FINAL REPORT

INTERIM REMEDIAL MEASURE PROGRAM

2003 ANNUAL PROGRESS REPORT
SEPTEMBER 2002 – AUGUST 2003

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

Prepared for
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INTERIM REMEDIAL MEASURE 2003 ANNUAL PROGRESS REPORT

GRIFFIN TECHNOLOGY, INC. FACILITY

TOWN OF FARMINGTON

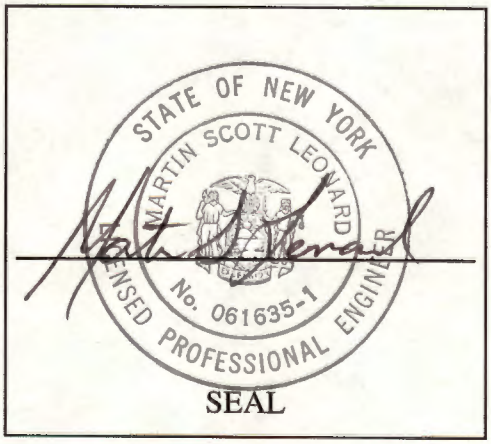
ONTARIO COUNTY, NEW YORK

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

Name: Martin S. Leonard, P.E.

Title: Consulting Professional Engineer

Date: October 7, 2003



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This report presents information collected by URS Corporation (URS) between September 2002 and August 2003 during the operation of the Interim Remedial Measure (IRM) system at the Griffin Technology, Inc. (GTI) site located at 6132 Victor-Manchester Road in Farmington, Ontario County, New York. A general location map is included as Figure 1-1.

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

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

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

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

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.

Activities performed during the period from September 2002 through August 2003 are described in Section 2.0. Information collected during this period of operation is presented in Section 3.0. Conclusions are presented in Section 4.0.

The Scope of Work for the IRM was presented in the *Final Design Document*, which was issued to the NYSDEC on September 27, 1996. Implementation of the IRM included the following historic activities:

- Installing the IRM system in the undeveloped parcel of land located downgradient of the source area. The original IRM system consisted of installing three groundwater extraction wells (RW-1 through RW-3), one bedrock monitoring well located in the source area which could potentially be used for additional recovery, two sets of nested piezometers located between each of the three extraction wells to monitor groundwater elevations between each well, a groundwater recovery and collection system to convey water to a central access vault, electrical power supply and controllers for each recovery pump, sample collection and flow monitoring appurtenances, and a force main to discharge the combined effluent of all three wells from the access vault to a sanitary sewer located on the southeast portion of the site.
- Converting the deep bedrock monitoring well into a fourth recovery well (RW-4).
- Installing a new sewer main crossing to provide sanitary sewer service to the undeveloped western parcel.
- Monitoring the quantity and quality of effluent discharged from the system monthly and reporting this data to the local POTW.
- Monitoring the groundwater elevations in all on-site wells and piezometers on a monthly basis to evaluate the effectiveness of the IRM as a groundwater extraction system and hydraulic barrier.
- Collecting groundwater samples from all wells located on and off site semi-annually for a period of four years, beginning six months after initiation of the system. Analyzing the groundwater samples collected during these semi-annual activities for volatile organic compounds (VOCs) by NYSDEC Test Method ASP 91-1 (now referenced as NYSDEC Test Method ASP 95-1). After four years, the frequency of monitoring well sampling was reduced to annual.
- Preparing progress reports for submission to the NYSDEC. The reports include data collected during the preceding months of operation as well as information and activities to be performed during subsequent reporting periods.

During the period from September 2002 through August 2003, URS completed the following:

- Collected water level data from on-site wells and composite effluent samples on a monthly basis;
- Performed a comprehensive groundwater monitoring event in June 2003; and,
- Evaluated system maintenance requirements.

2.1 IRM SYSTEM

The IRM installation activities were performed during December 1996 and January 1997. Operation of the IRM system was initiated on February 18, 1997. In June 1999, an additional recovery well was added to the system. In April 2000, a new sanitary sewer tie-in was connected to the system.

The layout of the IRM system, on-site groundwater monitoring wells and piezometers, and other pertinent features discussed in this report are shown in Figure 2-1. The system remains in operation. Components of the IRM system are discussed below.

2.1.1 IRM System Configuration

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

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

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

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

The extracted groundwater flows from the manifold and header in the central access vault through a force main pipe and into a sanitary sewer where it travels by gravity to the Canandaigua-Farmington Water and Sewer District for treatment. Prior to system start-up, the Canandaigua-Farmington Water and Sewer District received permission from the NYSDEC to receive this wastewater.

Between December 1999 and March 2000, a new sanitary sewer main crossing was installed beneath Victor-Manchester Road to provide separate service to the IRM system. On April 7, 2000, the recovery system discharge was disconnected from the sanitary sewer on the central parcel of the GTI site (where the former GTI building is located). The recovery system discharge was then connected to the new sanitary sewer main crossing at the clean-out on the western parcel.

2.2 IRM SYSTEM MONITORING

During the period from September 2002 through August 2003, groundwater elevation, discharge volume, and groundwater analytical data were collected to monitor the effectiveness of the IRM system. The data collected are discussed in the following subsections.

2.2.1 Hydraulic Head Measurement

Hydraulic head (groundwater elevation) measurements were collected from each groundwater well and piezometer located on-site a minimum of once per month during routine site visits. During some visits, hydraulic head measurements were also collected from nearby off-site monitoring wells MW-6S and MW-6D. On June 18, 2003, prior to the collection of groundwater samples, the water level in each on-site and off-site groundwater monitoring well was measured and recorded to evaluate groundwater flow conditions. All groundwater measurements were collected using an electronic water level indicator capable of measuring the water elevation to the nearest 0.01-foot.

2.2.2 Groundwater Sampling and Analysis

Composite effluent samples were collected monthly from the common header discharge in the central access vault. The recovery wells were typically shut down for approximately one hour while water level data were collected from the on-site monitoring wells. In order to collect the composite effluent sample, all recovery wells were restarted, such that the sample included a contribution from each well. These samples were submitted to Columbia Analytical Services, Inc. (CASI) of Rochester, New York for analysis of volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) method 8260. The analytical results of these composite samples were used to report estimated loadings to the POTW.

On June 18, 2003, groundwater samples were collected from on-site and off-site monitoring wells and the recovery well system to evaluate regional groundwater quality. Offsite well MW-13D was covered by a paved driveway and was not able to be sampled during the June 2003 event. Prior to sample collection, the static water level in each well was measured. Using these measurements, the volume of water contained in each well was calculated. The monitoring well was then purged of a minimum of three well volumes of water or until dry using a new, disposable, high-density polyethylene (HDPE) bailer equipped with a nylon cord. Groundwater samples were collected within 24 hours of purging from each groundwater monitoring well. Samples were transferred from the bailers to laboratory supplied containers. In addition, a composite groundwater sample was collected from the recovery well system. This sample was collected directly from the sample port on the pump discharge line and transferred to laboratory supplied containers.

Samples were placed into a cooler with ice for preservation until delivered to the laboratory for analysis. One duplicate sample was collected from monitoring well MW-3. Groundwater samples were submitted to CASI and analyzed for VOCs by NYSDEC Test Method ASP 95-1. Chain-of-custody procedures were followed throughout the sampling event.

Data collected during the previous 12 month period of IRM system operation (September 2002 through August 2003) and results of the June 2003 groundwater sampling event are presented in the following subsections.

3.1 HYDRAULIC HEAD MEASUREMENT RESULTS

Hydraulic head measurements collected from on-site and off-site groundwater monitoring wells and piezometers are presented in Table 3-1. Monthly water levels were collected from the onsite monitoring wells; however, MW-7S/D, MW-9S/D and MW-10S/D were only measured during the June annual event.

The elevation data were used to construct groundwater contour maps for 2 to 3 month intervals in both the overburden (Figures 3-1 through 3-5) and bedrock (Figures 3-6 through 3-10) water-bearing zones. Figures 3-4 and 3-9 illustrate groundwater flow conditions in the vicinity of the site in the overburden and bedrock water-bearing zones, respectively, as measured during the annual monitoring event on June 18, 2003.

Measurements collected during the annual event provide a more comprehensive understanding of groundwater flow patterns in the vicinity of the Site. Overburden measurements collected during the annual event, shown on Figure 3-4, indicate that groundwater flow in the overburden water-bearing zone is typically to the south-southwest and may ultimately discharge to Beaver Creek. Annual event measurements also indicated that groundwater flow is to the west-northwest in the bedrock water-bearing zone, as shown on Figure 3-9. The monthly onsite elevation data indicate a groundwater low surrounding the recovery system in both the overburden and bedrock zones, though the low is more pronounced in the bedrock water-bearing zone. In general, it appears that the system has exerted the greatest influence on flow patterns in the shallow and deep nested well pairs located closest to the system. On-site water level data from nested pairs outside the zone of influence of the extraction system (PZ-1S/D and PZ-2S/D) indicate the bedrock groundwater elevations are within 0 to 2 feet of the shallow zone. Off-site groundwater elevations levels in the MW-6S/D well pair are essentially equal indicating hydraulic connection between the two monitoring zones. Further offsite, at the MW-7S/D and MW-9S/D well pair locations, groundwater elevations in the overburden and bedrock zones are separated by more than 20 feet and clearly monitor distinct water-bearing zones.

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

3.2 EFFLUENT OPERATING DATA AND ANALYTICAL RESULTS

A summary of the historical IRM system operating data and effluent analysis is presented in Table 3-2. The monthly effluent samples were composite samples collected from the four recovery wells, RW-1 through RW-4. The effluent results continue to indicate that groundwater, containing chemicals of concern (COCs), is being removed from underneath the GTI site. The only COC detected in the effluent samples was trichloroethene (TCE). An overall decreasing trend is evident in TCE effluent concentrations. Prior to September 2002, 1,1,1-trichloroethane (1,1,1-TCA) was also detected; however, 1,1,1-TCA was not detected during the June 2003

monitoring event. Laboratory data sheets for effluent samples collected during this period of operation are provided in Appendix A.

The volume of water extracted by the system, as measured by the flow totalizer, decreased during the summer and fall months (September-October 2002 and July-August 2003) of this operating period. This appears to be related to lower seasonal groundwater elevations during later summer and fall and is similar to conditions observed during previous years.

3.3 GROUNDWATER ANALYTICAL RESULTS

A summary of groundwater analytical data for the monitoring wells sampled on June 18, 2003 and on previous sampling dates is presented in Table 3-3. The laboratory data sheets are provided in Appendix B. A data validation report for this data, prepared by a URS QA/QC reviewer, is provided in Appendix C. Results of the validation indicate that the data are acceptable.

Groundwater analytical results for the June 2003 samples indicated concentrations of COCs similar to the previous (May 2002) sampling event. The COCs detected in groundwater samples collected during June 2003 consist of TCE, 1,1,1-TCA, carbon disulfide, cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride. TCE was consistently reported at the highest concentration, with concentrations ranging from 4 to 130 micrograms per liter (µg/l). The COCs detected are consistent with the results of earlier sampling events, with the exception of carbon disulfide, which was detected at a low concentration of 4 µg/l. Vinyl chloride was only detected in the sample from MW-7D, at a concentration of 2 µg/l.

Based on analytical results from the nested pairs in closest proximity to the recovery system, the recovery system appears to be most effective at removing contaminants from the overburden zone in the wells closest to the system. Bedrock contaminants are also being influenced by the recovery system, but to a lesser extent than the shallow zone. This occurrence may be attributed to the three recovery wells based in the shallow zone, while only one of the four recovery wells is in the bedrock zone.

3.4 SYSTEM MAINTENANCE

The recovery system is relatively simple, with the ultimate treatment provided by the local POTW. System maintenance activities continued during this reporting period, similar to previous years. No significant system repairs were made during this time. The most common maintenance activity during the past year included changing the light bulb outside the control shed during several of the routine monthly site visits. A brass fitting on recovery well RW-4 was observed to have a small leak in March 2003. The fitting was subsequently replaced.

Based on the information collected during the 12-month period from September 2002 through August 2003, the following summary has been developed regarding environmental conditions at the GTI site:

- Groundwater flow in the overburden beneath the site is primarily to the south-southwest. In the bedrock, groundwater typically flows to the west-northwest. These flow patterns are consistent with previous observations made at the GTI site.
- The IRM system continues to influence groundwater flow patterns in the vicinity of the GTI facility. The groundwater elevation data generally indicate the presence of a groundwater low in the bedrock water-bearing zone in the immediate vicinity of the IRM system, indicating an apparent radius of influence surrounding the recovery well system.
- The monthly quantity of groundwater removed by the IRM system decreased during the late summer and fall months, consistent with previous years. The quantity of groundwater discharged by the system appears to correlate with seasonal changes in groundwater elevations, with lower discharge and groundwater elevations in late summer, fall, and early winter and higher discharge and groundwater elevations in late winter, spring, and early summer.
- The concentrations of COCs in the IRM system effluent have generally decreased throughout the operating period. Concentrations remain slightly lower than historical levels. TCE was the only COC reported in the IRM system effluent.
- Observations made over the previous 5 years indicate that the existing IRM system is effectively controlling off-site migration of COCs beneath the property and removing COCs from groundwater.

Tables

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-01	641.79	10/19/01	14.78	627.01
		11/04/01	14.99	626.80
		11/21/01	15.83	625.96
		12/03/01	12.11	629.68
		12/14/01	13.20	628.59
		1/3/2002	10.29	631.50
		1/16/2002	10.51	631.28
		2/1/2002	5.92	635.87
		2/13/2002	4.62	637.17
		2/25/2002	5.01	636.78
		3/11/2002	5.54	636.25
		3/26/2002	5.48	636.31
		4/13/2002	4.70	637.09
		4/27/2002	5.10	636.69
		5/23/2002	4.03	637.76
		6/5/2002	3.83	637.96
		6/14/2002	4.90	636.89
		7/1/2002	6.55	635.24
		7/15/2002	10.57	631.22
		7/29/2002	11.28	630.51
		8/15/2002	13.32	628.47
		9/4/2002	14.99	626.80
		9/20/2002	15.76	626.03
		10/2/2002	14.60	627.19
		10/14/2002	15.24	626.55
		10/25/2002	14.37	627.42
		11/11/2002	14.16	627.63
		11/26/2002	10.78	631.01
		12/19/2002	6.09	635.70
		1/3/2003	4.83	636.96
		1/20/2003	5.68	636.11
		1/31/2003	6.69	635.10
		2/12/2003	5.50	636.29
		2/25/2003	4.85	636.94
		3/14/2003	4.81	636.98
		3/31/2003	3.64	638.15
		4/17/2003	4.87	636.92
		5/1/2003	5.68	636.11
		5/15/2003	4.84	636.95
		6/1/2003	5.21	636.58
		6/18/2003	5.70	636.09
		7/1/2003	6.01	635.78
		7/14/2003	10.98	630.81
		8/1/2003	10.37	631.42
		8/15/2003	9.75	632.04

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-02S	641.28	10/19/01	DRY	DRY
		11/04/01	DRY	DRY
		11/21/01	DRY	DRY
		12/03/01	DRY	DRY
		12/14/01	DRY	DRY
		1/3/2002	DRY	DRY
		1/16/2002	DRY	DRY
		2/1/2002	11.50	629.78
		2/13/2002	7.84	633.44
		2/25/2002	7.98	633.30
		3/11/2002	8.86	632.42
		3/26/2002	8.68	632.60
		4/13/2002	7.61	633.67
		4/27/2002	7.98	633.30
		5/23/2002	6.82	634.46
		6/5/2002	6.13	635.15
		6/14/2002	7.69	633.59
		7/1/2002	11.48	629.80
		7/15/2002	15.63	625.65
		7/29/2002	DRY	DRY
		8/15/2002	DRY	DRY
		9/4/2002	DRY	DRY
		9/20/2002	DRY	DRY
		10/2/2002	DRY	DRY
		10/14/2002	DRY	DRY
		10/25/2002	DRY	DRY
		11/11/2002	DRY	DRY
		11/26/2002	DRY	DRY
		12/19/2002	13.53	627.75
		1/3/2003	8.55	632.73
		1/20/2003	8.95	632.33
		1/31/2003	13.78	627.50
		2/13/2003	8.75	632.53
		2/25/2003	7.82	633.46
		3/14/2003	7.92	633.36
		3/31/2003	5.74	635.54
		4/17/2003	7.12	634.16
		5/1/2003	7.73	633.55
		5/15/2003	7.78	633.50
		6/1/2003	7.12	634.16
		6/18/2003	8.81	632.47
		7/1/2003	9.27	632.01
		7/14/2003	15.99	625.29
		8/1/2003	14.65	626.63
		8/15/2003	12.77	628.51

NOTES
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SUMMARY OF GROUNDWATER ELEVATIONS
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GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-2D	642.37	Monitoring well converted to recovery well RW-4.		
MW-03	642.17	10/19/01	18.58	623.59
		11/04/01	18.98	623.19
		11/21/01	19.92	622.25
		12/03/01	17.24	624.93
		12/14/01	17.52	624.65
		1/3/2002	14.60	627.57
		1/16/2002	15.00	627.17
		2/1/2002	9.29	632.88
		2/13/2002	6.45	635.72
		2/25/2002	7.14	635.03
		3/11/2002	8.70	633.47
		3/26/2002	8.19	633.98
		4/13/2002	7.12	635.05
		4/27/2002	8.51	633.66
		5/23/2002	6.48	635.69
		6/5/2002	6.28	635.89
		6/14/2002	7.74	634.43
		7/1/2002	10.71	631.46
		7/15/2002	14.57	627.60
		7/29/2002	15.69	626.48
		8/15/2002	17.28	624.89
		9/4/2002	18.58	623.59
		9/20/2002	18.88	623.29
		10/2/2002	17.71	624.46
		10/14/2002	18.89	623.28
		10/25/2002	18.00	624.17
		11/11/2002	18.16	624.01
		11/26/2002	15.05	627.12
		12/19/2002	8.31	633.86
		1/3/2003	6.42	635.75
		1/20/2003	8.11	634.06
		1/31/2003	11.72	630.45
		2/13/2003	8.09	634.08
		2/25/2003	6.86	635.31
		3/14/2003	6.93	635.24
		3/31/2003	5.61	636.56
		4/17/2003	6.48	635.69
		5/1/2003	6.21	635.96
		5/15/2003	8.22	633.95
		6/1/2003	7.89	634.28
		6/18/2003	9.41	632.76
		7/1/2003	9.89	632.28
		7/14/2003	15.50	626.67
		8/1/2003	14.99	627.18
		8/15/2003	12.84	629.33

NOTES
NM indicates water elevation not measured.
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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-04	641.75	10/19/01	19.55	622.20
		11/04/01	19.19	622.56
		11/21/01	DRY	DRY
		12/03/01	19.13	622.62
		12/14/01	19.57	622.18
		1/3/2002	18.96	622.79
		1/16/2002	19.25	622.50
		2/1/2002	13.61	628.14
		2/13/2002	10.13	631.62
		2/25/2002	9.55	632.20
		3/11/2002	11.56	630.19
		3/26/2002	12.43	629.32
		4/13/2002	9.70	632.05
		4/27/2002	10.91	630.84
		5/23/2002	8.38	633.37
		6/5/2002	7.22	634.53
		6/14/2002	8.50	633.25
		7/1/2002	12.06	629.69
		7/15/2002	16.51	625.24
		7/29/2002	16.93	624.82
		8/15/2002	18.62	623.13
		9/4/2002	19.38	622.37
		9/20/2002	19.34	622.41
		10/2/2002	18.60	623.15
		10/14/2002	19.54	622.21
		10/25/2002	18.40	623.35
		11/11/2002	19.27	622.48
		11/26/2002	17.51	624.24
		12/19/2002	13.40	628.35
		1/3/2003	10.39	631.36
		1/20/2003	11.21	630.54
		1/31/2003	16.07	625.68
		2/13/2003	12.46	629.29
		2/25/2003	10.69	631.06
		3/14/2003	10.59	631.16
		3/31/2003	7.01	634.74
		4/17/2003	7.81	633.94
		5/1/2003	8.01	633.74
		5/15/2003	9.56	632.19
		6/1/2003	NM	NM
		6/18/2003	11.74	630.01
		7/1/2003	12.21	629.54
		7/14/2003	16.94	624.81
		8/1/2003	15.87	625.88
		8/15/2003	13.87	627.88

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

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SUMMARY OF GROUNDWATER ELEVATIONS
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GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-05S	640.85	10/19/01	DRY	DRY
		11/04/01	DRY	DRY
		11/21/01	DRY	DRY
		12/03/01	DRY	DRY
		12/14/01	DRY	DRY
		1/3/2002	20.08	620.77
		1/16/2002	20.45	620.40
		2/1/2002	19.62	621.23
		2/13/2002	11.20	629.65
		2/25/2002	11.62	629.23
		3/11/2002	13.62	627.23
		3/26/2002	13.43	627.42
		4/13/2002	10.72	630.13
		4/27/2002	11.86	628.99
		5/23/2002	9.40	631.45
		6/5/2002	8.54	632.31
		6/14/2002	9.80	631.05
		7/1/2002	12.93	627.92
		7/15/2002	16.65	624.20
		7/29/2002	17.18	623.67
		8/15/2002	19.50	621.35
		9/4/2002	19.79	621.06
		9/20/2002	20.71	620.14
		10/2/2002	20.29	620.56
		10/14/2002	20.24	620.61
		10/25/2002	20.39	620.46
		11/11/2002	20.60	620.25
		11/26/2002	19.32	621.53
		12/19/2002	16.46	624.39
		1/3/2003	12.80	628.05
		1/20/2003	13.32	627.53
		1/31/2003	16.95	623.90
		2/13/2003	13.49	627.36
		2/25/2003	11.74	629.11
		3/14/2003	11.63	629.22
		3/31/2003	8.40	632.45
		4/17/2003	9.09	631.76
		5/1/2003	10.21	630.64
		5/15/2003	11.26	629.59
		6/1/2003	10.91	629.94
		6/18/2003	12.13	628.72
		7/1/2003	12.32	628.53
		7/14/2003	16.30	624.55
		8/1/2003	15.21	625.64
		8/15/2003	14.39	626.46

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-05D	641.01	10/19/01	22.41	618.60
		11/04/01	22.92	618.09
		11/21/01	23.05	617.96
		12/03/01	22.48	618.53
		12/14/01	22.52	618.49
		1/3/2002	21.58	619.43
		1/16/2002	21.40	619.61
		2/1/2002	20.65	620.36
		2/13/2002	13.49	627.52
		2/25/2002	16.32	624.69
		3/11/2002	15.33	625.68
		3/26/2002	16.91	624.10
		4/13/2002	12.75	628.26
		4/27/2002	16.39	624.62
		5/23/2002	14.91	626.10
		6/5/2002	14.41	626.60
		6/14/2002	12.18	628.83
		7/1/2002	16.99	624.02
		7/15/2002	18.22	622.79
		7/29/2002	19.60	621.41
		8/15/2002	20.70	620.31
		9/4/2002	21.72	619.29
		9/20/2002	22.16	618.85
		10/2/2002	22.07	618.94
		10/14/2002	22.00	619.01
		10/25/2002	22.07	618.94
		11/11/2002	21.98	619.03
		11/26/2002	21.21	619.80
		12/19/2002	18.09	622.92
		1/3/2003	16.75	624.26
		1/20/2003	17.14	623.87
		1/31/2003	19.03	621.98
		2/13/2003	13.54	627.47
		2/25/2003	16.32	624.69
		3/14/2003	13.98	627.03
		3/31/2003	14.26	626.75
		4/17/2003	14.88	626.13
		5/1/2003	15.67	625.34
		5/15/2003	15.95	625.06
		6/1/2003	16.01	625.00
		6/18/2003	16.64	624.37
		7/1/2003	17.84	623.17
		7/14/2003	19.76	621.25
		8/1/2003	18.35	622.66
		8/15/2003	16.99	624.02

