

INTERIM REMEDIAL MEASURES
5TH QTR. PROGRESS REPORT
FORMER GRIFFIN TECHNOLOGY
FACILITY
FARMINGTON, NEW YORK
INDEX NO. (B8-315-90-01)

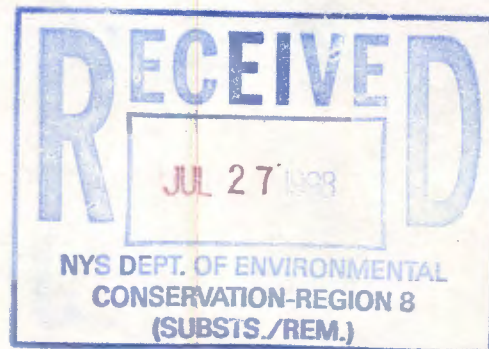
Prepared for
Diebold, Inc.
Canton, Ohio

July 23, 1998

Woodward-Clyde



30775 Bainbridge Road
Suite 200
Solon, Ohio 44139
440/349/2708
Project No. 6E06191



CERTIFICATION

INTERIM REMEDIAL MEASURE 5TH QUARTER PROGRESS REPORT

GRIFFIN TECHNOLOGY, INC. FACILITY

TOWN OF FARMINGTON

ONTARIO COUNTY, NEW YORK

The enclosed 5th Quarter Progress Report has been reviewed by the undersigned, and has been found to be consistent with the requirements of the Order on Consent (Index No. B8-315-90-01), entered into by the New York State Department of Environmental Conservation and Griffin Technology, Inc.

Name: Martin S. Leonard P.E.
Title: Consulting Professional Engineer
Date: July 23, 1998

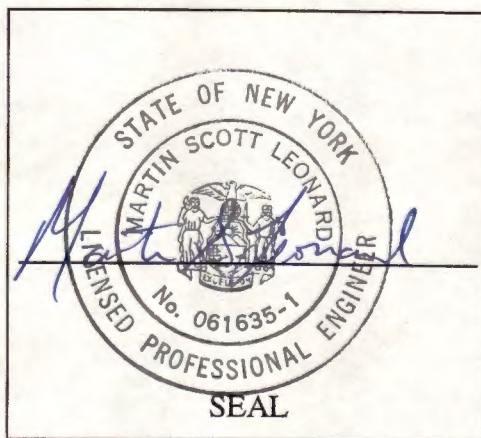


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This report presents the information collected during the fifth quarter of operation of the Interim Remedial Measure (IRM) system at the Griffin Technology, Inc. (GTI) site located at 6132 Victor-Manchester Road in the Town of Farmington, Ontario County, 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.

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 a 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 Canandagua-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 fifth quarter of operation are described in Section 2.0. Information collected during the fifth quarter of operation are presented in Section 3.0. Summary information is presented in Section 4.0.

The activities performed during the fifth quarter of IRM operation consisted of collecting bi-weekly groundwater elevations from on-site and off-site monitoring wells, measuring the quantity of water discharged by the IRM system during each of the three months of operation, and obtaining analytical data on the quality of the effluent discharged during each of the three months in this quarter. Each of these activities are described in greater detail below.

2.1. HYDRAULIC HEAD MEASUREMENT

During the fifth quarter of IRM operation, hydraulic head (groundwater elevation) measurements were collected a minimum of once per month from each groundwater well and piezometer located on-site. All groundwater measurements were collected using an electronic water level indicator capable of measuring the water elevation to the nearest 0.01 ft. Hydraulic head measurements were also collected from one off-site well (MW-11D) located in the immediate vicinity of the IRM system. This measurement was collected identically to the on-site wells measured during this time period. Hydraulic head measurements were discontinued at MW-6S and MW-6D due to an access notification issue which has occurred with the land owner.

2.2. EFFLUENT MONITORING SAMPLING AND ANALYSIS

At the end of each month of operation, the quantity of effluent discharged was recorded from a totalizing flow meter located on the common header discharge in the Central Access Vault. The value from the preceding months operation was subtracted from this value in order to determine the monthly effluent discharge to the Farmington Water and Sewer District wastewater treatment facility. In addition, a sample of the effluent was collected monthly from a sample port located on the header discharge in the Central Access Vault in order to evaluate the quality of the groundwater being recovered by the IRM system. The effluent samples were submitted to Columbia Analytical Services, Inc. (CASI) for analysis of volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) method 8260. The analytical results of the samples collected were used to report estimated loadings to the POTW.

Data collected and analytical results obtained during the fifth quarter of IRM system operation 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 the fifth quarter of IRM system operation is presented in Table 1. The results indicate that groundwater containing COC's continues to be removed from underneath the GTI site. The quantity of water removed by the system has decreased during the summer months. This condition is a result of lower groundwater elevations typically encountered during drier months. The effluent analytical data indicate that the concentrations of COC's has increased as the quantity of groundwater recovered decreased during each month. This is consistent with previous observations at the site. The laboratory data sheets are provided in Appendix A.

3.2. HYDRAULIC HEAD MEASUREMENT RESULTS

Groundwater elevations collected from selected on-site and off-site monitoring wells during the fifth quarter of IRM system operation are presented in Table 2. This data was used to prepare groundwater elevation and flow maps for the overburden and bedrock groundwater zones. Overburden groundwater zone contour maps for the GTI site are presented as Figures 2 through 4. Bedrock groundwater zone contour maps of the GTI site are presented as Figures 5 through 7.

The groundwater zone contour maps from the GTI site indicate that water levels in both the overburden and bedrock zones have been depressed near the GTI site boundary with a low area being present in the vicinity of RW-03. The data indicate that the IRM system is influencing groundwater patterns on the GTI site.

This data is also consistent with previous observed site conditions.

