FINAL REPORT

INTERIM REMEDIAL MEASURE PROGRAM

FOURTH SEMI-ANNUAL PROGRESS REPORT
(OCTOBER 1998 – MARCH 1999)

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

Prepared for
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INTERIM REMEDIAL MEASURE SEMI-ANNUAL PROGRESS REPORT

GRIFFIN TECHNOLOGY, INC. FACILITY

TOWN OF FARMINGTON

ONTARIO COUNTY, NEW YORK

The enclosed Fourth 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.

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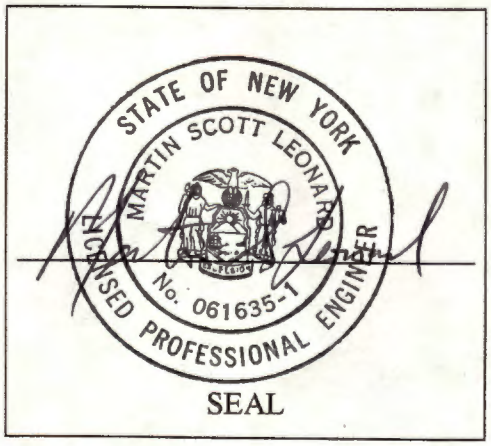

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This report presents information collected by URS Greiner Woodward Clyde (URSGWC) during the fourth six-month period of operation (October 1998 through March 1999) of the Interim Remedial Measure (IRM) system at the Griffin Technology, Inc. (GTI) site located at 6132 Victor-Manchester Road in the Town of Farmington, Ontario County, New York. The IRM system consists of three wells equipped with groundwater extraction pumps, which have been plumbed to discharge groundwater into the local sanitary sewer system. A general location map is included as Figure 1-1.

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. 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. The IRM system began operating on February 18, 1997.

The activities performed during the fourth 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.
- 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-site and off-site semi-annually beginning six months after initiation of the system and continuing for a period of two years. 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 preceding 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. 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 consists of a network of three groundwater recovery wells (designated as RW-01, RW-02, and RW-03). The recovery wells are constructed with 20-foot screened intervals that straddle the contact between the overburden and the bedrock. The total depths of the wells 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 installation of the force main discharge and subsequent system start-up, it was necessary for the Canandaguia-Farmington Water and Sewer District to receive permission from the NYSDEC to receive this wastewater.

2.2 IRM SYSTEM MONITORING

During the fourth 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. All groundwater measurements were collected using an electronic water level indicator capable of measuring the water elevation to the nearest 0.01 ft.

On March 17, 1999, 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. Measurements were not obtained from staff gauge SG-1 because the elevation of the creek was below this gauge's minimum depth.

2.2.2 Groundwater Sampling and Analysis

During the fourth 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 on the POTW.

On March 17 and 18, 1999, groundwater samples were collected to evaluate regional groundwater quality. Samples were collected from all monitoring wells. 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 the fourth six-month period of IRM system operation and the results of the fourth semi-annual groundwater sampling event are presented in the following subsections.

3.1 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 3-1. 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); cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride. These COCs are generally consistent with earlier results except that vinyl chloride was not previously identified in effluent samples. 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 lower near the end of the operating period, but remained within the range of historical levels. The quantity of water removed by the system increased during the latter months (February and March 1999) of this operating period. This appears to be related to higher seasonal groundwater elevations during late 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.

3.2 GROUNDWATER ANALYTICAL RESULTS

A summary of groundwater analytical data collected from all wells on March 17 and 18, 1999 is presented in Table 3-2. Table 3-2 also summarizes the data from previous sampling events. The laboratory data sheets from CASI, for the fourth semi-annual groundwater sampling event, are provided in Appendix B. A data validation report for this data, prepared by URSGWC's internal QA/QC reviewer, is provided in Appendix C. Results of the validation indicate that the data are acceptable. Low concentrations of acetone were reported in some samples; however, results of the validation suggest that the presence of acetone is attributed to laboratory activities.

Groundwater analytical results obtained from the March 17 and 18, 1999 event showed that concentrations of COCs were generally lower than those reported for the previous (September 2, 1998) groundwater sampling event. The COCs detected in groundwater samples collected during March 1999 consisted of TCE; 1,1,1-TCA; and cis-1,2-DCE. These COCs are consistent with the results of earlier sampling events. TCE was consistently the compound with the highest reported concentration.

3.3 HYDRAULIC HEAD MEASUREMENT RESULTS

Hydraulic head measurements collected during the past six months of operation from selected on-site groundwater monitoring wells and piezometers and nearby monitoring wells MW-6S and MW-6D are presented in Table 3-3. These data were used to construct monthly groundwater contour maps of the site for the overburden water-bearing zone (Figures 3-1 through 3-5) and the bedrock water-bearing zones (Figures 3-7 through 3-11).

The measurements collected from all on-site and off-site groundwater monitoring wells and piezometers on March 17, 1999 in conjunction of the groundwater sampling event are presented in Table 3-4. Hydraulic head measurements from previous groundwater sampling events at the site are included in Table 3-4. Figure 3-6 is a contour map illustrating groundwater flow conditions in the vicinity of the site in the overburden water-bearing zone on March 17, 1999. Figure 3-12 is a contour map illustrating groundwater flow conditions in the vicinity of the site in the bedrock water-bearing zone on March 17, 1999.

The groundwater contour maps from the GTI site indicate that groundwater in the overburden water-bearing zone generally appears to flow to the south or southwest. In the bedrock water-bearing zone, groundwater generally appears to flow toward a groundwater low area near the southwest corner of the site, in the vicinity of RW-03. The March 1999 data suggest that groundwater in the bedrock zone at the site flowed to the southwest toward a groundwater low in the vicinity of monitoring well MW-7D. 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.

Based on the information collected during the fourth 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 to the southwest. 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 1999 bedrock groundwater elevation data indicate the presence of a groundwater low southwest of the site in the vicinity of monitoring well MW-7D.
- The monthly quantity of groundwater removed by the IRM system increased during wet weather (spring) conditions. The concentrations of COCs in the IRM system effluent were higher at the beginning of this operating period and lowest near the end of the operating period, but remained consistent with historical levels. TCE was consistently the COC reported at the highest concentration in the IRM system effluent.
- Groundwater analytical results for samples collected during the March 1999 sampling event indicated that concentrations of COCs were generally lower than those reported for the previous (September 2, 1999) groundwater sampling event.

Data collection activities for the third year of IRM system operation will be continued in the same manner as the first and second years of IRM system operation. Continued monitoring of the site and additional data collection during the next period of operation will provide additional data to evaluate the long-term effectiveness of the IRM system.

TABLE 3-1
SUMMARY OF EFFLUENT DISCHARGES TO POTW
GRIFFIN TECHNOLOGY FACILITY
FARMINGTON, NEW YORK

	DISCHARGE	CONCENTRATIONS				
MONTH	(GAL.)	TCE	1,1,1-TCA	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 3-1
SUMMARY OF EFFLUENT DISCHARGES TO POTW
GRIFFIN TECHNOLOGY FACILITY
FARMINGTON, NEW YORK

MONTH	DISCHARGE (GAL.)	CONCENTRATIONS TCE	1,1,1-TCA	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	ND	17

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 MONITORING WELL GROUNDWATER ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	1,2-DCE	XYLENES
MW-01	12/19/94	ND	ND	ND	ND
	5/21/96	ND	ND	ND	ND
	8/13/97	ND	ND	ND	ND
	3/18/98	ND	ND	ND	ND
	9/2/98	ND	ND	ND	ND
	3/18/99	ND	ND	ND	ND
MW-02S	12/19/94	850	ND	ND	ND
	5/21/96	30	ND	1	ND
	8/13/97	NS	NS	NS	ND
	3/18/98	17,000	ND	ND	ND
	9/2/98	18,000	210	ND	ND
	3/18/99	28	ND	ND	ND
MW-02D	8/13/97	450	23	42	ND
	3/18/98	740	16	28	ND
	9/2/98	680	25	39	ND
	3/18/99	190	5	6	ND
MW-03	12/19/94	190	ND	ND	ND
	5/21/96	120	ND	2	ND
	8/13/97	150	ND	2	ND
	3/18/98	88	ND	ND	ND
	9/2/98	110	ND	ND	ND
	3/18/99	45	ND	ND	ND
MW-04	12/19/94	710	6.7	23	ND
	5/21/96	16	ND	2	ND
	8/13/97	NS	NS	NS	ND
	3/18/98	59	ND	2	ND
	9/2/98	450	7	20	ND
	3/18/99	58	ND	1	ND
MW-05S	12/19/94	580	15	ND	ND
	5/21/96	350	16	ND	ND
	8/13/97	760	31	4	ND
	3/18/98	120	4	ND	1
	9/2/98	390	14	ND	ND
	3/18/99	95	3	ND	ND

Notes:

1. 12/19/94 measurements collected by Blasland, Bouck & Lee.
2. No other VOC compounds detected at method detection limit.
3. ND indicates not detected.
4. All results expressed in micrograms per liter (µg/l).
5. "NS" indicates no sample collected.

TABLE 3-2
SUMMARY OF MONITORING WELL GROUNDWATER ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	1,2-DCE	XYLENES
MW-05D	12/19/94	820	23	ND	ND
	5/21/96	1,000	48	8	ND
	8/13/97	250	7	2	ND
	3/18/98	250	7	ND	ND
	9/2/98	300	8	2	ND
	3/18/99	200	7	2	ND
MW-06S	12/19/94	270	7.8	ND	ND
	5/21/96	ND	2	ND	ND
	8/13/97	140	9	3	ND
	3/18/98	5	ND	ND	ND
	9/2/98	140	8	2	ND
	3/17/99	ND	ND	ND	ND
MW-06D	12/19/94	190	7.5	ND	ND
	5/21/96	240	10	ND	ND
	8/13/97	150	10	2	ND
	3/18/98	6	ND	ND	ND
	9/2/98	140	8	2	ND
	3/17/99	ND	ND	ND	ND
MW-07S	12/19/94	250	6.6	8	ND
	5/21/96	310	7	6	ND
	8/13/97	250	6	6	ND
	3/18/98	3	ND	ND	ND
	9/2/98	220	5	4	ND
	3/17/99	ND	ND	ND	ND
MW-07D	12/19/94	260	ND	7	ND
	5/21/96	290	4	12	ND
	8/13/97	180	2	13	ND
	3/18/98	150	2	15	ND
	9/2/98	200	2	15	ND
	3/17/99	100	ND	8	ND
MW-08S	12/19/94	29	ND	ND	ND
		Well abandoned.			

Notes:

1. 12/19/94 measurements collected by Blasland, Bouck & Lee.
2. No other VOC compounds detected at method detection limit.
3. ND indicates not detected.
4. All results expressed in micrograms per liter (µg/l).
5. "NS" indicates no sample collected.

TABLE 3-2
SUMMARY OF MONITORING WELL GROUNDWATER ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	1,2-DCE	XYLENES
MW-08D	12/19/94	55	ND	ND	ND
		Well abandoned.			
MW-09S	12/19/94	ND	ND	ND	ND
	5/21/96	ND	ND	ND	ND
	8/13/97	2	ND	ND	ND
	3/18/98	3	ND	ND	ND
	9/2/98	NS	NS	NS	NS
	3/18/99	ND	ND	ND	ND
MW-09D	12/19/94	ND	ND	ND	ND
	5/21/96	ND	ND	ND	ND
	8/13/97	ND	ND	ND	ND
	3/18/98	ND	ND	ND	ND
	9/2/98	NS	NS	NS	NS
	3/18/99	ND	ND	ND	ND
MW-10S	12/19/94	7.8	ND	ND	ND
	5/29/96	30	1	ND	ND
	8/13/97	15	ND	ND	ND
	3/18/98	NS	NS	NS	NS
	9/2/98	8	ND	ND	ND
	3/18/99	ND	ND	ND	ND
MW-10D	12/19/94	8.2	ND	ND	ND
	5/29/96	8	ND	ND	ND
	8/13/97	15	ND	ND	ND
	3/18/98	NS	NS	NS	NS
	9/2/98	9	ND	ND	ND
	3/18/99	ND	ND	ND	ND
MW-11D	4/11/96	ND	ND	ND	ND
	5/21/96	ND	ND	ND	ND
	8/13/97	ND	ND	ND	ND
	3/18/98	ND	ND	ND	ND
	9/2/98	ND	ND	ND	ND
	3/18/99	ND	ND	ND	ND

Notes:

1. 12/19/94 measurements collected by Blasland, Bouck & Lee.
2. No other VOC compounds detected at method detection limit.
3. ND indicates not detected.
4. All results expressed in micrograms per liter (µg/l).
5. "NS" indicates no sample collected.

TABLE 3-2
SUMMARY OF MONITORING WELL GROUNDWATER ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	1,2-DCE	XYLENES
MW-13D	4/11/96	610	5	4	ND
	5/21/96	190	5	4	ND
	8/13/97	160	4	4	ND
	3/18/98	110	2	ND	ND
	9/2/98	140	3	2	ND
	3/17/99	120	2	2	ND

Notes:

1. 12/19/94 measurements collected by Blasland, Bouck & Lee.
2. No other VOC compounds detected at method detection limit.
3. ND indicates not detected.
4. All results expressed in micrograms per liter (µg/l).
5. "NS" indicates no sample collected.

TABLE 3-3
SUMMARY OF SEMI-MONTHLY GROUNDWATER ELEVATIONS - OCTOBER 1998 - MARCH
GRIFFIN TECHNOLOGY FACILITY
FARMINGTON, NEW YORK

Well Designation	Groundwater Elevation (ft)					
	10/01/98	10/15/98	11/02/98	11/16/98	12/01/98	12/15/98
MW-01	627.90	628.51	627.14	626.61	626.26	625.89
MW-2S	DRY	625.30	DRY	DRY	DRY	DRY
MW-2D	624.82	625.42	623.96	623.46	623.14	622.71
MW-03	624.75	625.51	623.97	623.44	623.12	622.63
MW-04	622.25	623.90	622.23	622.20	622.17	622.18
MW-5S	621.09	621.35	620.27	DRY	DRY	DRY
MW-5D	618.70	618.90	618.11	617.78	617.48	616.91
MW-06S	NM	622.04	NM	620.71	NM	619.96
MW-06D	NM	622.04	NM	620.68	NM	619.91
MW-11D	624.20	624.29	623.46	623.10	622.71	622.39
PZ-1S	DRY	DRY	DRY	DRY	DRY	DRY
PZ-1D	DRY	DRY	DRY	DRY	DRY	DRY
PZ-2S	DRY	DRY	DRY	DRY	DRY	DRY
PZ-2D	620.03	620.37	619.40	619.13	619.06	618.94

Notes:

1. Groundwater elevations measured on dates shown.
2. NM indicates groundwater elevation not measured on date shown.
3. DRY indicates no water present in well at time of measurement.
4. All measurements relative to mean sea level (msl).

