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INTERIM REMEDIAL MEASURE PROGRAM

2003 ANNUAL PROGRESS REPORT SEPTEMBER 2002 – AUGUST 2003

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

Prepared for Diebold, Inc. Canton, Ohio

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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 C **INTERIM REMEDIAL MEASURE 2003 ANNUAL PROGRESS REPORT**

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SECTIONONE

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

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

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

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

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

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

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

SECTIONTWO

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

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

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

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

SECTIONTWO

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 shutoff 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.

SECTIONTWO

2.2 IRM SYSTEM MONITORING

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

2.2.1 Hydraulic Head Measurement

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

2.2.2 Groundwater Sampling and Analysis

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

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

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

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

3.1 HYDRAULIC HEAD MEASUREMENT RESULTS

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

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

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

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

3.2 EFFLUENT OPERATING DATA AND ANALYTICAL RESULTS

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

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

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

3.3 GROUNDWATER ANALYTICAL RESULTS

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

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

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

3.4 SYSTEM MAINTENANCE

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

SECTIONFOUR

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

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



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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-01	641.79	10/19/01	14.78	627.01
		11/04/01	14.99	626.80
		11/21/01	15.83	625.96
		12/03/01	12.11	629.68
		12/14/01	13.20	628.59
		1/3/2002	10.29	631.50
		1/16/2002	10.51	631.28
		2/1/2002	5.92	635.87
		2/13/2002	4.62	637.17
		2/25/2002	5.01	636.78
		3/11/2002	5.54	636.25
		3/26/2002	5.48	636.31
		4/13/2002	4.70	637.09
		4/27/2002	5.10	636.69
		5/23/2002	4.03	637.76
		6/5/2002	3.83	637.96
		6/14/2002	4 90	636.89
		7/1/2002	6.55	635.24
		7/15/2002	10.57	631.22
		7/29/2002	11.28	630.51
		8/15/2002	13.32	628 47
		9/4/2002	14 99	626.80
		9/20/2002	15.76	626.03
		10/2/2002	14.60	627.19
		10/14/2002	15.24	626.55
		10/25/2002	14.37	627.42
		11/11/2002	14.16	627.63
		11/26/2002	10.78	631.01
		12/19/2002	6.09	635.70
		1/3/2003	4.83	636.96
		1/20/2003	5.68	636.11
		1/31/2003	6.69	635.10
		2/12/2003	5.50	636.29
		2/25/2003	4.85	636.94
		3/14/2003	4.81	636.98
		3/31/2003	3.64	638.15
		4/17/2003	4.87	636.92
		5/1/2003	5,68	636.11
		5/15/2003	4.84	636.95
		6/1/2003	5.21	636.58
		6/18/2003	5.70	636.09
		7/1/2003	6.01	635.78
		7/14/2003	10.98	630.81
		8/1/2003	10.37	631.42
		8/15/2003	9.75	632.04

NOTES

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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-02S	641.28	10/19/01	DRY	DRY
		11/04/01	DRY	DRY
		11/21/01	DRY	DRY
		12/03/01	DRY	DRY
		12/14/01	DRY	DRY
		1/3/2002	DRY	DRY
		1/16/2002	DRY	DRY
		2/1/2002	11.50	629.78
		2/13/2002	7.84	633.44
		2/25/2002	7.98	633.30
		3/11/2002	8.86	632.42
		3/26/2002	8.68	632.60
		4/13/2002	7.61	633.67
		4/27/2002	7.98	633,30
		5/23/2002	6.82	634.46
		6/5/2002	6.13	635.15
		6/14/2002	7.69	633.59
		7/1/2002	11.48	629.80
		7/15/2002	15.63	625.65
		7/29/2002	DRY	DRY
		8/15/2002	DRY	DRY
		9/4/2002	DRY	DRY
		9/20/2002	DRY	DRY
		10/2/2002	DRY	DRY
		10/14/2002	DRY	DRY
		10/25/2002	DRY	DRY
		11/11/2002	DRY	DRY
		11/26/2002	DRY	DRY
		12/19/2002	13.53	627.75
		1/3/2003	8.55	632.73
		1/20/2003	8.95	632.33
		1/31/2003	13.78	627.50
		2/13/2003	8.75	632.53
		2/25/2003	7.82	633.46
		3/14/2003	7.92	633.36
		3/31/2003	5.74	635.54
		4/17/2003	7.12	634.16
		5/1/2003	7.73	633.55
		5/15/2003	7.78	633.50
		6/1/2003	7.12	634.16
		6/18/2003	8.81	632.47
		7/1/2003	9.27	632.01
		7/14/2003	15.99	625.29
		8/1/2003	14.65	626.63
		8/15/2003	12.77	628.51

NOTES

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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-2D	642.37	Monitoring well	converted to recovery	well RW-4.
MW-03	642.17	10/19/01	18.58	623.59
		11/04/01	18.98	623.19
		11/21/01	19.92	622.25
		12/03/01	17.24	624.93
		12/14/01	17.52	624.65
		1/3/2002	14.60	627.57
		1/16/2002	15.00	627.17
		2/1/2002	9.29	632.88
		2/13/2002	6.45	635.72
		2/25/2002	7.14	635.03
		3/11/2002	8.70	633.47
		3/26/2002	8,19	633.98
		4/13/2002	7,12	635.05
		4/27/2002	8.51	633.66
		5/23/2002	6.48	635.69
		6/5/2002	6.28	635.89
		6/14/2002	7.74	634 43
		7/1/2002	10.71	631.46
		7/15/2002	14 57	627 60
		7/29/2002	15.69	626.48
		8/15/2002	17.28	624.80
		9/4/2002	18 58	623 50
		9/20/2002	19.99	623.39
		10/2/2002	17 71	624.46
		10/14/2002	18.90	622.29
		10/25/2002	19.00	624.17
		11/11/2002	18.00	624.17
		11/26/2002	15.05	624.01
		12/10/2002	9.21	027.12
		1/3/2002	6.31	625 75
		1/20/2003	0.42	634.06
		1/31/2003	0.11	620.45
		2/12/2002	8.00	624.09
		2/15/2003	6.09	034.08
		2/12/2003	6.02	033.31
		3/14/2003	0.95	635.24
		3/31/2003	5.01	030.30
		4/1/2003	0.48	635.09
		5/15/2002	0.21	622.05
		6/1/2002	0.22	634.39
		6/19/2002	0.41	034.28
		7/1/2003	9.41	032.70
		7/14/2002	9.89	032.28
		9/1/2002	13.30	020.07
		0/1/2003	14.99	027.18
		8/15/2003	12.84	629.33

NOTES

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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-04	641.75	10/19/01	19.55	622.20
		11/04/01	19.19	622.56
		11/21/01	DRY	DRY
		12/03/01	19.13	622.62
		12/14/01	19.57	622.18
		1/3/2002	18.96	622.79
		1/16/2002	19.25	622.50
		2/1/2002	13.61	628.14
		2/13/2002	10.13	631.62
		2/25/2002	9.55	632.20
		3/11/2002	11.56	630.19
		3/26/2002	12.43	629.32
		4/13/2002	9.70	632.05
		4/27/2002	10.91	630.84
		5/23/2002	8.38	633.37
		6/5/2002	7.22	634.53
		6/14/2002	8.50	633.25
		7/1/2002	12.06	629.69
		7/15/2002	16.51	625.24
		7/29/2002	16.93	624.82
		8/15/2002	18.62	623.13
		9/4/2002	19.38	622.37
		9/20/2002	19.34	622.41
		10/2/2002	18.60	623.15
		10/14/2002	19.54	622.21
		10/25/2002	18.40	623.35
		11/11/2002	19.27	622.48
		11/26/2002	17.51	624.24
		12/19/2002	13.40	628.35
		1/3/2003	10.39	631.36
		1/20/2003	11.21	630.54
		1/31/2003	16.07	625.68
		2/13/2003	12.46	629.29
		2/25/2003	10.69	631.06
		3/14/2003	10.59	631.16
		3/31/2003	7.01	634.74
		4/17/2003	7.81	633.94
		5/1/2003	8.01	633.74
		5/15/2003	9.56	632,19
		6/1/2003	NM	NM
		6/18/2003	11.74	630.01
		7/1/2003	12.21	629.54
		7/14/2003	16.94	624.81
		8/1/2003	15.87	625.88
				020.00

NOTES

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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-05S	640.85	10/19/01	DRY	DRY
		11/04/01	DRY	DRY
		11/21/01	DRY	DRY
		12/03/01	DRY	DRY
		12/14/01	DRY	DRY
		1/3/2002	20.08	620 77
		1/16/2002	20.45	620.40
		2/1/2002	19.62	621.23
		2/13/2002	11.20	629.65
		2/25/2002	11.62	629 23
		3/11/2002	13.62	627.23
		3/26/2002	13.43	627 42
		4/13/2002	10.72	630 13
		4/27/2002	11.86	628 99
		5/23/2002	9.40	631 45
		6/5/2002	8 54	632 31
		6/14/2002	9.80	631.05
		7/1/2002	12.00	627 02
		7/15/2002	16.65	624.20
		7/29/2002	17.18	623 67
		8/15/2002	19.50	621 35
		9/4/2002	19.79	621.06
		9/20/2002	20.71	620.14
		10/2/2002	20.29	620.56
		10/14/2002	20.24	620.61
		10/25/2002	20.39	620.46
		11/11/2002	20.59	620.25
		11/26/2002	19 32	621 53
		12/19/2002	16.46	624 30
		1/3/2003	12.80	628.05
		1/20/2003	13 32	627 53
		1/31/2003	16.95	623.90
		2/13/2003	13 49	627 36
		2/25/2003	11.74	629 11
		3/14/2003	11.63	629.22
		3/31/2003	8 40	632.45
		4/17/2003	9.09	631.76
		5/1/2003	10.21	630 64
		5/15/2003	11.26	629 59
		6/1/2003	10.91	629.94
		6/18/2003	12.13	628.72
		7/1/2003	12.32	628 53
		7/14/2003	16.30	624.55
		8/1/2003	15.21	625.64
		8/15/2003	14.39	626.46
			1 1.57	020.70

NOTES

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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-05D	641.01	10/19/01	22.41	618.60
		11/04/01	22.92	618.09
		11/21/01	23.05	617.96
		12/03/01	22.48	618.53
		12/14/01	22.52	618.49
		1/3/2002	21.58	619.43
		1/16/2002	21.40	619.61
		2/1/2002	20.65	620.36
		2/13/2002	13.49	627 52
		2/25/2002	16.32	624 69
		3/11/2002	15.33	625.68
		3/26/2002	16.91	624.10
		4/13/2002	12.75	628.26
		4/27/2002	16.39	624 62
		5/23/2002	14.91	626.10
		6/5/2002	14.41	626.60
		6/14/2002	12.18	628 83
		7/1/2002	16.99	624.02
		7/15/2002	18.22	622.79
		7/29/2002	19 60	621.41
		8/15/2002	20.70	620.31
		9/4/2002	21.72	610 20
		9/20/2002	22.16	618 85
		10/2/2002	22.07	618 94
		10/14/2002	22.00	619.01
		10/25/2002	22.07	618 94
		11/11/2002	21.98	619.03
		11/26/2002	21.21	619.80
		12/19/2002	18.09	622.92
		1/3/2003	16.75	624.26
		1/20/2003	17 14	623.87
		1/31/2003	19.03	621.98
		2/13/2003	13.54	627 47
		2/25/2003	16.32	624 69
		3/14/2003	13.98	627.03
		3/31/2003	14 26	626.75
		4/17/2003	14.88	626.13
		5/1/2003	15.67	625 34
		5/15/2003	15.95	625.06
		6/1/2003	16.01	625.00
		6/18/2003	16.64	624.37
		7/1/2003	17.84	623.17
		7/14/2003	19.76	621.25
		8/1/2003	18.35	622.66
		8/15/2003	16.99	624.02

NOTES

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

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

NOTES

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

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

NOTES

NM indicates water elevation not measured.

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

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

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

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

NOTES

NM indicates water elevation not measured.

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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-09S	630.16	10/19/01	NM	NM
		11/04/01	NM	NM
		11/21/01	NM	NM
		12/03/01	NM	NM
		12/14/01	NM	NM
		1/3/2002	NM	NM
		1/16/2002	NM	NM
		2/1/2002	NM	NM
		2/13/2002	NM	NM
		2/25/2002	NM	NM
		3/11/2002	NM	NM
		3/26/2002	NM	NM
		4/13/2002	NM	NM
		4/27/2002	NM	NM
		5/23/2002	8.54	621.62
		6/5/2002	NM	NM
		6/14/2002	NM	NM
		7/1/2002	NM	NM
		7/15/2002	NM	NM
		7/29/2002	NM	NM
		8/15/2002	NM	NM
		9/4/2002	NM	NM
		9/20/2002	NM	NM
		10/2/2002	NM	NM
		10/14/2002	NM	NM
		10/25/2002	NIM	NIM
		11/11/2002	NIM	NIM
		11/26/2002	NIM	NIM
		12/10/2002	INIVI	INIM
		1/2/2002	INIM	NM
		1/3/2003	NM	NM
		1/20/2003	NM	NM
		2/12/2003	NM	INIM
		2/15/2003	NIM	INIM
		3/14/2003	NIM	NIM
		3/31/2003	NIM	INIM
		4/17/2003	NM	NIM
		5/1/2003	NM	NIM
		5/15/2003	NM	NIM
		6/1/2003	NM	NIM
		6/18/2003	0.05	620.21
		7/1/2003	9.93 NM	NIM
		7/14/2003	NM	NM
		8/1/2003	NIM	NIM
		8/15/2003	NM	NIM
		0/13/2003	MM	INIVI

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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-09D	630.29	10/19/01	NM	NM
		11/04/01	NM	NM
		11/21/01	NM	NM
		12/03/01	NM	NM
		12/14/01	NM	NM
		1/3/2002	NM	NM
		1/16/2002	NM	NM
		2/1/2002	NM	NM
		2/13/2002	NM	NM
		2/25/2002	NM	NM
		3/11/2002	NM	NM
		3/26/2002	NM	NM
		4/13/2002	NM	NM
		4/27/2002	NM	NM
		5/23/2002	29.57	600.72
		6/5/2002	NM	NM
		6/14/2002	NM	NM
		7/1/2002	NM	NM
		7/15/2002	NM	NM
		7/29/2002	NM	NM
		8/15/2002	NM	NM
		9/4/2002	NM	NM
		9/20/2002	NM	NM
		10/2/2002	NM	NM
		10/14/2002	NM	NM
		10/25/2002	NM	NM
		11/11/2002	NM	NM
		11/26/2002	NM	NM
1 1 1 2		12/19/2002	NM	NM
		1/3/2003	NM	NM
		1/20/2003	NM	NM
		1/31/2003	NM	NM
		2/13/2003	NM	NM
		2/25/2003	NM	NM
		3/14/2003	NM	NM
		3/31/2003	NM	NM
100		4/17/2003	NM	NM
		5/1/2003	NM	NM
		5/15/2003	NM	NM
		6/1/2003	NM	NM
		6/18/2003	31.10	599.19
		7/1/2003	NM	NM
		7/14/2003	NM	NM
		8/1/2003	NM	NM
		8/15/2003	NM	NM

NOTES

NM indicates water elevation not measured.

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

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

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

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

NOTES

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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
MW-11D	641.89	10/19/01	18.81	623.08
		11/04/01	19.00	622.89
		11/21/01	19.29	622.60
		12/03/01	19.11	622.78
		12/14/01	18.83	623.06
		1/3/2002	16.98	624.91
		1/16/2002	17.07	624.82
		2/1/2002	14.77	627.12
		2/13/2002	9.80	632.09
		2/25/2002	9.90	631.99
		3/11/2002	10.18	631.71
		3/26/2002	9.71	632.18
		4/13/2002	8.65	633.24
		4/27/2002	10.08	631.81
		5/23/2002	7.78	634.11
	40	6/5/2002	7.75	634 14
		6/14/2002	10.15	631.74
		7/1/2002	12.50	629.39
		7/15/2002	15.35	626.54
		7/29/2002	15.85	626.04
		8/15/2002	17.32	624.57
		9/4/2002	18.26	623.63
		9/20/2002	18.69	623.20
		10/2/2002	18.82	623.07
		10/14/2002	18.92	622.97
		10/25/2002	18.86	623.03
		11/11/2002	18.63	623.26
		11/26/2002	18.14	623.75
		12/19/2002	14.33	627.56
		1/3/2003	10.90	630.99
		1/20/2003	11.68	630.21
		1/31/2003	13.52	628.37
		2/13/2003	11.18	630.71
		2/25/2003	9.26	632.63
		3/14/2003	9.48	632.41
		3/31/2003	6.70	635.19
		4/17/2003	9.47	632.42
		5/1/2003	NM	NM
		5/15/2003	8.37	633.52
		6/1/2003	8.14	633.75
		6/18/2003	10.44	631.45
		7/1/2003	11.51	630.38
		7/14/2003	NM	NM
		8/1/2003	14.31	627.58
		8/15/2003	13.12	628.77

NOTES

NM indicates water elevation not measured.

