FINAL REPORT

INTERIM REMEDIAL MEASURE PROGRAM

2004 ANNUAL PROGRESS REPORT
SEPTEMBER 2003 – AUGUST 2004

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

Prepared for
Diebold, Inc.
Canton, Ohio

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URS

800 West St. Clair Avenue
Suite 500
Cleveland, Ohio 44113-1232
(216) 622-2400
Project No. 13807296.00000

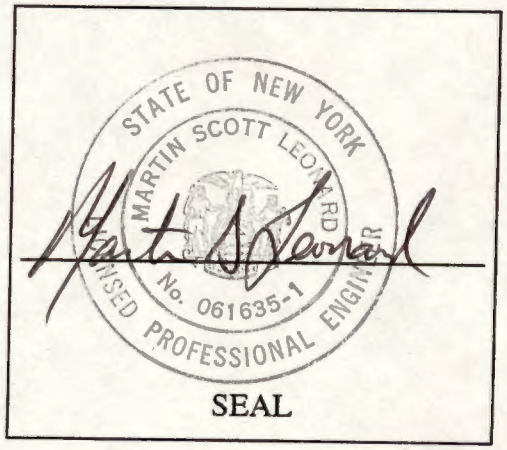
INTERIM REMEDIAL MEASURE 2004 ANNUAL PROGRESS REPORT
GRIFFIN TECHNOLOGY, INC. FACILITY
TOWN OF FARMINGTON
ONTARIO COUNTY, NEW YORK

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: 11/24/2004



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This report presents information collected by URS Corporation (URS) between September 2003 and August 2004 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 2003 through August 2004 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 OLM 4.2). 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 2003 through August 2004, 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 2004; 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 2003 through August 2004, 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. Monthly hydraulic head measurements were also collected from off-site monitoring wells MW-01 and MW-11D. During some visits, hydraulic head measurements were also collected from nearby off-site monitoring wells MW-6S and MW-6D. On June 22, 2004, 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 23, 2004, groundwater samples were collected from on-site and off-site monitoring wells and the recovery well system to evaluate regional groundwater quality. 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. Two duplicate samples were collected from monitoring wells MW-4 and MW-10S. Groundwater samples were submitted to CASI and analyzed for VOCs by NYSDEC Test Method OLM 4.2. Chain-of-custody procedures were followed throughout the sampling event.

Data collected during the previous 12 month period of IRM system operation (September 2003 through August 2004) and results of the June 2004 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 22, 2004.

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 most prevalent COC detected in the effluent samples was trichloroethene (TCE). An overall decreasing trend is evident in TCE effluent concentrations with a peak in concentration during December 2003. 1,1,1-trichloroethane (1,1,1-TCA) was also detected; however, 1,1,1-TCA was

only detected in December 2003 and August 2004. 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 (October-November 2003 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 23, 2004 and on previous sampling dates is presented in Table 3-3. Table 3-3 also summarizes the data from past sampling events. Table 3-4 presents data from the individual recovery well samples that were also collected as part of the groundwater sampling event. 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 2004 samples indicated concentrations of COCs similar to the previous (June 2003) sampling event. The COCs detected in groundwater samples collected during June 2004 consist of TCE, 1,1,1-TCA, cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride. TCE was consistently reported at the highest concentration, with concentrations ranging from below detectable levels to 130 micrograms per liter (µg/l). The COCs detected are consistent with the results of earlier sampling events. Vinyl chloride was only detected in the sample from MW-7D, at a concentration of 1 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; ultimate treatment is provided by the local POTW. System maintenance activities continued during this reporting period, similar to previous years. On August 16, 2004, pump RW-1 was adjusted, RW-2 totalizer and pump head were replaced, and RW-3 totalizer, pump motor and head were replaced. The most frequent maintenance activity during the past year included changing the light bulb outside the control shed during several of the routine monthly site visits.

Based on the information collected during the 12-month period from September 2003 through August 2004, 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 and 1,1-TCA were the only COCs reported in the IRM system effluent.
- Observations made over the previous 8 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
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	13.85	627.43
		9/19/2003	12.25	629.03
		10/4/2003	11.35	629.93
		10/20/2003	10.21	631.07
		10/31/2003	6.12	635.16
		11/14/2003	15.16	626.12
		12/1/2003	7.90	633.38
		12/17/2003	7.62	633.66
		12/30/2003	7.71	633.57
		1/16/2004	7.53	633.75
		1/30/2004	6.76	634.52
		2/13/2004	9.64	631.64
		3/1/2004	8.74	632.54
		3/16/2004	6.29	634.99
		3/29/2004	5.72	635.56
		4/15/2004	3.39	637.89
		4/30/2004	5.50	635.78
		5/14/2004	7.31	633.97
		6/1/2004	6.19	635.09
		6/18/2004	10.51	630.77
		6/22/2004	11.25	630.03
		7/2/2004	14.74	626.54
		7/16/2004	13.34	627.94
		8/2/2004	9.22	632.06
		8/16/2004	14.98	626.30
MW-2D	642.37	Monitoring well converted to recovery well RW-4.		

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	10.12	631.67
		9/19/2003	9.87	631.92
		10/4/2003	8.81	632.98
		10/20/2003	7.89	633.90
		10/31/2003	6.99	634.80
		11/14/2003	9.91	631.88
		12/1/2003	5.55	636.24
		12/17/2003	5.18	636.61
		12/30/2003	5.03	636.76
		1/16/2004	5.21	636.58
		1/30/2004	4.89	636.90
		2/13/2004	5.99	635.80
		3/1/2004	5.62	636.17
		3/16/2004	4.31	637.48
		3/29/2004	5.19	636.60
		4/15/2004	3.15	638.64
		4/30/2004	3.85	637.94
		5/14/2004	4.93	636.86
		6/1/2004	4.76	637.03
		6/18/2004	6.20	635.59
		6/22/2004	7.02	634.77
		7/2/2004	9.63	632.16
		7/16/2004	9.09	632.70
		8/2/2004	7.12	634.67
		8/16/2004	10.23	631.56

NOTES
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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-03	642.17	9/3/2003	15.50	626.67
		9/19/2003	14.83	627.34
		10/4/2003	13.01	629.16
		10/20/2003	12.06	630.11
		10/31/2003	6.03	636.14
		11/14/2003	13.80	628.37
		12/1/2003	6.43	635.74
		12/17/2003	6.51	635.66
		12/30/2003	6.62	635.55
		1/16/2004	6.87	635.30
		1/30/2004	5.87	636.30
		2/13/2004	10.69	631.48
		3/1/2004	9.29	632.88
		3/16/2004	7.71	634.46
		3/29/2004	6.99	635.18
		4/15/2004	3.61	638.56
		4/30/2004	6.32	635.85
		5/14/2004	8.01	634.16
		6/1/2004	6.91	635.26
		6/18/2004	11.11	631.06
		6/22/2004	11.89	630.28
		7/2/2004	14.35	627.82
		7/16/2004	14.39	627.78
		8/2/2004	10.50	631.67
		8/16/2004	14.49	627.68

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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	16.74	625.01
		9/19/2003	15.82	625.93
		10/4/2003	13.87	627.88
		10/20/2003	12.27	629.48
		10/31/2003	7.21	634.54
		11/14/2003	16.14	625.61
		12/1/2003	9.11	632.64
		12/17/2003	8.98	632.77
		12/30/2003	8.77	632.98
		1/16/2004	8.41	633.34
		1/30/2004	7.21	634.54
		2/13/2004	13.06	628.69
		3/1/2004	12.16	629.59
		3/16/2004	9.36	632.39
		3/29/2004	8.41	633.34
		4/15/2004	4.11	637.64
		4/30/2004	6.55	635.20
		5/14/2004	8.31	633.44
		6/1/2004	6.94	634.81
		6/18/2004	11.96	629.79
		6/22/2004	13.36	628.39
		7/2/2004	16.04	625.71
		7/16/2004	15.00	626.75
		8/2/2004	11.80	629.95
		8/16/2004	16.06	625.69

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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	16.62	624.23
		9/19/2003	15.31	625.54
		10/4/2003	14.22	626.63
		10/20/2003	13.19	627.66
		10/31/2003	8.73	632.12
		11/14/2003	16.39	624.46
		12/1/2003	9.51	631.34
		12/17/2003	9.48	631.37
		12/30/2003	9.46	631.39
		1/16/2004	9.06	631.79
		1/30/2004	8.75	632.10
		2/13/2004	13.77	627.08
		3/1/2004	12.01	628.84
		3/16/2004	10.21	630.64
		3/29/2004	10.77	630.08
		4/15/2004	4.77	636.08
		4/30/2004	7.01	633.84
		5/14/2004	8.89	631.96
		6/1/2004	7.51	633.34
		6/18/2004	11.45	629.40
		6/22/2004	13.02	627.83
		7/2/2004	15.65	625.20
		7/16/2004	14.80	626.05
		8/2/2004	11.75	629.10
		8/16/2004	15.81	625.04

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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	19.31	621.70
		9/19/2003	18.16	622.85
		10/4/2003	17.01	624.00
		10/20/2003	17.01	624.00
		10/31/2003	10.21	630.80
		11/14/2003	18.92	622.09
		12/1/2003	14.59	626.42
		12/17/2003	14.42	626.59
		12/30/2003	14.47	626.54
		1/16/2004	14.34	626.67
		1/30/2004	12.72	628.29
		2/13/2004	16.81	624.20
		3/1/2004	15.32	625.69
		3/16/2004	11.83	629.18
		3/29/2004	12.34	628.67
		4/15/2004	11.44	629.57
		4/30/2004	12.94	628.07
		5/14/2004	14.23	626.78
		6/1/2004	13.15	627.86
		6/18/2004	15.65	625.36
		6/22/2004	16.52	624.49
		7/2/2004	18.21	622.80
		7/16/2004	17.55	623.46
		8/2/2004	15.90	625.11
		8/16/2004	18.47	622.54

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TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	NM	NM
		9/19/2003	10.74	625.87
		10/4/2003	NM	NM
		10/20/2003	NM	NM
		10/31/2003	NM	NM
		11/14/2003	11.49	625.12
		12/1/2003	NM	NM
		12/17/2003	5.46	631.15
		12/30/2003	NM	NM
		1/16/2004	5.21	631.40
		1/30/2004	NM	NM
		2/13/2004	NM	NM
		3/1/2004	NM	NM
		3/16/2004	4.64	631.97
		3/29/2004	NM	NM
		4/15/2004	1.62	634.99
		4/30/2004	NM	NM
		5/14/2004	6.49	630.12
		6/1/2004	NM	NM
		6/18/2004	10.59	626.02
		6/22/2004	8.98	627.63
		7/2/2004	NM	NM
		7/16/2004	9.12	627.49
		8/2/2004	NM	NM
		8/16/2004	11.92	624.69

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	NM	NM
		9/19/2003	10.68	626.15
		10/4/2003	NM	NM
		10/20/2003	NM	NM
		10/31/2003	NM	NM
		11/14/2003	11.75	625.08
		12/1/2003	NM	NM
		12/17/2003	5.45	631.38
		12/30/2003	NM	NM
		1/16/2004	5.36	631.47
		1/30/2004	NM	NM
		2/13/2004	NM	NM
		3/1/2004	NM	NM
		3/16/2004	4.85	631.98
		3/29/2004	NM	NM
		4/15/2004	1.81	635.02
		4/30/2004	NM	NM
		5/14/2004	6.64	630.19
		6/1/2004	NM	NM
		6/18/2004	7.41	629.42
		6/22/2004	9.20	627.63
		7/2/2004	NM	NM
		7/16/2004	9.07	627.76
		8/2/2004	NM	NM
		8/16/2004	12.11	624.72

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	NM	NM
		9/19/2003	NM	NM
		10/4/2003	NM	NM
		10/20/2003	NM	NM
		10/31/2003	NM	NM
		11/14/2003	NM	NM
		12/1/2003	NM	NM
		12/17/2003	NM	NM
		12/30/2003	NM	NM
		1/16/2004	NM	NM
		1/30/2004	NM	NM
		2/13/2004	NM	NM
		3/1/2004	NM	NM
		3/16/2004	NM	NM
		3/29/2004	NM	NM
		4/15/2004	NM	NM
		4/30/2004	NM	NM
		5/14/2004	NM	NM
		6/1/2004	NM	NM
		6/18/2004	NM	NM
		6/22/2004	8.91	625.38
		7/2/2004	NM	NM
		7/16/2004	NM	NM
		8/2/2004	NM	NM
		8/16/2004	NM	NM

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	NM	NM
		9/19/2003	NM	NM
		10/4/2003	NM	NM
		10/20/2003	NM	NM
		10/31/2003	NM	NM
		11/14/2003	NM	NM
		12/1/2003	NM	NM
		12/17/2003	NM	NM
		12/30/2003	NM	NM
		1/16/2004	NM	NM
		1/30/2004	NM	NM
		2/13/2004	NM	NM
		3/1/2004	NM	NM
		3/16/2004	NM	NM
		3/29/2004	NM	NM
		4/15/2004	NM	NM
		4/30/2004	NM	NM
		5/14/2004	NM	NM
		6/1/2004	NM	NM
		6/18/2004	NM	NM
		6/22/2004	33.57	600.59
		7/2/2004	NM	NM
		7/16/2004	NM	NM
		8/2/2004	NM	NM
		8/16/2004	NM	NM

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	NM	NM
		9/19/2003	NM	NM
		10/4/2003	NM	NM
		10/20/2003	NM	NM
		10/31/2003	NM	NM
		11/14/2003	NM	NM
		12/1/2003	NM	NM
		12/17/2003	NM	NM
		12/30/2003	NM	NM
		1/16/2004	NM	NM
		1/30/2004	NM	NM
		2/13/2004	NM	NM
		3/1/2004	NM	NM
		3/16/2004	NM	NM
		3/29/2004	NM	NM
		4/15/2004	NM	NM
		4/30/2004	NM	NM
		5/14/2004	NM	NM
		6/1/2004	NM	NM
		6/18/2004	NM	NM
		6/22/2004	10.90	619.26
		7/2/2004	NM	NM
		7/16/2004	NM	NM
		8/2/2004	NM	NM
		8/16/2004	NM	NM

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	NM	NM
		9/19/2003	NM	NM
		10/4/2003	NM	NM
		10/20/2003	NM	NM
		10/31/2003	NM	NM
		11/14/2003	NM	NM
		12/1/2003	NM	NM
		12/17/2003	NM	NM
		12/30/2003	NM	NM
		1/16/2004	NM	NM
		1/30/2004	NM	NM
		2/13/2004	NM	NM
		3/1/2004	NM	NM
		3/16/2004	NM	NM
		3/29/2004	NM	NM
		4/15/2004	NM	NM
		4/30/2004	NM	NM
		5/14/2004	NM	NM
		6/1/2004	NM	NM
		6/18/2004	NM	NM
		6/22/2004	31.66	598.63
		7/2/2004	NM	NM
		7/16/2004	NM	NM
		8/2/2004	NM	NM
		8/16/2004	NM	NM

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	NM	NM
		9/19/2003	NM	NM
		10/4/2003	NM	NM
		10/20/2003	NM	NM
		10/31/2003	NM	NM
		11/14/2003	NM	NM
		12/1/2003	NM	NM
		12/17/2003	NM	NM
		12/30/2003	NM	NM
		1/16/2004	NM	NM
		1/30/2004	NM	NM
		2/13/2004	NM	NM
		3/1/2004	NM	NM
		3/16/2004	NM	NM
		3/29/2004	NM	NM
		4/15/2004	NM	NM
		4/30/2004	NM	NM
		5/14/2004	NM	NM
		6/1/2004	NM	NM
		6/18/2004	NM	NM
		6/22/2004	15.62	613.38
		7/2/2004	NM	NM
		7/16/2004	NM	NM
		8/2/2004	NM	NM
		8/16/2004	NM	NM

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	NM	NM
		9/19/2003	NM	NM
		10/4/2003	NM	NM
		10/20/2003	NM	NM
		10/31/2003	NM	NM
		11/14/2003	NM	NM
		12/1/2003	NM	NM
		12/17/2003	NM	NM
		12/30/2003	NM	NM
		1/16/2004	NM	NM
		1/30/2004	NM	NM
		2/13/2004	NM	NM
		3/1/2004	NM	NM
		3/16/2004	NM	NM
		3/29/2004	NM	NM
		4/15/2004	NM	NM
		4/30/2004	NM	NM
		5/14/2004	NM	NM
		6/1/2004	NM	NM
		6/18/2004	NM	NM
		6/22/2004	16.30	610.50
		7/2/2004	NM	NM
		7/16/2004	NM	NM
		8/2/2004	NM	NM
		8/16/2004	NM	NM

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	14.99	626.90
		9/19/2003	12.49	629.40
		10/4/2003	10.79	631.10
		10/20/2003	9.89	632.00
		10/31/2003	8.74	633.15
		11/14/2003	14.20	627.69
		12/1/2003	9.33	632.56
		12/17/2003	9.08	632.81
		12/30/2003	9.27	632.62
		1/16/2004	8.72	633.17
		1/30/2004	7.03	634.86
		2/13/2004	10.97	630.92
		3/1/2004	8.74	633.15
		3/16/2004	6.21	635.68
		3/29/2004	6.86	635.03
		4/15/2004	5.45	636.44
		4/30/2004	7.46	634.43
		5/14/2004	9.31	632.58
		6/1/2004	7.97	633.92
		6/18/2004	7.39	634.50
		6/22/2004	11.56	630.33
		7/2/2004	13.78	628.11
		7/16/2004	12.61	629.28
		8/2/2004	10.66	631.23
		8/16/2004	14.07	627.82
MW-13D	637.58	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
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	10.46	630.04
		9/19/2003	9.83	630.67
		10/4/2003	8.29	632.21
		10/20/2003	7.63	632.87
		10/31/2003	7.00	633.50
		11/14/2003	10.46	630.04
		12/1/2003	7.63	632.87
		12/17/2003	7.71	632.79
		12/30/2003	7.74	632.76
		1/16/2004	7.63	632.87
		1/30/2004	7.00	633.50
		2/13/2004	10.45	630.05
		3/1/2004	9.15	631.35
		3/16/2004	6.66	633.84
		3/29/2004	7.21	633.29
		4/15/2004	3.02	637.48
		4/30/2004	5.40	635.10
		5/14/2004	7.35	633.15
		6/1/2004	5.85	634.65
		6/18/2004	10.29	630.21
		6/22/2004	10.46	630.04
		7/2/2004	10.46	630.04
		7/16/2004	10.45	630.05
		8/2/2004	10.38	630.12
		8/16/2004	10.45	630.05

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	DRY	DRY
		9/19/2003	9.97	630.70
		10/4/2003	8.37	632.30
		10/20/2003	7.59	633.08
		10/31/2003	7.14	633.53
		11/14/2003	15.35	625.32
		12/1/2003	7.79	632.88
		12/17/2003	7.85	632.82
		12/30/2003	7.81	632.86
		1/16/2004	7.25	633.42
		1/30/2004	6.74	633.93
		2/13/2004	12.71	627.96
		3/1/2004	11.41	629.26
		3/16/2004	6.97	633.70
		3/29/2004	7.35	633.32
		4/15/2004	3.27	637.40
		4/30/2004	5.53	635.14
		5/14/2004	7.51	633.16
		6/1/2004	6.02	634.65
		6/18/2004	10.45	630.22
		6/22/2004	12.03	628.64
		7/2/2004	14.97	625.70
		7/16/2004	13.91	626.76
		8/2/2004	10.54	630.13
		8/16/2004	15.09	625.58

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	15.13	624.60
		9/19/2003	14.01	625.72
		10/4/2003	13.28	626.45
		10/20/2003	13.00	626.73
		10/31/2003	9.86	629.87
		11/14/2003	14.86	624.87
		12/1/2003	7.81	631.92
		12/17/2003	7.83	631.90
		12/30/2003	7.84	631.89
		1/16/2004	7.71	632.02
		1/30/2004	6.98	632.75
		2/13/2004	12.41	627.32
		3/1/2004	11.27	628.46
		3/16/2004	8.01	631.72
		3/29/2004	8.57	631.16
		4/15/2004	3.30	636.43
		4/30/2004	5.56	634.17
		5/14/2004	7.46	632.27
		6/1/2004	6.00	633.73
		6/18/2004	10.10	629.63
		6/22/2004	11.68	628.05
		7/2/2004	14.36	625.37
		7/16/2004	13.40	626.33
		8/2/2004	10.64	629.09
		8/16/2004	14.50	625.23