NOTES
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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-06S	636.61	10/19/01	16.32	620.29
		11/04/01	NM	NM
		11/21/01	17.11	619.50
		12/03/01	NM	NM
		12/14/01	16.50	620.11
		1/3/2002	NM	NM
		1/16/2002	15.50	621.11
		2/1/2002	NM	NM
		2/13/2002	8.43	628.18
		2/25/2002	NM	NM
		3/11/2002	8.38	628.23
		3/26/2002	NM	NM
		4/13/2002	6.45	630.16
		4/27/2002	NM	NM
		5/23/2002	5.04	631.57
		6/5/2002	NM	NM
		6/14/2002	6.28	630.33
		7/1/2002	NM	NM
		7/15/2002	12.84	623.77
		7/29/2002	NM	NM
		8/15/2002	14.67	621.94
		9/4/2002	NM	NM
		9/20/2002	15.85	620.76
		10/2/2002	NM	NM
		10/14/2002	16.04	620.57
		10/25/2002	NM	NM
		11/11/2002	15.86	620.75
		11/26/2002	NM	NM
		12/19/2002	11.78	624.83
		1/3/2003	NM	NM
		1/20/2003	9.13	627.48
		1/31/2003	NM	NM
		2/13/2003	8.91	627.70
		2/25/2003	NM	NM
		3/14/2003	7.49	629.12
		3/31/2003	NM	NM
		4/17/2003	7.03	629.58
		5/1/2003	NM	NM
		5/15/2003	6.94	629.67
		6/1/2003	NM	NM
		6/18/2003	7.91	628.70
		7/1/2003	NM	NM
		7/14/2003	13.47	623.14
		8/1/2003	NM	NM
		8/15/2003	11.29	625.32

NOTES
NM indicates water elevation not measured.
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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-06D	636.83	10/19/01	16.61	620.22
		11/04/01	NM	NM
		11/21/01	17.35	619.48
		12/03/01	NM	NM
		12/14/01	16.72	620.11
		1/3/2002	NM	NM
		1/16/2002	15.76	621.07
		2/1/2002	NM	NM
		2/13/2002	8.60	628.23
		2/25/2002	NM	NM
		3/11/2002	8.53	628.30
		3/26/2002	NM	NM
		4/13/2002	6.63	630.20
		4/27/2002	NM	NM
		5/23/2002	5.21	631.62
		6/5/2002	NM	NM
		6/14/2002	6.24	630.59
		7/1/2002	NM	NM
		7/15/2002	13.03	623.80
		7/29/2002	NM	NM
		8/15/2002	14.91	621.92
		9/4/2002	NM	NM
		9/20/2002	16.10	620.73
		10/2/2002	NM	NM
		10/14/2002	16.31	620.52
		10/25/2002	NM	NM
		11/11/2002	16.13	620.70
		11/26/2002	NM	NM
		12/19/2002	11.93	624.90
		1/3/2003	NM	NM
		1/20/2003	9.36	627.47
		1/31/2003	NM	NM
		2/13/2003	9.15	627.68
		2/25/2003	NM	NM
		3/14/2003	7.69	629.14
		3/31/2003	NM	NM
		4/17/2003	8.21	628.62
		5/1/2003	NM	NM
		5/15/2003	7.25	629.58
		6/1/2003	NM	NM
		6/18/2003	8.09	628.74
		7/1/2003	NM	NM
		7/14/2003	13.70	623.13
		8/1/2003	NM	NM
		8/15/2003	11.70	625.13

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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-07S	634.29	10/19/01	NM	NM
		11/04/01	NM	NM
		11/21/01	NM	NM
		12/03/01	NM	NM
		12/14/01	NM	NM
		1/3/2002	NM	NM
		1/16/2002	NM	NM
		2/1/2002	NM	NM
		2/13/2002	NM	NM
		2/25/2002	NM	NM
		3/11/2002	NM	NM
		3/26/2002	NM	NM
		4/13/2002	NM	NM
		4/27/2002	NM	NM
		5/23/2002	5.54	628.75
		6/5/2002	NM	NM
		6/14/2002	NM	NM
		7/1/2002	NM	NM
		7/15/2002	NM	NM
		7/29/2002	NM	NM
		8/15/2002	NM	NM
		9/4/2002	NM	NM
		9/20/2002	NM	NM
		10/2/2002	NM	NM
		10/14/2002	NM	NM
		10/25/2002	NM	NM
		11/11/2002	NM	NM
		11/26/2002	NM	NM
		12/19/2002	NM	NM
		1/3/2003	NM	NM
		1/20/2003	NM	NM
		1/31/2003	NM	NM
		2/13/2003	NM	NM
		2/25/2003	NM	NM
		3/14/2003	NM	NM
		3/31/2003	NM	NM
		4/17/2003	NM	NM
		5/1/2003	NM	NM
		5/15/2003	NM	NM
		6/1/2003	NM	NM
		6/18/2003	7.90	626.39
		7/1/2003	NM	NM
		7/14/2003	NM	NM
		8/1/2003	NM	NM
		8/15/2003	NM	NM

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-07D	634.16	10/19/01	NM	NM
		11/04/01	NM	NM
		11/21/01	NM	NM
		12/03/01	NM	NM
		12/14/01	NM	NM
		1/3/2002	NM	NM
		1/16/2002	NM	NM
		2/1/2002	NM	NM
		2/13/2002	NM	NM
		2/25/2002	NM	NM
		3/11/2002	NM	NM
		3/26/2002	NM	NM
		4/13/2002	NM	NM
		4/27/2002	NM	NM
		5/23/2002	30.49	603.67
		6/5/2002	NM	NM
		6/14/2002	NM	NM
		7/1/2002	NM	NM
		7/15/2002	NM	NM
		7/29/2002	NM	NM
		8/15/2002	NM	NM
		9/4/2002	NM	NM
		9/20/2002	NM	NM
		10/2/2002	NM	NM
		10/14/2002	NM	NM
		10/25/2002	NM	NM
		11/11/2002	NM	NM
		11/26/2002	NM	NM
		12/19/2002	NM	NM
		1/3/2003	NM	NM
		1/20/2003	NM	NM
		1/31/2003	NM	NM
		2/13/2003	NM	NM
		2/25/2003	NM	NM
		3/14/2003	NM	NM
		3/31/2003	NM	NM
		4/17/2003	NM	NM
		5/1/2003	NM	NM
		5/15/2003	NM	NM
		6/1/2003	NM	NM
		6/18/2003	32.69	601.47
		7/1/2003	NM	NM
		7/14/2003	NM	NM
		8/1/2003	NM	NM
		8/15/2003	NM	NM

NOTES
NM indicates water elevation not measured.
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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-09S	630.16	10/19/01	NM	NM
		11/04/01	NM	NM
		11/21/01	NM	NM
		12/03/01	NM	NM
		12/14/01	NM	NM
		1/3/2002	NM	NM
		1/16/2002	NM	NM
		2/1/2002	NM	NM
		2/13/2002	NM	NM
		2/25/2002	NM	NM
		3/11/2002	NM	NM
		3/26/2002	NM	NM
		4/13/2002	NM	NM
		4/27/2002	NM	NM
		5/23/2002	8.54	621.62
		6/5/2002	NM	NM
		6/14/2002	NM	NM
		7/1/2002	NM	NM
		7/15/2002	NM	NM
		7/29/2002	NM	NM
		8/15/2002	NM	NM
		9/4/2002	NM	NM
		9/20/2002	NM	NM
		10/2/2002	NM	NM
		10/14/2002	NM	NM
		10/25/2002	NM	NM
		11/11/2002	NM	NM
		11/26/2002	NM	NM
		12/19/2002	NM	NM
		1/3/2003	NM	NM
		1/20/2003	NM	NM
		1/31/2003	NM	NM
		2/13/2003	NM	NM
		2/25/2003	NM	NM
		3/14/2003	NM	NM
		3/31/2003	NM	NM
		4/17/2003	NM	NM
		5/1/2003	NM	NM
		5/15/2003	NM	NM
		6/1/2003	NM	NM
		6/18/2003	9.95	620.21
		7/1/2003	NM	NM
		7/14/2003	NM	NM
		8/1/2003	NM	NM
		8/15/2003	NM	NM

NOTES
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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-09D	630.29	10/19/01	NM	NM
		11/04/01	NM	NM
		11/21/01	NM	NM
		12/03/01	NM	NM
		12/14/01	NM	NM
		1/3/2002	NM	NM
		1/16/2002	NM	NM
		2/1/2002	NM	NM
		2/13/2002	NM	NM
		2/25/2002	NM	NM
		3/11/2002	NM	NM
		3/26/2002	NM	NM
		4/13/2002	NM	NM
		4/27/2002	NM	NM
		5/23/2002	29.57	600.72
		6/5/2002	NM	NM
		6/14/2002	NM	NM
		7/1/2002	NM	NM
		7/15/2002	NM	NM
		7/29/2002	NM	NM
		8/15/2002	NM	NM
		9/4/2002	NM	NM
		9/20/2002	NM	NM
		10/2/2002	NM	NM
		10/14/2002	NM	NM
		10/25/2002	NM	NM
		11/11/2002	NM	NM
		11/26/2002	NM	NM
		12/19/2002	NM	NM
		1/3/2003	NM	NM
		1/20/2003	NM	NM
		1/31/2003	NM	NM
		2/13/2003	NM	NM
		2/25/2003	NM	NM
		3/14/2003	NM	NM
		3/31/2003	NM	NM
		4/17/2003	NM	NM
		5/1/2003	NM	NM
		5/15/2003	NM	NM
		6/1/2003	NM	NM
		6/18/2003	31.10	599.19
		7/1/2003	NM	NM
		7/14/2003	NM	NM
		8/1/2003	NM	NM
		8/15/2003	NM	NM

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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-10S	629.00	10/19/01	NM	NM
		11/04/01	NM	NM
		11/21/01	NM	NM
		12/03/01	NM	NM
		12/14/01	NM	NM
		1/3/2002	NM	NM
		1/16/2002	NM	NM
		2/1/2002	NM	NM
		2/13/2002	NM	NM
		2/25/2002	NM	NM
		3/11/2002	NM	NM
		3/26/2002	NM	NM
		4/13/2002	NM	NM
		4/27/2002	NM	NM
		5/23/2002	15.11	613.89
		6/5/2002	NM	NM
		6/14/2002	NM	NM
		7/1/2002	NM	NM
		7/15/2002	NM	NM
		7/29/2002	NM	NM
		8/15/2002	NM	NM
		9/4/2002	NM	NM
		9/20/2002	NM	NM
		10/2/2002	NM	NM
		10/14/2002	NM	NM
		10/25/2002	NM	NM
		11/11/2002	NM	NM
		11/26/2002	NM	NM
		12/19/2002	NM	NM
		1/3/2003	NM	NM
		1/20/2003	NM	NM
		1/31/2003	NM	NM
		2/13/2003	NM	NM
		2/25/2003	NM	NM
		3/14/2003	NM	NM
		3/31/2003	NM	NM
		4/17/2003	NM	NM
		5/1/2003	NM	NM
		5/15/2003	NM	NM
		6/1/2003	NM	NM
		6/18/2003	15.41	613.59
		7/1/2003	NM	NM
		7/14/2003	NM	NM
		8/1/2003	NM	NM
		8/15/2003	NM	NM

NOTES
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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-10D	626.80	10/19/01	NM	NM
		11/04/01	NM	NM
		11/21/01	NM	NM
		12/03/01	NM	NM
		12/14/01	NM	NM
		1/3/2002	NM	NM
		1/16/2002	NM	NM
		2/1/2002	NM	NM
		2/13/2002	NM	NM
		2/25/2002	NM	NM
		3/11/2002	NM	NM
		3/26/2002	NM	NM
		4/13/2002	NM	NM
		4/27/2002	NM	NM
		5/23/2002	15.65	611.15
		6/5/2002	NM	NM
		6/14/2002	NM	NM
		7/1/2002	NM	NM
		7/15/2002	NM	NM
		7/29/2002	NM	NM
		8/15/2002	NM	NM
		9/4/2002	NM	NM
		9/20/2002	NM	NM
		10/2/2002	NM	NM
		10/14/2002	NM	NM
		10/25/2002	NM	NM
		11/11/2002	NM	NM
		11/26/2002	NM	NM
		12/19/2002	NM	NM
		1/3/2003	NM	NM
		1/20/2003	NM	NM
		1/31/2003	NM	NM
		2/13/2003	NM	NM
		2/25/2003	NM	NM
		3/14/2003	NM	NM
		3/31/2003	NM	NM
		4/17/2003	NM	NM
		5/1/2003	NM	NM
		5/15/2003	NM	NM
		6/1/2003	NM	NM
		6/18/2003	16.00	610.80
		7/1/2003	NM	NM
		7/14/2003	NM	NM
		8/1/2003	NM	NM
		8/15/2003	NM	NM

NOTES
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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-11D	641.89	10/19/01	18.81	623.08
		11/04/01	19.00	622.89
		11/21/01	19.29	622.60
		12/03/01	19.11	622.78
		12/14/01	18.83	623.06
		1/3/2002	16.98	624.91
		1/16/2002	17.07	624.82
		2/1/2002	14.77	627.12
		2/13/2002	9.80	632.09
		2/25/2002	9.90	631.99
		3/11/2002	10.18	631.71
		3/26/2002	9.71	632.18
		4/13/2002	8.65	633.24
		4/27/2002	10.08	631.81
		5/23/2002	7.78	634.11
		6/5/2002	7.75	634.14
		6/14/2002	10.15	631.74
		7/1/2002	12.50	629.39
		7/15/2002	15.35	626.54
		7/29/2002	15.85	626.04
		8/15/2002	17.32	624.57
		9/4/2002	18.26	623.63
		9/20/2002	18.69	623.20
		10/2/2002	18.82	623.07
		10/14/2002	18.92	622.97
		10/25/2002	18.86	623.03
		11/11/2002	18.63	623.26
		11/26/2002	18.14	623.75
		12/19/2002	14.33	627.56
		1/3/2003	10.90	630.99
		1/20/2003	11.68	630.21
		1/31/2003	13.52	628.37
		2/13/2003	11.18	630.71
		2/25/2003	9.26	632.63
		3/14/2003	9.48	632.41
		3/31/2003	6.70	635.19
		4/17/2003	9.47	632.42
		5/1/2003	NM	NM
		5/15/2003	8.37	633.52
		6/1/2003	8.14	633.75
		6/18/2003	10.44	631.45
		7/1/2003	11.51	630.38
		7/14/2003	NM	NM
		8/1/2003	14.31	627.58
		8/15/2003	13.12	628.77

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-13D	636.58	10/19/01	NM	NM
		11/04/01	NM	NM
		11/21/01	NM	NM
		12/03/01	NM	NM
		12/14/01	NM	NM
		1/3/2002	NM	NM
		1/16/2002	NM	NM
		2/1/2002	NM	NM
		2/13/2002	NM	NM
		2/25/2002	NM	NM
		3/11/2002	NM	NM
		3/26/2002	NM	NM
		4/13/2002	NM	NM
		4/27/2002	NM	NM
		5/23/2002	6.1	630.48
		6/5/2002	NM	NM
		6/14/2002	NM	NM
		7/1/2002	NM	NM
		7/15/2002	NM	NM
		7/29/2002	NM	NM
		8/15/2002	NM	NM
		9/4/2002	NM	NM
		9/20/2002	NM	NM
		10/2/2002	NM	NM
		10/14/2002	NM	NM
		10/25/2002	NM	NM
		11/11/2002	NM	NM
		11/26/2002	NM	NM
		12/19/2002	NM	NM
		1/3/2003	NM	NM
		1/20/2003	NM	NM
		1/31/2003	NM	NM
		2/13/2003	NM	NM
		2/25/2003	NM	NM
		3/14/2003	NM	NM
		3/31/2003	NM	NM
		4/17/2003	NM	NM
		5/1/2003	NM	NM
		5/15/2003	NM	NM
		6/1/2003	NM	NM
		6/18/2003	MW-13D covered under driveway	

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
PZ-1S	640.50	10/19/01	DRY	DRY
		11/04/01	10.41	630.09
		11/21/01	DRY	DRY
		12/03/01	DRY	DRY
		12/14/01	DRY	DRY
		1/3/2002	DRY	DRY
		1/16/2002	DRY	DRY
		2/1/2002	DRY	DRY
		2/13/2002	9.52	630.98
		2/25/2002	9.77	630.73
		3/11/2002	DRY	DRY
		3/26/2002	10.40	630.10
		4/13/2002	8.88	631.62
		4/27/2002	10.16	630.34
		5/23/2002	7.31	633.19
		6/5/2002	6.22	634.28
		6/14/2002	7.65	632.85
		7/1/2002	10.40	630.10
		7/15/2002	10.39	630.11
		7/29/2002	10.40	630.10
		8/15/2002	10.39	630.11
		9/4/2002	DRY	DRY
		9/20/2002	DRY	DRY
		10/2/2002	DRY	DRY
		10/14/2002	DRY	DRY
		10/25/2002	DRY	DRY
		11/11/2002	DRY	DRY
		11/26/2002	DRY	DRY
		12/19/2002	10.38	630.12
		1/3/2003	10.35	630.15
		1/20/2003	10.40	630.10
		1/31/2003	10.39	630.11
		2/13/2003	10.42	630.08
		2/25/2003	10.04	630.46
		3/14/2003	9.89	630.61
		3/31/2003	6.12	634.38
		4/17/2003	7.00	633.50
		5/1/2003	7.39	633.11
		5/15/2003	9.55	630.95
		6/1/2003	8.99	631.51
		6/18/2003	DRY	DRY
		7/1/2003	DRY	DRY
		7/14/2003	DRY	DRY
		8/1/2003	12.24	628.26
		8/15/2003	10.65	629.85

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
PZ-1D	640.67	10/19/01	DRY	DRY
		11/04/01	DRY	DRY
		11/21/01	DRY	DRY
		12/03/01	DRY	DRY
		12/14/01	DRY	DRY
		1/3/2002	DRY	DRY
		1/16/2002	DRY	DRY
		2/1/2002	15.38	625.29
		2/13/2002	9.68	630.99
		2/25/2002	9.87	630.80
		3/11/2002	11.66	629.01
		3/26/2002	11.62	629.05
		4/13/2002	9.01	631.66
		4/27/2002	10.33	630.34
		5/23/2002	7.49	633.18
		6/5/2002	6.32	634.35
		6/14/2002	7.81	632.86
		7/1/2002	11.55	629.12
		7/15/2002	DRY	DRY
		7/29/2002	DRY	DRY
		8/15/2002	DRY	DRY
		9/4/2002	DRY	DRY
		9/20/2002	DRY	DRY
		10/2/2002	DRY	DRY
		10/14/2002	DRY	DRY
		10/25/2002	DRY	DRY
		11/11/2002	DRY	DRY
		11/26/2002	DRY	DRY
		12/19/2002	14.30	626.37
		1/3/2003	10.86	629.81
		1/20/2003	11.32	629.35
		1/31/2003	DRY	DRY
		2/13/2003	11.62	629.05
		2/25/2003	10.14	630.53
		3/14/2003	10.02	630.65
		3/31/2003	6.27	634.40
		4/17/2003	7.14	633.53
		5/1/2003	7.86	632.81
		5/15/2003	9.67	631.00
		6/1/2003	9.43	631.24
		6/18/2003	10.78	629.89
		7/1/2003	11.51	629.16
		7/14/2003	DRY	DRY
		8/1/2003	12.94	627.73
		8/15/2003	10.91	629.76

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
PZ-2S	639.73	10/19/01	DRY	DRY
		11/04/01	DRY	DRY
		11/21/01	DRY	DRY
		12/03/01	DRY	DRY
		12/14/01	DRY	DRY
		1/3/2002	DRY	DRY
		1/16/2002	DRY	DRY
		2/1/2002	DRY	DRY
		2/13/2002	9.97	629.76
		2/25/2002	12.59	627.14
		3/11/2002	13.70	626.03
		3/26/2002	13.52	626.21
		4/13/2002	11.22	628.51
		4/27/2002	12.13	627.60
		5/23/2002	9.90	629.83
		6/5/2002	8.95	630.78
		6/14/2002	9.84	629.89
		7/1/2002	11.37	628.36
		7/15/2002	15.16	624.57
		7/29/2002	15.65	624.08
		8/15/2002	DRY	DRY
		9/4/2002	DRY	DRY
		9/20/2002	DRY	DRY
		10/2/2002	DRY	DRY
		10/14/2002	DRY	DRY
		10/25/2002	DRY	DRY
		11/11/2002	DRY	DRY
		11/26/2002	DRY	DRY
		12/19/2002	16.24	623.49
		1/3/2003	13.56	626.17
		1/20/2003	13.50	626.23
		1/31/2003	16.49	623.24
		2/13/2003	13.50	626.23
		2/25/2003	12.43	627.30
		3/14/2003	12.20	627.53
		3/31/2003	9.28	630.45
		4/17/2003	9.84	629.89
		5/1/2003	10.17	629.56
		5/15/2003	11.60	628.13
		6/1/2003	10.41	629.32
		6/18/2003	12.38	627.35
		7/1/2003	13.01	626.72
		7/14/2003	DRY	DRY
		8/1/2003	14.64	625.09
		8/15/2003	12.76	626.97

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
OCTOBER 2001 - AUGUST 2003
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	10/19/01	20.09	619.92
		11/04/01	20.20	619.81
		11/21/01	20.46	619.55
		12/03/01	19.93	620.08
		12/14/01	20.10	619.91
		1/3/2002	19.73	620.28
		1/16/2002	19.82	620.19
		2/1/2002	19.36	620.65
		2/13/2002	10.55	629.46
		2/25/2002	13.66	626.35
		3/11/2002	14.63	625.38
		3/26/2002	14.42	625.59
		4/13/2002	12.34	627.67
		4/27/2002	13.22	626.79
		5/23/2002	11.07	628.94
		6/5/2002	10.21	629.80
		6/14/2002	11.12	628.89
		7/1/2002	11.76	628.25
		7/15/2002	15.42	624.59
		7/29/2002	15.89	624.12
		8/15/2002	19.77	620.24
		9/4/2002	19.21	620.80
		9/20/2002	20.38	619.63
		10/2/2002	20.06	619.95
		10/14/2002	19.61	620.40
		10/25/2002	20.25	619.76
		11/11/2002	20.26	619.75
		11/26/2002	19.41	620.60
		12/19/2002	16.92	623.09
		1/3/2003	14.35	625.66
		1/20/2003	14.38	625.63
		1/31/2003	16.98	623.03
		2/13/2003	14.27	625.74
		2/25/2003	13.28	626.73
		3/14/2003	13.04	626.97
		3/31/2003	10.32	629.69
		4/17/2003	10.80	629.21
		5/1/2003	11.29	628.72
		5/15/2003	12.55	627.46
		6/1/2003	11.25	628.76
		6/18/2003	14.27	625.74
		7/1/2003	15.45	624.56
		7/14/2003	DRY	DRY
		8/1/2003	14.90	625.11
		8/15/2003	14.01	626.00

