittal.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/03/00

URS Greiner Woodward Clyde
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-12-11-99

Date Sampled : 12/11/99 **Order #:** 348621 **Sample Matrix:** WATER
Date Received: 12/11/99 **Submission #:** 9912000177 **Analytical Run** 46484

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/99			
ANALYTICAL DILUTION: 2.50			
ACETONE	20	50 U	UG/L
BENZENE	5.0	13 U	UG/L
BROMODICHLOROMETHANE	5.0	13 U	UG/L
BROMOFORM	5.0	13 U	UG/L
BROMOMETHANE	5.0	13 U	UG/L
2-BUTANONE (MEK)	10	25 U	UG/L
CARBON DISULFIDE	10	25 U	UG/L
CARBON TETRACHLORIDE	5.0	13 U	UG/L
CHLOROBENZENE	5.0	13 U	UG/L
CHLOROETHANE	5.0	13 U	UG/L
CHLOROFORM	5.0	13 U	UG/L
CHLOROMETHANE	5.0	13 U	UG/L
DIBROMOCHLOROMETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHANE	5.0	13 U	UG/L
1,2-DICHLOROETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHENE	5.0	13 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/L
1,2-DICHLOROPROPANE	5.0	13 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
ETHYLBENZENE	5.0	13 U	UG/L
2-HEXANONE	10	25 U	UG/L
METHYLENE CHLORIDE	5.0	13 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	25 U	UG/L
STYRENE	5.0	13 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/L
TETRACHLOROETHENE	5.0	13 U	UG/L
TOLUENE	5.0	13 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/L
TRICHLOROETHENE	5.0	420	UG/L
VINYL CHLORIDE	5.0	13 U	UG/L
O-XYLENE	5.0	13 U	UG/L
M+P-XYLENE	5.0	13 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	92	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/03/00

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 351381 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 46484

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/99			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	93	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

Columbia Analytical Services, Inc.
An Employee-Owned Company

Mustard St., Suite 250, Rochester, NY 14609-69245
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE 12-11-99 PAGE 1 OF 1

PROJECT NAME Griffin IRM
PROJECT MANAGER/CONTACT Mark Schmidt
COMPANY/ADDRESS 30775 Bainbridge Rd., Ste. 200 Solon, Ohio
TEL (440) 349-2708 FAX (440) 349-1514
SAMPLER'S SIGNATURE Bob Fabian

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ 95-1	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	8240							PRESERVATION pH < 2.0	PRESERVATION pH > 12	PRESERVATION Other
EFF-12-11-99	12-11-99	10:25	348621	WATER	2											X									

RELINQUISHED BY:
Bob Fabian
Signature Bob Fabian
Printed Name URSGWC
Firm 12-11-99 11:08
Date/Time

RECEIVED BY:
Tonya McCarthy
Signature Tonya McCarthy
Printed Name CAS
Firm 12.11.99 @ 1108
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm 12-11-99 11:08
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: Client
Shipping #:
Temperature: 5.8
Submission No: 12-177

SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Check Form

Project/Client LIRSGWC Submission Number 12-177

Cooler received on 12-11-99 and opened on 12-11-99 by JM

1. Were custody seals on outside of cooler? YES (NO)
   If yes, how many and where? Client delivered
2. Were signature & date correct? YES NO
3. Were custody papers properly filled out (ink, signed, etc)? (YES) NO
4. Did all bottles arrive in good condition (unbroken)? (YES) NO
5. Were all bottle labels complete (*i.e.* analysis, preservation, etc)? (YES) NO
6. Did all bottle labels and tags agree with custody papers? (YES) NO
7. Were correct bottles used for the tests indicated? (YES) NO
8. Were VOA vials checked for absence of air bubbles, and noted if so? (YES) NO
9. Where did the bottles originate? CAS/A CAS/K CAS/S CAS/L CAS/X CAS/J (CAS/R)
10. Temperature of cooler(s) upon receipt: 5.8°C

Is the temperature within 4 ± 2° C?:	Yes ☒	Yes ☐	Yes ☐	Yes ☐	Yes ☐
If No, Explain Below	No ☐	No ☐	No ☐	No ☐	No ☐

Date/Time Temperatures Taken: 12-11-99 @ 1110

Thermometer ID: IR GUN **Circle One:** Temp Blank (Sample Bottle) Cooler Temp.

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
5-9*	P/PCBs (608 only)					

YES = All samples OK
NO = Samples were preserved at lab as listed
*If pH adjustment is required, use NaOH and/or H_2SO_4

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

CLIENT NOTIFICATION: _____

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

December 30, 1999

Mr. Mark Schmidt
URS Greiner Woodward Clyde
30775 Bainbridge Road
Suite 200
Solon, OH 44139

PROJECT:GRIFFIN IRM
Submission #:9911000310

Dear Mr. Schmidt

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson
Client Service Manager

Enc.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director prior to report submittal.

Columbia Analytical Services Inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

(The basis of this proposal are the EPA-CLP Qualifiers)

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. For further explanation see case narrative / cover letter.

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.

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

N - Spiked sample recovery not within control limits.
(Flag the entire batch - Inorganic analysis only)

* - Duplicate analysis not within control limits.
(Flag the entire batch - Inorganic analysis only)

- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

S - Reported value determined by Method of Standard Additions. (MSA)

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

NY ID # in Rochester:	10145	NJ ID # in Rochester:	73004
CT ID # in Rochester:	PH0556	RI ID # in Rochester:	158
MA ID # in Rochester:	M-NY032	NH ID # in Rochester:	294198-A
OH EPA # in Rochester:	VAP	AIHA # in Rochester:	7889

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 12/30/99

URS Greiner Woodward Clyde
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-11-20-99

Date Sampled : 11/20/99 **Order #:** 343665 **Sample Matrix:** WATER
Date Received: 11/20/99 **Submission #:** 9911000310 **Analytical Run** 45802