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

TABLE 3-1
SUMMARY OF GROUNDWATER ELEVATIONS
SEPTEMBER 2003 - AUGUST 2004
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	9/3/2003	15.38	624.63
		9/19/2003	14.28	625.73
		10/4/2003	13.47	626.54
		10/20/2003	12.11	627.90
		10/31/2003	10.72	629.29
		11/14/2003	15.10	624.91
		12/1/2003	7.29	632.72
		12/17/2003	8.27	631.74
		12/30/2003	7.88	632.13
		1/16/2004	8.11	631.90
		1/30/2004	7.77	632.24
		2/13/2004	12.72	627.29
		3/1/2004	11.43	628.58
		3/16/2004	8.33	631.68
		3/29/2004	8.78	631.23
		4/15/2004	3.89	636.12
		4/30/2004	6.02	633.99
		5/14/2004	7.91	632.10
		6/1/2004	6.46	633.55
		6/18/2004	10.41	629.60
		6/22/2004	11.96	628.05
		7/2/2004	14.60	625.41
		7/16/2004	13.64	626.37
		8/2/2004	10.31	629.70
		8/16/2004	14.74	625.27

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 2003	137,790	140	ND	ND	ND	ND	ND	ND
October 2003	15,780	140	ND	ND	ND	ND	ND	ND
November 2003	54,080	140	ND	ND	ND	ND	ND	ND
December 2003	214,630	230	6.1	ND	ND	ND	ND	ND
January 2004	279,290	110	ND	ND	ND	ND	ND	ND
February 2004	48,780	100	ND	ND	ND	ND	ND	ND
March 2004	188,100	190	ND	ND	ND	ND	ND	ND
April 2004	247,390	82	ND	ND	ND	ND	ND	ND
May 2004	246,640	85	ND	ND	ND	ND	ND	ND
June 2004	160,020	100	ND	ND	ND	ND	ND	ND
July 2004	105,110	98	ND	ND	ND	ND	ND	ND
August 2004	123,490	210	5.4	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	ACETONE	VINYL CHLORIDE
MW-01	12/19/1994	ND	ND	ND	ND	ND	ND
	5/21/1996	ND	ND	ND	ND	ND	ND
	8/13/1997	ND	ND	ND	ND	ND	ND
	3/18/1998	ND	ND	ND	ND	ND	ND
	9/2/1998	ND	ND	ND	ND	ND	ND
	3/18/1999	ND	ND	ND	ND	ND	ND
	9/2/1999	ND	ND	ND	ND	ND	ND
	3/28/2000	ND	ND	ND	ND	ND	ND
	9/8/2000	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND
	9/13/2001	ND	ND	ND	ND	ND	ND
	5/24/2002	ND	ND	ND	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND
	6/23/2004	ND	ND	ND	ND	ND	ND
MW-02S	12/19/1994	850	ND	ND	ND	ND	ND
	5/21/1996	30	ND	1	ND	ND	ND
	8/13/1997	DRY	DRY	DRY	DRY	DRY	DRY
	3/18/1998	17,000	ND	ND	ND	ND	ND
	9/2/1998	18,000	210	ND	ND	ND	ND
	3/18/1999	28	ND	ND	ND	ND	ND
	9/2/1999	DRY	DRY	DRY	DRY	DRY	DRY
	3/28/2000	6	ND	ND	ND	ND	ND
	9/8/2000	DRY	DRY	DRY	DRY	DRY	DRY
	3/8/2001	9	ND	ND	ND	ND	ND
	9/13/2001	DRY	DRY	DRY	DRY	DRY	DRY
	5/24/2002	4	ND	ND	ND	ND	ND
	6/18/2003	4	ND	ND	ND	ND	ND
	6/23/2004	130	2	ND	ND	ND	ND
MW-02D	8/13/1997	450	23	42	ND	ND	ND
	3/18/1998	740	16	28	ND	ND	ND
	9/2/1998	680	25	39	ND	ND	ND
	3/18/1999	190	5	6	ND	ND	ND
	Monitoring well converted to recovery well RW-4.						
MW-03	12/19/1994	190	ND	ND	ND	ND	ND
	5/21/1996	120	ND	2	ND	ND	ND
	8/13/1997	150	ND	2	ND	ND	ND
	3/18/1998	88	ND	ND	ND	ND	ND
	9/2/1998	110	ND	ND	ND	ND	ND
	3/18/1999	45	ND	ND	ND	ND	ND
	9/2/1999	170	ND	ND	ND	ND	ND
	3/28/2000	93	ND	ND	ND	ND	ND
	9/8/2000	150	ND	ND	ND	ND	ND
	3/8/2001	96	ND	ND	ND	ND	ND
	9/13/2001	120	ND	ND	ND	ND	ND
	5/24/2002	85	ND	ND	ND	ND	ND
	6/18/2003	40	ND	ND	ND	ND	ND
Duplicate	6/18/2003	56	ND	ND	ND	ND	ND
	6/23/2004	96	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 above 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. Refe 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	ACETONE	VINYL CHLORIDE
MW-04	12/19/1994	710	6.7	23	ND	ND	ND
	5/21/1996	16	ND	2	ND	ND	ND
	8/13/1997	DRY	DRY	DRY	DRY	DRY	DRY
	3/18/1998	59	ND	2	ND	ND	ND
	9/2/1998	450	7	20	ND	ND	ND
	3/18/1999	58	ND	1	ND	ND	ND
	9/2/1999	DRY	DRY	DRY	DRY	DRY	DRY
	3/28/2000	9	ND	ND	ND	ND	ND
Duplicate	3/28/2000	9	ND	ND	ND	ND	ND
	9/8/2000	DRY	DRY	DRY	DRY	DRY	DRY
	3/8/2001	130	ND	2	ND	ND	ND
Duplicate	3/8/2001	130	ND	2	ND	ND	ND
	9/13/2001	DRY	DRY	DRY	DRY	DRY	DRY
	5/24/2002	67	ND	1	ND	ND	ND
Duplicate	5/24/2002	68	ND	1	ND	ND	ND
	6/18/2003	79	ND	ND	ND	ND	ND
	6/23/2004	75	ND	ND	ND	ND	ND
Duplicate	6/23/2004	73	ND	ND	ND	ND	ND
MW-05S	12/19/1994	580	15	ND	ND	ND	ND
	5/21/1996	350	16	ND	ND	ND	ND
	8/13/1997	760	31	4	ND	ND	ND
	3/18/1998	120	4	ND	1	ND	ND
	9/2/1998	390	14	ND	ND	ND	ND
	3/18/1999	95	3	ND	ND	ND	ND
	9/2/1999	DRY	DRY	DRY	DRY	DRY	DRY
	3/28/2000	140	4	ND	ND	ND	ND
	9/8/2000	550	22	ND	ND	ND	ND
	3/8/2001	330	9	ND	ND	ND	ND
	9/13/2001	DRY	DRY	DRY	DRY	DRY	DRY
	5/24/2002	59	1	ND	ND	ND	ND
	6/18/2003*	66	2	ND	ND	ND	ND
	6/23/2004	120	2	ND	ND	ND	ND
MW-05D	12/19/1994	820	23	ND	ND	ND	ND
	5/21/1996	1,000	48	8	ND	ND	ND
	8/13/1997	250	7	2	ND	ND	ND
	3/18/1998	250	7	ND	ND	ND	ND
	9/2/1998	300	8	2	ND	ND	ND
	3/18/1999	200	7	2	ND	ND	ND
	9/2/1999	220	6	2	ND	ND	ND
	3/28/2000	190	4	ND	ND	ND	ND
	9/8/2000	160	3	ND	ND	ND	ND
	3/8/2001	160	3	ND	ND	ND	ND
	9/13/2001	120	3	ND	ND	ND	ND
Duplicate	9/13/2001	110	2	ND	ND	3	ND
	5/24/2002	160	4	ND	ND	ND	ND
	6/18/2003	110	3	ND	ND	ND	ND
	6/23/2004	130	3	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 above 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. Refe 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	ACETONE	VINYL CHLORIDE
MW-06S	12/19/1994	270	7.8	ND	ND	ND	ND
	5/21/1996	ND	2	ND	ND	ND	ND
	8/13/1997	140	9	3	ND	ND	ND
	3/18/1998	5	ND	ND	ND	ND	ND
	9/2/1998	140	8	2	ND	ND	ND
	3/17/1999	ND	ND	ND	ND	ND	ND
	9/2/1999	110	6	4	ND	ND	ND
	3/28/2000	3	ND	ND	ND	ND	ND
	9/8/2000	110	5	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND
	9/13/2001	72	4	4	ND	ND	ND
	5/24/2002	3	ND	ND	ND	ND	ND
	6/18/2003	8	ND	ND	ND	ND	ND
	6/23/2004	ND	ND	ND	ND	ND	ND
MW-06D	12/19/1994	190	7.5	ND	ND	ND	ND
	5/21/1996	240	10	ND	ND	ND	ND
	8/13/1997	150	10	2	ND	ND	ND
	3/18/1998	6	ND	ND	ND	ND	ND
	9/2/1998	140	8	2	ND	ND	ND
	3/17/1999	ND	ND	ND	ND	ND	ND
	9/2/1999	110	7	2	ND	ND	ND
	3/28/2000	89	5	1	ND	ND	ND
	9/8/2000	110	6	ND	ND	ND	ND
Duplicate	9/8/2000	110	6	ND	ND	ND	ND
	3/8/2001	95	5	ND	ND	ND	ND
	9/13/2001	80	4	3	ND	3	ND
	5/24/2002	91	4	ND	ND	ND	ND
	6/18/2003	70	4	ND	ND	ND	ND
	6/23/2004	67	3	ND	ND	ND	ND
MW-07S	12/19/1994	250	6.6	8	ND	ND	ND
	5/21/1996	310	7	6	ND	ND	ND
	8/13/1997	250	6	6	ND	ND	ND
	3/18/1998	3	ND	ND	ND	ND	ND
	9/2/1998	220	5	4	ND	ND	ND
	3/17/1999	ND	ND	ND	ND	ND	ND
	9/2/1999	220	4	4	ND	ND	ND
	3/28/2000	210	4	3	ND	ND	ND
	9/8/2000	210	ND	ND	ND	ND	ND
	3/8/2001	200	4	3	ND	ND	ND
	9/13/2001	190	3	4	ND	ND	ND
	5/24/2002	180	3	2	ND	ND	ND
	6/18/2003	130	2	2	ND	ND	ND
	6/23/2004	130	2	1	ND	ND	ND

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.
2. All results expressed in micrograms per liter ($\mu g/l$).
3. No other VOC compounds detected above 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. Refe 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	ACETONE	VINYL CHLORIDE
MW-07D	12/19/1994	260	ND	7	ND	ND	ND
	5/21/1996	290	4	12	ND	ND	ND
	8/13/1997	180	2	13	ND	ND	ND
	3/18/1998	150	2	15	ND	ND	ND
	9/2/1998	200	2	15	ND	ND	ND
	3/17/1999	100	ND	8	ND	ND	ND
	9/2/1999	180	2	14	ND	ND	ND
	3/28/2000	130	ND	19	ND	ND	4
	9/8/2000	180	ND	13	ND	ND	ND
	3/8/2001	140	ND	20	ND	ND	3
	9/13/2001	150	1	14	ND	ND	ND
	5/24/2002	140	ND	19	ND	ND	4
	6/18/2003	120	ND	16	ND	ND	2
	6/23/2004	130	ND	15	ND	ND	1
MW-08S	12/19/1994 Well abandoned.	29	ND	ND	ND	ND	ND
MW-08D	12/19/1994 Well abandoned.	55	ND	ND	ND	ND	ND
MW-09S	12/19/1994	ND	ND	ND	ND	ND	ND
	5/21/1996	ND	ND	ND	ND	ND	ND
	8/13/1997	2	ND	ND	ND	ND	ND
	3/18/1998	3	ND	ND	ND	ND	ND
	9/2/1998	NS	NS	NS	NS	NS	NS
	3/18/1999	ND	ND	ND	ND	ND	ND
	9/2/1999	ND	ND	ND	ND	ND	ND
	3/28/2000	ND	ND	ND	ND	ND	ND
	9/8/2000	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND
	9/13/2001	ND	ND	ND	ND	ND	ND
	5/24/2002	ND	ND	ND	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND
	6/23/2004	ND	ND	ND	ND	ND	ND
MW-09D	12/19/1994	ND	ND	ND	ND	ND	ND
	5/21/1996	ND	ND	ND	ND	ND	ND
	8/13/1997	ND	ND	ND	ND	ND	ND
	3/18/1998	ND	ND	ND	ND	ND	ND
	9/2/1998	NS	NS	NS	NS	NS	NS
	3/18/1999	ND	ND	ND	ND	ND	ND
	9/2/1999	ND	ND	ND	ND	ND	ND
	3/28/2000	ND	ND	ND	ND	ND	ND
	9/8/2000	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND
	9/13/2001	ND	ND	ND	ND	3	ND
	5/24/2002	ND	ND	1	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND
	6/23/2004	ND	ND	1	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 above 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. Refe 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	ACETONE	VINYL CHLORIDE
MW-10S	12/19/1994	7.8	ND	ND	ND	ND	ND
	5/29/1996	30	1	ND	ND	ND	ND
	8/13/1997	15	ND	ND	ND	ND	ND
	3/18/1998	NS	NS	NS	NS	NS	NS
	9/2/1998	8	ND	ND	ND	ND	ND
	3/18/1999	ND	ND	ND	ND	ND	ND
	9/2/1999	7	ND	ND	ND	ND	ND
	3/28/2000	1	ND	ND	ND	ND	ND
	9/8/2000	3	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND
	9/13/2001	6	ND	ND	ND	ND	ND
	5/24/2002	ND	ND	ND	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND
	6/23/2004	3	ND	ND	ND	ND	ND
Duplicate	6/23/2004	3	ND	ND	ND	ND	ND
MW-10D	12/19/1994	8.2	ND	ND	ND	ND	ND
	5/29/1996	8	ND	ND	ND	ND	ND
	8/13/1997	15	ND	ND	ND	ND	ND
	3/18/1998	NS	NS	NS	NS	NS	NS
	9/2/1998	9	ND	ND	ND	ND	ND
	3/18/1999	ND	ND	ND	ND	ND	ND
	9/2/1999	7	ND	ND	ND	ND	ND
	3/28/2000	3	ND	ND	ND	ND	ND
	9/8/2000	6	ND	ND	ND	ND	ND
	3/8/2001	5	ND	ND	ND	ND	ND
	9/13/2001	6	ND	ND	ND	ND	ND
	5/24/2002	4	ND	ND	ND	ND	ND
	6/18/2003	5	ND	ND	ND	ND	ND
	6/23/2004	5	ND	ND	ND	ND	ND
MW-11D	4/11/1996	ND	ND	ND	ND	ND	ND
	5/21/1996	ND	ND	ND	ND	ND	ND
	8/13/1997	ND	ND	ND	ND	ND	ND
	3/18/1998	ND	ND	ND	ND	ND	ND
	9/2/1998	ND	ND	ND	ND	ND	ND
	3/18/1999	ND	ND	ND	ND	ND	ND
	9/2/1999	ND	ND	ND	ND	ND	ND
	3/28/2000	ND	ND	ND	ND	ND	ND
	9/8/2000	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND
	9/13/2001	ND	ND	ND	ND	ND	ND
	5/24/2002	ND	ND	ND	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND
	6/23/2004	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 ($\mu g/l$).
3. No other VOC compounds detected above 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. Refe 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	ACETONE	VINYL CHLORIDE
MW-13D	4/11/1996	610	5	4	ND	ND	ND
	5/21/1996	190	5	4	ND	ND	ND
	8/13/1997	160	4	4	ND	ND	ND
	3/18/1998	110	2	ND	ND	ND	ND
	9/2/1998	140	3	2	ND	ND	ND
	3/17/1999	120	2	2	ND	ND	ND
	9/2/1999	140	3	2	ND	ND	ND
	3/28/2000	85	2	ND	ND	ND	ND
	9/8/2000	140	ND	ND	ND	ND	ND
	3/8/2001	88	2	ND	ND	ND	ND
	9/13/2001	120	2	ND	ND	ND	ND
	5/24/2002	100	2	1	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 above 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. Refe analytical data and data validation report for additional descriptions.

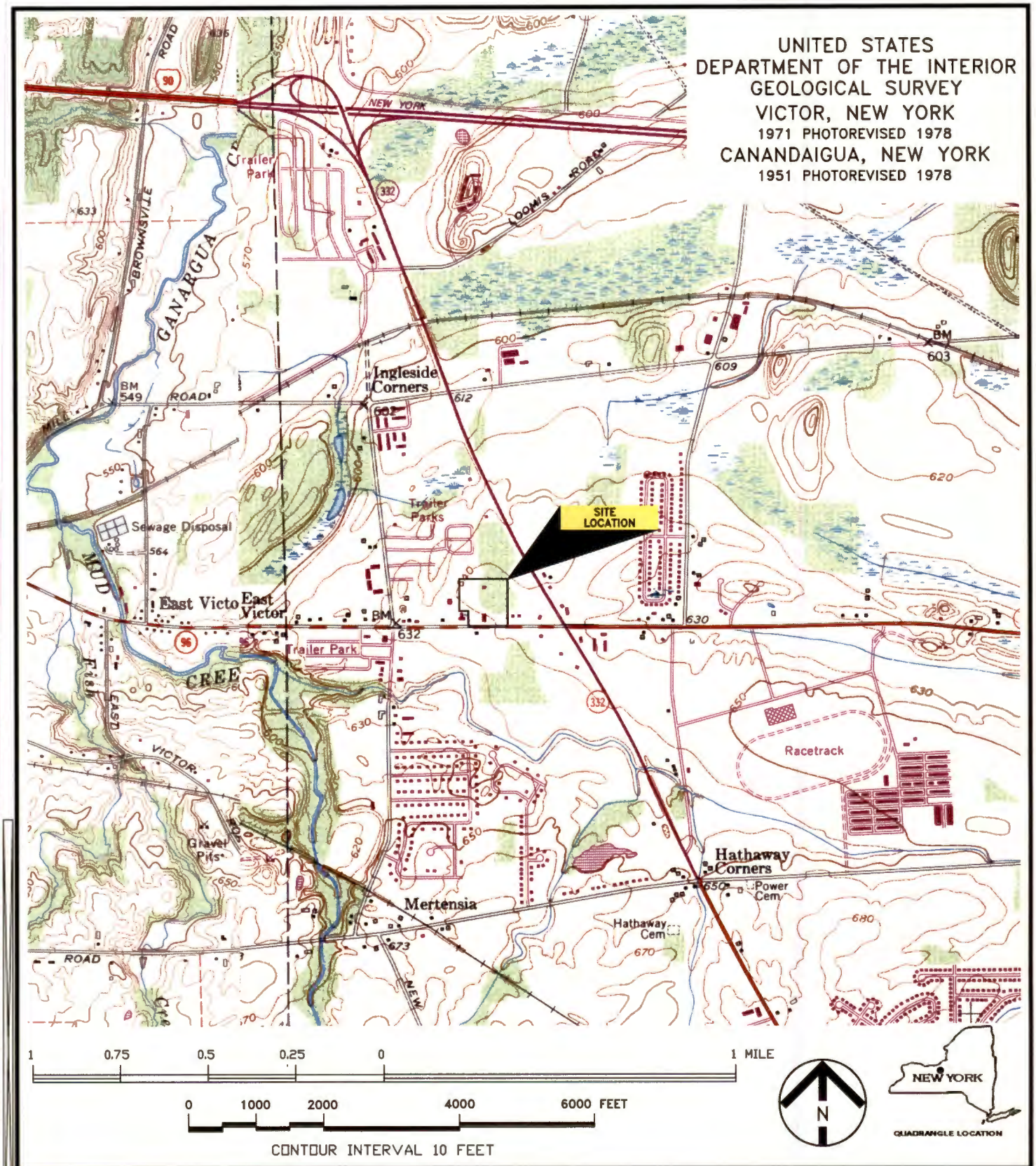
TABLE 3-4
SUMMARY OF RECOVERY WELL ANALYTICAL RESULTS
GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK

Recovery Well No.	Sample Date	TCE	1,1,1-TCA	CIS-1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
RW-1	3/28/2000	140	3	3	ND	ND	ND	ND
	9/8/2000	No sample collected due to low discharge.						
	3/8/2001	220	4	5	ND	ND	ND	ND
	9/13/2001	440	8	9	ND	ND	2	ND
	5/24/2002	53	ND	1	ND	ND	ND	ND
	6/23/2004	150	3	2	ND	ND	ND	ND
RW-2	3/28/2000	100	2	ND	ND	ND	ND	ND
	9/8/2000	No sample collected due to low discharge.						
	3/8/2001	140	3	ND	ND	ND	ND	ND
	9/13/2001	No sample collected due to low discharge.						
	5/24/2002	53	ND	ND	ND	ND	ND	ND
	6/23/2004	33	ND	5	ND	ND	7	ND
RW-3	3/28/2000	170	4	ND	ND	ND	ND	ND
	9/8/2000	No sample collected due to low discharge.						
	3/8/2001	180	4	ND	ND	ND	ND	ND
	9/13/2001	160	3	1	ND	ND	3	ND
	5/24/2002	120	3	ND	ND	ND	ND	ND
	6/23/2004	97	2	ND	ND	ND	ND	ND
RW-4	3/28/2000	1,000	22	11	ND	1	5	ND
	9/8/2000	760	ND	ND	ND	ND	ND	ND
	3/8/2001	840	16	8	ND	ND	ND	ND
	9/13/2001	No sample collected due to low discharge.						
	5/24/2002	490	11	6	ND	ND	ND	ND
	6/23/2004	420	10	9	ND	ND	ND	ND

Notes:

1. All results expressed in micrograms per liter (μg/l).
2. No other VOC compounds detected at method detection limit.
3. "ND" indicates not detected.
4. Data presented include actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data sheets and data validation report for additional descriptions.