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

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

NOTES

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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
PZ-1S	640.50	10/19/01	DRY	DRY
		11/04/01	10.41	630.09
		11/21/01	DRY	DRY
		12/03/01	DRY	DRY
		12/14/01	DRY	DRY
		1/3/2002	DRY	DRY
		1/16/2002	DRY	DRY
		2/1/2002	DRY	DRY
		2/13/2002	9.52	630.98
		2/25/2002	9.77	630,73
		3/11/2002	DRY	DRY
		3/26/2002	10.40	630.10
		4/13/2002	8.88	631.62
		4/27/2002	10.16	630.34
		5/23/2002	7.31	633.19
		6/5/2002	6.22	634.28
		6/14/2002	7.65	632.85
		7/1/2002	10.40	630.10
		7/15/2002	10.39	630.11
		7/29/2002	10.40	630.10
		8/15/2002	10.39	630.11
		9/4/2002	DRY	DRY
		9/20/2002	DRY	DRY
		10/2/2002	DRY	DRY
		10/14/2002	DRY	DRY
		10/25/2002	DRY	DRY
		11/11/2002	DRY	DRY
		11/26/2002	DRY	DRY
		12/19/2002	10.38	630.12
		1/3/2003	10.35	630.15
		1/20/2003	10.40	630.10
		1/31/2003	10.39	630.11
		2/13/2003	10.42	630.08
		2/25/2003	10.04	630.46
		3/14/2003	9.89	630.61
		3/31/2003	6.12	634.38
		4/17/2003	7.00	633.50
		5/1/2003	7.39	633.11
		5/15/2003	9.55	630.95
		6/1/2003	8.99	631.51
		6/18/2003	DRY	DRY
		7/1/2003	DRY	DRY
		7/14/2003	DRY	DRY
		8/1/2003	12.24	628.26
				020.20

NOTES

NM indicates water elevation not measured.

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

WellTop ofIDCasingDateIDElevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)
PZ-1D 640.67 10/19/01	DRY	DRY
11/04/01	DRY	DRY
11/21/01	DRY	DRY
12/03/01	DRY	DRY
12/14/01	DRY	DRY
1/3/2002	DRY	DRY
1/16/2002	DRY	DRY
2/1/2002	15 38	625 29
2/13/2002	9.68	630.99
2/25/2002	9.87	630.80
3/11/2002	11.66	629.01
3/26/2002	11.62	629.05
4/13/2002	9.01	631 66
4/27/2002	10.33	630 34
5/23/2002	7 49	633.18
6/5/2002	6 32	634 35
6/14/2002	7.81	632.86
7/1/2002	11.55	620 12
7/15/2002	DRY	DRY
7/29/2002	DRY	DRY
8/15/2002	DRY	DRY
9/4/2002	DRY	DRY
9/20/2002	DRY	DRY
10/2/2002	DRY	DRY
10/14/2002	DRY	DRY
10/25/2002	DRY	DRY
11/11/2002	DRY	DRY
11/26/2002	DRY	DRY
12/19/2002	14.30	626 37
1/3/2003	10.86	620.57
1/20/2003	11.32	629.35
1/31/2003	DRY	DPV
2/13/2003	11.62	620.05
2/25/2003	10.14	630.53
3/14/2003	10.02	630.65
3/31/2003	6.27	634.40
4/17/2003	7.14	633 53
5/1/2003	7.86	632.81
5/15/2003	9.67	631.00
6/1/2003	943	631.24
6/18/2003	10.78	620 80
7/1/2003	11 51	629.16
7/14/2003	DRY	DRY
8/1/2003	12.94	627 73
		021.15

NOTES

NM indicates water elevation not measured.

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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)
PZ-2S	639.73	10/19/01	DRY	DRY
		11/04/01	DRY	DRY
		11/21/01	DRY	DRY
		12/03/01	DRY	DRY
		12/14/01	DRY	DRY
		1/3/2002	DRY	DRY
		1/16/2002	DRY	DRY
		2/1/2002	DRY	DRY
		2/13/2002	9.97	629.76
		2/25/2002	12.59	627.14
		3/11/2002	13.70	626.03
		3/26/2002	13.52	626.21
		4/13/2002	11.22	628.51
		4/27/2002	12.13	627.60
		5/23/2002	9.90	629.83
		6/5/2002	8.95	630.78
		6/14/2002	9.84	629.89
		7/1/2002	11.37	628.36
		7/15/2002	15.16	624.57
		7/29/2002	15.65	624.08
		8/15/2002	DRY	DRY
		9/4/2002	DRY	DRY
		9/20/2002	DRY	DRY
		10/2/2002	DRY	DRY
		10/14/2002	DRY	DRY
		10/25/2002	DRY	DRY
		11/11/2002	DRY	DRY
		11/26/2002	DRY	DRY
		12/19/2002	16.24	623.49
		1/3/2003	13.56	626.17
		1/20/2003	13.50	626.23
		1/31/2003	16.49	623.24
		2/13/2003	13.50	626.23
		2/25/2003	12.43	627.30
		3/14/2003	12.20	627.53
		3/31/2003	9.28	630.45
		4/17/2003	9.84	629.89
		5/1/2003	10.17	629.56
		5/15/2003	11.60	628.13
		6/1/2003	10.41	629.32
		6/18/2003	12.38	627.35
		7/1/2003	13.01	626.72
		7/14/2003	DRY	DRY
		8/1/2003	14.64	625.09
		8/15/2003	12.76	626.07

NOTES

NM indicates water elevation not measured.

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

Well ID	Top of Casing Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	
PZ-2D	640.01	10/19/01	20.09	619.92	
		11/04/01	20.20	619.81	
		11/21/01	20.46	619.55	
		12/03/01	19.93	620.08	
		12/14/01	20.10	619.91	
		1/3/2002	19.73	620.28	
		1/16/2002	19.82	620.19	
		2/1/2002	19.36	620.65	
		2/13/2002	10.55	629.46	
		2/25/2002	13.66	626.35	
		3/11/2002	14.63	625.38	
		3/26/2002	14.42	625.59	
		4/13/2002	12.34	627.67	
		4/27/2002	13.22	626.79	
		5/23/2002	11.07	628.94	
		6/5/2002	10.21	629.80	
		6/14/2002	11.12	628.89	
		7/1/2002	11.76	628.25	
		7/15/2002	15.42	624.59	
		7/29/2002	15.89	624.12	
		8/15/2002	19.77	620.24	
		9/4/2002	19.21	620.80	
		9/20/2002	20.38	619.63	
		10/2/2002	20.06	619.95	
		10/14/2002	19.61	620.40	
		10/25/2002	20.25	619.76	
		11/11/2002	20.26	619.75	
		11/26/2002	19.41	620.60	
		12/19/2002	16.92	623.09	
		1/3/2003	14.35	625.66	
		1/20/2003	14.38	625.63	
		1/31/2003	16.98	623.03	
		2/13/2003	14.27	625.74	
		2/25/2003	13.28	626.73	
		3/14/2003	13.04	626.97	
		3/31/2003	10.32	629.69	
		4/17/2003	10.80	629.21	
		5/1/2003	11.29	628.72	
		5/15/2003	12.55	627.46	
		6/1/2003	11.25	628.76	
		6/18/2003	14.27	625.74	
		7/1/2003	15.45	624.56	
		7/14/2003	DRY	DRY	
		8/1/2003	14.90	625.11	
		8/15/2003	14.01	626.00	

NOTES

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

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

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

Notes:

All results expressed in micrograms per liter ($\mu g/l$). No other VOC compounds detected. ND indicates not detected.

Monitoring	Sample			CIS-				VINYL
Well No.	Date	TCE	1,1,1-TCA	1,2-DCE	XYLENES	1,1-DCE	ACETONE	CHLORIDE
MW-01	12/19/1994	ND	ND	ND	ND	ND	ND	ND
	5/21/1996	ND	ND	ND	ND	ND	ND	ND
	8/13/1997	ND	ND	ND	ND	ND	ND	ND
	3/18/1998	ND	ND	ND	ND	ND	ND	ND
	9/2/1998	ND	ND	ND	ND	ND	ND	ND
	3/18/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	ND	ND	ND	ND	ND	ND	ND
	3/28/2000	ND	ND	ND	ND	ND	ND	ND
	9/8/2000	ND	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND	ND
	9/13/2001	ND	ND	ND	ND	ND	ND	ND
	5/24/2002	ND	ND	ND	ND	ND	ND	ND
_	6/18/2003	ND	ND	ND	ND	ND	ND	ND
MW-02S	12/19/1994	850	ND	ND	ND	ND	ND	ND
	5/21/1996	30	ND	1	ND	ND	ND	ND
	8/13/1997	DRY	DRY	DPV	DPV	DRY	DRY	DRY
	3/18/1008	17 000	ND	ND	ND	ND	DRI	DRI
	9/2/1998	18,000	210	ND	ND	ND	ND	ND
	3/18/1000	28	ND	ND	ND	ND	ND	ND
	0/2/1000	DPV	DRY	DRY	DBY	DBY	DBY	ND
	3/28/2000	6	ND	DRI	DRI	DRI	DRI	DRY
	9/8/2000	DPV	DPV	DRY	DRY	DRY	DRY	ND
	3/8/2001	ORI	ND	ND	ND	DRI	DRI	DRI
	9/13/2001	DPV	DRY	DRV	ND	ND	ND	ND
	5/24/2002	DRI	ND	DRI	DRI	DRI	DRY	DRY
	6/18/2002	4	ND	ND	ND	ND	ND	ND
MW-02D	8/13/1007	450	22	40	NID	NID	NID	ND
MI W-02D	2/19/1009	740	23	42	ND	ND	ND	ND
	0/0/1009	690	10	28	ND	ND	ND	ND
	2/19/1000	100	25	39	ND	ND	ND	ND
	Monitoring we	ell converter	i to recovery w	o ell RW-4.	ND	ND	ND	ND
_							_	
MW-03	12/19/1994	190	ND	ND	ND	ND	ND	ND
	5/21/1996	120	ND	2	ND	ND	ND	ND
	8/13/1997	150	ND	2	ND	ND	ND	ND
	3/18/1998	88	ND	ND	ND	ND	ND	ND
	9/2/1998	110	ND	ND	ND	ND	ND	ND
	3/18/1999	45	ND	ND	ND	ND	ND	ND
	9/2/1999	170	ND	ND	ND	ND	ND	ND
	3/28/2000	93	ND	ND	ND	ND	ND	ND
	9/8/2000	150	ND	ND	ND	ND	ND	ND
	3/8/2001	96	ND	ND	ND	ND	ND	ND
	9/13/2001	120	ND	ND	ND	ND	ND	ND
	5/24/2002	85	ND	ND	ND	ND	ND	ND
	6/18/2003	40	ND	ND	ND	ND	ND	ND
Duplicate	6/18/2003	56	ND	ND	ND	ND	ND	ND

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.

2. All results expressed in micrograms per liter (µg/l).

3. No other VOC compounds detected at method detection limit.

4. ND indicates not detected.

5. NS indicates no sample collected; unable to locate or access well.

6. DRY indicates well not sampled due to lack of water.

7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.

Monitoring Well No	Sample	TCE	111704	CIS-	VVI ENER		ACETONE	VINYL
MW-04	12/10/1004	710	1,1,1-1CA	1,2-DCE	AILENES	I,I-DCE	ACETONE	CHLORIDE
101 00-004	5/21/1006	16	0.7	23	ND	ND	ND	ND
	8/13/1007	DPV	DBY	DBY	ND	ND	ND	ND
	3/18/1008	50	ND	DRI	DRI	DRI	DRY	DRY
	0/2/1008	150	7	20	ND	ND	ND	ND
	3/18/1000	400	NID	20	ND	ND	ND	ND
	9/2/1000	DPV	DRV	DBV	ND	ND	ND	ND
	3/28/2000	OKI	DKI	DKI	DRY	DRY	DRY	DRY
Duplicate	3/28/2000	9	ND	ND	ND	ND	ND	ND
Dupneate	9/8/2000	DBV	DBY	ND	ND	ND	ND	ND
	3/0/2000	DR I	DRI	DRY	DRY	DRY	DRY	DRY
Duplicata	3/0/2001	130	ND	2	ND	ND	ND	ND
Duplicate	3/8/2001	130	ND	2	ND	ND	ND	ND
	9/13/2001	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Dualizata	5/24/2002	67	ND	1	ND	ND	ND	ND
Dupicate	5/24/2002	68	ND	1	ND	ND	ND	ND
	0/18/2003	19	ND	ND	ND	ND	ND	ND
MW-05S	12/19/1994	580	15	ND	ND	ND	ND	ND
	5/21/1996	350	16	ND	ND	ND	ND	ND
	8/13/1997	760	31	4	ND	ND	ND	ND
	3/18/1998	120	4	ND	1	ND	ND	ND
	9/2/1998	390	14	ND	ND	ND	ND	ND
	3/18/1999	95	3	ND	ND	ND	ND	ND
	9/2/1999	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	3/28/2000	140	4	ND	ND	ND	ND	ND
	9/8/2000	550	22	ND	ND	ND	ND	ND
	3/8/2001	330	9	ND	ND	ND	ND	ND
	9/13/2001	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/24/2002	59	1	ND	ND	ND	ND	ND
	6/18/2003*	66	2	ND	ND	ND	ND	ND
MW-05D	12/19/1994	820	23	ND	ND	ND	ND	ND
	5/21/1996	1,000	48	8	ND	ND	ND	ND
	8/13/1997	250	7	2	ND	ND	ND	ND
	3/18/1998	250	7	ND	ND	ND	ND	ND
	9/2/1998	300	8	2	ND	ND	ND	ND
	3/18/1999	200	7	2	ND	ND	ND	ND
	9/2/1999	220	6	2	ND	ND	ND	ND
	3/28/2000	190	4	ND	ND	ND	ND	ND
	9/8/2000	160	3	ND	ND	ND	ND	ND
	3/8/2001	160	3	ND	ND	ND	ND	ND
	9/13/2001	120	3	ND	ND	ND	ND	ND
Duplicate	9/13/2001	110	2	ND	ND	ND		ND
	5/24/2002	160	4	ND	ND	ND	3	ND
	6/18/2003	110	3	ND	ND	ND	ND	ND

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.

2. All results expressed in micrograms per liter (µg/l).

3. No other VOC compounds detected at method detection limit.

4. ND indicates not detected.

5. NS indicates no sample collected; unable to locate or access well.

6. DRY indicates well not sampled due to lack of water.

7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.

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

Monitoring	Sample			CIS-				VINYL
Well No.	Date	TCE	1,1,1-TCA	1,2-DCE	XYLENES	1,1-DCE	ACETONE	CHLORIDE
MW-06S	12/19/1994	270	7.8	ND	ND	ND	ND	ND
	5/21/1996	ND	2	ND	ND	ND	ND	ND
	8/13/1997	140	9	3	ND	ND	ND	ND
	3/18/1998	5	ND	ND	ND	ND	ND	ND
	9/2/1998	140	8	2	ND	ND	ND	ND
	3/17/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	110	6	4	ND	ND	ND	ND
	3/28/2000	3	ND	ND	ND	ND	ND	ND
	9/8/2000	110	5	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND	ND
	9/13/2001	72	4	4	ND	ND	ND	ND
	5/24/2002	3	ND	ND	ND	ND	ND	ND
	6/18/2003	8	ND	ND	ND	ND	ND	ND
MW-06D	12/19/1994	190	7.5	ND	ND	ND	ND	ND
	5/21/1996	240	10	ND	ND	ND	ND	ND
	8/13/1997	150	10	2	ND	ND	ND	ND
	3/18/1998	6	ND	ND	ND	ND	ND	ND
	9/2/1998	140	8	2	ND	ND	ND	ND
	3/17/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	110	7	2	ND	ND	ND	ND
	3/28/2000	89	5	1	ND	ND	ND	ND
	9/8/2000	110	6	ND	ND	ND	ND	ND
Duplicate	9/8/2000	110	6	ND	ND	ND	ND	ND
	3/8/2001	95	5	ND	ND	ND	ND	ND
	9/13/2001	80	4	3	ND	ND	3	ND
	5/24/2002	91	4	ND	ND	ND	ND	ND
	6/18/2003	70	4	ND	ND	ND	ND	ND
MW-075	12/19/1994	250	6.6	8	ND	ND	ND	ND
	5/21/1996	310	7	6	ND	ND	ND	ND
	8/13/1997	250	6	6	ND	ND	ND	ND
	3/18/1998	3	ND	ND	ND	ND	ND	ND
	9/2/1998	220	5	4	ND	ND	ND	ND
	3/17/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	220	4	4	ND	ND	ND	ND
	3/28/2000	210	4	3	ND	ND	ND	ND
	9/8/2000	210	ND	ND	ND	ND	ND	ND
	3/8/2001	200	4	3	ND	ND	ND	ND
	9/13/2001	190	3	4	ND	ND	ND	ND
	5/24/2002	180	3	2	ND	ND	ND	ND
	6/18/2003	130	2	2	ND	ND	ND	ND

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.

