Woodward-Clyde
Engineering & sciences applied to the earth & its environment

June 12, 1997

Mr. David G. Pratt, Environmental Engineer I
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
6274 East Avon-Lima Road
Avon, New York 14414

Subject: Monthly Operation Report (5/1/97 - 5/31/97)
Interim Remedial Measure (Index No. B8-315-90-01)
Griffin Technology, Incorporated Facility; Victor, New York
(W-C Project No. 6E06191)

Dear Mr. Pratt:

On behalf of Diebold, Incorporated (Diebold), Woodward-Clyde International-Americas (W-C) is pleased to submit this third monthly progress report of the Interim Remedial Measure (IRM) at the subject facility. In accordance with the Order on Consent (Index No. B8-315-90-01) agreement between the New York State Department of Environmental Conservation (NYSDEC) and Griffin Technology, Incorporated (Griffin), which became effective on October 22, 1996, a groundwater collection system was installed during December 1996 and January 1997. The system was turned on February 18, 1997 and is currently in operation.

The third monthly progress report includes all data collected through the end of calendar month May 1997. Future progress reports will be submitted quarterly for the remaining duration of the IRM activities. (i.e., June-August 1997, September through November 1997, etc.). Information describing the IRM system and monitoring data collected during the third month of operation, is presented in the following subsections.

Description of IRM System

Figure 1 shows the IRM system layout, including nested piezometers and groundwater monitoring wells which are located in the immediate vicinity. The installation activities preceding initiation of the system have been described in previous progress reports. Please refer to these documents for additional information about the recovery and monitoring components of the system.

Monitoring Data Collection

Collection of monitoring data has been performed in accordance with the Final Design Document submitted to the New York State Department of Environmental Conservation (NYSDEC) during October 1996. Monitoring data collected from the site during the third month of operation consisted of groundwater elevation measurements, collection of a monthly effluent sample for laboratory analysis, and obtaining the total flow discharge readings totals from each recovery well to determine the total monthly discharge to the POTW.

On, May 15, 1997, a representative of W-C collected water elevations from each on-site well, and three off-site wells located in the immediate vicinity of the recovery wells. The measurements were recorded to the nearest 0.01 ft. An effluent sample was also collected from the sample port located on the central discharge pipe. The sample was transported to CASI and analyzed for VOC's by United States Environmental Protection Agency method 8260. The analytical method was chosen to comply with the monthly discharge requirements established by the FWSD.

On June 3, 1997 a representative of W-C recorded the readings on the flow meter of each recovery well conduit to the nearest gallon. The reading on the totalizing meter for all three wells was also collected in order to determine the quantity of water discharged to the POTW. The data collected was used to calculate well yields and an average daily yield from each well as well as the IRM system.

Groundwater Elevation Results

The groundwater elevations obtained during system operation are presented in Table 1. The data collected was used to prepare groundwater elevation contour maps of the overburden and bedrock formation in the vicinity of the IRM system. A groundwater elevation contour map for the overburden formation is presented as Figure 2. A groundwater elevation contour map for the bedrock formation is presented as Figure 3.

The groundwater contour maps indicate that the recovery wells have influenced the groundwater flow patterns of the bedrock and overburden formations both on and off the Griffin property. This is evidenced by the lowering of water elevations in the well and piezometers located in immediate vicinity of the IRM system, specifically in the area

surrounding recovery wells RW-02 and RW-03. Continued monitoring of water elevation data collected during future months of IRM system operation, and comparison of this data over time, will provide long-term information relating to the effectiveness of the hydraulic control provided by the system.

Effluent Analytical Results

The analytical results of the composite sample collected from the effluent discharge are summarized in Table 2. The analytical results of previous sampling events are also included in Table 2 as references. The results indicate that only 1,1,1-trichloroethane, and trichloroethene were detected in the effluent. The presence of these compounds in the system effluent continues to be an indication of the effectiveness of the IRM system in that groundwater from the source area is being extracted from the formation. The TCE concentration increased in the effluent sample from 240 micrograms per liter (µg/l) to 360 µg/l during the third month of operation. However, overall the TCE concentration appears to be reduced in the effluent since the system was initially started. Continued monitoring of the effluent discharge and the surrounding groundwater monitoring wells will provide additional information of the overall effectiveness of the IRM.

Effluent Discharge Measurements

The flow meter readings collected during system operation are presented in Table 3. The average daily effluent discharge and average flow rate during each week of operation have been calculated and are provided this table along with a total discharge rate for the first month of operation. During the third month of operation, approximately 243,000 gallons of water was discharged to the POTW. Flow meter readings will continue to be collected on a monthly basis for the duration of the IRM activities.

