FINAL REPORT

INTERIM REMEDIAL MEASURE QUARTERLY PROGRESS REPORT (APRIL – JUNE 2001)

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

Prepared for:
Diebold, Inc.
Canton, Ohio

July 23, 2001

URS

800 West St. Clair Avenue
Cleveland, Ohio 44113
216.622.2400
Project No. 38-06E06191.03

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1.1 PURPOSE AND ORGANIZATION

This report presents the information collected by URS Corporation (URS), formerly URS Greiner Woodward Clyde, between April and June 2001 during 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. A general location map is included as Figure 1-1.

The IRM system consists of four wells equipped with groundwater extraction pumps, which have been plumbed to discharge groundwater into the local sanitary sewer system. The system layout is shown in Figure 2-1.

The activities performed during this three-month period of operation are described in Section 2.0. Information collected during this period of operation is presented in Section 3.0. Summary information is presented in Section 4.0.

1.2 SYSTEM DESCRIPTION

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.

During December 1996 and January 1997, the IRM components were installed at the site. The components included three recovery wells (RW-1 through RW-3) and one deep monitoring well with the potential to be converted to a recovery well in the future. Following approval by the NYSDEC and the Canandaigua-Farmington Water and Sewer District to discharge recovery water into the sanitary sewer system, the system was placed on line with three recovery wells. The IRM system began operating on February 18, 1997. Between April and June 1999, one deep monitoring well (MW-2D) was converted to a recovery well (RW-4) and brought on line.

Between December 1999 and March 2000, a new sanitary sewer main crossing was installed

beneath Victor-Manchester Road to provide separate sanitary sewer service to the undeveloped western parcel of the former GTI site on which the recovery system is located. On April 7, 2000, the recovery system discharge was disconnected from the sanitary sewer on the central parcel of the GTI site and connected to the new sanitary sewer main crossing at the clean out on the western parcel.

The activities performed during this quarter of IRM operation consisted of measuring monitoring well groundwater elevations, recording the quantity of water discharged by the IRM system, and collecting samples of the IRM system effluent for laboratory analysis. Each of these activities is described in greater detail below.

2.1 HYDRAULIC HEAD MEASUREMENT

During this quarter of IRM operation, hydraulic head (groundwater elevation) measurements were collected an average of twice per month from each on-site groundwater well and piezometer and off-site monitoring well MW-11D. Hydraulic head measurements were also collected monthly from off-site monitoring wells MW-6S and MW-6D. These off-site wells are located in the immediate vicinity of the IRM system. Measurements were collected using an electronic water level indicator capable of measuring the water elevation to the nearest 0.01 feet.

2.2 EFFLUENT MONITORING, SAMPLING AND ANALYSIS

At the end of each month of operation, the quantity of effluent discharged by the IRM system 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 Canandaigua-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) Test Method 8260. The analytical results of the samples collected were used to report estimated loadings to the POTW.

Data obtained during this 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 collected during each month of the IRM system operation is presented in Table 1. The results indicate that groundwater containing chemicals of concern (COCs) is now being removed from underneath the GTI site. The only COC detected during April and May 2001 was trichloroethene (TCE). TCE and 1,1,1-trichloroethane (1,1,1-TCA) were detected during June 2001. These results are consistent with earlier results, except that previously identified COCs, such as cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC) were not detected during this quarter.

Historically, TCE has consistently been the compound with the highest reported concentration in the effluent samples. The concentrations of TCE in the system effluent were generally slightly lower than during the previous quarter. 1,1,1-TCA, detected in the June 2001 effluent sample, had not been detected since September 2000. Laboratory data sheets for the effluent sampling during this quarter are provided in Appendix A.

The quantity of water discharged by the system was lower than during the previous quarter. The monthly discharge was higher at the beginning of the quarter, and decreased toward the end of the quarter. The quantity of water discharged by the system appears to correlate with seasonal changes in groundwater elevations.

3.2 HYDRAULIC HEAD MEASUREMENT RESULTS

Hydraulic head measurements collected during this quarter of IRM system operation are presented in Table 2. These data were used to prepare monthly groundwater elevation and flow maps for the overburden and bedrock groundwater zones (Figures 3-1 through 3-6).

During this quarter of operation, groundwater elevations were relatively low; decreasing towards the end of the quarter. The groundwater contour maps from the GTI site indicate that groundwater in the overburden water-bearing zone typically flows to the south or southwest. In the bedrock water-bearing zone, groundwater generally appeared to flow toward a groundwater low area near the southwest corner of the site, in the vicinity of RW-03. The data indicate that the IRM system is continuing to influence groundwater flow patterns at the GTI site. These data are consistent with previously observed site conditions.

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

- TCE and 1,1,1-TCA were the only COCs detected in the system effluent during this quarter. The concentrations of TCE in the IRM system effluent were generally slightly lower than during the previous quarter. 1,1,1-TCA was detected only in the June 2001 effluent sample. 1,1,1-TCA had not been detected in previous 2001 effluent samples.
- The quantity of water discharged by the system was lower than during the previous quarter. The monthly discharge was higher at the beginning of the quarter, and decreased toward the end of the quarter. The quantity of groundwater discharged by the system appears to correlate with seasonal changes in groundwater elevations, with lower discharge and groundwater elevations in late summer, fall, and early winter and higher discharge and groundwater elevations in late winter, spring, and early summer.
- Groundwater elevations were relatively low during this quarter; decreasing towards the end of the quarter.
- Groundwater flow in the overburden water-bearing zone at this site is primarily to the south and southwest. This is consistent with previous reports for the GTI site.
- The IRM system is affecting groundwater flow patterns in the vicinity of the GTI facility. The groundwater elevation data 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 recovery well RW-03.

Data collection activities during the next quarter of IRM operation will consist of the same activities performed during the previous quarter of operation. The next semi-annual sampling of all groundwater monitoring wells is scheduled to be completed in September 2001.

Tables

TABLE 1
SUMMARY OF EFFLUENT DISCHARGES TO POTW (APRIL - JUNE 2001)
GRIFFIN TECHNOLOGY FACILITY
FARMINGTON, NEW YORK

MONTH	DISCHARGE (GAL.)	CONCENTRATIONS TCE	1,1,1-TCA
April 2001	412,099	210	ND
May 2001	164,831	390	ND
June 2001	97,349	380	10

Notes:

1. All results expressed in micrograms per liter (µg/l).
2. No other VOC compounds detected.
3. ND indicates not detected.
4. NS indicates no sample was detected due to low discharge.