2. All results expressed in micrograms per liter ($\mu g/l$).

3. No other VOC compounds detected at method detection limit.

4. ND indicates not detected.

5. NS indicates no sample collected; unable to locate or access well.

6. DRY indicates well not sampled due to lack of water.

7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.

8/29/2003

Monitoring Well No.	Sample Date	TCE	1,1,1-TCA	CIS- 1,2-DCE	XYLENES	1,1-DCE	ACETONE	VINYL CHLORIDE
MW-07D	12/19/1994	260	ND	7	ND	NID	ND	NID
MW-07D	5/21/1006	200	4	12	ND	ND	ND	ND
	8/13/1007	190	2	12	ND	ND	ND	ND
	3/19/1009	150	2	15	ND	ND	ND	ND
	0/2/1008	200	2	15	ND	ND	ND	ND
	3/17/1000	100	NID	15	ND	ND	ND	ND
	0/2/1000	190	ND	0	ND	ND	ND	ND
	2/22/2000	120	2 NID	14	ND	ND	ND	ND
	3/20/2000	130	ND	19	ND	ND	ND	4
	9/8/2000	180	ND	13	ND	ND	ND	ND
	3/8/2001	140	ND	20	ND	ND	ND	3
	9/13/2001	150	1	14	ND	ND	ND	ND
	5/24/2002	140	ND	19	ND	ND	ND	4
	6/18/2003	120	ND	16	ND	ND	ND	2
MW-08S	12/19/1994 Well abandoned.	29	ND	ND	ND	ND	ND	ND
MW-08D	12/19/1994 Well abandoned.	55	ND	ND	ND	ND	ND	ND
MW-09S	12/19/1994	ND	ND	ND	ND	ND	ND	ND
	5/21/1996	ND	ND	ND	ND	ND	ND	ND
	8/13/1997	2	ND	ND	ND	ND	ND	ND
	3/18/1998	3	ND	ND	ND	ND	ND	ND
	9/2/1998	NS	NS	NS	NS	NS	NE	ND
	3/18/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	ND	ND	ND	ND	ND	ND	ND
	3/28/2000	ND	ND	ND	ND	ND	ND	ND
	9/8/2000	ND	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND	ND
	9/13/2001	ND	ND	ND	ND	ND	ND	ND
	5/24/2002	ND	ND	ND	ND	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND	ND
MW.00D	12/10/1004	NID	NID	ND	ND	ND	ND	ND
MIW-09D	5/21/1006	ND	ND	ND	ND	ND	ND	ND
	5/21/1990	ND	ND	ND	ND	ND	ND	ND
	8/13/199/	ND	ND	ND	ND	ND	ND	ND
	3/18/1998	ND	ND	ND	ND	ND	ND	ND
	9/2/1998	NS	NS	NS	NS	NS	NS	NS
	3/18/1999	ND	ND	ND	ND	ND	ND	ND
	9/2/1999	ND	ND	ND	ND	ND	ND	ND
	3/28/2000	ND	ND	ND	ND	ND	ND	ND
	9/8/2000	ND	ND	ND	ND	ND	ND	ND
	3/8/2001	ND	ND	ND	ND	ND	ND	ND
	9/13/2001	ND	ND	ND	ND	ND	3	ND
	5/24/2002	ND	ND	1	ND	ND	ND	ND
	6/18/2003	ND	ND	ND	ND	ND	ND	ND

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.

2. All results expressed in micrograms per liter (µg/l).

3. No other VOC compounds detected at method detection limit.

4. ND indicates not detected.

5. NS indicates no sample collected; unable to locate or access well.

6. DRY indicates well not sampled due to lack of water.

7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.
TABLE 3-3 SUMMARY OF MONITORING WELL GROUNDWATER ANALYTICAL RESULTS GRIFFIN TECHNOLOGY, INC. FARMINGTON, NEW YORK

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

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.

2. All results expressed in micrograms per liter (µg/l).

3. No other VOC compounds detected at method detection limit.

4. "ND" indicates not detected.

5. "NS" indicates no sample collected; unable to locate or access well.

6. "DRY" indicates well not sampled due to lack of water.

7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.

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

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

Notes:

1. 12/19/94 data collected by Blasland, Bouck & Lee.

2. All results expressed in micrograms per liter (µg/l).

3. No other VOC compounds detected at method detection limit.

4. "ND" indicates not detected.

5. "NS" indicates no sample collected; unable to locate or access well.

6. "DRY" indicates well not sampled due to lack of water.

7. Data presented includes actual and estimated concentrations based on Level IV Data Validation Procedures. Refer to analytical data and data validation report for additional descriptions.







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Q: \Dieboid \13807295 \Figures \2003 \048121902.dwg User: betley Sep 18, 2003 - 11:50am



Q: \Dieboid \13807295 \Figures \2003 \049031403.dwg Ueer: betley Sep 18, 2003 - 11:53am



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GRIFFIN TECHNOLOGY, INC. Farmington, New York

Figure 3-4 Overburden Groundwater Contour Map - June 18, 2003





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SCALE 1" = 200' Q: \Diebold\13807295\Figures\2003\BED081803.dwg Uner: befley Sep 18 2003 - 11:56gm





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





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Appendix A Recovery Well Effluent Analytical Results



A FULL SERVICE ENVIRONMENTAL LABORATORY

October 24, 2002

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

PROJECT:GRIFFIN IRM Submission #:R2213821

Dear Mr. Armstrong

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of ____ 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.



CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2213821

Lab ID	<u>Client ID</u>
586332	EFF-9-20-02

All samples were received in good condition.

All samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

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







Effective 6/18/2002

ORGANIC QUALIFIERS

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J. Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- X As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

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

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COLUMBIA ANALYTICAL SE CES

8

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

Date Sampled : 09/20/02 Date Received: 09/20/02 Subr	Order #: mission #:	586332 R2213821	Sample Mar Analytica	trix: 1 Run	WATER 83358
ANALYTE		PQL	RES	ULT	UNITS
DATE ANALYZED : 10/03/0 ANALYTICAL DILUTION: 2	02 2.00			1	
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
IBROMOCHLOROMETHANE		5.0	10	U	UG/L
,1-DICHLOROETHANE		5.0	10	U	UG/L
, 2-DICHLOROETHANE		5.0	10	U	UG/L
,1-DICHLOROETHENE		5.0	10	U	UG/L
CIS-1,2-DICHLOROETHENE		5.0	10	U	UG/L
RANS-1, 2-DICHLOROETHENE		5.0	10	U	UG/L
, 2 - DICHLOROPROPANE		5.0	10	U	UG/L
IS-1, 3-DICHLOROPROPENE		5.0	10	U	UG/L
RANS-1, 3-DICHLOROPROPENE		5.0	10	U	UG/L
THYLBENZENE		5.0	10	U	UG/L
-HEXANONE		10	20	U	UG/L
ETHYLENE CHLORIDE		5.0	10	U	UG/L
-METHYL-2-PENTANONE (MIBK)		10	20	U	UG/L
TYRENE		5.0	10	U	UG/L
, 1, 2, 2-TETRACHLOROETHANE		5.0	10	U	UG/L
ETRACHLOROETHENE		5.0	10	U	UG/L
COLUENE		5.0	10	U	UG/L
, 1, 1-TRICHLOROETHANE		5.0	10	U	UG/L
,1,2-TRICHLOROETHANE		5.0	10	U	UG/L
RICHLOROETHENE		5.0	250		UG/L
INYL CHLORIDE		5.0	10	U	UG/L
-XYLENE		5.0	10	U	UG/L
+P-XYLENE		5.0	10	U	UG/L
SURROGATE RECOVERIES	QC LIMI	ITS			
BROMOFLUOROBENZENE	(83 - 1	18 2)	02		8
OLUENE - D8	(91 _ 1	13 8)	105		0
	()1 - 1	13 0/	103		0

COLUMBIA ANALYTICAL SE CES

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

Date Sampled : Date Received:	Order # Submission #	: 590103 :	Sample Matrix: Analytical Run	WATER 83358
ANALYTE		PQL	RESULT	UNITS
DATE ANALYZED : 10/0	03/02	-		
ANALITICAL DILOTION:	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 (MIB)	()	10	10 0	UG/L
STYRENE		5.0	5.0 0	UG/L
1, A, 2, 2-TETRACHLOROETHANE		5.0	5.0 0	UG/L
TETRACHLOROETHENE		5.0	5.00	UG/L
IOLUENE		5.0	5.0 0	UG/L
1, 1, 1 - IKICHLOKOETHANE		5.0	5.0 11	UG/L
T, I, Z-IKICHLOKOETHANE		5.0	5.0 11	UG/L
VINVI CULORIDE		5.0	5.0 11	UG/L
- XVI.ENE		5.0	5.0 11	UG/L
M+P-XYLENE		5.0	5.0 U	UG/L
SURROGATE RECOVERIES	QC LI	MITS		
4-BROMOFLUOROBENZENE	(83 -	118 %)	95	÷
FOLUENE-D8	(91 -	113 %)	104	S
DIBROMOFLUOROMETHANE	(87 -	115 %)	96	æ

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Project Name Chiffin IRm					T	ANALYSIS REQUESTED (Include Method Number and Cardoline Party)															
oject Manager	Report CC	0			000	ANALISIS REQUESTED (Include Method Number and Container Preservative)															
mpany/Address	Carthey	ine Pa	ilko		PHE	SERVATIVE															
URS		-			S		1	11	1	8082	5 /	5/	2/2	Nii	1	1	2/	1	1	F	reservativ
634 St. Clait					AINEP		2	4	10	0/0	SLAN		HOH	0	Elow	mo	2/	/	/	1 2	HCL HNO3
Clevela 1 al	1.0		-		TNOC		0/00	1	×/00	1000	1200	NAL STAL	CTE S	1/2/2	0/0	2/2	/	/	11		H2SO4 NaOH
net addies in	FAX#				3 OF	04	25	2000	808	120/	120	AME -	LAR CO		DIS	55	1	/ /	1	67	MeOH NaHSO
CH6)622-2400	(216) (22-0	123		MBEF	188	20/5	20/2	D'S	NS S	NE/0	A's	ALS	100	100	5	/	/	/	8	Other _
	Sampler's Philip Na	ime			N	0000	8/0	PE/SO	2 ZZ	220	22	S/X	ME/19	MEL	100	/	/	/	/	RE	MARKS/
CLIENT SAMPLE ID	FOR OFFICE USE ONLY	SAMP	LING	MATRIX				1							-	1	1	(ALT	ERNATE	E DESCRIP
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							STAN	DARD	_			-	(LCS, DI	ls + QC UP, MS/	Summa MSD as	required	9	PO#			
						REQL	ESTED	FAX DAT	E				III. Resu	its + QC	and Ca	libration		BILL	ro:		
													IV Data	Validatio	n Deno	et with O	mu Data				
						REQL	ESTED	REPORT	DATE				V. Speice	alized Fo	orms / C	ustom F	anort	-	Da	2 1	200
MPLE RECEIPT: CONDITION/COOI	FR TEMP		CUS		C. V								Edata		Yes	N	lo	SUE	AISSION #:	-1	YL
RELINQUISHED BY	RECEIVED BY		REL	INQUISHED E	37 Y	N		RECEN	ED BY			-	RE	ELINQU	JISHED	BY	_	-		RECEIV	ED BY
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ratura Bob Fabran Station Protocol	igited Name	Sign	ature ted Name			Signat	ure I Name					Signatu	Nome					Signal	lure		
nature Bob Fabran Pr Hed Name Bob Fabian Pr Bob Fabian Fi	apature Hearther Chrising Arother Langon	Sign Print Firm	ted Name			Signal Printer Firm	ure J Name					Signatu Printed	Name					Signal	ture 1 Name		

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

Cooler	Chent	wyca			Submission Nur	nber <u>R2-138</u>	21
	received on	gho aby:	ne	_cot	URIER: CAS	UPS FEDEX	CD&L CLIENT
1. 2. 3. 4. 5. 5. 7.	Were custo Were custo Did all bottl Did any VC Were Ice or Where did t Temperature	dy seals on outside dy papers properly les arrive in good o A vials have sign Ice packs present he bottles originat e of cooler(s) upon	e of coo filled condition ificant t? e? n receip	oler? out (in on (un air but	uk, signed, etc.)? broken)? obles?	YES YES YES CASTR	NO NO NO NO NO NO NO NO OC, CLIENT
1	is the tempe	rature within 0° -	6° C?:		Yes Yes	Yes	Yes Yes
1	If No, Expl	ain Below		1	No No	No	No No
J	Date/Time 1	Cemperatures Take	en c	3/5	olor		6:40
	Thermomete	er ID: 161 or	OR GI	5ND	Reading From:	Temp Blank	or Sample Bottle
1			1				
			YES	NO	Sample I.D.	Reagent	Vol. Added
	pH	Reagent					
	12	NaOH					
	2	HNO	_				
		311103	1		-		
	2	H ₂ SO ₄					
Residual	2 Chlorine (+/-)	H ₂ SO ₄ for TCN & Phenol					
Residual	2 Chlorine (+/-) 5-9**	H ₂ SO ₄ for TCN & Phenol P/PCBs (608 only)					
Residual (ES = All If pH adj	2 Chlorine (+/-) 5-9** samples OK ustment is requ VOC (T	Hrvo3 H ₂ SO4 for TCN & Phenol P/PCBs (608 only) NO = Sam hired, use NaOH and/or C Vial pH Verification ested after Analysis) Following Samples Exhibited pH > 2	ples were H ₂ SO ₄	e preserv	ved at lab as listed	PC OK to adjust	
Residual (ES = All If pH adj	2 Chlorine (+/-) 5-9** samples OK ustment is required VOO (T	Hrvo3 H ₂ SO4 for TCN & Phenol P/PCBs (608 only) NO = Sam tired, use NaOH and/or C Vial pH Verification ested after Analysis) Following Samples Exhibited pH > 2	ples were H ₂ SO ₄	e preserv	ved at lab as listed	PC OK to adjust	pH

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A FULL SERVICE ENVIRONMENTAL LABORATORY

November 6, 2002

P尾保屋IIV7屋 NOV 1 2 2002

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

Una

PROJECT: GRIFFIN IRM Submission #:R2214222

Dear Mr. Armstrong

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

1an/6. As

Mark Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of _/ 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.



CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2214222

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

All samples were received in good condition.

ll samples were preserved in accordance with approved analytical methods.

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

I holding times and associated QC were within limits.