TABLE 3-3
SUMMARY OF SEMI-MONTHLY GROUNDWATER ELEVATIONS - OCTOBER 1998 - MARCH
GRIFFIN TECHNOLOGY FACILITY
FARMINGTON, NEW YORK

Well Designation	01/05/99	01/14/99	01/26/99	02/15/99	03/02/99	03/17/99
MW-01	626.79	626.07	636.35	637.20	635.89	637.82
MW-2S	DRY	DRY	632.47	634.19	632.12	636.36
MW-2D	622.97	622.53	632.48	634.21	631.95	637.69
MW-03	623.39	622.84	635.77	635.45	632.22	637.29
MW-04	622.20	622.15	630.86	633.35	628.95	635.83
MW-5S	DRY	DRY	627.62	632.05	627.30	635.60
MW-5D	616.82	616.60	624.55	630.69	626.32	634.74
MW-06S	NM	NM	NM	629.49	NM	633.11
MW-06D	NM	NM	NM	629.60	NM	633.23
MW-11D	622.30	622.19	624.29	632.11	629.48	635.09
PZ-1S	DRY	DRY	DRY	632.91	DRY	637.48
PZ-1D	DRY	DRY	629.35	632.94	628.68	637.50
PZ-2S	DRY	DRY	626.56	631.29	626.57	636.41
PZ-2D	618.87	618.83	626.38	631.39	626.55	636.50

Notes:

1. Groundwater elevations measured on dates shown.
2. NM indicates groundwater elevation not measured on date shown.
3. DRY indicates no water present in well at time of measurement.
4. All measurements relative to mean sea level (msl).

TABLE 3-4
SUMMARY OF SEMI-ANNUAL MONITORING WELL GROUNDWATER ELEVATION DATA
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date[1]	Groundwater (ft)	Groundwater Elevation (ft)
MW-01	641.79	12/19/94	5.60	636.19
		5/24/96	3.32	638.47
		5/29/96	3.81	637.98
		8/13/97	13.61	628.18
		3/17/98	6.86	634.93
		9/1/98	12.52	629.27
		3/17/99	3.97	637.82
MW-02S	641.28	12/19/94	7.50	633.78
		5/24/96	3.60	637.68
		5/29/96	4.47	636.81
		8/13/97	15.92	625.36
		3/17/98	6.87	634.41
		9/1/98	14.61	626.67
		3/17/99	4.92	636.36
MW-02D	642.37	8/13/97	17.55	624.82
		3/17/98	7.97	634.40
		9/1/98	15.60	626.77
		3/17/99	4.68	637.69
MW-03	642.17	12/19/94	7.83	634.34
		5/24/96	4.82	637.35
		5/29/96	5.77	636.40
		8/13/97	17.32	624.85
		3/17/98	6.84	635.33
		9/1/98	15.79	626.38
		3/17/99	4.88	637.29

NOTES

[1] - 12/19/94 measurements collected by Blasland, Bouck & Lee.
NA - Data not available.
NS - Water elevation not collected.

TABLE 3-4
SUMMARY OF SEMI-ANNUAL MONITORING WELL GROUNDWATER ELEVATION DATA
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date[1]	Groundwater (ft)	Groundwater Elevation (ft)
MW-04	641.75	12/19/94	8.48	633.27
		5/24/96	4.42	637.33
		5/29/96	5.29	636.46
		8/13/97	19.50	622.25
		3/17/98	8.27	633.48
		9/1/98	16.54	625.21
		3/17/99	5.92	635.83
MW-05S	640.85	12/19/94	8.00	632.85
		5/24/96	3.85	637.00
		5/29/96	4.83	636.02
		8/13/97	19.86	620.99
		3/17/98	9.19	631.66
		9/1/98	16.12	624.73
		3/17/99	5.25	635.60
MW-05D	641.01	12/19/94	8.44	632.57
		5/24/96	4.48	636.53
		5/29/96	5.52	635.49
		8/13/97	22.24	618.77
		3/17/98	16.68	624.33
		9/1/98	16.21	624.80
		3/17/99	6.27	634.74

NOTES

[1] - 12/19/94 measurements collected by Blasland, Bouck & Lee.
NA - Data not available.
NS - Water elevation not collected.

TABLE 3-4
SUMMARY OF SEMI-ANNUAL MONITORING WELL GROUNDWATER ELEVATION DATA
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date[1]	Groundwater (ft)	Groundwater Elevation (ft)
MW-06S	636.61	12/19/94	7.36	629.25
		5/24/96	3.70	632.91
		5/29/96	4.89	631.72
		8/13/97	14.87	621.74
		3/17/98	5.24	631.37
		9/1/98	13.89	622.72
		3/17/99	3.50	633.11
MW-06D	636.83	12/19/94	7.43	629.40
		5/24/96	3.77	633.06
		5/29/96	5.03	631.80
		8/13/97	15.07	621.76
		3/17/98	5.41	631.42
		9/1/98	14.09	622.74
		3/17/99	3.60	633.23
MW-07S	634.29	12/19/94	7.53	626.76
		5/24/96	4.26	630.03
		5/29/96	5.18	629.11
		8/13/97	14.70	619.59
		3/17/98	4.85	629.44
		9/1/98	13.68	620.61
		3/17/99	4.72	629.57
MW-07D	634.16	12/19/94	32.95	601.21
		5/24/96	32.51	601.65
		5/29/96	31.85	602.31
		8/13/97	37.35	596.81
		3/17/98	33.02	601.14
		9/1/98	36.80	597.36
		3/17/99	33.22	600.94

NOTES

[1] - 12/19/94 measurements collected by Blasland, Bouck & Lee.

NA - Data not available.

NS - Water elevation not collected.

TABLE 3-4
SUMMARY OF SEMI-ANNUAL MONITORING WELL GROUNDWATER ELEVATION DATA
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date[1]	Groundwater (ft)	Groundwater Elevation (ft)
MW-08S	633.64	12/19/94	11.39	622.25
			Well Abandoned	
MW-08D	633.91	12/19/94	13.16	620.75
			Well Abandoned	
MW-09S	630.16	12/19/94	11.56	618.60
		5/24/96	9.17	620.99
		5/29/96	10.24	619.92
		8/13/97	14.69	615.47
		3/17/98	10.21	619.95
		9/1/98	NS	
		3/17/99	10.38	619.78
MW-09D	630.29	12/19/94	12.71	617.58
		5/24/96	17.02	613.27
		5/29/96	14.78	615.51
		8/13/97	20.56	609.73
		3/17/98	15.91	614.38
		9/1/98	NS	
		3/17/99	13.60	616.69
MW-10S	629.00	12/19/94	14.87	614.13
		5/24/96	NA	NA
		5/29/96	15.26	613.74
		8/13/97	16.62	612.38
		3/17/98	NS	
		9/1/98	16.55	612.45
		3/17/99	14.98	614.02

NOTES

[1] - 12/19/94 measurements collected by Blasland, Bouck & Lee.

NA - Data not available.

NS - Water elevation not collected.

TABLE 3-4
SUMMARY OF SEMI-ANNUAL MONITORING WELL GROUNDWATER ELEVATION DATA
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

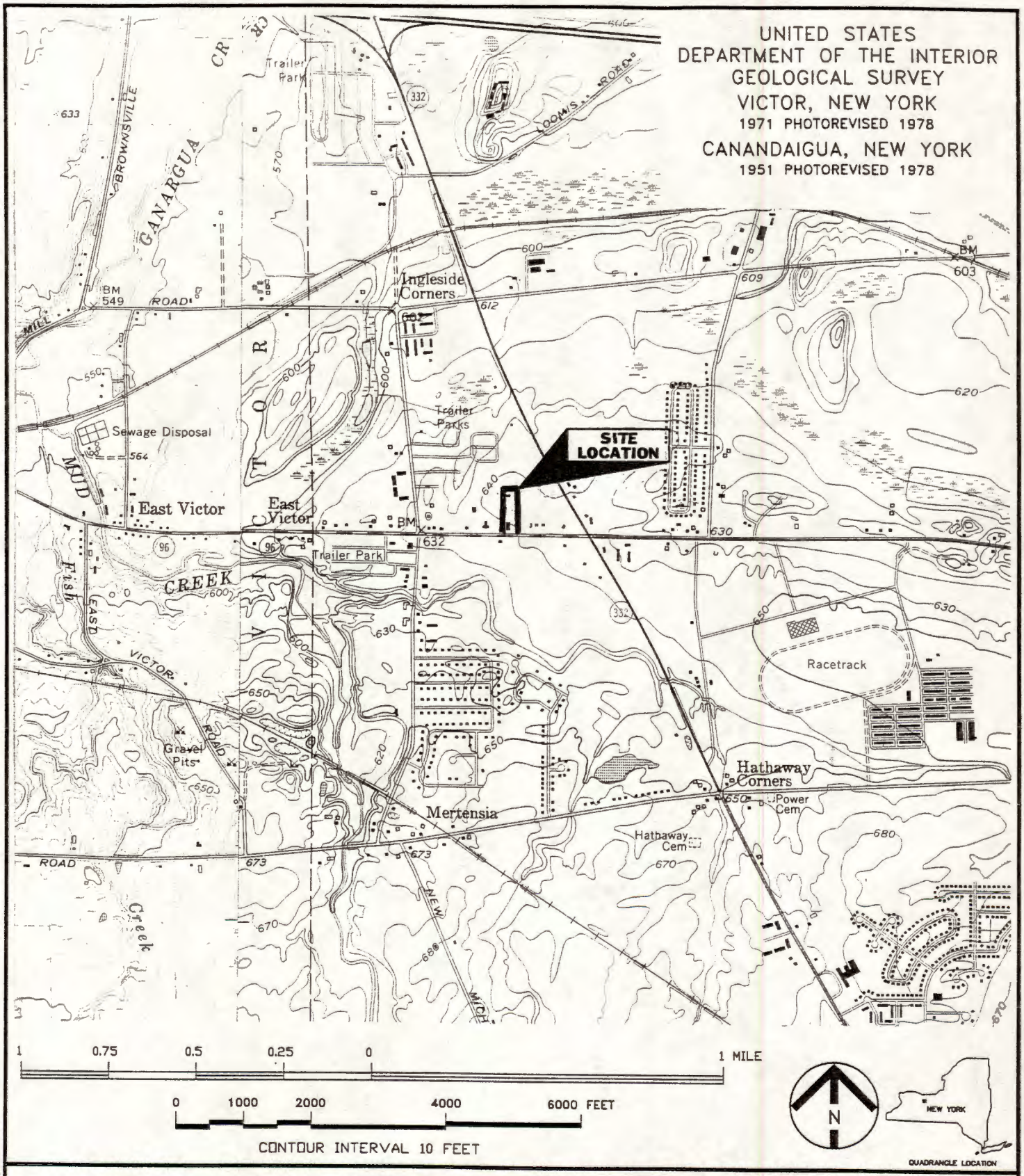
Well ID	Top of Casing Elevation (ft)	Date[1]	Groundwater (ft)	Groundwater Elevation (ft)
MW-10D	626.80	12/19/94	16.82	609.98
		5/24/96	NA	NA
		5/29/96	4.78	622.02
		8/13/97	17.92	608.88
		3/17/98	NS	
		9/1/98	17.77	609.03
		3/17/99	16.34	610.46
MW-11D	641.89	12/19/94	NA	
		5/24/96	7.10	634.79
		5/29/96	8.71	633.18
		8/13/97	17.53	624.36
		3/17/98	7.85	634.04
		9/1/98	16.60	625.29
		3/17/99	6.80	635.09
MW-13D	636.58	12/19/94	NA	
		5/24/96	3.45	633.13
		5/29/96	4.78	631.80
		8/13/97	16.25	620.33
		3/17/98	7.29	629.29
		9/1/98	13.80	622.78
		3/17/99	4.98	631.60

NOTES

[1] - 12/19/94 measurements collected by Blasland, Bouck & Lee.

NA - Data not available.

NS - Water elevation not collected.