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS
APRIL - JUNE 2001
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-01	641.79	04/11/01	3.46	638.33
		04/29/01	5.32	636.47
		05/14/01	7.40	634.39
		05/30/01	8.08	633.71
		06/16/01	11.04	630.75
		06/29/01	12.48	629.31
MW-02S	641.28	04/11/01	5.63	635.65
		04/29/01	8.47	632.81
		05/14/01	13.22	628.06
		05/30/01	13.73	627.55
		06/16/01	DRY	DRY
		06/29/01	DRY	DRY
MW-2D	642.37	Monitoring well converted to recovery well RW-4.		
MW-03	642.17	04/11/01	5.51	636.66
		04/29/01	9.93	632.24
		05/14/01	13.50	628.67
		05/30/01	14.12	628.05
		06/16/01	15.87	626.30
		06/29/01	16.88	625.29
MW-04	641.75	04/11/01	6.98	634.77
		04/29/01	11.78	629.97
		05/14/01	16.25	625.50
		05/30/01	16.33	625.42
		06/16/01	18.50	623.25
		06/29/01	19.22	622.53

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

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS
APRIL - JUNE 2001
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-05S	640.85	04/11/01	8.10	632.75
		04/29/01	12.76	628.09
		05/14/01	16.22	624.63
		05/30/01	17.17	623.68
		06/16/01	18.73	622.12
		06/29/01	19.37	621.48
MW-05D	641.01	04/11/01	10.97	630.04
		04/29/01	17.11	623.90
		05/14/01	18.48	622.53
		05/30/01	19.34	621.67
		06/16/01	19.91	621.10
		06/29/01	21.14	619.87
MW-06S	636.61	04/11/01	3.49	633.12
		04/29/01	NM	NM
		05/14/01	11.95	624.66
		05/30/01	NM	NM
		06/16/01	13.80	622.81
		06/29/01	NM	NM
MW-06D	636.83	04/11/01	3.74	633.09
		04/29/01	NM	NM
		05/14/01	12.19	624.64
		05/30/01	NM	NM
		06/16/01	14.01	622.82
		06/29/01	NM	NM

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

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS
APRIL - JUNE 2001
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-11D	641.89	04/11/01	6.49	635.40
		04/29/01	11.03	630.86
		05/14/01	13.34	628.55
		05/30/01	13.40	628.49
		06/16/01	15.50	626.39
		06/29/01	16.43	625.46
PZ-1S	640.50	04/11/01	5.92	634.58
		04/29/01	DRY	DRY
		05/14/01	DRY	DRY
		05/30/01	DRY	DRY
		06/16/01	DRY	DRY
		06/29/01	DRY	DRY
PZ-1D	640.67	04/11/01	6.10	634.57
		04/29/01	11.25	629.42
		05/14/01	DRY	DRY
		05/30/01	DRY	DRY
		06/16/01	DRY	DRY
		06/29/01	DRY	DRY
PZ-2S	639.73	04/11/01	8.77	630.96
		04/29/01	12.68	627.05
		05/14/01	16.22	623.51
		05/30/01	16.55	623.18
		06/16/01	DRY	DRY
		06/29/01	DRY	DRY

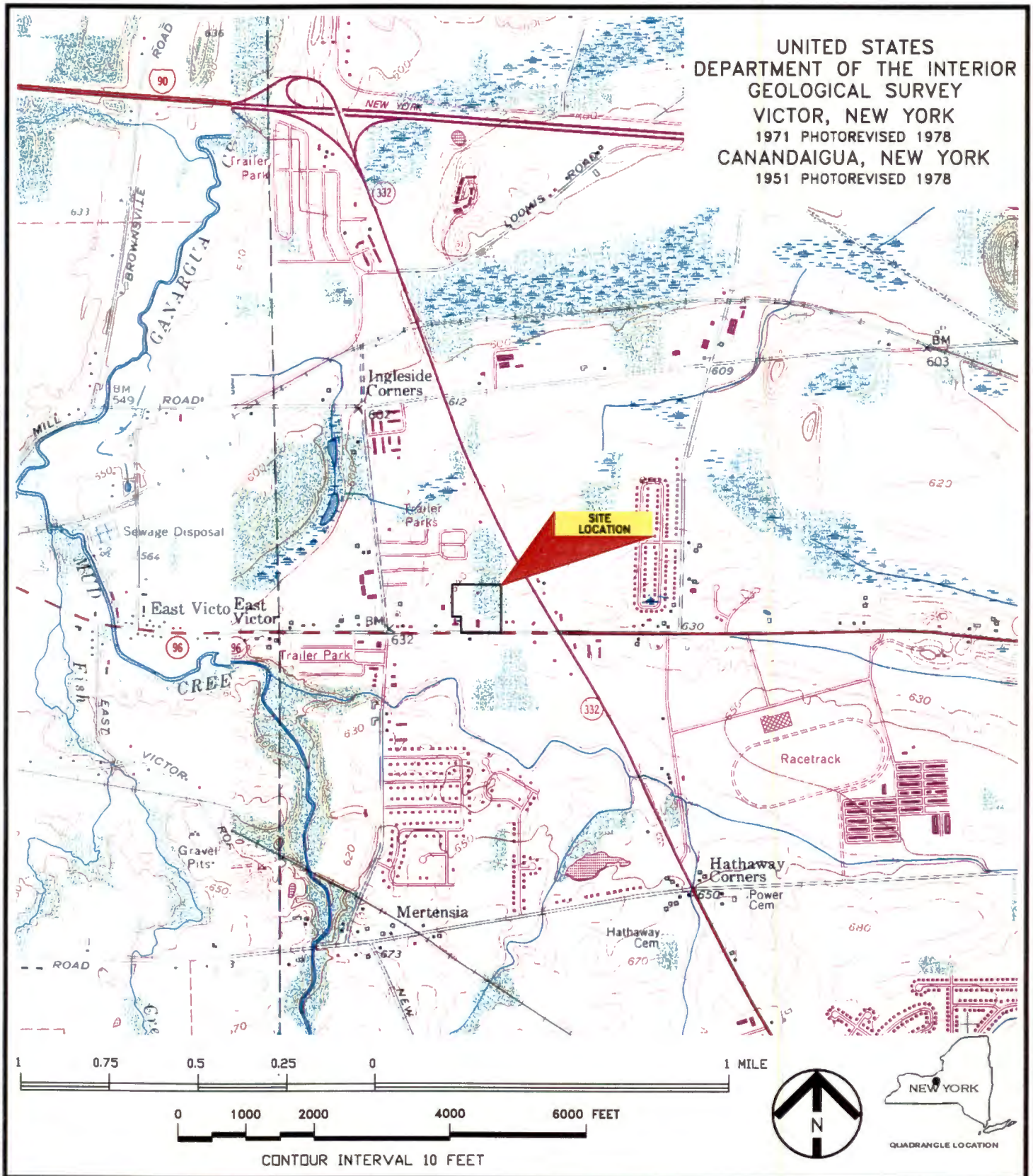
NOTES
NM indicates water elevation not measured.
DRY indicates well did not contain groundwater.