Figures

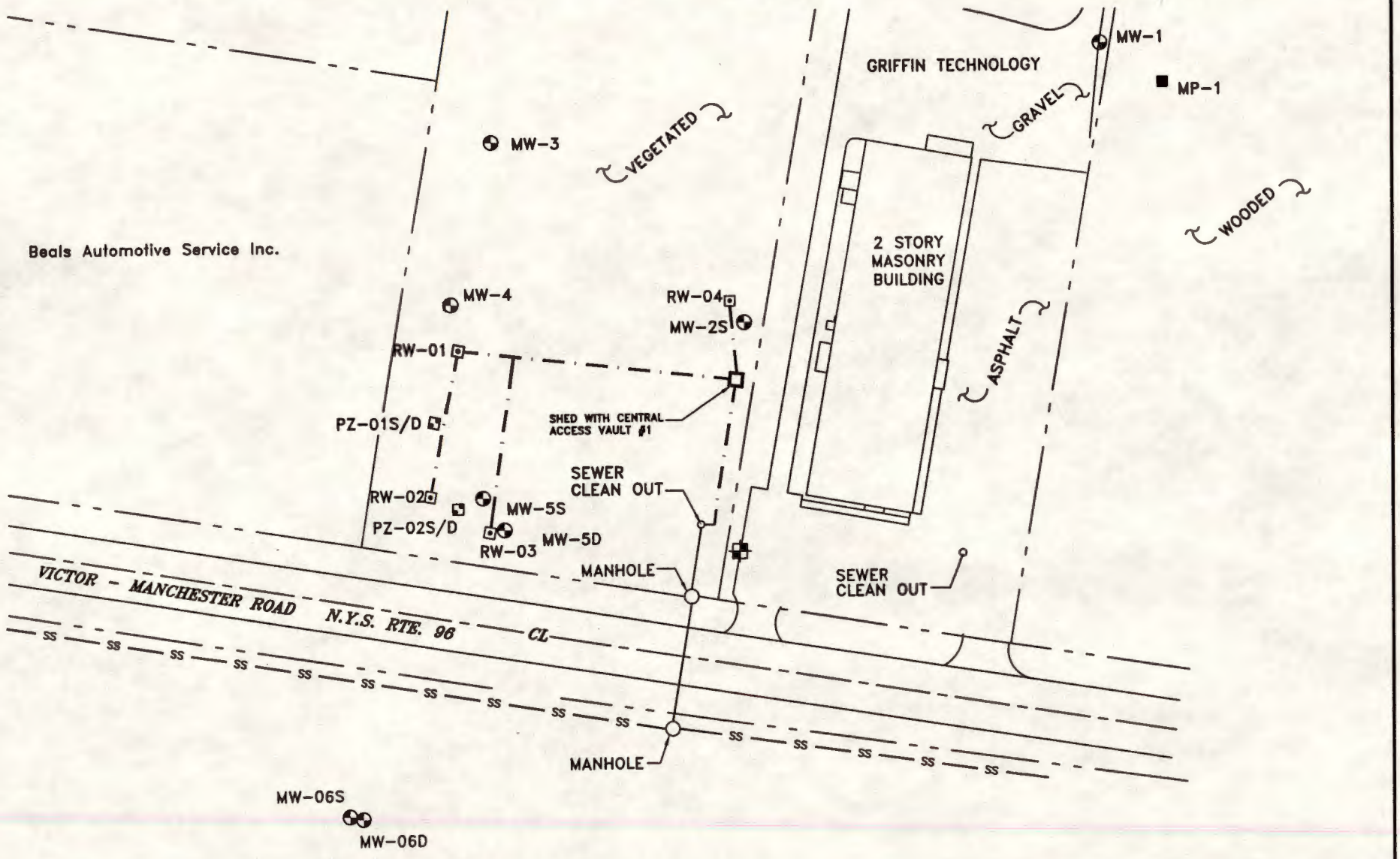


GENERAL LOCATION MAP

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

DRAWN BY: JML	CHECKED BY: CAP	PROJECT NUMBER: 13807296	DATE: 11/9/04	FIGURE NO: 1-1

URS



GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 2-1
IRM System Layout

URS

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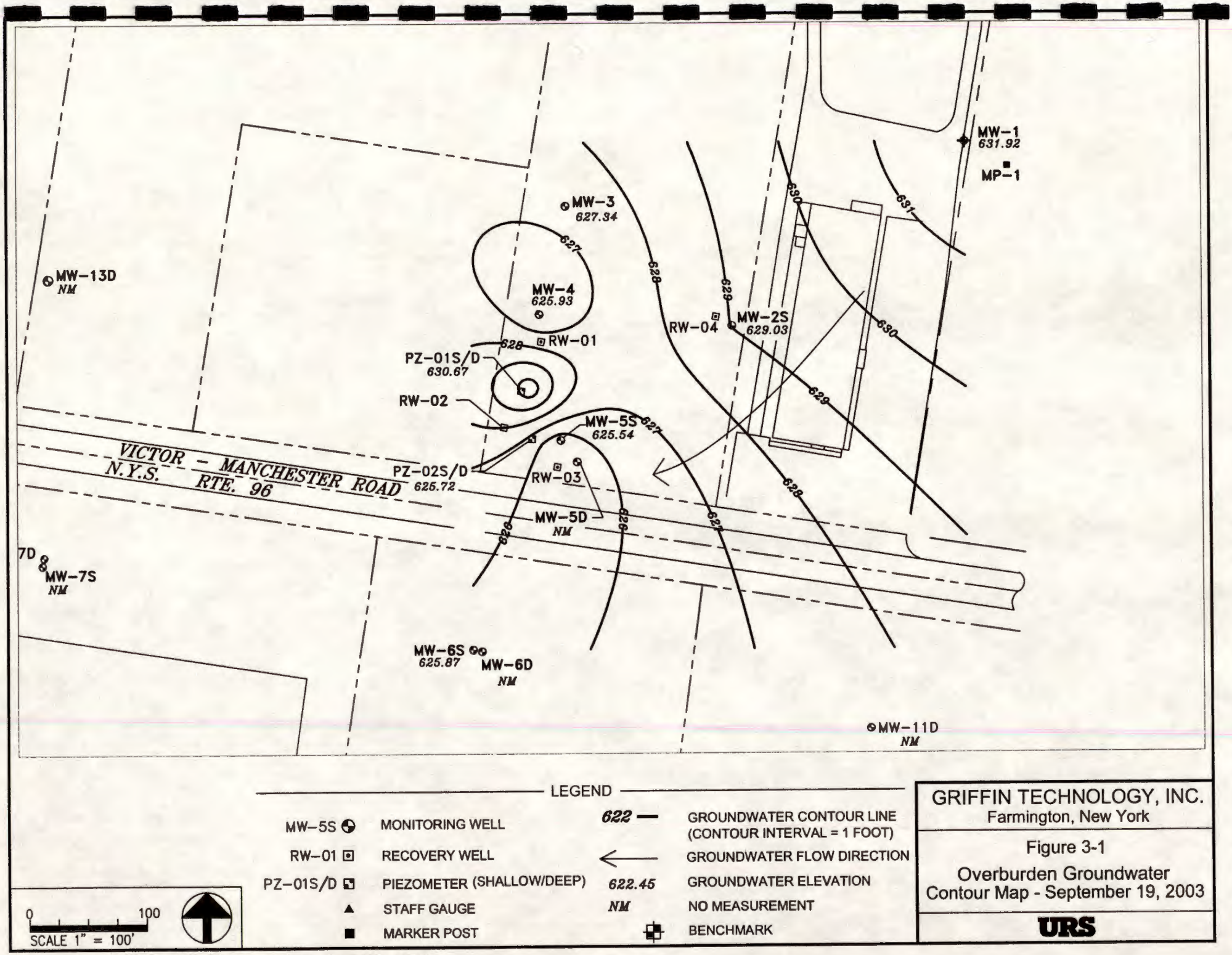
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MP-1
MW-3
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MW-13D
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MW-4
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PZ-01S/D
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RW-02
RW-04
MW-2S
629.03
MW-5S
625.54
PZ-02S/D
625.72
RW-03
VICTOR - MANCHESTER ROAD
N.Y.S. RTE. 96
MW-5D
NM
7D
MW-7S
NM
MW-6S
625.87
MW-6D
NM
MW-11D
NM
627
628
629
630
631
626
LEGEND
MW-5S MONITORING WELL
RW-01 RECOVERY WELL
PZ-01S/D PIEZOMETER (SHALLOW/DEEP)
STAFF GAUGE
MARKER POST
622 GROUNDWATER CONTOUR LINE (CONTOUR INTERVAL = 1 FOOT)
GROUNDWATER FLOW DIRECTION
622.45 GROUNDWATER ELEVATION
NM NO MEASUREMENT
BENCHMARK
0
100
SCALE 1" = 100'
GRIFFIN TECHNOLOGY, INC.
Farmington, New York
Figure 3-1
Overburden Groundwater Contour Map - September 19, 2003
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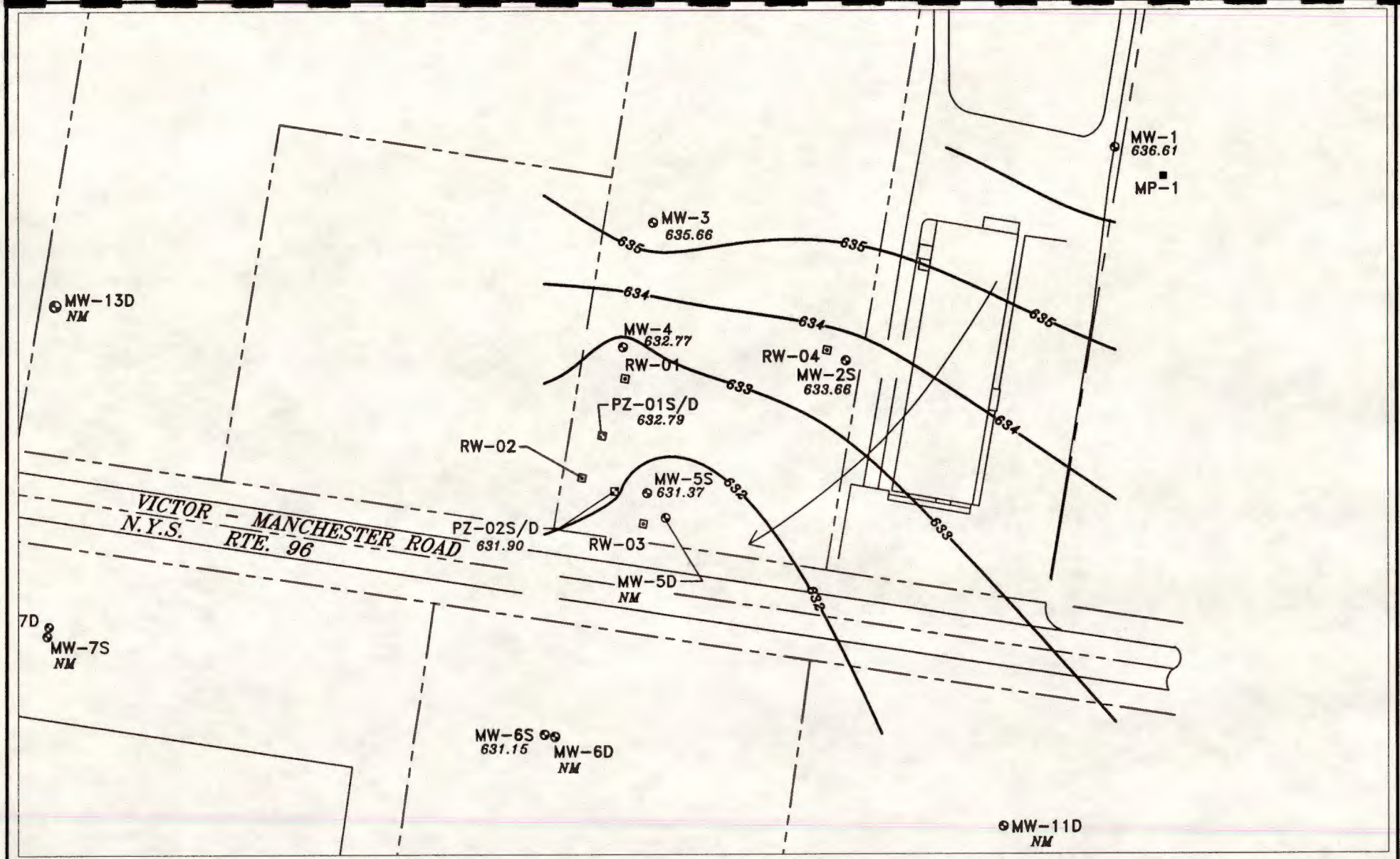

LEGEND

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	NM	NO MEASUREMENT
	MARKER POST		BENCHMARK

0 100
SCALE 1" = 100'

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-2
Overburden Groundwater Contour Map - December 17, 2003

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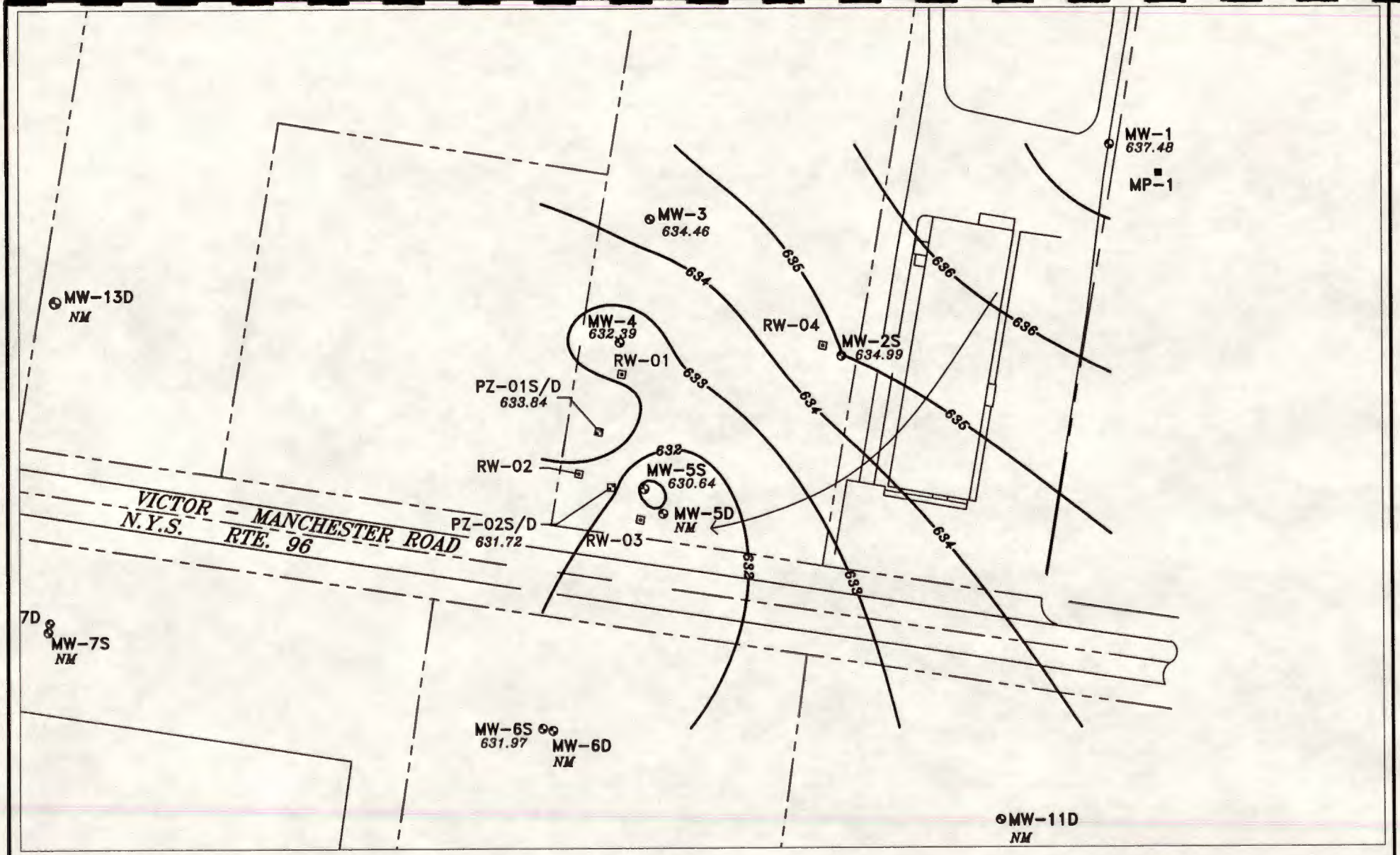

LEGEND

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	NM	NO MEASUREMENT
■	MARKER POST	⊕	BENCHMARK

0 100
SCALE 1" = 100'

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-3
Overburden Groundwater Contour Map - March 16, 2004

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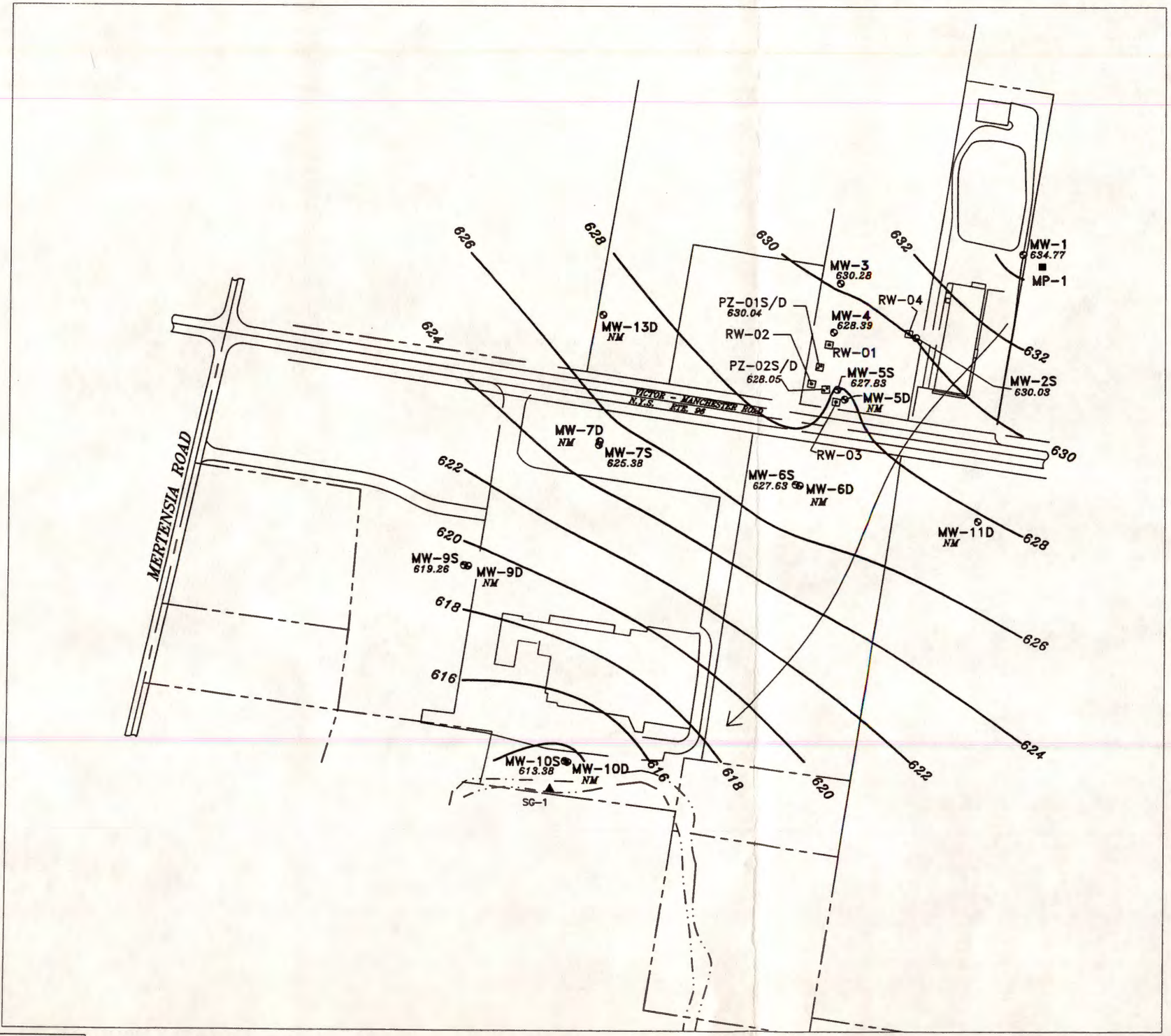