1 0.75 0.5 0.25 0 1 MILE

0 1000 2000 4000 6000 FEET

CONTOUR INTERVAL 10 FEET

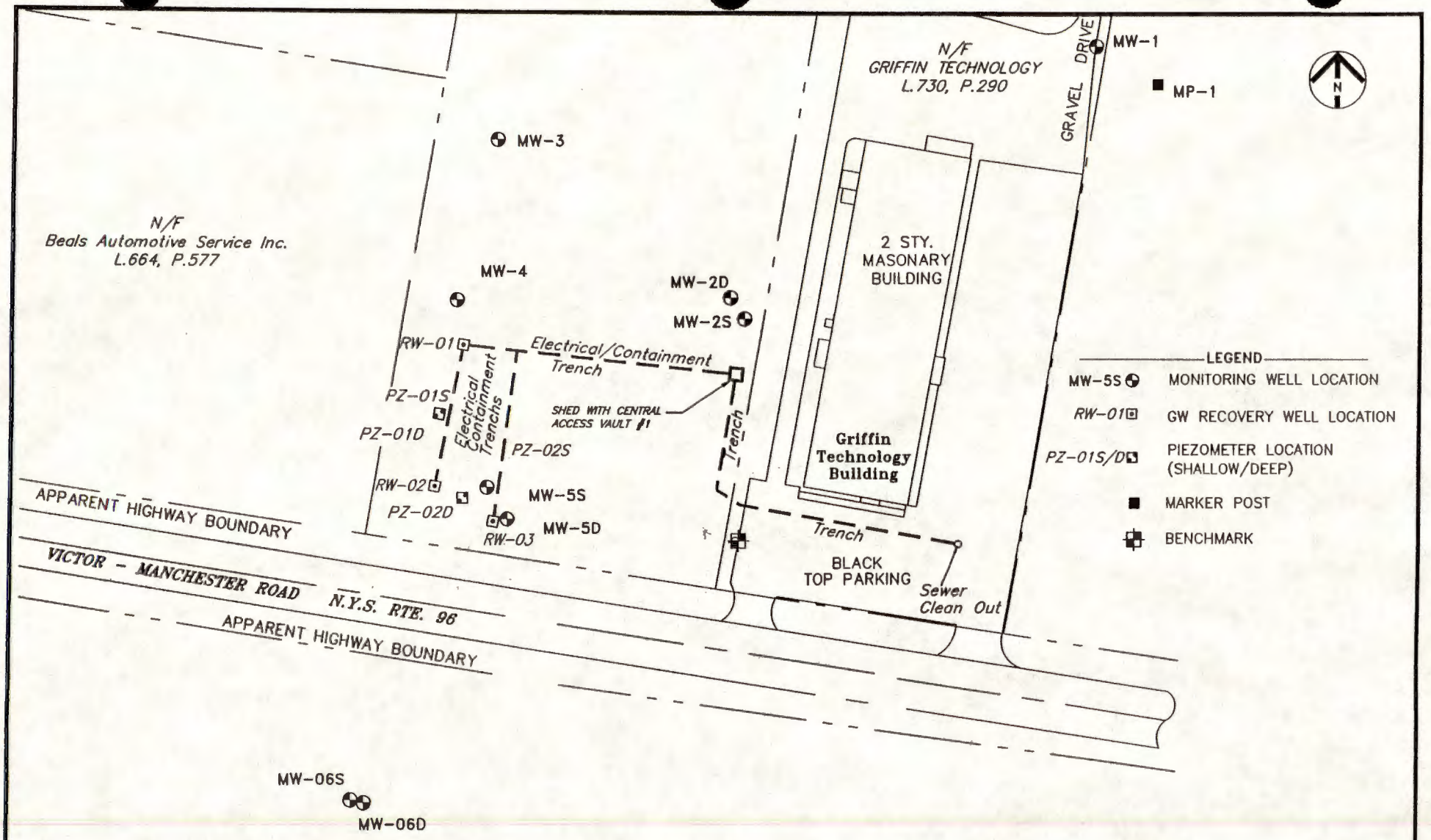
GENERAL LOCATION MAP

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

G:\6E06191\GLM.DWG

URS Greiner Woodward Clyde



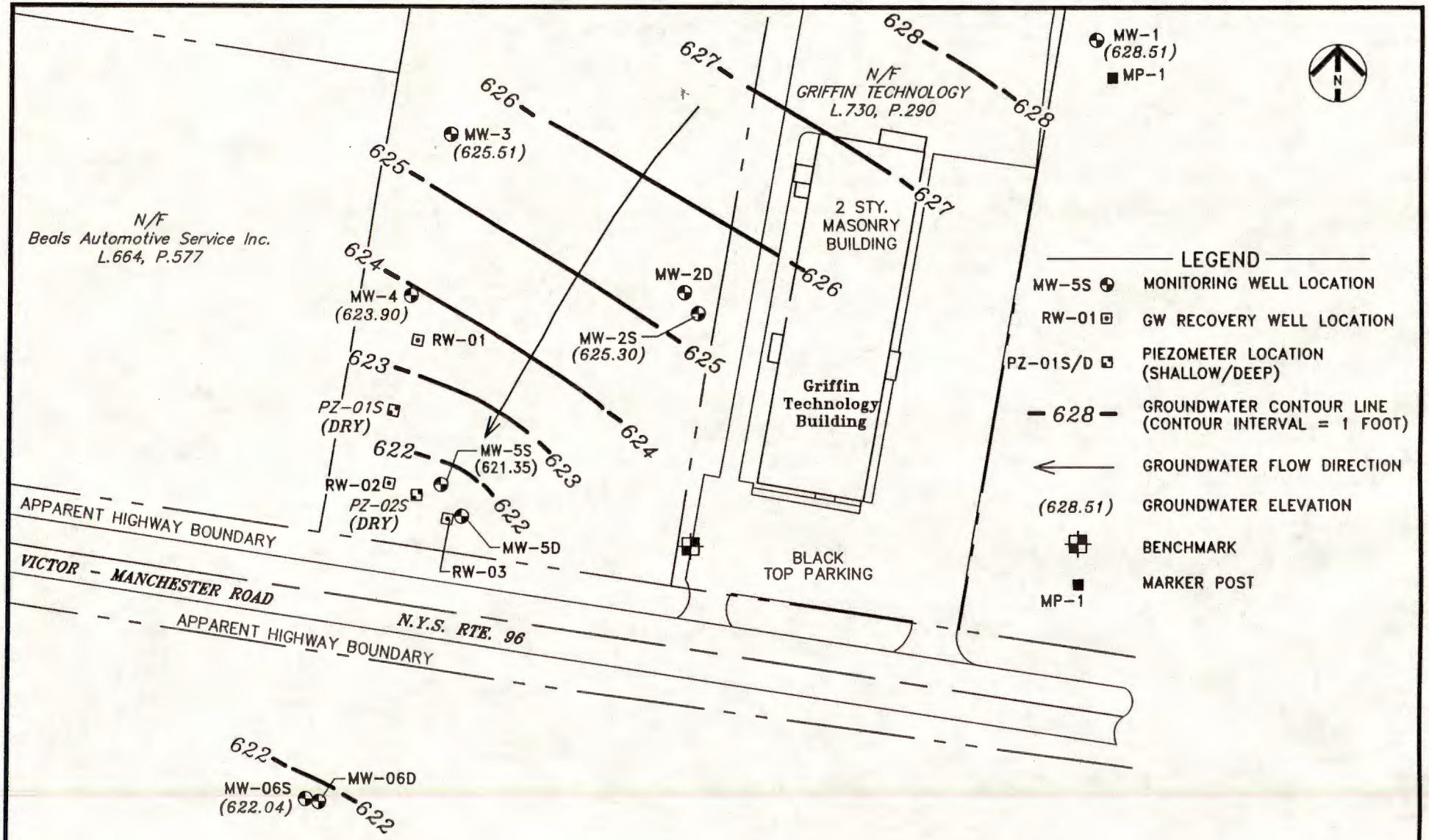
IRM SYSTEM LAYOUT

GRIFFIN TECHNOLOGY, INC. VICTOR, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 12-01-98	FIGURE NO: 2-1

U:\6E06191\BASEMAP2.DWG

URS Greiner Woodward Clyde

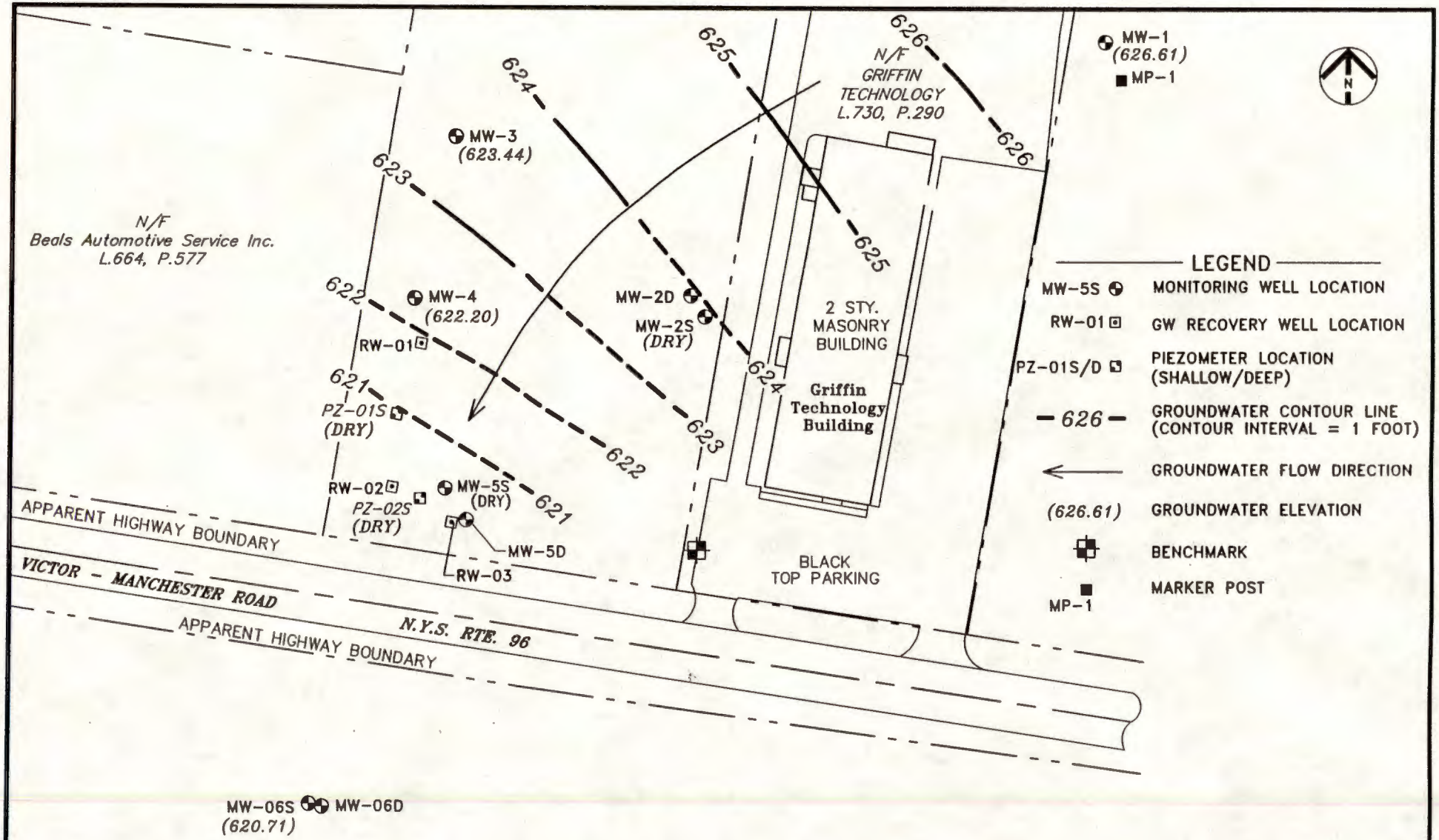


OVERBURDEN GROUNDWATER CONTOUR MAP
OCTOBER 15, 1998
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 2-10-99	FIGURE NO: 3-1

Q:\6E06191\3RD_SEMI\SH981015.DWG

URS Greiner Woodward Clyde



OVERBURDEN GROUNDWATER CONTOUR MAP
NOVEMBER 16, 1998
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 2-10-99	FIGURE NO: 3-2

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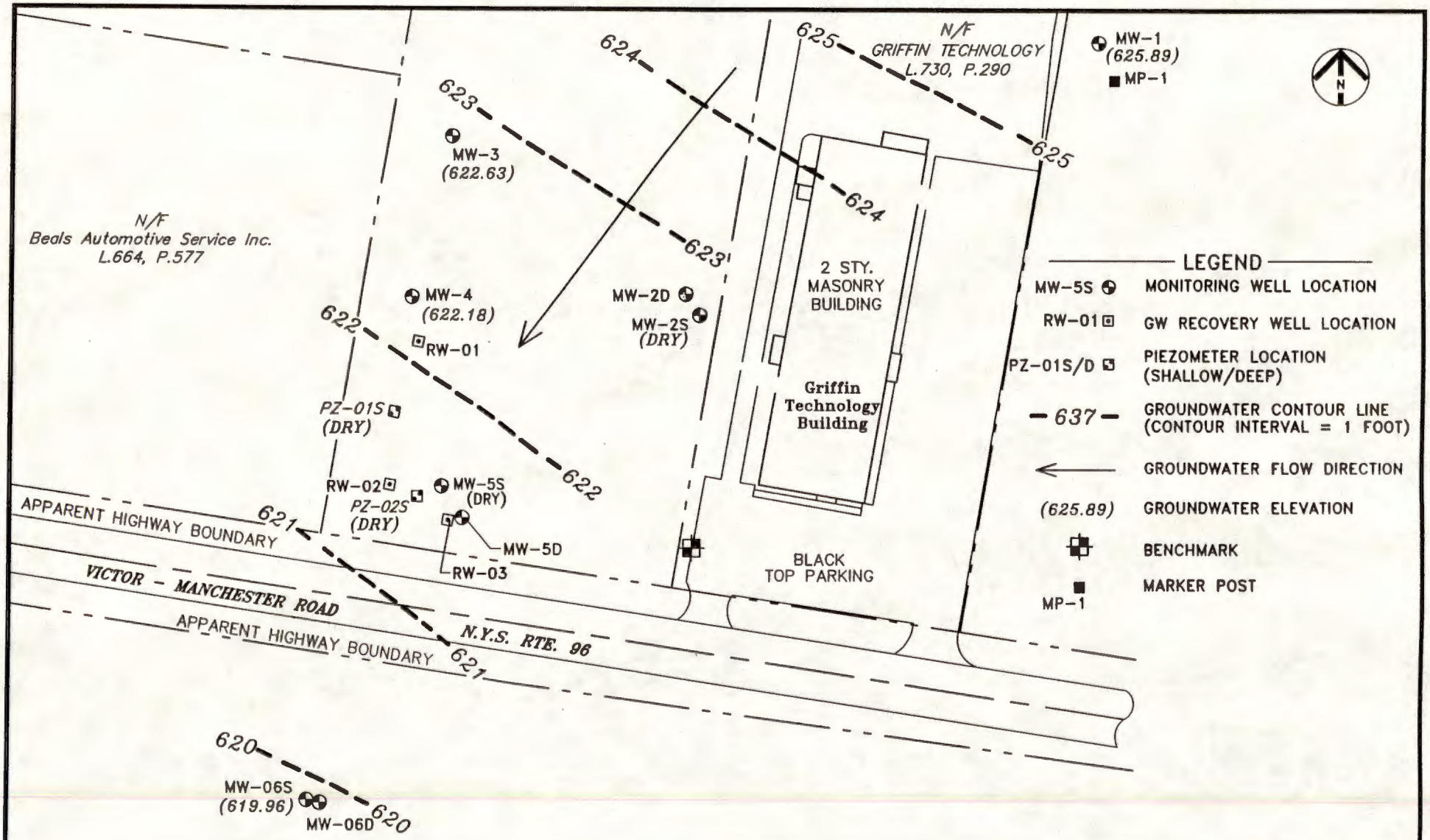
URS Greiner Woodward Clyde



OVERBURDEN GROUNDWATER CONTOUR MAP
DECEMBER 15, 1998
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 2-10-99	FIGURE NO: 3-3