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS
APRIL - JUNE 2001
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
PZ-2D	640.01	04/11/01	10.21	629.80
		04/29/01	13.75	626.26
		05/14/01	16.91	623.10
		05/30/01	17.17	622.84
		06/16/01	18.89	621.12
		06/29/01	19.60	620.41

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

Figures



GENERAL LOCATION MAP

FORMER GRIFFIN TECHOLOGY INC. SITES - ONTARIO COUNTY - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: CAP	PROJECT NUMBER: 6E06191	DATE: 6/4/01	FIGURE NO: 1-1

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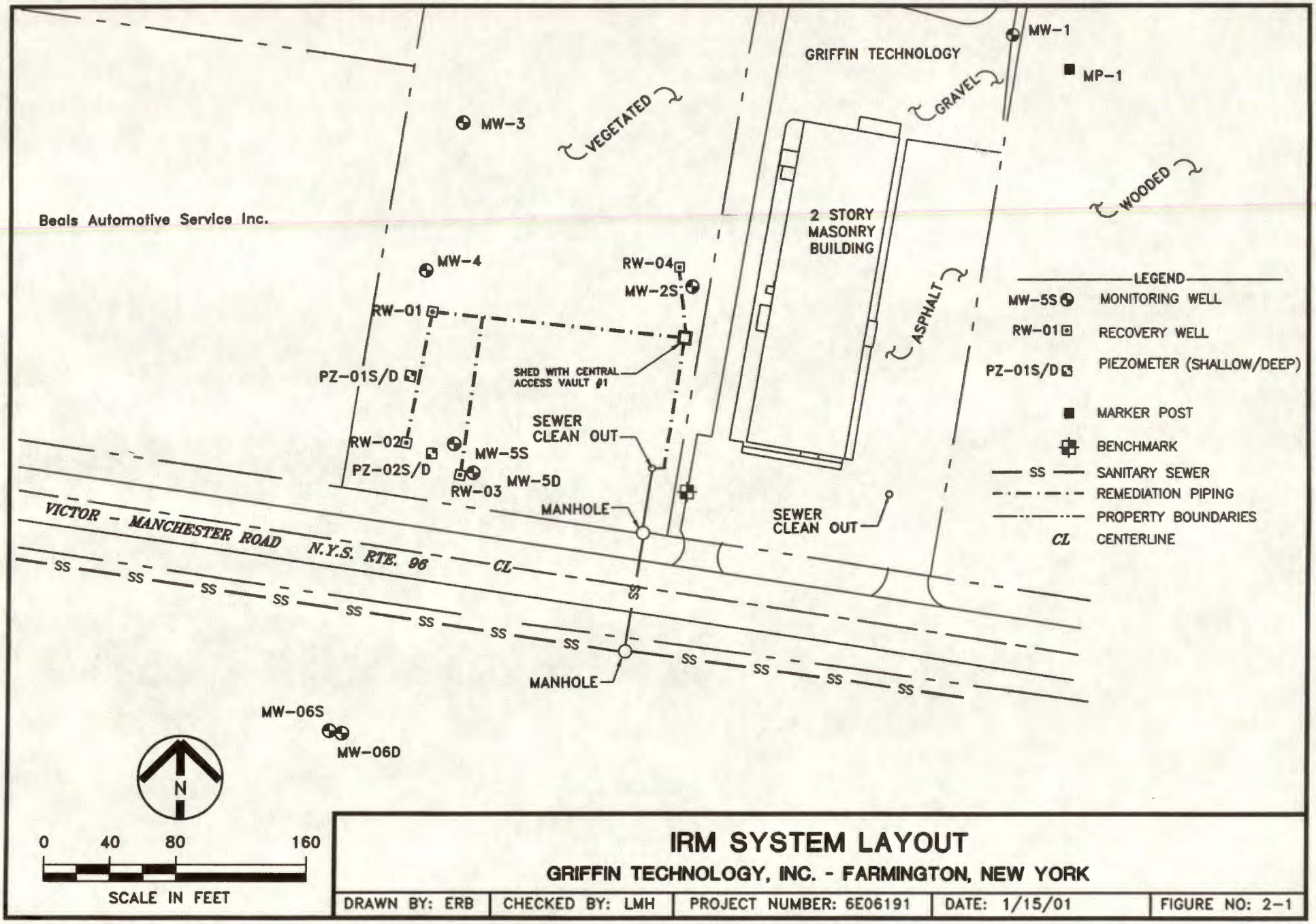
URS



IRM SYSTEM LAYOUT

GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: ERB	CHECKED BY: LMH	PROJECT NUMBER: 6E06191	DATE: 1/15/01	FIGURE NO: 2-1

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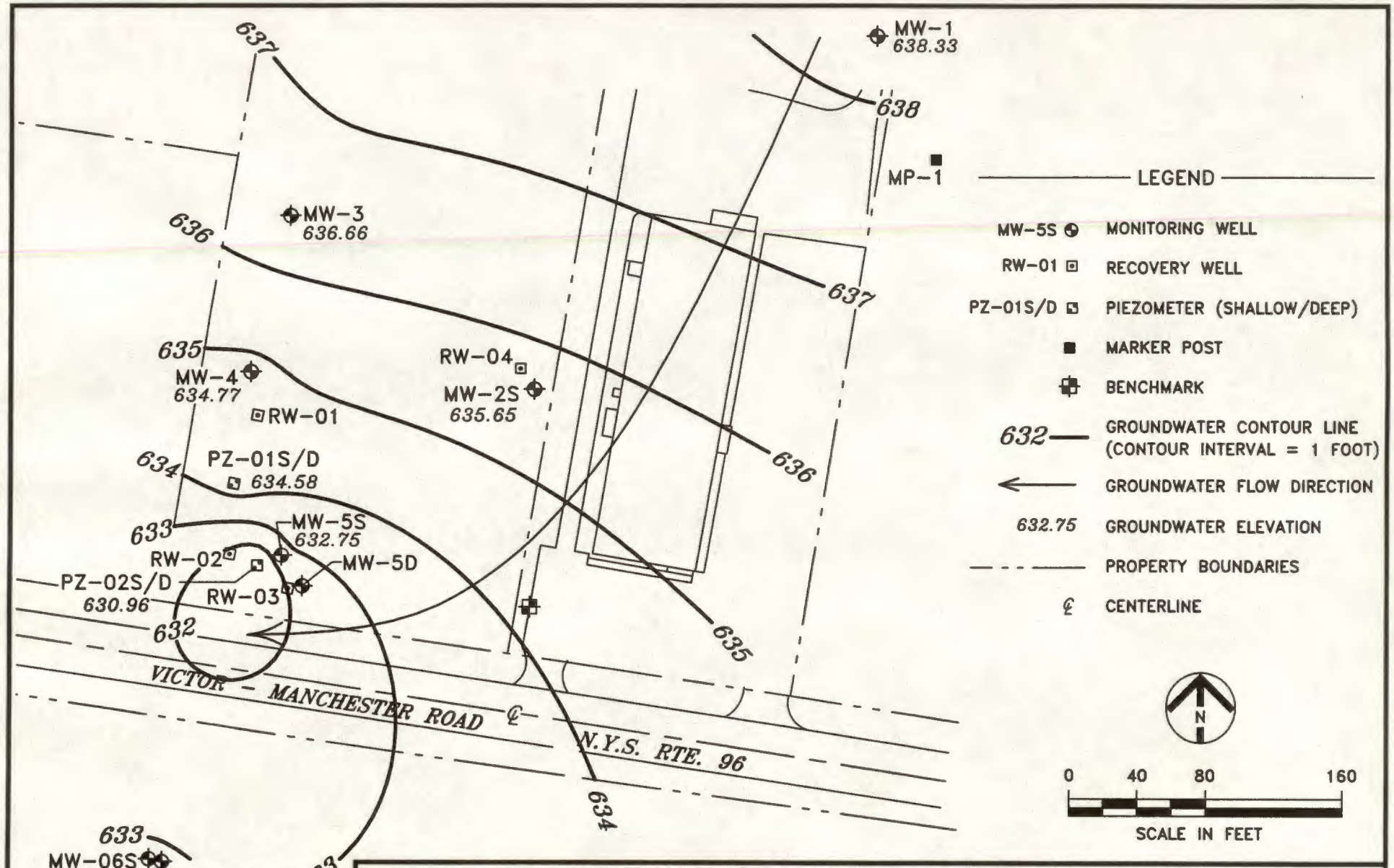
URS