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/30/99			
ANALYTICAL DILUTION: 2.50			
ACETONE	20	50 U	UG/L
BENZENE	5.0	13 U	UG/L
BROMODICHLOROMETHANE	5.0	13 U	UG/L
BROMOFORM	5.0	13 U	UG/L
BROMOMETHANE	5.0	13 U	UG/L
2-BUTANONE (MEK)	10	25 U	UG/L
CARBON DISULFIDE	10	25 U	UG/L
CARBON TETRACHLORIDE	5.0	13 U	UG/L
CHLOROBENZENE	5.0	13 U	UG/L
CHLOROETHANE	5.0	13 U	UG/L
CHLOROFORM	5.0	13 U	UG/L
CHLOROMETHANE	5.0	13 U	UG/L
DIBROMOCHLOROMETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHANE	5.0	13 U	UG/L
1,2-DICHLOROETHANE	5.0	13 U	UG/L
1,1-DICHLOROETHENE	5.0	13 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/L
1,2-DICHLOROPROPANE	5.0	13 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/L
ETHYLBENZENE	5.0	13 U	UG/L
2-HEXANONE	10	25 U	UG/L
METHYLENE CHLORIDE	5.0	13 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	25 U	UG/L
STYRENE	5.0	13 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/L
TETRACHLOROETHENE	5.0	13 U	UG/L
TOLUENE	5.0	13 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/L
TRICHLOROETHENE	5.0	450	UG/L
VINYL CHLORIDE	5.0	13 U	UG/L
O-XYLENE	5.0	13 U	UG/L
M+P-XYLENE	5.0	13 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	97	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 12/30/99

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 346976 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 45802

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/30/99			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	97	%
TOLUENE-D8	(88 - 110 %)	98	%
IBROMOFLUOROMETHANE	(86 - 118 %)	97	%

Columbia Analytical Services, Inc.
An Employee-Owned Company
1 Mustard St., Suite 250, Rochester, NY 14609-6925
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE 11-20-99 PAGE 1 OF 1

PROJECT NAME Griffin IRM
PROJECT MANAGER/CONTACT Mark Schmidt
COMPANY/ADDRESS 30775 Bainbridge Rd
Solon, Ohio
TEL (440) 349-2708 FAX (440) 349-1514
SAMPLER'S SIGNATURE Bob Fabian

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ 95-1	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	8240							PRESERVATION pH < 2.0	pH > 12	Other
EFF-11-20-99	11-20-99	08:40	343665	WATER	2											X									

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm URSWC
Date/Time 11-20-99 09:25

RECEIVED BY:
Signature Gregory A. Emonis
Printed Name
Firm CAS 11-20-99 9:25
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature Brian Collon
Printed Name Brian Collon
Firm CAS
Date/Time 11/20/99 923

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: Client
Shipping #:
Temperature: 12.8
Submission No: 11-310

SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Check Form

Project/Client WCC4 Submission Number 11-310

Cooler received on 11-20-99 and opened on 11-20-99 by MC

1.	Were custody seals on outside of cooler?	YES (NO)
	If yes, how many and where?	
2.	Were signature & date correct?	YES NO
3.	Were custody papers properly filled out (ink, signed, etc)?	(YES) NO
4.	Did all bottles arrive in good condition (unbroken)?	(YES) NO
5.	Were all bottle labels complete (*i.e.* analysis, preservation, etc)?	(YES) NO
6.	Did all bottle labels and tags agree with custody papers?	(YES) NO
7.	Were correct bottles used for the tests indicated?	(YES) NO
8.	Were VOA vials checked for absence of air bubbles, and noted if so?	(YES) NO
9.	Where did the bottles originate?	CAS/A CAS/K CAS/S CAS/L CAS/X CAS/J (CAS/R)

10.	Temperature of cooler(s) upon receipt:	12.8				
	Is the temperature within 4 ± 2° C?:	Yes ☐	Yes ☐	Yes ☐	Yes ☐	Yes ☐
	If No, Explain Below	No ☐	No ☐	No ☐	No ☐	No ☐

Date/Time Temperatures Taken: 9:25 11-20-99

Thermometer ID: IR 6110 **Circle One:** Temp Blank (Sample Bottle IR 6110) Cooler Temp.

Explain any discrepancies:

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
5-9*	P/PCBs (608 only)					

YES = All samples OK
NO = Samples were preserved at lab as listed
*If pH adjustment is required, use NaOH and/or H_2SO_4

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

CLIENT NOTIFICATION:

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

October 27, 1999

Mr. Mark Schmidt
URS Greiner Woodward Clyde
30775 Bainbridge Road
Suite 200
Solon, OH 44139

PROJECT:GRIFFIN IRM
Submission #:9910000128

Dear Mr. Schmidt

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson
Client Service Manager

Enc.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director prior to report submittal.

1 Mustard St.• Suite 250 • Rochester, NY 14609 • Tele:(716)288-5380 • Fax:(716)288-8475

Columbia Analytical Services Inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

(The basis of this proposal are the EPA-CLP Qualifiers)

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. For further explanation see case narrative / cover letter.

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.

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

N - Spiked sample recovery not within control limits.
(Flag the entire batch - Inorganic analysis only)

* - Duplicate analysis not within control limits.
(Flag the entire batch - Inorganic analysis only)

- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

S - Reported value determined by Method of Standard Additions. (MSA)

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

NY ID # in Rochester:	10145	NJ ID # in Rochester:	73004
CT ID # in Rochester:	PH0556	RI ID # in Rochester:	158
MA ID # in Rochester:	M-NY032	NH ID # in Rochester:	294198-A
OH EPA # in Rochester:	VAP	AIHA # in Rochester:	7889

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/27/99

URS Greiner Woodward Clyde
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-10-8-99

Date Sampled : 10/08/99 **Order #:** 331248 **Sample Matrix:** WATER
Date Received: 10/08/99 **Submission #:** 9910000128 **Analytical Run** 44143

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/14/99			
ANALYTICAL DILUTION: 5.00			
ACETONE	20	100 U	UG/L
BENZENE	5.0	25 U	UG/L
BROMODICHLOROMETHANE	5.0	25 U	UG/L
BROMOFORM	5.0	25 U	UG/L
BROMOMETHANE	5.0	25 U	UG/L
2-BUTANONE (MEK)	10	50 U	UG/L
CARBON DISULFIDE	10	50 U	UG/L
CARBON TETRACHLORIDE	5.0	25 U	UG/L
CHLOROBENZENE	5.0	25 U	UG/L
CHLOROETHANE	5.0	25 U	UG/L
CHLOROFORM	5.0	25 U	UG/L
CHLOROMETHANE	5.0	25 U	UG/L
DIBROMOCHLOROMETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHANE	5.0	25 U	UG/L
1,2-DICHLOROETHANE	5.0	25 U	UG/L
1,1-DICHLOROETHENE	5.0	25 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	25 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	25 U	UG/L
1,2-DICHLOROPROPANE	5.0	25 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	25 U	UG/L
ETHYLBENZENE	5.0	25 U	UG/L
2-HEXANONE	10	50 U	UG/L
METHYLENE CHLORIDE	5.0	25 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	50 U	UG/L
STYRENE	5.0	25 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	25 U	UG/L
TETRACHLOROETHENE	5.0	25 U	UG/L
TOLUENE	5.0	25 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	25 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	25 U	UG/L
TRICHLOROETHENE	5.0	500	UG/L
VINYL CHLORIDE	5.0	25 U	UG/L
O-XYLENE	5.0	25 U	UG/L
M+P-XYLENE	5.0	25 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	96	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/27/99