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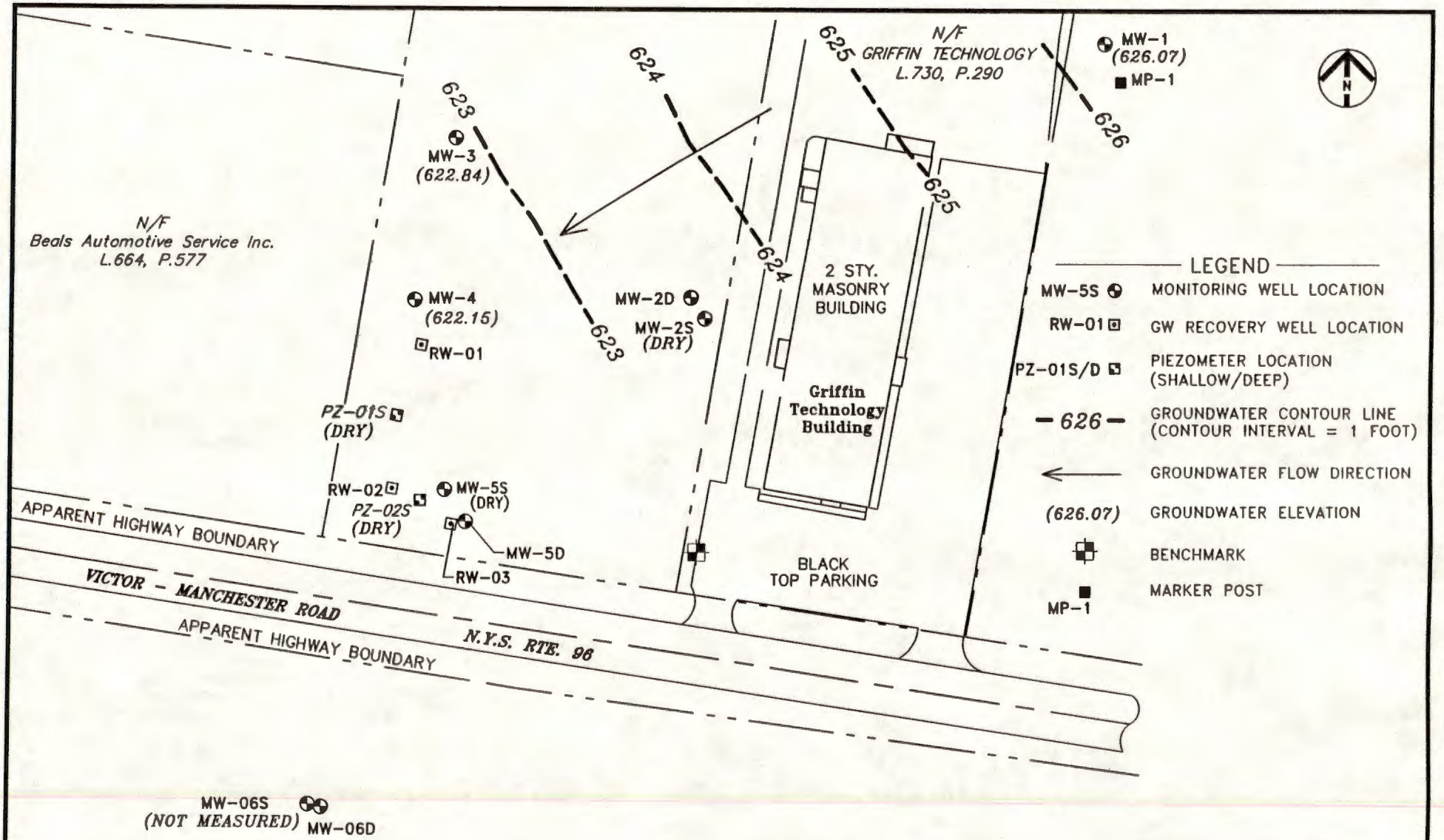
URS Greiner Woodward Clyde



0 40 80 160

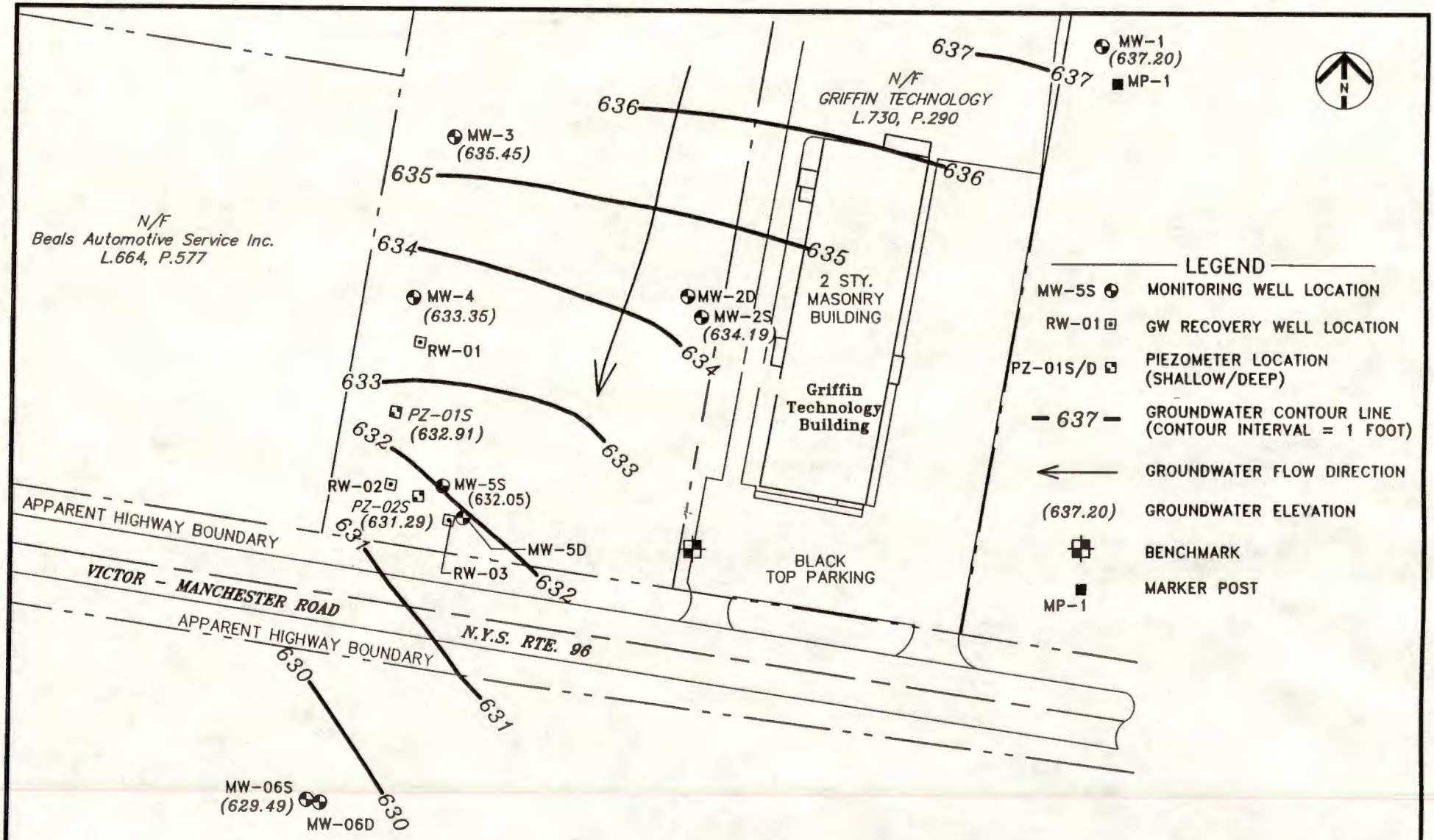
APPROXIMATE SCALE IN FEET

OVERBURDEN GROUNDWATER CONTOUR MAP
JANUARY 14, 1999
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 05-26-99	FIGURE NO: 3-4

Q:\6E06191\3RD_SEM\SH990114.DWG

URS Greiner Woodward Clyde

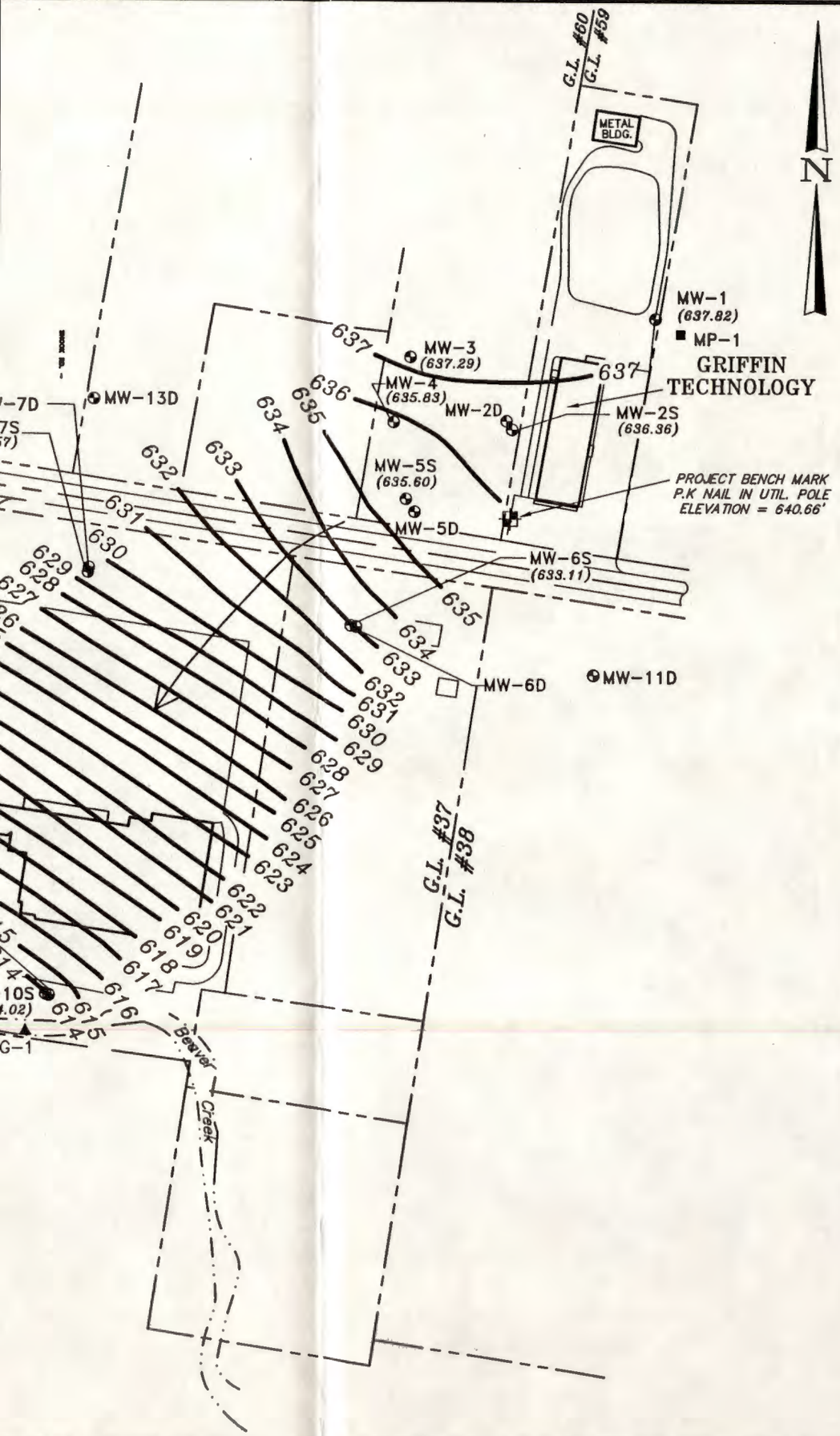


OVERBURDEN GROUNDWATER CONTOUR MAP
FEBRUARY 15, 1999
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 5-26-99	FIGURE NO: 3-5

Q:\6E06191\3RD_SEM\SH991502.DWG

URS Greiner Woodward Clyde



LEGEND

- ⊕ MONITORING WELL
- ▲ STAFF GAUGE
- — 625 — GROUNDWATER CONTOUR (INTERVAL = 1 FOOT)
- (637.82) GROUNDWATER ELEVATION 03-17-99
- ← GROUNDWATER FLOW DIRECTION
- ■ MARKER POST
- (N.M.) NOT MEASURED
- ⌖ BENCHMARK

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

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 200 ft.

URS Greiner Woodward Clyde

30775 Bainbridge Road, Suite 200
Solon, Ohio 44139

CLIENT: DIEBOLD, INC.

LOCATION: FARMINGTON, ONTARIO COUNTY, NEW YORK

OVERBURDEN GROUNDWATER CONTOUR MAP MARCH 17,1999

DRAWN BY:	CHECKED BY:	PROJECT NO:	DATE:	FIGURE NO:
MMS	MTS	6E06191	05-26-99	3-6

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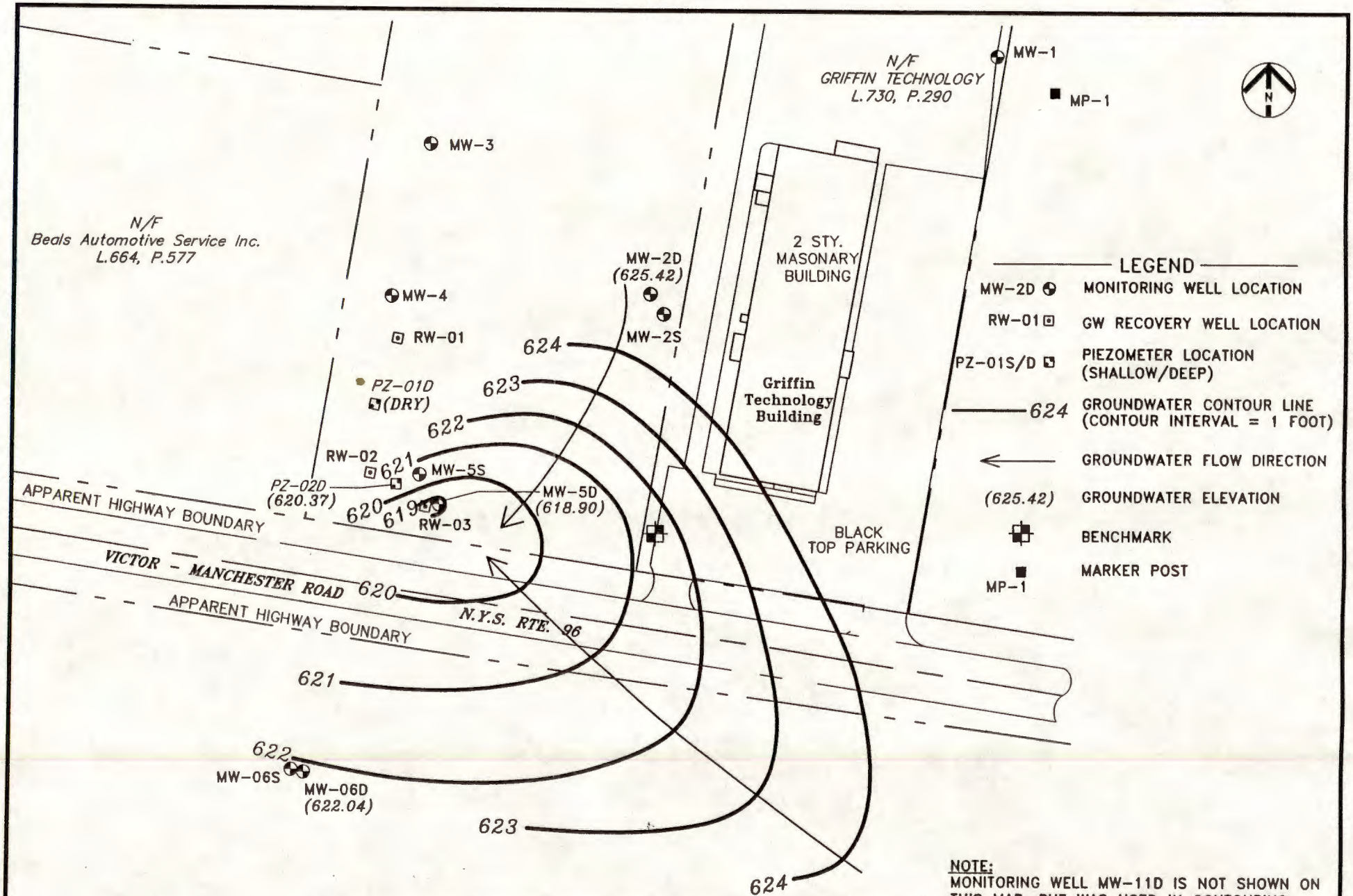