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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Effective 11/4/2002

ORGANIC QUALIFIERS

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- X As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated Delaware Accredited Connecticut ID # PH0556 Florida ID # E87674 Massachusetts ID # M-NY032 Navy Facilities Engineering Service Center Approved Nebraska Accredited

NELAP Accredited New York ID # 10145 New Jersey ID # NY004 New Hampshire ID # 294100 A/B Rhode Island ID # 158 South Carolina ID #91012 West Virginia ID # 292

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COLUMBIA ANALYTICAL SE CES

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

URS COL	rporatio	on		
Project	Refere	ID :	GRIFFIN	IRM
Client	Sample		EFF-10-	14-02

ANALYTE PQL RESULT UNIT DATE ANALYZED : 10/22/02 ANALYTICAL DILUTION: 2.00	Date Sampled : 10/14/02 12: Date Received: 10/14/02 Su	50 Order #	: 593115 : R2214222	Sample Ma Analytica	atrix: al Rur	WATER 84595
DATE ANALYZED : 10/22/02 ANALYTICAL DILUTION: 2.00 ACETONE BENZENE BROMODICHLOROMETHANE 20 40 U UG/L BROMODICHLOROMETHANE 5.0 10 U UG/L CARBON DISULFIDE 10 20 U UG/L CARBON TETRACHLORIDE 5.0 10 U UG/L CHLOROBENZENE 5.0	ANALYTE		PQL	RES	SULT	UNITS
ACETONE 20 40 U UG/L BENZENE 5.0 10 U UG/L BROMODICHLOROMETHANE 5.0 10 U UG/L BROMODFORM 5.0 10 U UG/L BROMOMETHANE 5.0 10 U UG/L CARDON DISULFIDE 10 20 U UG/L CARBON DISULFIDE 10 20 U UG/L CARBON DISULFIDE 10 20 U UG/L CARBON TETRACHLORIDE 5.0 10 U UG/L PHLOROBETHANE 5.0 10 U UG/L PLOCO	DATE ANALYZED : 10/22 ANALYTICAL DILUTION:	/02 2.00				
BENZENE 5.0 10 UG/L BROMODICHLOROMETHANE 5.0 10 U UG/L BROMODICHLOROMETHANE 5.0 10 U UG/L BROMOMETHANE 5.0 10 U UG/L BROMOMETHANE 5.0 10 U UG/L CARBON DISULFIDE 10 20 U UG/L CARBON TETRACHLORIDE 5.0 10 U UG/L CARDON TETRACHLORIDE 5.0 10 U UG/L CHLOROBENZENE 5.0 10 U UG/L CHLOROBETHANE 5.0 10 U UG/L CHLOROETHANE 5.0 10 U UG/L CHLOROETHANE 5.0 10 U UG/L 1, 2-DICHLOROETHANE 5.0 10 U UG/L 1, 2-DICHLOROETHENE 5.0 10 U UG/L 1, 2-DICHLOROETHENE 5.0 10 U UG/L 1, 2-TICHLOROPENPANE <td>ACETONE</td> <td></td> <td>20</td> <td>4.0</td> <td>TT</td> <td></td>	ACETONE		20	4.0	TT	
BROMODICHLOROMETHANE J.0 U.0 U.G/L BROMOFORM 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 CARBON TETRACHLORIDE 5.0 10 U UG/L CHLOROBENZENE 5.0 10 U UG/L CHLOROFTHANE 5.0 10 U UG/L CHLOROFTHANE 5.0 10 U UG/L CHLOROFTHANE 5.0 10 U UG/L CHLOROBENZENE 5.0 10 U UG/L CHLOROBENZENE 5.0 10 U UG/L CHLOROBENZENE 5.0 10 U UG/L CTS-1, 2-DICHLOROBENTHANE 5.0<	BENZENE		5 0	40		UG/L
BROMOFORM 5.0 10 UG/L BROMOMETHANE 5.0 10 U UG/L SROMOMETHANE 5.0 10 U UG/L CARBON DISULFIDE 10 20 U UG/L CARBON TETRACHLORIDE 10 20 U UG/L CARBON TETRACHLORIDE 5.0 10 U UG/L CARBON TETRACHLORIDE 5.0 10 U UG/L CARBON TETRACHLORIDE 5.0 10 U UG/L CARBON TETRACHLORIDE 5.0 10 U UG/L CARBON TETRACHLORIDE 5.0 10 U UG/L CHLOROBETHANE 5.0 10 U UG/L CHLOROBETHANE 5.0 10 U UG/L 1.1-DICHLOROETHANE 5.0 10 U UG/L .1-DICHLOROETHANE 5.0 10 U UG/L .1-S-1,2-DICHLOROETHENE 5.0 10 U UG/L .1S-1,2-DICHLOROETHENE 5.0 10	BROMODICHLOROMETHANE		5.0	10	TT	UG/L
BROMOMETHANE 5.0 10 0 00/1 2-BUTANONE (MEK) 10 20 0	BROMOFORM		5.0	10	TT	UG/L
2-BUTANONE (MEK) 10<	BROMOMETHANE		5.0	10	TT	UG/L
CARBON DISULFIDE 10 20 00 00/L CARBON TETRACHLORIDE 5.0 10 0 00/L CARBON TETRACHLORIDE 5.0 10 0 00/L CARDON DESNZENE 5.0 10 0 00/L CHLOROBENZENE 5.0 10 0 00/L CHLOROBETHANE 5.0 10 0 00/L 1, 1-DICHLOROBETHANE 5.0 10 0 00/L 1, 2-DICHLOROBETHENE 5.0 10 0 00/L TS1, 2-DICHLOROPENE 5.0 10 0 00/L TRANS-1, 2-DICHLOROPENPENE 5.0 10 0 00/L THYLBENZENE 5.0 10 0 00/L THYLBENZENE 5.0 10 0 00/L THYLENE CHLOROP	2-BUTANONE (MEK)		10	10	TT	UG/L
CARBON TETRACHLORIDE 10 10 UG/L CHLOROBENZENE 5.0 10 U UG/L CHLOROBENZENE 5.0 10 U UG/L CHLOROFORM 5.0 10 U UG/L CHLOROFORM 5.0 10 U UG/L CHLOROFORM 5.0 10 U UG/L CHLOROETHANE 5.0 10 U UG/L CHLOROETHANE 5.0 10 U UG/L 1, 1-DICHLOROETHANE 5.0 10 U UG/L 1, 2-DICHLOROETHENE 5.0 10 U UG/L 7RANS-1, 2-DICHLOROETHENE 5.0 10 U UG/L ., 2-DICHLOROPROPANE 5.0 10 U UG/L ., 2-DICHLOROPROPANE 5.0 10 U UG/L ., 2-DICHLOROPROPANE 5.0 10 U UG/L ., 2-DICHLOROPROPENE 5.0 10 U UG/L ., 1, 2-TRICHLOROPROPENE 5.0 10 U UG/L	CARBON DISULFIDE		10	20	TT	UG/L
CHLOROBENZENE 5.0 10 U UG/L CHLOROFTHANE 5.0 10 U UG/L CHLOROFORM 5.0 10 U UG/L CHLOROFORM 5.0 10 U UG/L CHLOROMETHANE 5.0 10 U UG/L (1, 2-DICHLOROETHANE 5.0 10 U UG/L (1, 2-DICHLOROETHENE 5.0 10 U UG/L (1, 2-DICHLOROETHENE 5.0 10 U UG/L (1, 2-DICHLOROPANE 5.0 10 U UG/L (1S1, 1, 3-DICHLOROPROPANE 5.0 10 U UG/L (1S1, 3-DICHLOROPROPENE 5.0 10 U UG/L (THYBENZENE 5.0 10 U UG/L -HE	CARBON TETRACHLORIDE		5 0	20	TT	UG/L
CHLOROETHANE 5.0 10 U UG/L CHLOROFORM 5.0 10 U UG/L CHLOROMETHANE 5.0 10 U UG/L CHLOROMETHANE 5.0 10 U UG/L CHLOROMETHANE 5.0 10 U UG/L CHLOROETHANE 5.0 10 U UG/L 1, 1-DICHLOROETHANE 5.0 10 U UG/L 1, 2-DICHLOROETHENE 5.0 10 U UG/L 1S-1, 2-DICHLOROETHENE 5.0 10 U UG/L RANS-1, 2-DICHLOROETHENE 5.0 10 U UG/L ., 2-DICHLOROPROPANE 5.0 10 U UG/L ., 2-DICHLOROPROPANE 5.0 10 U UG/L ., 2-DICHLOROPROPENE 5.0 10 U UG/L ., 2-DICHLOROPROPENE 5.0 10 U UG/L ., 2-TETRACHLOROPROPENE 5.0 10 U UG/L ., 1, 2, 2-TETRACHLOROPROPENE 5.0 10 U UG/L	CHLOROBENZENE		5.0	10	TT	UG/L
CHLOROFORM 5.0 10 U UG/L CHLOROMETHANE 5.0 10 U UG/L DIBROMOCHLOROMETHANE 5.0 10 U UG/L OIBROMOCHLOROMETHANE 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 2, 2-DICHLOROETHENE 5.0 10 U UG/L 7RANS-1, 2-DICHLOROETHENE 5.0 10 U UG/L 7.2-DICHLOROPROPENE 5.0 10 U UG/L 7.2-DICHLOROPROPENE 5.0 10 U UG/L 7.3-DICHLOROPROPENE 5.0 10 U UG/L THYLBENZENE 5.0 10 U UG/L -HEXANONE 10 20 U UG/L ETHYLENE CHLORIDE 5.0 10 U UG/L -METHYL-2-PENTANONE (MIBK) 10 20 U UG/L	CHLOROETHANE		5.0	10	U	UG/L
CHLOROMETHANE 5.0 10 0 UG/L DIBROMOCHLOROMETHANE 5.0 10 U UG/L 1, 1-DICHLOROMETHANE 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 CHLOROPOTHOROETHENE 5.0 10 U UG/L CHLOROPOPOPOPOPOPOPOPOPOPOPOPOPOPOPOPOPOPO	CHLOROFORM		5.0	10	TT	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-DICHLOROETHANE 5.0 10 U UG/L 1.1-DICHLOROETHENE 5.0 10 U UG/L 1.1-2-DICHLOROETHENE 5.0 10 U UG/L 1.1-2-DICHLOROETHENE 5.0 10 U UG/L 1.2-DICHLOROETHENE 5.0 10 U UG/L 1.2-DICHLOROFROPANE 5.0 10 U UG/L 1.3-DICHLOROPROPANE 5.0 10 U UG/L 1.3-DICHLOROPROPENE 5.0 10 U UG/L THYLBENZENE 5.0 10 U UG/L -HEXANONE 10 20 U UG/L -HEXANONE 10 20 U UG/L -HEXANONE 5.0 10 U UG/L -METHYL-2-PENTANONE (MIBK) 10 20 U UG/L 1,1	CHLOROMETHANE		5.0	10	TT	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 CIS-1,2-DICHLOROETHENE 5.0 10 U UG/L CRANS-1,2-DICHLOROETHENE 5.0 10 U UG/L .2-DICHLOROFROPANE 5.0 10 U UG/L .2-DICHLOROPROPANE 5.0 10 U UG/L .2-DICHLOROPROPANE 5.0 10 U UG/L .2-DICHLOROPROPANE 5.0 10 U UG/L .2-DICHLOROPROPENE 5.0 10 U UG/L .2-DICHLOROPROPENE 5.0 10 U UG/L .1741BENZENE 5.0 10 U UG/L .182ANONE 10 20 U UG/L .172.2-TETRACHLOROETHANE 5.0 10 U UG/L .1, 2.2-TETRACHLOROETHANE 5.0 10 U UG/L	DIBROMOCHLOROMETHANE		5.0	10	TT	UG/L
1, 2-DICHLOROETHANE 5.0 10 U UG/L 1, 1-DICHLOROETHENE 5.0 10 U UG/L CTS-1, 2-DICHLOROETHENE 5.0 10 U UG/L CRANS-1, 2-DICHLOROETHENE 5.0 10 U UG/L CRANS-1, 2-DICHLOROETHENE 5.0 10 U UG/L ., 2-DICHLOROPROPANE 5.0 10 U UG/L ., 2-DICHLOROPROPENE 5.0 10 U UG/L RANS-1, 3-DICHLOROPROPENE 5.0 10 U UG/L THYLBENZENE 5.0 10 U UG/L -HEXANONE 10 20 U UG/L ETHYLENE CHLORIDE 5.0 10 U UG/L -METHYL-2-PENTANONE (MIBK) 10 20 U UG/L .1, 2, 2-TETRACHLOROETHANE 5.0 10 U UG/L .1, 1-TRICHLOROETHANE 5.0 10 U UG/L .1, 1-TRICHLOROETHANE 5.0 10 U UG/L .1, 2-TRICHLOROETHANE 5.0 10 U	L, 1-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 CRANS-1,2-DICHLOROETHENE 5.0 10 U UG/L .2-DICHLOROPROPANE 5.0 10 U UG/L .2-DICHLOROPROPANE 5.0 10 U UG/L SIS-1, 3-DICHLOROPROPENE 5.0 10 U UG/L CRANS-1, 3-DICHLOROPROPENE 5.0 10 U UG/L CRANS-1, 3-DICHLOROPROPENE 5.0 10 U UG/L CRANS-1, 3-DICHLOROPROPENE 5.0 10 U UG/L CHYLENE 10 20 U UG/L CHYLENE 10 20 U UG/L -HEXANONE 10 20 U UG/L -METHYLENE CHLORIDE 5.0 10 U UG/L -METHYLENE CHLOROETHANE 5.0 10 U UG/L 1, 1, 2, 2-TETRACHLOROETHANE 5.0 10 U UG/L 1, 1, 2-TRICHLOROETHANE 5.0 <t< td=""><td>, 2-DICHLOROETHANE</td><td></td><td>5.0</td><td>10</td><td>U</td><td>UG/L</td></t<>	, 2-DICHLOROETHANE		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 .,2-DICHLOROPROPANE 5.0 10 U UG/L .,2-DICHLOROPROPANE 5.0 10 U UG/L .,2-DICHLOROPROPENE 5.0 10 U UG/L .,2-DICHLOROPROPENE 5.0 10 U UG/L TRANS-1,3-DICHLOROPROPENE 5.0 10 U UG/L TRANS-1,3-DICHLOROPROPENE 5.0 10 U UG/L THYLBENZENE 5.0 10 U UG/L -HEXANONE 10 20 U UG/L ETHYLENE CHLORIDE 5.0 10 U UG/L -METHYL-2-PENTANONE (MIBK) 10 20 U UG/L 1,1,2,2-TETRACHLOROETHANE 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 1,1,2-TRICHLOROETHANE 5.0 10 U	,1-DICHLOROETHENE		5.0	10	U	UG/L
TRANS - 1, 2 - DICHLOROETHENE 5.0 10 U UG/L ., 2 - DICHLOROPROPANE 5.0 10 U UG/L TIS - 1, 3 - DICHLOROPROPENE 5.0 10 U UG/L RANS - 1, 3 - DICHLOROPROPENE 5.0 10 U UG/L TRANS - 1, 3 - DICHLOROPROPENE 5.0 10 U UG/L TRANS - 1, 3 - DICHLOROPROPENE 5.0 10 U UG/L TANS - 1, 3 - DICHLOROPROPENE 5.0 10 U UG/L TANS - 1, 3 - DICHLOROPROPENE 5.0 10 U UG/L TYPENE 5.0 10 U UG/L -HEXANONE 10 20 U UG/L -METHYLE - 2 - PENTANONE (MIBK) 10 20 U UG/L TYRENE 5.0 10 U UG/L , 1, 2, 2 - TETRACHLOROETHANE 5.0 10 U UG/L OLUENE 5.0 10 U UG/L , 1, 1 - TRICHLOROETHANE 5.0 10 U UG/L , 1, 2 - TRICHLOROETHANE 5.0 </td <td>IS-1,2-DICHLOROETHENE</td> <td></td> <td>5.0</td> <td>10</td> <td>U</td> <td>UG/L</td>	IS-1,2-DICHLOROETHENE		5.0	10	U	UG/L
	RANS-1, 2-DICHLOROETHENE		5.0	10	TT	UG/L
TIS-1,3-DICHLOROPROPENE 5.0 10 U UG/L TRANS-1,3-DICHLOROPROPENE 5.0 10 U UG/L THYLBENZENE 5.0 10 U UG/L -HEXANONE 5.0 10 U UG/L ETHYLENE CHLORIDE 5.0 10 U UG/L -METHYL-2-PENTANONE (MIBK) 10 20 U UG/L TYRENE 5.0 10 U UG/L .1,2,2-TETRACHLOROETHANE 5.0 10 U UG/L .1,2,2-TRICHLOROETHANE 5.0 10 U UG/L .1,2-TRICHLOROETHANE 5.0 10 U UG/L .1,2-TRICHLOROETHANE 5.0 10 U UG/L .1,2-TRICHLOROETHANE 5.0 10 U UG/L .1,2-TRICHLOROETHENE 5.0 10 U	, 2-DICHLOROPROPANE		5.0	10	TT	UG/L
TANS-1,3-DICHLOROPROPENE 5.0 10 U UG/L THYLBENZENE 5.0 10 U UG/L -HEXANONE 10 20 U UG/L ETHYLENE CHLORIDE 10 20 U UG/L -METHYL-2-PENTANONE (MIBK) 10 20 U UG/L TYRENE 5.0 10 U UG/L ,1,2,2-TETRACHLOROETHANE 5.0 10 U UG/L ETRACHLOROETHENE 5.0 10 U UG/L OLUENE 5.0 10 U UG/L ,1,1-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHANE 5.0 270 UG/L NYL CHLORIDE 5.0 270 UG/L -XYLENE 5.0 10 U UG/L +P-XYLENE 5.0 10 U UG/L	IS-1, 3-DICHLOROPROPENE		5.0	10	U	UG/L
THYLBENZENE 5.0 10 U UG/L -HEXANONE 10 20 U UG/L ETHYLENE CHLORIDE 10 20 U UG/L -METHYL-2-PENTANONE (MIBK) 10 20 U UG/L TYRENE 5.0 10 U UG/L ,1,2,2-TETRACHLOROETHANE 5.0 10 U UG/L ETRACHLOROETHENE 5.0 10 U UG/L OLUENE 5.0 10 U UG/L ,1,1-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHENE 5.0 270 UG/L INYL CHLORIDE 5.0 10 U UG/L -XYLENE 5.0 10 U UG/L +P-XYLENE 5.0	RANS-1, 3-DICHLOROPROPENE		5.0	10	II	UG/L
-HEXANONE 10 0 0G/L ETHYLENE CHLORIDE 10 20 U UG/L -METHYL-2-PENTANONE (MIBK) 10 20 U UG/L TYRENE 10 20 U UG/L -METHYL-2-PENTANONE (MIBK) 10 20 U UG/L TYRENE 5.0 10 U UG/L ,1,2,2-TETRACHLOROETHANE 5.0 10 U UG/L STRACHLOROETHENE 5.0 10 U UG/L OLUENE 5.0 10 U UG/L ,1,1-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHANE 5.0 10 U UG/L RICHLOROETHENE 5.0 270 UG/L INYL CHLORIDE 5.0 10 U UG/L -XYLENE 5.0 10 U UG/L +P-XYLENE 5.0 10 U UG/L	THYLBENZENE		5.0	10	IT	UG/L
ETHYLENE CHLORIDE 10 20 0 0G/L -METHYL-2-PENTANONE (MIBK) 10 20 U UG/L TYRENE 10 20 U UG/L ,1,2,2-TETRACHLOROETHANE 5.0 10 U UG/L ,1,2,2-TETRACHLOROETHANE 5.0 10 U UG/L ctrachLoroethene 5.0 10 U UG/L oLUENE 5.0 10 U UG/L ,1,1-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHANE 5.0 10 U UG/L RICHLOROETHENE 5.0 270 UG/L INYL CHLORIDE 5.0 10 U UG/L -XYLENE 5.0 10 U UG/L	-HEXANONE		10	10	IT	UG/L
-METHYL-2-PENTANONE (MIBK) 10 20 U UG/L TYRENE 5.0 10 U UG/L ,1,2,2-TETRACHLOROETHANE 5.0 10 U UG/L ETRACHLOROETHENE 5.0 10 U UG/L OLUENE 5.0 10 U UG/L ,1,1-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHENE 5.0 10 U UG/L ,1YL CHLOROETHENE 5.0 270 UG/L INYL CHLORIDE 5.0 10 U UG/L -XYLENE 5.0 10 U UG/L	ETHYLENE CHLORIDE		5.0	20	U	UG/L
TYRENE 10 10 U UG/L ,1,2,2-TETRACHLOROETHANE 5.0 10 U UG/L ETRACHLOROETHENE 5.0 10 U UG/L OLUENE 5.0 10 U UG/L ,1,1-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHENE 5.0 10 U UG/L RICHLOROETHENE 5.0 10 U UG/L INYL CHLORIDE 5.0 10 U UG/L -XYLENE 5.0 10 U UG/L +P-XYLENE 5.0 10 U UG/L	-METHYL-2-PENTANONE (MIBK)		10	10	IT	UG/L
1, 2, 2 - TETRACHLOROETHANE 5.0 10 0 0G/L ETRACHLOROETHENE 5.0 10 0 UG/L OLUENE 5.0 10 0 UG/L , 1, 1 - TRICHLOROETHANE 5.0 10 0 UG/L , 1, 2 - TRICHLOROETHANE 5.0 10 0 UG/L , 1, 2 - TRICHLOROETHANE 5.0 10 0 UG/L , 1, 2 - TRICHLOROETHANE 5.0 10 0 UG/L , 1, 2 - TRICHLOROETHANE 5.0 10 0 UG/L RICHLOROETHENE 5.0 270 UG/L INYL CHLORIDE 5.0 10 U UG/L -XYLENE 5.0 10 U UG/L +P-XYLENE 5.0 10 U UG/L	TYRENE		5.0	20	TT	UG/L
ETRACHLOROETHENE 5.0 10 U UG/L OLUENE 5.0 10 U UG/L , 1, 1 - TRICHLOROETHANE 5.0 10 U UG/L , 1, 2 - TRICHLOROETHANE 5.0 10 U UG/L , 1, 2 - TRICHLOROETHANE 5.0 10 U UG/L RICHLOROETHENE 5.0 270 UG/L INYL CHLORIDE 5.0 10 U UG/L -XYLENE 5.0 10 U UG/L +P - XYLENE 5.0 10 U UG/L	, 1, 2, 2-TETRACHLOROETHANE		5.0	10	TT ·	UG/L
OLUENE 5.0 10 0 0G/L ,1,1-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHANE 5.0 10 U UG/L RICHLOROETHENE 5.0 10 U UG/L INYL CHLORIDE 5.0 270 UG/L -XYLENE 5.0 10 U UG/L +P-XYLENE 5.0 10 U UG/L	ETRACHLOROETHENE		5.0	10	TT	UG/L
,1,1-TRICHLOROETHANE 5.0 10 U UG/L ,1,2-TRICHLOROETHANE 5.0 10 U UG/L RICHLOROETHENE 5.0 270 UG/L INYL CHLORIDE 5.0 10 U UG/L -XYLENE 5.0 10 U UG/L +P-XYLENE 5.0 10 U UG/L	OLUENE		5.0	10	II	UG/L
,1,2-TRICHLOROETHANE 5.0 10 0 0G/L RICHLOROETHENE 5.0 10 U UG/L INYL CHLORIDE 5.0 270 UG/L -XYLENE 5.0 10 U UG/L +P-XYLENE 5.0 10 U UG/L	,1,1-TRICHLOROETHANE		5.0	10	IT	UG/L
RICHLOROETHENE 5.0 270 UG/L INYL CHLORIDE 5.0 10 U UG/L -XYLENE 5.0 10 U UG/L +P-XYLENE 5.0 10 U UG/L	,1,2-TRICHLOROETHANE		5.0	10	II	UG/L
INYL CHLORIDE 5.0 270 0G/L -XYLENE 5.0 10 U UG/L -P-XYLENE 5.0 10 U UG/L	RICHLOROETHENE		5.0	270	0	
-XYLENE 5.0 10 U UG/L +P-XYLENE 5.0 10 U UG/L	INYL CHLORIDE		5.0	270	TT	UG/L
+P-XYLENE 5.0 10 U UG/L	-XYLENE		5.0	10	TT	UG/L
	+P-XYLENE		5.0	10	TT	UG/L
			5.0	10	0	UG/L