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 335259 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 44143

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/14/99			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	95	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

COLUMBIA ANALYTICAL SERVICES, INC.
[redacted]ustard St., Suite 250, Rochester, NY 14609-6925
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(8[redacted]) 695-7222

DATE 10-8-99 PAGE 1 OF 1

PROJECT NAME Griffin IRM
PROJECT MANAGER/CONTACT Mark Schmidt
COMPANY/ADDRESS 30775 Bainbridge Rd., Ste 200 Solon, Ohio
TEL (440) 349-2708 FAX (440) 349-1514
SAMPLER'S SIGNATURE Bob Fabian

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ 95-1	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	8240							PRESERVATION pH < 2.0	pH > 12	Other
EFF-10-8-99	10-8-99	11:00	331248	WATER	2											X									

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm ORS WCC
Date/Time 10-8-99 12:05

RECEIVED BY:
Signature [redacted]
Printed Name [redacted]
Firm CAS
Date/Time 10/8/99 1205

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: Client
Shipping #:
Temperature: 60
Submission No: 10-128

SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

Cooler Receipt And Preservation Check Form

Project/Client United Ref. Submission Number 10-128

Cooler received on 10/8 and opened on 10/8 by BC

1. Were custody seals on outside of cooler? YES (NO)
   If yes, how many and where? _____ client Delivered
2. Were signature & date correct? (YES) NO
3. Were custody papers properly filled out (ink, signed, etc)? (YES) NO
4. Did all bottles arrive in good condition (unbroken)? (YES) NO
5. Were all bottle labels complete (*i.e.* analysis, preservation, etc)? (YES) NO
6. Did all bottle labels and tags agree with custody papers? (YES) NO
7. Were correct bottles used for the tests indicated? (YES) NO
8. Were VOA vials checked for absence of air bubbles, and noted if so? (YES) NO
9. Where did the bottles originate? CAS/A CAS/K CAS/S CAS/L CAS/X CAS/J CAS/R
10. Temperature of cooler(s) upon receipt: 6.0 _____ _____ _____ _____ _____

Is the temperature within 4 ± 2° C?:	Yes ☐	Yes ☐	Yes ☐	Yes ☐	Yes ☐	Yes ☐
If No, Explain Below	No ☐	No ☐	No ☐	No ☐	No ☐	No ☐

Date/Time Temperatures Taken: 10/8/15 1205

Thermometer ID: 161 **Circle One:** Temp Blank Sample Bottle (Cooler Temp.)

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
5-9*	P/PCBs (608 only)					

YES = All samples OK
NO = Samples were preserved at lab as listed
*If pH adjustment is required, use NaOH and/or H_2SO_4

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

CLIENT NOTIFICATION: _____

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367790

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7399

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q	C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichlorothene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	10	U		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	10	U		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	10	U		
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p) Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367790

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7399

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-1

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367790

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7399

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q		
1.		UNKNOWN	2.57	12	J	R	B
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							
21.							
22.							
23.							
24.							
25.							
26.							
27.							
28.							
29.							
30.							

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-2S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367793

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7414

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q	C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichlorothene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	10	U		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	10	U		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	6	J		
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p)Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-2S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367793

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7414

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-2S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367793

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7414

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

G, C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q		
1.		UNKNOWN	2.55	13	JB	R	B
2.		UNKNOWN	16.48	10	J	R	B
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							
21.							
22.							
23.							
24.							
25.							
26.							
27.							
28.							
29.							
30.							

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367795

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7400

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q	C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichlorothene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	10	U		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	10	U		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	93			
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p)Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367795

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7400

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-3

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367795

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7400

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q1C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	R	B
1.		UNKNOWN	2.54	12	J		
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							
21.							
22.							
23.							
24.							
25.							
26.							
27.							
28.							
29.							
30.							

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367796

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7415

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q	C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichloroethene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	10	U		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	10	U		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	9	J		
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p) Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367796

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7415

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-4

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367796

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7415

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q, C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.56	12	JB R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367798

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7416

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q, C
74-87-3	Chloromethane	10	U	
75-01-4	Vinyl Chloride	10	U	
74-83-9	Bromomethane	10	U	
75-00-3	Chloroethane	10	U	
75-35-4	1,1-Dichloroethene	10	U	
67-64-1	Acetone	10	U	UJ C
75-15-0	Carbon Disulfide	10	U	
75-09-2	Methylene Chloride	10	U	
156-60-5	trans-1,2-Dichlorothene	10	U	
75-34-3	1,1-Dichloroethane	10	U	
156-59-4	cis-1,2-Dichloroethene	10	U	
78-93-3	2-Butanone (MEK)	10	U	UJ C
67-66-3	Chloroform	10	U	
71-55-6	1,1,1-Trichloroethane	4	J	
56-23-5	Carbon Tetrachloride	10	U	
71-43-2	Benzene	10	U	
107-06-2	1,2-Dichloroethane	10	U	
79-01-6	Trichloroethene	140		
78-87-5	1,2-Dichloropropane	10	U	
75-27-4	Bromodichloromethane	10	U	
10061-01-5	cis-1,3-Dichloropropene	10	U	
108-10-1	4-Methyl-2-Pentonone	10	U	
108-88-3	Toluene	10	U	
10061-02-6	trans-1,3-Dichloropropene	10	U	
79-00-5	1,1,2-Trichloroethane	10	U	
127-18-4	Tetrachloroethene	10	U	
591-78-6	2-Hexanone	10	U	UJ C
124-48-1	Dibromochloromethane	10	U	
108-90-7	Chlorobenzene	10	U	
100-41-4	Ethylbenzene	10	U	
1330-20-7	(m+p)Xylene	10	U	
1330-20-7	o-Xylene	10	U	
100-42-5	Styrene	10	U	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367798

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7416

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-5S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367798

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7416

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

QC

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.57	15	JB R C
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367799

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7396

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q	C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichlorothene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	10	U		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	4	J		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	190			
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p) Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367799

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7396

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

EPA SAMPLE NO.