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

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

		DISCHARGE CONCENTRATIONS						
MONTH	(GAL.)	TCE	1,1,1-TCA	Cis-1,2-DCE	2-BUTANONE	VINYL CHLORIDE	ACETONE	4-METHYL-2-PENTANONE
September 2002	35,891	250	ND	ND	ND	ND	ND	ND
October 2002	25,049	270	ND	ND	ND	ND	ND	ND
November 2002	53,001	230	ND	ND	ND	ND	ND	ND
December 2002	48,060	260	ND	ND	ND	ND	ND	ND
January 2003	175,900	240	ND	ND	ND	ND	ND	ND
February 2003	180,200	240	ND	ND	ND	ND	ND	ND
March 2003	366,681	210	ND	ND	ND	ND	ND	ND
April 2003	326,086	ND	ND	ND	ND	ND	ND	ND
May 2003	335,966	100	ND	ND	ND	ND	ND	ND
June 2003	165,138	78	ND	ND	ND	ND	ND	ND
July 2003	74,810	140	ND	ND	ND	ND	ND	ND
August 2003	99,420	110	ND	ND	ND	ND	ND	ND

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

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

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-01	12/19/1994	ND	ND	ND	ND	ND	ND	ND
	5/21/1996	ND	ND	ND	ND	ND	ND	ND
	8/13/1997	ND	ND	ND	ND	ND	ND	ND
	3/18/1998	ND	ND	ND	ND	ND	ND	ND
	9/2/1998	ND	ND	ND	ND	ND	ND	ND
	3/18/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	ND	ND	ND	ND	ND	ND	ND
	3/28/2000	ND	ND	ND	ND	ND	ND	ND
	9/8/2000	ND	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND	ND
	9/13/2001	ND	ND	ND	ND	ND	ND	ND
	5/24/2002	ND	ND	ND	ND	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND	ND
MW-02S	12/19/1994	850	ND	ND	ND	ND	ND	ND
	5/21/1996	30	ND	1	ND	ND	ND	ND
	8/13/1997	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	3/18/1998	17,000	ND	ND	ND	ND	ND	ND
	9/2/1998	18,000	210	ND	ND	ND	ND	ND
	3/18/1999	28	ND	ND	ND	ND	ND	ND
	9/2/1999	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	3/28/2000	6	ND	ND	ND	ND	ND	ND
	9/8/2000	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	3/8/2001	9	ND	ND	ND	ND	ND	ND
	9/13/2001	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/24/2002	4	ND	ND	ND	ND	ND	ND
	6/18/2003	4	ND	ND	ND	ND	ND	ND
MW-02D	8/13/1997	450	23	42	ND	ND	ND	ND
	3/18/1998	740	16	28	ND	ND	ND	ND
	9/2/1998	680	25	39	ND	ND	ND	ND
	3/18/1999	190	5	6	ND	ND	ND	ND
	Monitoring well converted to recovery well RW-4.							
MW-03	12/19/1994	190	ND	ND	ND	ND	ND	ND
	5/21/1996	120	ND	2	ND	ND	ND	ND
	8/13/1997	150	ND	2	ND	ND	ND	ND
	3/18/1998	88	ND	ND	ND	ND	ND	ND
	9/2/1998	110	ND	ND	ND	ND	ND	ND
	3/18/1999	45	ND	ND	ND	ND	ND	ND
	9/2/1999	170	ND	ND	ND	ND	ND	ND
	3/28/2000	93	ND	ND	ND	ND	ND	ND
	9/8/2000	150	ND	ND	ND	ND	ND	ND
	3/8/2001	96	ND	ND	ND	ND	ND	ND
	9/13/2001	120	ND	ND	ND	ND	ND	ND
	5/24/2002	85	ND	ND	ND	ND	ND	ND
	6/18/2003	40	ND	ND	ND	ND	ND	ND
Duplicate	6/18/2003	56	ND	ND	ND	ND	ND	ND

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter (µg/l).
3. No other VOC compounds detected at method detection limit.
4. ND indicates not detected.
5. NS indicates no sample collected; unable to locate or access well.
6. DRY indicates well not sampled due to lack of water.
7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.

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

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-04	12/19/1994	710	6.7	23	ND	ND	ND	ND
	5/21/1996	16	ND	2	ND	ND	ND	ND
	8/13/1997	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	3/18/1998	59	ND	2	ND	ND	ND	ND
	9/2/1998	450	7	20	ND	ND	ND	ND
	3/18/1999	58	ND	1	ND	ND	ND	ND
	9/2/1999	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	3/28/2000	9	ND	ND	ND	ND	ND	ND
Duplicate	3/28/2000	9	ND	ND	ND	ND	ND	ND
	9/8/2000	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	3/8/2001	130	ND	2	ND	ND	ND	ND
Duplicate	3/8/2001	130	ND	2	ND	ND	ND	ND
	9/13/2001	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/24/2002	67	ND	1	ND	ND	ND	ND
Duplicate	5/24/2002	68	ND	1	ND	ND	ND	ND
	6/18/2003	79	ND	ND	ND	ND	ND	ND
MW-05S	12/19/1994	580	15	ND	ND	ND	ND	ND
	5/21/1996	350	16	ND	ND	ND	ND	ND
	8/13/1997	760	31	4	ND	ND	ND	ND
	3/18/1998	120	4	ND	1	ND	ND	ND
	9/2/1998	390	14	ND	ND	ND	ND	ND
	3/18/1999	95	3	ND	ND	ND	ND	ND
	9/2/1999	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	3/28/2000	140	4	ND	ND	ND	ND	ND
	9/8/2000	550	22	ND	ND	ND	ND	ND
	3/8/2001	330	9	ND	ND	ND	ND	ND
	9/13/2001	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/24/2002	59	1	ND	ND	ND	ND	ND
	6/18/2003*	66	2	ND	ND	ND	ND	ND
MW-05D	12/19/1994	820	23	ND	ND	ND	ND	ND
	5/21/1996	1,000	48	8	ND	ND	ND	ND
	8/13/1997	250	7	2	ND	ND	ND	ND
	3/18/1998	250	7	ND	ND	ND	ND	ND
	9/2/1998	300	8	2	ND	ND	ND	ND
	3/18/1999	200	7	2	ND	ND	ND	ND
	9/2/1999	220	6	2	ND	ND	ND	ND
	3/28/2000	190	4	ND	ND	ND	ND	ND
	9/8/2000	160	3	ND	ND	ND	ND	ND
	3/8/2001	160	3	ND	ND	ND	ND	ND
	9/13/2001	120	3	ND	ND	ND	ND	ND
Duplicate	9/13/2001	110	2	ND	ND	ND	3	ND
	5/24/2002	160	4	ND	ND	ND	ND	ND
	6/18/2003	110	3	ND	ND	ND	ND	ND

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter (µg/l).
3. No other VOC compounds detected at method detection limit.
4. ND indicates not detected.
5. NS indicates no sample collected; unable to locate or access well.
6. DRY indicates well not sampled due to lack of water.
7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.

*: Carbon disulfide also detected at 4 µg/l.

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

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-06S	12/19/1994	270	7.8	ND	ND	ND	ND	ND
	5/21/1996	ND	2	ND	ND	ND	ND	ND
	8/13/1997	140	9	3	ND	ND	ND	ND
	3/18/1998	5	ND	ND	ND	ND	ND	ND
	9/2/1998	140	8	2	ND	ND	ND	ND
	3/17/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	110	6	4	ND	ND	ND	ND
	3/28/2000	3	ND	ND	ND	ND	ND	ND
	9/8/2000	110	5	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND	ND
	9/13/2001	72	4	4	ND	ND	ND	ND
	5/24/2002	3	ND	ND	ND	ND	ND	ND
	6/18/2003	8	ND	ND	ND	ND	ND	ND
MW-06D	12/19/1994	190	7.5	ND	ND	ND	ND	ND
	5/21/1996	240	10	ND	ND	ND	ND	ND
	8/13/1997	150	10	2	ND	ND	ND	ND
	3/18/1998	6	ND	ND	ND	ND	ND	ND
	9/2/1998	140	8	2	ND	ND	ND	ND
	3/17/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	110	7	2	ND	ND	ND	ND
	3/28/2000	89	5	1	ND	ND	ND	ND
	9/8/2000	110	6	ND	ND	ND	ND	ND
Duplicate	9/8/2000	110	6	ND	ND	ND	ND	ND
	3/8/2001	95	5	ND	ND	ND	ND	ND
	9/13/2001	80	4	3	ND	ND	3	ND
	5/24/2002	91	4	ND	ND	ND	ND	ND
	6/18/2003	70	4	ND	ND	ND	ND	ND
MW-07S	12/19/1994	250	6.6	8	ND	ND	ND	ND
	5/21/1996	310	7	6	ND	ND	ND	ND
	8/13/1997	250	6	6	ND	ND	ND	ND
	3/18/1998	3	ND	ND	ND	ND	ND	ND
	9/2/1998	220	5	4	ND	ND	ND	ND
	3/17/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	220	4	4	ND	ND	ND	ND
	3/28/2000	210	4	3	ND	ND	ND	ND
	9/8/2000	210	ND	ND	ND	ND	ND	ND
	3/8/2001	200	4	3	ND	ND	ND	ND
	9/13/2001	190	3	4	ND	ND	ND	ND
	5/24/2002	180	3	2	ND	ND	ND	ND
	6/18/2003	130	2	2	ND	ND	ND	ND

Notes:
1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter (µg/l).
3. No other VOC compounds detected at method detection limit.
4. ND indicates not detected.
5. NS indicates no sample collected; unable to locate or access well.
6. DRY indicates well not sampled due to lack of water.
7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.

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

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-07D	12/19/1994	260	ND	7	ND	ND	ND	ND
	5/21/1996	290	4	12	ND	ND	ND	ND
	8/13/1997	180	2	13	ND	ND	ND	ND
	3/18/1998	150	2	15	ND	ND	ND	ND
	9/2/1998	200	2	15	ND	ND	ND	ND
	3/17/1999	100	ND	8	ND	ND	ND	ND
	9/2/1999	180	2	14	ND	ND	ND	ND
	3/28/2000	130	ND	19	ND	ND	ND	4
	9/8/2000	180	ND	13	ND	ND	ND	ND
	3/8/2001	140	ND	20	ND	ND	ND	3
	9/13/2001	150	1	14	ND	ND	ND	ND
	5/24/2002	140	ND	19	ND	ND	ND	4
	6/18/2003	120	ND	16	ND	ND	ND	2
MW-08S	12/19/1994 Well abandoned.	29	ND	ND	ND	ND	ND	ND
MW-08D	12/19/1994 Well abandoned.	55	ND	ND	ND	ND	ND	ND
MW-09S	12/19/1994	ND	ND	ND	ND	ND	ND	ND
	5/21/1996	ND	ND	ND	ND	ND	ND	ND
	8/13/1997	2	ND	ND	ND	ND	ND	ND
	3/18/1998	3	ND	ND	ND	ND	ND	ND
	9/2/1998	NS	NS	NS	NS	NS	NS	NS
	3/18/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	ND	ND	ND	ND	ND	ND	ND
	3/28/2000	ND	ND	ND	ND	ND	ND	ND
	9/8/2000	ND	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND	ND
	9/13/2001	ND	ND	ND	ND	ND	ND	ND
	5/24/2002	ND	ND	ND	ND	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND	ND
MW-09D	12/19/1994	ND	ND	ND	ND	ND	ND	ND
	5/21/1996	ND	ND	ND	ND	ND	ND	ND
	8/13/1997	ND	ND	ND	ND	ND	ND	ND
	3/18/1998	ND	ND	ND	ND	ND	ND	ND
	9/2/1998	NS	NS	NS	NS	NS	NS	NS
	3/18/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	ND	ND	ND	ND	ND	ND	ND
	3/28/2000	ND	ND	ND	ND	ND	ND	ND
	9/8/2000	ND	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND	ND
	9/13/2001	ND	ND	ND	ND	ND	3	ND
	5/24/2002	ND	ND	1	ND	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND	ND

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter (µg/l).
3. No other VOC compounds detected at method detection limit.
4. ND indicates not detected.
5. NS indicates no sample collected; unable to locate or access well.
6. DRY indicates well not sampled due to lack of water.
7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.

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

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-10S	12/19/1994	7.8	ND	ND	ND	ND	ND	ND
	5/29/1996	30	1	ND	ND	ND	ND	ND
	8/13/1997	15	ND	ND	ND	ND	ND	ND
	3/18/1998	NS	NS	NS	NS	NS	NS	NS
	9/2/1998	8	ND	ND	ND	ND	ND	ND
	3/18/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	7	ND	ND	ND	ND	ND	ND
	3/28/2000	1	ND	ND	ND	ND	ND	ND
	9/8/2000	3	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND	ND
	9/13/2001	6	ND	ND	ND	ND	ND	ND
	5/24/2002	ND	ND	ND	ND	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND	ND
MW-10D	12/19/1994	8.2	ND	ND	ND	ND	ND	ND
	5/29/1996	8	ND	ND	ND	ND	ND	ND
	8/13/1997	15	ND	ND	ND	ND	ND	ND
	3/18/1998	NS	NS	NS	NS	NS	NS	NS
	9/2/1998	9	ND	ND	ND	ND	ND	ND
	3/18/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	7	ND	ND	ND	ND	ND	ND
	3/28/2000	3	ND	ND	ND	ND	ND	ND
	9/8/2000	6	ND	ND	ND	ND	ND	ND
	3/8/2001	5	ND	ND	ND	ND	ND	ND
	9/13/2001	6	ND	ND	ND	ND	ND	ND
	5/24/2002	4	ND	ND	ND	ND	ND	ND
	6/18/2003	5	ND	ND	ND	ND	ND	ND
MW-11D	4/11/1996	ND	ND	ND	ND	ND	ND	ND
	5/21/1996	ND	ND	ND	ND	ND	ND	ND
	8/13/1997	ND	ND	ND	ND	ND	ND	ND
	3/18/1998	ND	ND	ND	ND	ND	ND	ND
	9/2/1998	ND	ND	ND	ND	ND	ND	ND
	3/18/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	ND	ND	ND	ND	ND	ND	ND
	3/28/2000	ND	ND	ND	ND	ND	ND	ND
	9/8/2000	ND	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND	ND
	9/13/2001	ND	ND	ND	ND	ND	ND	ND
	5/24/2002	ND	ND	ND	ND	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND	ND

Notes:
1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter (µg/l).
3. No other VOC compounds detected at method detection limit.
4. "ND" indicates not detected.
5. "NS" indicates no sample collected; unable to locate or access well.
6. "DRY" indicates well not sampled due to lack of water.
7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.

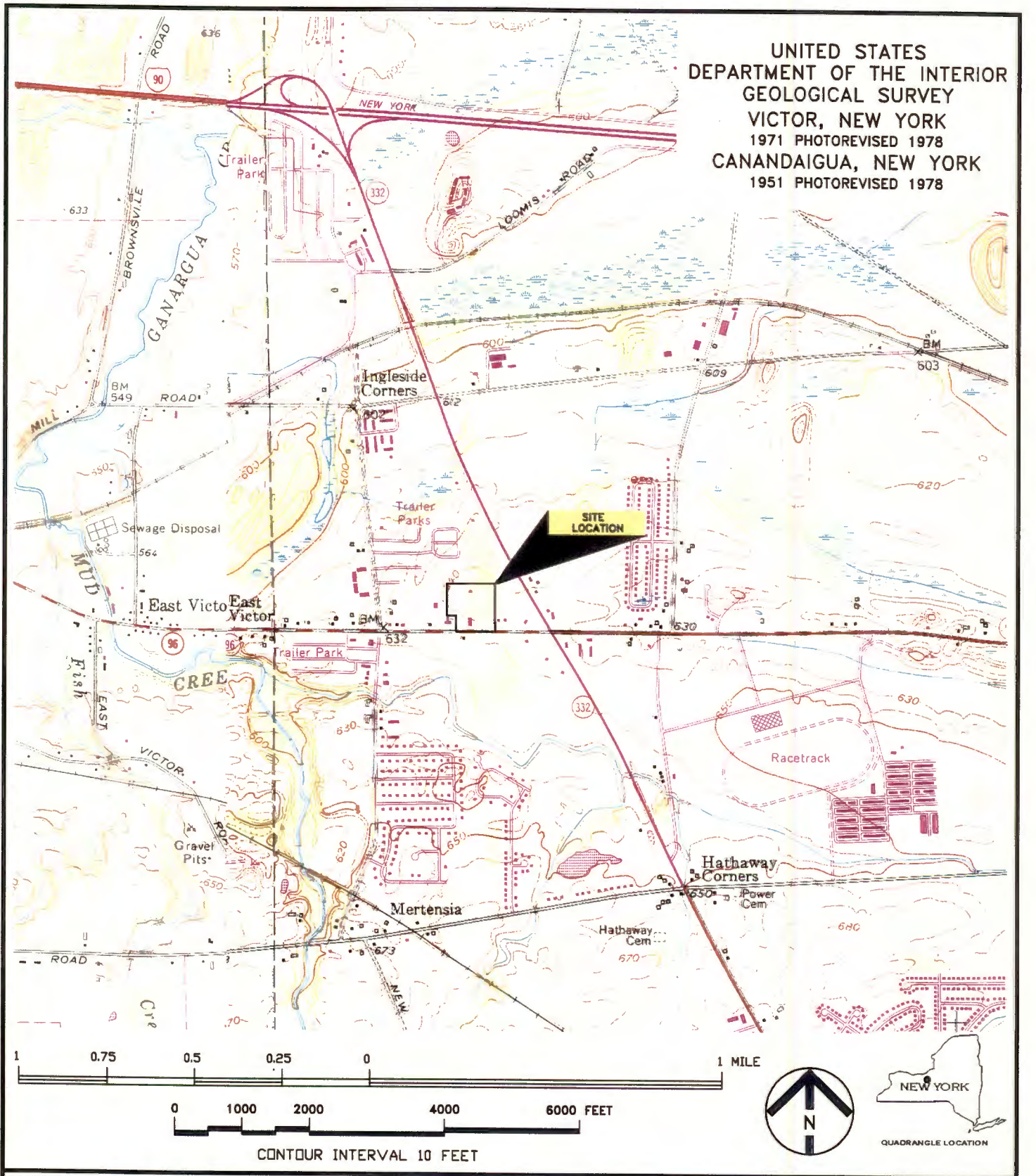
TABLE 3-3
SUMMARY OF MONITORING WELL GROUNDWATER ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-13D	4/11/1996	610	5	4	ND	ND	ND	ND
	5/21/1996	190	5	4	ND	ND	ND	ND
	8/13/1997	160	4	4	ND	ND	ND	ND
	3/18/1998	110	2	ND	ND	ND	ND	ND
	9/2/1998	140	3	2	ND	ND	ND	ND
	3/17/1999	120	2	2	ND	ND	ND	ND
	9/2/1999	140	3	2	ND	ND	ND	ND
	3/28/2000	85	2	ND	ND	ND	ND	ND
	9/8/2000	140	ND	ND	ND	ND	ND	ND
	3/8/2001	88	2	ND	ND	ND	ND	ND
	9/13/2001	120	2	ND	ND	ND	ND	ND
	5/24/2002	100	2	1	ND	ND	ND	ND
	6/18/2003	Monitoring well buried under pavement						

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter (µg/l).
3. No other VOC compounds detected at method detection limit.
4. "ND" indicates not detected.
5. "NS" indicates no sample collected; unable to locate or access well.
6. "DRY" indicates well not sampled due to lack of water.
7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.

Figures



GENERAL LOCATION MAP

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

DRAWN BY: ERB	CHECKED BY: CAP	PROJECT NUMBER: 13807295	DATE: 9/15/03	FIGURE NO: 1-1

URS

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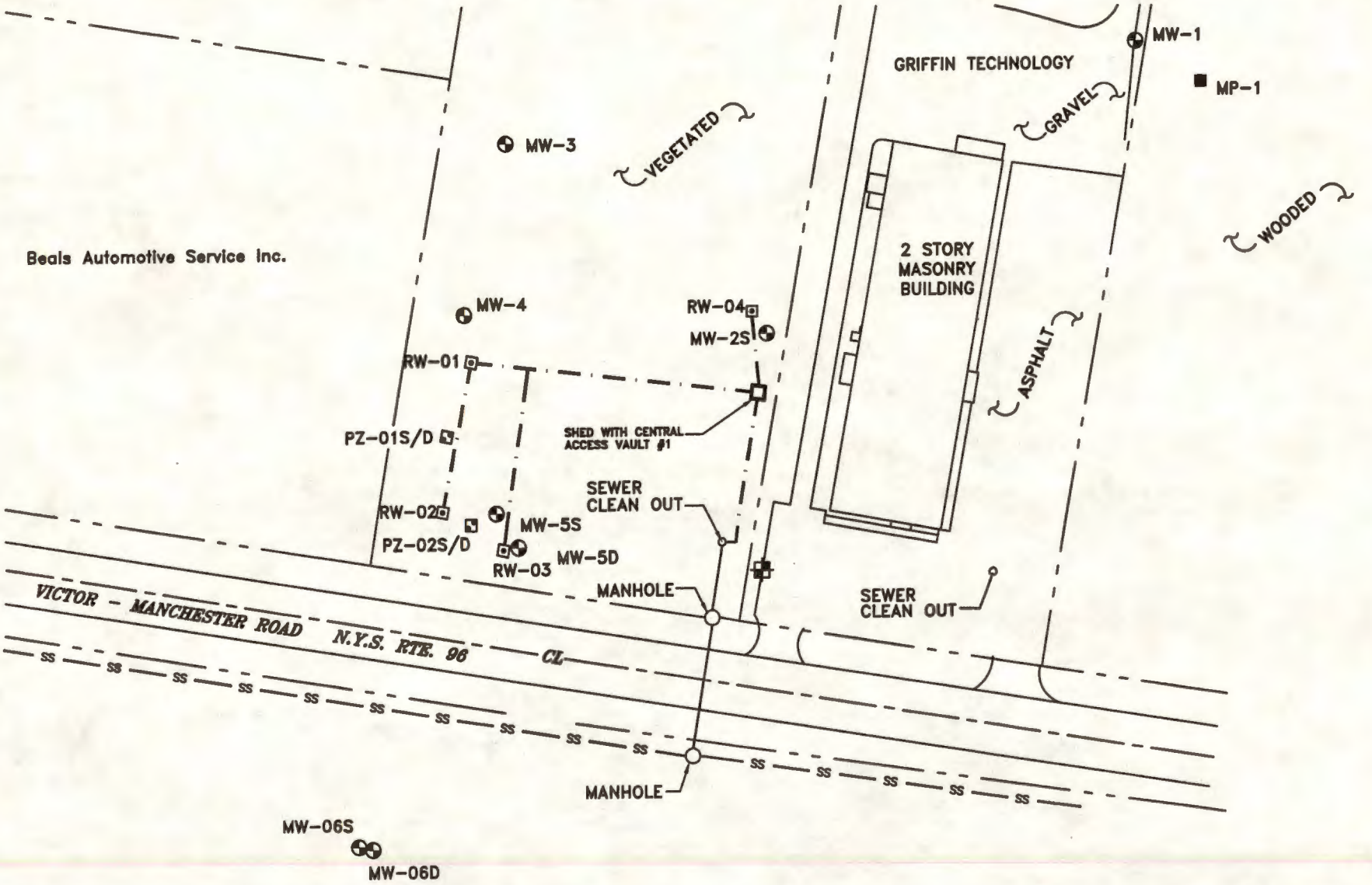