4 - BROMOFLUOROBENZENE	(83 - 118 %)	103	රු	
TOLUENE - D8	(91 - 113 %)	105	ද	
IBROMOFLUOROMETHANE	(87 - 115 %)	103	ද	
	(0) 110 8/	. 103	8	

COLUMBIA ANALYTICAL SE CES

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

Date Sampled : Date Received:	Order Submission	#: 598576 #:	Sample Matrix: Analytical Run	WATER 84595
ANALYTE		PQL	RESULT	UNITS
DATE ANALYZED : ANALYTICAL DILUTION:	10/22/02 1.00			in that dit, or
ACETONE		20	20 11	UG/I.
BENZENE		5.0	50 11	UG/L
3ROMODICHLOROMETHANE		5.0	5.0 11	UG/L
BROMOFORM		5.0	5.0 11	UG/L
BROMOMETHANE		5.0	5.0 11	UG/L
2-BUTANONE (MEK)		10	10 11	UG/L
CARBON DISULFIDE		10	10 11	UG/L
CARBON TETRACHLORIDE		5.0	5.0 11	UG/L
CHLOROBENZENE		5.0	5.0 11	UG/L
CHLOROETHANE		5.0	5.0 11	UC/L
CHLOROFORM		5.0	5 0 11	UG/L
HLOROMETHANE		5.0	5.0 11	UG/L
IBROMOCHLOROMETHANE		5.0	5.0 11	UG/L
,1-DICHLOROETHANE		5.0	5.0 11	UG/L
,2-DICHLOROETHANE		5.0	5.0 U	UG/L
,1-DICHLOROETHENE		5.0	5.0 U	UG/L
CIS-1, 2-DICHLOROETHENI	8	5.0	5.0 U	UG/L
RANS-1, 2-DICHLOROETHI	ENE	5.0	5.0 U	UG/L
,2-DICHLOROPROPANE		5.0	5.0 U	UG/L
IS-1, 3-DICHLOROPROPEN	NE	5.0	5.0 U	UG/L
RANS-1, 3-DICHLOROPROP	PENE	5.0	5.0 U	UG/L
THYLBENZENE		5.0	5.0 U	UG/L
-HEXANONE	-11	10	10 U	UG/L
ETHYLENE CHLORIDE	and the second sec	5.0	5.0 U	UG/L
-METHYL-2-PENTANONE	(MIBK)	10	10 U	UG/L
1 2 2 mpmps and the	21.00	5.0	5.0 U	UG/L
FTPACHLOROETH	IANE	5.0	5.0 U	UG/L
OL LIENE		5.0	5.0 U	UG/L
1 1 TRICHTORODOR		5.0	5.0 U	UG/L
1 2 TRICHLOROETHANE		5.0	5.0 U	UG/L
PICHLOPOFTUENE		5.0	5.0 U	UG/L
TNVI. CULODIDE		5.0	5.0 U	UG/L
-XVI.ENE		5.0	5.0 U	UG/L
+P-XVI.ENE		5.0	5.0 U	UG/L
· · ATHENE		5.0	5.0 U	UG/L
SURROGATE RECOVERIES	QC LI	IMITS		
-BROMOFLUOROBENZENE	(83	- 118 %)	100	0.
DLUENE-D8	(91	- 113 21	105	6
BROMOFLUOROMETHANE	(87	115 81	105	*
	(0/ "	10 644		*



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Date/Time

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PROJECT NAME	Cr:CC	. 10			T			-							[DATE	10-1	14-0	2		PAGE	1	OF_	1
	Gritt	IM JR	m		-							A	NAL	YSI	S RE	QU	EST	ED						1
PROJECT MANAGER/C	CONTACT_	Ken Ar	mstrong								1.	le	Z	T	Τ	T		T	1			Inne		
COMPANY/ADDRESS	URS				0	95-1	5-2		5-3	A's	OA	H	ATIO	b		P						PRE	SERV	ATIC
634 St. Clai	34 St. Clair, Cleveland Ohio 44113							8	s a	Sa	Sod	s	EH.		B	0								1
TEL (216) 622-1	400	EAV (A	122		AIN	5	52	01/6	E Se	1021 TCL	227 TCL	ALS	CTI	1	OLV	da								
SAMPLER'S SIGNATUR	E Bol	- Fab	16) <u>622-01</u>	12.3	CONT	S VOA's	S SVOA	DA's		S LIST 6	S LIST 8	S O S	CHARA	S, TOTA	S, DISS ELOW)	o use	_		-					
SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY	SAMPLE	HOF	GC/M 826	GC/M	GC V	PESTI 808	TOT	TOT C	CLP	VASTE	IETAL IST B	ETAL:	c's 6.						< 2.0	> 12	-ie
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Signature Bob Fabian		Signature C	ine .	24 hr.		48 hr.	5 da	ay	1. R	outine R	eport										OAMPLE	REVEIP		
Printed Name URS		Printed Name	arching	Stand	ard (10-	15 worki	ing days)	2. H	arrative	ep. w/C	ASE		P.O. #:						Shipping	Via:			,
Firm 10-14-02	13:45	Firm CAS	es comp	Provid	le Verba	I Prelimi	nary Re	sults	3. El	PA Level	III Dacks			Bill To:					- 1	Shipping	#:		~	
Dater mile		Date/Time	0/14/00 1345	Provid	le FAX I	Prelimina	ry Resu	its .	4. N.	J. Redu	ced	ge							-1	iemperati	ure:			
HELINQUISHED BY		R	ECEIVED BY:	Requested	d Report	t Date		_	De	liverable	es Level	NV.							-			1117		_
Signature		Signature							6. Sit	le specif	ic QC.	rerables							1	lubmissic	In No:	171	·LL	-
Printed Name		Printed Name		SPECI	AL IN	STRU	CTION	IS/CC	MME	NTS:		-												
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Project/Client	with	9		_Submission Nu	mber	1422	2	
Cooler received of	m_ioliyle_ by	one		DURIER: CAS	UPS	FEDEX	CD&L	CLIEN
 Were cust Were cust Did all bo Did any V Were Ice Where did Temperate 	ody seals on outsi ody papers proper tiles arrive in good OA vials have sig or lce packs prese the bottles origina- ure of cooler(s) upo	de of ca ly fillea d condit mifican mt? ate? on rece	ooler? d out (i tion (u t air bu	ink, signed, etc.) nbroken)? ubbles?	?	YES YES YES CAS/RC	NO NO NO NO NO CLI	N/A ENT
Is the temp	perature within 0°	- 6° C?	•	(Yes) Yes		Yes	Yes	Yes
lf No, Exp	lain Below			No No		No	No	No
Date/Time	Temperatures Tak	ken:	101	14/07 . ++	131			110
f out of Tempera Cooler Breakdown	ture, Client App	roval to	o Run	Samplesby:	Temp]	Blank or	Sam	ple Bottle
f out of Tempera Cooler Breakdown Were all bo Did all bott Were correct Air Sample xplain any discrer	ture, Client Appr Date :	roval to / O/ le (i.e. a agree w for the bes Inta	o Run o Run i y / y analysi i th cus tests in act	Samples	rized	YES YES Tedlar® E	NO NO NO Bags Infla	anted N/
f out of Tempera Cooler Breakdown Were all bo Did all bott Were correct Air Sample xplain any discrep	ture, Client Appr Date : ttle labels complet le labels and tags a ct containers used : s: Cassettes / Tul ancies:	roval to /O/ le (i.e. a agree w for the bes Inta	o Run o Run iy// analysi ith cus tests in act	Samples	rized	VIES VES VES Tedlar® E	NO NO NO Bags Infla	aned N
f out of Tempera Cooler Breakdown Were all bo Did all bott Were correct Air Sample xplain any discrep	ture, Client Appr Date : ttle labels complet le labels and tags a ct containers used s: Cassettes / Tul ancies:	roval to /O/ le (i.e. a agree w for the bes Inta YES	o Run IIII cus ith cus tests in act	Samples	rized	VES YES Tedlar® E	NO NO NO Bags Infla Vol. A	aned N
f out of Tempera Cooler Breakdown Were all bo Did all bott Were correct Air Sample xplain any discrep pH	ture, Client Appr Date : ttle labels complet le labels and tags a ct containers used s: Cassettes / Tul ancies: Reagent NaOH	roval to /O/ le (i.e. a agree w for the bes Inta YES	o Run o Run iy// analysi ith cus tests in act NO	Samples	rized	VIES VES VES Tedlar® E	NO NO Bags Infla	aned N
f out of Tempera Cooler Breakdown Were all bo Did all bott Were correct Air Sample xplain any discrep pH 12 2	ture, Client Appr Date : ttle labels complet le labels and tags a ct containers used s: Cassettes / Tul ancies: Reagent NBOH HNO3	roval to /O/ le (i.e. a agree w for the bes Inta YES	o Run o Run iy// analysi ith cus tests in act NO	Samples	rized	VIES VES Tedlar® H	NO NO Bags Infla	aned N
f out of Tempera Cooler Breakdown Were all bo Did all bott Were correct Air Sample xplain any discrep pH 12 2 2	ture, Client Appr : Date : ttle labels complet le labels and tags a ct containers used : :: Cassettes / Tul ancies: Reagent NaOH HNO ₃ H ₂ SO ₄	roval to Proval to P	o Run iy// analysi ith cus tests in act NO	Samplesby: by:	rized	VIES VES Tedlar® E	NO NO Bags Infla	anted N/
f out of Tempera Cooler Breakdown Were all bo Did all bott Were correct Air Sample xplain any discrep pH 12 2 2 2 Residual Chlorine (+/-)	ture, Client Appr : Date : ttle labels complet le labels and tags a ct containers used : :: Cassettes / Tul ancies: Reagent NaOH HNO ₃ H ₂ SO ₄ for TCN & Phenol	roval to Proval to P	o Run iy// analysi ith cus tests in act NO	Samplesby: s, preservation, estody papers? indicated? Canisters Pressu Sample 1.D.	rized	VIES VIES VIES Tedlar® E	NO NO Bags Infla	anted N/
f out of Tempera Cooler Breakdown Were all bo Did all bott Were correct Air Sample xplain any discrep pH 12 2 2 lesidual Chlorine (+/-) 5-9**	ture, Client Appr : Date : ttle labels complet le labels and tags a ct containers used : :: Cassettes / Tul ancies: Reagent NaOH HNO ₃ H ₂ SO ₄ for TCN & Phenol P/PCBs (608 only)	roval to Proval to P	o Run IIIII analysi ith cus tests in act	Samples	rized	VIES VIES VIES Tedlar® E	NO NO Bags Infla	anted N/
If out of Temperal Cooler Breakdown Were all bo Did all bott Were correa Air Sample xplain any discrep pH 12 2 kesidual Chlorine (+/-) 5-9** S = All samples OK f pH adjustment is require	ture, Client Appr ture, Client	roval to roval to //// // // // // // // // //	o Run o Run iy// analysi ith cus tests in act NO	Samples	rized	Blank or YES YES Tedlar® E gent	NO NO Bags Infla	ated N/



A FULL SERVICE ENVIRONMENTAL LABORATORY

December 11, 2002

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



PROJECT: GRIFFIN IRM Submission #:R2214621

Dear Mr. Armstrong

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Marth. UND

Mark Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of _____ 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.



CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2214621

> Lab ID 600805

Client ID EFF-11-11-02

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

all samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

o 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.



APPENDIX J PROJECT MANAGER REPORT REVIEW CHECKLIST

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

Project Manager:

Date of Report Review_






Effective 11/4/2002

ORGANIC QUALIFIERS

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- X As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

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

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COLUMBIA ANALYTICAL SER CES

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

Date Sampled : 11/11/02 Ord Date Received: 11/11/02 Submissi	ler #: 600805 .on #: R2214621	Sample Matrix: Analytical Run	WATER 85344
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/21/02			
ANALYTICAL DILUTION: 2.00			
ACETONE	20	40 11	
BENZENE	5.0	40 0	
BROMODICHLOROMETHANE	5.0	10 1	
BROMOFORM	5.0	10 0	UG/L
BROMOMETHANE	5.0	10 11	UG/L
2-BUTANONE (MEK)	10	20 11	UG/L
CARBON DISULFIDE	10	20 0	UG/L
CARBON TETRACHLORIDE	5 0	10 11	UG/L
CHLOROBENZENE	5.0	10 11	UG/L
CHLOROETHANE	5.0	10 0	UG/L
CHLOROFORM	5.0	10 1	UG/L
CHLOROMETHANE	5.0	10 0	UG/L
DIBROMOCHLOROMETHANE	5.0	10 11	
,1-DICHLOROETHANE	5.0	10 11	
,2-DICHLOROETHANE	5.0	10 11	
,1-DICHLOROETHENE	5.0	10 11	
CIS-1,2-DICHLOROETHENE	5.0	10 11	
RANS-1,2-DICHLOROETHENE	5.0	10 11	UG/L
,2-DICHLOROPROPANE	5.0	10 11	
CIS-1, 3-DICHLOROPROPENE	5.0	10 11	UG/L
RANS-1, 3-DICHLOROPROPENE	5.0	10 11	UG/L
THYLBENZENE	5.0	10 11	UC/L
-HEXANONE	10	20 11	
ETHYLENE CHLORIDE	5.0	10 11	UG/L
-METHYL-2-PENTANONE (MIBK)	10	20 11	UG/L
TYRENE	5.0	10 U	UG/L
,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/L
ETRACHLOROETHENE	5.0	10 U	UG/L
OLUENE	5.0	10 U	UG/L
,1,1-TRICHLOROETHANE	5.0	10 U	UG/L
,1,2-TRICHLOROETHANE	5.0	10 U	UG/L
RICHLOROETHENE	5.0	230	UG/L
INYL CHLORIDE	5.0	10 U	UG/L
-XYLENE	5.0	10 U	UG/L
+P-XYLENE	5.0	10 U	UG/L
SURROGATE RECOVERIES QC	LIMITS		
-BROMOFLUOROBENZENE (83	- 118 %)	106	9
OLUENE-D8 (0)	- 113 21	105	2
IBROMOFLUOROMETHANE	- 115 9)	100	0

COLUMBIA ANALYTICAL SEF CES

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

Date Sampled : Date Received: S	Order Submission	#: 603854 #:	Sample Matrix: Analytical Run	WATER 85344
ANALYTE		PQL	RESULT	UNITS
DATE ANALYZED : 11/2	21/02			
ANALYTICAL DILUTION:	1.00			
CERONE		20	20 U	UG/L
ACETONE		5.0	5.0 U	UG/L
BENZENE BENZENE		5.0	5.0 U	UG/L
BROMODICHLOROMEIHANE		5.0	5.0 U	UG/L
BROMOFORM		5.0	5.0 U	UG/L
BROMOMEINANE (MEK)		10	10 U	UG/L
CARRON DIGHLEIDE		10	10 U	UG/L
CARDON TETRACULOFIDE		5.0	5.0 U	UG/L
CHROON IEIRACHUORIDE		5.0	5.0 U	UG/L
CHLOROBENZENE		5.0	5.0 U	UG/L
CHLOROEITANE		5.0	5.0 U	UG/L
CHLOROFORM		5.0	5.0 U	UG/L
DIBROMOCULOROMETHANE		5.0	5.0 U	UG/L
1 1 DICULOPOETHANE		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 (MIB)	K)	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 0	UG/L
M+P-XYLENE		5.0	5.0 0	OG/T
SURROGATE RECOVERIES	QC I	JIMITS		
A-DROMOFILIORODENIZENE	(83	- 118 %)	105	8
4-BRUMUFLUURUBENZENE	(91	- 113 %)	99	8
DIDDOMOET HODOMETHANE	(87	- 115 %)	102	8

Another 1 Mustard St., Suite 250, Rochester, NY 14609-6925 (716) 200-5380 • FAX (716) 208-6475 An Employee-Owned Company

CHAIN OF	CUST	QDY/LABORATORY	ANALYSIS		TÍNRA
	-	DATE	11-11-02	PAGE	LOF
		DAIL		PAGE	UF 1

	riffin	IRN	n									A	NAL	YSIS	RE	QUE	STE	D						:	
PROJECT MANAGER/C		ien Ar	mstrong								s	d/F	ION.			4	T	T	Т	T	T	Ţ	PRES	ERVA	TIO
COMPANY/ADDRESS 634 St. C TEL (26) 622-24 SAMPLER'S SIGNATUR	URS Lair, (too E_Br	Hevela FAX 12	d, Ohio 116, 622-24	<u>4411 3</u> 64	CONTAINERS	S VOA's 0 0 624 095-1	S SVOA's 0 0 625 0 95-2	DA's 1	ICIDES/PCB's	S LIST 8021 VOA's	S LIST 8270 SVOA	A'S D SVOA'S D F	E CHARACTERIZAT ct Corros. D Ic	S, TOTAL BELOW)	S, DISSOLVED SELOW)	by USEPA-CL	-						0		
SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY	SAMPLE	# OF	GC/M 2826	GC/M	30 802	D 808	TOT	TOT	10LP	VASTI	AETAI LIST I	AETAI LIST B	905							1 < 2.	1 > 12	ther
EFF-11-11-02	11-11-02	10:50	LAD I.D.	WATER	3									20	V D	×			+	+	+	+	ā	ā	ð
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RELINQUISHED E Ball Falvar Signature Bal Fabian Printed Name URS Firm 11-11-02- Date/Time RELINQUISHED E	8Y: _//-35 BY:	Signature Printed Nam Firm 11-1 Date/Time	RECEIVED BY:	TURNA 24 h 28 h	AROUN Ir Idard (11 ride Verl ride FA)	ID REQ 48 hr. 0-15 wor bal Prelimin (Prelimin ort Date	UIREM 5 c king day ninary R nany Res	ENTS day rs) lesuits suits	REF	PORT F Routine Routine Narrative EPA Lev Validatat V.J. Rec Deliveral	REQUIR Report Rep. w/r el III ble Pack luced bles Lev	REMEN CASE age rel IV	ITS	P.O. #: Bill To:		E INFO	PRMATIC	ON:	SI SI Te	hipping 1 hipping 1 imperati	SAMP				
Signature		Signature							6. 9	Site spe	cific QC.	Inverable	95				-		- 30	Unissic	on ryp: -	1		00	<u>'</u>
Printed Name Firm Date/Time		Printed Nam Firm	0	SPEC	LS	NSTR	UCTIC	DNS/C	OMME	ENTS:															
RELINQUISHED E	IY:	Date/ nine	RECEIVED BY:	ORG	ANICS	6: 0	TCL		2	AEC	Dnly		N Only		Specia	List									
Signature Prime Name		Signature Printed Nam	8																						-
Date/Time		Date/Time																							

	1105				P7 14621		
Project/Client	UD			Submission Number	Na-17091	•	
Cooler received on	11-11-02 by:	Ke	_C01	JRIER: CAS UP	S FEDEX	CD&L	CLIENT
 Were custo Were custo Did all bott Did any VC Were Ice on Where did Temperature 	bdy seals on outside ody papers properly les arrive in good of OA vials have signing r lee packs present the bottles originate re of cooler(s) upor	e of coo filled o conditio ificant a t? e? n receip	oler? out (in on (un air bul	uk, signed, etc.)? broken)? bbles?	YES YES YES CAS/RC	NO NO NO CLI	N/A ENT
Is the temp	erature within 0° -	6° C?:	(Yes Yes	Yes	Yes	Yes
If No. Expl	lain Below			No No	No	No	No
Date/Time	Temperatures Take	en.	11-11	-07 @_ 11:3	5	110	110
T		TO	T			2	
	- 11-1	2-02			ATE .		•
Cooler Breakdown: 1. Were all bot 2. Did all bott 3. Were correct 4. Air Samples Explain any discrep	Date : tile labels complete le labels and tags ag t containers used f s: Cassettes / Tub pancies:	2-02 e (i.e. an gree with for the the bes Intac	nalysi: th cus ests in ct	by: s, preservation, etc.)? tody papers? dicated? Canisters Pressurized	TES TES TES Tedlar®	NO NO NO Bags Infi	lated N/
Cooler Breakdown: 1. Were all bot 2. Did all bottl 3. Were correct 4. Air Samples Explain any discrep	Date : tile labels complete le labels and tags af ct containers used f s: Cassettes / Tub pancies:	e (i.e. ar gree with for the to bes Intac	nalysis th cus ests in ct	by:	Tedlar®	NO NO Bags Inf	lated N/
Cooler Breakdown: 1. Were all bot 2. Did all bottl 3. Were correct 4. Air Samples Explain any discrep	Date :	2-02 e (i.e. av gree with for the to bes Intac	nalysis th cus ests in ct	by:	Tedlar® Resgent	NO NO Bags Inf	lated N/
Cooler Breakdown: 1. Were all bot 2. Did all bottl 3. Were correct 4. Air Samples Explain any discrep pH 12	Date :	gree without the solution of t	nalysis th cus ests in ct NO	by: s, preservation, etc.)? tody papers? dicated? Canisters Pressurized Sample 1.D.	ME TES TES Tedlar® Resgent	NO NO Bags Infl	lated N/
Cooler Breakdown: 1. Were all bo 2. Did all bottl 3. Were correct 4. Air Samples Explain any discrep pH 12 2	E Date :	2-02 e (i.e. au gree without the the for the the s Intace YES	nalysis th cus ests in ct NO	by:	TES TES Tedlar® Reagent	NO NO Bags Infl	lated N/
Cooler Breakdown: 1. Were all bo 2. Did all bottl 3. Were correct 4. Air Samples Explain any discrep pH 12 2 2	E Date :	2-02 e (i.e. au gree without the the for the the bes Intac	nalysis th cus ests in ct NO	by:	TES TES Tedlar® Resgent	NO NO Bags Infl	lated N/A
Cooler Breakdown: 1. Were all bo 2. Did all bottl 3. Were correct 4. Air Samples Explain any discrep pH 12 2 2 Residual Chlorine (+/-)	E Date :	2-02 e (i.e. au gree without the the for the the bes Intac	nalysis th cus ests in ct NO	by:	TES TES Tedlar® Resgent	NO NO Bags Infl	lated N/A
Cooler Breakdown: 1. Were all bo 2. Did all bottl 3. Were correct 4. Air Samples Explain any discrep pH 12 2 Residual Chlorine (+/-) 5-9**	E Date :	2-02 e (i.e. au gree with for the to bes Intace YES	nalysis th cus ests in ct	by:	Reagent	NO NO Bags Infl	lated N/A
Cooler Breakdown: 1. Were all bo 2. Did all bottl 3. Were correct 4. Air Samples Explain any discrep pH 12 2 Residual Chlorine (+/-) 5-9** 7ES = All samples OK	Date :	yes were	nalysis th cus ests in ct NO	by:	ME TES TES Tedlar® Resgent	NO NO Bags Infl Vol.	lated N/
Cooler Breakdown: 1. Were all bo 2. Did all bottl 3. Were correct 4. Air Samples Explain any discrep pH 12 2 Residual Chlorine (+/-) 5-9** /ES = All samples OK *)If pH adjustment is req VC	E Date :	2-02 e (i.e. ar gree without the solution of the the bes Intace YES VES ples were the solution ples were the solution the	nalysis th cus ests in ct NO	by:	ME TES Tedlar® Resgent PC OK to adjust	NO NO Bags Infl Vol.	lated N/A

P:\QAQC\QA_DOCUM\SOP\DRAFT\Attachments\Cooler Receipt And Preservation Check Form.doc



A FULL SERVICE ENVIRONMENTAL LABORATORY

January 17, 2003

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

PROJECT:GRIFFIN IRM Submission #:R2215114

Dear Mr. Armstrong

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark/Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of _____ 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.



CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2215114

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

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

All samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

o 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.







Effective 11/4/2002

ORGANIC QUALIFIERS

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- X As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated Delaware Accredited Connecticut ID # PH0556 Florida ID # E87674 Massachusetts ID # M-NY032 Navy Facilities Engineering Service Center Approved Nebraska Accredited

NELAP Accredited New York ID # 10145 New Jersey ID # NY004 New Hampshire ID # 294100 A/B Rhode Island ID # 158 South Carolina ID #91012 West Virginia ID # 292

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COLUMBIA ANALYTICAL SEI CES

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

URS COI	poratio	on		
Project	Refere	ence		GRIFFIN IRM
Client	Sample	ID	:	EFF-12-19-02

.