Based on the information collected during the preceding three months of IRM system operation, the following summary has been developed regarding environmental conditions at the GTI site:

- The IRM system is affecting groundwater flow patterns in the vicinity of the GTI facility. The groundwater contour maps prepared using water elevation data from the bedrock and overburden zones, indicate that the elevation of groundwater in the immediate vicinity of the IRM system has been depressed.
- Regional groundwater elevations have decreased during the last three months. The depressed elevations are apparently reducing the rate of groundwater recovery of the IRM system by reducing the rate of recharge in the wells.
- As the quantity of groundwater being recovered has decreased, the concentration of COC's present in the recovered material has increased.

Additional data collection activities during the next quarter of IRM operation will consist of the same activities performed during the previous months of operation. The second semi-annual sampling of all groundwater monitoring wells is scheduled at the end of the sixth quarter.

Tables



TABLE 1
SUMMARY OF EFFLUENT DISCHARGES IN POTW
APRIL - JUNE 1998
GRIFFIN TECHNOLOGY INC.
VICTOR, NEW YORK

MONTH	DISCHARGE (GAL.)	TCE	1,1,1-TCA	1,2-DCE
April 1998	352,742	150	ND	ND
May 1998	191,088	250	ND	ND
June 1998	96,750	320	7.5	ND

Notes:

1. All results expressed in micrograms per liter ($\mu\text{g/l}$).
 2. No other VOC compounds detected at method detection limit.
 3. ND indicates not detected at method detection limit.
-
-



TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS APRIL - JUNE 1998
GRIFFIN TECHNOLOGY FACILITY
VICTOR, NEW YORK

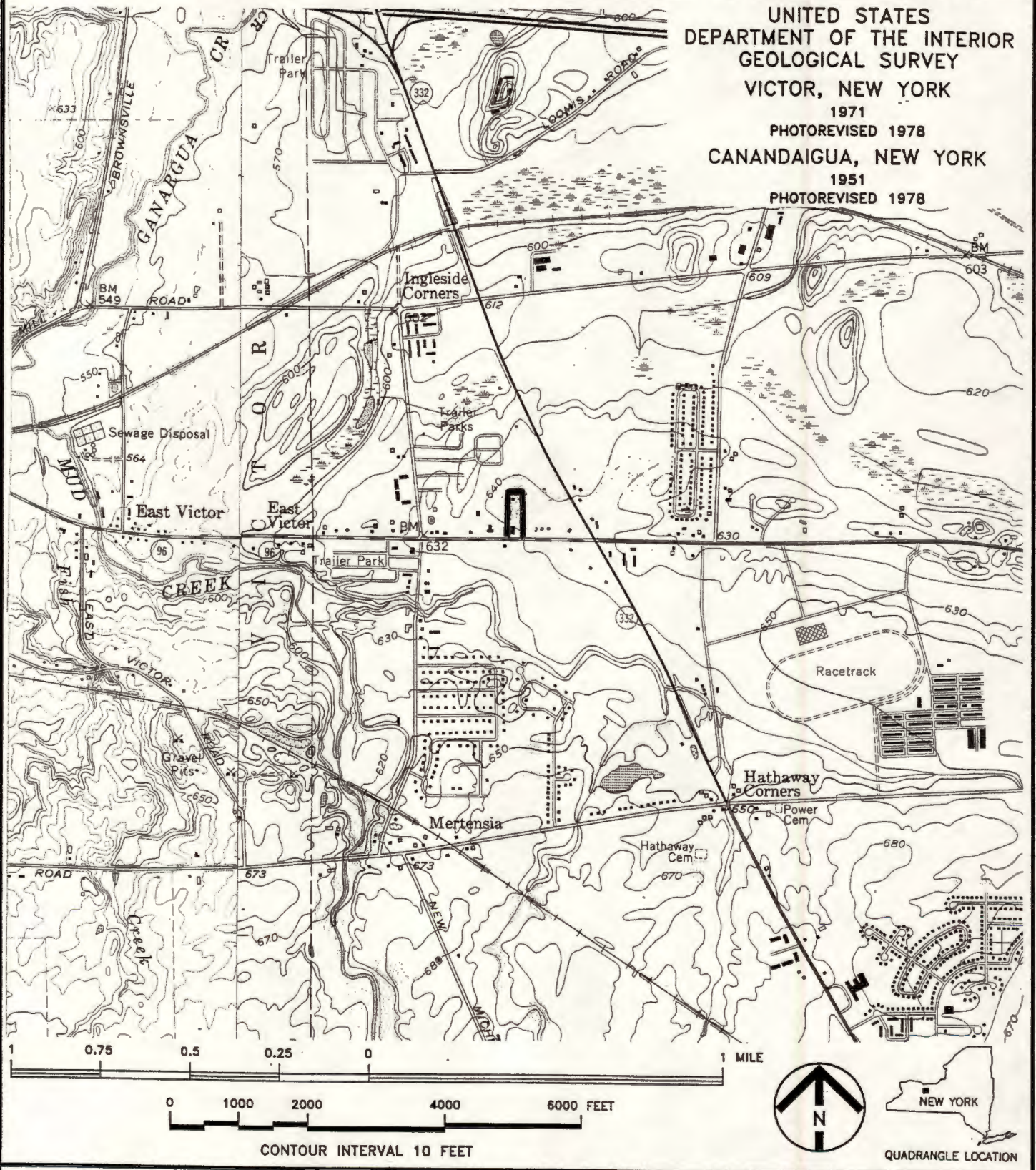
Well Designation	WATER LEVEL (ft) 04/24/98	WATER LEVEL (ft) 05/04/98	WATER LEVEL (ft) 05/12/98	WATER LEVEL (ft) 06/12/98	WATER LEVEL (ft) 06/30/98
MW-01	637.25	636.11	636.81	631.47	634.19
MW-2S	633.66	632.39	633.29	627.41	631.04
MW-2D	633.65	632.27	633.36	627.58	631.07
MW-03	634.37	631.67	632.65	627.32	630.10
MW-04	632.20	629.16	630.48	624.34	626.82
MW-5S	630.49	627.66	628.94	622.76	624.87
MW-5D	624.45	623.24	624.09	620.37	622.29
MW-06S	629.88	NM	NM	NM	NM
MW-06D	629.93	NM	NM	NM	NM
MW-11D	632.97	630.97	633.65	625.98	629.51
PZ-1S	632.00		630.20	630.12	630.15
PZ-1D	631.98	628.96	630.17	Dry	626.12
PZ-2S	629.21	626.67	627.67	621.91	623.83
PZ-2D	628.73	626.49	627.41	622.06	623.87

NOTES:

1. Water levels collected on dates shown.
2. "NM" indicates water 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).