LEGEND

- MW-5S — MONITORING WELL
- RW-01 — RECOVERY WELL
- PZ-01S/D — PIEZOMETER (SHALLOW/DEEP)
- ▲ — STAFF GAUGE
- ■ — MARKER POST
- *NM* — NO MEASUREMENT
- BENCHMARK
- *622* — GROUNDWATER CONTOUR LINE (CONTOUR INTERVAL = 1 FOOT)
- GROUNDWATER FLOW DIRECTION
- *626.39* — GROUNDWATER ELEVATION

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-4

Overburden Groundwater Contour Map - June 22, 2004

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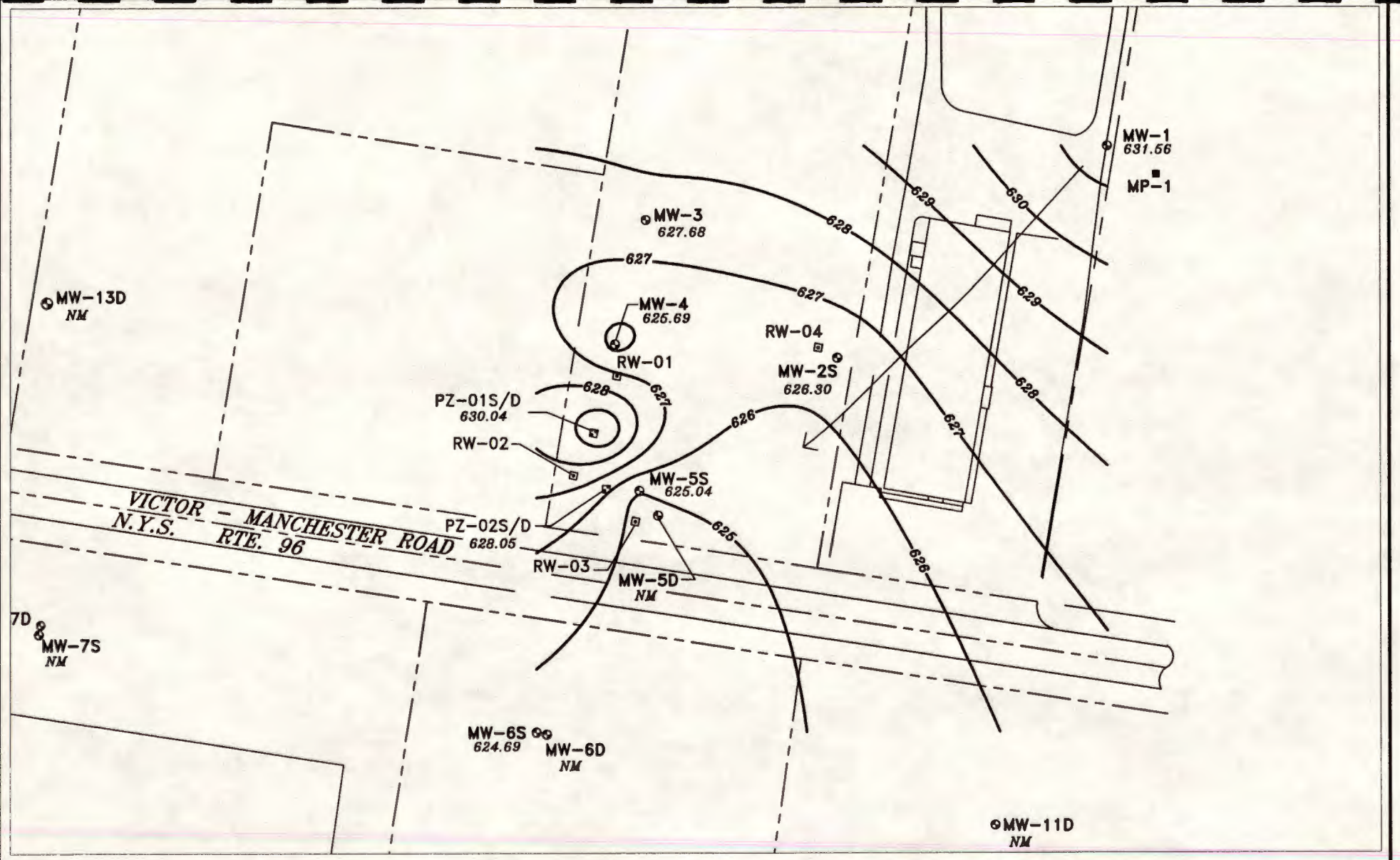

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-5

Overburden Groundwater Contour Map - August 16, 2004

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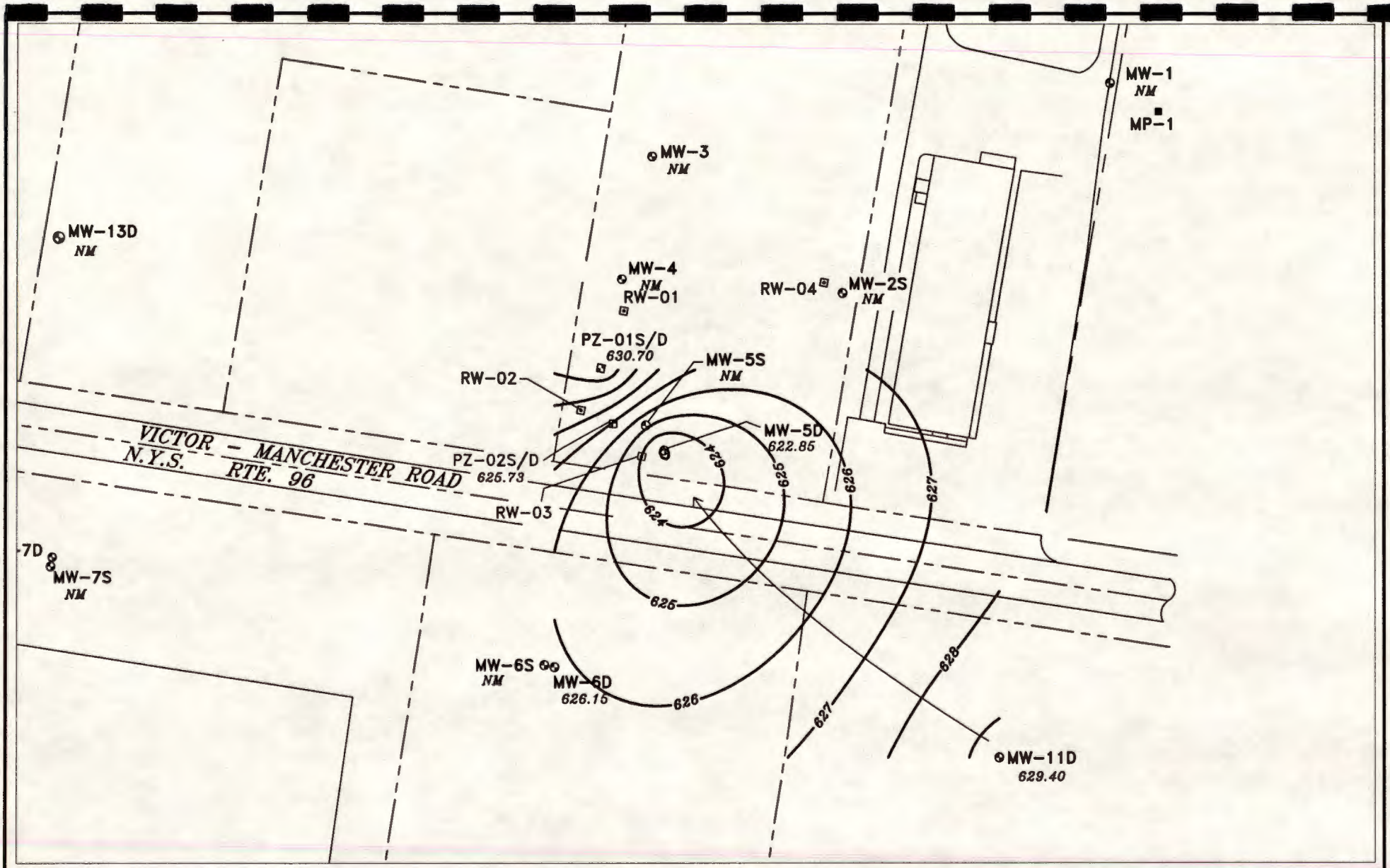

LEGEND

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	NM	NO MEASUREMENT
	MARKER POST		BENCHMARK

0 100
SCALE 1" = 100'

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-6

Bedrock Groundwater Contour Map - September 19, 2003

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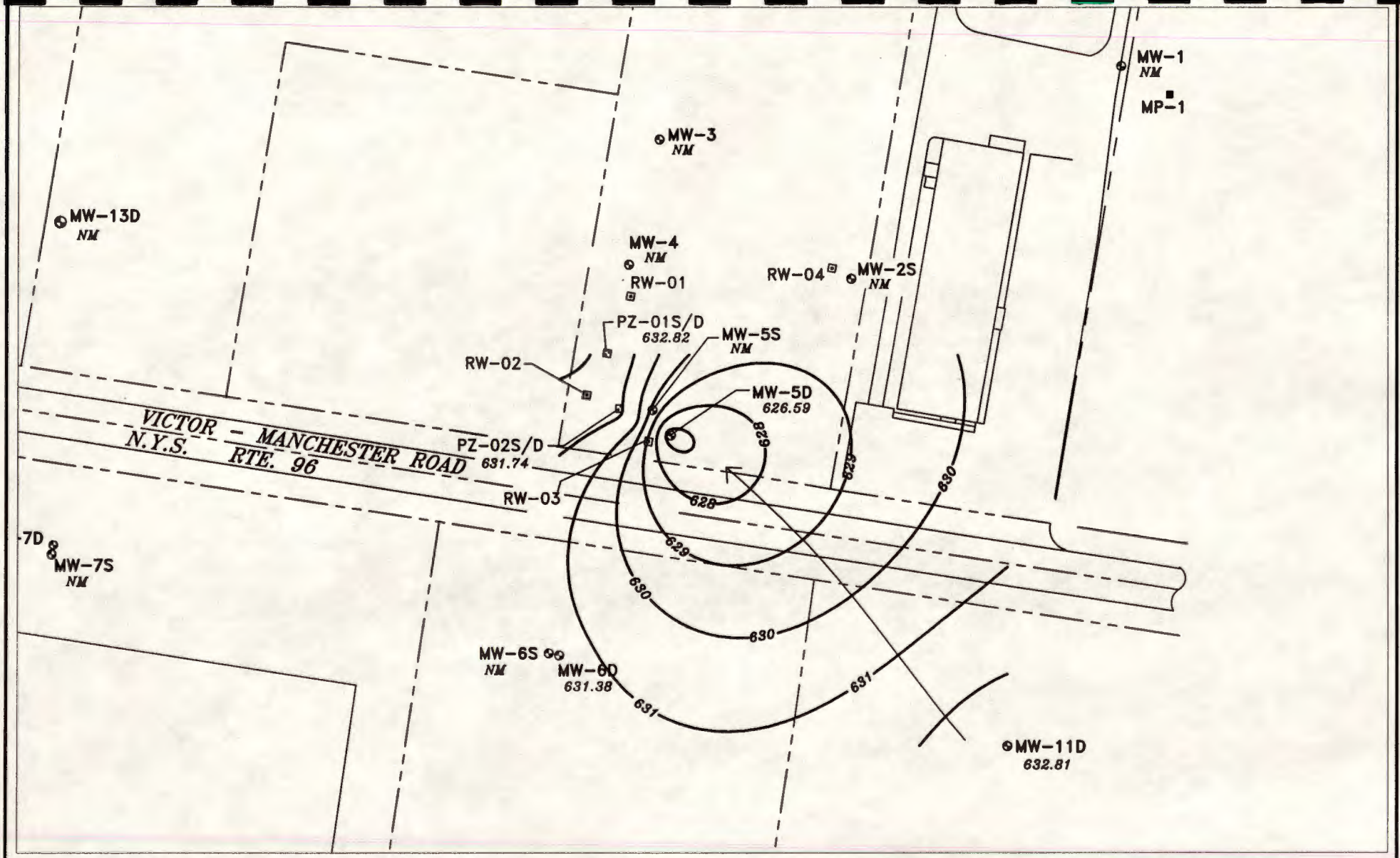


LEGEND

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	NM	NO MEASUREMENT
	MARKER POST		BENCHMARK

0 100
SCALE 1" = 100'

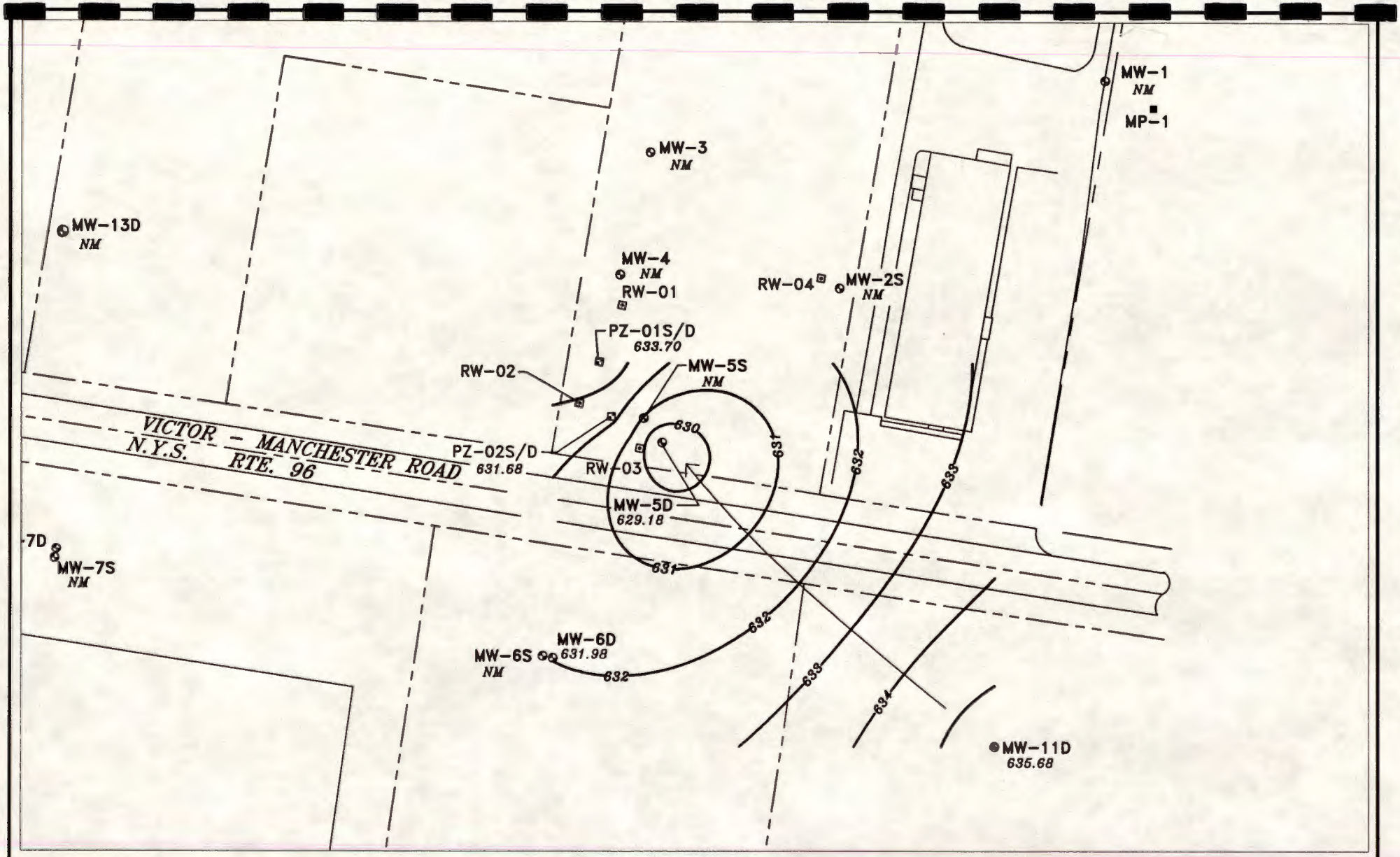
GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-7

Bedrock Groundwater Contour Map - December 17, 2003

URS

P:\D\Diebold\13807295\DWGs\Figures\2004\fig03-7.dwg User:lyndon Nov 09, 2004 - 8:44am



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	NM	NO MEASUREMENT
	MARKER POST		BENCHMARK

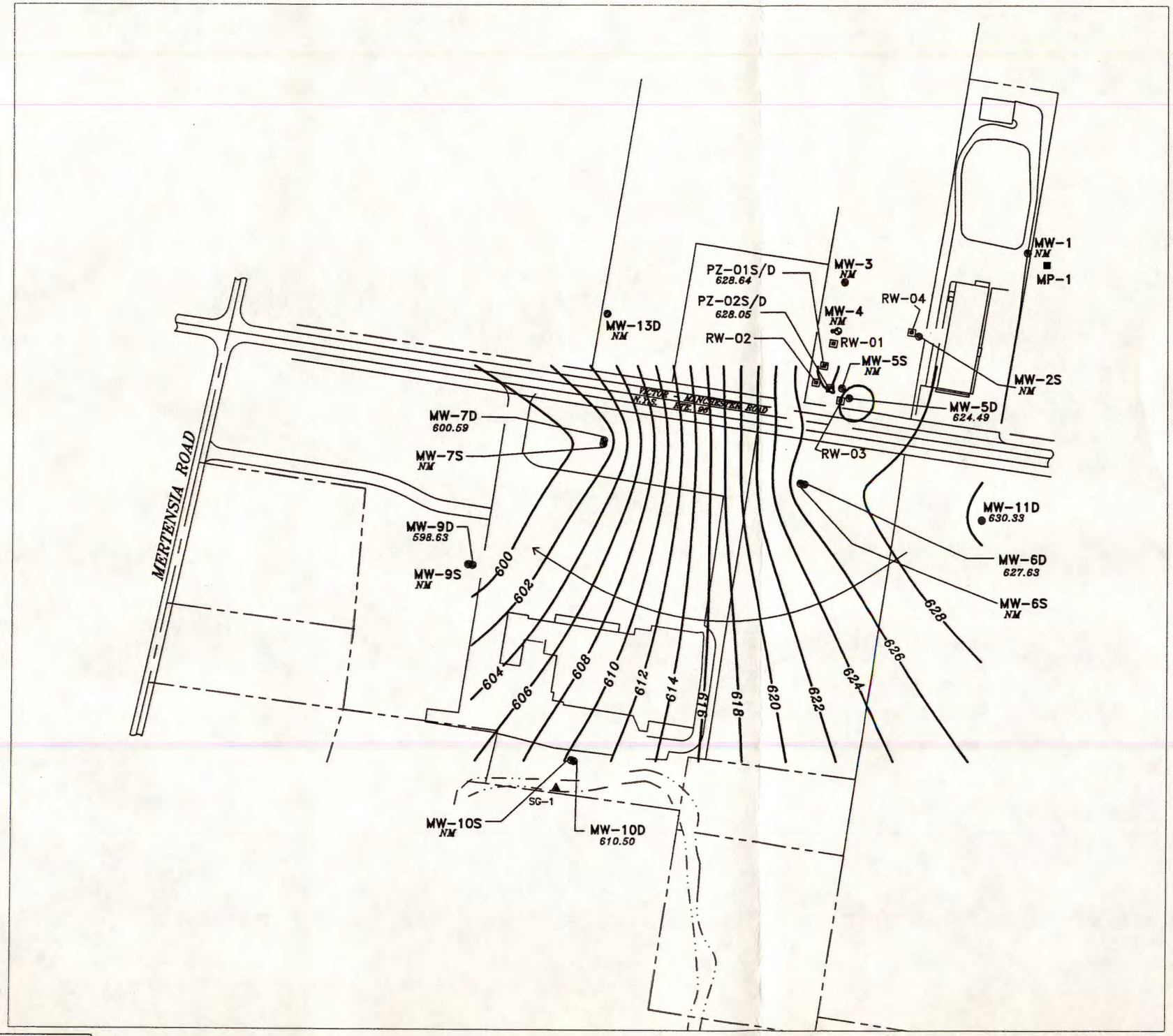
0 100
SCALE 1" = 100'