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 2-1
IRM System Layout

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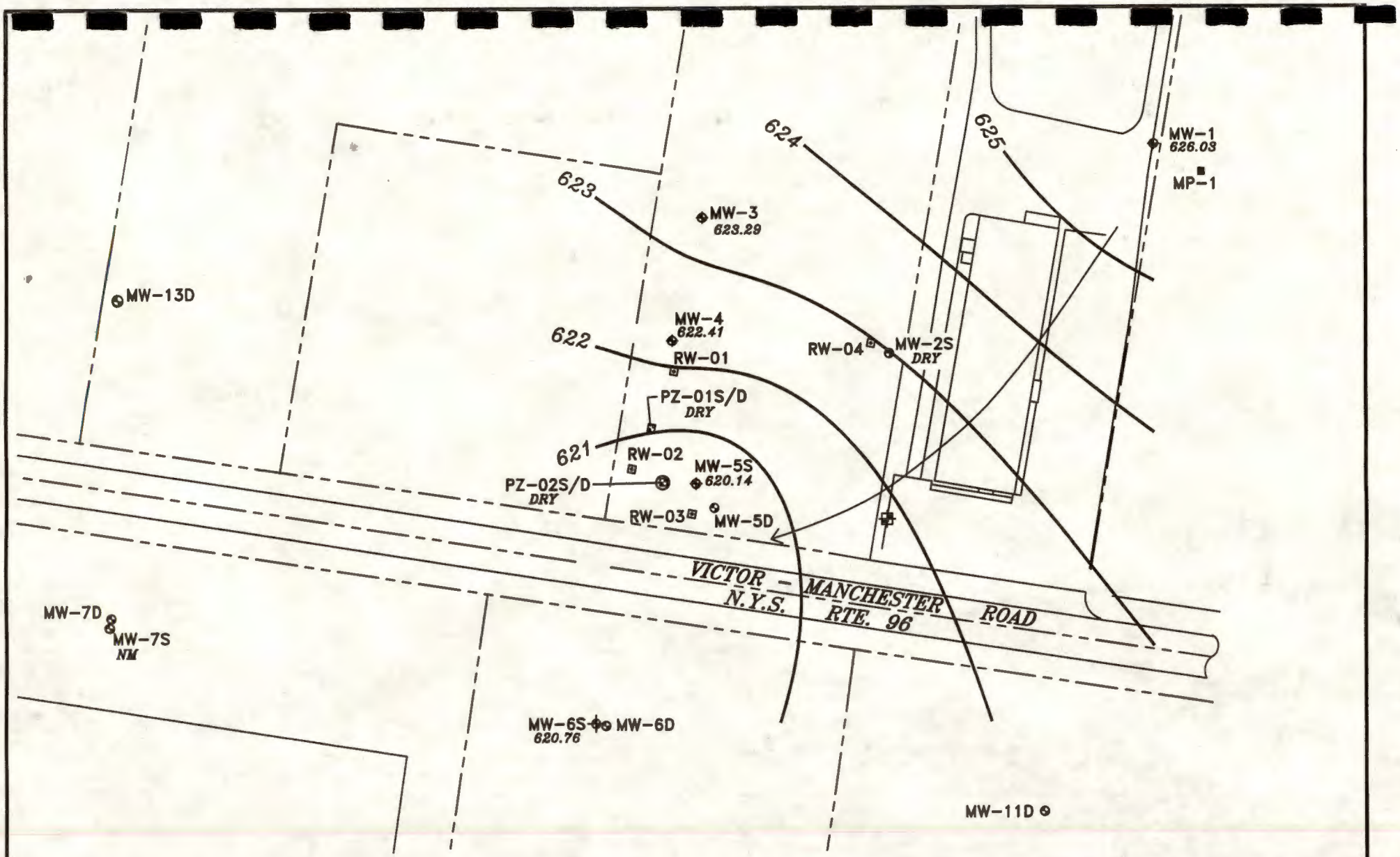

LEGEND

MW-5S	MONITORING WELL	622	GROUNDWATER CONTOUR LINE (CONTOUR INTERVAL = 1 FOOT)
RW-01	RECOVERY WELL		GROUNDWATER FLOW DIRECTION
PZ-01S/D	PIEZOMETER (SHALLOW/DEEP)	622.45	GROUNDWATER ELEVATION
	STAFF GAUGE		BENCHMARK
	MARKER POST		

0 100
SCALE 1" = 100'

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-1

Overburden Groundwater Contour Map - September 20, 2002

URS

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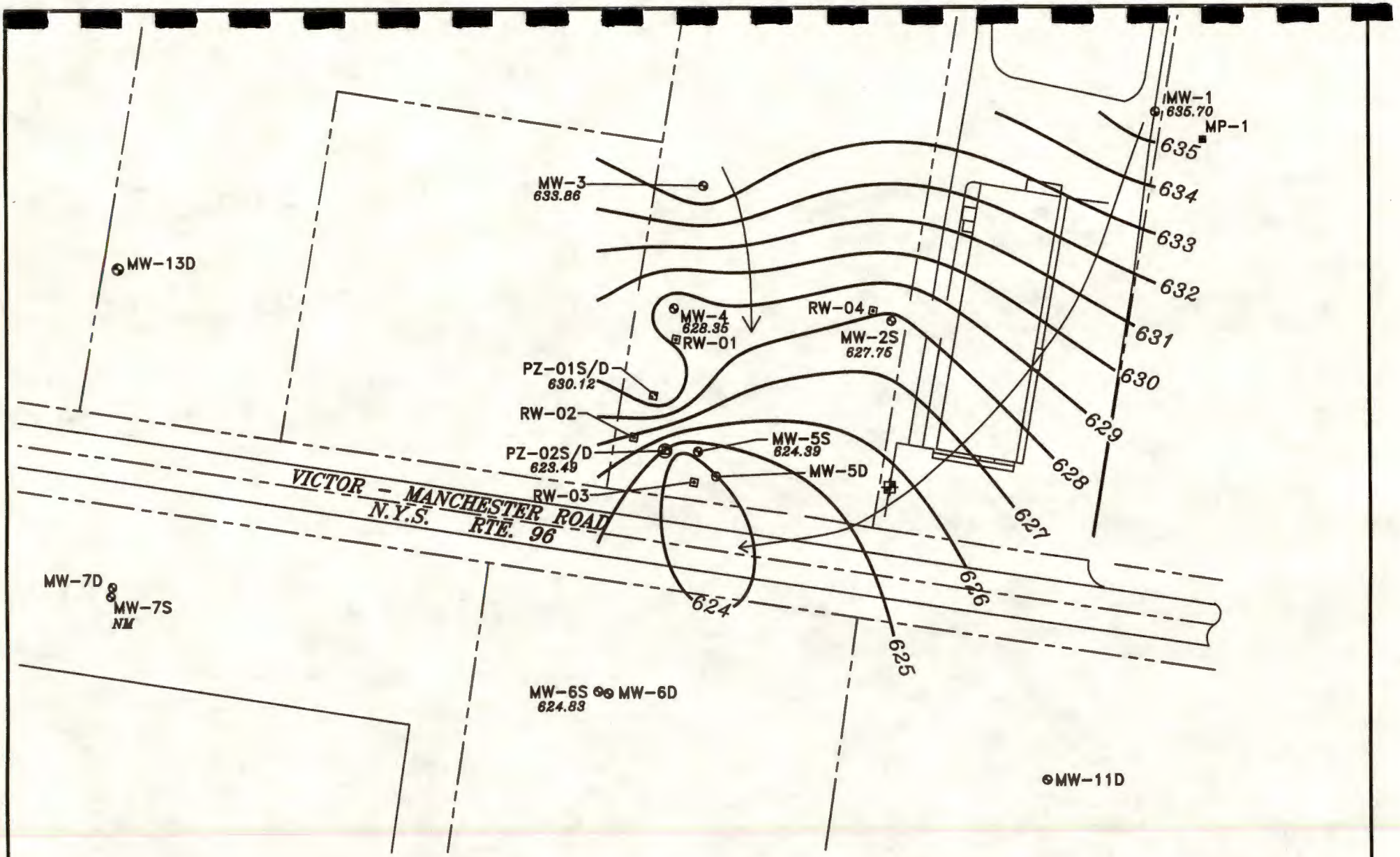

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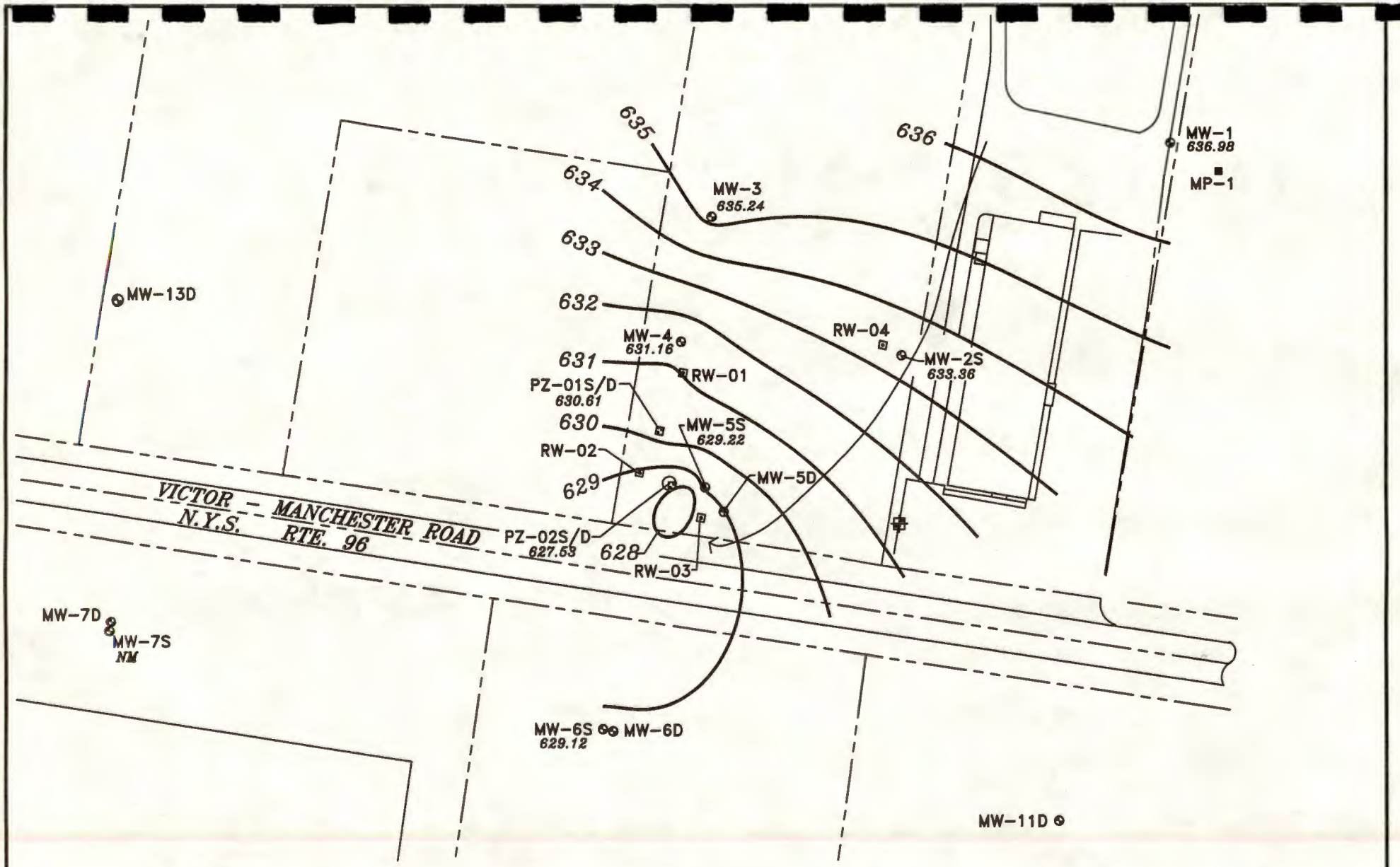

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-3

Overburden Groundwater Contour Map - March 14, 2003

URS

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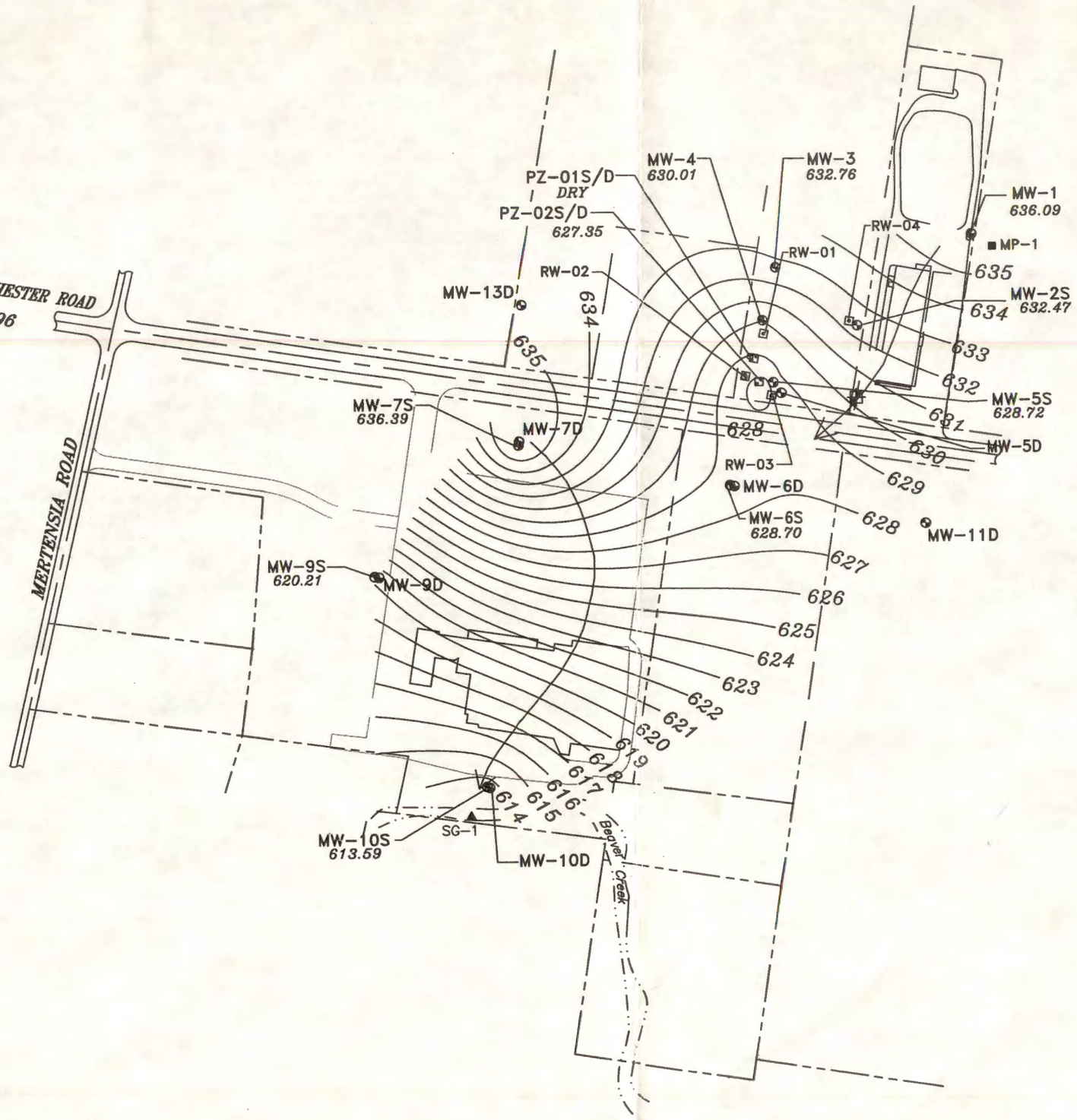

LEGEND

- MW-5S — MONITORING WELL
- RW-01 — RECOVERY WELL
- PZ-01S/D — PIEZOMETER (SHALLOW/DEEP)
- ▲ STAFF GAUGE
- ■ MARKER POST
- BENCHMARK
- 622 — GROUNDWATER CONTOUR LINE (CONTOUR INTERVAL = 1 FOOT)
- GROUNDWATER FLOW DIRECTION
- 626.39 GROUNDWATER ELEVATION

0 200
SCALE 1" = 200'

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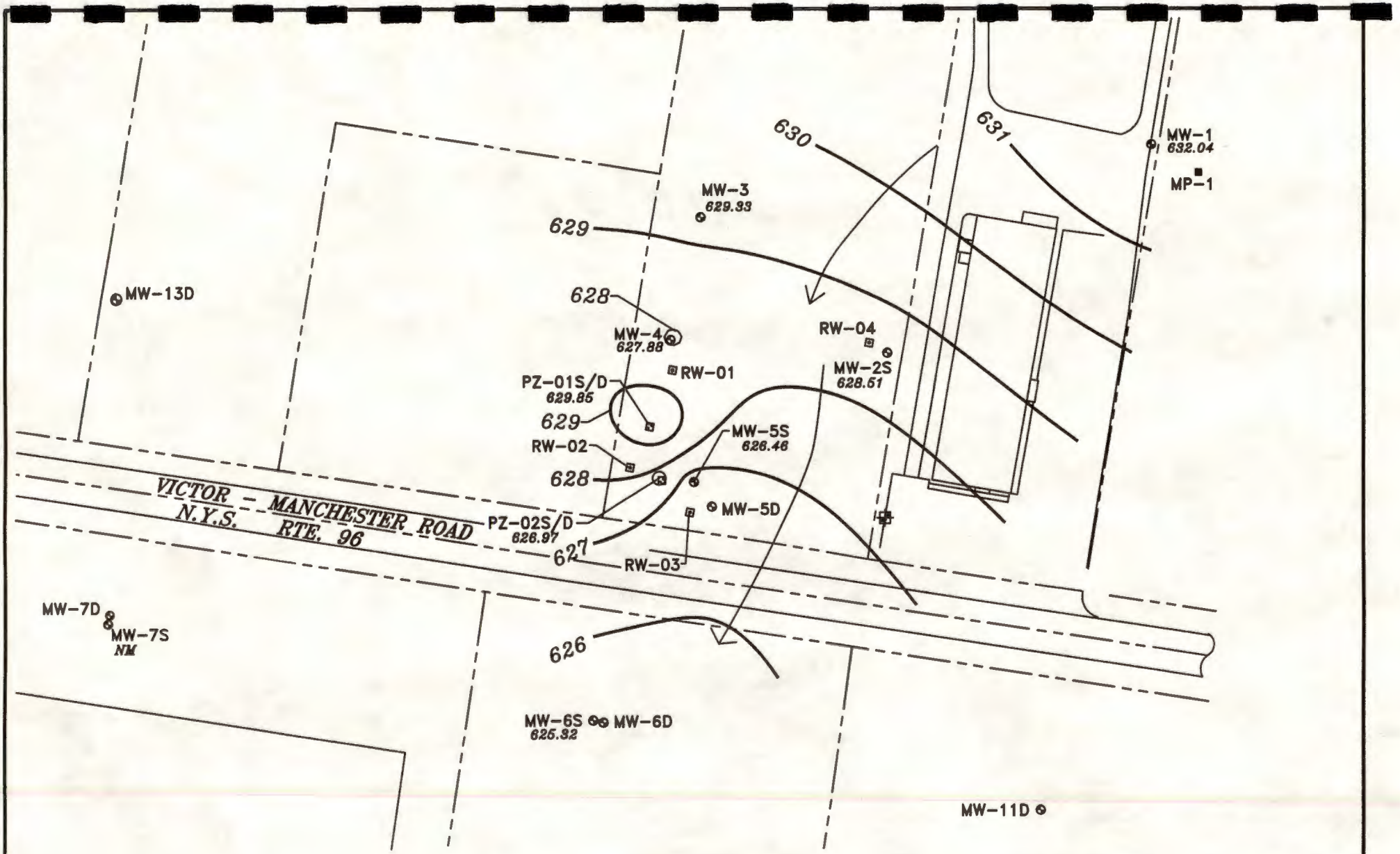
GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-4

Overburden Groundwater Contour Map - June 18, 2003

URS



GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-5

Overburden Groundwater Contour Map - August 15, 2003

URS

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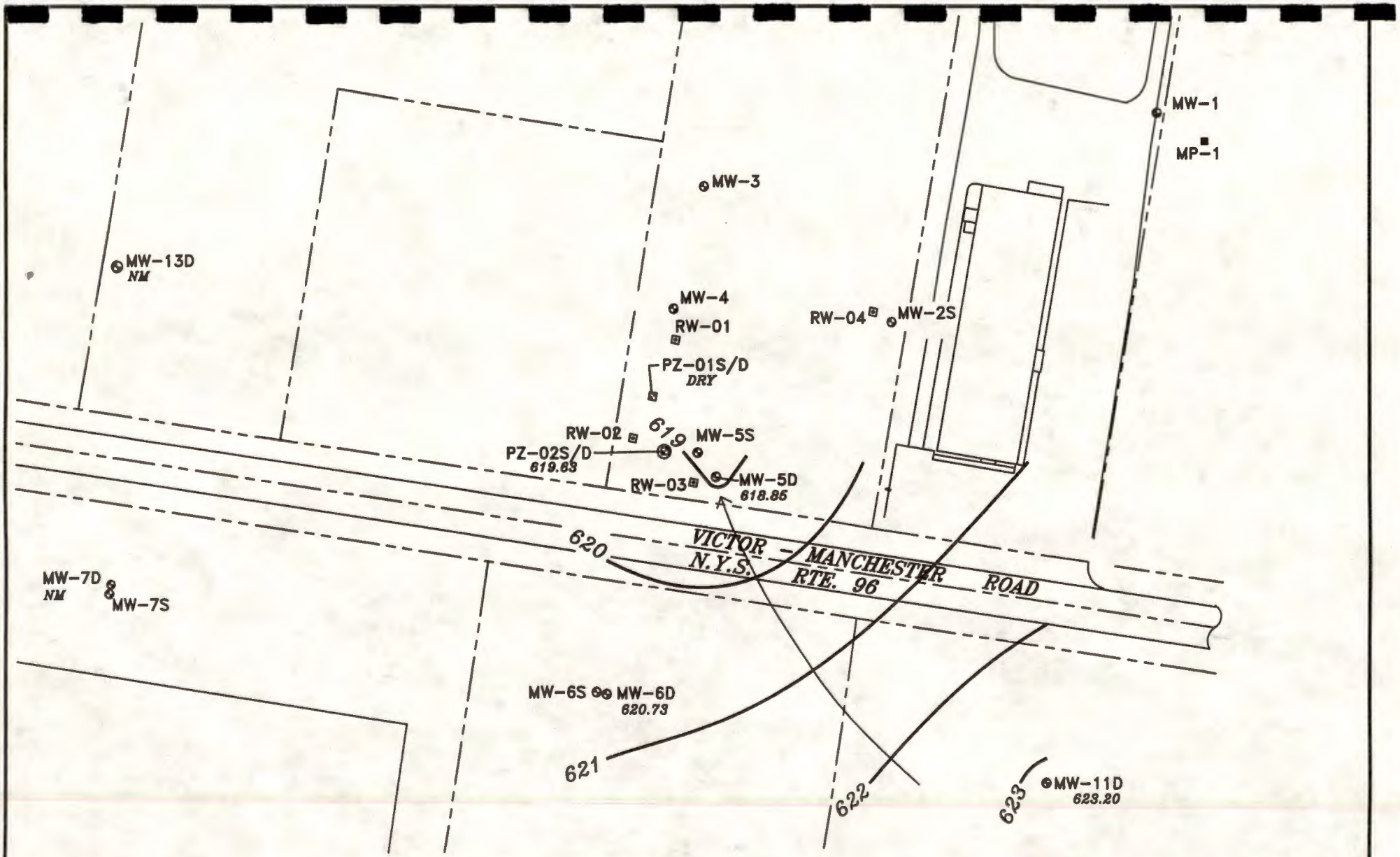