Figures

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 GEOLOGICAL SURVEY
 VICTOR, NEW YORK
 1971
 PHOTOREVISED 1978
 CANANDAIGUA, NEW YORK
 1951
 PHOTOREVISED 1978



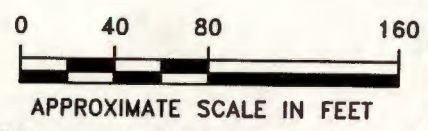
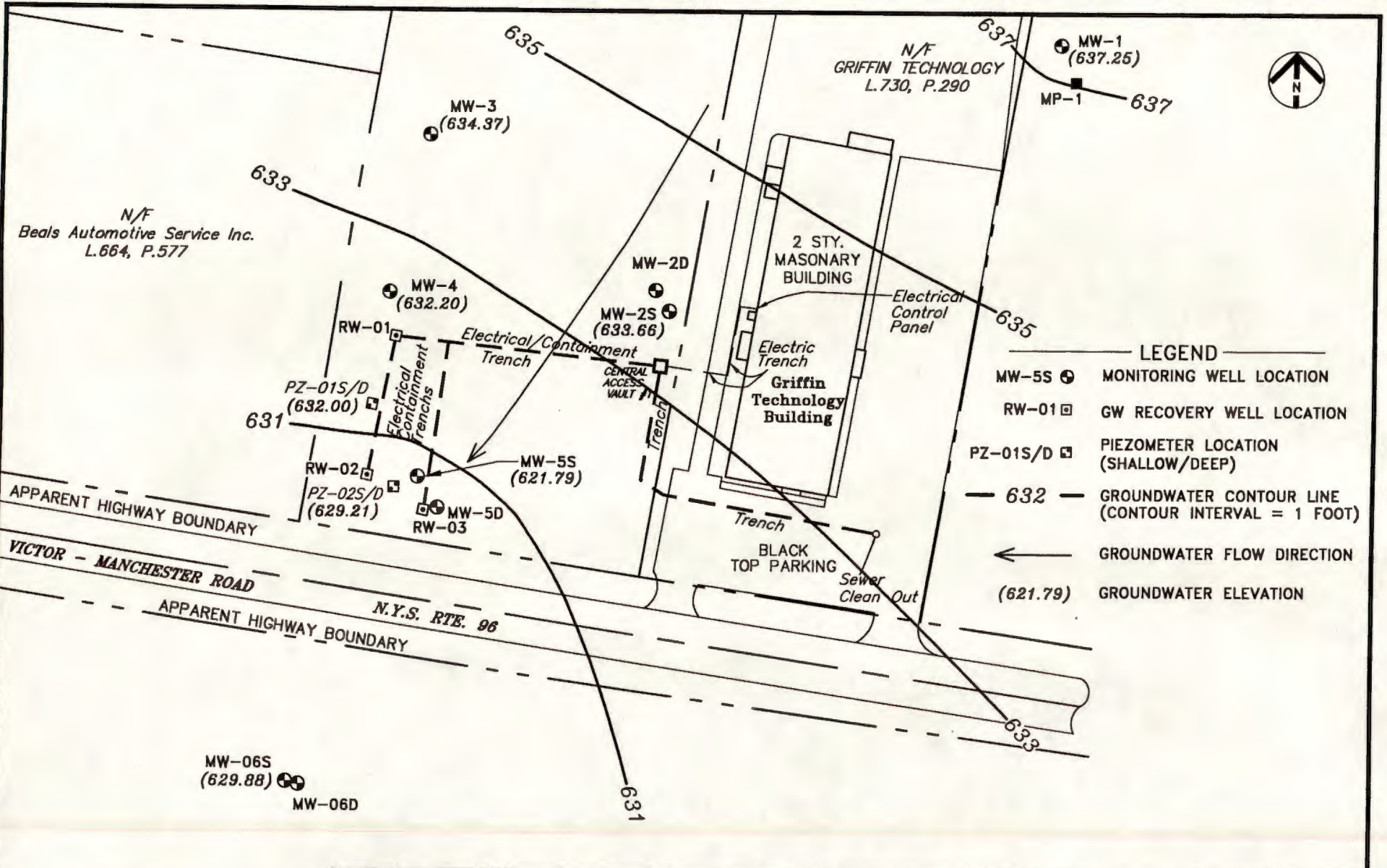
GENERAL LOCATION MAP

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

DRAWN BY: MMS	CHECKED BY: KMA	PROJECT NUMBER: 4E06282	DATE: 6-10-96	FIGURE NO: 1
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Woodward-Clyde
 Consultants