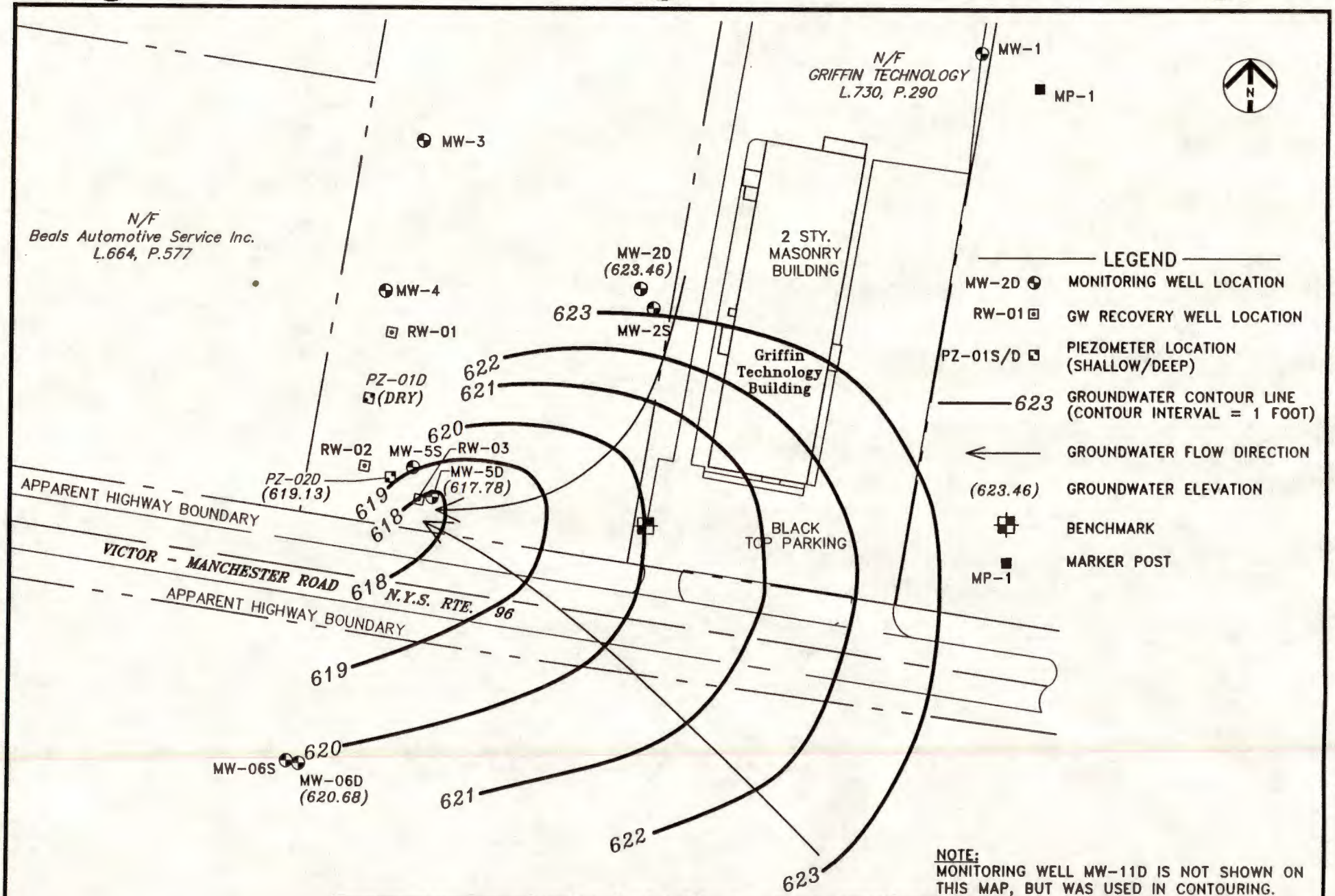
NOTE:
MONITORING WELL MW-11D IS NOT SHOWN ON THIS MAP, BUT WAS USED IN CONTOURING.

BEDROCK GROUNDWATER CONTOUR MAP
OCTOBER 15, 1998
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 02-10-99	FIGURE NO: 3-7

U:\6E06191\DP981015.DWG

URS Greiner Woodward Clyde

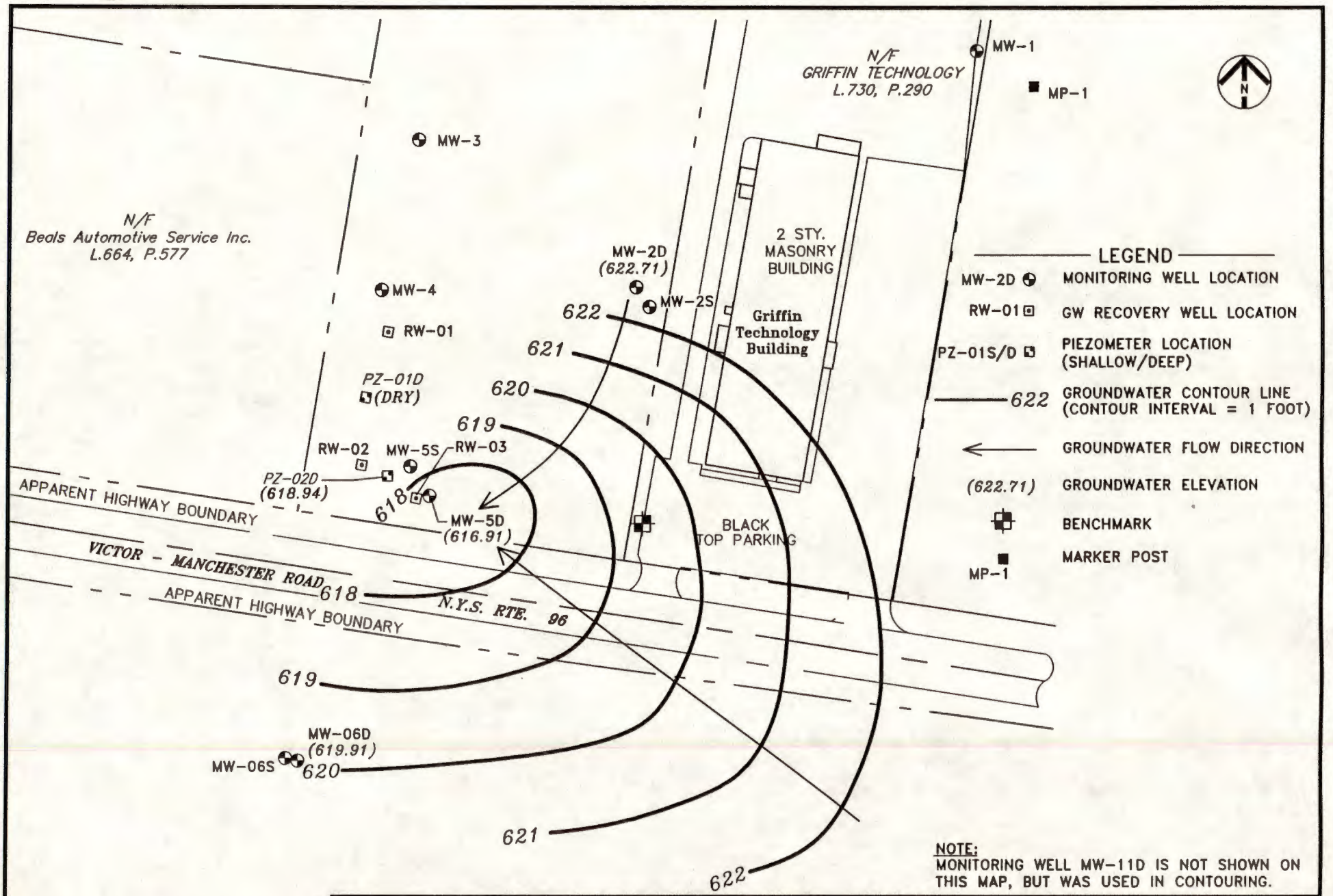


BEDROCK GROUNDWATER CONTOUR MAP
NOVEMBER 16, 1998
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 02-10-99	FIGURE NO: 3-8

O:\6E06191\3rd-SEMI\DP9B1116.DWG

URS Greiner Woodward Clyde

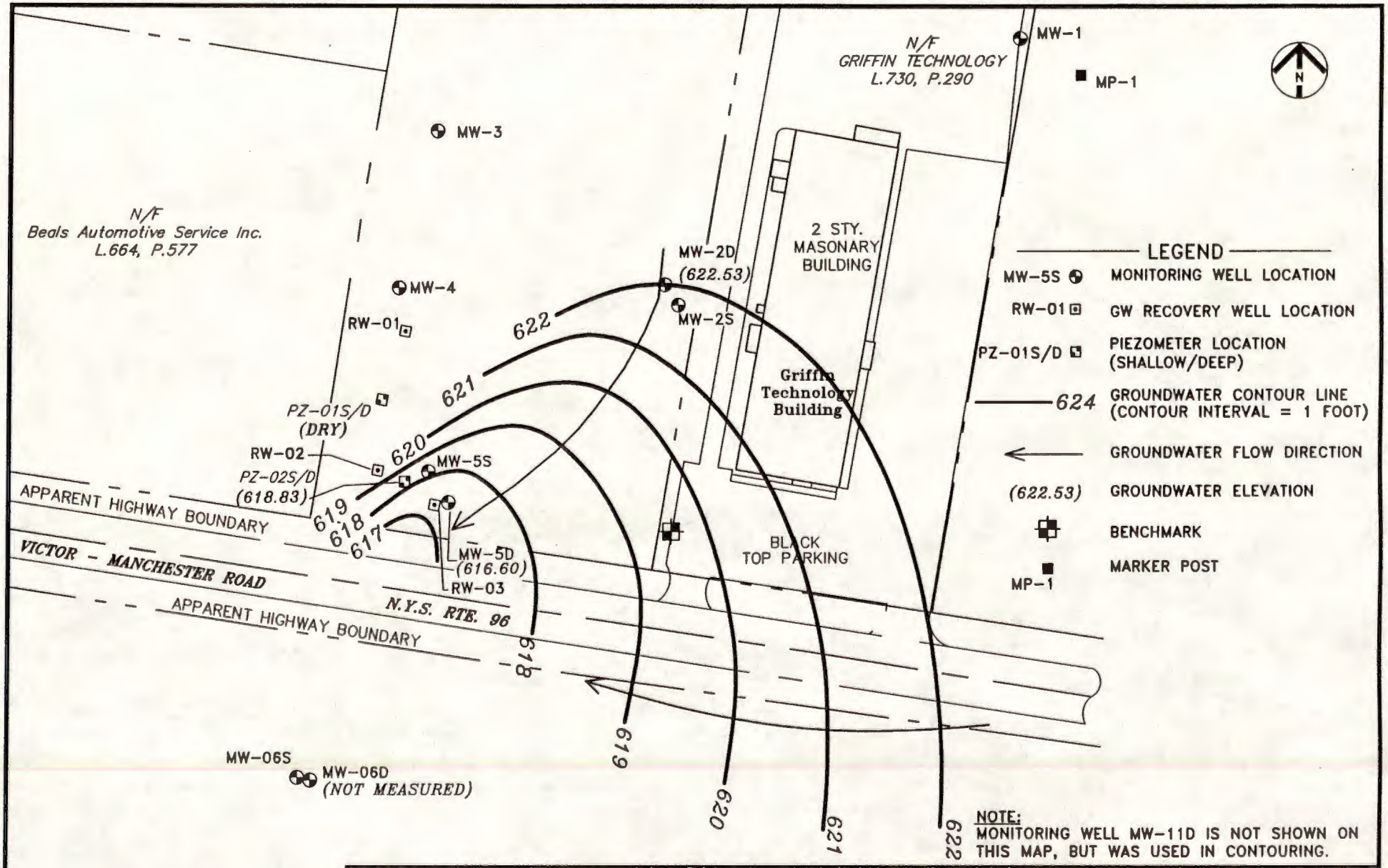


BEDROCK GROUNDWATER CONTOUR MAP
DECEMBER 15, 1998
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 02-10-99	FIGURE NO: 3-9

Q:\6E06191\3rd-SEM\DP981215.DWG

URS Greiner Woodward Clyde



BEDROCK GROUNDWATER CONTOUR MAP
JANUARY 14, 1999
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 05-26-99	FIGURE NO: 3-10

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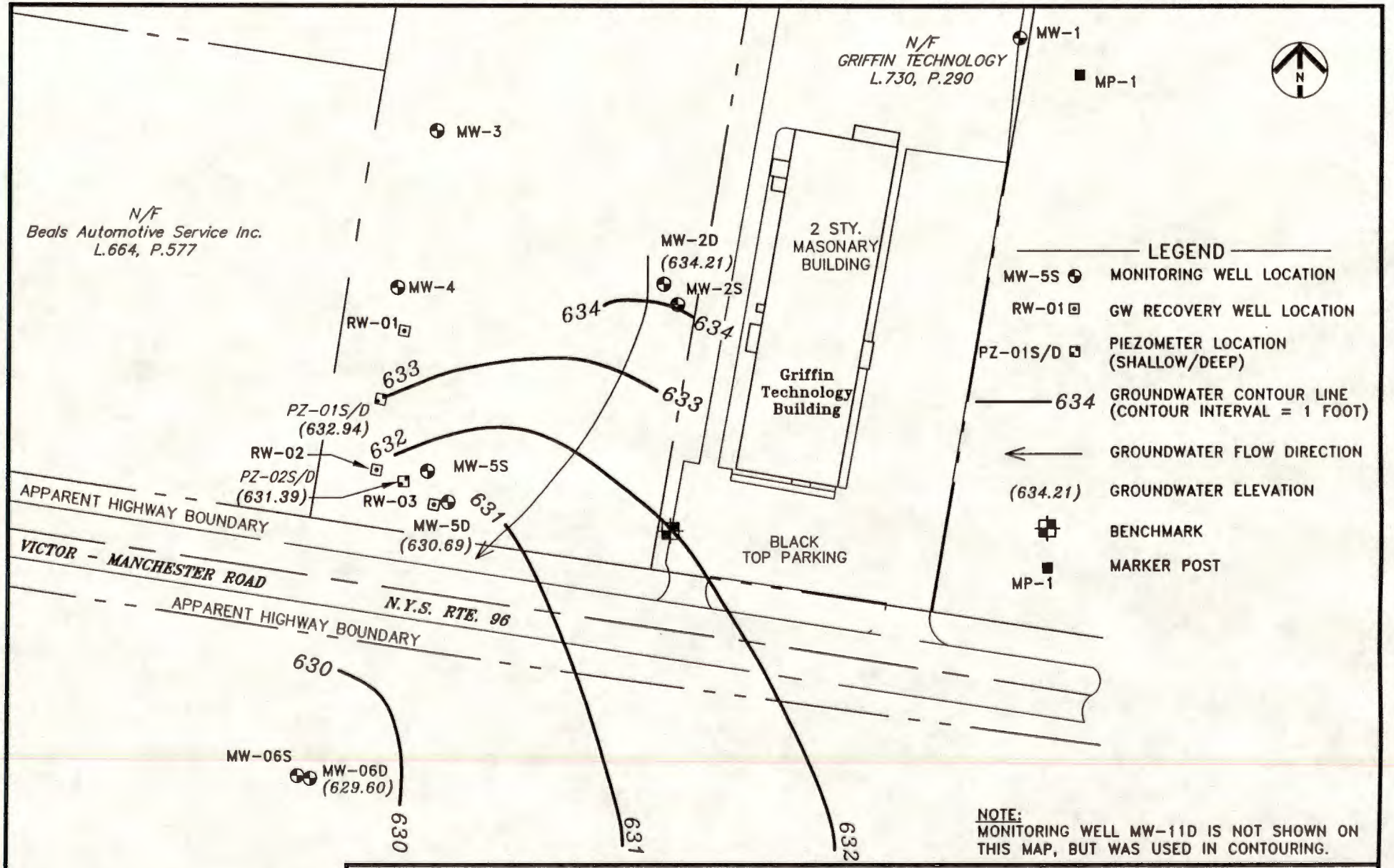
URS Greiner Woodward Clyde