MW-5D

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367799

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7396

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

R C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.53	12	J R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367800

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7401

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q	C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichlorothene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	10	U		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	10	U		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	3	J		
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p)Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367800

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7401

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-6S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367800

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7401

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q, C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.55	12	J R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367801

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7402

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	10	U	
75-01-4	Vinyl Chloride	10	U	
74-83-9	Bromomethane	10	U	
75-00-3	Chloroethane	10	U	
75-35-4	1,1-Dichloroethene	10	U	
67-64-1	Acetone	10	U	UJ C
75-15-0	Carbon Disulfide	10	U	
75-09-2	Methylene Chloride	10	U	
156-60-5	trans-1,2-Dichloroethene	10	U	
75-34-3	1,1-Dichloroethane	10	U	
156-59-4	cis-1,2-Dichloroethene	1	J	
78-93-3	2-Butanone (MEK)	10	U	UJ C
67-66-3	Chloroform	10	U	
71-55-6	1,1,1-Trichloroethane	5	J	
56-23-5	Carbon Tetrachloride	10	U	
71-43-2	Benzene	10	U	
107-06-2	1,2-Dichloroethane	10	U	
79-01-6	Trichloroethene	89		
78-87-5	1,2-Dichloropropane	10	U	
75-27-4	Bromodichloromethane	10	U	
10061-01-5	cis-1,3-Dichloropropene	10	U	
108-10-1	4-Methyl-2-Pentonone	10	U	
108-88-3	Toluene	10	U	
10061-02-6	trans-1,3-Dichloropropene	10	U	
79-00-5	1,1,2-Trichloroethane	10	U	
127-18-4	Tetrachloroethene	10	U	
591-78-6	2-Hexanone	10	U	UJ C
124-48-1	Dibromochloromethane	10	U	
108-90-7	Chlorobenzene	10	U	
100-41-4	Ethylbenzene	10	U	
1330-20-7	(m+p)Xylene	10	U	
1330-20-7	o-Xylene	10	U	
100-42-5	Styrene	10	U	

Q C

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367801

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7402

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-6D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367801

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7402

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q, C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.55	12	J R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367802

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7395

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 2.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q	C
74-87-3	Chloromethane	20	U		
75-01-4	Vinyl Chloride	20	U		
74-83-9	Bromomethane	20	U		
75-00-3	Chloroethane	20	U		
75-35-4	1,1-Dichloroethene	20	U		
67-64-1	Acetone	20	U	UJ	C
75-15-0	Carbon Disulfide	20	U		
75-09-2	Methylene Chloride	20	U		
156-60-5	trans-1,2-Dichlorothene	20	U		
75-34-3	1,1-Dichloroethane	20	U		
156-59-4	cis-1,2-Dichloroethene	3	J		
78-93-3	2-Butanone (MEK)	20	U	UJ	C
67-66-3	Chloroform	20	U		
71-55-6	1,1,1-Trichloroethane	4	J		
56-23-5	Carbon Tetrachloride	20	U		
71-43-2	Benzene	20	U		
107-06-2	1,2-Dichloroethane	20	U		
79-01-6	Trichloroethene	210			
78-87-5	1,2-Dichloropropane	20	U		
75-27-4	Bromodichloromethane	20	U		
10061-01-5	cis-1,3-Dichloropropene	20	U		
108-10-1	4-Methyl-2-Pentonone	20	U		
108-88-3	Toluene	20	U		
10061-02-6	trans-1,3-Dichloropropene	20	U		
79-00-5	1,1,2-Trichloroethane	20	U		
127-18-4	Tetrachloroethene	20	U		
591-78-6	2-Hexanone	20	U	UJ	C
124-48-1	Dibromochloromethane	20	U		
108-90-7	Chlorobenzene	20	U		
100-41-4	Ethylbenzene	20	U		
1330-20-7	(m+p)Xylene	20	U		
1330-20-7	o-Xylene	20	U		
100-42-5	Styrene	20	U		

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367802

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7395

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 2.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-7S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367802

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7395

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 2.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	Q C
1.		UNKNOWN	2.55	29	J	R B
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						
21.						
22.						
23.						
24.						
25.						
26.						
27.						
28.						
29.						
30.						

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367803

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7403

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q	C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	4	J		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	VJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichlorothene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	19			
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	10	U		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	130			
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p)Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367803

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7403

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-7D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367803

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7403

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

QC

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.56	11	J R C
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-9S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367804

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7404

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q/C
74-87-3	Chloromethane	10	U	
75-01-4	Vinyl Chloride	10	U	
74-83-9	Bromomethane	10	U	
75-00-3	Chloroethane	10	U	
75-35-4	1,1-Dichloroethene	10	U	
67-64-1	Acetone	10	U	U C
75-15-0	Carbon Disulfide	10	U	
75-09-2	Methylene Chloride	10	U	
156-60-5	trans-1,2-Dichloroethene	10	U	
75-34-3	1,1-Dichloroethane	10	U	
156-59-4	cis-1,2-Dichloroethene	10	U	
78-93-3	2-Butanone (MEK)	10	U	U C
67-66-3	Chloroform	10	U	
71-55-6	1,1,1-Trichloroethane	10	U	
56-23-5	Carbon Tetrachloride	10	U	
71-43-2	Benzene	10	U	
107-06-2	1,2-Dichloroethane	10	U	
79-01-6	Trichloroethene	10	U	
78-87-5	1,2-Dichloropropane	10	U	
75-27-4	Bromodichloromethane	10	U	
10061-01-5	cis-1,3-Dichloropropene	10	U	
108-10-1	4-Methyl-2-Pentonone	10	U	
108-88-3	Toluene	10	U	
10061-02-6	trans-1,3-Dichloropropene	10	U	
79-00-5	1,1,2-Trichloroethane	10	U	
127-18-4	Tetrachloroethene	10	U	
591-78-6	2-Hexanone	10	U	U C
124-48-1	Dibromochloromethane	10	U	
108-90-7	Chlorobenzene	10	U	
100-41-4	Ethylbenzene	10	U	
1330-20-7	(m+p) Xylene	10	U	
1330-20-7	o-Xylene	10	U	
100-42-5	Styrene	10	U	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-9S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367804

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7404

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

EPA SAMPLE NO.

MW-9S

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367804

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7404

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q1C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.56	11	J R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-9D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367805

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7405

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q		C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichlorothene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	10	U		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	10	U		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	10	U		
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	VJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p) Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-9D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367805

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7405

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

EPA SAMPLE NO.