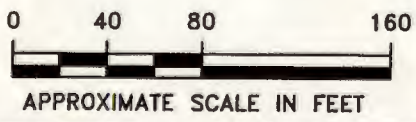
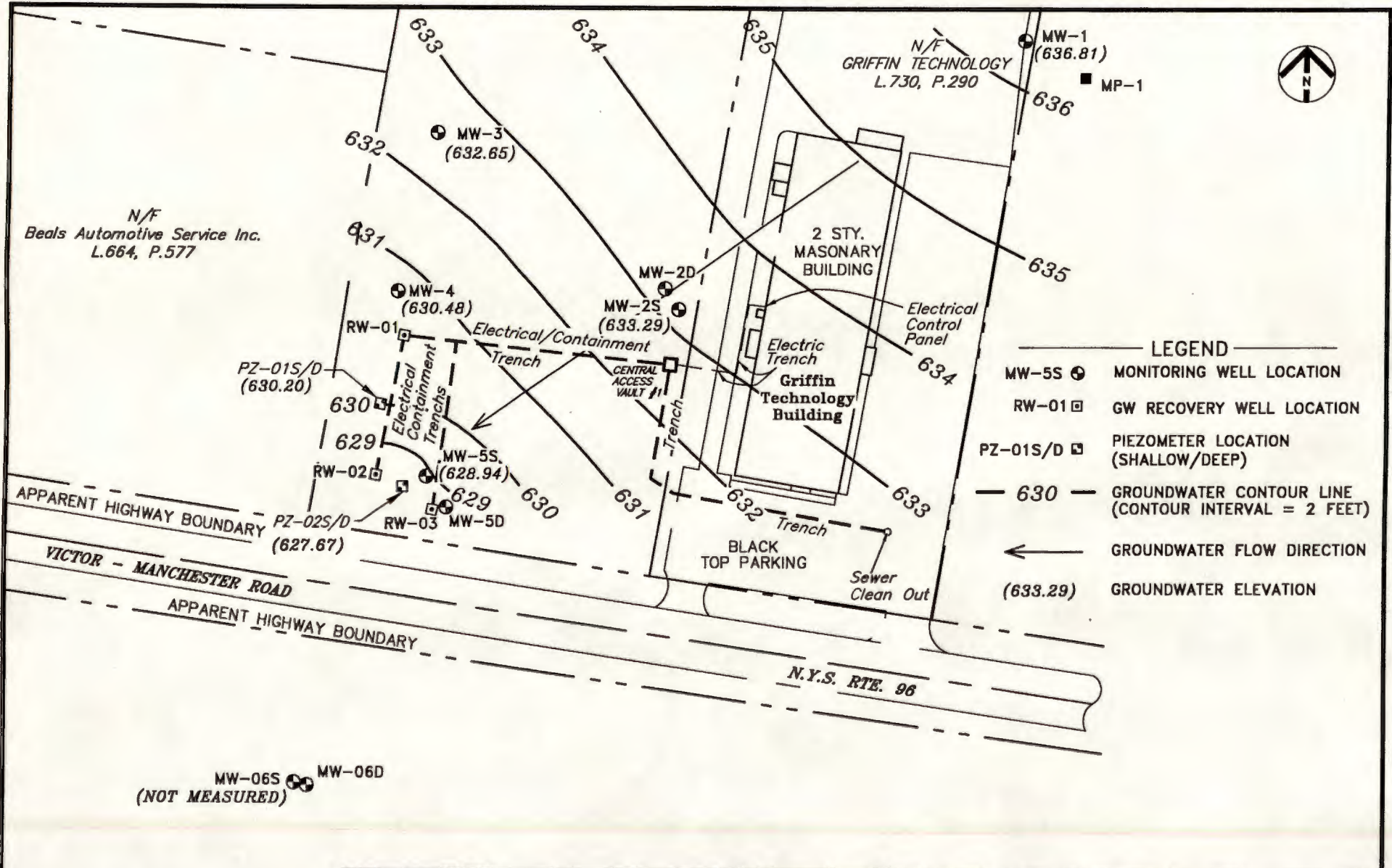
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OVERBURDEN GROUNDWATER CONTOUR MAP
APRIL 24, 1998
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: KMA	PROJECT NUMBER: 6E06191	DATE: 07-22-98	FIGURE NO: 2
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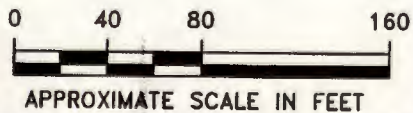
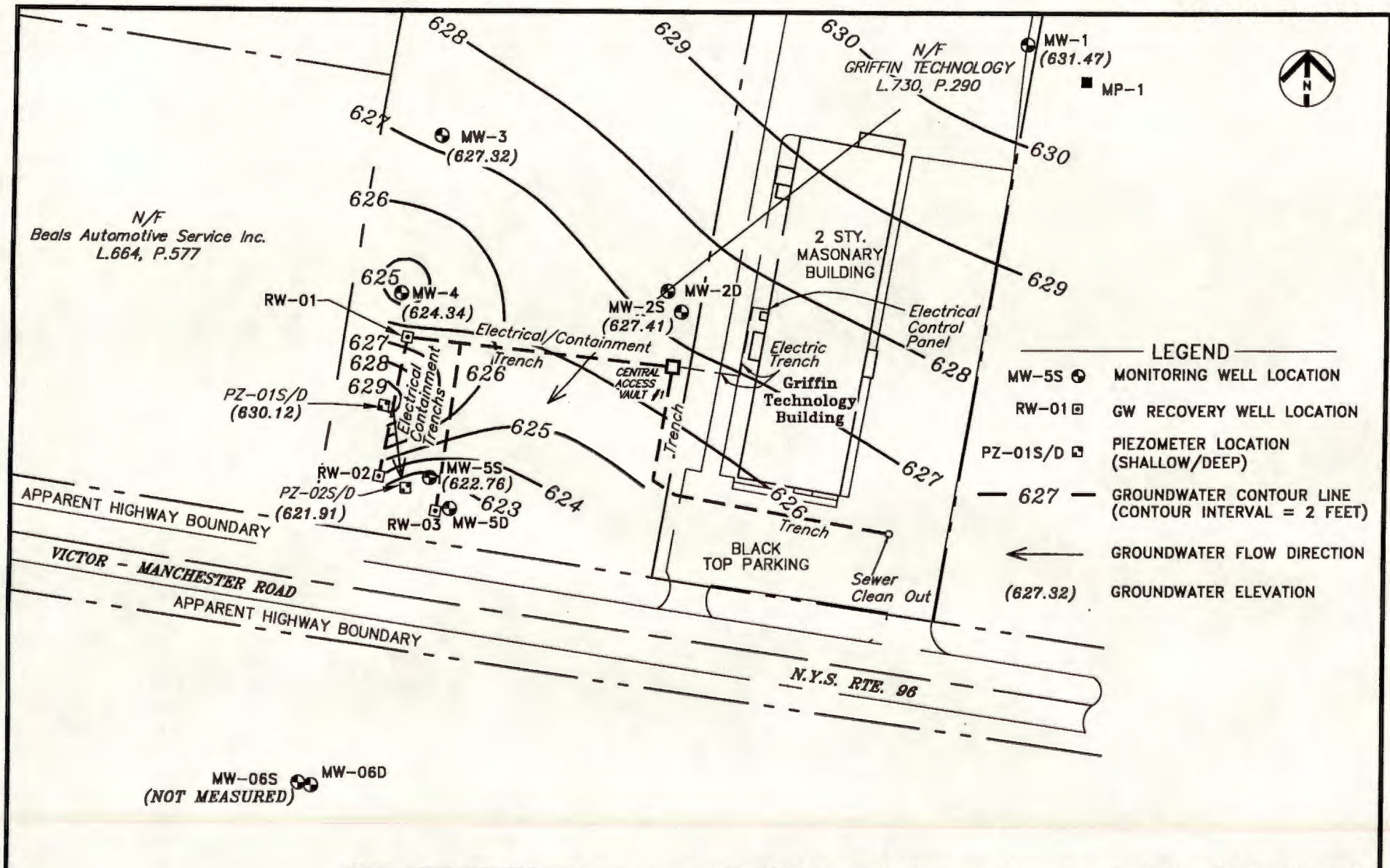
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OVERBURDEN GROUNDWATER CONTOUR MAP
MAY 12, 1998
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