LEGEND

MW-5S	MONITORING WELL	622	GROUNDWATER CONTOUR LINE (CONTOUR INTERVAL = 1 FOOT)
RW-01	RECOVERY WELL		GROUNDWATER FLOW DIRECTION
PZ-01S/D	PIEZOMETER (SHALLOW/DEEP)		GROUNDWATER ELEVATION
▲	STAFF GAUGE		BENCHMARK
■	MARKER POST		

0 100
SCALE 1" = 100'

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-6

Bedrock Groundwater Contour Map - September 20, 2002

URS

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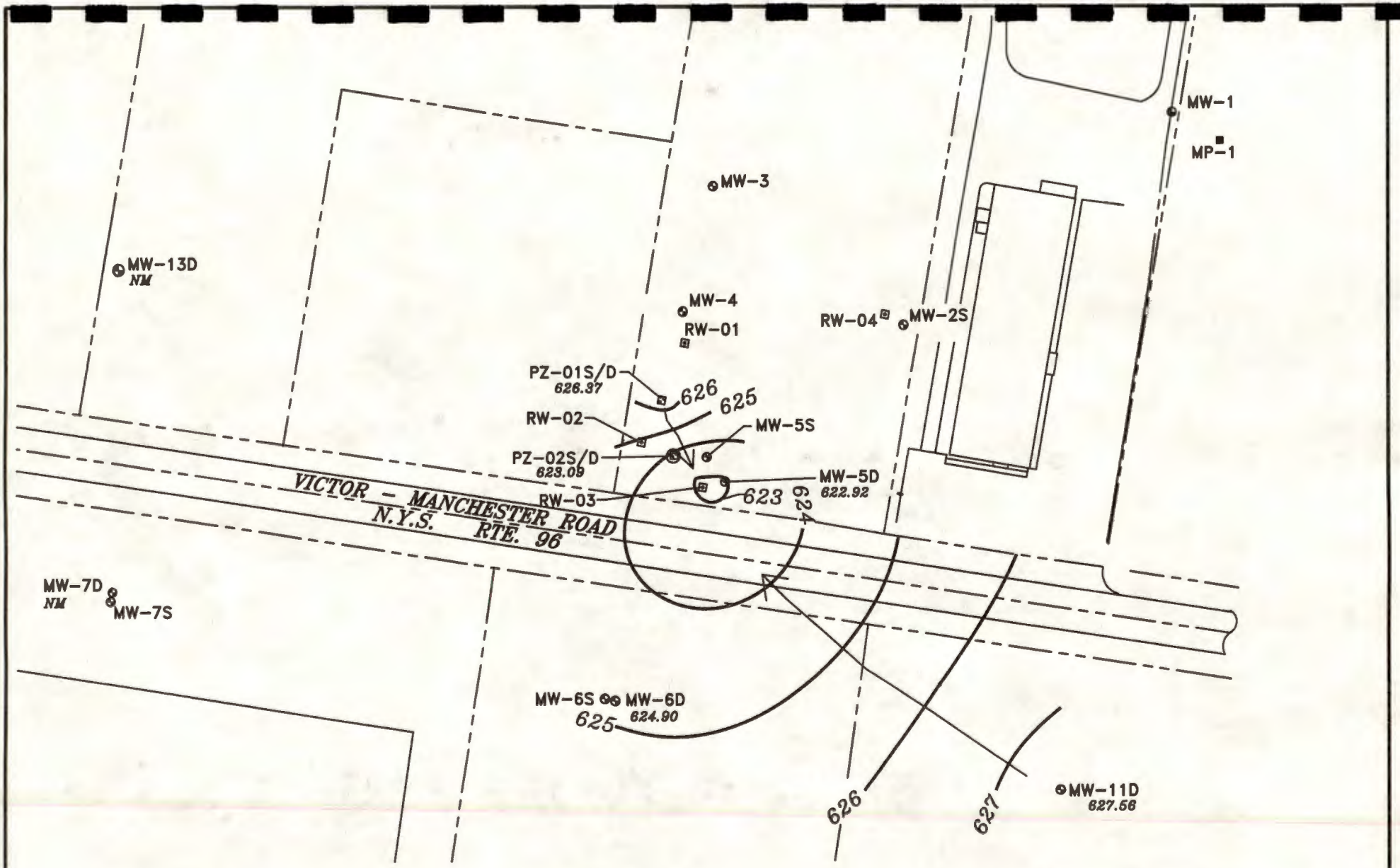

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-7

Bedrock Groundwater Contour Map - December 19, 2002

URS

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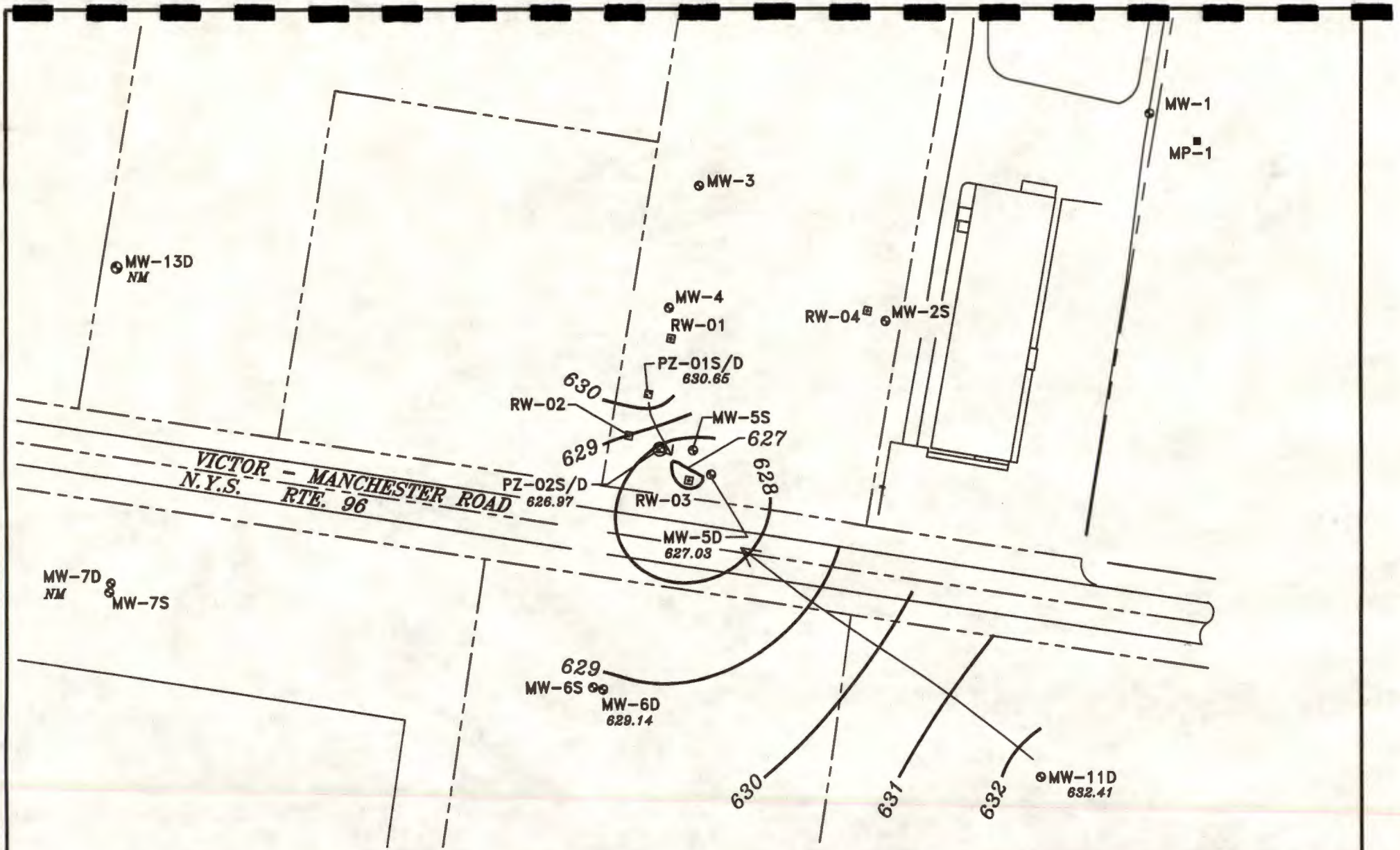

LEGEND

MW-5S	MONITORING WELL	622	GROUNDWATER CONTOUR LINE (CONTOUR INTERVAL = 1 FOOT)
RW-01	RECOVERY WELL		GROUNDWATER FLOW DIRECTION
PZ-01S/D	PIEZOMETER (SHALLOW/DEEP)		GROUNDWATER ELEVATION
	STAFF GAUGE		BENCHMARK
	MARKER POST		

0 100
SCALE 1" = 100'

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-8

Bedrock Groundwater Contour Map - March 14, 2003

URS

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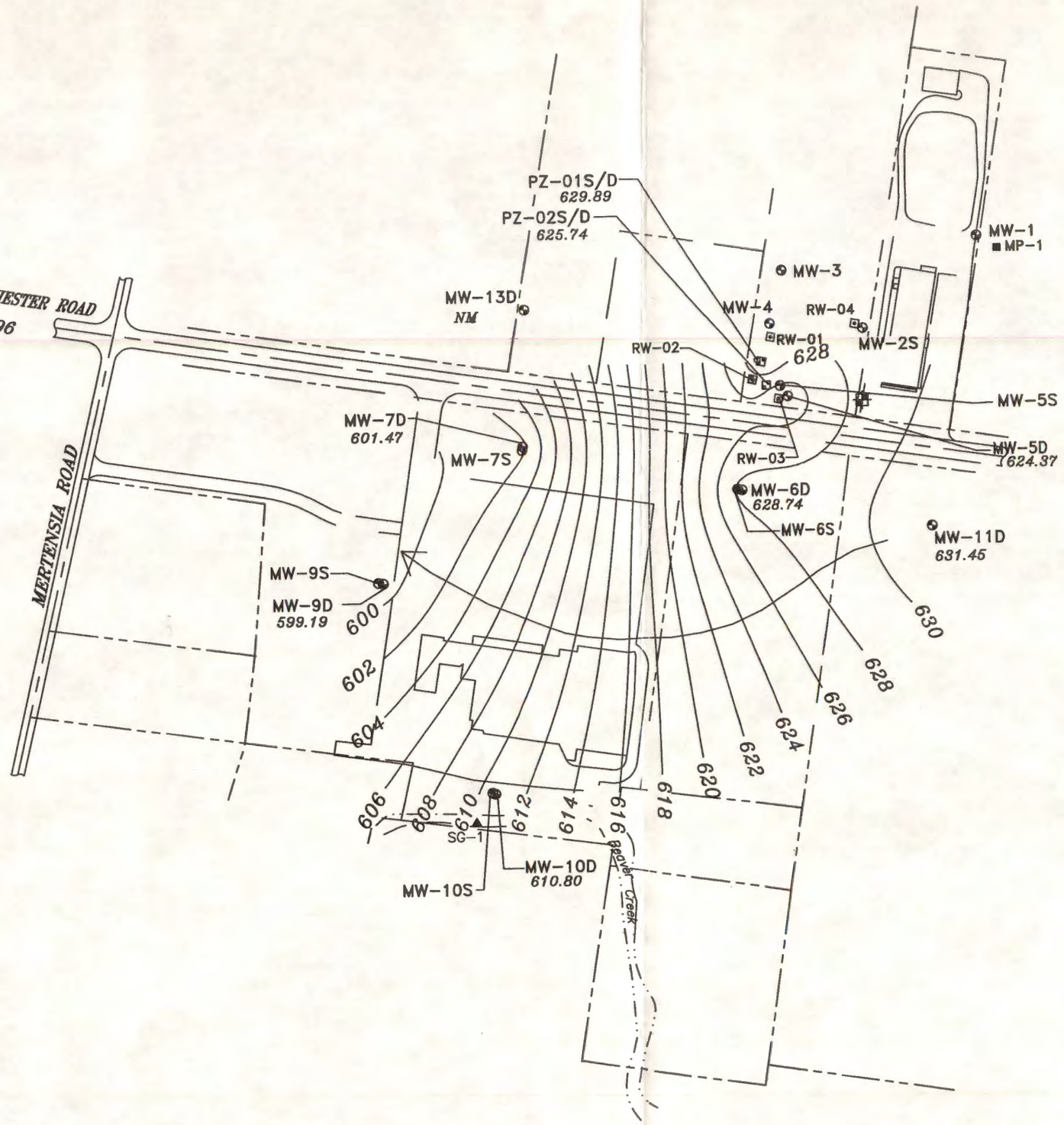

LEGEND

- MW-5S — MONITORING WELL
- RW-01 — RECOVERY WELL
- PZ-01S/D — PIEZOMETER (SHALLOW/DEEP)
- STAFF GAUGE
- MARKER POST
- BENCHMARK
- 622 — GROUNDWATER CONTOUR LINE (CONTOUR INTERVAL = 1 FOOT)
- GROUNDWATER FLOW DIRECTION
- 626.39 — GROUNDWATER ELEVATION

0 200
SCALE 1" = 200'

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-9
Bedrock Groundwater
Contour Map - June 18, 2003

URS

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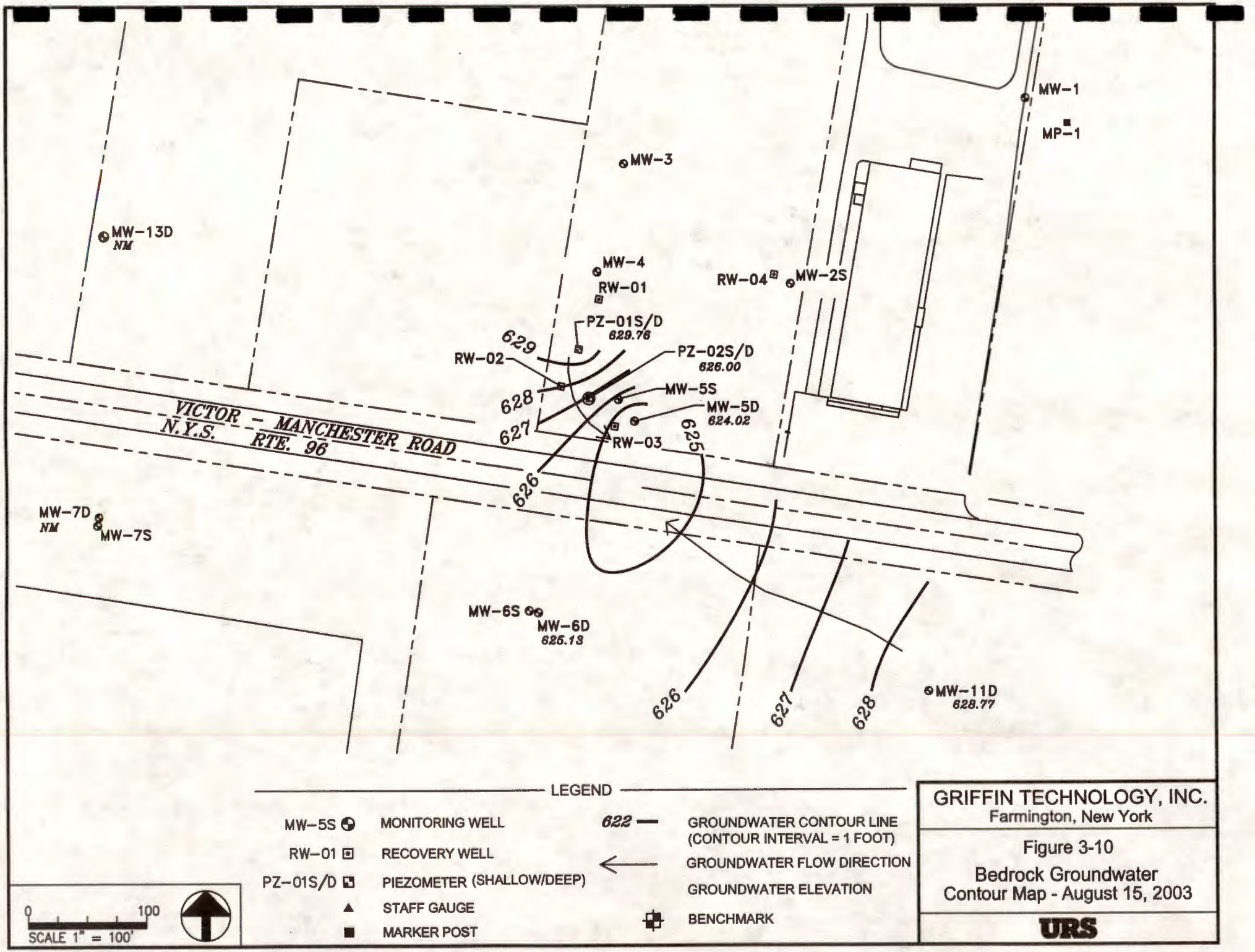

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-10

Bedrock Groundwater Contour Map - August 15, 2003

URS

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Appendix A
Recovery Well Effluent Analytical Results

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

October 24, 2002

Mr. Ken Armstrong
URS Corporation
1382 West 9th Street
Suite 100
Cleveland, OH 44113

PROJECT:GRIFFIN IRM
Submission #:R2213821

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 (585) 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:(585)288-5380 • Fax:(585)288-8475

Columbia Analytical Services Inc.

1 Mustard ST.
Suite 250
Rochester, NY 14609
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM
Lab Submission # : R2213821
Project Manager : Mark Wilson
Reported : 10/24/02

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. Perry

Columbia Analytical Services, Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2213821

Lab ID	Client ID
586332	EFF-9-20-02

All samples were received in good condition.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

Columbia Analytical Services INC.
An Employee - Owned Company

ACCREDITED IN ACCORDANCE WITH nelac

QUALITY ETHICS SERVICE
ACL Environmental Sciences

Effective 6/18/2002

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/24/02

URS Corporation
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-9-20-02

Date Sampled : 09/20/02 **Order #:** 586332 **Sample Matrix:** WATER
Date Received: 09/20/02 **Submission #:** R2213821 **Analytical Run** 83358

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/03/02			
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	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	(83 - 118 %)	92	%
TOLUENE-D8	(91 - 113 %)	105	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	93	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/24/02

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 590103 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 83358

DATE ANALYZED : 10/03/02
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	(83 - 118 %)	95	%
TOLUENE-D8	(91 - 113 %)	104	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	96	%

Analytical Services
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

SR #

CAS Contact

Project Name: Griffin IRM	Project Number:
Project Manager: Ken Armstrong	Report CC: Catherine Palko
Company/Address: URS 634 St. Clair Cleveland Ohio	
Phone #: (216) 622-2400	FAX#: (216) 622-0123
Sampler's Signature:	Sampler's Printed Name:

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)
- VOC's by USEPA-CLP

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	NUMBER OF CONTAINERS	VOC's by USEPA-CLP	REMARKS/ ALTERNATE DESCRIPTION
EFF-9-20-02	586332	9-20-02	08:55	WATER	3	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:
R22-13821
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Bob Fabian	Signature: Heather Lanning	Signature:	Signature:	Signature:	Signature:
Printed Name: Bob Fabian	Printed Name: Heather Lanning	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: URS	Firm: CAS	Firm:	Firm:	Firm:	Firm:
Date/Time: 9-20-02 09:37	Date/Time: 9/20/02 937	Date/Time:	Date/Time:	Date/Time:	Date/Time:

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

SCOC-0402-40

Co[illegible] Receipt And Preservation Check Fo[illegible]

Project/Client WCCA Submission Number R2-13821

Cooler received on 9/20/02 by: DL 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:	8				
	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:	9/20/02			9:40	

Thermometer ID: 161 or IR GUN Reading From: Temp Blank or Sample Bottle

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 9/20/02 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:

Columbia Analytical Services Inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

November 6, 2002

RECEIVED
NOV 12 2002
URS

Mr. Ken Armstrong
URS Corporation
1382 West 9th Street
Suite 100
Cleveland, OH 44113

PROJECT:GRIFFIN IRM
Submission #:R2214222

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 (585) 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:(585)288-5380 • Fax:(585)288-8475

Columbia Analytical Services, Inc.
1 Mustard ST.
Suite 250
Rochester, NY 14609
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM
Lab Submission # : R2214222
Project Manager : Mark Wilson
Reported : 11/06/02

Report Contains a total of 7 pages

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

Columbia Analytical Services Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2214222

Lab ID	Client ID
593115	EFF-10-14-02

All samples were received in good condition.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

Columbia Analytical Services INC.
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ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL 2002 Seal of Excellence Program Environmental

Effective 11/4/2002

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 11/06/02

URS Corporation
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-10-14-02

Date Sampled : 10/14/02 12:50 **Order #:** 593115 **Sample Matrix:** WATER
Date Received: 10/14/02 **Submission #:** R2214222 **Analytical Run** 84595

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/22/02			
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	270	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	(83 - 118 %)	103	%
TOLUENE-D8	(91 - 113 %)	105	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 11/06/02

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 598576 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 84595

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/22/02			
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	(83 - 118 %)	103	%
TOLUENE-D8	(91 - 113 %)	105	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	103	%

[redacted] Analytical Services INC.
An Employee-Owned Company

[redacted] Mustard St., Suite 250, Rochester, NY 14609-6925
[redacted] (716) [redacted]880 • FAX (716) 288-8475

CHAIN OF [redacted]STODY/LA[redacted]ORA[redacted]RY ANALYSIS REQUEST FORM

DATE 10-14-02 PAGE 1 OF 1

PROJECT NAME Griffin IRM

PROJECT MANAGER/CONTACT Ken Armstrong

COMPANY/ADDRESS URS

634 St. Clair, Cleveland Ohio 44113

TEL (216) 622-2400 FAX (216) 622-0123

SAMPLER'S SIGNATURE Bob Fabian

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)	Voc's by USEPA-CLP	PRESERVATION pH < 2.0	pH > 12	Other
EFF-10-14-02	10-14-02	12:50		WATER	3											X			

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm URS
Date/Time 10-14-02 13:45

RECEIVED BY:
Signature [redacted]
Printed Name [redacted]
Firm CAS
Date/Time 10/14/02 1345

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

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

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

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

SAMPLE RECEIPT:
Shipping Via:
Shipping #:
Temperature:
Submission No: 14222

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

Cooler Receipt And Preservation Check Form

Project/Client WCC4 Submission Number 14222

Cooler received on 10/14/02 by NP 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:	6°				
	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: 10/14/02 ~~1402~~ 1345

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 10/14/02 by: BK

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			
	<2 11/7/02.		

Other Comments:

Columbia Analytical Services Inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

December 11, 2002

RECEIVED
DEC 18 2002
URS

Mr. Ken Armstrong
URS Corporation
800 West St. Claire Ave.
Suite 500
Cleveland, OH 44113

PROJECT:GRIFFIN IRM
Submission #:R2214621

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 (585) 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:(585)288-5380 • Fax:(585)288-8475

Columbia Analytical Services Inc.