The flow measurements indicate a trend that recovery well discharge rates may be starting to attenuate. The average total flow rate from the three wells was calculated to be 5.1 gallons per minute (gpm) during the third month of operation. The previous reporting period flow rate was 7.8 gpm. The reduced flow rates may be attributable to the cone of depression formed in the vicinity of the recovery wells and the influence these wells have had on the removal and recovery of local groundwater.

Summary

Overall, the information collected during the third month of operation indicate continued IRM system effectiveness in controlling on-site groundwater flow in that groundwater elevations indicate an on-site inward flow gradient. Future data collection will provide the long-term data trends necessary for determining the overall effectiveness of the IRM system. Future progress reports are scheduled to occur on a quarterly basis for the remaining duration of the IRM. As outlined in the IRM schedule, the next progress report will include the data collected from the first Semi-annual groundwater monitoring event.

Should you have any questions about the information contained herein, or require additional information, please do not hesitate to contact us.

Sincerely,

Kenneth M. Armstrong EIT, CHMM
Assistant Project Engineer

Martin L. Schmidt, Ph.D.
Senior Consulting Professional

Enclosures

cc: Mark Tucker, Diebold, Inc.
Dave Rinehart, Diebold, Inc.
File

Tables

TABLE 1
GROUNDWATER ELEVATION MEASUREMENTS
GRIFFIN TECHNOLOGIES, INC.
VICTOR, NEW YORK

WELL NUMBER	GROUNDWATER ELEVATION(ft.)[1] 3/14/97	4/15/97	5/15/97
MW-01	NM	637.53	635.25
MW-2S	634.86	634.01	630.92
MW-2D	634.90	634.09	631.00
MW-03	636.28	635.28	629.56
MW-04	633.63	632.83	626.72
MW-5S	631.73	631.03	625.17
MW-5D	624.73	624.56	621.69
MW-6S	NM	629.97	626.11
MW-6D	NM	630.45	626.12
MW-11D	NM	633.99	630.09
PZ-1S	630.18	632.68	NM
PZ-1D	629.50	632.70	626.27
PZ-2S	633.68	629.59	624.49
PZ-2D	633.74	629.42	624.31

NOTES

1. "[1]" Water level elevations relative to surveyors benchmark.
2. "S" indicates overburden groundwater monitoring well or piezometer.
3. "D" indicates bedrock groundwater monitoring well or piezometer.
4. "NM" indicates not measured on date shown.

TABLE 2
SUMMARY OF EFFLUENT ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
VICTOR, NEW YORK

Parameter	3/01/97 Effluent Discharge Concentration (µg/l)	3/27/97 Effluent Discharge Concentration (µg/l)	4/15/97 Effluent Discharge Concentration (µg/l)	5/15/97 Effluent Discharge Concentration (µg/l)
cis-1,2-Dichloroethene	6.5	ND	6.0	ND
1,1,1-Trichloroethane	14.0	ND	5.8	9.8
Trichloroethene	610.0	290.0	240.0	360.0

Notes

1. Samples analyzed for VOC's by USEPA method 8260.
2. All results expressed in micrograms per liter (µg/l).
3. No other compounds detected at method detection limits.

TABLE 3
FLOW METER MEASUREMENTS
GRIFFIN TECHNOLOGIES, INC.
VICTOR, NEW YORK

WELL IDENTIFICATION	FLOW METER READINGS (GAL) Month 1 03/14/97	Month 2 05/01/97	Month 3 06/03/97
RW-01	76,680	237,965	298,856
RW-02	82,290	261,230	344,542
RW-03	96,070	295,113	393,958
Operating Period (Days)	28	48	33
Total Discharge for Period (Gallons)	255,040	539,268	243,048
Average Daily Recovery (Gallons)	10,202	11,235	7,365
Average Flow Rate (gal./min.)	7.1	7.8	5.1