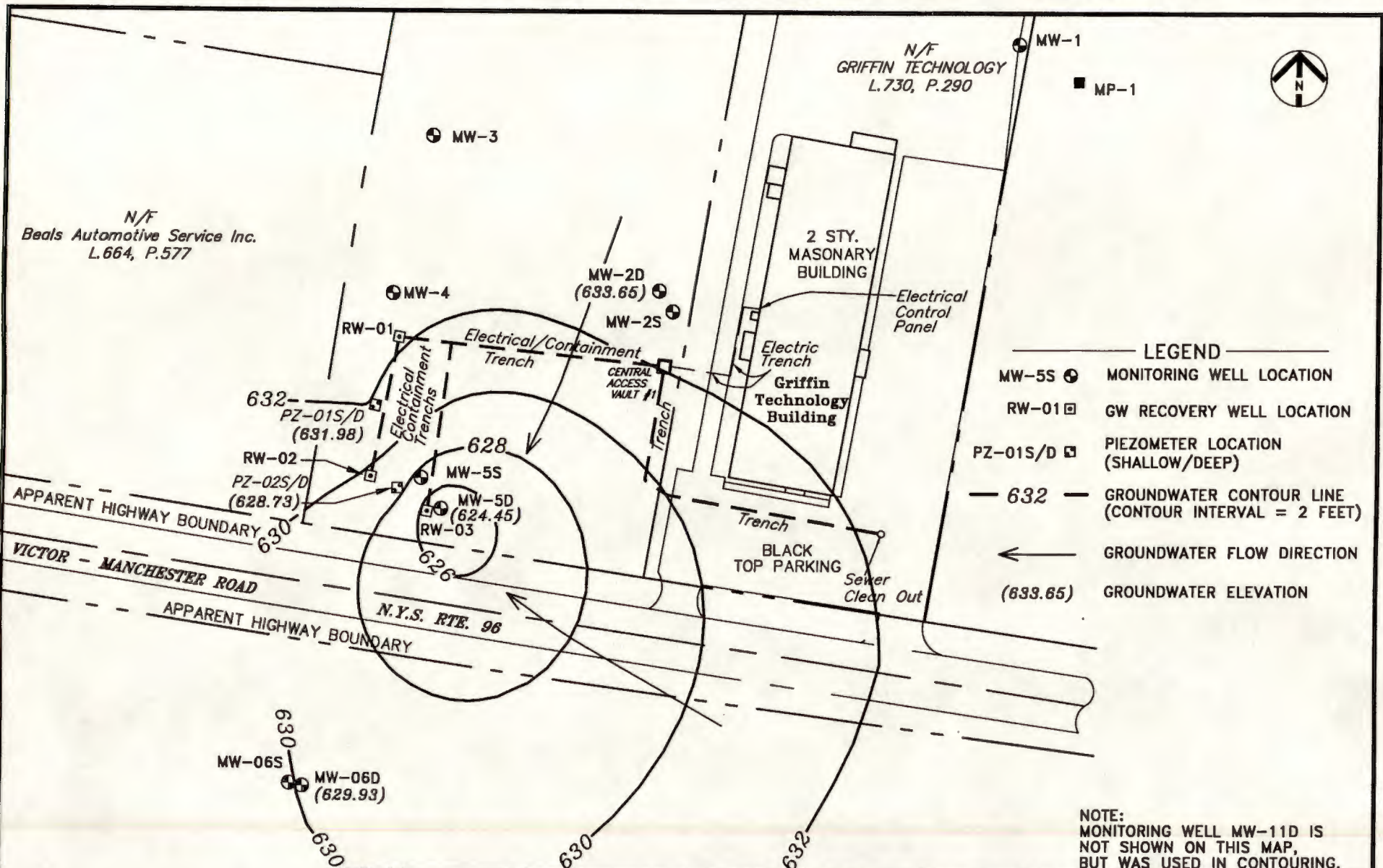
DRAWN BY: NJA	CHECKED BY: KMA	PROJECT NUMBER: 6E06191	DATE: 7-22-98	FIGURE NO: 3
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U:\6E06191\GWMAPS\0512885X.DWG