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-8
Bedrock Groundwater
Contour Map - March 16, 2004

URS

P:\D\Diebold\13807295\DWGs\Figures\2004\fig03-8.dwg User:lyndon Nov 09, 2004 - 8:59am



LEGEND

MW-5S	MONITORING WELL
RW-01	RECOVERY WELL
PZ-01S/D	PIEZOMETER (SHALLOW/DEEP)
▲	STAFF GAUGE
■	MARKER POST
NM	NO MEASUREMENT
	BENCHMARK
622	GROUNDWATER CONTOUR LINE (CONTOUR INTERVAL = 1 FOOT)
←	GROUNDWATER FLOW DIRECTION
626.39	GROUNDWATER ELEVATION

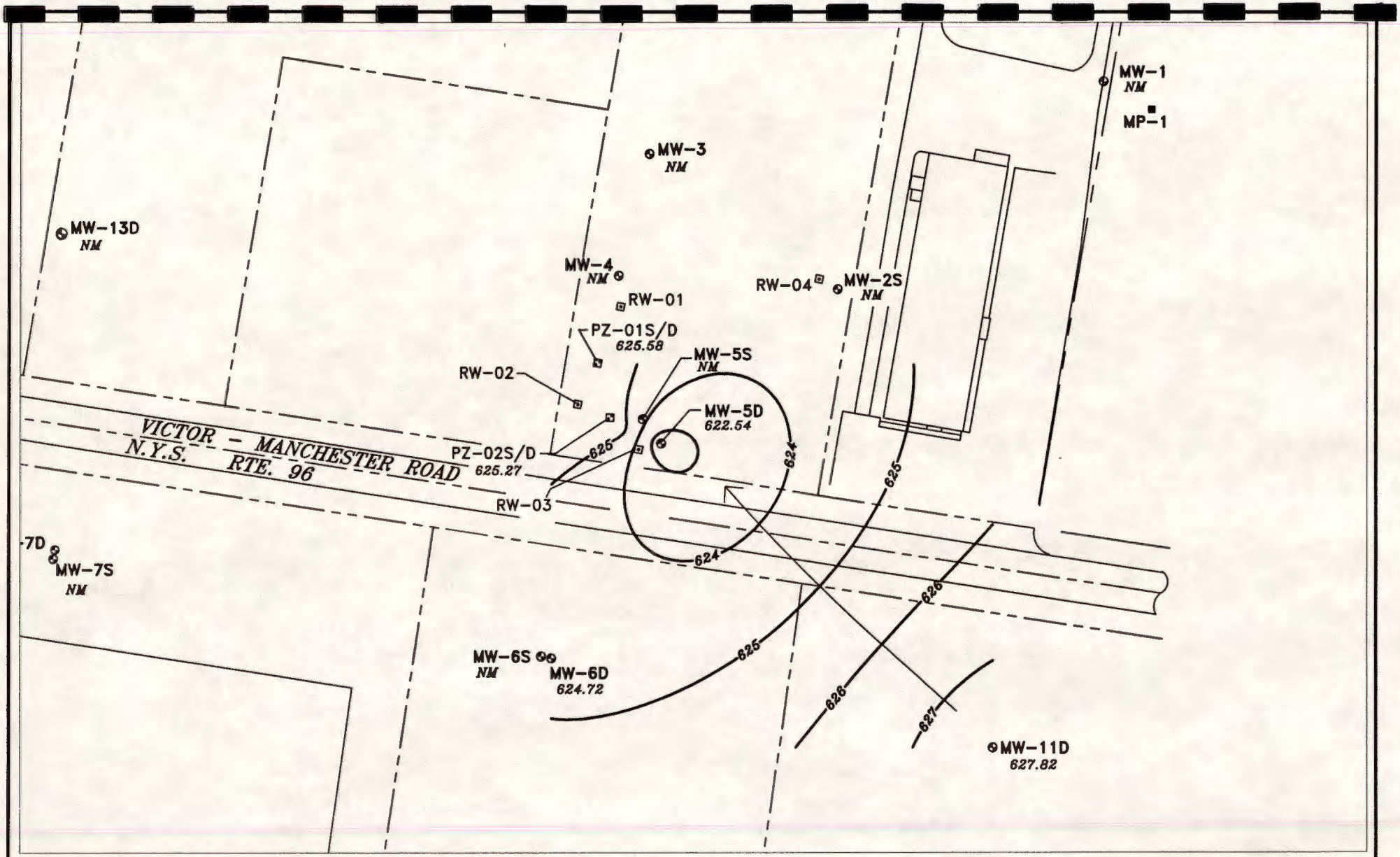
0 200
SCALE 1" = 200'

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-9
Bedrock Groundwater Contour Map - June 22, 2004

URS

P:\D\Diebold\13807295\DWGs\Figures\2004\fig03-9.dwg User:lyndon Nov 16, 2004 - 8:32am



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	NM	NO MEASUREMENT
	MARKER POST		BENCHMARK

0 100
SCALE 1" = 100'

GRIFFIN TECHNOLOGY, INC.
Farmington, New York

Figure 3-10

Bedrock Groundwater Contour Map - August 16, 2004

URS

P:\D\Diebold\13807295\DWGs\Figures\2004\fig03-10.dwg User:lyndon Nov 09, 2004 - 9:28am

Appendix A
Recovery Well Effluent Analytical Results

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

RECEIVED
OCT 21 2003
URS

October 15, 2003

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

PROJECT:GRIFFIN 13807296
Submission #:R2318497

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 P. 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 # : R2318497
Project Manager : Mark Wilson
Reported : 10/15/03

Report Contains a total of 1 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 #: R2318497

Lab ID	Client ID
673759	EFF-091903

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 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 SER ES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/15/03

URS Corporation
Project Reference: GRIFFIN 13807296
Client Sample ID : EFF-091903

Date Sampled : 09/19/03 **Order #:** 673759 **Sample Matrix:** WATER
Date Received: 09/19/03 **Submission #:** R2318497 **Analytical Run** 95863

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 09/27/03			
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 %)	98	%
TOLUENE-D8	(88 - 124 %)	108	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	105	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 10/15/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 675654 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 95863

DATE ANALYZED : 09/27/03
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 %)	98	%
TOLUENE-D8	(88 - 124 %)	108	%
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 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

PAGE 1 OF 1

CAR #

CAS Contact

Project Name: GRIFFIN	Project Number: 13807296
Project Manager: LARRY SZUHAY	Report CC: CATHERINE PALKO
Company/Address: URS CORP. 634 ST. CLAIRE CLEVELAND OH 44113	
Phone #: (216) 622-2400	FAX#: (216) 622-2464
Sampler's 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 BY EPA CLP							REMARKS/ ALTERNATE DESCRIPTION
EFF-091903		9/19/03	1110	GW	3									3							

1

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

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 # 1F497

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:	Signature:	Signature:	Signature:	Signature:
Printed Name: URS CORPORATION	Printed Name: Heather Lovejoy	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: 9/19/03	Firm: CTS	Firm:	Firm:	Firm:	Firm:
Date/Time:	Date/Time: 9/19/03 1140	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 RZ-18497

Cooler received on 9/19/03 by: 9:00 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:	19°				
	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: 9/19/03 1145

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: 9/19/03 by: ONP

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 10, 2003

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

PROJECT:GRIFFIN 13807296
Submission #:R2318823

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.

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 13807296
Lab Submission # : R2318823
Project Manager : Mark Wilson
Reported : 11/10/03

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 #: R2318823

Lab ID	Client ID
681254	EFF-102003

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 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: 11/10/03

URS Corporation
Project Reference: GRIFFIN 13807296
Client Sample ID : EFF-102003

Date Sampled : 10/20/03 **Order #:** 681254 **Sample Matrix:** WATER
Date Received: 10/20/03 **Submission #:** R2318823 **Analytical Run** 97404

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/27/03			
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 %)	95	%
TOLUENE-D8	(88 - 124 %)	102	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	108	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 11/10/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 686767 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 97404

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/27/03			
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 %)	97	%
TOLUENE-D8	(88 - 124 %)	102	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	104	%

DAY 1 OF 1

CHAIN OF CUSTODY RECORD

URS
CONSULTANTS, INC.

JOB NUMBER: 13807296.00000 SAMPLER: (SIGNATURE) Melissa Jan

SAMPLE DESCRIPTION	DATE	TIME	SAMPLE IDENT. NO.	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	PRESERVATION USED	ANALYSIS REQUIRED
EFF-102003	10/20/03	1358	102003		X	HCl	EPA-CLP

THIS SECTION TO BE COMPLETED BY URS CONSULTANTS, INC.

RELINQUISHED BY: (SIGNATURE)	RECEIVED BY: (SIGNATURE)	DATE/TIME
RELINQUISHED BY: (SIGNATURE)	RECEIVED BY: (SIGNATURE)	DATE/TIME

DISPATCHED BY: (SIGNATURE) Melissa Jan

METHOD OF SHIPMENT: Auto

THIS SECTION TO BE COMPLETED BY THE LABORATORY

RELINQUISHED BY: (SIGNATURE)	RECEIVED BY: (SIGNATURE)	DATE/TIME
RELINQUISHED BY: (SIGNATURE) Melissa Jan	RECEIVED BY: (SIGNATURE) Heather Darezzo	DATE/TIME 10/20/03 1430

NAME AND LOCATION OF LABORATORY:
Columbia Analytical, Rochester NY

RETURN COMPLETED CHAIN OF CUSTODY RECORD TO:

URS CONSULTANTS, INC.
282 Delaware Avenue
Buffalo, New York 14202
(716) 856-5636

URSF-019/1 OF 1/COCR

Cooler Receipt And Preservation Check Form

Project/Client URS Submission Number 16823

Cooler received on 10/20/03 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:	16				
	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: 10/20/03 1435

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: 10/21/03 by: JBC

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

December 10, 2003

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

PROJECT:GRIFFIN 13807296.00000
Submission #:R2319188

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 #	: R2319188
Project Manager	: Mark Wilson
Reported	: 12/10/03

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 #: R2319188

Lab ID	Client ID
689087	EFF-111403

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 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: 12/10/03

URS Corporation
Project Reference: GRIFFIN 13807296.00000
Client Sample ID : EFF-111403

Date Sampled : 11/14/03 **Order #:** 689087 **Sample Matrix:** WATER
Date Received: 11/14/03 **Submission #:** R2319188 **Analytical Run** 98503

DATE ANALYZED : 11/26/03
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	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 %)	94	%
TOLUENE-D8	(88 - 124 %)	98	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	108	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 694635 ANALYTICAL RUN # : 98503

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 11/26/03			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	80	50 - 150
BENZENE	20.0	97	70 - 130
BROMODICHLOROMETHANE	20.0	107	70 - 130
BROMOFORM	20.0	93	70 - 130
BROMOMETHANE	20.0	96	50 - 150
2-BUTANONE (MEK)	20.0	80	50 - 150
CARBON DISULFIDE	20.0	104	70 - 130
CARBON TETRACHLORIDE	20.0	108	70 - 130
CHLOROBENZENE	20.0	95	70 - 130
CHLOROETHANE	20.0	96	70 - 130
CHLOROFORM	20.0	111	70 - 130
CHLOROMETHANE	20.0	99	70 - 130
DIBROMOCHLOROMETHANE	20.0	101	70 - 130
1,1-DICHLOROETHANE	20.0	102	70 - 130
1,2-DICHLOROETHANE	20.0	108	70 - 130
1,1-DICHLOROETHENE	20.0	95	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	100	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	94	70 - 130
1,2-DICHLOROPROPANE	20.0	93	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	96	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	98	70 - 130
ETHYLBENZENE	20.0	96	70 - 130
2-HEXANONE	20.0	79	70 - 130
METHYLENE CHLORIDE	20.0	104	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	77	70 - 130
STYRENE	20.0	92	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	91	70 - 130
TETRACHLOROETHENE	20.0	102	70 - 130
TOLUENE	20.0	93	70 - 130
1,1,1-TRICHLOROETHANE	20.0	101	70 - 130
1,1,2-TRICHLOROETHANE	20.0	89	70 - 130
TRICHLOROETHENE	20.0	93	70 - 130
VINYL CHLORIDE	20.0	97	70 - 130
O-XYLENE	20.0	96	70 - 130
M+P-XYLENE	40.0	94	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 12/10/03

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 694634 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 98503

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/26/03			
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 %)	95	%
TOLUENE-D8	(88 - 124 %)	99	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	110	%

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 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

PAGE 1 OF 1

SR # [redacted]

CAS Contact

Project Name: GRIFFIN	Project Number: 13807296.00000
Project Manager: Larry Stahay	Report CC: Catherine Palko
Company/Address: URS Corp. 800 St. Claire Ave Cleveland OH	
Phone #: 216-622-2400	FAX#: 216-622-2464
Sampler's Signature: Melissa	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-111403		11/14/03	1402	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

2

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 #: 19188

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

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Melissa	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	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 11/14/03	Date/Time: 11/14/03 1515	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 19188.

Cooler received on 11/14/03 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:	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: 11/14/03 1520

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: 11/17/03 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

January 7, 2004

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

RECEIVED
JAN 22 2004
URS

PROJECT:GRIFFIN IRM 13807296-00000
Submission #:R2319578

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 IRM 13807296-00000
Lab Submission # : R2319578
Project Manager : Mark Wilson
Reported : 01/07/04

Report Contains a total of 11 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 #: R2319578

Lab ID	Client ID
696876	EFF-121703

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.
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ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL 2003 SEAL OF EXCELLENCE PROGRAM Environmental

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: 01/07/04

URS Corporation
Project Reference: GRIFFIN IRM 13807296-00000
Client Sample ID : EFF-121703

Date Sampled : 12/17/03 **Order #:** 696876 **Sample Matrix:** WATER
Date Received: 12/17/03 **Submission #:** R2319578 **Analytical Run** 99226

DATE ANALYZED : 12/27/03
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	6.1	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	230 E	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 %)	111	%
TOLUENE-D8	(88 - 124 %)	108	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/07/04

URS Corporation
Project Reference: GRIFFIN IRM 13807296-00000
Client Sample ID : EFF-121703

Date Sampled : 12/17/03 **Order #:** 696876 **Sample Matrix:** WATER
Date Received: 12/17/03 **Submission #:** R2319578 **Analytical Run** 99226

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/29/03			
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	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 %)	110	%
TOLUENE-D8	(88 - 124 %)	107	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	106	%

OLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 699319 ANALYTICAL RUN # : 99226

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 12/26/03			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	114	50 - 150
BENZENE	20.0	99	70 - 130
BROMODICHLOROMETHANE	20.0	102	70 - 130
BROMOFORM	20.0	90	70 - 130
BROMOMETHANE	20.0	78	50 - 150
2-BUTANONE (MEK)	20.0	107	50 - 150
CARBON DISULFIDE	20.0	104	70 - 130
CARBON TETRACHLORIDE	20.0	104	70 - 130
CHLOROBENZENE	20.0	93	70 - 130
CHLOROETHANE	20.0	90	70 - 130
CHLOROFORM	20.0	103	70 - 130
CHLOROMETHANE	20.0	91	70 - 130
DIBROMOCHLOROMETHANE	20.0	91	70 - 130
1,1-DICHLOROETHANE	20.0	107	70 - 130
1,2-DICHLOROETHANE	20.0	105	70 - 130
1,1-DICHLOROETHENE	20.0	102	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	95	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	99	70 - 130
1,2-DICHLOROPROPANE	20.0	94	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	92	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	94	70 - 130
ETHYLBENZENE	20.0	98	70 - 130
2-HEXANONE	20.0	112	70 - 130
METHYLENE CHLORIDE	20.0	97	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	101	70 - 130
STYRENE	20.0	90	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	80	70 - 130
TETRACHLOROETHENE	20.0	88	70 - 130
TOLUENE	20.0	95	70 - 130
1,1,1-TRICHLOROETHANE	20.0	96	70 - 130
1,1,2-TRICHLOROETHANE	20.0	93	70 - 130
TRICHLOROETHENE	20.0	101	70 - 130
VINYL CHLORIDE	20.0	96	70 - 130
O-XYLENE	20.0	90	70 - 130
M+P-XYLENE	40.0	92	70 - 130

OLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

ABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 699321 ANALYTICAL RUN # : 99226

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 12/29/03			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	140	50 - 150
BENZENE	20.0	107	70 - 130
BROMODICHLOROMETHANE	20.0	111	70 - 130
BROMOFORM	20.0	96	70 - 130
BROMOMETHANE	20.0	73	50 - 150
2-BUTANONE (MEK)	20.0	136	50 - 150
CARBON DISULFIDE	20.0	99	70 - 130
CARBON TETRACHLORIDE	20.0	112	70 - 130
CHLOROBENZENE	20.0	92	70 - 130
CHLOROETHANE	20.0	97	70 - 130
CHLOROFORM	20.0	116	70 - 130
CHLOROMETHANE	20.0	103	70 - 130
DIBROMOCHLOROMETHANE	20.0	92	70 - 130
1,1-DICHLOROETHANE	20.0	114	70 - 130
1,2-DICHLOROETHANE	20.0	112	70 - 130
1,1-DICHLOROETHENE	20.0	111	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	104	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	104	70 - 130
1,2-DICHLOROPROPANE	20.0	102	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	103	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	98	70 - 130
ETHYLBENZENE	20.0	100	70 - 130
2-HEXANONE	20.0	127	70 - 130
METHYLENE CHLORIDE	20.0	110	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	114	70 - 130
STYRENE	20.0	87	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	104	70 - 130
TETRACHLOROETHENE	20.0	86	70 - 130
TOLUENE	20.0	98	70 - 130
1,1,1-TRICHLOROETHANE	20.0	110	70 - 130
1,1,2-TRICHLOROETHANE	20.0	95	70 - 130
TRICHLOROETHENE	20.0	96	70 - 130
VINYL CHLORIDE	20.0	103	70 - 130
O-XYLENE	20.0	90	70 - 130
M+P-XYLENE	40.0	93	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/07/04

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 699318 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 99226

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/26/03			
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 %)	109	%
TOLUENE-D8	(88 - 124 %)	106	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	104	%

COLUMBIA ANALYTICAL SE :CES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 01/07/04

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 699320 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 99226

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/29/03			
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 %)	111	%
TOLUENE-D8	(88 - 124 %)	108	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	106	%

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

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: 13807296.00000
Project Manager: Larry Szilvay	Report CC: Catherine Palko
Company/Address: URS Corporation 800 W. St Claire 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 - 121703	696F76	12/17/03	1115	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

10

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 #:

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: Gregory G. Esmerian	Signature	Signature	Signature	Signature
Printed Name: URS Corporation	Printed Name: CAS	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Melissa Nemeth	Firm	Firm	Firm	Firm	Firm
Date/Time: 12/17/03 11:50	Date/Time: 12-17-03 11:50	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 R2-19578.

Cooler received on 12-17-03 by: KE COURIER: CAS UPS FEDEX CD&L (CLIENT)

1.	Were custody seals on outside of cooler?			(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: 12-17-03 @ 11:56

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: 12-17-03 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

RECEIVED
FEB - 9 2004

February 2, 2004

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

PROJECT:GRIFFIN 13807296.00000
Submission #:R2419912

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.