NOTES

1. Readings taken on date shown on column header.

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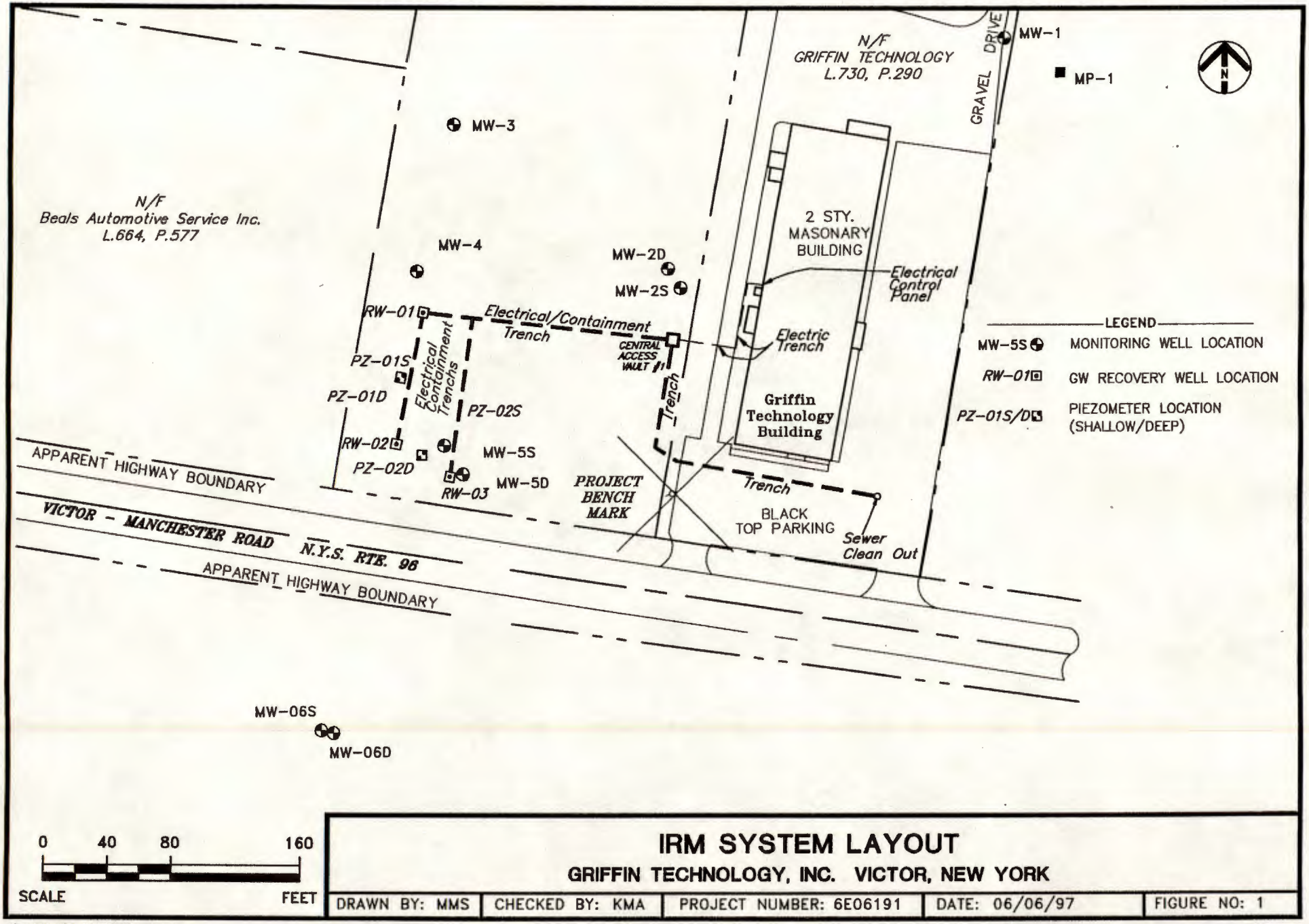
L:\128NWORK\GRIFFIN\Table3