1 Mustard ST.
Suite 250
Rochester, NY 14609
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM
Lab Submission # : R2214621
Project Manager : Mark Wilson
Reported : 12/11/02

Report Contains a total of 8 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. Perry

Columbia Analytical Services, Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2214621

Lab ID	Client ID
600805	EFF-11-11-02

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

Columbia Analytical Services, Inc.
An Employee-Owned Company

APPENDIX J
PROJECT MANAGER REPORT REVIEW CHECKLIST

Submission Number: _____

Yes	No	NA		
☐	☐	☐	1.	Is the client specific information correct? - copies to correct individuals - results match previously faxed data - meets client requirements: correct methods, reporting limits, hold times - report matches info on C-O-C: receipt date, sample collection date/time/location
☐	☐	☐	2.	Are all results appropriately reported? - results , analytical dates, QC data (if applicable) are present - correct significant figures - Units correct for the matrix - Data qualifiers correct - Validity check ie: TKN vs. NH3, total vs. soluble
☐	☐	☐	3.	Is report complete and all NCARs, QC outliers reported in Case Narrative and copied to QA as appropriate? - Documentation included? – Field forms, COCs, etc. - Copies of Non-Conformities copied to QA. - VOA pH check section of the CRPF completed - LCS/MS recovery limits pulled correctly from STARLIMS - All applicable sections of the report included. Correct sequence. (see ADM-RG) -All subcontracted results clearly indicated by subcontractor name or accreditation number. - Missed holding times appropriately mentioned in the case narrative or cover letter. - Sample acceptance discrepancies are appropriately mentioned in the case narrative.
☐	☐	☐	4.	If CAS collected the sample, is the sampling procedure mentioned in the case narrative?

Project Manager:_____ Date of Report Review_____

Columbia Analytical Services INC.
An Employee - Owned Company

Effective 11/4/2002

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 12/11/02

URS Corporation
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-11-11-02

Date Sampled : 11/11/02 **Order #:** 600805 **Sample Matrix:** WATER
Date Received: 11/11/02 **Submission #:** R2214621 **Analytical Run** 85344

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/21/02			
ANALYTICAL DILUTION: 2.00			
ACETONE	20	40 U	UG/L
BENZENE	5.0	10 U	UG/L
BROMODICHLOROMETHANE	5.0	10 U	UG/L
BROMOFORM	5.0	10 U	UG/L
BROMOMETHANE	5.0	10 U	UG/L
2-BUTANONE (MEK)	10	20 U	UG/L
CARBON DISULFIDE	10	20 U	UG/L
CARBON TETRACHLORIDE	5.0	10 U	UG/L
CHLOROBENZENE	5.0	10 U	UG/L
CHLOROETHANE	5.0	10 U	UG/L
CHLOROFORM	5.0	10 U	UG/L
CHLOROMETHANE	5.0	10 U	UG/L
DIBROMOCHLOROMETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHANE	5.0	10 U	UG/L
1,2-DICHLOROETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHENE	5.0	10 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/L
1,2-DICHLOROPROPANE	5.0	10 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/L
ETHYLBENZENE	5.0	10 U	UG/L
2-HEXANONE	10	20 U	UG/L
METHYLENE CHLORIDE	5.0	10 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/L
STYRENE	5.0	10 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/L
TETRACHLOROETHENE	5.0	10 U	UG/L
TOLUENE	5.0	10 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/L
TRICHLOROETHENE	5.0	230	UG/L
VINYL CHLORIDE	5.0	10 U	UG/L
O-XYLENE	5.0	10 U	UG/L
M+P-XYLENE	5.0	10 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(83 - 118 %)	106	%
TOLUENE-D8	(91 - 113 %)	105	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 12/11/02

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 603854 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 85344

DATE ANALYZED : 11/21/02
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	(83 - 118 %)	105	%
TOLUENE-D8	(91 - 113 %)	99	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	102	%

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

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE 11-11-02 PAGE 1 OF 1

PROJECT NAME Griffin IRM

PROJECT MANAGER/CONTACT Ken Armstrong

COMPANY/ADDRESS URS

634 St. Clair, Cleveland, Ohio 44113

TEL (216) 622-2400 FAX (216) 622-2464

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)	Vocs by USEPA-CLP	PRESERVATIO pH < 2.0	pH > 12	Other
EFF-11-11-02	11-11-02	10:50		WATER	3											X			

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm URS
Date/Time 11-11-02 11:35

RECEIVED BY:
Signature
Printed Name Gregory O. Esmerian
Firm CAS
Date/Time 11-11-02 11:35

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

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

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

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

SAMPLE RECEIPT:
Shipping Via:
Shipping #:
Temperature:
Submission No: 22/14621

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

Cooler Receipt And Preservation Check Form

Project/Client URS Submission Number R2-14621

Cooler received on 11-11-02 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:	4°				
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 11-11-02 @ 11:35

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 11-12-02 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				
	911 [illegible] 12/11/02			

Other Comments:

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

January 17, 2003

Mr. Ken Armstrong
URS Corporation
800 West St. Claire Ave.
Suite 500
Cleveland, OH 44113

PROJECT:GRIFFIN IRM
Submission #:R2215114

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 (585) 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
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM
Lab Submission # : R2215114
Project Manager : Mark Wilson
Reported : 01/17/03

Report Contains a total of 7 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

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

Columbia Analytical Services Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2215114

Lab ID	Client ID
610197	EFF-12-19-02

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

Columbia Analytical Services INC.
An Employee - Owned Company

ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL 2002 SEAL OF EXCELLENCE PROGRAM Environmental

Effective 11/4/2002

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/17/03

URS Corporation
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-12-19-02

Date Sampled : 12/19/02 **Order #:** 610197 **Sample Matrix:** WATER
Date Received: 12/19/02 **Submission #:** R2215114 **Analytical Run** 86948

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/31/02			
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	260	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	(83 - 118 %)	98	%
TOLUENE-D8	(91 - 113 %)	96	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/17/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled :
Date Received:
Order #: 615079
Submission #:
Sample Matrix: WATER
Analytical Run 86948

DATE ANALYZED : 12/31/02
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 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
1,2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,4-DICHLOROBENZENE	5.0	5.0 U	UG/L
1,3-DICHLOROBENZENE	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
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
METHYLENE CHLORIDE	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
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

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(83 - 118 %)	100	%
TOLUENE-D8	(91 - 113 %)	100	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	98	%

Analytical Services Inc.
An Employee-Owned Company

[redacted] Howard St., Suite 250, Rochester, NY 14609-6925 [redacted] 716) [redacted] 380 [redacted] 716) [redacted] 475 [redacted]

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE 12-19-02 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)

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)	VOC's by USEPA-CLP							PRESERVATIO		
																							pH < 2.0	pH > 12	Other
EFF-12-19-02	12-19-02	14:35		WATER	3											X									

RELINQUISHED BY:
Signature Bob Fabian
Printed Name Bob Fabian
Firm URS
Date/Time 12-19-02 15:30

RECEIVED BY:
Signature Kelly M. Cook
Printed Name K. Cook
Firm ES
Date/Time 12/19/02 1530

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

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

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

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

SAMPLE RECEIPT:
Shipping Via:
Shipping #:
Temperature:
Submission No: 15114

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

Cooler Receipt And Preservation Check Form

Project/Client WCC4 Submission Number 15114

Cooler received on 12/19/02 by: YMY 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:	1°C				
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 12/19/02 1530

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 12/20/02 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

February 14, 2003

Mr. Ken Armstrong
URS Corporation
800 West St. Claire Ave.
Suite 500
Cleveland, OH 44113

PROJECT:GRIFFIN IRM
Submission #:R2315436

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 (585) 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
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM
Lab Submission # : R2315436
Project Manager : Mark Wilson
Reported : 02/14/03

Report Contains a total of 2 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 Perry

Columbia Analytical Services Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2315436

Lab ID	Client ID
615632	EFF-1-20-03

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

Columbia Analytical Services INC.
An Employee - Owned Company

ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL Environmental

Effective 11/4/2002

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 02/14/03

URS Corporation
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-1-20-03

Date Sampled : 01/20/03 **Order #:** 615632 **Sample Matrix:** WATER
Date Received: 01/20/03 **Submission #:** R2315436 **Analytical Run** 87732

DATE ANALYZED : 01/23/03
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	240	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	(83 - 118 %)	101	%
TOLUENE-D8	(91 - 113 %)	102	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	105	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 02/14/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 619764 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 87732

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 01/23/03			
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	(83 - 118 %)	101	%
TOLUENE-D8	(91 - 113 %)	103	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	103	%

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

SR #

CAS Contact

Project Name: Griffin IRM	Project Number: ~~10-000~~ 13807296.00000
Project Manager: Ken Armstrong	Report CC: Catherine Palko
Company/Address: URS 634 St. Clair Cleveland, Ohio 44113	
Phone #: (216)622-2400	FAX#: (216) 622-2464
Sampler's Signature: Bob Fabian	Sampler's Printed Name: Bob 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)
- VOC's by USEPA - CLP

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 _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	VOC's by USEPA - CLP	REMARKS/ ALTERNATE DESCRIPTION
EFF-1-20-03	415632	1-20-03	14:45	WATER	3	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:
R22-15436
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Bob Fabian	Signature: Heather Gregory	Signature	Signature	Signature	Signature
Printed Name: Bob Fabian	Printed Name: Heather Lovejoy	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 01-20-03 15:25	Date/Time: 1/20/03 1525	Date/Time	Date/Time	Date/Time	Date/Time

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

SCOC-0402-40

Cooler Receipt And Preservation Check Form

Project/Client URS Submission Number 22-15436.

Cooler received on 1/20/03 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:	3°			
	Is the temperature within 0° - 6° C?:	Yes	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 1/20/03 1530

Thermometer ID: 161 or IR GUN Reading From: Temp Blank or Sample Bottle

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 1/21/03 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:

Columbia Analytical Services Inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

RECEIVED
MAR 07 2003
URS

March 3, 2003

Mr. Ken Armstrong
URS Corporation
800 West St. Claire Ave.
Suite 500
Cleveland, OH 44113

PROJECT:GRIFFIN IRM
Submission #:R2315707

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 (585) 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
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM
Lab Submission # : R2315707
Project Manager : Mark Wilson
Reported : 03/03/03

Report Contains a total of 8 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. Perry

Columbia Analytical Services Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2315707

Lab ID	Client ID
619875	EFF-2-12-03

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

Columbia Analytical Services INC.
An Employee - Owned Company

ACCREDITED IN ACCORDANCE WITH nelac

Ethics service Quality ACIL 2002 Seal of Excellence Program Environmental

Effective 11/4/2002

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

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

URS Corporation
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-2-12-03

Date Sampled : 02/12/03 **Order #:** 619875 **Sample Matrix:** WATER
Date Received: 02/12/03 **Submission #:** R2315707 **Analytical Run** 88097

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 02/21/03			
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	240	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	(83 - 118 %)	102	%
TOLUENE-D8	(91 - 113 %)	106	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	95	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 622553 ANALYTICAL RUN # : 88097

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 02/21/03			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	94	50 - 150
BENZENE	20.0	96	70 - 130
BROMODICHLOROMETHANE	20.0	99	70 - 130
BROMOFORM	20.0	97	70 - 130
BROMOMETHANE	20.0	118	50 - 150
2-BUTANONE (MEK)	20.0	90	50 - 150
CARBON DISULFIDE	20.0	106	70 - 130
CARBON TETRACHLORIDE	20.0	89	70 - 130
CHLOROBENZENE	20.0	97	70 - 130
CHLOROETHANE	20.0	96	70 - 130
CHLOROFORM	20.0	98	70 - 130
CHLOROMETHANE	20.0	97	70 - 130
DIBROMOCHLOROMETHANE	20.0	99	70 - 130
1,1-DICHLOROETHANE	20.0	101	70 - 130
1,2-DICHLOROETHANE	20.0	93	70 - 130
1,1-DICHLOROETHENE	20.0	91	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	99	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	92	70 - 130
1,2-DICHLOROPROPANE	20.0	100	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	106	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	103	70 - 130
ETHYLBENZENE	20.0	96	70 - 130
2-HEXANONE	20.0	92	70 - 130
METHYLENE CHLORIDE	20.0	97	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	97	70 - 130
STYRENE	20.0	100	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	100	70 - 130
TETRACHLOROETHENE	20.0	91	70 - 130
TOLUENE	20.0	97	70 - 130
1,1,1-TRICHLOROETHANE	20.0	87	70 - 130
1,1,2-TRICHLOROETHANE	20.0	100	70 - 130
TRICHLOROETHENE	20.0	91	70 - 130
VINYL CHLORIDE	20.0	97	70 - 130
O-XYLENE	20.0	96	70 - 130
M+P-XYLENE	40.0	97	70 - 130

COLUMBIA ANALYTICAL SERVICES

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

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 622552 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 88097

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 02/21/03			
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	(83 - 118 %)	99	%
TOLUENE-D8	(91 - 113 %)	104	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	98	%

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

Analytical Services, Inc.
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CAS Contact

Project Name: Griffin IRM	Project Number: ~~10-00~~ 13807296.00000
Project Manager: Ken Armstrong	Report CC: Catherine Palko
Company/Address: URS 634 St. Clair Cleveland, Ohio 44113	
Phone #: (216) 622-2400	FAX#: (216) 622-2464
Sampler's Signature:	Sampler's Printed Name:

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

PRESERVATIVE

NUMBER OF CONTAINERS

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	Vocs by USEPA CLP	REMARKS/ ALTERNATE DESCRIPTION
EFF-2-12-03		2-12-03	13:45	WATER	3	X	

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 _____

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 ☐ VOA's ☐ METALS ☐ SVOA's ☐ H/P
WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.
METALS, TOTAL (List in comments below)
METALS, DISSOLVED (List in comments below)

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:
SUBMISSION #: 15707

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Bob Fabian	Signature: Heather Lovejoy	Signature:	Signature:	Signature:	Signature:
Printed Name: Bob Fabian	Printed Name: Heather Lovejoy	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: URS	Firm: CAS	Firm:	Firm:	Firm:	Firm:
Date/Time: 2-12-03 14:40	Date/Time: 2/12/03 1440	Date/Time:	Date/Time:	Date/Time:	Date/Time:

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

SCOC-0101-08

Cooler Receipt And Preservation Check Form

Project/Client UES Submission Number 02-15707

Cooler received on 2/12/03 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:	5°				
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 2/12/03 1440

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 2-13-03 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:

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

March 31, 2003

Mr. Ken Armstrong
URS Corporation
800 West St. Claire Ave.
Suite 500
Cleveland, OH 44113

PROJECT:GRIFFIN IRM
Submission #:R2316058

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 (585) 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
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM
Lab Submission # : R2316058
Project Manager : Mark Wilson
Reported : 03/31/03

Report Contains a total of 8 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. Perry

Columbia Analytical Services Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2316058

Lab ID	Client ID
625948	EFF-3-14-03

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

Columbia Analytical Services INC.
An Employee - Owned Company

ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL 2002 Seal of Excellence Program Environmental

Effective 11/4/2002

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 03/31/03

URS Corporation
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-3-14-03

Date Sampled : 03/14/03 **Order #:** 625948 **Sample Matrix:** WATER
Date Received: 03/14/03 **Submission #:** R2316058 **Analytical Run** 88723

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 03/18/03			
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	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	(83 - 118 %)	104	%
TOLUENE-D8	(91 - 113 %)	106	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 626697 ANALYTICAL RUN # : 88723

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 03/18/03			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	90	50 - 150
BENZENE	20.0	98	70 - 130
BROMODICHLOROMETHANE	20.0	95	70 - 130
BROMOFORM	20.0	98	70 - 130
BROMOMETHANE	20.0	104	50 - 150
2-BUTANONE (MEK)	20.0	98	50 - 150
CARBON DISULFIDE	20.0	95	70 - 130
CARBON TETRACHLORIDE	20.0	97	70 - 130
CHLOROBENZENE	20.0	96	70 - 130
CHLOROETHANE	20.0	92	70 - 130
CHLOROFORM	20.0	96	70 - 130
CHLOROMETHANE	20.0	97	70 - 130
DIBROMOCHLOROMETHANE	20.0	91	70 - 130
1,1-DICHLOROETHANE	20.0	97	70 - 130
1,2-DICHLOROETHANE	20.0	82	70 - 130
1,1-DICHLOROETHENE	20.0	105	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	98	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	95	70 - 130
1,2-DICHLOROPROPANE	20.0	92	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	99	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	95	70 - 130
ETHYLBENZENE	20.0	104	70 - 130
2-HEXANONE	20.0	100	70 - 130
METHYLENE CHLORIDE	20.0	96	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	101	70 - 130
STYRENE	20.0	101	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	97	70 - 130
TETRACHLOROETHENE	20.0	105	70 - 130
TOLUENE	20.0	102	70 - 130
1,1,1-TRICHLOROETHANE	20.0	94	70 - 130
1,1,2-TRICHLOROETHANE	20.0	94	70 - 130
TRICHLOROETHENE	20.0	100	70 - 130
VINYL CHLORIDE	20.0	94	70 - 130
O-XYLENE	20.0	100	70 - 130
M+P-XYLENE	40.0	101	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 03/31/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 626696 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 88723

DATE ANALYZED : 03/18/03
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	(83 - 118 %)	102	%
TOLUENE-D8	(91 - 113 %)	107	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	102	%

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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SR # [redacted]

CAS Contact

Project Name: Griffin IRM	Project Number: 13807296.00000
Project Manager: Ken Armstrong	Report CC: Catherine Palko
Company/Address: URS 634 St. Clair Cleveland, Ohio 44113	
Phone #: (216) 622-2400	FAX#: (216) 622-2464
Sampler's Signature: Bob Fabian	Sampler's Printed Name: Bob Fabian

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	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)	Voc's by USEPA-CLP	REMARKS/ ALTERNATE DESCRIPTION
EFF-3-14-03	625948	3-14-03	11:15	WATER	3											X	

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 _____

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:
SUBMISSION #: R2316058

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Bob Fabian	Kelly M. Cook				
Signature: Bob Fabian	Signature: K Cook	Signature	Signature	Signature	Signature
Printed Name: URS	Printed Name: CAS	Printed Name	Printed Name	Printed Name	Printed Name
Firm	Firm	Firm	Firm	Firm	Firm
3-14-03 12:10	3/14/03 1210	Date/Time	Date/Time	Date/Time	Date/Time

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

SCOC-0101-08

Cooler Receipt And Preservation Check Form

Project/Client WCC Submission Number 16058

Cooler received on 3/14/03 by: KMC 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:	3C			
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 3/14/03 1210

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 3/14/03 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

April 30, 2003

Mr. Ken Armstrong
URS Corporation
800 West St. Claire Ave.
Suite 500
Cleveland, OH 44113

PROJECT:GRIFFIN IRM 13807296.00000
Submission #:R2316509

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 (585) 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:(585)288-5380 • Fax:(585)288-8475

Columbia Analytical Services Inc.

1 Mustard ST.
Suite 250
Rochester, NY 14609
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM 13807296.00000
Lab Submission # : R2316509
Project Manager : Mark Wilson
Reported : 04/30/03

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 Perry

Columbia Analytical Services Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2316509

Lab ID	Client ID
633661	EFF-04-17-03

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

Columbia Analytical Services INC.

An Employee - Owned Company

ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL 2002 Seal of Excellence Program Environmental

Effective 11/4/2002

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 04/30/03

URS Corporation
Project Reference: GRIFFIN IRM 13807296.00000
Client Sample ID : EFF-04-17-03

Date Sampled : 04/17/03 **Order #:** 633661 **Sample Matrix:** WATER
Date Received: 04/17/03 **Submission #:** R2316509 **Analytical Run** 90127

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 04/29/03			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	8.4	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	25	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	(83 - 118 %)	99	%
TOLUENE-D8	(91 - 113 %)	104	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	97	%

Cooler Receipt And Preservation Check Form

Project/Client WCC4 Submission Number 46BC16509

Cooler received on 4/17/03 by: BC 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:	15°			
	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: 4/17/03 1140

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 4/18/03 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 3, 2003

RECEIVED
JUN - 9 2003

Ms. Catherine Palko
URS Corporation
800 West St. Claire Ave.
Suite 500
Cleveland, OH 44113

PROJECT:GRIFFIN IRM 13807296.00000
Submission #:R2316868

Dear Ms. Palko

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 (585) 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
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client	: URS Corporation
Project Reference	: GRIFFIN IRM 13807296.00000
Lab Submission #	: R2316868
Project Manager	: Mark Wilson
Reported	: 05/29/03

Report Contains a total of 2 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

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

Columbia Analytical Services, Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2316868

Lab ID	Client ID
641115	EFF-05-14-03

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

Columbia Analytical Services INC.
An Employee - Owned Company

ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL 2002 Seal of Excellence Program Environmental

Effective 11/4/2002

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 05/29/03

URS Corporation
Project Reference: GRIFFIN IRM 13807296.00000
Client Sample ID : EFF-05-14-03

Date Sampled : 05/13/03 **Order #:** 641115 **Sample Matrix:** WATER
Date Received: 05/14/03 **Submission #:** R2316868 **Analytical Run** 91077

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/21/03			
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	65	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	(83 - 118 %)	108	%
TOLUENE-D8	(91 - 113 %)	102	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	105	%

COLUMBIA ANALYTICAL SER..CES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 05/29/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 642747 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 91077

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/21/03			
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	(83 - 118 %)	105	%
TOLUENE-D8	(91 - 113 %)	101	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	103	%

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

Con[redacted]a Analytical Services INC.
An Employee - Owned Company
www.caslab.com

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

PAGE 1 OF 1

SR # [redacted]

CAS Contact [redacted]

Project Name: Griffin	Project Number: 13807296.00000
Project Manager: Larry	Report CC: Catherine Palko
Company/Address: URS 634 St. Clair Cleveland, OH 44113	
Phone #: (216) 622-2400	FAX#: (216) 6222464
Sampler's Signature: [signature]	Sampler's Printed Name: Melissa Nemeth

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

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	VOC's – EPA CLP	HCl	REMARKS/ ALTERNATE DESCRIPTION
EFF-05-14-03		5-13-03	8:45	W	3									X		

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 _____

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. Specialized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #: 16868

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Melissa Nemeth	Printed Name: Gregory O. Esmerian	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS Buffalo	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 5-14-03 9:20	Date/Time: 5/14/03 9:20	Date/Time	Date/Time	Date/Time	Date/Time

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

SCOC-1102-08

Cooler Receipt And Preservation Check Form

Project/Client UES Submission Number RA-16868

Cooler received on 5/14/03 by: ND 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:	4°			
	Is the temperature within 0° - 6° C?:	Yes	Yes	Yes	Yes	Yes
	If No, Explain Below	(No)	No	No	No	No

Date/Time Temperatures Taken: 5/14/03 925

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 5-14-03 by: KE

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 9, 2003

RECEIVED
JUN 12 2003
URS

Ms. Catherine Palko
URS Corporation
800 West St. Claire Ave.
Suite 500
Cleveland, OH 44113

PROJECT:GRIFFIN IRM
Submission #:R2316890

Dear Ms. Palko

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 (585) 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
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN IRM
Lab Submission # : R2316890
Project Manager : Mark Wilson
Reported : 05/28/03

Report Contains a total of 1 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

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

Columbia Analytical Services, Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2316890

Lab ID	Client ID
641471	EFF-5-15-03

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

Columbia Analytical Services INC.