MW-9D

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367805

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7405

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

R C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.55	11	J R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-10S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367806

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7406

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	A	C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichlorothene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	10	U		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	10	U		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	1	J		
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p)Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-10S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367806

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7406

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-10S

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367806

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7406

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.56	10	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

C
R B

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-10D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367807

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7407

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	QC
74-87-3	Chloromethane	10	U	
75-01-4	Vinyl Chloride	10	U	
74-83-9	Bromomethane	10	U	
75-00-3	Chloroethane	10	U	
75-35-4	1,1-Dichloroethene	10	U	
67-64-1	Acetone	10	U	UJ C
75-15-0	Carbon Disulfide	10	U	
75-09-2	Methylene Chloride	10	U	
156-60-5	trans-1,2-Dichlorothene	10	U	
75-34-3	1,1-Dichloroethane	10	U	
156-59-4	cis-1,2-Dichloroethene	10	U	
78-93-3	2-Butanone (MEK)	10	U	UJ C
67-66-3	Chloroform	10	U	
71-55-6	1,1,1-Trichloroethane	10	U	
56-23-5	Carbon Tetrachloride	10	U	
71-43-2	Benzene	10	U	
107-06-2	1,2-Dichloroethane	10	U	
79-01-6	Trichloroethene	3	J	
78-87-5	1,2-Dichloropropane	10	U	
75-27-4	Bromodichloromethane	10	U	
10061-01-5	cis-1,3-Dichloropropene	10	U	
108-10-1	4-Methyl-2-Pentonone	10	U	
108-88-3	Toluene	10	U	
10061-02-6	trans-1,3-Dichloropropene	10	U	
79-00-5	1,1,2-Trichloroethane	10	U	
127-18-4	Tetrachloroethene	10	U	
591-78-6	2-Hexanone	10	U	UJ C
124-48-1	Dibromochloromethane	10	U	
108-90-7	Chlorobenzene	10	U	
100-41-4	Ethylbenzene	10	U	
1330-20-7	(m+p) Xylene	10	U	
1330-20-7	o-Xylene	10	U	
100-42-5	Styrene	10	U	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-10D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367807

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7407

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-10D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367807

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7407

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.54	10	J R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-11D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367808

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7408

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q	C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichlorothene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	10	U		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	10	U		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	10	U		
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p)Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-11D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367808

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7408

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-11D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367808

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7408

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.55	11	J R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367809

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7409

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	10	U	QC
75-01-4	Vinyl Chloride	10	U	
74-83-9	Bromomethane	10	U	
75-00-3	Chloroethane	10	U	
75-35-4	1,1-Dichloroethene	10	U	
67-64-1	Acetone	10	U	UJ C
75-15-0	Carbon Disulfide	10	U	
75-09-2	Methylene Chloride	10	U	
156-60-5	trans-1,2-Dichlorothene	10	U	
75-34-3	1,1-Dichloroethane	10	U	
156-59-4	cis-1,2-Dichloroethene	10	U	
78-93-3	2-Butanone (MEK)	10	U	UJ C
67-66-3	Chloroform	10	U	
71-55-6	1,1,1-Trichloroethane	2	J	
56-23-5	Carbon Tetrachloride	10	U	
71-43-2	Benzene	10	U	
107-06-2	1,2-Dichloroethane	10	U	
79-01-6	Trichloroethene	85		
78-87-5	1,2-Dichloropropane	10	U	
75-27-4	Bromodichloromethane	10	U	
10061-01-5	cis-1,3-Dichloropropene	10	U	
108-10-1	4-Methyl-2-Pentonone	10	U	
108-88-3	Toluene	10	U	
10061-02-6	trans-1,3-Dichloropropene	10	U	
79-00-5	1,1,2-Trichloroethane	10	U	
127-18-4	Tetrachloroethene	10	U	
591-78-6	2-Hexanone	10	U	UJ C
124-48-1	Dibromochloromethane	10	U	
108-90-7	Chlorobenzene	10	U	
100-41-4	Ethylbenzene	10	U	
1330-20-7	(m+p)Xylene	10	U	
1330-20-7	o-Xylene	10	U	
100-42-5	Styrene	10	U	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367809

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7409

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW-13D

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367809

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7409

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/04/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q C
R B

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.55	10	J
2.	1634-04-4	PROPANE, 2-METHOXY-2-METHYL-	5.33	24	NJ
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RW-01

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367810

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7417

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q	C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichlorothene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	3	J		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	3	J		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	140			
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p)Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RW-01

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367810

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7417

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

RW-01

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367810

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7417

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.55	11	JB R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RW-02

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367811

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7418

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q C
74-87-3	Chloromethane	10	U	
75-01-4	Vinyl Chloride	10	U	
74-83-9	Bromomethane	10	U	
75-00-3	Chloroethane	10	U	
75-35-4	1,1-Dichloroethene	10	U	
67-64-1	Acetone	10	U	UJ C
75-15-0	Carbon Disulfide	10	U	
75-09-2	Methylene Chloride	10	U	
156-60-5	trans-1,2-Dichlorothene	10	U	
75-34-3	1,1-Dichloroethane	10	U	
156-59-4	cis-1,2-Dichloroethene	10	U	
78-93-3	2-Butanone (MEK)	10	U	UJ C
67-66-3	Chloroform	10	U	
71-55-6	1,1,1-Trichloroethane	2	J	
56-23-5	Carbon Tetrachloride	10	U	
71-43-2	Benzene	10	U	
107-06-2	1,2-Dichloroethane	10	U	
79-01-6	Trichloroethene	100		
78-87-5	1,2-Dichloropropane	10	U	
75-27-4	Bromodichloromethane	10	U	
10061-01-5	cis-1,3-Dichloropropene	10	U	
108-10-1	4-Methyl-2-Pentonone	10	U	
108-88-3	Toluene	10	U	
10061-02-6	trans-1,3-Dichloropropene	10	U	
79-00-5	1,1,2-Trichloroethane	10	U	
127-18-4	Tetrachloroethene	10	U	
591-78-6	2-Hexanone	10	U	UJ C
124-48-1	Dibromochloromethane	10	U	
108-90-7	Chlorobenzene	10	U	
100-41-4	Ethylbenzene	10	U	
1330-20-7	(m+p)Xylene	10	U	
1330-20-7	o-Xylene	10	U	
100-42-5	Styrene	10	U	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RW-02