Figures



IRM SYSTEM LAYOUT

GRIFFIN TECHNOLOGY, INC. VICTOR, NEW YORK

DRAWN BY: MMS	CHECKED BY: KMA	PROJECT NUMBER: 6E06191	DATE: 06/06/97	FIGURE NO: 1

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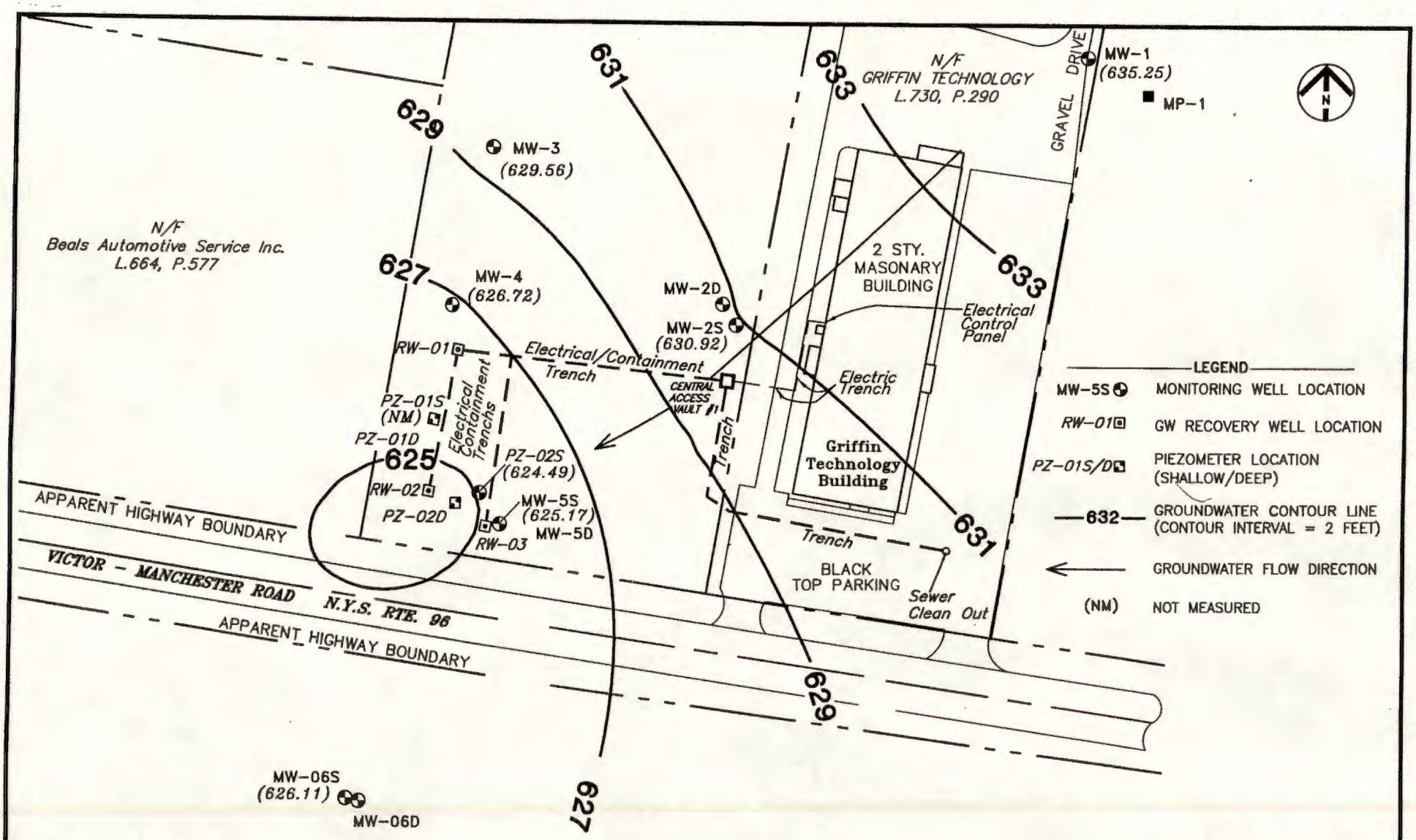
Woodward-Clyde Consultants