OVERBURDEN GROUNDWATER CONTOUR MAP
JUNE 12, 1998
GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: NJA	CHECKED BY: KMA	PROJECT NUMBER: 6E06191	DATE: 7-22-98	FIGURE NO: 4
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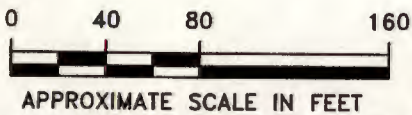


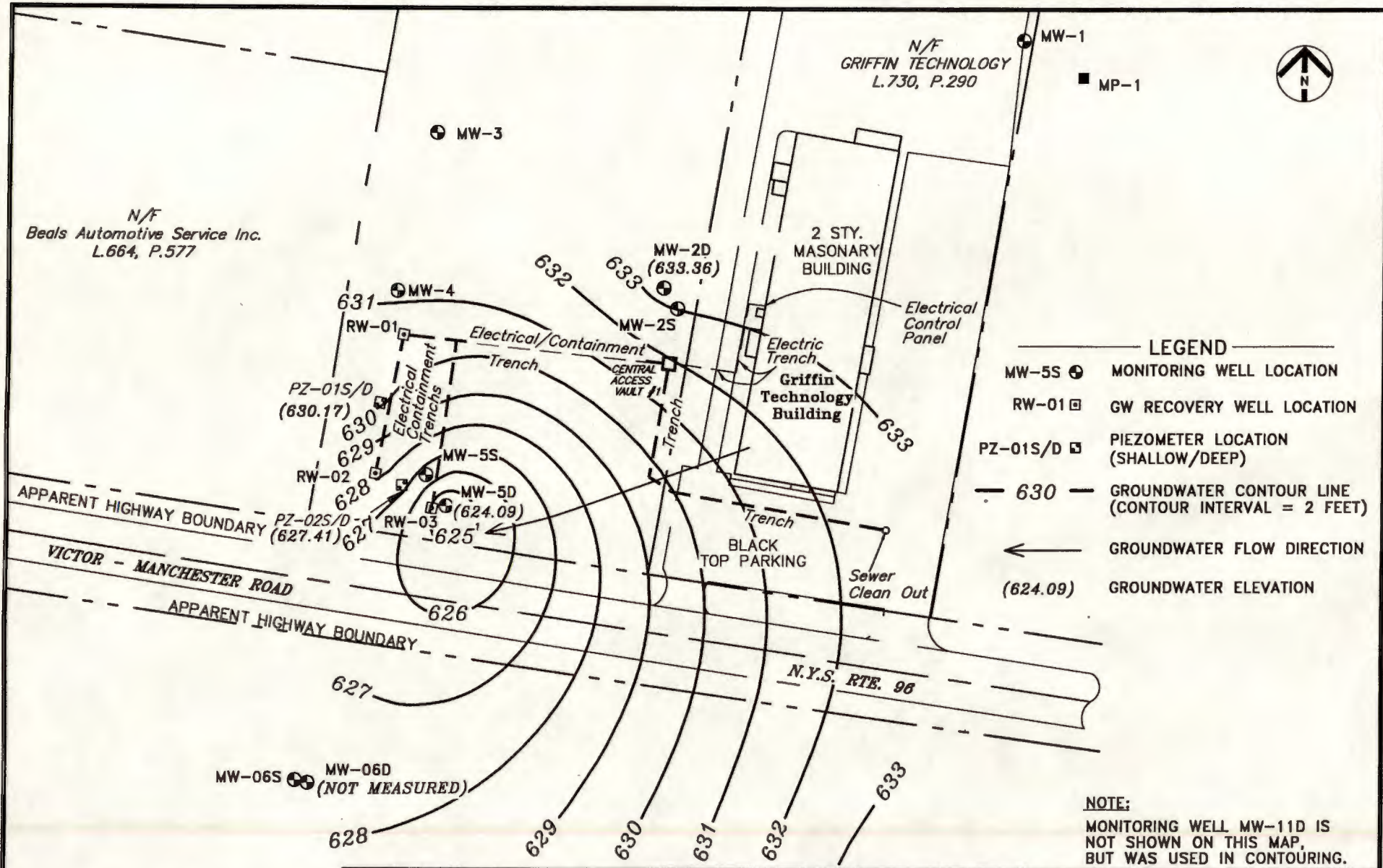
BEDROCK GROUNDWATER CONTOUR MAP

APRIL 24, 1998

GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: MMS	CHECKED BY: KMA	PROJECT NUMBER: 6E06191	DATE: 7-22-98	FIGURE NO: 5
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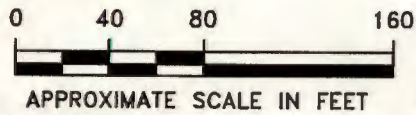