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367811

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7418

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

RW-02

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367811

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7418

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.55	12	JB R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RW-03

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367812

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7419

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	a	c
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichlorothene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	10	U		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	4	J		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	170			
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p)Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RW-03

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367812

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7419

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

RW-03

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367812

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7419

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q C

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.54	12	JB R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RW-04

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367813

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7420

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q	Q	C
74-87-3	Chloromethane		10	U		
75-01-4	Vinyl Chloride		10	U		
74-83-9	Bromomethane		10	U		
75-00-3	Chloroethane		10	U		
75-35-4	1,1-Dichloroethene		1	J		
67-64-1	Acetone		5	J	J	C
75-15-0	Carbon Disulfide		10	U		
75-09-2	Methylene Chloride		10	U		
156-60-5	trans-1,2-Dichlorothene		10	U		
75-34-3	1,1-Dichloroethane		10	U		
156-59-4	cis-1,2-Dichloroethene		11			
78-93-3	2-Butanone (MEK)		10	U	UJ	C
67-66-3	Chloroform		10	U		
71-55-6	1,1,1-Trichloroethane		22			
56-23-5	Carbon Tetrachloride		10	U		
71-43-2	Benzene		10	U		
107-06-2	1,2-Dichloroethane		10	U		
79-01-6	Trichloroethene	1000	~~1500~~	~~E~~		E
78-87-5	1,2-Dichloropropane		10	U		
75-27-4	Bromodichloromethane		10	U		
10061-01-5	cis-1,3-Dichloropropene		10	U		
108-10-1	4-Methyl-2-Pentonone		10	U		
108-88-3	Toluene		10	U		
10061-02-6	trans-1,3-Dichloropropene		10	U		
79-00-5	1,1,2-Trichloroethane		10	U		
127-18-4	Tetrachloroethene		10	U		
591-78-6	2-Hexanone		10	U	UJ	C
124-48-1	Dibromochloromethane		10	U		
108-90-7	Chlorobenzene		10	U		
100-41-4	Ethylbenzene		10	U		
1330-20-7	(m+p)Xylene		10	U		
1330-20-7	o-Xylene		10	U		
100-42-5	Styrene		10	U		

E - reported from ~~second~~ secondary dilution

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RW-04

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367813

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7420

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

RW-04

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367813

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7420

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RW-04DL

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367813DL

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7423

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	100	U
75-01-4	Vinyl Chloride	100	U
74-83-9	Bromomethane	100	U
75-00-3	Chloroethane	100	U
75-35-4	1,1-Dichloroethene	100	U
67-64-1	Acetone	100	U
75-15-0	Carbon Disulfide	100	U
75-09-2	Methylene Chloride	100	U
156-60-5	trans-1,2-Dichloroethene	100	U
75-34-3	1,1-Dichloroethane	100	U
156-59-4	cis-1,2-Dichloroethene	100	U
78-93-3	2-Butanone (MEK)	100	U
67-66-3	Chloroform	100	U
71-55-6	1,1,1-Trichloroethane	19	DJ
56-23-5	Carbon Tetrachloride	100	U
71-43-2	Benzene	100	U
107-06-2	1,2-Dichloroethane	100	U
79-01-6	Trichloroethene	1000	D
78-87-5	1,2-Dichloropropane	100	U
75-27-4	Bromodichloromethane	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
108-10-1	4-Methyl-2-Pentonone	100	U
108-88-3	Toluene	100	U
10061-02-6	trans-1,3-Dichloropropene	100	U
79-00-5	1,1,2-Trichloroethane	100	U
127-18-4	Tetrachloroethene	100	U
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	100	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	100	U
1330-20-7	(m+p) Xylene	100	U
1330-20-7	o-Xylene	100	U
100-42-5	Styrene	100	U

only result used

AJM 5/13/00

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RW-04DL

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367813DL

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7423

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

RW-04DL

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367813DL

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7423

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 10.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.55	110	JBD
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367814

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7422

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q C
74-87-3	Chloromethane	10	U	
75-01-4	Vinyl Chloride	10	U	
74-83-9	Bromomethane	10	U	
75-00-3	Chloroethane	10	U	
75-35-4	1,1-Dichloroethene	10	U	
67-64-1	Acetone	10	U	UJ C
75-15-0	Carbon Disulfide	10	U	
75-09-2	Methylene Chloride	10	U	
156-60-5	trans-1,2-Dichlorothene	10	U	
75-34-3	1,1-Dichloroethane	10	U	
156-59-4	cis-1,2-Dichloroethene	10	U	
78-93-3	2-Butanone (MEK)	10	U	UJ C
67-66-3	Chloroform	10	U	
71-55-6	1,1,1-Trichloroethane	10	U	
56-23-5	Carbon Tetrachloride	10	U	
71-43-2	Benzene	10	U	
107-06-2	1,2-Dichloroethane	10	U	
79-01-6	Trichloroethene	9	J	
78-87-5	1,2-Dichloropropane	10	U	
75-27-4	Bromodichloromethane	10	U	
10061-01-5	cis-1,3-Dichloropropene	10	U	
108-10-1	4-Methyl-2-Pentonone	10	U	
108-88-3	Toluene	10	U	
10061-02-6	trans-1,3-Dichloropropene	10	U	
79-00-5	1,1,2-Trichloroethane	10	U	
127-18-4	Tetrachloroethene	10	U	
591-78-6	2-Hexanone	10	U	UJ C
124-48-1	Dibromochloromethane	10	U	
108-90-7	Chlorobenzene	10	U	
100-41-4	Ethylbenzene	10	U	
1330-20-7	(m+p) Xylene	10	U	
1330-20-7	o-Xylene	10	U	
100-42-5	Styrene	10	U	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367814

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7422

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DUP

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367814

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7422

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/05/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.55	12	JB R B
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367815