Date Sampled : 12/19/02 Date Received: 12/19/02 Subr	Order #: 610197 mission #: R2215114	Sample Matrix: Analytical Run	WATER 1 86948
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/31/0	02		
ANALYTICAL DILUTION:	2.00		
ACETONE	20	40 11	UC/L
BENZENE	5.0	10 11	
BROMODICHLOROMETHANE	5.0	10 11	
BROMOFORM	5.0	10 11	
BROMOMETHANE	5.0	10 11	
2-BUTANONE (MEK)	10	20 11	
CARBON DISULFIDE	10	20 0	
CARBON TETRACHLORIDE	10	20 0	UG/L
CHLOROBENZENE	5.0	10 0	UG/L
CHLOROETHANE	5.0	10 0	UG/L
CHLOROFORM	5.0		UG/L
CHLOROMETHANE	5.0	10 0	UG/L
DIBROMOCHLOROMETUANE	5.0	10 0	UG/L
1 1-DICHLOPOETUANE	5.0	10 0	UG/L
1 2-DICHLOROFTHANE	5.0	10 U	UG/L
1 1-DICHLOROFTHANE	5.0	10 U	UG/L
CIG 1 2 DIGULODODDUDUD	5.0	10 U	UG/L
TRANG 1 2 DICHLOROETHENE	5.0	10 U	UG/L
IRANS-I, 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, 2-TRICHLOROETHANE	5.0	10 U	UG/L
TRICHLOROETHENE	5.0	260	UG/L
VINYL CHLORIDE	5.0	10 11	UG/L
D-XYLENE	5.0	10 11	UG/L
I+P-XYLENE	5.0	10 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(83 - 118 %)	98	*
OLUENE-D8	(91 - 113 %)	96	8
IBROMOFLUOROMETHANE	(87 - 115 %)	98	*
		20	0

COLUMBIA ANALYTICAL SEI CES

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

Project Reference: Client Sample ID : METHOD BLANK

Date Sampled : Date Received: Submit	Order #: 615079 ssion #:	Sample Matrix: Analytical Run	WATER 86948
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/31/02 ANALYTICAL DILUTION: 1.0	00		
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
CARBON TETRACULORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOPOFTHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
	5.0	5.0 U	UG/L
DIPROMOCULOROMETURNE	5.0	5.0 U	UG/L
1 2 DICHLOROMETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1, 4-DICHLOROBENZENE	5.0	5.0 U	UG/L
1 DICHLOROBENZENE	5.0	5.0 U	UG/L
1 2 DICHLOROETHANE	5.0	5.0 U	UG/L
1, 2-DICHLOROETHANE	5.0	5.0 U	UG/L
L, I-DICHLOROETHENE	5.0	5.0 U	UG/L
RANS-1, 2-DICHLOROETHENE	5.0	5.0 U	UG/L
1, 2-DICHLOROPROPANE	5.0	5.0 U	UG/L
IS-1, 3-DICHLOROPROPENE	5.0	5.0 U	UG/L
RANS-1, 3-DICHLOROPROPENE	5.0	5.0 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
, 1, 2, 2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
ETRACHLOROETHENE	5.0	5.0 U	UG/L
, 1, 1-TRICHLOROETHANE	5.0	5.0 U	UG/L
L, 1, 2-TRICHLOROETHANE	5.0	5.0 U	
RICHLOROETHENE	5.0	5.0 U	
INYL CHLORIDE	5.0	5.0 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
-BROMOFLUOROBENZENE	(83 - 118 %)	100	0
OLUENE-D8	(91 - 113 %)	100	0
IBROMOFLUOROMETHANE	(87 - 115 %)	98	90

An Employee Owned Company	Griff.		0		Т			-							1	DATE	12	-19-0	02	PAGE_	1.	0P
	51111	N H	im		1	-	-	-				A	NAL	YSI	S R	EQUI	ESTE	D				5
COMPANY/ADDRESS	634	St. Cl	air		St	1 95-1	95-2		95-3	OA's	VOA's	d/hD	IZATION			47			Τ		PRE	SERVAT
TEL (216) _622- SAMPLER'S SIGNATUR	2400 IE Br	FAX (2)	-16)		ONTAINER	VOA's	SVOA's	Vs 0 601/602	DES/PCB's	LIST 8021 V	LIST 8270 S	METALS	HARACTER	TOTAL OW)	DISSOLVEI	USEPA-						
SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ON	SAMPLE	OF C	C/MS 8260	C/MS 8270	C VOA 8021	ESTICI 8081	TOTAI	TOTAL	VOA's	ASTE C React	ST BEI	TALS, ST BEI	5 63					2.0	12
EFF-12-19-02	12-19-02	14:35	LAB I.D.	MATRIX	* 2	00	00	00	20	<u>ა</u> –	2 S	Po	\$ū	E.M	A M	Se					Hq	~ Hq
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RELINQUISHED E Bob Falman Signature Bob Fabia Printed Name URS Firm 12-19-02 15	NY:	Signature Printed Name Firm D. IP	AECEWED BY: M. LOOK LOOK		ROUNI lard (10-	D REQU 48 hr. 15 worki al Prelimi	IREME 5 da ing days) nary Res	y	REP(1. Ro 2. Ro 2. Ro 3. EF	DRT RI Dutine R Dutine R Arrative PA Level	eport ep. w/C/	EMEN	rs	P.O. #: Bill To:	INVOIC	E INFO	RMATION	N:	Shipping	SAMPLE Via:	RECEIP	r:
RELINQUISHED B	Y:	Date/Time	RECEIVED BY:	Provid	de FAX I d Repor	Prelimina t Date	ny Resul	ts	4. N. De 5. NY	J. Redu liverable ASP/C	ced s Level LP Deliv	ge IV verables	-						Temperat	ure:	SH	¥
Printed Name		Signature Printed Name Firm		SPECI	AL IN	STRU	CTION	IS/CO	_ 6. Sit	e specif NTS:	ic QC.		1						5			1
BELINOUSHED B	·····	Date/Time	EOEN/ED DY		S	(¹¹)	01 0	1														
Printed Name		H Signature Printed Name	ECEIVED BY:		NICS:			JPPL		AE On	ily [BN	Only		pecial	List						
im		Firm																				

Project/Client_	Wee	f		Submission Numb	per 15/14	-	
Cooler received	on 12/19/02 by:	Kin	<u>r</u> co	URIER: CAS	UPS FEDEX	CD&L	CLIEN
1.Were cu2.Were cu3.Did all 14.Did any5.Were 16.Where do7.Temperation	stody seals on outsid stody papers proper pottles arrive in good VOA vials have sig or Ice packs prese id the bottles origina ature of cooler(s) upo	de of co ly filler l condit nifican nt? ate? on rece	ooler? d out (i tion (u t air bu ipt:	nk, signed, etc.)? nbroken)? ubbles?	YES YES YES YES CAS/RC	NO NO NO NO CLI	N/A ENT
Is the ter	nperature within 0°	- 6° C?	:	Yes Yes	Yes	Yes	Ves
If No, E	xplain Below			No No	No	No	No
Date/Tin	ne Temperatures Tak	ten: 1	2/10	102 152	30)	140	INO
f out of Tempe Cooler Breakdow Were all Did all bo	vn: Date : 6 bottle labels complet ttle labels and tags a	roval to 20 te (i.e. a agree w	o Run or analysi	s, preservation, etc.	13:2)? TES	NO	
f out of Tempe Cooler Breakdow Were all Did all bo Were con Air Samp xplain any discr	vn: Date : bottle labels complete ttle labels and tags a rect containers used les: Cassettes / Tul epancies:	te (i.e. a agree w for the bes Inta	analysi tests in act	Samplesby: s, preservation, etc. stody papers? ndicated? Canisters Pressuriz	MES)? YES YES ed Tedlar® 1	NO NO NO Bags Infla	ated N
f out of Tempe Cooler Breakdow Were all Did all bo Were con Air Samp xplain any discr	rature, Client Appr m: Date : bottle labels complete ottle labels and tags a rect containers used les: Cassettes / Tul epancies:	roval to 201 te (i.e. a agree w for the bes Inta	o Run or analysi rith cus tests in act	Samplesby: s, preservation, etc. stody papers? ndicated? Canisters Pressuriza	Present Reagent	NO NO NO Bags Infla	
f out of Tempe Cooler Breakdow Were all Did all bo Were con Air Samp xplain any discr	rature, Client Approversion of the second se	roval to 20/ te (i.e. a agree w for the bes Inta	o Run or analysi rith cus tests in act NO	Samplesby: s, preservation, etc. stody papers? ndicated? Canisters Pressuriza Sample I.D.	P P P P P P P P P P P P P P	NO NO Bags Infla Vol. A	ated N
f out of Tempe Cooler Breakdow Were all Did all bo Were cor Air Samp xplain any discr pH 12	rature, Client Approversion vn: Date : bottle labels complete bottle labels and tags a rect containers used les: Cassettes / Tule epancies: Reagent NaOH	roval to 20/ te (i.e. a agree w for the bes Inta YES	o Run or analysi rith cus tests in act NO	Samplesby: s, preservation, etc. stody papers? ndicated? Canisters Pressurize Sample I.D.	VES ed Tedlar® (NO NO Bags Infla Vol. A	ated N
f out of Tempe Cooler Breakdow Were all Did all bo Were cor Air Samp xplain any discr pH 12 2	rature, Client Approversion vn: Date : bottle labels complete bottle labels and tags a rect containers used les: Cassettes / Tule epancies: Reagent NaOH HNO3	roval to 200 te (i.e. a agree w for the bes Inta YES	o Run or analysi rith cus tests in act NO	Samplesby: s, preservation, etc. stody papers? ndicated? Canisters Pressurize Sample I.D.	Presed Tedlar® (NO NO Bags Infla Vol. A	ated N
f out of Tempe Cooler Breakdov Were all Did all bo Were con Air Samp xplain any discr pH 12 2 2	rature, Client Approximation vn: Date : bottle labels complete bottle labels and tags a rect containers used les: Cassettes / Tul epancies: Reagent NaOH HNO3 H ₂ SO ₄	YES	o Run or Run analysi rith cus tests in act NO	Samplesby:s, preservation, etc. stody papers? ndicated? Canisters Pressurizz	Prese Pres Pres Pres Reagent	NO NO Bags Infla Vol. A	ated N
f out of Tempe Cooler Breakdov Were all Did all bo Were con Air Samp xplain any discr pH 12 2 2 2	rature, Client Approximation vn: Date : bottle labels complete bottle labels and tags a rect containers used les: Cassettes / Tule epancies: Reagent NaOH HNO3 H ₂ SO4 /-) for TCN & Phenol	YES	o Run or Run analysi rith cus tests in act NO	Samplesby:s, preservation, etc. stody papers? ndicated? Canisters Pressuriz	No Contraction of the second s	NO NO Bags Infla Vol. A	ated N
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f out of Tempe Cooler Breakdov Were all Did all bo Were cor Air Samp xplain any discr pH 12 2 esidual Chlorine (+ 5-9** S = All samples Of f pH adjustment is r	rature, Client Appr m: Date :	roval to 220/ te (i.e. a agree w for the bes Inta YES Ples were H ₂ SO ₄	o Run o Run analysi ith cus tests in act NO preserv	Samples	PC OK to adjust pH	NO NO Bags Infla Vol. A	

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A FULL SERVICE ENVIRONMENTAL LABORATORY

February 14, 2003

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



URS

PROJECT:GRIFFIN IRM Submission #:R2315436

Dear Mr. Armstrong

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

al int

Mark Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of ____ 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.



C

CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2315436

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

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

All samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

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







Effective 11/4/2002

ORGANIC QUALIFIERS

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- X As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated Delaware Accredited Connecticut ID # PH0556 Florida ID # E87674 Massachusetts ID # M-NY032 Navy Facilities Engineering Service Center Approved Nebraska Accredited

NELAP Accredited New York ID # 10145 New Jersey ID # NY004 New Hampshire ID # 294100 A/B Rhode Island ID # 158 South Carolina ID #91012 West Virginia ID # 292

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COLUMBIA ANALYTICAL SER(ES

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

Date Sampled : 01/20/03 Date Received: 01/20/03 St	Ordoubmissio	er #: 615 on #: R23	632 15436	Sample Matrix: Analytical Run	WATER 87732
ANALYTE			PQL	RESULT	UNITS
DATE ANALYZED : 01/2: ANALYTICAL DILUTION:	3/03 2.00				
ACETONE			20	40 11	
BENZENE			5.0	10 11	UG/L
BROMODICHLOROMETHANE			5.0	10 0	UG/L
BROMOFORM			5.0	10 11	UG/L
BROMOMETHANE			5.0	10 11	UG/L
2-BUTANONE (MEK)			10	20 11	UG/L
CARBON DISULFIDE			10	20 11	
CARBON TETRACHLORIDE			5.0	10 11	UG/L
CHLOROBENZENE			5.0	10 11	
CHLOROETHANE			5.0	10 11	UG/L
CHLOROFORM			5.0	10 11	UG/L
CHLOROMETHANE			5.0	10 11	UG/L
DIBROMOCHLOROMETHANE			5.0	10 1	UG/L
1,1-DICHLOROETHANE			5.0	10 0	UG/L
1,2-DICHLOROETHANE			5.0	10 0	UG/L
1,1-DICHLOROETHENE			5.0	10 1	UG/L
CIS-1,2-DICHLOROETHENE			5.0	10 0	UG/L
TRANS-1,2-DICHLOROETHENE			5.0	10 11	UG/L
L, 2-DICHLOROPROPANE			5.0	10 11	UG/L
CIS-1,3-DICHLOROPROPENE			5.0	10 11	UG/L
TRANS-1, 3-DICHLOROPROPENE			5.0	10 0	UG/L
THYLBENZENE			5.0	10 11	UG/L
2-HEXANONE			10	20 11	UG/L
ETHYLENE CHLORIDE			5.0	10 11	
4-METHYL-2-PENTANONE (MIBK)			10	20 11	
STYRENE			5.0	10 11	UG/L
1,1,2,2-TETRACHLOROETHANE			5.0	10 11	UG/L
TETRACHLOROETHENE			5.0	10 11	
TOLUENE			5.0	10 11	UG/L
,1,1-TRICHLOROETHANE			5.0	10 11	UG/I
,1,2-TRICHLOROETHANE			5.0	10 11	UG/L
RICHLOROETHENE			5.0	240	
INYL CHLORIDE			5.0	10 11	UG/L
-XYLENE			5.0	10 11	
I+P-XYLENE			5.0	10 U	UG/L
SURROGATE RECOVERIES	QC	LIMITS			3.1
-BROMOFLUOROBENZENE	(83	- 118 %)	101	8
OLUENE-D8	(91	- 113 %)	102	9
IBROMOFLUOROMETHANE	197	115 %		102	D

COLUMBIA ANALYTICAL SER

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

Date Sampled : Date Received:	Order #: Submission #:	619764	Sample Matrix: Analytical Run	WATER 87732
ANALYTE		PQL	RESULT	UNITS
DATE ANALYZED : 01/ ANALYTICAL DILUTION:	23/03 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 0	UG/L
CHLOROMETHANE		5.0	5.0 0	UG/L
DIBROMOCHLOROMETHANE		5.0	5.0 0	UG/L
1, 1-DICHLOROETHANE		5.0	5.0 0	UG/L
1, 2-DICHLOROETHANE		5.0	5.0 0	UG/L
CIG 1 2 DIGULODORTURNE		5.0	5.0 0	UG/L
TRANG 1 2 DICHLOROETHENE		5.0	5.0 0	UG/L
2 DICHLOROPPODANE		5.0	5.0 0	UG/L
TS-1 2-DICHLOROPROPANE		5.0	5.0 0	UG/L
PANG-1 3-DICHLOROPROPENE		5.0	5.0 0	UG/L
TUVIDENZENE		5.0	5.0 0	UG/L
- HEYANONE		5.0	5.0 0	UG/L
ETHYLENE CHLOPIDE		5.0		UG/L
A-METHYL-2-DENTANONE (MIRI	(2)	10	10 11	UG/L
STYRENE		5.0	5 0 11	UG/L
1,1,2,2-TETRACHLOROETHANE		5.0	5.0 11	UG/L
TETRACHLOROETHENE		5.0	5.0 11	UG/L
OLUENE		5.0	5.0 U	UG/L
.1.1-TRICHLOROETHANE		5.0	5.0 U	UG/L
,1,2-TRICHLOROETHANE		5.0	5.0 U	UG/L
RICHLOROETHENE		5.0	5.0 U	UG/L
INYL CHLORIDE		5.0	5.0 U	UG/L
-XYLENE		5.0	5.0 U	UG/L
1+P-XYLENE		5.0	5.0 U	UG/L
SURROGATE RECOVERIES	QC LIMIT	rs		
-BROMOFLUOROBENZENE	(83 - 11	.8 %)	101	8
OLUENE-D8	(91 - 11	.3 %)	103	8
IBROMOFLUOROMETHANE	(87 - 11	5 %)	103	*

Griffin IRm	Project Number	120	v n n n n					AN	N YSIS	REOU	ERTER	Analy	-			-				-	
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Cleveland Obio 44413					TNOC		0	00/	000	20/00	10/20	ALP	STE S	3/2		0/5	5/	/	/	34	3. H2SO4 4. NaOH
	FAX#				OF	1/5	38/2	52	ES 10	8/50	151	ME	40	TOT Le	DISS	0	1	1	/ /	5	5. Zn. Acetate 5. MeOH
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							5	TANDAF	40 III		o cary		II. Resu (LCS, D	Its + QC	Summar MSD as i	ies required	1)	PO#			
							REQUEST	ED FAX	DATE				III. Resu	lts + QC	and Cal	ibration		BILL	ro:		
													Summa	nes				-			
QAPP						1	REQUEST	ED REP(ORT DAT			-	V Spain	valuatio	mepon	with PA	aw Data	H	0		6471
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Distribution: White - Return to Originator; Yellow - Las Copy; Pink - Retained by Client