An Employee - Owned Company

Effective 11/4/2002

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 05/28/03

URS Corporation
Project Reference: GRIFFIN IRM
Client Sample ID : EFF-5-15-03

Date Sampled : 05/15/03 **Order #:** 641471 **Sample Matrix:** WATER
Date Received: 05/15/03 **Submission #:** R2316890 **Analytical Run** 91075

DATE ANALYZED : 05/21/03
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	100	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	(83 - 118 %)	108	%
TOLUENE-D8	(91 - 113 %)	101	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 642741 ANALYTICAL RUN # : 91075

DATE ANALYZED : 05/21/03
ANALYTICAL DILUTION: 1.0

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
ACETONE	20.0	96	50 - 150
BENZENE	20.0	84	70 - 130
BROMODICHLOROMETHANE	20.0	88	70 - 130
BROMOFORM	20.0	78	70 - 130
BROMOMETHANE	20.0	96	50 - 150
2-BUTANONE (MEK)	20.0	90	50 - 150
CARBON DISULFIDE	20.0	122	70 - 130
CARBON TETRACHLORIDE	20.0	84	70 - 130
CHLOROBENZENE	20.0	84	70 - 130
CHLOROETHANE	20.0	94	70 - 130
CHLOROFORM	20.0	94	70 - 130
CHLOROMETHANE	20.0	100	70 - 130
DIBROMOCHLOROMETHANE	20.0	82	70 - 130
1,1-DICHLOROETHANE	20.0	90	70 - 130
1,2-DICHLOROETHANE	20.0	92	70 - 130
1,1-DICHLOROETHENE	20.0	88	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	87	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	83	70 - 130
1,2-DICHLOROPROPANE	20.0	86	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	94	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	92	70 - 130
ETHYLBENZENE	20.0	82	70 - 130
2-HEXANONE	20.0	99	70 - 130
METHYLENE CHLORIDE	20.0	89	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	92	70 - 130
STYRENE	20.0	84	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	85	70 - 130
TETRACHLOROETHENE	20.0	77	70 - 130
TOLUENE	20.0	82	70 - 130
1,1,1-TRICHLOROETHANE	20.0	80	70 - 130
1,1,2-TRICHLOROETHANE	20.0	86	70 - 130
TRICHLOROETHENE	20.0	81	70 - 130
VINYL CHLORIDE	20.0	93	70 - 130
O-XYLENE	20.0	83	70 - 130
M+P-XYLENE	40.0	79	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 05/28/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 642739 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 91075

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/21/03			
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	(83 - 118 %)	105	%
TOLUENE-D8	(91 - 113 %)	101	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	103	%

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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

SR #

CAS Contact

Project Name: Griffin	Project Number: 13807296.00000
Project Manager: Larry	Report CC: Catherine Palko
Company/Address: URS 634 St. Clair Cleveland OH 44113	
Phone #: (216) 622-2400	FAX#: (216) 622-2464
Sampler's Signature: Melissa Nemeth	Sampler's Printed Name: MELISSA NEMETH

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

PRESERVATIVE: HCl

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	VOC's - EPA CLP	REMARKS/ ALTERNATE DESCRIPTION
EFF-5-15-03		5.15.03	1330	W	3	X	

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 _____

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)

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:
SUBMISSION #: 16890

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Melissa Nemeth	Signature: Brian Collier	Signature	Signature	Signature	Signature
Printed Name: Melissa Nemeth	Printed Name: Brian Collier	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 5.15.03 1405	Date/Time: 5/15/03 1405	Date/Time	Date/Time	Date/Time	Date/Time

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

SCOC-0402-40

Columbia Analytical Services, Inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

July 17, 2003

Mr. Larry Szuhay
URS Corporation
800 West St. Claire Ave.
Suite 500
Cleveland, OH 44113

PROJECT:GRIFFIN 13807296.00000
Submission #:R2317294

Dear Mr. Szuhay

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 (585) 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
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client	: URS Corporation
Project Reference	: GRIFFIN 13807296.00000
Lab Submission #	: R2317294
Project Manager	: Mark Wilson
Reported	: 07/17/03

Report Contains a total of 10 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. Perry

Columbia Analytical Services Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2317294

Lab ID	Client ID
649977	EFF-061803

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

1A

EI SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

EFF-061803

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649977 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0447.D

Level: (low/med) LOW Date Received: 06/19/03

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	78	
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFF-061803

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 649977 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0447.D

Level: (low/med) LOW Date Received: 06/19/03

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EP. AMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK03

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655804

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0443.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK03

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655804

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0443.D

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

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VBLK01	105	101	92	0
02	VBLK01MS	105	100	90	0
03	MW9S-603	111	99	89	0
04	MW10S-603	112	100	89	0
05	MW10D-603	113	99	89	0
06	VBLK02	102	100	86	0
07	VBLK02MS	101	102	87	0
08	MW9D-603	101	101	89	0
09	MW1-603	101	100	86	0
10	MW2S-603	103	101	86	0
11	MW3-603	104	99	86	0
12	VBLK03	84	106	98	0
13	VBLK03MS	85	106	97	0
14	MW11D-603	84	106	98	0
15	MWY(DUP)-6	84	105	95	0
16	EFF-061803	86	106	97	0
17	TRIP BLANK	86	105	96	0

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

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 1 OF 2

SR # [redacted]

CAS Contact [redacted]

Project Name: GRIFFITH	Project Number: 13807296.00000
Project Manager: LARRY SWANEY	Report CC: Catherine Palko
Company/Address: URS CORPORATION, 800 E. St. Clair, Cleveland, OH 44113	
Phone #: (216) 622-2400	FAX#: (216) 622-2464
Sampler's Signature: [signature]	Sampler's Printed Name: CHUCK SIEGEL

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: HCl

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 _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	95-1	REMARKS/ ALTERNATE DESCRIPTION
MW9S-603	64969	6.18.03	1155	GW	3								X	
MW9D-603	70		1145											
MW10S-603	71		1210											
MW10D-603	72		1201											
MW11D-603	73		1005											
~~MW13-603~~ M.N														
MWX (MS)-603	MW5D (83)		1012											
MWX (MSD)-603	↓ (83)		1013											
MWY (DUP)-603	74		1049	↓	↓									
FFF-061803	77	6.18.03		GW	3								↓	

SPECIAL INSTRUCTIONS/COMMENTS
Metals
MS/MSD ON MW5D
DUP ON MW3

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:
SUBMISSION #: 23/7294

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: MELISSA NEMETH	Printed Name: Heather Lukens	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS CORP	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 6/18/03 1325	Date/Time: 6/18/03 1325	Date/Time	Date/Time	Date/Time	Date/Time

SCOC-1102-08

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

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

PAGE 2 OF 2

CAS Contact

Project Name: GRIFFIN	Project Number: 13807296.00000
Project Manager: LARRY SZUHAY	Report CC: Catherine Falko
Company/Address: URS CORPORATION ~~834~~ 800 St. Clair Cleveland OH 44113	
Phone #: (216) 622-2464	FAX#: (216) 622-2464
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: HCl

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625 ☐CLP	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608 ☐CLP	PCB's ☐8082 ☐608 ☐CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	45-1	REMARKS/ ALTERNATE DESCRIPTION
MW1-603	649978	6.18.03	0950	GW	3								X	
MW2S-603	79		0940											
MW3-603	80		1047											
MW4-603	81		1036											
MW5S-603	82		1024											
MW5D-603	83		1014											
MW6S-603	84		1058											
MW6D-603	85		1108											
MW7S-603	86		1122											
MW7D-603	87		1116											

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 _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

6

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:
SUBMISSION #: 12317294

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: MELISSA NEMETH	Printed Name: Heather Lonergan	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS CORP	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 6/18/03 1325	Date/Time: 6/18/03 1325	Date/Time	Date/Time	Date/Time	Date/Time

SCOC-1102-08

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

Cooler Receipt And Preservation Check Form

Project/Client CRS Submission Number 17294.

Cooler received on 6/18/03 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: 6/18/03 ~~1325~~ ONLY 1335

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples Same day receipt - MW 6/18/03

Cooler Breakdown: Date: 6/19/03 by: [signature]

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.

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July 25, 2003

Mr. Larry Szuhay
URS Corporation
800 West St. Claire Ave.
Suite 500
Cleveland, OH 44113

PROJECT:GRIFFIN 13807296
Submission #:R2317618

Dear Mr. Szuhay

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 (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Michael K Perry

Mark Wilson
Client Service Manager

Enc.

Columbia Analytical Services Inc.

1 Mustard ST.
Suite 250
Rochester, NY 14609
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : URS Corporation
Project Reference: GRIFFIN 13807296
Lab Submission # : R2317618
Project Manager : Mark Wilson
Reported : 07/25/03

Report Contains a total of 7 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

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

Columbia Analytical Services Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2317618

Lab ID	Client ID
656048	EFF-071403

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

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Ethics Service Quality Environmental
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2002 SEAL OF EXCELLENCE PROGRAM

Effective 6/12/2003

INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- D - Spike was diluted out
- E - The reported value is estimated because of the presence of interference.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- * - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Pennsylvania Registration 68-786
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 07/25/03

URS Corporation
Project Reference: GRIFFIN 13807296
Client Sample ID : EFF-071403

Date Sampled : 07/14/03 **Order #:** 656048 **Sample Matrix:** WATER
Date Received: 07/14/03 **Submission #:** R2317618 **Analytical Run** 93433

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/16/03			
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	140	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	(83 - 118 %)	101	%
TOLUENE-D8	(91 - 113 %)	102	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	110	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 07/25/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 658754 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 93433

DATE ANALYZED : 07/16/03
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	(83 - 118 %)	102	%
TOLUENE-D8	(91 - 113 %)	99	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	105	%

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 1 OF 1

SR# [redacted]

CAS Contact

Project Name: GRIFFIN	Project Number: 1380796
Project Manager: LARRY SZUHAY	Report CC: Catherine Palko
Company/Address: URS Corp 800 St. Clair Cleveland OH 44113	
Phone #: 216 622 2400	FAX#: 216 622 2464
Sampler's Signature: [signature]	Sampler's Printed Name: MELISSA NEMETH

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

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	95-1	REMARKS/ ALTERNATE DESCRIPTION
EFF-071403		7.14.03	1603	GW	3									X	

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 _____

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:
SUBMISSION# 17618

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: MELISSA NEMETH	Printed Name: Bryan Gilson	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS Corp	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 7/14/03	Date/Time: 7/14/03 1645	Date/Time	Date/Time	Date/Time	Date/Time

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

SCOC-1102-08

Cooler Receipt And Preservation Check Form

Project/Client CRS Submission Number R2-17618.

Cooler received on 7/14/03 by: BC 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:	23°				
	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: 7/14/03 1650

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 7/14/03 by: _____

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

September 2, 2003

Mr. Larry Szuhay
URS Corporation
800 West St. Claire Ave.
Suite 500
Cleveland, OH 44113

RECEIVED
SEP - 8 2003
URS

PROJECT:GRIFFIN 13807296
Submission #:R2318043

Dear Mr. Szuhay

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 (585) 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
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client	: URS Corporation
Project Reference	: GRIFFIN 13807296
Lab Submission #	: R2318043
Project Manager	: Mark Wilson
Reported	: 09/02/03

Report Contains a total of 8 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

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

Columbia Analytical Services Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2318043

Lab ID	Client ID
664661	EFF-081503

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

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.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

Columbia Analytical Services INC.
An Employee - Owned Company

ACCREDITED IN ACCORDANCE WITH nelac

Effective 6/12/2003

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

* - This flag identifies compounds associated with a quality control parameter which exceeds laboratory limits.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Pennsylvania Registration 68-786
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 09/02/03

URS Corporation
Project Reference: GRIFFIN 13807296
Client Sample ID : EFF-081503

Date Sampled : 08/14/03 **Order #:** 664661 **Sample Matrix:** WATER
Date Received: 08/15/03 **Submission #:** R2318043 **Analytical Run** 94495

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 08/21/03			
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	110	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	(83 - 118 %)	105	%
TOLUENE-D8	(91 - 113 %)	112	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 665597 ANALYTICAL RUN # : 94495

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 08/20/03			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	107	50 - 150
BENZENE	20.0	101	70 - 130
BROMODICHLOROMETHANE	20.0	99	70 - 130
BROMOFORM	20.0	84	70 - 130
BROMOMETHANE	20.0	98	50 - 150
2-BUTANONE (MEK)	20.0	98	50 - 150
CARBON DISULFIDE	20.0	83	70 - 130
CARBON TETRACHLORIDE	20.0	96	70 - 130
CHLOROBENZENE	20.0	90	70 - 130
CHLOROETHANE	20.0	103	70 - 130
CHLOROFORM	20.0	97	70 - 130
CHLOROMETHANE	20.0	126	70 - 130
DIBROMOCHLOROMETHANE	20.0	91	70 - 130
1,1-DICHLOROETHANE	20.0	104	70 - 130
1,2-DICHLOROETHANE	20.0	98	70 - 130
1,1-DICHLOROETHENE	20.0	111	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	101	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	105	70 - 130
1,2-DICHLOROPROPANE	20.0	96	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	92	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	93	70 - 130
ETHYLBENZENE	20.0	95	70 - 130
2-HEXANONE	20.0	98	70 - 130
METHYLENE CHLORIDE	20.0	101	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	99	70 - 130
STYRENE	20.0	91	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	85	70 - 130
TETRACHLOROETHENE	20.0	89	70 - 130
TOLUENE	20.0	98	70 - 130
1,1,1-TRICHLOROETHANE	20.0	102	70 - 130
1,1,2-TRICHLOROETHANE	20.0	95	70 - 130
TRICHLOROETHENE	20.0	109	70 - 130
VINYL CHLORIDE	20.0	111	70 - 130
O-XYLENE	20.0	93	70 - 130
M+P-XYLENE	40.0	97	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 09/02/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 665596 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 94495

DATE ANALYZED : 08/21/03
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	(83 - 118 %)	102	%
TOLUENE-D8	(91 - 113 %)	111	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	108	%

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE 1 OF 1

SR [redacted]

CAS Contact

Project Name: GRIFFIN	Project Number: 13807296
Project Manager: LARRY SZUHAY	Report CC: CATHERINE PALKO
Company/Address: URS CORP 800 ST CLAIR CLEVELAND OH 44113	
Phone #: 216-622-2400	FAX#: 216-622-2464
Sampler's Signature: MELISSA NEMETH	Sampler's Printed Name: MELISSA NEMETH

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	95-1							REMARKS/ ALTERNATE DESCRIPTION
EFF-081503	[redacted]	8/14/03	1515	GW	3								3							

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 _____

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. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION#: 12318043

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: MELISSA NEMETH	Signature: Heather Lovejoy	Signature	Signature	Signature	Signature
Printed Name: MELISSA NEMETH	Printed Name: Heather Lovejoy	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS - BUFFALO	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 8/14/03	Date/Time: 8/15/03 1015	Date/Time	Date/Time	Date/Time	Date/Time

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

SCOC-1102-08

Cooler Receipt And Preservation Check Form

Project/Client URS Submission Number 180143.

Cooler received on 8/15/03 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:	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: 8/15/03 1615

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

Cooler Breakdown: Date: 8/18/03 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:

Appendix B
Monitoring Well Groundwater Analytical Results

1 Mustard Street, Suite 250 Rochester, NY 14609-6925 (585) 288-5380 (585) 288-8475 fax

Columbia Analytical Services INC.
An Employee - Owned Company

August 13, 2003

Ms. Peggy Schuler
URS Corporation
800 West St. Claire Avenue
Suite 500
Cleveland, OH 44113

PROJECT: GRIFFIN 13807296.00000
Submission #: R2317294

Dear Ms. Schuler:

Enclosed are the revised Form 1's and Case Narrative for the above referenced project. The date received has been corrected. Please insert these pages into the report package that was previously sent to you. I apologize for any inconvenience this may have caused. Should you have any questions please contact me at (585) 288-5380.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson
Client Service Manager

Enc.

Receipt date corrected —
8/19/03

CASE NARRATIVE

COMPANY: URS Greiner WCC
Griffin IRM
SUBMISSION #: R2217294

URS water samples were collected on 06/18/03 and received at CAS on 06/18/03 in good condition. See the CLP Batching Form for sample ID cross references.

VOLATILE ORGANICS

Water samples were analyzed for the Target Compound List (TCL) of Volatile Organics by Method 95-1 from the NYSASP 1995. Samples were received same day as collected at 11 degrees C.

Sample MW-5D was analyzed for site specific QC. All matrix spike recoveries were within QC limits. All RPD's were within limits.

All initial and continuing calibrations were compliant.

All blank spike recoveries were within QC limits.

All surrogate standard recoveries were within QC limits.

All Internal standard areas were within QC limits.

All samples were analyzed within the required holding times.

No additional analytical or QC problems were encountered with these analyses.

CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG #: MW9S-603
SUBMISSION R2317294
CLIENT: URS Corporation
CLIENT REP: Mark Wilson
PROJECT: GRIFFIN 13807296.00000

BATCH COMPLETE: __yes_____
DISKETTE REQUESTED: Y__X_ N____
DATE: 06/18/03
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:
DATE DUE: 07/12/03
PROTOCOL: ASPB
SHIPPING No.:
SUMMARY PKG: Y___X__ N

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH (SOLIDS)	% SOLIDS	REMARKS SAMPLE CONDITION
649969	MW9S-603	WATER	95-1	6/18/03	6/19/03			
649970	MW9D-603	WATER	95-1	6/18/03	6/19/03			
649971	MW10S-603	WATER	95-1	6/18/03	6/19/03			
649972	MW10D-603	WATER	95-1	6/18/03	6/19/03			
649973	MW11D-603	WATER	95-1	6/18/03	6/19/03			
649974	MWY(DUP)-603	WATER	95-1	6/18/03	6/19/03			
649977	EFF-061803	WATER	95-1	6/18/03	6/19/03			
649978	MW1-603	WATER	95-1	6/18/03	6/19/03			
649979	MW2S-603	WATER	95-1	6/18/03	6/19/03			
649980	MW3-603	WATER	95-1	6/18/03	6/19/03			
649981	MW4-603	WATER	95-1	6/18/03	6/19/03			
649982	MW5S-603	WATER	95-1	6/18/03	6/19/03			
649983	MW5D-603	WATER	QC 95-1	6/18/03	6/19/03			
649984	MW6S-603	WATER	95-1	6/18/03	6/19/03			
649985	MW6D-603	WATER	95-1	6/18/03	6/19/03			
649986	MW7S-603	WATER	95-1	6/18/03	6/19/03			
649987	MW7D-603	WATER	95-1	6/18/03	6/19/03			
650207	Trip Blank	"	95-1					
650209	Cooler Blank	"	95-1					

3

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Ethics Service Quality ACIL 2002 SEAL OF EXCELLENCE PROGRAM Environmental

Effective 6/12/2003

ORGANIC QUALIFIERS

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

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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 of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

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

X - As specified in Case Narrative.

* - This flag identifies compounds associated with a quality control parameter which exceeds laboratory limits.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
NELAP Accredited
New York ID # 10145
New Jersey ID # NY004
New Hampshire ID # 294100 A/B
Pennsylvania Registration 68-786
Rhode Island ID # 158
South Carolina ID #91012
West Virginia ID # 292

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PAGE 1 OF 2

SR #

CAS Contact

Project Name: GRIFFISS	Project Number: 13807296.00000
Project Manager: LARRY STONAY	Report CC: Catherine Palko
Company/Address: URS CORPORATION 800 ~~103~~ St. Clair Cleveland, OH 44113	
Phone #: (216) (622) 2400	FAX#: (216) 622-2464
Sampler's Signature: Chuck Siegel	Sampler's Printed Name: CHUCK SIEGEL

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

PRESERVATIVE: HCl

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 _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	95-1	REMARKS/ ALTERNATE DESCRIPTION
MW9S-603	649969	6.18.03	1155	GW	3								X	
MW9D-603	70		1145											
MW10S-603	71		1210											
MW10D-603	72		1201											
MW11D-603	73		1005											
~~MW13-603~~ M.N														
MWX (MS)-603	MW5D (83)		1012											
MWX (MSD)-603	↓ (83)		1013											
MWY (DUP)-603	74		1049	↓	↓									
FFF-061803	77	6.18.03		GW	3									

SPECIAL INSTRUCTIONS/COMMENTS

Metals

MS/MSD ON MW5D

DUP ON MW3

CT

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. Specialized Forms / Custom Report

Edata ____ Yes ____ No

INVOICE INFORMATION

PO#

BILL TO:

SUBMISSION #: 123729 4

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Melissa Nemeth	Signature: Ekaterina Lavrova	Signature	Signature	Signature	Signature
Printed Name: MELISSA NEMETH	Printed Name: Ekaterina Lavrova	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS Corp	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 6/18/03 1325	Date/Time: 6/18/03 1825	Date/Time	Date/Time	Date/Time	Date/Time

SCOC-1102-08

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

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PAGE 2 OF 2

SR #

CAS Contact

Project Name: GRIFFIN	Project Number: 13807296.00000
Project Manager: LARRY SZUHAY	Report CC: Catherine Falko
Company/Address: URS CORPORATION, ~~800~~ 534 St. Clair, Cleveland OH 44113	
Phone #: (216) 622-2400	FAX#: (216) 622-2464
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: HCl

NUMBER OF CONTAINERS

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	45-1	REMARKS/ ALTERNATE DESCRIPTION
MW1-603	649978	6-18-03	0950	GW	3	X	
MW2S-603	79		0940				
MW3-603	80		1047				
MW4-603	81		1036				
MW5S-603	82		1024				
MW5D-603	83		1014				
MW6S-603	84		1058				
MW6D-603	85		1108				
MW7S-603	86		1122				
MW7D-603	87		1116				

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

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 _____

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:
SUBMISSION #: 12317294

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: MELISSA KEMERY	Printed Name: Heather Lovejoy	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: URS CORP	Firm: CAS	Firm:	Firm:	Firm:	Firm:
Date/Time: 6/18/03 1325	Date/Time: 6/18/03 1325	Date/Time:	Date/Time:	Date/Time:	Date/Time:

SCOC-1102-08

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

Cooler Receipt And Preservation Check Form

Project/Client URS Submission Number 17294

Cooler received on 6/18/03 by: 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: 6/18/03 ~~1335~~ ENTRY 1335

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples Same day receipt - MW 6/18/03

Cooler Breakdown: Date: 6/19/03 by:

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:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649969 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0399.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW9S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649969 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0399.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649970 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0409.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	UJ
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	UJ
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	UJ

8/11/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW9D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649970 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0409.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW10S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649971 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0400.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW10S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649971 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0400.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW10D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649972 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0401.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	5	J
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW10D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649972 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0401.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW11D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649973 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0445.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	UJ
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

RK 8/4/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW11D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649973 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0445.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MWY(DUP)-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649974 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0446.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	56	
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	UJ
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MWY(DUP)-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649974 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0446.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFF-061803

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649977 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0447.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	78	
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	UJ
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

8/19/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFF-061803

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649977 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0447.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649978 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0410.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	UJ
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	UJ
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	UJ

PJ 8/19/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW1-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649978 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0410.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW2S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649979 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0411.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	4	J
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	UJ
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	UJ

8/13/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW2S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649979 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0411.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW3-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649980 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0412.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

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

74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	40	
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	UJ
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	UJ

8/19/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW3-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649980 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0412.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW4-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649981 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9771.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/27/03

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

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

CONCENTRATION UNITS:

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

74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	79	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

RJP 8/19/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW4-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649981 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9771.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/27/03

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

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW5S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649982 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9772.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	4	J
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	2	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	66	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

8/9-13

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW5S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649982 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9772.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW5D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649983 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9789.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	110	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW5D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649983 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9789.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW6S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649984 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9773.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	8	J
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

8/19/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW6S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649984 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9773.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW6D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649985 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9774.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	4	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	70	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

RH 8/19/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW6D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649985 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9774.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

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

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 007446-09-5	Sulfur dioxide	3.96	5	JN

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW7S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649986 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9775.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	2	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	2	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	130	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

8/19/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW7S-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649986 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9775.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW7D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649987 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9776.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

CONCENTRATION UNITS:

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

74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	2	J
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	16	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	120	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

8/19/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW7D-603

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 649987 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9776.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 650207 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0448.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	UJ
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	UJ
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

8/13/03

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 650207 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0448.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

COOLER BLK

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 650209 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9790.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