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7430

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/06/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	Q	C
74-87-3	Chloromethane	10	U		
75-01-4	Vinyl Chloride	10	U		
74-83-9	Bromomethane	10	U		
75-00-3	Chloroethane	10	U		
75-35-4	1,1-Dichloroethene	10	U		
67-64-1	Acetone	10	U	UJ	C
75-15-0	Carbon Disulfide	10	U		
75-09-2	Methylene Chloride	10	U		
156-60-5	trans-1,2-Dichloroethene	10	U		
75-34-3	1,1-Dichloroethane	10	U		
156-59-4	cis-1,2-Dichloroethene	10	U		
78-93-3	2-Butanone (MEK)	10	U	UJ	C
67-66-3	Chloroform	10	U		
71-55-6	1,1,1-Trichloroethane	10	U		
56-23-5	Carbon Tetrachloride	10	U		
71-43-2	Benzene	10	U		
107-06-2	1,2-Dichloroethane	10	U		
79-01-6	Trichloroethene	10	U		
78-87-5	1,2-Dichloropropane	10	U		
75-27-4	Bromodichloromethane	10	U		
10061-01-5	cis-1,3-Dichloropropene	10	U		
108-10-1	4-Methyl-2-Pentonone	10	U		
108-88-3	Toluene	10	U		
10061-02-6	trans-1,3-Dichloropropene	10	U		
79-00-5	1,1,2-Trichloroethane	10	U		
127-18-4	Tetrachloroethene	10	U		
591-78-6	2-Hexanone	10	U	UJ	C
124-48-1	Dibromochloromethane	10	U		
108-90-7	Chlorobenzene	10	U		
100-41-4	Ethylbenzene	10	U		
1330-20-7	(m+p)Xylene	10	U		
1330-20-7	o-Xylene	10	U		
100-42-5	Styrene	10	U		

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367815

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7430

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/06/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS-ROC Contract: WCC

Lab Code: 10145 Case No.: R20-1413 SAS No.: SDG No.: MW1

Matrix: (soil/water) WATER Lab Sample ID: 367815

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: Q7430

Level: (low/med) LOW Date Received: 03/28/00

% Moisture: not dec. _____ Date Analyzed: 04/06/00

GC Column: HP624 ID: 2.00 (mm) Dilution Factor: 1.0

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

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

QC

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ✓	2.55	29	JB R B
2.		UNKNOWN	16.48	70	J
3.		UNKNOWN	19.14	9	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

ANALYTICAL DATA VALIDATION
GRIFFIN TECHNOLOGY SITE
SEMI-ANNUAL GROUNDWATER SAMPLING
MARCH 2000

INTRODUCTION

This appendix presents the findings of a validation of analytical data for samples collected in March 2000 at the Griffin Technology Inc. (GTI) Site. Sampling was conducted by URS Greiner Woodward Clyde (URSGWC) and analytical services were provided by Columbia Analytical Services, Inc. (CASI) of Rochester, New York. Twenty groundwater samples and associated QC samples were collected and analyzed for volatile organic compounds (VOCs) in accordance with New York State Department of Environmental Conservation (NYSDEC) Analytical Service Protocol (ASP) Method 95-1.

The procedures for validation of the data followed guidance from the following documents:

1. Interim Remedial Measure Program Appendix B: Quality Assurance Project Plan (QAPP). July 1996. Prepared by Woodward-Clyde Consultants.

2. CLP Organics Data Review and Preliminary Review. S.O.P. No. HW-6, Revision 11, June 1996. Prepared by USEPA Region II.

The above "Guidelines" provided the criteria to review. Additional acceptance criteria are given in the analytical method.

The criteria evaluated included the following:

VOCs

Significant problems identified in case narrative
Results reported from secondary dilutions
Sample holding times
Instrument performance and calibration
Method blank and trip blank contamination
Surrogate spike recoveries
MS/MSD recoveries and relative percent difference (RPD) values
Internal standard areas and retention times

VOCs continued:

Field duplicate results

Compound identification and quantitation

Overall assessment of data

The following sections present the data validation:

SIGNIFICANT PROBLEMS IDENTIFIED IN CASE NARRATIVE

No significant problems were identified in the laboratory case narrative.

RESULTS REPORTED FROM SECONDARY DILUTIONS

For samples that required dilutions, part of the validation process is to evaluate which set of results (initial or diluted) are considered to be most representative of the sample matrix. For this data set, two samples were analyzed at dilutions for VOCs.

- All VOC results for sample MW-7S were reported at dilution factor of 2.0 since screening prior to final analysis indicated a TCE concentration slightly above the instrument's linear calibration range. For this sample, the laboratory did not report results of an undiluted analysis.

- For the initial VOC analysis of sample RW-04 analyzed at a 1.0 dilution factor, the corresponding TCE concentration exceeded the instrument's linear calibration range and the sample was reanalyzed at a dilution factor of 1:10. For this sample, the TCE concentration reported from the diluted analysis (1,000 µg/l) is considered to be most representative of the samples' concentration and was transcribed onto the data summary table, along with any appropriate qualifiers.

SAMPLE HOLDING TIMES

The VOC holding time criterion established in the QAPP is seven days from receipt at the laboratory to analysis. Nine of the samples were analyzed between eight and nine days from sample receipt. Data qualification was not considered necessary since the samples were preserved with hydrochloric acid and were analyzed within the "Guidelines" holding time criterion of fourteen days from collection to analyses.

GC/MS INSTRUMENT PERFORMANCE

GC/MS instrument performance checks are performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for instrument performance checks included evaluation of possible transcription or calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. All criteria for bromofluorobenzene (BFB) for VOCs were met for this data set. Additionally, no transcription errors or calculation errors were found.

INITIAL AND CONTINUING CALIBRATION

Initial and continuing calibration criteria are established to ensure the instruments are capable of producing acceptable qualitative and quantitative data for VOCs. All initial and continuing calibrations were performed at the required frequency.

All VOC initial calibration relative response factor (RRF) values met the acceptance criteria presented in the "Guidelines". One VOC initial calibration had select relative standard deviation (RSD) values above the "Guidelines" acceptance criterion of 30 percent. Per the "Guidelines", samples associated with initial calibrations having RSD values above 30 percent require qualification of both detected and non-detected results as estimated (J for detects, UJ for non-detects). Sample results requiring qualification based on the outlying VOC initial calibration RSD values are as follows:

Instrument	Date	Compound	%RSD	Qualifier Detects/Non-detects
1. GCMS#6	04/01/00	acetone	51.4	J/UJ
		2-butanone	36.7	J/UJ
		2-hexanone	35.2	J/UJ

Associated Samples: All samples from sampling event

J - estimated result for detects

UJ - estimated result for non-detects

With one exception (RW-04), the affected compound results for the associated samples were all reported as non-detected.

All VOC continuing calibration RRF values met the acceptance criteria presented in the "Guidelines". VOC continuing calibration analyses had percent difference (%D) values for select VOCs above the "Guidelines" acceptance criterion 25 percent. The select compounds were the same as those that exhibited elevated initial calibration RSD values. Since the associated VOC sample results were previously qualified based on the initial calibration data, additional data qualification was not required based on the continuing calibration outliers.