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 13807296.00000
Lab Submission # : R2419912
Project Manager : Mark Wilson
Reported : 02/02/04

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. _____

Columbia Analytical Services, Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2419912

Lab ID	Client ID
702765	EFF-0111604

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 2003 SEAL OF EXCELLENCE PROGRAM Environmental

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: 02/02/04

URS Corporation
Project Reference: GRIFFIN 13807296.00000
Client Sample ID : EFF-0111604

Date Sampled : 01/16/04 **Order #:** 702765 **Sample Matrix:** WATER
Date Received: 01/16/04 **Submission #:** R2419912 **Analytical Run** 99856

DATE ANALYZED : 01/20/04
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	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 %)	114	%
TOLUENE-D8	(88 - 124 %)	96	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	105	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 703147 ANALYTICAL RUN # : 99856

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 01/20/04			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	117	50 - 150
BENZENE	20.0	106	70 - 130
BROMODICHLOROMETHANE	20.0	109	70 - 130
BROMOFORM	20.0	89	70 - 130
BROMOMETHANE	20.0	65	50 - 150
2-BUTANONE (MEK)	20.0	121	50 - 150
CARBON DISULFIDE	20.0	112	70 - 130
CARBON TETRACHLORIDE	20.0	113	70 - 130
CHLOROBENZENE	20.0	83	70 - 130
CHLOROETHANE	20.0	96	70 - 130
CHLOROFORM	20.0	112	70 - 130
CHLOROMETHANE	20.0	87	70 - 130
DIBROMOCHLOROMETHANE	20.0	82	70 - 130
1,1-DICHLOROETHANE	20.0	111	70 - 130
1,2-DICHLOROETHANE	20.0	110	70 - 130
1,1-DICHLOROETHENE	20.0	117	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	108	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	106	70 - 130
1,2-DICHLOROPROPANE	20.0	96	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	102	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	87	70 - 130
ETHYLBENZENE	20.0	88	70 - 130
2-HEXANONE	20.0	104	70 - 130
METHYLENE CHLORIDE	20.0	114	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	93	70 - 130
STYRENE	20.0	79	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	89	70 - 130
TETRACHLOROETHENE	20.0	81	70 - 130
TOLUENE	20.0	86	70 - 130
1,1,1-TRICHLOROETHANE	20.0	103	70 - 130
1,1,2-TRICHLOROETHANE	20.0	87	70 - 130
TRICHLOROETHENE	20.0	92	70 - 130
VINYL CHLORIDE	20.0	98	70 - 130
O-XYLENE	20.0	81	70 - 130
M+P-XYLENE	40.0	85	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 02/02/04

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 703146 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 99856

DATE ANALYZED : 01/20/04
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 %)	113	%
TOLUENE-D8	(88 - 124 %)	96	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	100	%

Columbia Analytical Services, Inc.
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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

COC #

CAS Contact

Project Name: GRIFFIN	Project Number: 13807296.00000
Project Manager: LARRY SZUHAY	Report CC: Catherine Palko
Company/Address: URS CORP 800 W. St. Clair Cleveland OH 44113	
Phone #: 216-622-2400	FAX#: 216-622-2464
Sampler's Signature: Melissa Neneth	Sampler's Printed Name: MELISSA NENETH

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-011604		1/16/04	1045	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

2

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 #: 19912

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

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Melissa Neneth	Signature: Kelly M. Cook	Signature	Signature	Signature	Signature
Printed Name: MELISSA NENETH	Printed Name: K. COOK	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS CORP	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 1/16/04 1130	Date/Time: 1/16/04 1130	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 B2-19912

Cooler received on 1/16/04 by: MM **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°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: 1/16/04 1130

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: 1/19/04 by: DB2

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 2, 2004

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

PROJECT:GRIFFIN 13807296.00000
Submission #:R2420209

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 # : R2420209
Project Manager : Mark Wilson
Reported : 03/02/04

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 #: R2420209

Lab ID	Client ID
707830	EFF-021304

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.
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ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL 2003 SEAL OF EXCELLENCE PROGRAM Environmental

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: 03/02/04

URS Corporation
Project Reference: GRIFFIN 13807296.00000
Client Sample ID : EFF-021304

Date Sampled : 02/13/04 **Order #:** 707830 **Sample Matrix:** WATER
Date Received: 02/13/04 **Submission #:** R2420209 **Analytical Run** 100834

DATE ANALYZED : 02/23/04
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 %)	99	%
TOLUENE-D8	(88 - 124 %)	104	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	109	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 709789 ANALYTICAL RUN # : 100834

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 02/23/04			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	78	50 - 150
BENZENE	20.0	92	70 - 130
BROMODICHLOROMETHANE	20.0	96	70 - 130
BROMOFORM	20.0	96	70 - 130
BROMOMETHANE	20.0	90	50 - 150
2-BUTANONE (MEK)	20.0	78	50 - 150
CARBON DISULFIDE	20.0	87	70 - 130
CARBON TETRACHLORIDE	20.0	99	70 - 130
CHLOROBENZENE	20.0	95	70 - 130
CHLOROETHANE	20.0	88	70 - 130
CHLOROFORM	20.0	91	70 - 130
CHLOROMETHANE	20.0	84	70 - 130
DIBROMOCHLOROMETHANE	20.0	94	70 - 130
1,1-DICHLOROETHANE	20.0	90	70 - 130
1,2-DICHLOROETHANE	20.0	97	70 - 130
1,1-DICHLOROETHENE	20.0	85	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	90	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	89	70 - 130
1,2-DICHLOROPROPANE	20.0	96	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	93	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	91	70 - 130
ETHYLBENZENE	20.0	95	70 - 130
2-HEXANONE	20.0	75	70 - 130
METHYLENE CHLORIDE	20.0	90	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	81	70 - 130
STYRENE	20.0	96	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	94	70 - 130
TETRACHLOROETHENE	20.0	96	70 - 130
TOLUENE	20.0	93	70 - 130
1,1,1-TRICHLOROETHANE	20.0	89	70 - 130
1,1,2-TRICHLOROETHANE	20.0	94	70 - 130
TRICHLOROETHENE	20.0	92	70 - 130
VINYL CHLORIDE	20.0	89	70 - 130
O-XYLENE	20.0	99	70 - 130
M+P-XYLENE	40.0	96	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 03/02/04

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 709788 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 100834

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 02/23/04			
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	(88 - 124 %)	104	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	106	%

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CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

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PAGE 1 OF 1

SR #

CAS Contact

Project Name: GRIFFIN	Project Number: 13807296.00000
Project Manager: LARRY SZUHAY	Report CC: CATHERINE PALKO
Company/Address: URS CORP 800 W. 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-021304		2/13/04	1045	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
X **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 #: L02609

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: Gregory O. Esmerian	Signature	Signature	Signature	Signature
Printed Name: MELISSA NEMETH	Printed Name: Gregory O. Esmerian	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS Corp	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 2/13/04 11:30	Date/Time: 2-13-04 11:30	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 RA-20209.

Cooler received on 2-13-04 by: KE 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) 2-13-04	
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: 2-13-04 @ 11:37

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: 2/13/04 by: KMC

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 24, 2004

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

PROJECT:GRIFFIN
Submission #:R2420560

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

Michael Perry
Laboratory Director

Enc.

RECEIVED
MAR - 5 2004
URS

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
Lab Submission # : R2420560
Project Manager : Michael Perry
Reported : 03/24/04

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 #: R2420560

Lab ID	Client ID
712686	EFF-031604

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 ACIL 2003 SEAL OF EXCELLENCE PROGRAM Environmental

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: 03/24/04

URS Corporation
Project Reference: GRIFFIN
Client Sample ID : EFF-031604

Date Sampled : 03/16/04 12:00 **Order #:** 712686 **Sample Matrix:** WATER
Date Received: 03/16/04 **Submission #:** R2420560 **Analytical Run** 101437

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 03/19/04			
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	190	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	(88 - 124 %)	99	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	105	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 713944 ANALYTICAL RUN # : 101437

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 03/19/04			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	78	50 - 150
BENZENE	20.0	85	70 - 130
BROMODICHLOROMETHANE	20.0	94	70 - 130
BROMOFORM	20.0	101	70 - 130
BROMOMETHANE	20.0	97	50 - 150
2-BUTANONE (MEK)	20.0	77	50 - 150
CARBON DISULFIDE	20.0	91	70 - 130
CARBON TETRACHLORIDE	20.0	85	70 - 130
CHLOROBENZENE	20.0	92	70 - 130
CHLOROETHANE	20.0	79	70 - 130
CHLOROFORM	20.0	89	70 - 130
CHLOROMETHANE	20.0	81	70 - 130
DIBROMOCHLOROMETHANE	20.0	97	70 - 130
1,1-DICHLOROETHANE	20.0	76	70 - 130
1,2-DICHLOROETHANE	20.0	96	70 - 130
1,1-DICHLOROETHENE	20.0	77	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	81	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	75	70 - 130
1,2-DICHLOROPROPANE	20.0	83	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	91	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	91	70 - 130
ETHYLBENZENE	20.0	94	70 - 130
2-HEXANONE	20.0	86	70 - 130
METHYLENE CHLORIDE	20.0	86	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	79	70 - 130
STYRENE	20.0	92	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	100	70 - 130
TETRACHLOROETHENE	20.0	92	70 - 130
TOLUENE	20.0	86	70 - 130
1,1,1-TRICHLOROETHANE	20.0	78	70 - 130
1,1,2-TRICHLOROETHANE	20.0	91	70 - 130
TRICHLOROETHENE	20.0	81	70 - 130
VINYL CHLORIDE	20.0	81	70 - 130
O-XYLENE	20.0	94	70 - 130
M+P-XYLENE	40.0	95	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 03/24/04

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 713943 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 101437

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 03/19/04			
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 %)	97	%
TOLUENE-D8	(88 - 124 %)	99	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	104	%

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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[redacted] # [redacted] [redacted] [redacted] [redacted]
CAS Contact

Project Name: GRIFFIN	Project Number: 13807296.00000
Project Manager: Larry Szuhay	Report CC: Catherine Palko
Company/Address: URS Corp. 800 W. 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 8260	MW4 3/16/04	REMARKS/ ALTERNATE DESCRIPTION
EFF-031604		3/16/04	1200	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. Speicalized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO: 11340
RZ420560
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 10C CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Melissa Nemeth	Signature: Brian Catlow	Signature	Signature	Signature	Signature
Printed Name: Melissa Nemeth	Printed Name: Brian Catlow	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS Corp	Firm: GAS	Firm	Firm	Firm	Firm
Date/Time: 3/16/04	Date/Time: 3/16/04 12:30	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 20560

Cooler received on 3/16/04 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:	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: 3/16/04 12:35

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

If out of Temperature, Client Approval to Run Samples Temp OK - 4hr Rule - BC

Cooler Breakdown: Date: 3/16/04 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 28, 2004

RECEIVED
MAY - 6 2004
URS

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

PROJECT:GRIFFIN PROJECT #13807296.00000
Submission #:R2420957

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

Michael Perry
Laboratory Director

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 PROJECT #13807296.00000
Lab Submission # : R2420957
Project Manager : Michael Perry
Reported : 04/28/04

Report Contains a total of _____ 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 #: R2420957

Lab ID	Client ID
718884	EFF 041504

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 2003 SEAL OF EXCELLENCE PROGRAM Environmental

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: 04/28/04

URS Corporation
Project Reference: GRIFFIN PROJECT #13807296.00000
Client Sample ID : EFF 041504

Date Sampled : 04/15/04 **Order #:** 718884 **Sample Matrix:** WATER
Date Received: 04/15/04 **Submission #:** R2420957 **Analytical Run** 102756

DATE ANALYZED : 04/21/04
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	82	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 - 119 %)	98	%
TOLUENE-D8	(88 - 124 %)	97	%
DIBROMOFLUOROMETHANE	(91 - 113 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 721718 ANALYTICAL RUN # : 102756

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 04/21/04			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	90	50 - 150
BENZENE	20.0	91	70 - 130
BROMODICHLOROMETHANE	20.0	102	70 - 130
BROMOFORM	20.0	102	70 - 130
BROMOMETHANE	20.0	102	50 - 150
2-BUTANONE (MEK)	20.0	81	50 - 150
CARBON DISULFIDE	20.0	92	70 - 130
CARBON TETRACHLORIDE	20.0	88	70 - 130
CHLOROBENZENE	20.0	90	70 - 130
CHLOROETHANE	20.0	82	70 - 130
CHLOROFORM	20.0	97	70 - 130
CHLOROMETHANE	20.0	84	70 - 130
DIBROMOCHLOROMETHANE	20.0	103	70 - 130
1,1-DICHLOROETHANE	20.0	86	70 - 130
1,2-DICHLOROETHANE	20.0	101	70 - 130
1,1-DICHLOROETHENE	20.0	81	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	87	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	81	70 - 130
1,2-DICHLOROPROPANE	20.0	90	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	96	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	99	70 - 130
ETHYLBENZENE	20.0	89	70 - 130
2-HEXANONE	20.0	86	70 - 130
METHYLENE CHLORIDE	20.0	92	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	88	70 - 130
STYRENE	20.0	89	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	104	70 - 130
TETRACHLOROETHENE	20.0	87	70 - 130
TOLUENE	20.0	89	70 - 130
1,1,1-TRICHLOROETHANE	20.0	83	70 - 130
1,1,2-TRICHLOROETHANE	20.0	99	70 - 130
TRICHLOROETHENE	20.0	82	70 - 130
VINYL CHLORIDE	20.0	81	70 - 130
O-XYLENE	20.0	90	70 - 130
M+P-XYLENE	40.0	90	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 04/28/04

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 721717 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 102756

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 04/21/04			
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 - 119 %)	98	%
TOLUENE-D8	(88 - 124 %)	99	%
DIBROMOFLUOROMETHANE	(91 - 113 %)	102	%

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

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

COR #

CAS Contact

Project Name: GRIFFIN	Project Number: 13807296000000
Project Manager: Larry Szuhay	Report CC: Catherine Palko
Company/Address: URS 634 St. Clair Cleveland OH 44113	
Phone #: (216) 622-2400	FAX#: (216) 622-2462
Sampler's Signature:	Sampler's Printed Name: Jen Christy

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)	VOC EPA CLP							REMARKS/ ALTERNATE DESCRIPTION
EFF 041504	718884	4/5/04	1000	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 Per Contract
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 #:

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: Jen Christy	Printed Name: Heather Hoying	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS	Firm: QLS	Firm	Firm	Firm	Firm
Date/Time: 4/5/04	Date/Time: 4/5/04	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 R24-20957

Cooler received on 4/15/04 by: KP 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: 4/15/04 1020

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

If out of Temperature, Client Approval to Run Samples 4hr rule

Cooler Breakdown: Date: 4/15/04 by: ICMC

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 10, 2004

RECEIVED
JUN 14 2004
URS

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

PROJECT:GRIFFIN PROJECT#: 113807296.00000
Submission #:R2421351

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

Michael Perry
Laboratory Director

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 PROJECT#: 113807296.00000
Lab Submission # : R2421351
Project Manager : Michael Perry
Reported : 06/10/04

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 #: R2421351

Lab ID	Client ID
727159	EFF051404

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 2003 SEAL OF EXCELLENCE PROGRAM Environmental

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: 06/10/04

URS Corporation
Project Reference: GRIFFIN PROJECT#: 113807296.00000
Client Sample ID : EFF051404

Date Sampled : 05/14/04 07:45 **Order #:** 727159 **Sample Matrix:** WATER
Date Received: 05/14/04 **Submission #:** R2421351 **Analytical Run** 104571

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/18/04			
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	85	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 - 119 %)	99	%
TOLUENE-D8	(88 - 124 %)	96	%
DIBROMOFLUOROMETHANE	(91 - 113 %)	96	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 733359 ANALYTICAL RUN # : 104571

DATE ANALYZED : 5/18/2004
ANALYTICAL DILUTION: 1.0

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
ACETONE	20.0	101	50 - 150
BENZENE	20.0	98	70 - 130
BROMODICHLOROMETHANE	20.0	93	70 - 130
BROMOFORM	20.0	102	70 - 130
BROMOMETHANE	20.0	97	50 - 150
2-BUTANONE (MEK)	20.0	88	50 - 150
CARBON DISULFIDE	20.0	87	70 - 130
CARBON TETRACHLORIDE	20.0	97	70 - 130
CHLOROBENZENE	20.0	98	70 - 130
CHLOROETHANE	20.0	100	70 - 130
CHLOROFORM	20.0	102	70 - 130
CHLOROMETHANE	20.0	101	70 - 130
DIBROMOCHLOROMETHANE	20.0	94	70 - 130
1,1-DICHLOROETHANE	20.0	83	70 - 130
1,2-DICHLOROETHANE	20.0	92	70 - 130
1,1-DICHLOROETHENE	20.0	86	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	99	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	91	70 - 130
1,2-DICHLOROPROPANE	20.0	98	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	98	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	95	70 - 130
ETHYLBENZENE	20.0	97	70 - 130
2-HEXANONE	20.0	95	70 - 130
METHYLENE CHLORIDE	20.0	93	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	98	70 - 130
STYRENE	20.0	92	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	101	70 - 130
TETRACHLOROETHENE	20.0	103	70 - 130
TOLUENE	20.0	98	70 - 130
1,1,1-TRICHLOROETHANE	20.0	91	70 - 130
1,1,2-TRICHLOROETHANE	20.0	91	70 - 130
TRICHLOROETHENE	20.0	99	70 - 130
VINYL CHLORIDE	20.0	101	70 - 130
O-XYLENE	20.0	95	70 - 130
M+P-XYLENE	40.0	97	70 - 130

Cooler Receipt And Preservation Check Form

Project/Client URS Submission Number R24-21351

Cooler received on 5-14-04 by: KE 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:	17°				
	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: 5-14-04 @ 8:55

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: 5/14/04 by: KMC

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

July 7, 2004

RECEIVED
JUL 12 2004
URS

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

PROJECT:GRIFFIN
Submission #:R2421805

Dear Mr. Szuhay:

Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 07/06/04 per a Facsimile transmittal. 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

Michael Perry
Laboratory Director

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
Lab Submission # : R2421805
Project Manager : Michael Perry
Reported : 07/07/04

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. Michael K. Perry

Columbia Analytical Services Inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2421805

Lab ID	Client ID
736276	EFF 061804

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.
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ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL 2003 SEAL OF EXCELLENCE PROGRAM Environmental

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: 07/07/04

URS Corporation
Project Reference: GRIFFIN
Client Sample ID : EFF 061804

Date Sampled : 06/18/04 09:10 **Order #:** 736276 **Sample Matrix:** WATER
Date Received: 06/18/04 **Submission #:** R2421805 **Analytical Run** 105758

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/04			
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	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 - 119 %)	97	%
TOLUENE-D8	(88 - 124 %)	101	%
DIBROMOFLUOROMETHANE	(91 - 113 %)	99	%

OLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 740896 ANALYTICAL RUN # : 105758

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 06/27/04			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	91	50 - 150
BENZENE	20.0	85	70 - 130
BROMODICHLOROMETHANE	20.0	91	70 - 130
BROMOFORM	20.0	85	70 - 130
BROMOMETHANE	20.0	86	50 - 150
2-BUTANONE (MEK)	20.0	82	50 - 150
CARBON DISULFIDE	20.0	78	70 - 130
CARBON TETRACHLORIDE	20.0	82	70 - 130
CHLOROBENZENE	20.0	85	70 - 130
CHLOROETHANE	20.0	76	70 - 130
CHLOROFORM	20.0	86	70 - 130
CHLOROMETHANE	20.0	82	70 - 130
DIBROMOCHLOROMETHANE	20.0	88	70 - 130
1,1-DICHLOROETHANE	20.0	79	70 - 130
1,2-DICHLOROETHANE	20.0	92	70 - 130
1,1-DICHLOROETHENE	20.0	85	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	82	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	76	70 - 130
1,2-DICHLOROPROPANE	20.0	87	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	85	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	89	70 - 130
ETHYLBENZENE	20.0	86	70 - 130
2-HEXANONE	20.0	80	70 - 130
METHYLENE CHLORIDE	20.0	86	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	80	70 - 130
STYRENE	20.0	89	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	69	70 - 130
TETRACHLOROETHENE	20.0	80	70 - 130
TOLUENE	20.0	86	70 - 130
1,1,1-TRICHLOROETHANE	20.0	78	70 - 130
1,1,2-TRICHLOROETHANE	20.0	90	70 - 130
TRICHLOROETHENE	20.0	98	70 - 130
VINYL CHLORIDE	20.0	87	70 - 130
O-XYLENE	20.0	87	70 - 130
M+P-XYLENE	40.0	87	70 - 130

COLUMBIA ANALYTICAL SERVICES

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

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 740895 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 105758

DATE ANALYZED : 06/27/04
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 - 119 %)	98	%
TOLUENE-D8	(88 - 124 %)	101	%
DIBROMOFLUOROMETHANE	(91 - 113 %)	101	%

Columbia Analytical Services, Inc.
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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 #

CAS Contact

Project Name: GRIFFIN	Project Number: 13807296.00000
Project Manager: LARRY SZUHAY	Report CC: CATHERINE PALKO
Company/Address: URS 1634 St Clair Cleveland, OH 44113	
Phone #: 216.622.2400	FAX#: 216.622.2462
Sampler's Signature: Jennifer Chrisny	Sampler's Printed Name: JENNIFER CHRISNY

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)	VOA 8260B	HCl	REMARKS/ ALTERNATE DESCRIPTION
EFF 061804		6-18-04	0910	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 Per Contract
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only per contract
____ 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:
R2421805
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 18°C CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Jennifer Chrisny	Signature: Heather Lavergne	Signature	Signature	Signature	Signature
Printed Name: Jen Chrisny	Printed Name: Heather Lavergne	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS Buffalo	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 6/18/04 0950	Date/Time: 6/18/04 950	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 R24-21805.