OVERBURDEN GROUNDWATER CONTOUR MAP
APRIL 11, 2001
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: TBC	CHECKED BY: CAP	PROJECT NUMBER: 6E06191	DATE: 7/11/01	FIGURE NO: 3-1

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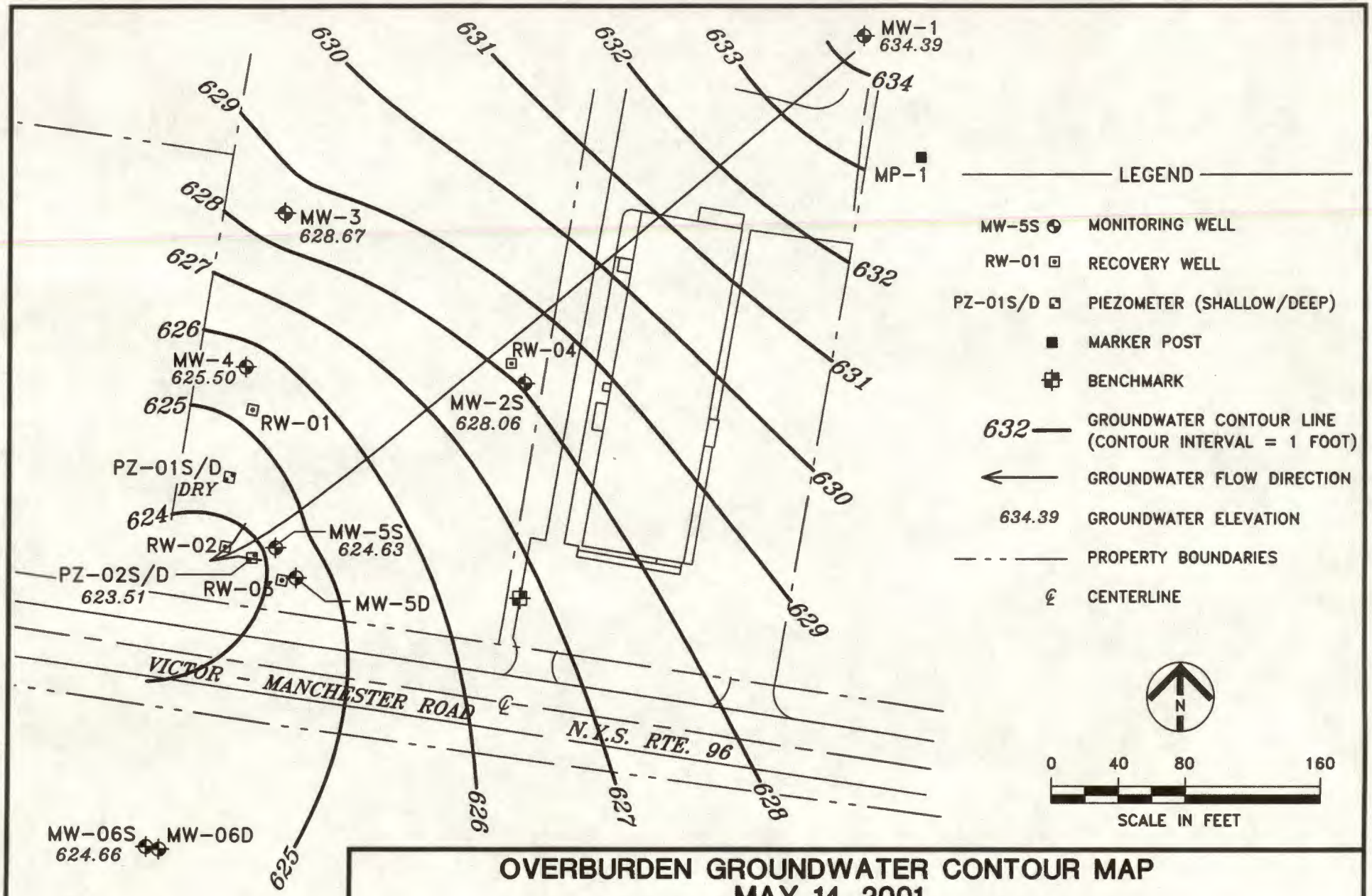
URS



OVERBURDEN GROUNDWATER CONTOUR MAP
MAY 14, 2001
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: TBC	CHECKED BY: CAP	PROJECT NUMBER: 6E06191	DATE: 7/11/01	FIGURE NO: 3-2