BEDROCK GROUNDWATER CONTOUR MAP

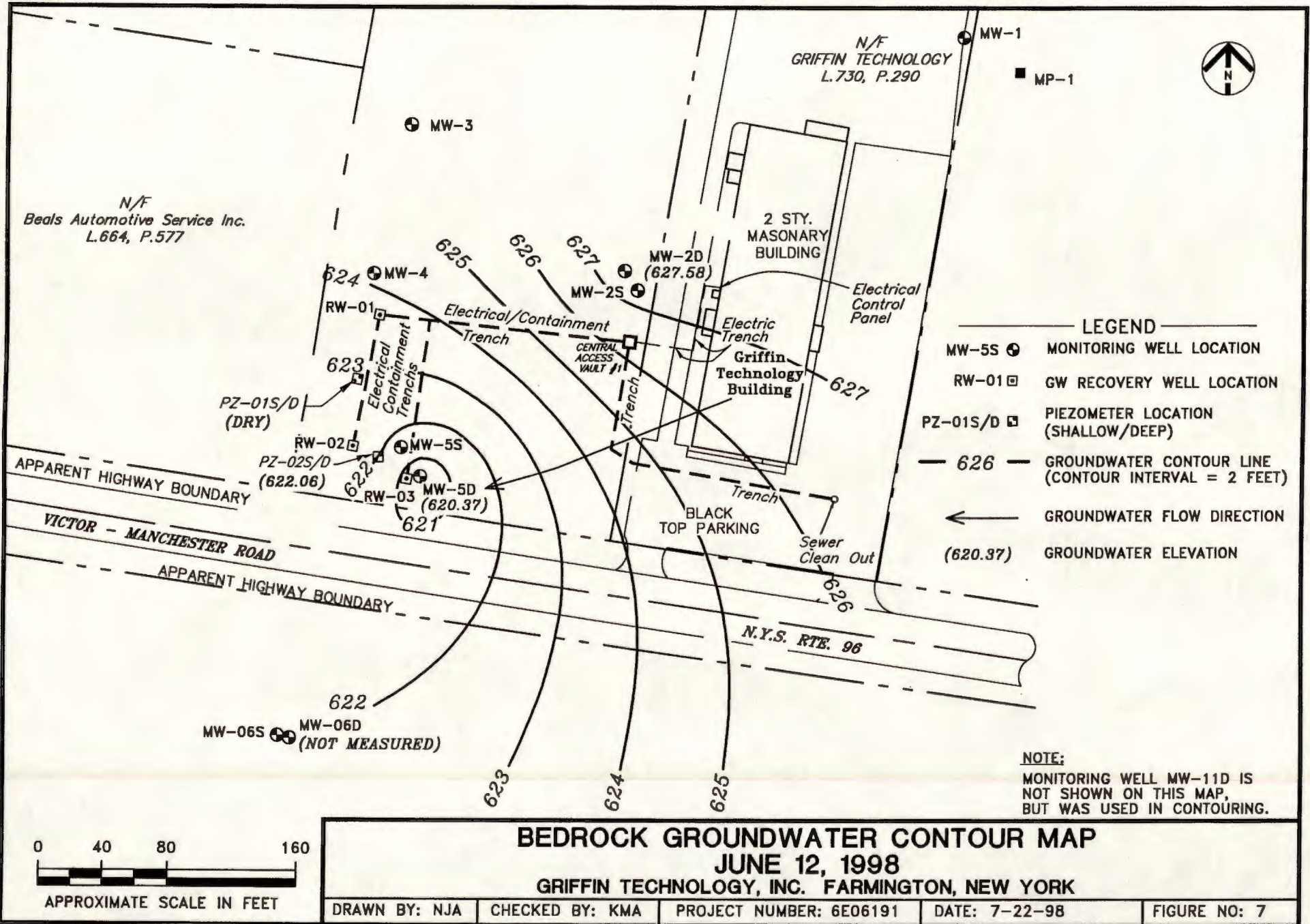
MAY 12, 1998

GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

DRAWN BY: NJA	CHECKED BY: KMA	PROJECT NUMBER: 6E06191	DATE: 7-22-98	FIGURE NO: 6
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NOTE:
MONITORING WELL MW-11D IS NOT SHOWN ON THIS MAP, BUT WAS USED IN CONTOURING.



U:\6E06191\GWMAPS\061298DX.DWG

Appendix A



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
CT ID # in Rochester: PH0556
MA ID # in Rochester: M-NY032

NJ ID # in Rochester: 73004
RI ID # in Rochester: 158

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 4-24-98 PAGE 1 OF 1

PROJECT NAME <u>Griffin IRM</u>					ANALYSIS REQUESTED															
PROJECT MANAGER/CONTACT <u>Ken Armstrong</u>					# OF CONTAINERS	GC/MS VOA's <input type="checkbox"/> 8260 <input type="checkbox"/> 624	GC/MS SVOA's <input type="checkbox"/> 8270A <input type="checkbox"/> 625	GC VOA's <input type="checkbox"/> 8010/8020 <input type="checkbox"/> 601/602	PESTICIDES/PCB's <input type="checkbox"/> 8080 <input type="checkbox"/> 608	STAR'S LIST 8021 VOA's <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP	STAR'S LIST 8270 SVOA's <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP	TCLP <input type="checkbox"/> METALS <input type="checkbox"/> VOA's <input type="checkbox"/> SVOA's <input type="checkbox"/> H/P	WASTE CHARACTERIZATION <input type="checkbox"/> React <input type="checkbox"/> Corros. <input type="checkbox"/> Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	8240	PRESERVATION			
pH < 2.0																				
pH > 12																				
Other																				
COMPANY/ADDRESS <u>30775 Bainbridge Rd, Ste 200</u> <u>Solon, Ohio</u>																				
TEL (440) <u>349-2708</u> FAX (440) <u>349-1514</u>																				
SAMPLER'S SIGNATURE <u>Bob Fabian</u>																				
SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX																
<u>EFF-4-24-98</u>	<u>4-24-98</u>	<u>11:50</u>	<u>207829</u>	<u>WATER</u>	2															