Additionally, no errors in calculations or transcriptions were noted during the validation of the calibration data from this data set.

LABORATORY METHOD BLANKS

Laboratory method blanks evaluate the existence and magnitude of contamination problems resulting from laboratory activities. All laboratory method blanks were analyzed at the prescribed method frequencies.

All three VOC method blank samples were reported as non-detected for TCL-VOCs but had low level detections of an unknown tentatively identified compound (TIC). Per the "Guidelines", TICs detected at concentrations less than five times associated method blank concentrations are rejected (R). All but sample RW-04 required qualification in accordance with the foregoing. Presented as follows are the affected samples and appropriate qualifiers:

Fraction	Analyte	Conc.	Qualified Conc.
VOCs (µg/l)			
1. VBLK01	unknown RT 2.59	17J	
Associated Samples:			
MW-1	unknown RT 2.57	12J	R
MW-3	unknown RT 2.54	12J	R
MW-5D	unknown RT 2.53	12J	R
MW-6S	unknown RT 2.55	12J	R
MW-6D	unknown RT 2.55	12J	R

Fraction	Analyte	Conc.	Qualified Conc.
VOCs (µg/l)			
Associated Samples continued:			
MW-7S	unknown RT 2.55	29J	R
MW-7D	unknown RT 2.56	11J	R
MW-9S	unknown RT 2.56	11J	R
MW-9D	unknown RT 2.55	11J	R
MW-10S	unknown RT 2.56	10J	R
MW-10D	unknown RT 2.54	10J	R
MW-11D	unknown RT 2.55	11J	R
MW-13D	unknown RT 2.55	10J	R
2. VBLK02	unknown RT 2.58	16J	
Associated Samples:			
MW-2S	unknown RT 2.55	13J	R
MW-4	unknown RT 2.56	12J	R
MW-5S	unknown RT 2.57	15J	R
RW-01	unknown RT 2.55	11J	R
RW-02	unknown RT 2.55	12J	R
RW-03	unknown RT 2.54	12J	R
DUP	unknown RT 2.55	12J	R
3. VBLK03	unknown RT 2.58	16J	
Associated Samples:			
Trip	unknown RT 2.55	29J	R

RT retention time
J estimated concentration for TICs
R result is unusable

No other sample results required qualification based on detections in the laboratory method blank samples.

TRIP BLANK SAMPLES

Trip blank samples are used to assess VOC cross-contamination during shipment to the laboratory. One trip blank sample was submitted with the cooler containing aqueous samples for VOC analyses.

Two VOC TICs were reported as detected in the trip blank. TICs detected at concentrations less than five times associated blank concentrations are generally considered introduced contamination and the associated data are rejected (R) in accordance with the "Guidelines". Only one sample result required qualification per the "Guidelines" and is summarized below:

Fraction	Analyte	Conc.	Qualified Conc.
VOCs (µg/l)			
1. Trip Blank	unknown RT 16.48	70J	
Associated Samples:			
MW-2S	unknown RT 16.48	10J	R

RT retention time
J estimated concentration for TICs
R result is unusable

SURROGATE SPIKE RECOVERIES

Samples analyzed for VOCs are spiked with surrogate compounds prior to analysis. Surrogate compounds are used to evaluate overall laboratory performance for sample preparation efficiency on a per sample basis. The "Guidelines" require that all VOC surrogate spike recoveries meet acceptance criteria.

All VOC surrogate spike recoveries were within the laboratory's established control limits, which indicated that the laboratory's preparation procedure was acceptable. Additionally, no errors in calculations or transcriptions were found.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

Matrix effects on the analytical results are checked by analyzing matrix spike/matrix spike duplicate (MS/MSD) samples. MW-5D was analyzed as an MS/MSD sample for this sampling event.

All VOC MS/MSD recoveries were within the method established control limits; this indicated that acceptable analytical accuracy was achieved for these analyses. All but one relative percent difference (RPD) values between MS/MSD recoveries were within control limits; this indicated satisfactory analytical precision was achieved. The TCE RPD value was 22 percent, which is above the method RPD control limit of 14 percent. The TCE sample concentrations were substantially greater than the MS/MSD spiking concentrations (4-5 times), therefore, likely affecting the reproducibility of the MS recoveries. As such, data qualification was not considered necessary.

Additionally, no errors in calculations or transcriptions were found.

INTERNAL STANDARDS

Internal standard (I.S.) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. All VOC I.S. retention times and area responses were within the established control limits.

Validation of the I.S. data also included spot checking the retention times and areas summarized on Form-8 to those on the instrument chromatograms; no anomalies were noted.

FIELD DUPLICATE RESULTS

Field duplicate results were used to evaluate representativeness. For aqueous samples, when analytes for both duplicate and sample values are greater than five times the quantitation limit, satisfactory representativeness is indicated by an RPD less than or equal to 50 percent. Where one or both of the analytes of a field duplicate pair are reported at less than five times the quantitation limit, satisfactory representativeness is indicated if the field duplicate results agree within 2.5 times the quantitation limit. Field duplicate results that do not meet these criteria may indicate unsatisfactory representativeness of the results.

One field duplicate sample pair, labeled as MW-4 and DUP, was collected with this sampling event. The results reported for the field duplicate sample pair are in agreement with the above criteria, which indicates that the aggregate sampling and analytical precision was acceptable.

COMPOUND IDENTIFICATION AND QUANTITATION

Data for one or more detected compound/analytes were checked for potential identification errors and were recalculated from the raw data. No anomalies or transcription errors were noted during validation of the reported analyte identifications and quantitations.

OVERALL DATA ASSESSMENT

Based on the criteria outlined, it is recommended that the results reported for these analyses be accepted for their intended use. Acceptable levels of accuracy and precision (based on the MS/MSD results and field duplicate results) were achieved for this data set. In addition, completeness, defined to be the percentage of analytical results which are judged to be valid, including estimated (J or UJ) values, for this data set was 100 percent for TCL VOCs. Sample results from this investigation required some qualification based on the minor deficiencies summarized below:

- Acetone, 2-butanone, and 2-hexanone results for all samples were qualified as estimated (J for detects (acetone RW-04 only), UJ for non-detects) based on outlying initial calibration data.

- Select tentatively identified compounds (TICs) for all but one sample were rejected as unusable (R) based on the presence of same in associated laboratory method blank sample or field trip blank sample.

No transcription errors or calculation errors were found during validation of the reported VOC results from this data set.