S025NW01_PROJ3.Cleveland Q:\Diebold\6E06191\2001\S1\OVBmay14.DWG

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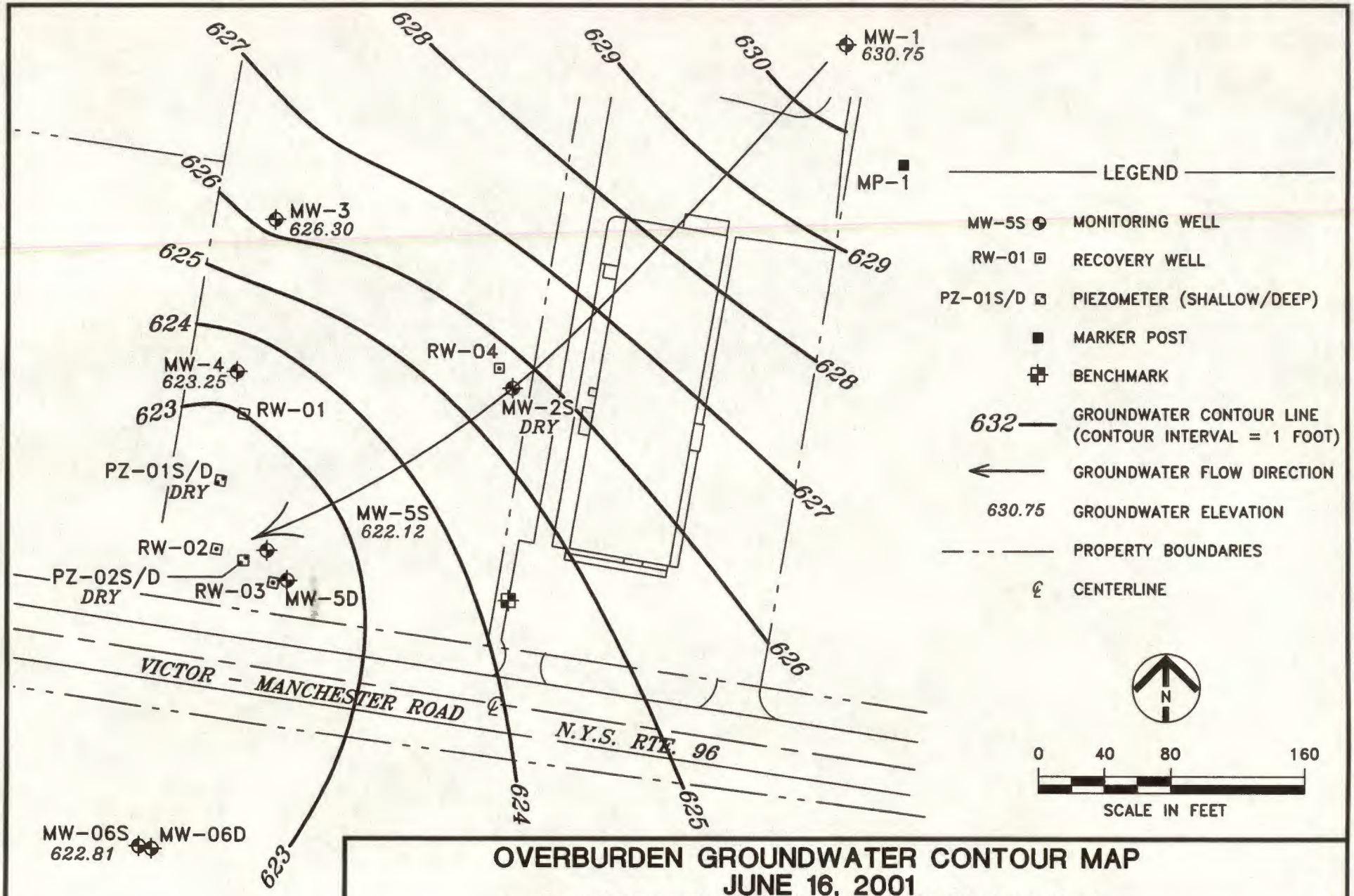

OVERBURDEN GROUNDWATER CONTOUR MAP
JUNE 16, 2001
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: TBC	CHECKED BY: CAP	PROJECT NUMBER: 6E06191	DATE: 7/11/01	FIGURE NO: 3-3

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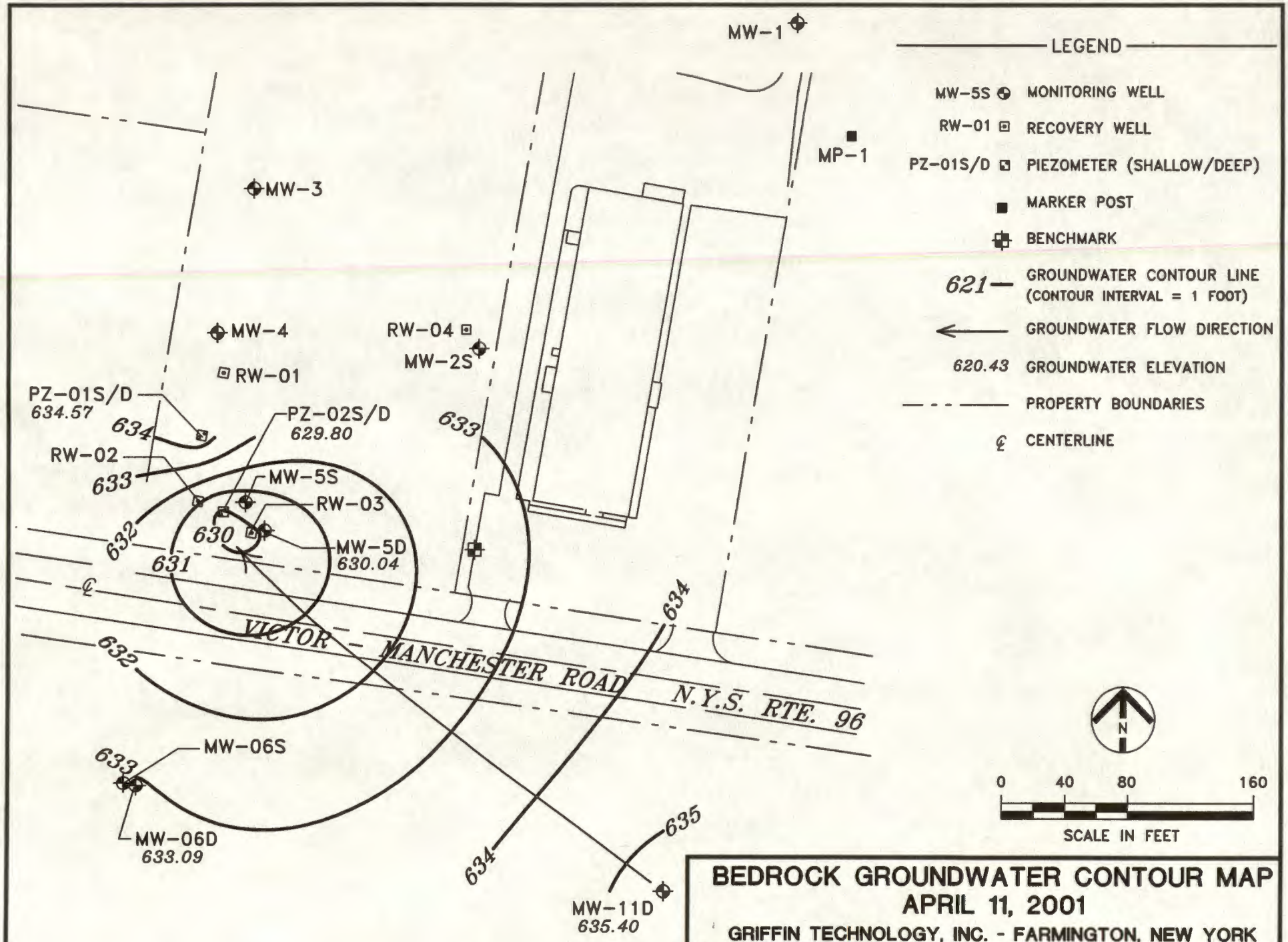