RELINQUISHED BY: <u>Bob Fabian</u> Signature <u>Bob Fabian</u> Printed Name <u>WCC</u> Firm <u>4-24-98 @ 12:30</u> Date/Time	RECEIVED BY: <u>V Gardner</u> Signature <u>V Gardner</u> Printed Name <u>CAS</u> Firm <u>4/24/98 @ 12:30</u> Date/Time	TURNAROUND REQUIREMENTS ___ 24 hr. ___ 48 hr. ___ 5 day <input checked="" type="checkbox"/> Standard (10-15 working days) ___ Provide Verbal Preliminary Results ___ Provide FAX Preliminary Results Requested Report Date _____	REPORT REQUIREMENTS <input checked="" type="checkbox"/> 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: <u>98-4-404</u>
RELINQUISHED BY: Signature _____ Printed Name _____ Firm _____ Date/Time _____	RECEIVED BY: Signature _____ Printed Name _____ Firm _____ Date/Time _____	SPECIAL INSTRUCTIONS/COMMENTS: METALS ORGANICS: <input type="checkbox"/> TCL <input type="checkbox"/> PPL <input type="checkbox"/> AE Only <input type="checkbox"/> BN Only <input type="checkbox"/> Special List _____ _____			
RELINQUISHED BY: Signature _____ Printed Name _____ Firm _____ Date/Time _____	RECEIVED BY: Signature _____ Printed Name _____ Firm _____ Date/Time _____	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			

Woodward Clyde Consultants
 Project Reference: DIEBOLD GRIFFIN SITE
 Client Sample ID : EFF-4-24-98

Date Sampled : 04/24/98 Order #: 207829 Sample Matrix: WATER
 Date Received: 04/24/98 Submission #: 9804000404 Analytical Run 26092

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 05/04/98		
ANALYTICAL DILUTION:	1.0		
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	150	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 %)	110	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	98	%

Project Reference:
 Client Sample ID : METHOD BLANK

Date Sampled : Order #: 210178 Sample Matrix: WATER
 Date Received: Submission #: Analytical Run 26092

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/04/98			
ANALYTICAL DILUTION: 1.0			
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 %)	104	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	94	%

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 5-12-98 PAGE 1 OF 1

PROJECT NAME <u>Griffin TRM</u>					ANALYSIS REQUESTED															
PROJECT MANAGER/CONTACT <u>Ken Armstrong</u>					# OF CONTAINERS	GC/MS VOA's <input type="checkbox"/> 8260 <input type="checkbox"/> 624	GC/MS SVOA's <input type="checkbox"/> 8270A <input type="checkbox"/> 625	GC VOA's <input type="checkbox"/> 8010/8020 <input type="checkbox"/> 601/602	PESTICIDES/PCB's <input type="checkbox"/> 8080 <input type="checkbox"/> 608	STAR'S LIST 8021 VOA's <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP	STAR'S LIST 8270 SVOA's <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP	TCLP <input type="checkbox"/> METALS <input type="checkbox"/> VOA's <input type="checkbox"/> SVOA's <input type="checkbox"/> H/P	WASTE CHARACTERIZATION <input type="checkbox"/> React <input type="checkbox"/> Corros. <input type="checkbox"/> Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	8240	ASP 91-1	PRESERVATION		
COMPANY/ADDRESS <u>30775 Bainbridge Rd. Solon, Ohio</u>																		pH < 2.0	pH > 12	Other
TEL (440) <u>349-2708</u> FAX (440) <u>349-1514</u>																				
SAMPLER'S SIGNATURE <u>Bob Fabian</u>																				
SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX																
<u>EFF-5-12-98</u>	<u>5-12-98</u>	<u>12:05</u>	<u>211818</u>	<u>WATER</u>	<u>2</u>															
<u>MW-25-5-12-98</u>	<u>5-12-98</u>	<u>12:35</u>	<u>211819</u>	<u>WATER</u>	<u>2</u>															

RELINQUISHED BY: Signature: <u>Bob Fabian</u> Printed Name: <u>wcc</u> Firm: <u>5-12-98</u> Date/Time: <u>13:15</u>		RECEIVED BY: Signature: <u>V Gardner</u> Printed Name: <u>CAS</u> Firm: <u>5/12/98 @ 1315</u> 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: <u>client</u> Shipping #: _____ Temperature: _____ Submission No: <u>98-5-479</u> <u>98-5-480</u>	
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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 _____		SPECIAL INSTRUCTIONS/COMMENTS: METALS ORGANICS: <input type="checkbox"/> TCL <input type="checkbox"/> PPL <input type="checkbox"/> AE Only <input type="checkbox"/> BN Only <input type="checkbox"/> Special List			
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Woodward Clyde Consultants
 Project Reference: GRIFFIN IRM
 Client Sample ID : EFF-5-12-98

Date Sampled : 05/12/98 Order #: 211818 Sample Matrix: WATER
 Date Received: 05/12/98 Submission #: 9805000479 Analytical Run 26715

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 05/21/98		
ANALYTICAL DILUTION:	2.0		
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
CHLORO BENZENE	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	250	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 %)	102	%
TOLUENE-D8	(88 - 110 %)	106	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	103	%

Project Reference:
Client Sample ID : METHOD BLANKDate Sampled : Order #: 213616 Sample Matrix: WATER
Date Received: Submission #: Analytical Run 26715

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/20/98			
ANALYTICAL DILUTION: 1.0			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	101	%
TOLUENE-D8	(88 - 110 %)	105	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
 METHOD 8260B TCL
 Reported: 06/29/98

Woodward Clyde Consultants
 Project Reference: GRIFFIN IRM
 Client Sample ID : EFF-6-12-98

Date Sampled : 06/12/98 Order #: 217308 Sample Matrix: WATER
 Date Received: 06/12/98 Submission #: 9806000190 Analytical Run 27737

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/98			
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	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	7.5	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	320	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(86 - 115 %)	101	%
TOLUENE-D8	(88 - 110 %)	106	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
 METHOD 8260B TCL
 Reported: 06/29/98

Project Reference:
 Client Sample ID : METHOD BLANK

Date Sampled : Order #: 220623 Sample Matrix: WATER
 Date Received: Submission #: Analytical Run 27737

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/26/98			
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	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(86 - 115 %)	101	%
TOLUENE-D8	(88 - 110 %)	104	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	98	%