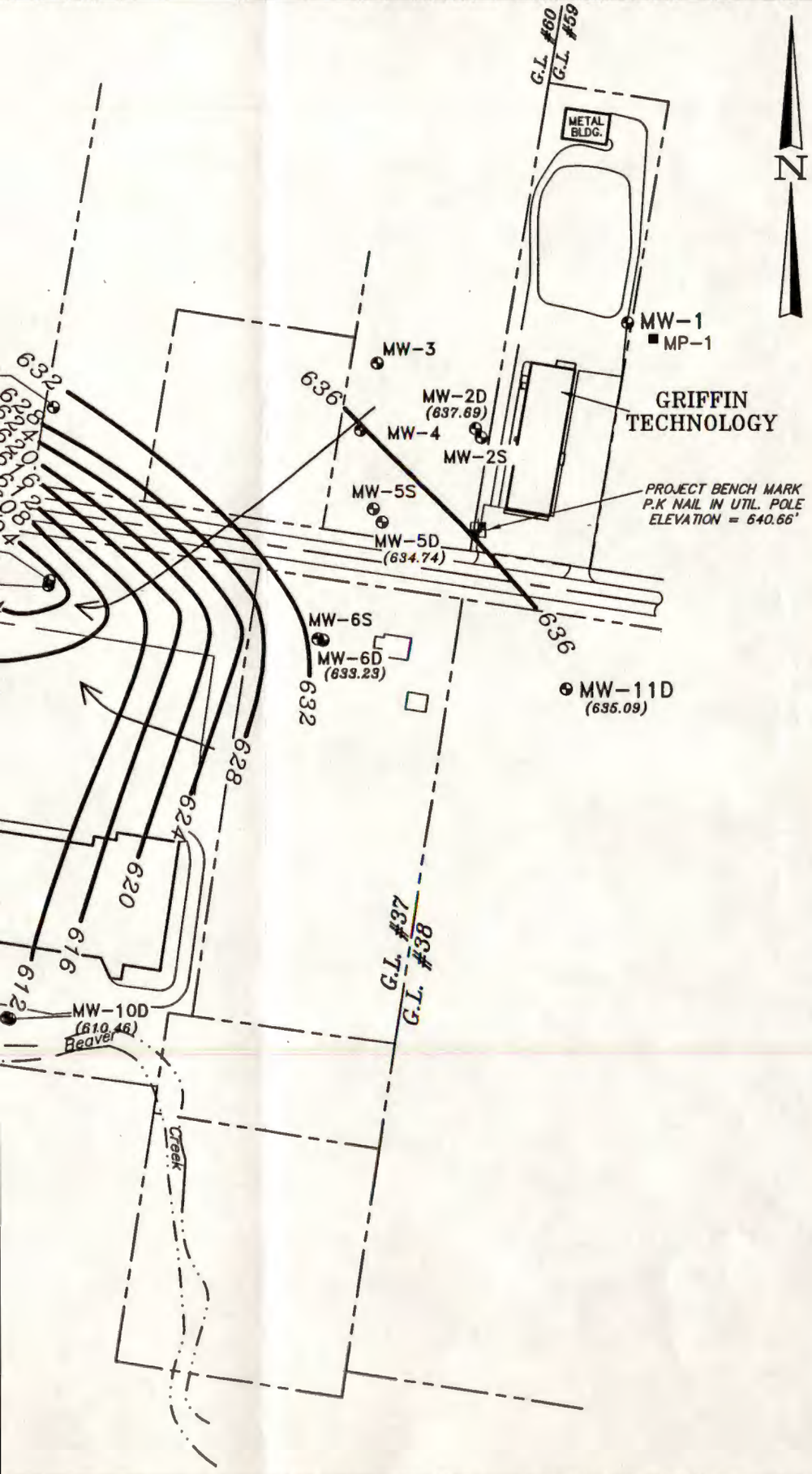


BEDROCK GROUNDWATER CONTOUR MAP
FEBRUARY 15, 1999
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: MTS	PROJECT NUMBER: 6E06191	DATE: 05-26-99	FIGURE NO: 3-11

U:\6E06191\DP990215.DWG

URS Greiner Woodward Clyde



LEGEND

- MONITORING WELL
- STAFF GAUGE
- —636— GROUNDWATER CONTOUR (INTERVAL = 4 FEET)
- (637.69) GROUNDWATER ELEVATION 03-17-99
- GROUNDWATER FLOW DIRECTION
- MARKER POST
- (N.M.) NOT MEASURED
- BENCHMARK

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

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 200 ft.

URS Greiner Woodward Clyde

30775 Bainbridge Road, Suite 200
Solon, Ohio 44139

CLIENT: DIEBOLD, INC.

LOCATION: FARMINGTON, ONTARIO COUNTY, NEW YORK

BEDROCK GROUNDWATER CONTOUR MAP MARCH 17, 1999

DRAWN BY:	CHECKED BY:	PROJECT NO:	DATE:	FIGURE NO:
MMS	MTS	6E06191	05-26-99	3-12

U:\6E06191\031799DP

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

October 30, 1998

Mr. Ken Armstrong
Woodward Clyde Consultants
30775 Bainbridge Road
Suite 200
Solon, OH 44139

PROJECT:GRIFFIN IRM-MONTHLY
Submission #:9810000247

Dear Mr. Armstrong

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.

RECEIVED
NOV 05 1998

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
65 Ramapo Valley Rd. • Suite 16 • Mahwah, NJ 07430 • Tele:(201)512-3292 • Fax:(201)512-3362

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		

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/30/98

Woodward Clyde Consultants
Project Reference: GRIFFIN IRM-MONTHLY
Client Sample ID : EFF-10-15-98

Date Sampled : 10/15/98 **Order #:** 247565 **Sample Matrix:** WATER
Date Received: 10/15/98 **Submission #:** 9810000247 **Analytical Run** 31777

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/29/98			
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	400	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 %)	102	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	93	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/30/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled :
Date Received:
Order #: 251268
Submission #:
Sample Matrix: WATER
Analytical Run 31777

DATE ANALYZED : 10/29/98
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 %)	99	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	93	%

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE 10-15-98 PAGE 1 OF 1

PROJECT NAME Griffin IRM
PROJECT MANAGER/CONTACT Kea Armstrong
COMPANY/ADDRESS 30775 Bainbridge Rd., Ste. 200
Solon, Ohio
TEL (440) 349-2208 FAX (440) 349-1514
SAMPLER'S SIGNATURE Bob Faber

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624	GC/MS SVOA's ☐ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☐ 8080 ☐ 608	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)	9240							PRESERVATION pH < 2.0	pH > 12	Other
EFF-10-15-98	10-15-98	12:07	217565	WATER	2											X									

RELINQUISHED BY:
Signature Bob Faber
Printed Name BOB FABIAN
Firm WCC
Date/Time 10-15-98 13:00

RECEIVED BY:
Signature Tom Hastings
Printed Name Tom Hastings
Firm CAS
Date/Time 10/15/98 13:00

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm

RECEIVED BY:
Signature
Printed Name
Firm

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

REPORT REQUIREMENTS
(X) 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: 9.9
Submission No: 10-247

SPECIAL INSTRUCTIONS/COMMENTS:
METALS Code 1340
ORGANICS: X TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

65 RAMAPO VALLEY ROAD 201-512-3292 | 309 WEST RIDLEY AVE

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

December 3, 1998

RECEIVED

DEC 08 1998

Woodward-Clyde Consultants
Solon, Ohio

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

PROJECT:GRIFFIN IRM-MONTHLY
Submission #:9811000278

Dear Mr. Schmidt:

Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 12/01/98 per a Facsimile transmittal. 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 P. Wilson

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 14608 • Tele:(716)288-5380 • Fax:(716)288-8475
65 Rampo Vally Rd. • Suite 16 • Mahwah, NJ 07430 • Tele:(201)512-3292 • Fax:(201)512-3743

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 12/03/98

Woodward Clyde Consultants
Project Reference: GRIFFIN IRM-MONTHLY
Client Sample ID : EFF-11-16-98

Date Sampled : 11/16/98 **Order #:** 256028 **Sample Matrix:** WATER
Date Received: 11/16/98 **Submission #:** 9811000278 **Analytical Run** 32970

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/20/98			
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	12	UG/L
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/L
TRICHLOROETHENE	5.0	440 E	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 %)	93	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 12/03/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled :
Date Received:
Order #: 259324
Submission #:
Sample Matrix: WATER
Analytical Run 32970

DATE ANALYZED : 11/20/98
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 %)	86	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE 11-16-98 PAGE 1 OF 1

PROJECT NAME Griffin
PROJECT MANAGER/CONTACT Mark Schmidt
COMPANY/ADDRESS 30775 Bainbridge Rd. Ste 200
Solon, Ohio 44139
TEL (440) 349-2708 FAX (440) 349-1514
SAMPLER'S SIGNATURE

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624	GC/MS SVOA's ☐ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☐ 8080 ☐ 608	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)	5260							PRESERVATION pH < 2.0	pH > 12	Other
EFF-11-16-98	11-16-98	11:20	256028	WATER	2											X									

RELINQUISHED BY:
Signature Bob Fabian
Printed Name WCC
Firm 11-16-98 12:09
Date/Time

RECEIVED BY:
Signature Tom Hastings
Printed Name
Firm 11/16/98 12:09
Date/Time

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:
Shipping #:
Temperature:
Submission No: 9811-378

SPECIAL INSTRUCTIONS/COMMENTS:
METALS WCC 4 6 = Mr. Mark Schmidt
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

65 RAMAPO VALLEY ROAD 201-512-3292
MAHWAH, N.J. 07430 FAX 201-512-3263
309 WEST RIDLEY AVE. 610-521-3083
RIDLEY PARK, PA 19078 FAX 610-521-3083

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

January 20, 1999

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

PROJECT:GRIFFIN IRM-MONTHLY
Submission #:9812000210

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. 1/21/99

1 Mustard St. • Suite 250 • Rochester, NY 14609 • Tele:(716)288-5380 • Fax:(716)288-8475
65 Ramapo Valley Rd. • Suite 16 • Mahwah, NJ 07430 • Tele:(201)512-3292 • Fax:(201)512-3362

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		

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/20/99

Woodward Clyde Consultants
Project Reference: GRIFFIN IRM-MONTHLY
Client Sample ID : EFF-12-15-98

Date Sampled : 12/15/98 **Order #:** 262639 **Sample Matrix:** WATER
Date Received: 12/15/98 **Submission #:** 9812000210 **Analytical Run** 34329

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/23/98			
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	19	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	22	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	590	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 %)	102	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/20/99

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled :
Date Received:
Order #: 267224
Submission #:
Sample Matrix: WATER
Analytical Run 34329

DATE ANALYZED : 12/23/98
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 %)	102	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COL[redacted]IA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF [redacted]USTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE 12-15-98 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

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624	GC/MS SVOA's ☐ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☐ 8080 ☐ 608	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-12-15-98	12-15-98	10:58	262637	WATER	2											X									

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm WCC
Date/Time 12-15-98 11:45

RECEIVED BY:
Signature Tom Hastings
Printed Name Tom Hastings
Firm [illegible]
Date/Time 12/15/98 11:45

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: 4.2
Submission No: 9812-215

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

65 RAMAPO VALLEY ROAD
MAHWAH, NJ 07430
201-512-3292
FAX 201-512-3362

309 WEST RIDLEY AVE.
RIDLEY PARK, PA 19078
610-521-3083
FAX 610-521-4589

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

January 29, 1999

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

PROJECT:GRIFFIN IRM
Submission #:9901000143

Dear Mr. Schmidt:

Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 01/28/99 per a Facsimile transmittal. 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 14608 • Tele:(716)288-5380 • Fax:(716)288-8475
65 Rampo Vally Rd. • Suite 16 • Mahwah, NJ 07430 • Tele:(201)512-3292 • Fax:(201)512-3362

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		

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/29/99

Woodward Clyde Consultants
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-1-14-99

Date Sampled : 01/14/99 **Order #:** 267710 **Sample Matrix:** WATER
Date Received: 01/14/99 **Submission #:** 9901000143 **Analytical Run** 34700

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 01/20/99			
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	660	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 %)	111	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/29/99

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled :
Date Received:
Order #: 270248
Submission #:
Sample Matrix: WATER
Analytical Run 34700

DATE ANALYZED : 01/20/99
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 %)	108	%
TOLUENE-D8	(88 - 110 %)	102	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard [redacted] uite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN O[redacted]CUSTODY/LABORATORY ANALYSIS REQU[redacted]T FORM

(800) 695-7222

DATE 1-14-99 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

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624	GC/MS SVOA's ☐ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☐ 8080 ☐ 608	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)	P240	PRESERVATION pH < 2.0	PRESERVATION pH > 12	PRESERVATION Other
EFF-1-14-99	1-14-99	12:55		WATER	2											X			

ANALYSIS REQUESTED

RELINQUISHED BY:
Signature: Bob Fabian
Printed Name: Bob Fabian
Firm: WCC
Date/Time: 1-14-99 13:55

RECEIVED BY:
Signature: Tom Hastings
Printed Name: Tom Hastings
Firm: TH 1/14/99
Date/Time: 13:55

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: 1-143
Shipping #:
Temperature: 4.0°
Submission No: 01-143

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

65 RAMAPO VALLEY ROAD
MAHWAH, NJ 07430
201-512-3292
FAX 201-512-3362

309 WEST RIDLEY AVE.
RIDLEY PARK, PA 19078
610-521-3083
FAX 610-521-4589

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

April 2, 1999

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

PROJECT:GRIFFIN IRM-MONTHLY
Submission #:9902000190

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

Service Manager for:

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
65 Ramapo Valley Rd. • Suite 16 • Mahwah, NJ 07430 • Tele:(201)512-3292 • Fax:(201)512-3362

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: 03/02/99

Woodward Clyde Consultants
Project Reference: GRIFFIN IRM-MONTHLY
Client Sample ID : EFF-2-15-99

Date Sampled : 02/15/99 **Order #:** 273244 **Sample Matrix:** WATER
Date Received: 02/15/99 **Submission #:** 9902000190 **Analytical Run** 35600

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 02/26/99			
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	230	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 %)	91	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 03/02/99

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled :
Date Received:
Order #: 275852
Submission #:
Sample Matrix: WATER
Analytical Run 35600

DATE ANALYZED : 02/26/99
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 %)	88	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE 2-15-99 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

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624	GC/MS SVOA's ☐ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☐ 8080 ☐ 608	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)	8270 8260							PRESERVATION pH < 2.0	pH > 12	Other
EFF-2-15-99	2-15-99	11:09	273044	WATER	2											X									

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm WCC
Date/Time 2-15-99 1155

RECEIVED BY:
Signature Cindy Toomey
Printed Name Cindy Toomey
Firm CAS
Date/Time 2-15-99 1155

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature Brian Collen
Printed Name Brian Collen
Firm CAS
Date/Time 2/15/99 1155

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
X 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: 9902-190

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

65 RAMAPO VALLEY ROAD, MAHWAH, NJ 07430 — 201-512-3292, FAX 201-512-3362
309 WEST RIDLEY AVE., RIDLEY PARK, PA 19078 — 610-521-3083, FAX 610-521-4589

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

April 7, 1999

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

PROJECT:GRIFFIN IRM
Submission #:9903000257

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
65 Ramapo Valley Rd. • Suite 16 • Mahwah, NJ 07430 • Tele:(201)512-3292 • Fax:(201)512-3362

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

VOLATIL. ORGANICS
METHOD 8260B TCL
Reported: 04/07/99

URS Greiner Woodward Clyde
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-3-18-99

Date Sampled : 03/18/99 **Order #:** 279618 **Sample Matrix:** WATER
Date Received: 03/18/99 **Submission #:** 9903000257 **Analytical Run** 36755

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 03/27/99			
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	12	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	140	UG/L
VINYL CHLORIDE	5.0	17	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 %)	109	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 04/07/99

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled :
Date Received:
Order #: 283339
Submission #:
Sample Matrix: WATER
Analytical Run 36755

DATE ANALYZED : 03/27/99
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 %)	108	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE 3-18-99 PAGE 2 OF 2

PROJECT NAME Griffon 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

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624	GC/MS SVOA's ☐ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☐ 8080 ☐ 608	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)	ASP95-1	8240	PRESERVATION pH < 2.0	PRESERVATION pH > 12	PRESERVATION Other
MW-1	3-18-99	12:03	379609	WATER	2											X				
MW-2S (MS/MSD)		12:20	610		4											X				
MW-2D		12:28	611		2											X				
MW-3		12:40	612		2											X				
MW-4		12:50	613		2											X				
MW-5S		13:00	614		2											X				
MW-5D		13:08	615		2											X				
DUP			616		2											X				
Trip			617		2											X				
EFF-3-18-99	V	13:30	3-257	V	2												X			

RELINQUISHED BY:
Signature: Bob Fabian
Printed Name: Bob Fabian
Firm: URS-WCC
Date/Time: 3-18-99 14:30

RECEIVED BY:
Signature: Tom Hastings
Printed Name: Tom Hastings
Firm: CAS
Date/Time: 3/18/99 14:30

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°
Submission No: 3-256
3-257

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

65 RAMAPO VALLEY ROAD, MAHWAH, NJ 07430 201-512-3292 FAX 201-512-3362
309 WEST RIDLEY AVE., RIDLEY PARK, PA 19078 610-521-3083 FAX 610-521-4589

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

April 16, 1999

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

PROJECT:GRIFFIN IRM
Submission #:9903000256

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
65 Ramapo Valley Rd. • Suite 16 • Mahwah, NJ 07430 • Tele:(201)512-3292 • Fax:(201)512-3362

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard Suite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE 3-18-99 PAGE 2 OF 2

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	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624	GC/MS SVOA's ☐ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☐ 8080 ☐ 608	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)	ASP 95-1	8240						PRESERVATION pH < 2.0	PRESERVATION pH > 12	PRESERVATION Other
MW-1 ✓	3-18-99	12:03	279609	WATER	2											X								
MW-2S (MS/MSD) ✓		12:20	610		4											X								
MW-2D ✓		12:28	611		2											X								
MW-3 ✓		12:40	612		2											X								
MW-4 ✓		12:50	613		2											X								
MW-5S ✓		13:00	614		2											X								
MW-5D ✓		13:08	615		2											X								
DUP MW-4			616		2											X								
Trip			617		2											X								
EFF-3-18-99	↓	13:30	3-257	↓	2												X							

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm URS WCC
Date/Time 3-18-99 14:30

RECEIVED BY:
Signature Tom Hastings
Printed Name Tom Hastings
Firm CAS
Date/Time 3/18/99 14:30

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°
Submission No: 3-256
3-257

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

65 RAMAPO VALLEY ROAD
MAHWAH, NJ 07430
201-512-3292
FAX 201-512-3362

309 WEST RIDLEY AVE.
RIDLEY PARK, PA 19078
610-521-3083
FAX 610-521-4589

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE 3-18-99 PAGE 1 OF 2

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	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624	GC/MS SVOA's ☐ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☐ 8080 ☐ 608	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)	ASP-95-1							PRESERVATION pH < 2.0	pH > 12	Other
MW-13D	3-17-99	09:00	279599	WATER	2											X									
MW-6S		09:15	600		2											X									
MW-6D		09:33	601		2											X									
MW-7S		09:55	602		2											X									
MW-7D		10:05	603		2											X									
MW-9S	3-18-99	10:20	604		2											X									
MW-9D		10:43	605		2											X									
MW-10S		11:02	606		2											X									
MW-10D		11:20	607		2											X									
MW-11D		11:40	608		2											X									

RELINQUISHED BY:
Signature: Bob Fabian
Printed Name: Bob Fabian
Firm: URS WCC
Date/Time: 3-18-99 14:30

RECEIVED BY:
Signature: Tom Hastings
Printed Name: Tom Hastings
Firm: CAS
Date/Time: 3/18/99 14:30

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°
Submission No: 3-256

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

65 RAMAPO VALLEY ROAD
MAHWAH, NJ 07430
201-512-3292
FAX 201-512-3362

309 WEST RIDLEY AVE.
RIDLEY PARK, PA 19078
610-521-3083
FAX 610-521-4589

CASE NARRATIVE

COMPANY: Woodward Clyde Consultants
Griffin IRM
SUBMISSION #: 9903000256

WCC water samples were collected on 03/17-18/99 and received at CAS on 03/18/99 in good condition. See the CAS Batching form to cross reference between Client ID and CAS sample numbers.

VOLATILE ORGANICS

Water samples and a trip blank were analyzed for Target Compound List (TCL) of volatile organics by method 95-1 from the NYSASP.

Sample MW-5D was analyzed twice with the diluted analysis designated MW-5DDL.

Sample MW2S was analyzed for site specific QC. All matrix spike recoveries and %RPD were within QC limits. All blank spike recoveries were within limits.

All tuning criteria for BFB were met.

The initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within acceptance limits.

All internal standard areas were within QC Limits.

All samples were analyzed within the holding time as specified in the method.

No other analytical or QC problems were encountered.

1 Mustard Street, Suite 250 ▪ Rochester, NY 14609-6925 ▪ Telephone (716) 288-5380 ▪ Fax (716) 288-8475

CAS ASP/CLP BATCHIN ORM / LOGIN SHEET

SDG #: MW-	CASE No.:	BATCH COMPLETE: __yes_____	DATE REVISED:
SUBMISSIO	9903000256	DISKETTE REQUESTED: Y___ N__x__	DATE DUE: 4/18/98
CLIENT:	Woodward Clyde Consultants	DATE: 03/18/99	PROTOCOL: ASP-B
CLIENT REP:	Mark Wilson	CUSTODY SEAL: PRESENT/ABSENT:	SHIPPING No.:
PROJECT:	GRIFFIN IRM	CHAIN OF CUSTODY: PRESENT/ABSENT:	

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLE	DATE RECEIVE	pH (SOLIDS)	% SOLIDS	REMARKS AMPLE CONDITION
279599	MW-13D	WATER	95-1	3/17/99	3/18/99			
279600	MW-6S	WATER	95-1	3/17/99	3/18/99			
279601	MW-6D	WATER	95-1	3/17/99	3/18/99			
279602	MW-7S	WATER	95-1	3/17/99	3/18/99			
279603	MW-7D	WATER	95-1	3/17/99	3/18/99			
279604	MW-9S	WATER	95-1	3/18/99	3/18/99			
279605	MW-9D	WATER	95-1	3/18/99	3/18/99			
279606	MW-10S	WATER	95-1	3/18/99	3/18/99			
279607	MW-10D	WATER	95-1	3/18/99	3/18/99			
279608	MW-11D	WATER	95-1	3/18/99	3/18/99			
279609	MW-1	WATER	95-1	3/18/99	3/18/99			
279610	MW-2S	WATER	95-1	3/18/99	3/18/99			
279611	MW-2D	WATER	95-1	3/18/99	3/18/99			
279612	MW-3	WATER	95-1	3/18/99	3/18/99			
279613	MW-4	WATER	95-1	3/18/99	3/18/99			
279614	MW-5S	WATER	95-1	3/18/99	3/18/99			
279615	MW-5D	WATER	95-1	3/18/99	3/18/99			
279616	DUP	WATER	95-1	3/18/99	3/18/99			
279617	TRIP BLANK	WATER	95-1	3/18/99	3/18/99			

0002

SDG #: MW-	CASE No.:	BATCH COMPLETE: __yes_____	DATE REVISED:
SUBMISSIO	9903000256	DISKETTE REQUESTED: Y___ N__x__	DATE DUE: 4/18/98

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements* 95ASP PROTOCOL					
		*VOA GC/MS	*BNA GC/MS	*VOA GC	*PEST PCB	*METALS	*OTHER
MW-13D	279599	X					
MW-6S	279600	X					
MW-6D	279601	X					
MW-7S	279602	X					
MW-7D	279603	X					
MW-9S	279604	X					
MW-9D	279605	X					
MW-10S	279606	X					
MW-10D	279607	X					
MW-11D	279608	X					
MW-1	279609	X					
MW-2S	279610	X					
MW-2D	279611	X					
MW-3	279612	X					
MW-4	279613	X					
MW-5S	279614	X					
MW-5D	279615	X					
DUP	279616	X					
TRIP BLANK	279617	X					

*Check Appropriate Boxes
*CLP, Non-CLP
*HSL, Priority Pollutant
NCF1 9/89

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOA
ANALYSES

LABORATORY SAMPLE ID	MATRIX	DATE COLLECTED	DATE REC'D AT LAB	LOW LEVEL MED LEVEL	DATE ANALYZED
279599	WATER	3/17/99	3/18/99	LOW	3/25/99
279600	WATER	3/17/99	3/18/99	LOW	3/26/99
279601	WATER	3/17/99	3/18/99	LOW	3/26/99
279602	WATER	3/17/99	3/18/99	LOW	3/26/99
279603	WATER	3/17/99	3/18/99	LOW	3/26/99
279604	WATER	3/18/99	3/18/99	LOW	3/26/99
279605	WATER	3/18/99	3/18/99	LOW	3/26/99
279606	WATER	3/18/99	3/18/99	LOW	3/26/99
279607	WATER	3/18/99	3/18/99	LOW	3/26/99
279608	WATER	3/18/99	3/18/99	LOW	3/26/99
279609	WATER	3/18/99	3/18/99	LOW	3/26/99
279610	WATER	3/18/99	3/18/99	LOW	3/26/99
279611	WATER	3/18/99	3/18/99	LOW	3/26/99
279612	WATER	3/18/99	3/18/99	LOW	3/26/99
279613	WATER	3/18/99	3/18/99	LOW	3/26/99
279614	WATER	3/18/99	3/18/99	LOW	3/26/99
279615	WATER	3/18/99	3/18/99	LOW	3/26/99
279616	WATER	3/18/99	3/18/99	LOW	3/26/99
279617	WATER	3/18/99	3/18/99	LOW	3/26/99

NCF5 5/91

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY

ORGANIC ANALYSES

SAMPLE ID	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
279599	WATER	95-1			1
279600	WATER	95-1			1
279601	WATER	95-1			1
279602	WATER	95-1			1
279603	WATER	95-1			1
279604	WATER	95-1			1
279605	WATER	95-1			1
279606	WATER	95-1			1
279607	WATER	95-1			1
279608	WATER	95-1			1
279609	WATER	95-1			1
279610	WATER	95-1			1
279611	WATER	95-1			1
279612	WATER	95-1			1
279613	WATER	95-1			1
279614	WATER	95-1			1
279615	WATER	95-1			1, 2
279616	WATER	95-1			1
279617	WATER	95-1			1

NCF2 9/89

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

DUP

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279616 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5481.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	1	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	59	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DUP

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279616 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5481.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279609 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5499.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-1

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279609 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5499.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-2D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279611 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5477.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	6	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	5	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-2D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279611 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5477.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-2S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279610 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5486.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	28	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-2S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279610 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5486.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-3

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279612 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5482.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	45	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-3

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279612 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5482.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279613 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5478.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	1 ~~2~~	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	58	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

DL 04/16/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-4

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279613 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5478.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279615 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5480.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	7	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	230	E
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-5D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279615 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5480.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-5DDL

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279615 2

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5483.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 2.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	20	U
75-01-4	Vinyl chloride	20	U
75-00-3	Chloroethane	20	U
74-83-9	Bromomethane	20	U
67-64-1	Acetone	20	U
75-35-4	1,1-Dichloroethene	20	U
75-09-2	Methylene chloride	20	U
75-15-0	Carbon disulfide	20	U
75-34-3	1,1-Dichloroethane	20	U
78-93-3	2-Butanone	20	U
540-59-0	1,2-Dichloroethene (total)	20	U
67-66-3	Chloroform	20	U
107-06-2	1,2-Dichloroethane	20	U
71-55-6	1,1,1-Trichloroethane	6	JD
56-23-5	Carbon tetrachloride	20	U
71-43-2	Benzene	20	U
79-01-6	Trichloroethene	200	D
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
124-48-1	Dibromochloromethane	20	U
75-25-2	Bromoform	20	U
108-10-1	4-Methyl-2-pentanone	20	U
108-88-3	Toluene	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	o-Xylene	20	U
100-42-5	Styrene	20	U
108-88-3	1,1,2,2-Tetrachloroethane	20	U
108383& 106423	(m+p) Xylene	20	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-5DDL