OVERBURDEN GROUNDWATER CONTOUR MAP
MAY 15, 1997
GRIFFIN TECHNOLOGY, INC. VICTOR, NEW YORK

DRAWN BY: MMS	CHECKED BY: KMA	PROJECT NUMBER: 6E06191	DATE: 06/02/97	FIGURE NO: 2

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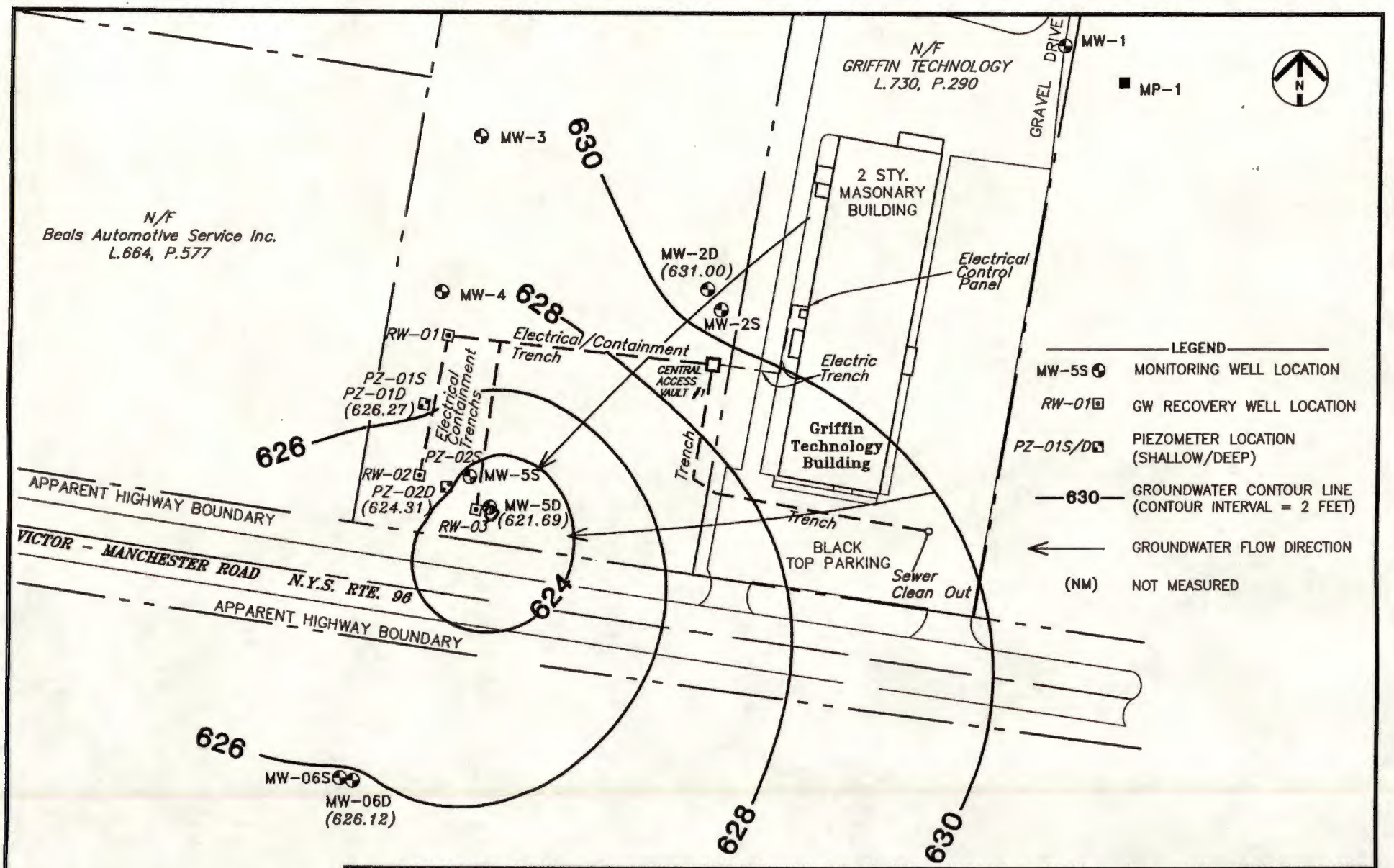
Woodward-Clyde Consultants



BEDROCK GROUNDWATER CONTOUR MAP
MAY 15, 1997
GRIFFIN TECHNOLOGY, INC. VICTOR, NEW YORK

DRAWN BY: MMS	CHECKED BY: KMA	PROJECT NUMBER: 6E06191	DATE: 06/02/97	FIGURE NO: 3

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Appendix A

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 06/05/97

Woodward Clyde Consultants
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-5-15-97

Date Sampled : 05/15/97 **Order #:** 148240 **Sample Matrix:** WATER
Date Received: 05/15/97 **Submission #:** 9705000215 **Analytical Run** 17655

DATE ANALYZED : 05/28/97
ANALYTICAL DILUTION: 1.0

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	9.8	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	360	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	97	%
TOLUENE-D8	(88 - 110 %)	93	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	87	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260 TCL
Reported: 06/05/97

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 151554 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 17655

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/28/97			
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 %)	103	%
TOLUENE-D8	(88 - 110 %)	109	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	108	%

[redacted]COLUMBIA ANALYTICAL SERVICES, INC. [redacted] CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

700 Exchange Street, Rochester, New York 14608
(716) 454-6810 • FAX (716) 454-6825

(800) 695-7222

DATE 5-15-97 PAGE 1 OF 1

PROJECT NAME Griffin IRM
PROJECT MANAGER/CONTACT Ken Armstrong
COMPANY/ADDRESS 30775 Bainbridge Rd., Ste 200
Solon, Ohio
TEL (216) 349-2708 FAX (216) 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)	8240							PRESERVATION pH < 2.0	pH > 12	Other
EFF-5-15-97	5-15-97	11:45	148240	WATER	2											X									

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm WOODWARD-CLYDE
Date/Time 5-15-97 13:22

RECEIVED BY:
Signature Tom Hastings
Printed Name
Firm
Date/Time 5/15/97 13:22

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 Validateble 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: NA
Submission No: 97-5-215

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