Cooler received on 6/18/04 by: CWK 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:	18°				
	Is the temperature within 0° - 6° C?:	Yes	Yes	Yes	Yes	Yes
	If No, Explain Below	(No)	No	No	No	No

4hR Rule

Date/Time Temperatures Taken: 6-18-04 1000

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: 6/18/04 by: KMC

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

August 3, 2004

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

PROJECT:GRIFFIN
Submission #:R2422214

Dear Mr. Szuhay:

Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 08/03/04 per a Facsimile transmittal. 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

Michael Perry
Laboratory Director

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
Lab Submission # : R2422214
Project Manager : Michael Perry
Reported : 08/03/04

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 #: R2422214

Lab ID	Client ID
744020	EFF 071604

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.
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ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL 2003 SEAL OF EXCELLENCE PROGRAM Environmental

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 SERVICE

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 08/03/04

URS Corporation
Project Reference: GRIFFIN
Client Sample ID : EFF 071604

Date Sampled : 07/16/04 08:50 **Order #:** 744020 **Sample Matrix:** WATER
Date Received: 07/16/04 **Submission #:** R2422214 **Analytical Run** 106666

DATE ANALYZED : 07/21/04
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	98	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 - 119 %)	100	%
TOLUENE-D8	(88 - 124 %)	104	%
DIBROMOFLUOROMETHANE	(91 - 113 %)	103	%

OLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

ABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 747400 ANALYTICAL RUN # : 106666

DATE ANALYZED : 07/21/04
ANALYTICAL DILUTION: 1.0

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
ACETONE	20.0	87	50 - 150
BENZENE	20.0	106	70 - 130
BROMODICHLOROMETHANE	20.0	104	70 - 130
BROMOFORM	20.0	87	70 - 130
BROMOMETHANE	20.0	106	50 - 150
2-BUTANONE (MEK)	20.0	92	50 - 150
CARBON DISULFIDE	20.0	77	70 - 130
CARBON TETRACHLORIDE	20.0	105	70 - 130
CHLOROBENZENE	20.0	100	70 - 130
CHLOROETHANE	20.0	116	70 - 130
CHLOROFORM	20.0	115	70 - 130
CHLOROMETHANE	20.0	119	70 - 130
DIBROMOCHLOROMETHANE	20.0	94	70 - 130
1,1-DICHLOROETHANE	20.0	110	70 - 130
1,2-DICHLOROETHANE	20.0	108	70 - 130
1,1-DICHLOROETHENE	20.0	107	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	101	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	100	70 - 130
1,2-DICHLOROPROPANE	20.0	102	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	108	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	107	70 - 130
ETHYLBENZENE	20.0	105	70 - 130
2-HEXANONE	20.0	82	70 - 130
METHYLENE CHLORIDE	20.0	106	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	89	70 - 130
STYRENE	20.0	103	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	99	70 - 130
TETRACHLOROETHENE	20.0	96	70 - 130
TOLUENE	20.0	106	70 - 130
1,1,1-TRICHLOROETHANE	20.0	110	70 - 130
1,1,2-TRICHLOROETHANE	20.0	102	70 - 130
TRICHLOROETHENE	20.0	103	70 - 130
VINYL CHLORIDE	20.0	123	70 - 130
O-XYLENE	20.0	98	70 - 130
M+P-XYLENE	40.0	103	70 - 130

COLUMBIA ANALYTICAL SERVICE

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 08/03/04

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 747399 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 106666

DATE ANALYZED : 07/21/04
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 - 119 %)	100	%
TOLUENE-D8	(88 - 124 %)	103	%
DIBROMOFLUOROMETHANE	(91 - 113 %)	100	%

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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

COC #

CAS Contact

Project Name: GRIFFIN	Project Number: 13807296.00000
Project Manager: Larry Szuhay	Report CC: Catherine Palko
Company/Address: URS 1634 St Clair Cleveland OH 44113	
Phone #: 216.622.2400	FAX#: 216 622 2462
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)	VOA 8260B							REMARKS/ ALTERNATE DESCRIPTION
EFF071604		7/16/04	0850	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: Per Contract
REQUESTED REPORT DATE:

REPORT REQUIREMENTS
____ I. Results Only per contract
____ 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:
R2422214
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 17°C
CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: Jon Chrisby	Printed Name: CAS Jen Yager	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: URS	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 7/16/04 0935	Date/Time: 7/16/04 09:35	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 R2422214

Cooler received on 7/16/04 by: CML 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:	17°				
	Is the temperature within 0° - 6° C?:	Yes	Yes	Yes	Yes	Yes
	If No, Explain Below	(No) 4 hours rule	No	No	No	No

Date/Time Temperatures Taken: 7/16/04 0945

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: 7/16/04 by: CML

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 1, 2004

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

PROJECT:GRIFFEN
Submission #:R2422610

Dear Mr. Szuhay:

Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 08/31/04 per a Facsimile transmittal. 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

Michael Perry
Laboratory Director

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: GRIFFEN
Lab Submission # : R2422610
Project Manager : Michael Perry
Reported : 09/01/04

Report Contains a total of 11 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 #: R2422610

Lab ID	Client ID
751400	EFF081604

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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ACCREDITED IN ACCORDANCE WITH nelac

Ethics Service Quality ACIL 2003 SEAL OF EXCELLENCE PROGRAM Environmental

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: 09/01/04

URS Corporation
Project Reference: GRIFFEN
Client Sample ID : EFF081604

Date Sampled : 08/16/04 08:15 **Order #:** 751400 **Sample Matrix:** WATER
Date Received: 08/16/04 **Submission #:** R2422610 **Analytical Run** 107798

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 08/19/04			
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	5.4	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	230 E	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 - 119 %)	95	%
TOLUENE-D8	(88 - 124 %)	106	%
DIBROMOFLUOROMETHANE	(91 - 113 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 09/01/04

URS Corporation
Project Reference: GRIFFEN
Client Sample ID : EFF081604

Date Sampled : 08/16/04 08:15 **Order #:** 751400 **Sample Matrix:** WATER
Date Received: 08/16/04 **Submission #:** R2422610 **Analytical Run** 107798

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 08/20/04			
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 - 119 %)	99	%
TOLUENE-D8	(88 - 124 %)	105	%
DIBROMOFLUOROMETHANE	(91 - 113 %)	106	%

OLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 755582 ANALYTICAL RUN # : 107798

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 08/19/04			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	108	50 - 150
BENZENE	20.0	87	70 - 130
BROMODICHLOROMETHANE	20.0	96	70 - 130
BROMOFORM	20.0	80	70 - 130
BROMOMETHANE	20.0	90	50 - 150
2-BUTANONE (MEK)	20.0	92	50 - 150
CARBON DISULFIDE	20.0	87	70 - 130
CARBON TETRACHLORIDE	20.0	80	70 - 130
CHLOROBENZENE	20.0	83	70 - 130
CHLOROETHANE	20.0	82	70 - 130
CHLOROFORM	20.0	95	70 - 130
CHLOROMETHANE	20.0	92	70 - 130
DIBROMOCHLOROMETHANE	20.0	89	70 - 130
1,1-DICHLOROETHANE	20.0	90	70 - 130
1,2-DICHLOROETHANE	20.0	106	70 - 130
1,1-DICHLOROETHENE	20.0	79	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	82	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	75	70 - 130
1,2-DICHLOROPROPANE	20.0	93	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	92	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	94	70 - 130
ETHYLBENZENE	20.0	80	70 - 130
2-HEXANONE	20.0	89	70 - 130
METHYLENE CHLORIDE	20.0	95	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	90	70 - 130
STYRENE	20.0	88	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	77	70 - 130
TETRACHLOROETHENE	20.0	71	70 - 130
TOLUENE	20.0	85	70 - 130
1,1,1-TRICHLOROETHANE	20.0	84	70 - 130
1,1,2-TRICHLOROETHANE	20.0	92	70 - 130
TRICHLOROETHENE	20.0	92	70 - 130
VINYL CHLORIDE	20.0	92	70 - 130
O-XYLENE	20.0	84	70 - 130
M+P-XYLENE	40.0	80	70 - 130

OLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260B TCL

ABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 755584 ANALYTICAL RUN # : 107798

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED : 08/20/04			
ANALYTICAL DILUTION: 1.0			
ACETONE	20.0	91	50 - 150
BENZENE	20.0	111	70 - 130
BROMODICHLOROMETHANE	20.0	114	70 - 130
BROMOFORM	20.0	91	70 - 130
BROMOMETHANE	20.0	110	50 - 150
2-BUTANONE (MEK)	20.0	92	50 - 150
CARBON DISULFIDE	20.0	85	70 - 130
CARBON TETRACHLORIDE	20.0	114	70 - 130
CHLOROBENZENE	20.0	108	70 - 130
CHLOROETHANE	20.0	116	70 - 130
CHLOROFORM	20.0	114	70 - 130
CHLOROMETHANE	20.0	118	70 - 130
DIBROMOCHLOROMETHANE	20.0	99	70 - 130
1,1-DICHLOROETHANE	20.0	112	70 - 130
1,2-DICHLOROETHANE	20.0	113	70 - 130
1,1-DICHLOROETHENE	20.0	115	70 - 130
CIS-1,2-DICHLOROETHENE	20.0	105	70 - 130
TRANS-1,2-DICHLOROETHENE	20.0	104	70 - 130
1,2-DICHLOROPROPANE	20.0	110	70 - 130
CIS-1,3-DICHLOROPROPENE	20.0	116	70 - 130
TRANS-1,3-DICHLOROPROPENE	20.0	111	70 - 130
ETHYLBENZENE	20.0	110	70 - 130
2-HEXANONE	20.0	85	70 - 130
METHYLENE CHLORIDE	20.0	108	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	88	70 - 130
STYRENE	20.0	110	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	100	70 - 130
TETRACHLOROETHENE	20.0	104	70 - 130
TOLUENE	20.0	111	70 - 130
1,1,1-TRICHLOROETHANE	20.0	114	70 - 130
1,1,2-TRICHLOROETHANE	20.0	105	70 - 130
TRICHLOROETHENE	20.0	106	70 - 130
VINYL CHLORIDE	20.0	118	70 - 130
O-XYLENE	20.0	107	70 - 130
M+P-XYLENE	40.0	109	70 - 130

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 09/01/04

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 755581 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 107798

DATE ANALYZED : 08/19/04
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 - 119 %)	95	%
TOLUENE-D8	(88 - 124 %)	103	%
DIBROMOFLUOROMETHANE	(91 - 113 %)	104	%

COLUMBIA ANALYTICAL SE[illegible]CES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 09/01/04

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 755583 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 107798

DATE ANALYZED : 08/20/04
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 - 119 %)	98	%
TOLUENE-D8	(88 - 124 %)	102	%
DIBROMOFLUOROMETHANE	(91 - 113 %)	99	%

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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SR #

CAS Contact

Project Name: griffin	Project Number: 13807296.00000
Project Manager: Larry Szuhay	Report CC: Catherine Falko
Company/Address: URS	
634 ST. Clair	
Cleveland, OH 44113	
Phone #: 216-622-2400	FAX#: 216-622-2464
Sampler's Signature: Tom Urban	Sampler's Printed Name: Tom Urban

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)	VOA 8260B							REMARKS/ ALTERNATE DESCRIPTION
EFF081604		8/16/04	815	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 per contract
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
_____ I. Results Only per contract
_____ 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:
R422610
SUBMISSION #:

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

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Tom Urban	Signature: C M Kutzer	Signature	Signature	Signature	Signature
Printed Name: Tom Urban	Printed Name: C M Kutzer	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS Buffalo	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 8/16/04 @ 1100	Date/Time: 8/16/04 1100	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 R2422610

Cooler received on 8/16/04 by: CMK 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:	19°				
	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: 8/16/04 1100 4 hr. rule

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: CMK 8/17 8/16/04 by: CMK

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

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
Lab Submission # : R2421873
Project Manager : Michael Perry
Reported : 07/26/04

Report Contains a total of 81 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

CASE NARRATIVE

COMPANY: URS Corporation
PROJECT: Griffin
SUBMISSION #: R2421873
SDG#: MW-1

Water samples were collected on 06/23/04 and received at CAS on 06/23/04 within several hours of sampling in good condition. See CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested. An ASP-B report has been prepared.

VOLATILE ORGANIC ANALYSIS

Twenty-one water samples and a Trip Blank were analyzed for the Target Compound List (TCL) of volatile organics by OLM4.2 from the NYS DEC June 2000 ASP. Library Searches against the NBS/EPA library were conducted on all samples. The 30 largest peaks within 10 % of the nearest Internal Standard were searched. A summary of detected peaks is included following the Target data. Any analyte detected was quantitated based on the closest internal standard and has been flagged with a "J" as estimated.

All Tuning criteria for BFB were within limits.

The initial and continuing calibration criteria for the method were met.

All internal standard areas were within QC limits.

All sample surrogate recoveries were within QC limits for recovery.

The Blank Spike recoveries were all within QC limits. The Matrix Spike/Matrix Spike Duplicate recoveries and RPD from sample MW-5D were all within QC limits.

All Laboratory Blanks were free from contamination.

Sample EFF-RW04 was re-analyzed at a larger dilution to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E".

No other analytical or QC problems were encountered during the analysis of this SDG.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package, has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Michael K. Perry
Laboratory Manager

7/26/04
Date

[redacted] AS[redacted]P B[redacted]HING FORM / [redacted]LOGIN SHEET

SDG #: MW-1
SUBMISSION R2421873
CLIENT: URS Corporation
CLIENT REP: Michael Perry
PROJECT: GRIFFIN

BATCH COMPLETE: __yes_____
DISKETTE REQUESTED: Y__X_ N____
DATE: 06/24/04
CUSTODY SEAL: ABSENT
CHAIN OF CUSTODY: PRESENT

DATE REVISED:
DATE DUE: 07/21/04
PROTOCOL: CLP
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
737862	MW-1-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737863	MW-2S-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737864	MW-5S-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737865	MW-5D-062304 + QC	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737866	MW-4-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737867	MW-3-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737868	MW100-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737869	MW200-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737870	MW-6S-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737871	MW-6D-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737872	MW-7S-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737873	MW-7D-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737874	MW-9S-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737875	MW-9D-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737876	MW-10S-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737877	MW-10D-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737878	MW-11D-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737879	EFF-RW01-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737880	EFF-RW02-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737881	EFF-RW03-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737882	EFF-RW04-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			
737883	TB-1-062304	WATER	OLM 4.2 VOA	6/23/04	6/23/04			

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Ethics Service Quality ACIL 2003 SEAL OF EXCELLENCE PROGRAM Environmental

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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CAS Contact

Project Name: Griffin	Project Number: 13807296.00000
Project Manager: Larry Szuhay	Report CC: Catherine Palko
Company/Address: URS Corporation	
800 St. Clair	
Cleveland, OH 44113	
Phone #: 216-622-2400	FAX#: 216-622-2464
Sampler's Signature: Thomas Urban	Sampler's Printed Name: Thomas Urban

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)	VOC - 624.2	REMARKS/ ALTERNATE DESCRIPTION
MW-1-062304		6/23/04	830	GW	3								X	
MW-25-062304			845	GW										
MW-55-062304			920											
MW-5D-062304			900											
MW-5D-MS1-062304			900											MS
MW-5D-MSD1-062304			900											MSD
MW-5D-MS2-062304			900											MS
MW-5D-MSD2-062304			900											MSD
MW-4-062304			930											
MW-3-062304			945											

SPECIAL INSTRUCTIONS/COMMENTS
Metals

CA

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:
RZ421873
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 10°C CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Thomas Urban	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Thomas Urban	Printed Name: Heather Lovejoy	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS Corp.	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 6/23/04 @ 1440	Date/Time: 6/23/04 1440	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

CAS Contact

Project Name: Griffin
Project Number: 13807296.00000
Project Manager: Larry Szuhay
Report CC: Catherine Falko
Company/Address: URS Corporation
800 St. Clair
Cleveland, OH 44113
Phone #: 216-622-2400
FAX#: 216-622-2464
Sampler's Signature: Thomas Urban
Sampler's Printed Name: Thomas Urban

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)	VOC - 624.2	REMARKS/ ALTERNATE DESCRIPTION
MW100-062304		6/23/04	—	GW	3								X	Field Duplicate
MW200-062304			—											Field Duplicate
MW-6S-062304			1005											
MW-6D-062304			1000											
MW-7S-062304			1015											
MW-7D-062304			1020											
MW-9S-062304			1040											
MW-9D-062304			1035											
MW-10S-062304			1050											
MW-10D-062304			1100											

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 #:

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

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Thomas Urban	Signature: [illegible] Heather Lobyn	Signature	Signature	Signature	Signature
Printed Name: Thomas Urban	Printed Name: Heather Lobyn	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS Corp	Firm: QS	Firm	Firm	Firm	Firm
Date/Time: 6/23/04 1440	Date/Time: 6/23/04 1440	Date/Time	Date/Time	Date/Time	Date/Time

SCOC-1102-08

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

Columbia Analytical Services, Inc.
An Employee - Owned Company
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CAS Contact

Project Name: Griffin	Project Number: 13807296.00000
Project Manager: Larry Szuhay	Report CC: Catherine Palko
Company/Address: URS Corporation 800 St. Clair Cleveland, OH 44113	
Phone #: 216-622-2400	FAX#: 216-622-2464
Sampler's Signature: Thomas Urban	Sampler's Printed Name: Thomas Urban

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)	VOC - OLM04.2	REMARKS/ ALTERNATE DESCRIPTION
MW-11D-062304		6/23/04	1120	GW	3								X	
EFF-RW01-062304			1200											
EFF-RW02-062304			1325											
EFF-RW03-062304			1155											
EFF-RW04-062304			1150											
TB-1-062304			--	TB										Trip Blank

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 #:

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

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Thomas J. Urban	Signature: Heather Lovejoy	Signature	Signature	Signature	Signature
Printed Name: Thomas Urban	Printed Name: Heather Lovejoy	Printed Name	Printed Name	Printed Name	Printed Name
Firm: URS Corp.	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 6/23/04 @ 1440	Date/Time: 6/23/04 1440	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 ____ Submission Number B2-21673

Cooler received on 6/23/04 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:	10		
	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: 6/23/04 1445

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: 6/23/04 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.

MW-1

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737862 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5081.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/25/04

GC Column: ZB-624 ID: 0.25 (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
1330-20-7	(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.

MW-1

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737862 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5081.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 06/25/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-2S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737863 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5082.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/25/04

GC Column: ZB-624 ID: 0.25 (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	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
1330-20-7	(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.

MW-2S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737863 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5082.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 06/25/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737864 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5083.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/25/04

GC Column: ZB-624 ID: 0.25 (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	2	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	120	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	(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.

MW-5S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737864 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5083.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/25/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737865 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5094.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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	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
1330-20-7	(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.

MW-5D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737865 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5094.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-4

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737866 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5095.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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	75	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	(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.

MW-4

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737866 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5095.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737867 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5084.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/25/04

GC Column: ZB-624 ID: 0.25 (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	96	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	(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.

MW-3

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737867 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5084.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/25/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW100

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737868 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5093.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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	73	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	(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.

MW100

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737868 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5093.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW200

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737869 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5098.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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	3	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
1330-20-7	(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.

MW200

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737869 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5098.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-6S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737870 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5099.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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
1330-20-7	(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.

MW-6S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737870 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5099.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-6D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737871 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5100.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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	67	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	(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.

MW-6D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737871 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5100.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737872 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5104.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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	1	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
1330-20-7	(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.

MW-7S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737872 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5104.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737873 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5105.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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	1	J
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	15	
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	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
1330-20-7	(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.

MW-7D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737873 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5105.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-9S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737874 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5184.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
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
1330-20-7	(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.

MW-9S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737874 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5184.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-9D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737875 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5185.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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	1	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	(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.

MW-9D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737875 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5185.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-10S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737876 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5108.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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	3	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
1330-20-7	(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.