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279615 2

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5483.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 2.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279614 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5479.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	95	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-5S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279614 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5479.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279601 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5493.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	3	JB
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-6D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279601 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5493.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279600 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5492.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (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
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-6S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279600 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5492.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-7D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279603 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5485.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	8	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-7D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279603 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5485.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279602 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5484.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	7	J
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-7S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279602 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5484.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-9D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279605 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5495.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	7	JB
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-9D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279605 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5495.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-9S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279604 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5494.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	5	JB
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-9S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279604 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5494.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-10D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279607 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5497.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	6	JB
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-10D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279607 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5497.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-10S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279606 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5496.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-10S

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279606 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5496.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-11D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279608 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5498.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	3	JB
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-11D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279608 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5498.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279599 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5472.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/25/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	2	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	120	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-13D

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279599 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5472.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/25/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279617 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5500.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (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
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	1 ~~2~~	J
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

DL 4/16/99

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279617 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5500.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

COOLER BLK

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279675 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5511.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/27/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	4	J
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

COOLER BLK

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279675 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5511.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/27/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VBLK01	94	100	100	0
02	VBLK01MS	97	100	99	0
03	MW-13D	96	103	100	0

			QC LIMITS
SMC1	=	1,2-Dichloroethane-d4	(76-114)
SMC2	=	Toluene-d8	(88-110)
SMC3	=	Bromofluorobenzene	(86-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VBLK02	98	101	95	0
02	MW-2D	98	101	95	0
03	MW-4	104	104	100	0
04	MW-5S	100	103	97	0
05	MW-5D	103	101	96	0
06	DUP	103	102	99	0
07	MW-3	105	99	95	0
08	MW-5DDL	95	101	98	0
09	MW-7S	101	99	95	0
10	MW-7D	105	100	96	0
11	MW-2S	101	103	96	0
12	VBLK03	105	97	95	0
13	MW-2SMS	108	101	95	0
14	MW-2SMSD	107	101	97	0
15	MW-6S	106	100	94	0
16	MW-6D	110	99	95	0
17	MW-9S	108	101	95	0
18	MW-9D	106	99	94	0
19	MW-10S	112	103	95	0
20	MW-10D	111	102	99	0
21	MW-11D	107	101	91	0
22	MW-1	108	101	97	0
23	TRIP BLANK	113	100	97	0
24	VBLK04	102	104	101	0
25	COOLER BLK	100	101	100	0

			QC LIMITS
SMC1	=	1,2-Dichloroethane-d4	(76-114)
SMC2	=	Toluene-d8	(88-110)
SMC3	=	Bromofluorobenzene	(86-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix Spike - EPA Sample No.: MW-2S

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	49	98	61 - 145
Benzene	50	0.0	44	88	76 - 127
Trichloroethene	50	28	68	80	71 - 120
Toluene	50	0.0	43	86	76 - 125
Chlorobenzene	50	0.0	43	86	75 - 130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	49	98	0	14	61 - 145
Benzene	50	46	92	4	11	76 - 127
Trichloroethene	50	69	82	2	14	71 - 120
Toluene	50	44	88	2	13	76 - 125
Chlorobenzene	50	44	88	2	13	75 - 130

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

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-2SMS

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279610 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5490.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	49	
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	44	
79-01-6	Trichloroethene	68	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	43	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	43	
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-2SMSD

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 279610 1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5491.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (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
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	49	
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	46	
79-01-6	Trichloroethene	69	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	44	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	44	
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix Spike - EPA Sample No.: VBLK01

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	45	90	61 - 145
Benzene	50	0.0	45	90	76 - 127
Trichloroethene	50	0.0	41	82	71 - 120
Toluene	50	0.0	44	88	76 - 125
Chlorobenzene	50	0.0	42	84	75 - 130

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

* Values outside of QC limits

RPD: 1 out of 5 outside limits

Spike Recovery: 1 out of 10 outside limits

COMMENTS: _____

_____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01MS

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: BLANK SPIKE

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5468.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/25/99

GC Column: RTX502. ID: 0.53 (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
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	45	
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	45	
79-01-6	Trichloroethene	41	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	44	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	42	
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK01

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Lab File ID: A5462.D Lab Sample ID: MET BLK #1

Date Analyzed: 03/25/99 Time Analyzed: 16:17

GC Column: RTX502. ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS#1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLK01MS	BLANK SPIKE	A5468.D	20:14
02	MW-13D	279599 1.0	A5472.D	22:44

COMMENTS

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK01

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: MET BLK #1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5462.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/25/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: MET BLK #1

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5462.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/25/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK02

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Lab File ID: A5476.D Lab Sample ID: MET BLK #2

Date Analyzed: 03/26/99 Time Analyzed: 08:19

GC Column: RTX502. ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS#1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW-2D	279611 1	A5477.D	08:56
02	MW-4	279613 1	A5478.D	09:32
03	MW-5S	279614 1	A5479.D	10:08
04	MW-5D	279615 1	A5480.D	10:49
05	DUP	279616 1	A5481.D	11:27
06	MW-3	279612 1	A5482.D	12:05
07	MW-5DDL	279615 2	A5483.D	12:46
08	MW-7S	279602 1	A5484.D	13:27
09	MW-7D	279603 1	A5485.D	14:09
10	MW-2S	279610 1	A5486.D	14:51

COMMENTS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK02

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: MET BLK #2

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5476.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK02

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: MET BLK #2

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5476.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK03

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Lab File ID: A5489.D Lab Sample ID: MET BLK #3

Date Analyzed: 03/26/99 Time Analyzed: 16:34

GC Column: RTX502. ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS#1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW-2SMS	279610 1	A5490.D	17:11
02	MW-2SMSD	279610 1	A5491.D	17:49
03	MW-6S	279600 1	A5492.D	18:26
04	MW-6D	279601 1	A5493.D	19:02
05	MW-9S	279604 1	A5494.D	19:40
06	MW-9D	279605 1	A5495.D	20:17
07	MW-10S	279606 1	A5496.D	20:55
08	MW-10D	279607 1	A5497.D	21:33
09	MW-11D	279608 1	A5498.D	22:10
10	MW-1	279609 1	A5499.D	22:48
11	TRIP BLANK	279617 1	A5500.D	23:26

COMMENTS

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK03

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: MET BLK #3

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5489.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	5	J
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK03

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: MET BLK #3

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5489.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/26/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK04

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Lab File ID: A5510.D Lab Sample ID: MET BLK #4

Date Analyzed: 03/27/99 Time Analyzed: 09:25

GC Column: RTX502. ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS#1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	COOLER BLK	279675 1	A5511.D	10:09

COMMENTS

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK04

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: MET BLK #4

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5510.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/27/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
74-83-9	Bromomethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	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
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	o-Xylene	10	U
100-42-5	Styrene	10	U
108-88-3	1,1,2,2-Tetrachloroethane	10	U
108383& 106423	(m+p) Xylene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK04

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: MET BLK #4

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A5510.D

Level: (low/med) LOW Date Received: 03/18/99

% Moisture: not dec. _____ Date Analyzed: 03/27/99

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Lab File ID (Standard): A5459.D Date Analyzed: 03/25/99

Instrument ID: GCMS#1 Time Analyzed: 13:49

GC Column: RTX502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	174581	11.25	867471	13.04	667822	19.67
	LOWER LIMIT	87291	10.75	433736	12.54	333911	19.17
	UPPER LIMIT	349162	11.75	1734942	13.54	1335644	20.17
	EPA SAMPLE NO.						
01	VBLK01	189573	11.25	926764	13.05	714368	19.67
02	VBLK01MS	182981	11.26	903323	13.06	696587	19.68
03	MW-13D	188625	11.27	916328	13.05	703476	19.67

IS1 = Bromochloromethane

IS2 = 1,4-Difluorobenzene

IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Lab File ID (Standard): A5475.D Date Analyzed: 03/26/99

Instrument ID: GCMS#1 Time Analyzed: 07:42

GC Column: RTX502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	187265	11.25	907285	13.04	693775	19.65
	LOWER LIMIT	93633	10.75	453643	12.54	346888	19.15
	UPPER LIMIT	374530	11.75	1814570	13.54	1387550	20.15
	EPA SAMPLE NO.						
01	VBLK02	183253	11.25	867775	13.04	667796	19.67
02	MW-2D	178326	11.25	874515	13.05	669344	19.67
03	MW-4	170773	11.28	848675	13.06	637985	19.68
04	MW-5S	170044	11.25	828181	13.04	644112	19.67
05	MW-5D	168790	11.28	837536	13.06	643193	19.68
06	DUP	174208	11.27	836449	13.05	638626	19.69
07	MW-3	162578	11.27	810251	13.06	629137	19.68
08	MW-5DDL	177008	11.27	838777	13.06	639492	19.68
09	MW-7S	174089	11.27	820269	13.05	631433	19.69
10	MW-7D	164534	11.26	836961	13.06	641831	19.68
11	MW-2S	171209	11.25	828446	13.05	629250	19.69

IS1 = Bromochloromethane
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Lab File ID (Standard): A5488.D Date Analyzed: 03/26/99

Instrument ID: GCMS#1 Time Analyzed: 15:46

GC Column: RTX502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	178720	11.27	812166	13.06	625623	19.68
	LOWER LIMIT	89360	10.77	406083	12.56	312812	19.18
	UPPER LIMIT	357440	11.77	1624332	13.56	1251246	20.18
	EPA SAMPLE NO.						
01	VBLK03	176968	11.27	836735	13.05	648954	19.69
02	MW-2SMS	167493	11.28	828956	13.06	643336	19.68
03	MW-2SMSD	164787	11.27	794727	13.07	627156	19.69
04	MW-6S	176023	11.29	838568	13.07	651660	19.69
05	MW-6D	167004	11.27	806917	13.07	632869	19.69
06	MW-9S	172802	11.27	834666	13.07	647586	19.69
07	MW-9D	174730	11.27	828488	13.06	649711	19.69
08	MW-10S	163725	11.28	814180	13.06	623654	19.69
09	MW-10D	167343	11.27	804363	13.07	618408	19.69
10	MW-11D	173780	11.29	817431	13.07	632002	19.67
11	MW-1	172883	11.27	826029	13.07	631594	19.69
12	TRIP BLANK	163110	11.27	815843	13.07	623380	19.69

IS1 = Bromochloromethane

IS2 = 1,4-Difluorobenzene

IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: 10145 Contract: WCC

Lab Code: CAS/ROC Case No.: 99-3-256 SAS No.: _____ SDG No.: MW-1

Lab File ID (Standard): A5508.D Date Analyzed: 03/27/99

Instrument ID: GCMS#1 Time Analyzed: 08:00

GC Column: RTX502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	185859	11.25	888410	13.06	692117	19.67
	LOWER LIMIT	92930	10.75	444205	12.56	346059	19.17
	UPPER LIMIT	371718	11.75	1776820	13.56	1384234	20.17
	EPA SAMPLE NO.						
01	VBLK04	177184	11.26	894972	13.04	675632	19.68
02	COOLER BLK	181862	11.25	850793	13.04	662776	19.67

IS1 = Bromochloromethane

IS2 = 1,4-Difluorobenzene

IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

APPENDIX C

ANALYTICAL DATA VALIDATION
GRIFFIN TECHNOLOGY SITE
SYSTEM OPERATION
SEMI-ANNUAL GROUNDWATER SAMPLING
FIRST ROUND, 1999

INTRODUCTION

This appendix presents the findings of a validation of analytical data for samples collected in March 1999 at the Griffin Technology Inc. (GTI) Site. Sampling was conducted by URS GreinerWoodward Clyde (URSGWC) and analytical services were provided by Columbia Analytical Services, Inc. (CASI) of Rochester, New York. All samples were 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 No. 8, January 1992. Prepared by USEPA Region II.

The above "Guidelines" provided the criteria to review. Additional quantitative 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 more representative of the sample matrix. For this data set, one sample required dilution for VOC analysis.

- For the initial VOC analysis of sample MW-5D 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 1:2. For this sample, the TCE concentration reported from the diluted analysis is considered to be more 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. All samples were analyzed between eight and nine days from sample receipt. Data qualification was not considered necessary since the samples 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 and relative standard deviation (%RSD) values met the acceptance criteria presented in the "Guidelines".

All VOC continuing calibration RRF values met the acceptance criterion presented in the "Guidelines". One VOC continuing calibration analysis had percent difference (%D) values between initial and continuing calibration response factors in excess of the "Guidelines" criterion of 25 percent. Per the "Guidelines," detected and non-detected sample results for the affected compounds are qualified as estimated (J for detects UJ for non-detects) based on the outlying %D values. Sample results requiring qualification based on the outlying continuing calibration %D values as shown below:

Instrument	Date	Compound	%D	Qualifier Detects/Non-detects
1. GCMS#1	3/26/99	acetone	35.1	J/UJ
		2-butanone	29.9	J/UJ
		2-hexanone	28.8	J/UJ

Associated Samples: MW-1, MW-6S, MW-6D, MW-9S, MW-9D, MW-10S, MW-10D, MW-11D, trip blank

J - estimated result for detects

UJ - estimated result for non-detects

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.

Two of the VOC method blank samples had low level detections of acetone. Per the "Guidelines," sample results that are not at least 10 times greater than laboratory method blank concentrations require qualification as non-detected (data qualifier U). Sample results requiring qualification as non-detected based on the presence of acetone in laboratory methods blanks are as follows:

Fraction	Analyte	Conc.	Qualified Conc.
VOCs (µg/l)			
1. VBLK02 3/26/99	acetone	2.02	
Associated Samples:			
MW-7S	acetone	7J	10U
2. VBLK03 3/26/99	acetone	2.32	
Associated Samples:			
MW-6D	acetone	3JB	10U
MW-9S	acetone	5JB	10U
MW-9D	acetone	7JB	10U
MW-10D	acetone	6JB	10U
MW-11D	acetone	3JB	10U
Associated Samples:			

B detected in corresponding laboratory blank
J detected below quantitation limit, result is estimated
U qualified as non-detected due to potential contamination

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.

Carbon disulfide was the only compound detected in the trip blank sample; its concentration was 1 µg/l. Carbon disulfide was not detected in any site samples and therefore, no data qualification was required based on its detection in the trip blank sample.

SURROGATE SPIKE RECOVERIES

Samples analyzed for VOCs were 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.

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-2S was analyzed as an MS/MSD sample for this sampling event.

All VOC MS/MSD recoveries and relative percent difference (RPD) values for samples MW-2S were within the method established control limits. Therefore, acceptable analytical accuracy and precision were achieved for these analyses.

INTERNAL STANDARDS

Internal standards (I.S.) performance criteria ensures 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 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. Sample results from this investigation required some qualification based on the minor deficiencies summarized below:

Acetone, 2-butanone, and 2-hexanone results for nine samples were qualified as estimated (J for detects, UJ for non-detects) based on outlying continuing calibration %D values which exceeded the "Guidelines" acceptance criterion of 25 percent. Additionally, acetone results for six samples were qualified as non-detected (U) on the basis of potential laboratory contamination. No transcription errors or calculation errors were found during validation of the reported VOC results from this data set.