BEDROCK GROUNDWATER CONTOUR MAP
APRIL 11, 2001
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: TBC	PROJECT NUMBER: 6E06191	
CHECKED BY: CAP	DATE: 7/11/01	FIGURE NO: 3-4

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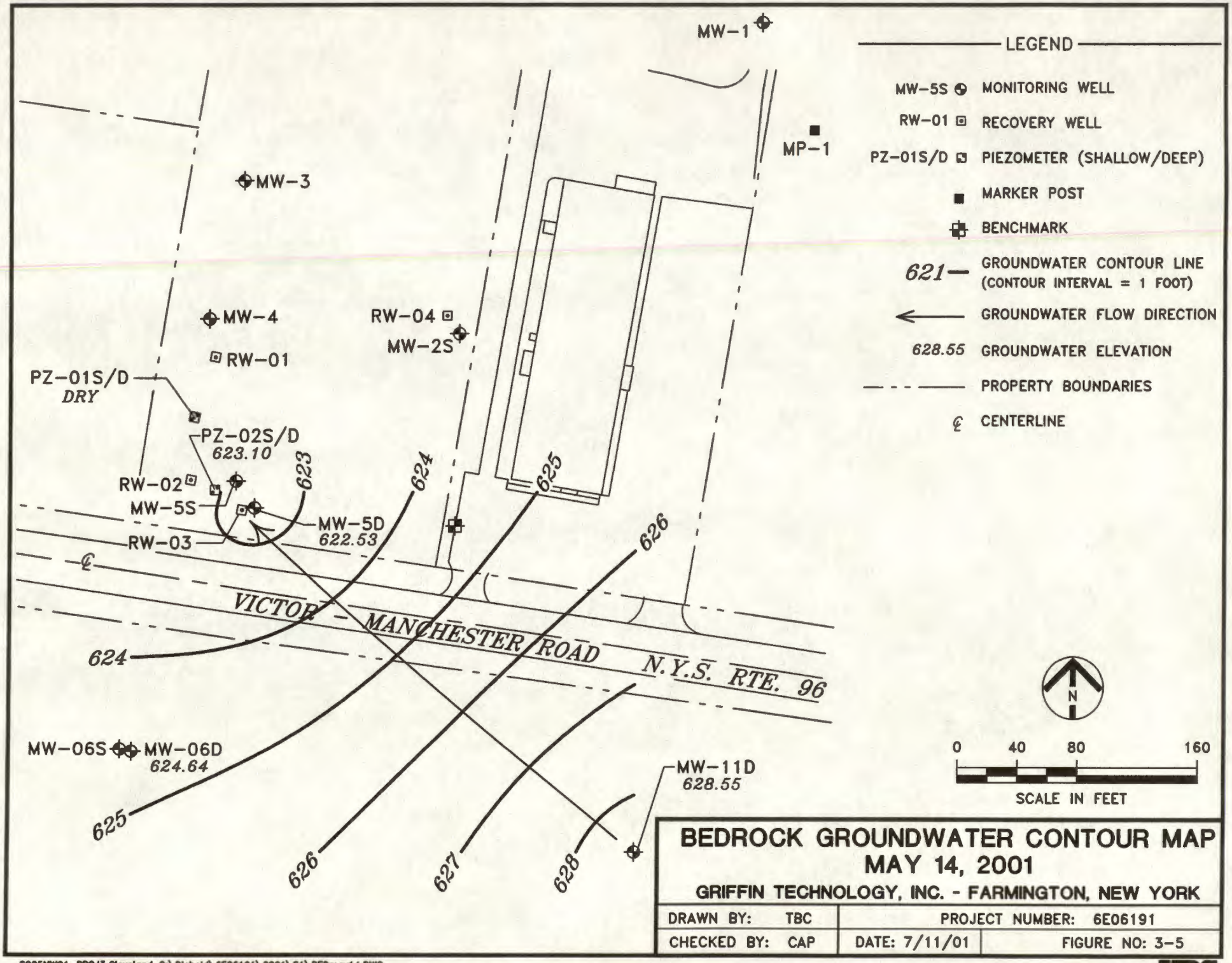

BEDROCK GROUNDWATER CONTOUR MAP
MAY 14, 2001
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: TBC	PROJECT NUMBER: 6E06191	
CHECKED BY: CAP	DATE: 7/11/01	FIGURE NO: 3-5