MW-10S

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737876 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5108.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-10D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737877 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5193.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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	5	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
1330-20-7	(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.

MW-10D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737877 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5193.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-11D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737878 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5187.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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
1330-20-7	(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.

MW-11D

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737878 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5187.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFF-RW01

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737879 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5188.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
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	2	J
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	150	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	(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-RW01

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737879 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5188.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFF-RW02

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737880 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5189.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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	7	J
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	5	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	33	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	(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-RW02

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737880 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5189.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q
1.	unknown	3.63	21	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFF-RW03

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737881 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5190.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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	2	J
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	97	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	(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-RW03

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737881 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5190.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFF-RW04

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737882 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5191.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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	9	J
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	430	E
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	(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-RW04

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737882 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5191.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EFF-RW04DL

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737882 2.5

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5194.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 2.5

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	25	U
75-01-4	Vinyl chloride	25	U
74-83-9	Bromomethane	25	U
75-00-3	Chloroethane	25	U
67-64-1	Acetone	25	U
75-35-4	1,1-Dichloroethene	25	U
75-09-2	Methylene chloride	25	U
75-15-0	Carbon disulfide	25	U
156-60-5	trans-1,2-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	25	U
78-93-3	2-Butanone	25	U
156-59-2	cis-1,2-Dichloroethene	7	JD
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
71-55-6	1,1,1-Trichloroethane	10	JD
56-23-5	Carbon tetrachloride	25	U
71-43-2	Benzene	25	U
79-01-6	Trichloroethene	420	D
78-87-5	1,2-Dichloropropane	25	U
75-27-4	Bromodichloromethane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
10061-02-6	trans-1,3-Dichloropropene	25	U
79-00-5	1,1,2-Trichloroethane	25	U
124-48-1	Dibromochloromethane	25	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	25	U
591-78-6	2-Hexanone	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
1330-20-7	(m+p) Xylene	25	U
95-47-6	o-Xylene	25	U
100-42-5	Styrene	25	U
79-34-5	1,1,2,2-Tetrachloroethane	25	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EFF-RW04DL

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737882 2.5

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5194.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 2.5

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB-1

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737883 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5192.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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
1330-20-7	(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.

TB-1

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737883 1.0

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5192.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VBLK01	111	104	94	0
02	VBLK01MS	109	101	95	0
03	MW-1	106	102	88	0
04	MW-2S	109	102	88	0
05	MW-5S	108	104	87	0
06	MW-3	108	101	87	0
07	VBLK02	105	101	89	0
08	VBLK02MS	105	96	88	0
09	MW100	108	103	89	0
10	MW-5D	111	103	88	0
11	MW-4	111	102	89	0
12	MW-5DMS	110	100	86	0
13	MW-5DMSD	107	99	87	0
14	MW200	107	102	86	0
15	MW-6S	108	105	88	0
16	MW-6D	113	106	89	0
17	MW-7S	109	107	86	0
18	MW-7D	111	107	90	0
19	MW-10S	109	104	87	0

			QC LIMITS
SMC1	=	SURR1,1,2-Diclethane	(76-114)
SMC2	=	SURR,Toluene-d8	(88-110)
SMC3	=	SURR2,BFB	(86-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VBLK03	105	105	96	0
02	VBLK03MS	109	99	92	0
03	MW-9S	108	103	91	0
04	MW-9D	107	104	92	0
05	MW-11D	104	102	90	0
06	EFF-RW01	105	105	90	0
07	EFF-RW02	103	106	90	0
08	EFF-RW03	108	105	92	0
09	EFF-RW04	102	104	87	0
10	TB-1	105	102	86	0
11	MW-10D	107	103	87	0
12	EFF-RW04DL	106	108	88	0

			QC LIMITS
SMC1	=	SURR1,1,2-Diclethane	(76-114)
SMC2	=	SURR,Toluene-d8	(88-110)
SMC3	=	SURR2,BFB	(86-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix Spike - EPA Sample No VBLK01

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	54	108	61 - 145
Benzene	50	0.0	52	104	76 - 127
Trichloroethene	50	0.0	52	104	71 - 120
Toluene	50	0.0	52	104	76 - 125
Chlorobenzene	50	0.0	53	106	75 - 130

COMMENTS:

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK01MS

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 745564

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5068.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 06/25/04

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	54	
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	52	
79-01-6	Trichloroethene	52	
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	52	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	53	
100-41-4	Ethylbenzene	10	U
1330-20-7	(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

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix Spike - EPA Sample No VBLK02

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	55	110	61 - 145
Benzene	50	0.0	50	100	76 - 127
Trichloroethene	50	0.0	50	100	71 - 120
Toluene	50	0.0	51	102	76 - 125
Chlorobenzene	50	0.0	52	104	75 - 130

COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK02MS

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 745572

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5092.D

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

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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	55	
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	50	
79-01-6	Trichloroethene	50	
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	51	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	52	
100-41-4	Ethylbenzene	10	U
1330-20-7	(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

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix Spike - EPA Sample No VBLK03

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	58	116	61 - 145
Benzene	50	0.0	51	102	76 - 127
Trichloroethene	50	0.0	51	102	71 - 120
Toluene	50	0.0	53	106	76 - 125
Chlorobenzene	50	0.0	52	104	75 - 130

COMMENTS:

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK03MS

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 745577

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5183.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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	58	
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	51	
79-01-6	Trichloroethene	51	
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	53	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	52	
100-41-4	Ethylbenzene	10	U
1330-20-7	(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

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix Spike - EPA Sample No MW-5D

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	55	110	61 - 145
Benzene	50	0.0	47	94	76 - 127
Trichloroethene	50	130	170	72	71 - 120
Toluene	50	0.0	51	102	76 - 125
Chlorobenzene	50	0.0	51	102	75 - 130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	55	110	0	14	61 - 145
Benzene	50	48	96	2	11	76 - 127
Trichloroethene	50	180	100	22 *	14	71 - 120
Toluene	50	50	100	2	13	76 - 125
Chlorobenzene	50	50	100	2	13	75 - 130

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

* Values outside of QC limits

RPD: 1 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5DMS

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737865 1.0 MS

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5096.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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	55	
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	47	
79-01-6	Trichloroethene	170	
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	51	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	51	
100-41-4	Ethylbenzene	10	U
1330-20-7	(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

MW-5DMSD

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 737865 1.0 MSD

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5097.D

Level: (low/med) LOW Date Received: 06/23/04

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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	55	
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	48	
79-01-6	Trichloroethene	180	
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	50	
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	50	
100-41-4	Ethylbenzene	10	U
1330-20-7	(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.: R4-21873 SAS No.: SDG No.: MW-1

Lab File ID: R5066.D Lab Sample ID: 745559

Date Analyzed: 06/25/04 Time Analyzed: 11:02

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS#6

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLK01MS	745564	R5068.D	12:28
02	MW-1	737862 1.0	R5081.D	19:32
03	MW-2S	737863 1.0	R5082.D	20:01
04	MW-5S	737864 1.0	R5083.D	20:30
05	MW-3	737867 1.0	R5084.D	20:59

COMMENTS

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK01

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 745559

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5066.D

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

% Moisture: not dec. _____ Date Analyzed: 06/25/04

GC Column: ZB-624 ID: 0.25 (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
1330-20-7	(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.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 745559

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5066.D

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

% Moisture: not dec. _____ Date Analyzed: 06/25/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK02

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Lab File ID: R5091.D Lab Sample ID: 745571

Date Analyzed: 06/28/04 Time Analyzed: 11:02

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS#6

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLK02MS	745572	R5092.D	11:35
02	MW100	737868 1.0	R5093.D	12:14
03	MW-5D	737865 1.0	R5094.D	12:45
04	MW-4	737866 1.0	R5095.D	13:14
05	MW-5DMS	737865 1.0 MS	R5096.D	13:55
06	MW-5DMSD	737865 1.0 MSD	R5097.D	14:25
07	MW200	737869 1.0	R5098.D	14:54
08	MW-6S	737870 1.0	R5099.D	15:23
09	MW-6D	737871 1.0	R5100.D	15:52
10	MW-7S	737872 1.0	R5104.D	17:56
11	MW-7D	737873 1.0	R5105.D	18:25
12	MW-10S	737876 1.0	R5108.D	19:55

COMMENTS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK02

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 745571

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5091.D

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

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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
1330-20-7	(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.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 745571

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5091.D

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

% Moisture: not dec. _____ Date Analyzed: 06/28/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK03

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Lab File ID: R5182.D Lab Sample ID: 745576

Date Analyzed: 07/01/04 Time Analyzed: 16:23

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS#6

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLK03MS	745577	R5183.D	16:52
02	MW-9S	737874 1.0	R5184.D	17:22
03	MW-9D	737875 1.0	R5185.D	17:54
04	MW-11D	737878 1.0	R5187.D	18:52
05	EFF-RW01	737879 1.0	R5188.D	19:21
06	EFF-RW02	737880 1.0	R5189.D	19:50
07	EFF-RW03	737881 1.0	R5190.D	20:20
08	EFF-RW04	737882 1.0	R5191.D	20:49
09	TB-1	737883 1.0	R5192.D	21:18
10	MW-10D	737877 1.0	R5193.D	21:47
11	EFF-RW04DL	737882 2.5	R5194.D	22:16

COMMENTS

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK03

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 745576

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5182.D

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

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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
1330-20-7	(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.: R4-21873 SAS No.: _____ SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 745576

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: R5182.D

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

% Moisture: not dec. _____ Date Analyzed: 07/01/04

GC Column: ZB-624 ID: 0.25 (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 NAME	RT	EST. CONC.	Q

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Lab File ID: R5011.D BFB Injection Date: 06/23/04

Instrument ID: GCMS#6 BFB Injection Time: 11:16

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.1
75	30.0 - 66.0% of mass 95	42.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.3
173	Less than 2.0% of mass 174	1.6 (1.6)1
174	50.0 - 120.0% of mass 95	101.9
175	4.0 - 9.0% of mass 174	7.0 (6.9)1
176	93.0 - 101.0% of mass 174	97.0 (95.2)1
177	5.0 - 9.0% of mass 176	6.7 (6.9)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	R5022.D	06/23/04	18:09
02	VSTD020	VSTD020	R5023.D	06/23/04	18:40
03	VSTD050	VSTD050	R5024.D	06/23/04	19:10
04	VSTD100	VSTD100	R5025.D	06/23/04	19:42
05	VSTD200	VSTD200	R5026.D	06/23/04	20:42

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Lab File ID: R5064.D BFB Injection Date: 06/25/04

Instrument ID: GCMS#6 BFB Injection Time: 09:19

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.1
75	30.0 - 66.0% of mass 95	48.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.7
173	Less than 2.0% of mass 174	1.2 (1.2)1
174	50.0 - 120.0% of mass 95	107.0
175	4.0 - 9.0% of mass 174	7.1 (6.7)1
176	93.0 - 101.0% of mass 174	100.5 (94.0)1
177	5.0 - 9.0% of mass 176	7.6 (7.5)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	R5065.D	06/25/04	10:26
02	VBLK01	745559	R5066.D	06/25/04	11:02
03	VBLK01MS	745564	R5068.D	06/25/04	12:28
04	MW-1	737862 1.0	R5081.D	06/25/04	19:32
05	MW-2S	737863 1.0	R5082.D	06/25/04	20:01
06	MW-5S	737864 1.0	R5083.D	06/25/04	20:30
07	MW-3	737867 1.0	R5084.D	06/25/04	20:59

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Lab File ID: R5089.D BFB Injection Date: 06/28/04

Instrument ID: GCMS#6 BFB Injection Time: 09:45

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.0
75	30.0 - 66.0% of mass 95	45.5
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	0.7 (0.7)1
174	50.0 - 120.0% of mass 95	96.0
175	4.0 - 9.0% of mass 174	6.7 (6.9)1
176	93.0 - 101.0% of mass 174	92.5 (96.4)1
177	5.0 - 9.0% of mass 176	7.3 (7.9)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	R5090.D	06/28/04	10:32
02	VBLK02	745571	R5091.D	06/28/04	11:02
03	VBLK02MS	745572	R5092.D	06/28/04	11:35
04	MW100	737868 1.0	R5093.D	06/28/04	12:14
05	MW-5D	737865 1.0	R5094.D	06/28/04	12:45
06	MW-4	737866 1.0	R5095.D	06/28/04	13:14
07	MW-5DMS	737865 1.0 MS	R5096.D	06/28/04	13:55
08	MW-5DMSD	737865 1.0 MSD	R5097.D	06/28/04	14:25
09	MW200	737869 1.0	R5098.D	06/28/04	14:54
10	MW-6S	737870 1.0	R5099.D	06/28/04	15:23
11	MW-6D	737871 1.0	R5100.D	06/28/04	15:52
12	MW-7S	737872 1.0	R5104.D	06/28/04	17:56
13	MW-7D	737873 1.0	R5105.D	06/28/04	18:25
14	MW-10S	737876 1.0	R5108.D	06/28/04	19:55

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Lab File ID: R5173.D BFB Injection Date: 07/01/04

Instrument ID: GCMS#6 BFB Injection Time: 11:05

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	19.2
75	30.0 - 66.0% of mass 95	53.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.5
173	Less than 2.0% of mass 174	0.3 (0.3)1
174	50.0 - 120.0% of mass 95	92.6
175	4.0 - 9.0% of mass 174	6.6 (7.1)1
176	93.0 - 101.0% of mass 174	92.0 (99.4)1
177	5.0 - 9.0% of mass 176	5.3 (5.8)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	VSTD010	VSTD010	R5175.D	07/01/04	12:25
02	VSTD020	VSTD020	R5176.D	07/01/04	12:54
03	VSTD050	VSTD050	R5177.D	07/01/04	13:29
04	VSTD100	VSTD100	R5178.D	07/01/04	13:59
05	VSTD200	VSTD200	R5179.D	07/01/04	14:30
06	VBLK03	745576	R5182.D	07/01/04	16:23
07	VBLK03MS	745577	R5183.D	07/01/04	16:52
08	MW-9S	737874 1.0	R5184.D	07/01/04	17:22
09	MW-9D	737875 1.0	R5185.D	07/01/04	17:54
10	MW-11D	737878 1.0	R5187.D	07/01/04	18:52
11	EFF-RW01	737879 1.0	R5188.D	07/01/04	19:21
12	EFF-RW02	737880 1.0	R5189.D	07/01/04	19:50
13	EFF-RW03	737881 1.0	R5190.D	07/01/04	20:20
14	EFF-RW04	737882 1.0	R5191.D	07/01/04	20:49
15	TB-1	737883 1.0	R5192.D	07/01/04	21:18
16	MW-10D	737877 1.0	R5193.D	07/01/04	21:47
17	EFF-RW04DL	737882 2.5	R5194.D	07/01/04	22:16

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CAS/ROCH Contract: URS

Lab Code: 10145 Case No.: R4-21873 SAS No.: _____ SDG No.: MW-1

Lab File ID (Standard): R5065.D Date Analyzed: 06/25/04

Instrument ID: GCMS#6 Time Analyzed: 10:26

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	IS1 RT #	IS2 AREA #	IS2 RT #	IS3 AREA #	IS3 RT #
	12 HOUR STD	224900	7.87	1104305	8.94	1009705	11.21
	UPPER LIMIT	449800	8.37	2208610	9.44	2019410	11.71
	LOWER LIMIT	112450	7.37	552153	8.44	504853	10.71
	EPA SAMPLE NO.						
01	VBLK01	197334	7.86	982756	8.94	905363	11.21
02	VBLK01MS	200412	7.87	1007062	8.94	902822	11.21
03	MW-1	193537	7.87	952139	8.94	860826	11.21
04	MW-2S	188530	7.87	941945	8.94	852325	11.21
05	MW-5S	186080	7.86	914725	8.94	830136	11.21
06	MW-3	186274	7.86	930849	8.94	824654	11.21

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.: R4-21873 SAS No.: _____ SDG No.: MW-1

Lab File ID (Standard): R5090.D Date Analyzed: 06/28/04

Instrument ID: GCMS#6 Time Analyzed: 10:32

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1		IS2		IS3	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	221236	7.86	1076615	8.94	991621	11.21
	UPPER LIMIT	442472	8.36	2153230	9.44	1983242	11.71
	LOWER LIMIT	110618	7.36	538308	8.44	495811	10.71
	EPA SAMPLE NO.						
01	VBLK02	215424	7.87	1087511	8.94	975135	11.21
02	VBLK02MS	202908	7.87	972759	8.94	888303	11.21
03	MW100	204356	7.87	1025363	8.94	915247	11.21
04	MW-5D	199115	7.87	1018752	8.94	902364	11.21
05	MW-4	194914	7.87	995536	8.94	894878	11.21
06	MW-5DMS	201650	7.87	1036929	8.94	912208	11.21
07	MW-5DMSD	199119	7.87	1017357	8.94	911521	11.21
08	MW200	198361	7.86	968410	8.94	871573	11.21
09	MW-6S	197807	7.87	957545	8.94	854841	11.21
10	MW-6D	190036	7.86	944805	8.94	850507	11.21
11	MW-7S	190248	7.87	932711	8.94	845146	11.21
12	MW-7D	190459	7.87	932829	8.94	819808	11.21
13	MW-10S	189891	7.86	897185	8.94	827665	11.21

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.: R4-21873 SAS No.: _____ SDG No.: MW-1

Lab File ID (Standard): R5177.D Date Analyzed: 07/01/04

Instrument ID: GCMS#6 Time Analyzed: 13:29

GC Column: ZB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	IS1 RT #	IS2 AREA #	IS2 RT #	IS3 AREA #	IS3 RT #
	12 HOUR STD	177103	7.87	856021	8.94	818669	11.21
	UPPER LIMIT	354206	8.37	1712042	9.44	1637338	11.71
	LOWER LIMIT	88552	7.37	428011	8.44	409335	10.71
	EPA SAMPLE NO.						
01	VBLK03	168858	7.86	832472	8.94	751116	11.21
02	VBLK03MS	162574	7.87	844145	8.94	769556	11.21
03	MW-9S	168607	7.87	860125	8.94	763261	11.21
04	MW-9D	168579	7.86	868800	8.94	762680	11.21
05	MW-11D	171443	7.87	859842	8.94	765830	11.21
06	EFF-RW01	170489	7.87	843800	8.94	759192	11.21
07	EFF-RW02	176198	7.86	864679	8.94	764229	11.21
08	EFF-RW03	165120	7.86	834923	8.94	756752	11.21
09	EFF-RW04	171192	7.87	835638	8.94	765028	11.21
10	TB-1	163882	7.87	820362	8.94	739382	11.21
11	MW-10D	160936	7.87	812717	8.94	734252	11.21
12	EFF-RW04DL	166011	7.87	806404	8.94	734847	11.21

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 2004

INTRODUCTION

This appendix presents the findings of a validation of analytical data for samples collected in June 2004 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. Nineteen primary groundwater samples and associated QC samples were collected and analyzed for volatile organic compounds (VOCs) by USEPA Contract Laboratory Program (CLP) Method OLM04.2 in accordance with the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) dated June 2000.

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

The trichloroethene result in sample EFF-RW04 was reported from a secondary analysis with a dilution factor of 2.5 due to a concentration exceeding the calibration range in the undiluted analysis. All other analytes for this sample were reported from the primary (undiluted) analysis.

SAMPLE HOLDING TIMES

The VOC holding time criterion established in the QAPP is seven days from receipt at the laboratory to analysis. Eleven primary samples, both field duplicates, and the MS/MSD were analyzed within this time period. Eight additional primary samples and the trip blank were analyzed on the eighth day after receipt. Although the analyses of these 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 deviations (RSDs) between response factors for 1,2,4-trichlorobenzene in the initial calibrations dated 06/23/04 and 07/01/04 exceeded the 30% criterion (37.9% and 37.6%, respectively). 1,2,4-Trichlorobenzene was not detected in any of the associated samples; therefore no qualification of data was required.

All VOC continuing calibration RRF values and percent difference (%D) values met the acceptance criterion presented in the "Guidelines".

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 three 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. One trip blank sample, identified as TB-1-062304, was submitted with the cooler containing aqueous samples for VOC analyses. No target compounds or TICs were detected in the trip blank.

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-062304 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 (IS) 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 IS 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.

Two field duplicate sample pairs, labeled as samples MW-4-062304 and MW100-062304 and samples MW-10S-062304 and MW200-02304, were collected during 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, precision, and representativeness (based on the LCS, MS/MSD, and field duplicate results) were achieved for this data set. Sample results from this investigation required no qualification. Therefore, 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.

No transcription errors or calculation errors were found during validation of the reported VOC results from this data set.