CONCENTRATION UNITS:

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

COOLER BLK

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 650209 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9790.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW5D-603MS

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 655970

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9769.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/27/03

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

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

CONCENTRATION UNITS:

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	49	
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	50	
79-01-6	Trichloroethene	160	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	48	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	49	
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW5D-603MSD

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-60

Matrix: (soil/water) WATER Lab Sample ID: 655971

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9770.D

Level: (low/med) LOW Date Received: 06/18/03

% Moisture: not dec. _____ Date Analyzed: 06/27/03

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

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	50	
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	49	
79-01-6	Trichloroethene	160	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	48	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	49	
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK01

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: B0397.D Lab Sample ID: 655795

Date Analyzed: 06/25/03 Time Analyzed: 12:55

GC Column: DB624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS#5

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLK01MS	655797	B0398.D	13:35
02	MW9S-603	649969 1.0	B0399.D	14:10
03	MW10S-603	649971 1.0	B0400.D	14:51
04	MW10D-603	649972 1.0	B0401.D	15:26

COMMENTS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655795

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0397.D

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

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655795

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0397.D

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

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK02

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: B0407.D Lab Sample ID: 655798

Date Analyzed: 06/25/03 Time Analyzed: 19:00

GC Column: DB624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS#5

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLK02MS	655799	B0408.D	19:35
02	MW9D-603	649970 1.0	B0409.D	20:11
03	MW1-603	649978 1.0	B0410.D	20:46
04	MW2S-603	649979 1.0	B0411.D	21:21
05	MW3-603	649980 1.0	B0412.D	21:57

COMMENTS

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK02

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655798

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0407.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

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

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK02

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655798

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0407.D

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

% Moisture: not dec. _____ Date Analyzed: 06/25/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK03

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: B0443.D Lab Sample ID: 655804

Date Analyzed: 06/26/03 Time Analyzed: 17:55

GC Column: DB624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS#5

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MW11D-603	649973 1.0	B0445.D	19:12
02	MWY(DUP)-603	649974 1.0	B0446.D	19:47
03	EFF-061803	649977 1.0	B0447.D	20:22
04	TRIP BLANK	650207 1.0	B0448.D	20:58

COMMENTS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK03

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655804

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0443.D

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

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

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

74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK03

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655804

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: B0443.D

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

% Moisture: not dec. _____ Date Analyzed: 06/26/03

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK04

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: I9766.D Lab Sample ID: 655961

Date Analyzed: 06/27/03 Time Analyzed: 20:45

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

Instrument ID: GCMS#1

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLK04MS	655962	I9768.D	22:02
02	MW5D-603MS	655970	I9769.D	22:41
03	MW5D-603MSD	655971	I9770.D	23:20
04	MW4-603	649981 1.0	I9771.D	23:59
05	MW5S-603	649982 1.0	I9772.D	00:38
06	MW6S-603	649984 1.0	I9773.D	01:17
07	MW6D-603	649985 1.0	I9774.D	01:56
08	MW7S-603	649986 1.0	I9775.D	02:35
09	MW7D-603	649987 1.0	I9776.D	03:14

COMMENTS

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK04

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655961

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9766.D

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

% Moisture: not dec. _____ Date Analyzed: 06/27/03

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

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK04

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655961

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9766.D

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

% Moisture: not dec. _____ Date Analyzed: 06/27/03

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

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK05

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: I9787.D Lab Sample ID: 655966

Date Analyzed: 06/28/03 Time Analyzed: 15:27

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

Instrument ID: GCMS#1

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLK05MS	655968	I9788.D	16:06
02	MW5D-603	649983 1.0	I9789.D	16:45
03	COOLER BLK	650209 1.0	I9790.D	17:23

COMMENTS

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK05

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655966

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9787.D

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

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+p)Xylene	10	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK05

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Matrix: (soil/water) WATER Lab Sample ID: 655966

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: I9787.D

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

% Moisture: not dec. _____ Date Analyzed: 06/28/03

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

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

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

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: B0110.D BFB Injection Date: 06/09/03

Instrument ID: GCMS#5 BFB Injection Time: 13:27

GC Column: DB624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.2
75	30.0 - 60.0% of mass 95	38.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.3 (0.4)1
174	50.0 - 120.0% of mass 95	78.7
175	5.0 - 9.0% of mass 174	5.6 (7.1)1
176	95.0 - 101.0% of mass 174	77.5 (98.4)1
177	5.0 - 9.0% of mass 176	4.9 (6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	VSTD010	B0112.D	06/09/03	14:39
02	VSTD020	VSTD020	B0113.D	06/09/03	15:14
03	VSTD050	VSTD050	B0114.D	06/09/03	15:49
04	VSTD100	VSTD100	B0115.D	06/09/03	16:25
05	VSTD200	VSTD200	B0116.D	06/09/03	17:00

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: B0393.D BFB Injection Date: 06/25/03

Instrument ID: GCMS#5 BFB Injection Time: 10:47

GC Column: DB624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.6
75	30.0 - 60.0% of mass 95	38.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.1 (0.1)1
174	50.0 - 120.0% of mass 95	80.0
175	5.0 - 9.0% of mass 174	5.9 (7.4)1
176	95.0 - 101.0% of mass 174	77.2 (96.6)1
177	5.0 - 9.0% of mass 176	5.3 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	B0395.D	06/25/03	11:44
02	VBLK01	655795	B0397.D	06/25/03	12:55
03	VBLK01MS	655797	B0398.D	06/25/03	13:35
04	MW9S-603	649969 1.0	B0399.D	06/25/03	14:10
05	MW10S-603	649971 1.0	B0400.D	06/25/03	14:51
06	MW10D-603	649972 1.0	B0401.D	06/25/03	15:26

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: B0404.D BFB Injection Date: 06/25/03

Instrument ID: GCMS#5 BFB Injection Time: 17:09

GC Column: DB624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.1
75	30.0 - 60.0% of mass 95	41.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.3 (0.3)1
174	50.0 - 120.0% of mass 95	86.8
175	5.0 - 9.0% of mass 174	6.2 (7.1)1
176	95.0 - 101.0% of mass 174	86.4 (99.6)1
177	5.0 - 9.0% of mass 176	5.7 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	B0405.D	06/25/03	17:35
02	VBLK02	655798	B0407.D	06/25/03	19:00
03	VBLK02MS	655799	B0408.D	06/25/03	19:35
04	MW9D-603	649970 1.0	B0409.D	06/25/03	20:11
05	MW1-603	649978 1.0	B0410.D	06/25/03	20:46
06	MW2S-603	649979 1.0	B0411.D	06/25/03	21:21
07	MW3-603	649980 1.0	B0412.D	06/25/03	21:57

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: B0432.D BFB Injection Date: 06/26/03

Instrument ID: GCMS#5 BFB Injection Time: 10:21

GC Column: DB624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.9
75	30.0 - 60.0% of mass 95	41.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	50.0 - 120.0% of mass 95	89.9
175	5.0 - 9.0% of mass 174	6.3 (7.0)1
176	95.0 - 101.0% of mass 174	87.0 (96.8)1
177	5.0 - 9.0% of mass 176	5.6 (6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	B0433.D	06/26/03	10:54
02	VBLK03	655804	B0443.D	06/26/03	17:55
03	VBLK03MS	655804	B0444.D	06/26/03	18:37
04	MW11D-603	649973 1.0	B0445.D	06/26/03	19:12
05	MWY(DUP)-603	649974 1.0	B0446.D	06/26/03	19:47
06	EFF-061803	649977 1.0	B0447.D	06/26/03	20:22
07	TRIP BLANK	650207 1.0	B0448.D	06/26/03	20:58

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: I9751.D BFB Injection Date: 06/27/03

Instrument ID: GCMS#1 BFB Injection Time: 10:28

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.1
75	30.0 - 60.0% of mass 95	56.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.8
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	50.0 - 120.0% of mass 95	74.8
175	5.0 - 9.0% of mass 174	5.3 (7.1)1
176	95.0 - 101.0% of mass 174	74.8 (100.1)1
177	5.0 - 9.0% of mass 176	4.3 (5.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	VSTD010	I9753.D	06/27/03	11:47
02	VSTD020	VSTD020	I9754.D	06/27/03	12:34
03	VSTD050	VSTD050	I9755.D	06/27/03	13:18
04	VSTD100	VSTD100	I9756.D	06/27/03	14:08
05	VSTD200	VSTD200	I9757.D	06/27/03	14:50

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: I9764.D BFB Injection Date: 06/27/03

Instrument ID: GCMS#1 BFB Injection Time: 19:36

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	52.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.3 (0.4)1
174	50.0 - 120.0% of mass 95	74.6
175	5.0 - 9.0% of mass 174	5.4 (7.2)1
176	95.0 - 101.0% of mass 174	73.2 (98.1)1
177	5.0 - 9.0% of mass 176	5.6 (7.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	I9765.D	06/27/03	20:06
02	VBLK04	655961	I9766.D	06/27/03	20:45
03	VBLK04MS	655962	I9768.D	06/27/03	22:02
04	MW5D-603MS	655970	I9769.D	06/27/03	22:41
05	MW5D-603MSD	655971	I9770.D	06/27/03	23:20
06	MW4-603	649981 1.0	I9771.D	06/27/03	23:59
07	MW5S-603	649982 1.0	I9772.D	06/28/03	00:38
08	MW6S-603	649984 1.0	I9773.D	06/28/03	01:17
09	MW6D-603	649985 1.0	I9774.D	06/28/03	01:56
10	MW7S-603	649986 1.0	I9775.D	06/28/03	02:35
11	MW7D-603	649987 1.0	I9776.D	06/28/03	03:14

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID: I9785.D BFB Injection Date: 06/28/03

Instrument ID: GCMS#1 BFB Injection Time: 14:17

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.3
75	30.0 - 60.0% of mass 95	51.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	72.8
175	5.0 - 9.0% of mass 174	5.5 (7.6)1
176	95.0 - 101.0% of mass 174	72.9 (100.1)1
177	5.0 - 9.0% of mass 176	5.8 (8.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	I9786.D	06/28/03	14:48
02	VBLK05	655966	I9787.D	06/28/03	15:27
03	VBLK05MS	655968	I9788.D	06/28/03	16:06
04	MW5D-603	649983 1.0	I9789.D	06/28/03	16:45
05	COOLER BLK	650209 1.0	I9790.D	06/28/03	17:23

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID (Standard): B0395.D Date Analyzed: 06/25/03

Instrument ID: GCMS#5 Time Analyzed: 11:44

GC Column: DB624 ID: 0.32 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	138809	9.42	832770	11.25	877711	16.77
	LOWER LIMIT	69405	8.92	416385	10.75	438856	16.27
	UPPER LIMIT	277618	9.92	1665540	11.75	1755422	17.27
	EPA SAMPLE NO.						
01	VBLK01	125424	9.42	735560	11.24	758635	16.77
02	VBLK01MS	120084	9.42	701385	11.24	706060	16.78
03	MW9S-603	111551	9.43	649662	11.25	661277	16.77
04	MW10S-603	109463	9.42	627786	11.25	635702	16.77
05	MW10D-603	105683	9.42	602845	11.24	616250	16.78

IS1 = Bromochloromethane

IS2 = 1,4-Difluorobenzene

IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of contract required QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID (Standard): B0405.D Date Analyzed: 06/25/03

Instrument ID: GCMS#5 Time Analyzed: 17:35

GC Column: DB624 ID: 0.32 (mm) Heated Purge: (Y/N) N

		IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR ST	100416		9.44		613978		11.26		632728		16.79	
	LOWER LIMIT	50208		8.94		306989		10.76		316364		16.29	
	UPPER LIMIT	200832		9.94		1227956		11.76		1265456		17.29	
	EPA SAMPLE NO.												
01	VBLK02	101046		9.43		574500		11.25		586416		16.78	
02	VBLK02MS	100819		9.43		572323		11.25		581384		16.78	
03	MW9D-603	99452		9.42		558830		11.25		560509		16.77	
04	MW1-603	98066		9.43		553992		11.25		555713		16.78	
05	MW2S-603	96256		9.43		548583		11.25		546806		16.78	
06	MW3-603	95949		9.43		538912		11.25		547861		16.78	

IS1 = Bromochloromethane

IS2 = 1,4-Difluorobenzene

IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of contract required QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID (Standard): B0433.D Date Analyzed: 06/26/03

Instrument ID: GCMS#5 Time Analyzed: 10:54

GC Column: DB624 ID: 0.32 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	118253	9.44	654733	11.27	693153	16.79
	LOWER LIMIT	59127	8.94	327367	10.77	346577	16.29
	UPPER LIMIT	236506	9.94	1309466	11.77	1386306	17.29
	EPA SAMPLE NO.						
01	VBLK03	184869	9.41	1139591	11.24	1224246	16.76
02	VBLK03MS	184013	9.41	1137070	11.24	1218034	16.76
03	MW11D-603	185665	9.41	1121946	11.24	1207119	16.76
04	MWY(DUP)-603	183359	9.41	1121586	11.23	1197642	16.76
05	EFF-061803	180415	9.41	1098888	11.24	1173878	16.76
06	TRIP BLANK	178841	9.41	1078482	11.24	1153935	16.76

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

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

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

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID (Standard): I9765.D Date Analyzed: 06/27/03

Instrument ID: GCMS#1 Time Analyzed: 20:06

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

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	255990	12.21	1031846	14.28	856945	21.36
	LOWER LIMIT	127995	11.71	515923	13.78	428473	20.86
	UPPER LIMIT	511980	12.71	2063692	14.78	1713890	21.86
	EPA SAMPLE NO.						
01	VBLK04	260497	12.21	1035240	14.28	843718	21.34
02	VBLK04MS	261342	12.22	1045964	14.27	887052	21.35
03	MW5D-603MS	257987	12.22	1032363	14.27	873721	21.35
04	MW5D-603MSD	258144	12.22	1033257	14.27	867164	21.34
05	MW4-603	264799	12.21	1026994	14.27	846806	21.34
06	MW5S-603	258206	12.21	1035492	14.27	858565	21.34
07	MW6S-603	246726	12.20	996205	14.27	841050	21.34
08	MW6D-603	248661	12.20	988752	14.27	831137	21.34
09	MW7S-603	258551	12.21	986694	14.27	826382	21.34
10	MW7D-603	252683	12.21	1009197	14.27	842950	21.34

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

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

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

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R3-17294 SAS No.: _____ SDG No.: MW9S-603

Lab File ID (Standard): I9786.D Date Analyzed: 06/28/03

Instrument ID: GCMS#1 Time Analyzed: 14:48

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

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	270336	12.24	1096071	14.29	905505	21.36
	LOWER LIMIT	135168	11.74	548036	13.79	452753	20.86
	UPPER LIMIT	540672	12.74	2192142	14.79	1811010	21.86
	EPA SAMPLE NO.						
01	VBLK05	265397	12.21	1053897	14.29	874787	21.36
02	VBLK05MS	259295	12.23	1024558	14.28	856151	21.36
03	MW5D-603	264772	12.22	1045833	14.27	865933	21.34
04	COOLER BLK	262077	12.22	1016771	14.27	862078	21.35

IS1 = Bromochloromethane

IS2 = 1,4-Difluorobenzene

IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of contract required QC limits

Appendix C
Analytical Data Validation

APPENDIX C
ANALYTICAL DATA VALIDATION

GRIFFIN TECHNOLOGY SITE

SYSTEM OPERATION
ANNUAL GROUNDWATER SAMPLING

JUNE 2003

INTRODUCTION

This appendix presents the findings of a validation of analytical data for samples collected in June 2003 at the Griffin Technology Inc. (GTI) Site. Sampling was conducted by URS Corporation (URS) and analytical services were provided by Columbia Analytical Services, Inc. (CASI) of Rochester, New York. Sixteen primary groundwater samples and associated QC samples were collected and analyzed for volatile organic compounds (VOCs) in accordance with New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) Method 95-1.

The procedures for validation of the data followed guidance from the following documents:

1. Interim Remedial Measure Program Appendix B: Quality Assurance Project Plan (QAPP). July 1996. Prepared by Woodward-Clyde Consultants.

2. CLP Organics Data Review and Preliminary Review. S.O.P. No. HW-6, Revision 12, March 2001. Prepared by USEPA Region II.

The above "Guidelines" provided the criteria to review. Additional acceptance criteria are given in the analytical method.

The criteria evaluated included the following:

Volatile Organic Compounds

- Significant problems identified in case narrative
- Results reported from secondary dilutions, if any
- Sample holding times
- Instrument performance and calibration
- Method blank and trip blank contamination
- Surrogate spike recoveries
- Laboratory control sample recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries and relative percent difference (RPD) values
- Internal standard areas and retention times

- Field duplicate results
- Compound identification and quantitation
- Overall assessment of data

The following sections present the findings of the data validation.

SIGNIFICANT PROBLEMS IDENTIFIED IN CASE NARRATIVE

No significant problems were noted in the case narrative.

RESULTS REPORTED FROM SECONDARY DILUTIONS

No secondary dilutions were required for samples in this delivery group.

SAMPLE HOLDING TIMES

The VOC holding time criterion established in the QAPP is seven days from receipt at the laboratory to analysis. Seven samples were analyzed within this time period. Two additional samples, the field duplicate, and the Trip Blank were analyzed on the eighth day after receipt, six samples and the MS/MSD were analyzed on the ninth day after receipt, and the remaining sample and the Cooler Blank were analyzed on the tenth day. Although the analyses of nine primary samples were performed beyond the *contractual* holding time of seven days, they were well within the *technical* holding time of 14 days after collection for preserved water samples. Since the laboratory documented that all samples were adequately preserved (pH<2 at the time of analysis), no qualifications were deemed necessary.

GC/MS INSTRUMENT PERFORMANCE

GC/MS instrument performance checks are performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for instrument performance checks included evaluation of possible transcription or calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. All criteria for bromofluorobenzene (BFB) for VOCs were met for this data set. Additionally, no transcription errors or calculation errors were noted during validation of the instrument performance data from this data set.

INITIAL AND CONTINUING CALIBRATION

Initial and continuing calibration criteria are established to ensure that the instruments are capable of producing acceptable qualitative and quantitative data for VOCs. All initial and continuing calibrations were performed at the required frequency.

All VOC initial calibration relative response factor (RRF) values met the acceptance criteria presented in the "Guidelines". The relative standard deviation (RSD) between response factors for acetone (35.2%) in the initial calibration dated 06/27/03 exceeded the 30% criterion. Acetone was not detected in any of the associated samples; therefore no qualification of data was required.

All VOC continuing calibration RRF values met the acceptance criterion presented in the "Guidelines". Three VOC continuing calibration analyses yielded percent difference (%D) values for one or more compounds above the "Guidelines" acceptance criterion of 25 percent These exceedances and the affected samples are summarized in the following table.

Continuing Calibration Date (Time)	Compound	%D	Associated Groundwater Samples	Qualification
06/25/03 (1735)	Trichloroethene Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone 1,1,2,2-Tetrachloroethane	25.7 41.3 42.9 37.0 42.0 26.5	MW9D-603 MW1-603 MW2S-603 MW3-603	Estimated Results (J/UJ)
06/26/03 (1054)	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	26.0 37.1 29.6 30.9	MW11D-603 MWY(DUP) -603 EFF-061803 Trip Blank	Estimated Results (UJ)
06/27/03 (2006)	Acetone	27.2	MW4-603 MW5S-603 MW6S-603 MW6D-603 MW7S-603 MW7D-603	Estimated Results (UJ)

LABORATORY METHOD BLANKS

Laboratory method blanks evaluate the existence and magnitude of contamination problems resulting from laboratory activities. VOC laboratory method blanks were analyzed at the prescribed method frequency.

All five VOC method blank samples were reported as non-detected for TCL-VOCs and tentatively identified compounds (TICs).

TRIP BLANK SAMPLES

Trip blank samples are used to assess VOC cross-contamination during shipment to the laboratory. Two trip blank samples, identified as "Trip Blank" and "Cooler Blank", were submitted with the cooler containing aqueous samples for VOC analyses.

No target compounds or TICs were detected in either of the trip blanks.

SURROGATE SPIKE RECOVERIES

Samples analyzed for VOCs are spiked with surrogate compounds prior to analysis. Surrogate compounds are used to evaluate overall laboratory performance for sample preparation efficiency on a per sample basis. The "Guidelines" require that all VOC surrogate spike recoveries meet acceptance criteria.

All VOC surrogate spike recoveries were within the laboratory's established control limits, which indicated that the laboratory's preparation procedure was acceptable. Additionally, no errors in calculations or transcriptions were noted during the validation of the surrogate spike recoveries from this data set.

LABORATORY CONTROL SAMPLES

Laboratory control samples (LCS) are analyzed for VOCs and serve to monitor the overall performance of the steps in an analysis, including sample preparation.

All VOC LCS recoveries were within the laboratory's established control limits, indicating that the method was in control. Additionally, no errors in calculations or transcriptions were noted during the validation of the LCS recoveries from this data set.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

Matrix effects on the analytical results are evaluated by analyzing matrix spike/matrix spike duplicate (MS/MSD) samples. Sample MW5D-603 was analyzed as an MS/MSD sample for this data set.

All VOC MS/MSD recoveries and relative percent differences (RPDs) were within the method established control limits, indicating that acceptable analytical accuracy and precision were achieved for these analyses. Additionally, no errors in calculations or transcriptions were noted during validation of the MS/MSD results from this data set.

INTERNAL STANDARDS

Internal standard (I.S.) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. Internal standard area counts may not vary by more than a factor of two (-50 percent to +100 percent) from the associated continuing calibration standard area counts. The retention times of the internal standards may not vary by more than ±30 seconds from the associated continuing calibration standard retention times.

All VOC analyses reported for the groundwater samples had acceptable internal standard area counts and retention times. Validation of the I.S. data also included verification of retention times and areas summarized on the "Volatile Internal Standard Area and RT Summary" forms (Form 8A) to those on the instrument chromatograms on a 10 percent basis; no anomalies were noted.

FIELD DUPLICATE RESULTS

Field duplicate results were used to evaluate representativeness. For aqueous samples, when analytes for both duplicate and sample values are greater than five times the quantitation limit, satisfactory representativeness is indicated by an RPD less than or equal to 50 percent.

Where one or both of the analytes of a field duplicate pair are reported at less than five times the quantitation limit, satisfactory representativeness is indicated if the field duplicate results agree within 2.5 times the quantitation limit. Field duplicate results that do not meet these criteria may indicate unsatisfactory representativeness of the results.

One field duplicate sample pair, labeled as MW3-603 and MWY(DUP)-603, was collected with this sampling event. The results reported for the field duplicate sample pair were in agreement with the above criteria, thus indicating that the aggregate sampling and analytical precision was acceptable for this data set.

COMPOUND IDENTIFICATION AND QUANTITATION

All detected compounds were checked for potential identification errors and were recalculated from the raw data. No anomalies or transcription errors were noted during validation of the reported compound identifications and quantitations.

OVERALL DATA ASSESSMENT

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision (based on the LCS, MS/MSD, and field duplicate results) were achieved for this data set. In addition, completeness, defined to be the percentage of analytical results which are judged to be valid, including estimated ("J" or "UJ") values, was 100 percent for this data set. Sample results from this investigation required some qualification based on the minor deficiencies summarized below:

- The results for one or more compounds that exceeded continuing calibration criteria were qualified as estimated ("J" or "UJ") in twelve primary samples, the field duplicate, and the Trip Blank. The individual samples and compounds qualified are presented in the "Initial and Continuing Calibration" section above.

No transcription errors or calculation errors were found during validation of the reported VOC results from this data set.