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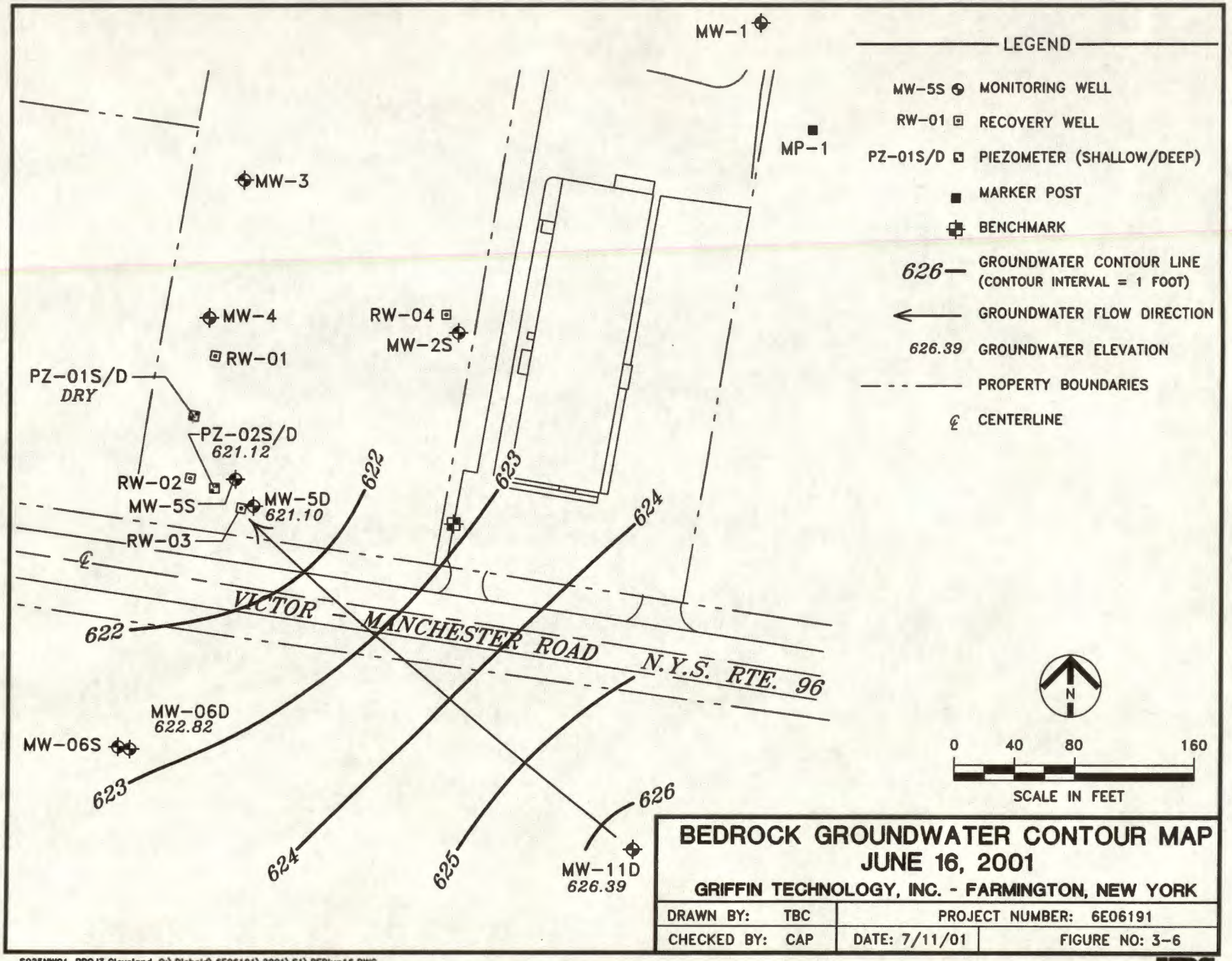
URS



BEDROCK GROUNDWATER CONTOUR MAP
JUNE 16, 2001
GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK

DRAWN BY: TBC	PROJECT NUMBER: 6E06191	
CHECKED BY: CAP	DATE: 7/11/01	FIGURE NO: 3-6

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URS

Appendix A

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

RECEIVED
MAY 21 2001
URS

May 2, 2001

Mr. Ken Armstrong
URS Corporation
623 West St. Clair Ave
Cleveland, OH 44143

PROJECT:GRIFFIN IRM
Submission #:R2106547

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.

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

Columbia Analytical Services Inc.
1 Mustard ST.
Suite 250
Rochester, NY 14609

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM
Lab Submission # : R2106547
Reported : 05/02/01

Report Contains a total of 7 pages

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

Columbia Analytical Services, Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2106547

Lab ID	Client ID
454628	EFF-4-11-01

All samples were received in good condition.

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

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

Columbia Analytical Services inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

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

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

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

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

E - This flag identifies compounds whose concentrations exceed the calibration range.

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

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

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

- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

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

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

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

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 05/02/01

URS Corporation
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-4-11-01

Date Sampled : 04/11/01 **Order #:** 454628 **Sample Matrix:** WATER
Date Received: 04/12/01 **Submission #:** R2106547 **Analytical Run** 63503

DATE ANALYZED : 04/17/01
ANALYTICAL DILUTION: 2.00

ANALYTE	PQL	RESULT	UNITS
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	210	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 %)	103	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	109	%

COLUMBIA ANALYTICAL SERVICES

VOLATI ORGANICS
METHOD 8260B TCL
Reported: 05/02/01

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 458522 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 63503

DATE ANALYZED : 04/17/01
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 %)	101	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	106	%

Columbia Analytical Services, Inc.
An Employee-Owned Company
www.caslab.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (716) 288-5380 • 800-695-7222 x11 • FAX (716) 288-8475 PAGE 1 OF 1

S[redacted]
CAS Contact

Project Name: Griffin IRM	Project Number: 3806E06191.03
Project Manager: Ken Armstrong	Report CC:
Company/Address: 634 St. Clair Cleveland, Ohio 44113	
Phone #: (216)622-2400	FAX#: (216)241-7083
Sampler's Signature: Robert Fabian	Sampler's Printed Name: ROBERT FABIAN

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

NUMBER OF CONTAINERS

- GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP
- GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP
- GC VOA's ☐ 8021 ☐ 601/602
- PESTICIDES/ PCB's ☐ 8081 ☐ 608 ☐ CLP ☐ 8082
- 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 in comments below)
- METALS, DISSOLVED (List in comments below)
- 4240
- 1

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX															
EFF-4-11-01		4-11-01	11:15	WATER	2										X				

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ **RUSH** (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
_____ **STANDARD**
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Speicalized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
22/6547
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 12 CUSTODY SEALS: Y (N)

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Bob Fabian			Client		
Signature: Bob Fabian	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: URS	Printed Name: CAS	Printed Name: CAS	Printed Name:	Printed Name:	Printed Name:
Firm:	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 4-11-01 11:55	Date/Time: 4/11/01 1153	Date/Time: 4/11/01 1153	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-0101-08

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Check Form

Project/Client WCC4 Submission Number 6547

Cooler received on 4/11/07 by: MC COURIER: CAS UPS FEDEX CD&L (CLIENT)

1.	Were custody seals on outside of cooler?	YES (NO)
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES) NO
3.	Did all bottles arrive in good condition (unbroken)?	(YES) NO
4.	Did any VOA vials have significant air bubbles?	YES (NO) N/A
5.	Were Ice or Ice packs present? Yhr. Rule	(YES) NO
6.	Where did the bottles originate?	(CAS/ROC), CLIENT
7.	Temperature of cooler(s) upon receipt: 12	

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

Date/Time Temperatures Taken: 4/4/07 1155

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

If out of Temperature, Client Approval to Run Samples_____

Cooler Breakdown: Date: 4/13/07 by: BC

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES) NO
2.	Did all bottle labels and tags agree with custody papers?	(YES) NO
3.	Were correct containers used for the tests indicated?	(YES) NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated	(N/A)

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
Residual Chlorine (+/-)	for TCN & Phenol					
5-9*	P/PCBs (608 only)					

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

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

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

Other Comments:

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

June 4, 2001

Mr. Ken Armstrong
URS Corporation
623 West St. Clair Ave
Cleveland, OH 44143

PROJECT:GRIFFIN IRM
Submission #:R2106937

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.

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

Columbia Analytical Services, Inc.

1 Mustard ST.
Suite 250
Rochester, NY 14609

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM
Lab Submission # : R2106937
Reported : 06/04/01

Report Contains a total of 7 pages

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

01

Columbia Analytical Services, Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2106937

Lab ID	Client ID
463190	EFF-5-14-01

All samples were received in good condition.

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

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

Columbia Analytical Services, Inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

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

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

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

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

E - This flag identifies compounds whose concentrations exceed the calibration range.

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

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

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

- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

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

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

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

COLUMBIA ANALYTICAL SERVICES

VOLATI ORGANICS
METHOD 8260B TCL
Reported: 06/04/01

URS Corporation
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-5-14-01

Date Sampled : 05/14/01 **Order #:** 463190 **Sample Matrix:** WATER
Date Received: 05/14/01 **Submission #:** R2106937 **Analytical Run** 65027

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/23/01			
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	390	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 %)	101	%
TOLUENE-D8	(88 - 110 %)	104	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATI ORGANICS
METHOD 8260B TCL
Reported: 06/04/01

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 467955 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 65027

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/23/01			
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 %)	100	%
TOLUENE-D8	(88 - 110 %)	102	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

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

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE 5-14-01 PAGE 1 OF 1

PROJECT NAME Griffin IRM
PROJECT MANAGER/CONTACT Ken Armstrong
COMPANY/ADDRESS 634 St. Clair
Cleveland, Ohio 44113
TEL (216) 622-2400 FAX (216) 241-3083
SAMPLER'S SIGNATURE Bob Fabian

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ 95-1	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	8240							PRESERVATION pH < 2.0	PRESERVATION H > 12	PRESERVATION Other
EFF-5-14-01	5-14-01	13:20	163190	WATER	2											X									

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm URS
Date/Time 5-14-01 13:55

RECEIVED BY:
Signature
Printed Name
Firm CAS
Date/Time 5/14/01 1355

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: 2
Submission No: 21/6937

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

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Che Form

Project/Client WCCH Submission Number R2-6937

Cooler received on 5/14/07 by: [illegible] COURIER: CAS UPS FEDEX CD&L CLIENT

1.	Were custody seals on outside of cooler?	YES (NO)
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES) NO
3.	Did all bottles arrive in good condition (unbroken)?	(YES) NO
4.	Did any VOA vials have significant air bubbles?	YES (NO) N/A
5.	Were **Ice** or **Ice packs** present?	(YES) NO
6.	Where did the bottles originate?	(CAS/ROC), CLIENT
7.	Temperature of cooler(s) upon receipt:	2

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

Date/Time Temperatures Taken: 5/14/07 1357

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

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 5-15-01 by: HE

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES) NO
2.	Did all bottle labels and tags agree with custody papers?	(YES) NO
3.	Were correct containers used for the tests indicated?	(YES) NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated	(N/A)

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
Residual Chlorine (+/-)	for TCN & Phenol					
5-9*	P/PCBs (608 only)					

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

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

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

Other Comments:

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

RECEIVED
JUL 17 2001
URS

July 10, 2001

Mr. Ken Armstrong
URS Corporation
623 West St. Clair Ave
Cleveland, OH 44143

PROJECT:GRIFFIN IRM
Submission #:R2107373

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.

Columbia Analytical Services Inc.

1 Mustard ST.
Suite 250
Rochester, NY 14609

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM
Lab Submission # : R2107373
Reported : 07/10/01

Report Contains a total of 7 pages

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. 7/11/01

Columbia Analytical Services, Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2107373

Lab ID	Client ID
471600	EFF-6-16-01

All samples were received in good condition.

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

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

Columbia Analytical Services Inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

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

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

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

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

E - This flag identifies compounds whose concentrations exceed the calibration range.

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

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

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

- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

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

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

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

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 07/10/01

URS Corporation
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-6-16-01

Date Sampled : 06/16/01 **Order #:** 471600 **Sample Matrix:** WATER
Date Received: 06/16/01 **Submission #:** R2107373 **Analytical Run** 66373

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/01			
ANALYTICAL DILUTION: 2.00			
ACETONE	20	40 U	UG/L
BENZENE	5.0	10 U	UG/L
BROMODICHLOROMETHANE	5.0	10 U	UG/L
BROMOFORM	5.0	10 U	UG/L
BROMOMETHANE	5.0	10 U	UG/L
2-BUTANONE (MEK)	10	20 U	UG/L
CARBON DISULFIDE	10	20 U	UG/L
CARBON TETRACHLORIDE	5.0	10 U	UG/L
CHLOROBENZENE	5.0	10 U	UG/L
CHLOROETHANE	5.0	10 U	UG/L
CHLOROFORM	5.0	10 U	UG/L
CHLOROMETHANE	5.0	10 U	UG/L
DIBROMOCHLOROMETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHANE	5.0	10 U	UG/L
1,2-DICHLOROETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHENE	5.0	10 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/L
1,2-DICHLOROPROPANE	5.0	10 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
ETHYLBENZENE	5.0	10 U	UG/L
2-HEXANONE	10	20 U	UG/L
METHYLENE CHLORIDE	5.0	10 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/L
STYRENE	5.0	10 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/L
TETRACHLOROETHENE	5.0	10 U	UG/L
TOLUENE	5.0	10 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	10	UG/L
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/L
TRICHLOROETHENE	5.0	380	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 %)	104	%
TOLUENE-D8	(88 - 110 %)	102	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	99	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 07/10/01

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 476997 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 66373

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/01			
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 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	98	%

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

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FO

DATE 6-16-01 PAGE 1 OF 1

PROJECT NAME Griffin IRM

PROJECT MANAGER/CONTACT Ken Armstrong

COMPANY/ADDRESS 30775 Bainbridge Rd
Solon, Ohio

TEL ( ) FAX ( )

SAMPLER'S SIGNATURE Bob Fabian

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ 95-1	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	8240							PRESERVATI pH < 2.0	pH > 12	Other
EFF-6-16-01	6-16-01	10:05		WATER	2																				

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm URS
Date/Time 6-16-01 10:35

RECEIVED BY:
Signature Mark Gaydos
Printed Name Mark Gaydos
Firm CAS
Date/Time 6/16/01 1035

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: 11
Submission No: R4/7373

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

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Check Form

Project/Client WCC4 Submission Number 7373

Cooler received on 6/16/01 by: [illegible] COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES / NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant air bubbles? YES NO N/A
5. Were **Ice** or **Ice packs** present? YES NO
6. Where did the bottles originate? CAS/ROC, CLIENT
7. Temperature of cooler(s) upon receipt: 11

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

Date/Time Temperatures Taken: 6/16/01 1040

Thermometer ID: _____ Temp Blank Sample Bottle Cooler Temp. IR Gun

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 6/18/01 by: [illegible]

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO_3					
2	H_2SO_4					
Residual Chlorine (+/-)	for TCN & Phenol					
5-9*	P/PCBs (608 only)					

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

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

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

Other Comments:

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