Cooler received on_	1/20/03 by	HOP	COU	RIER: CAS U	UPS FEDEX	CD&L	CLIENT	
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Is the tempe	rature within 0° - 6	5° C?:	(Yes Yes	Yes	Yes	Yes	
If No, Expla	in Below	• •]	No No	No	No	No	
Date/Time T	emperatures Take	n:	1/2	doz 1530				
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f out of Temperat	Date : tle labels complete tabels and tags ag t containers used for Cassettes / Tub	21/15 (i.e. an gree without the these lines	Run S nalysis th cus ests in	Samplesby: s, preservation, et tody papers? dicated? Canisters Pressur	c.)? YES YES YES	NO NO NO R Bass In	flated	
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f out of Temperat Cooler Breakdown: Were all bot Did all bottle Were correc Air Samples Explain any discrep	Date :	yes	Run S nalysis th cus ests in ct NO	Samplesby: by: by: by: s, preservation, et tody papers? dicated? Canisters Pressur Sample I.D.	c.)? YES YES YES ized Tedla Reagent	NO NO NO r® Bags In Vo	flated N	
f out of Temperat	Date : Date : tle labels complete e labels and tags ag t containers used fi : Cassettes / Tub ancies: Reagent NaOH	yes	Run S nalysis th cus ests in ct NO	Samplesby: by:by: s, preservation, et tody papers? dicated? Canisters Pressur Sample I.D.	c.)? YES YES ized Tedla Reagent	NO NO NO r® Bags In Vo	flated N	
f out of Temperat Cooler Breakdown: Were all both Did all both Were correct Air Samples Explain any discrep pH 12 2	Date : Date : tle labels complete e labels and tags ag t containers used fi : Cassettes / Tub ancies: Reagent NaOH HNO ₃	yes	Run S nalysis th cus ests in ct NO	Samplesby: by:by: s, preservation, et tody papers? dicated? Canisters Pressur Sample I.D.	c.)? YES YES ized Tedla Reagent	NO NO NO r® Bags In Vo	flated N	
f out of Temperat Cooler Breakdown: Were all both Did all both Were correct Air Samples Explain any discrep pH 12 2 2 Residual Chlorine (+/-)	Date : Date : tle labels complete e labels and tags ag t containers used fi : Cassettes / Tub ancies: Reagent NaOH HNO ₃ H ₂ SO ₄ for TCN & Phenol	yes	Run S nalysis th cus ests in ct	Samplesby: by:by: s, preservation, et tody papers? dicated? Canisters Pressur Sample I.D.	c.)? YES YES ized Tedla Reagent	NO NO NO r® Bags In Vo	flated N	
f out of Temperat Cooler Breakdown: Were all both Did all both Were correct Air Samples Explain any discrep pH 12 2 2 Residual Chlorine (+/-)	ure, Client Appro Date :	yES	Run S nalysis th cus ests in ct	Samplesby: by:by: s, preservation, et tody papers? dicated? Canisters Pressur Sample I.D.	c.)? YES YES ized Tedla Reagent	NO NO NO r® Bags In Vo	flated N	
f out of Temperat Cooler Breakdown: Were all bot Did all both Were correct Air Samples Explain any discrep pH 12 2 Residual Chlorine (+/-) 5-9** (ES = All samples OK	ure, Client Appro Date : // tle labels complete e labels and tags age t containers used fills Cassettes / Tub ancies: Reagent NaOH HNO3 H ₂ SO4 for TCN & Phenol P/PCBs (608 only) NO = Sam	yes wer	Run S nalysis th cus ests in ct NO	Samplesby: _	c.)? YES YES ized Tedla Reagent PC OK to ad	NO NO NO r® Bags In Vo	flated N.	
f out of Temperat Cooler Breakdown: Were all bot Did all both Were correct Air Samples Explain any discrep pH 12 2 Residual Chlorine (+/-) 5-9** (ES = All samples OK *If pH adjustment is rect V(ure, Client Appro Date : // tle labels complete e labels and tags age t containers used fills Cassettes / Tub ancies: Reagent NaOH HNO3 H2SO4 for TCN & Phenol P/PCBs (608 only) NO = Samured, use NaOH and/o OC Vial pH Verification Following Samples Exhibited pH > 2	yes ples wer r H ₂ SO ₄	Run S nalysis th cus ests in ct NO	Samplesby:	c.)? YES YES ized Tedla Reagent PC OK to ad	NO NO NO r® Bags In Vo	flated N.	

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Other Comments:



A FULL SERVICE ENVIRONMENTAL LABORATORY

March 3, 2003

URS

HAP. U / 2003

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

PROJECT: GRIFFIN IRM Submission #:R2315707

Dear Mr. Armstrong

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

all its

Mark Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of Y 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. <u>Muchael Fran</u>



CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2315707

Lab ID	<u>Client ID</u>
619875	EFF-2-12-03

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

All samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

To 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.







Effective 11/4/2002

ORGANIC QUALIFIERS

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- X As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated Delaware Accredited Connecticut ID # PH0556 Florida ID # E87674 Massachusetts ID # M-NY032 Navy Facilities Engineering Service Center Approved Nebraska Accredited

NELAP Accredited New York ID # 10145 New Jersey ID # NY004 New Hampshire ID # 294100 A/B Rhode Island ID # 158 South Carolina ID #91012 West Virginia ID # 292

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COLUMBIA ANALYTICAL SEI CES

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

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

Date Sampled : 02/12/03 Date Received: 02/12/03 Sub	Order #: 619875 mission #: R2315707	Sample Matrix: Analytical Run	WATER 88097
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 02/21/	/03		
ANALYTICAL DILUTION:	2.00		
ACETONE	20	40 U	UG/L
BENZENE	5.0	10 U	UG/L
BROMODICHLOROMETHANE	5.0	10 U	UG/L
BROMOFORM	5.0	10 U	UG/L
BROMOMETHANE	5.0	10 U	UG/L
2-BUTANONE (MEK)	10	20 U	UG/L
CARBON DISULFIDE	10	20 U	UG/L
CARBON TETRACHLORIDE	5.0	10 U	UG/L
CHLOROBENZENE	5.0	10 U	UG/L
CHLOROETHANE	5.0	10 U	UG/L
CHLOROFORM	5.0	10 U	UG/L
CHLOROMETHANE	5.0	10 U	UG/L
DIBROMOCHLOROMETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHANE	5.0	10 U	UG/L
1,2-DICHLOROETHANE	5.0	10 U	UG/L
1,1-DICHLOROETHENE	5.0	10 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/L
TRANS-1, 2-DICHLOROETHENE	5.0	10 U	UG/L
1,2-DICHLOROPROPANE	5.0	10 U	UG/L
CIS-1, 3-DICHLOROPROPENE	5.0	10 U	UG/L
TRANS-1, 3-DICHLOROPROPENE	5.0	10 U	UG/L
ETHYLBENZENE	5.0	10 0	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 0	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	10 0	UG/L
TETRACHLOROETHENE	5.0	10 0	
TOLUENE	5.0	10 0	UG/L
1,1,1-TRICHLOROETHANE	5.0		UG/L
T, T, Z-TRICHLOROETHANE	5.0	10 0	UG/L
TRICHLOROETHENE	5.0	240	UG/L
O XVI ENE	5.0	10 0	
M+P-XYLENE	5.0	10 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(83 - 118 %)	102	8
TOLUENE-D8	(91 - 113 %)	106	8
DIBROMOFLUOROMETHANE	(87 - 115 %)	95	90

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS METHOD: 8260B TCL

ABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 622553	ANALYT	ICAL RUN # :	88097
ANALYTE	TRUE VALUE	* RECOVERY	QC LIMITS
ATE ANALYZED : 02/21/03 NALYTICAL DILUTION: 1.0	1.000	1.25	
ACETONE BENZENE BROMODICHLOROMETHANE BROMOFORM BROMOMETHANE 2-BUTANONE (MEK) CARBON DISULFIDE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROBENZENE CHLOROFORM CHLOROMETHANE DIBROMOCHLOROMETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,2-DICHLOROETHANE CIS-1,2-DICHLOROETHENE TRANS-1,2-DICHLOROETHENE I,2-DICHLOROPROPANE CIS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE TRANS-1,3-DICHLOROPROPENE THYLBENZENE	$\begin{array}{c} 20.0\\$	94 96 99 97 118 90 106 89 97 96 98 97 96 98 97 99 101 93 91 99 92 100 106 103 96	50 - 150 70 - 130 70 - 130 70 - 130 50 - 150 50 - 150 50 - 150 70 - 130 70 -
2-HEXANONE METHYLENE CHLORIDE A-METHYL-2-PENTANONE (MIBK) STYRENE 1,1,2,2-TETRACHLOROETHANE TETRACHLOROETHENE OLUENE 1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE CRICHLOROETHENE VINYL CHLORIDE O-XYLENE A+P-XYLENE	20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	92 97 97 100 100 91 97 87 100 91 97 96 97	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$

COLUMBIA ANALYTICAL SEI CES

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

Project	t Refere	ence	: 6		
Client	Sample	ID	:	METHOD	BLANK
Contract of the local division of the local					

Date Sampled : Date Received:	Order #: Submission #:	622552	Sample Ma Analytica	atrix: al Run	WATER 88097
ANALYTE		PQL	RES	ULT	UNITS
DATE ANALYZED :	02/21/03	0			
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	II	UG/L
CHLOROBENZENE		5.0	5.0	U	UG/L
CHLOROETHANE		5.0	5.0	IT	UC/L
CHLOROFORM		5.0	5.0	TT	
CHLOROMETHANE		5.0	5.0	TT	
DIBROMOCHLOROMETHANE		5.0	5.0	TT	
1,1-DICHLOROETHANE		5.0	5.0	TT	
1,2-DICHLOROETHANE		5.0	5.0	TT	
1,1-DICHLOROETHENE		5.0	5.0	TT	UG/L
CIS-1, 2-DICHLOROETHENE		5.0	5.0	TT	
TRANS-1, 2-DICHLOROETHEN	IE .	5.0	5.0	TT	
1,2-DICHLOROPROPANE		5.0	5.0	TT	
CIS-1, 3-DICHLOROPROPENE		5.0	5.0	TT	
TRANS-1, 3-DICHLOROPROPE	NE	5.0	5.0	TT	UG/L
ETHYLBENZENE		5.0	5.0	TT	
2-HEXANONE		10	5.0	U	UG/L
METHYLENE CHLORIDE		5.0	10	U	UG/L
4-METHYL-2-PENTANONE (M	ITBK)	10	5.0	U	UG/L
STYRENE		5 0	10	U	UG/L
1,1,2,2-TETRACHLOROETHA	NE	5.0	5.0	U	UG/L
TETRACHLOROETHENE		5.0	5.0	U	
COLUENE		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
RICHLOROETHENE		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
I+P-XYLENE		5.0	5.0	U	
SURROGATE RECOVERIES	OC LIMIT	5	0.10		00/1
-BROMOFLUOROBENZENE	(83 - 11	8 8)	99		8
ULUENE-D8	(91 - 11)	3 8)	104		0.
	1		T 0 T		5

Griffin IRN		Project Number	13807	1291	0.000	Γ			ANALY	SIS RE	QUES	TED (Inclue	le Mat	hod N	umbo	and	Contal			
Project Manager	1	Report CC	10001	216.10	00000	PRE	SERVATIV	E	T	1		(-	T				and	lontai	ner Pro	servative)
Company/Address		Cather	ine re	elko		-			-		0.1										
UKS						RS		/ /	/ /	1	808	. /	S.K	2/2	Noi	_/	1	S	1	1	Preservative
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Cleveland	Ohin	44	,3			CON	1 /0.	0/0	0/00	2/00	200	222	20	E LO	3/7	000	200	S.	/	/ /	3. H ₂ SO ₄ 4. NaOH
hone # /2 !! \	F	TTI	12			3 OF	100	100	000	Sec.	150	50	AN CINE	A B	101	DIS	1 m	3 /	1	1	5. Zn. Aceta 6. MeOH 7. NeHSO
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		ampreis Frinteo Nan	18			NU	00000	800	PES 0	STA	DIZ C	22	O/SEA	NET OF	MET	1	8	/	/	/	REMARKS/
CLIENT SAMPLE ID	FOR OFFI	CE USE ONLY		PLING	MATDIN			1	1					1	1-2		1	1		ALTER	INATE DESCRIPTIN
EFF-2-12-03	1.0	See 35	9-12-03	13:4	MATRIX	2												-			
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							-	24 hr	48) hr	5 da	iy		II. Resul	ts + QC	Summa	ries		PO#		
							REQU	SIAN	DARD					III Resu	Its + 00	and Co	libration))	BILLT	0:	
														Summar	ies		noracion.		-		
							REQU	ESTED	REPORT	DATE				IV. Data	Validatio	n Repor	t with Ra	aw Data			
														V. Speica	alized Fo	orms / Cu	ustom R	eport			
RELINQUISHED BY	DLER TEMP:	CEIVED BY		CUST	TODY SEAL	S: Y	N							Edata		Yes _	No	0	SUBM	SSIGN 5-	707
Bob Falia	The second se	CEIVED BY		RELI	NQUISHED B	Y			RECEIV	ED BY				RE	LINQU	ISHED	BY			RE	CEIVED BY
Beb Fabian	Signature	2.	Sign	ature			Signat	ure					Signatu	re					Circuit		
New Marme RS	Printed Name	e xarego) Print	ted Name			Printed	I Name				-+	Printed	Name					Drinted	Name	
2-12-03 14:40	Firm	Covering	Firm	1			Firm					-	Firm						Firm	PRELIMINE	
	212																		rum		

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

Project/Client	UKS	· · ·			IDET_U	19-10	101.	
Cooler received on	2/12/03 by	HOR	CO	URIER: CAS	UPS	FEDEX	CD&L	CLIEN
 Were custo Were custo Did all bott Did any V(Were Ice o 	dy seals on outside dy papers properly les arrive in good DA vials have sign r Ice packs presen	e of co filled conditi ificant t?	oler? out (in on (un air bul	nk, signed, etc.)? Ibroken)? bbles?		YES YES YES	NO NO NO NO NO	N⁄A
6. Where did f 7. Temperatur	the bottles originat e of cooler(s) upor	e? n receip	pt:	5		CAS/RC	96, CLI	INT
Is the temp	erature within 0° -	6° C?:		Yes Yes		Yes	Yes	Yes
If No, Expl	ain Below			No No		No	No	No
Date/Time	Femperatures Tak	en:	2/12	103 1440				
tout of Tempera	ure, Chent Appr	oval to	Run	Samples				-
Cooler Breakdown: Were all both Did all both Were correct	Date : $2 - 1 = 3$ ttle labels complete e labels and tags a et containers used f	b = 03 c (i.e. a gree w.	malysi ith cus tests ir	by:	c.)?	CTES YES YES	NO NO NO	
Cooler Breakdown: Were all bo Did all bottl Were correct Air Samples Explain any discrep	Date : Date : ttle labels complete e labels and tags a et containers used f s: Cassettes / Tub ancies:	oval to - 0 - 2 c (i.e. a gree w for the bes Inta	malysi ith cus tests in ict	by:	c.)? (ized	YES YES Tedlar®	NO NO NO Bags Infla	uted N
Cooler Breakdown: Were all bo Did all bottl Were correct Air Samples Explain any discrep	Date : Date : ttle labels complete e labels and tags a et containers used f s: Cassettes / Tub ancies:	oval to -03 c (i.e. a gree w for the bes Inta	malysi ith cus tests in ict	by:	c.)? ((ized	YES YES Tedlar®	NO NO Bags Infla Vol. A	added
Cooler Breakdown: Were all bo Did all bottl Were correct Air Samples Explain any discrep	Date : Date : ttle labels complete e labels and tags a et containers used f s: Cassettes / Tub ancies: Reagent	oval to - 0] e (i.e. a gree w. for the bes Inta YES	malysi ith cus tests in ct	by:	c.)? ((ized Rea	YES YES Tedlar®	NO NO Bags Infla Vol. A	ated N
Cooler Breakdown: Were all both Did all both Were correct Air Samples Explain any discrep pH 12	Date : 2-12 Date : 2-12 ttle labels complete e labels and tags a et containers used f s: Cassettes / Tub ancies: Reagent NaOH	yES	malysi ith cus tests in ict	samplesby: s, preservation, eta tody papers? adicated? Canisters Pressuri Sample I.D.	c.)? ((ized	YES YES Tedlar®	NO NO Bags Infla	tted N
Cooler Breakdown: Were all bo Did all bottl Were correct Air Samples Explain any discrep pH 12 2	Date : 2-12 Date : 2-12 ttle labels complete e labels and tags a et containers used f s: Cassettes / Tub ancies: Reagent NaOH HNO3 HNO3	oval to - 0] e (<i>i.e.</i> a gree w for the bes Inta YES	malysi ith cus tests in ict	samplesby:_by:	c.)? ((ized	YES YES Tedlar®	NO NO Bags Infla	nted N
Cooler Breakdown: Were all bo Did all bottl Were correct Air Samples Explain any discrep pH 12 2 2	Date : 2-12 Date : 2-12 ttle labels complete e labels and tags a et containers used fis: Cassettes / Tub ancies:	YES	nalysi ith cus tests in ict	samplesby: s, preservation, et tody papers? adicated? Canisters Pressuri Sample I.D.	c.)? ((ized Rea	YES YES Tedlar®	NO NO Bags Infla	added
Cooler Breakdown: Were all bo Did all bottl Were correct Air Samples Explain any discrep pH 12 2 2 Residual Chlorine (+/-)	Reagent NaOH HNO3 H2SO4	YES	nalysi ith cus tests in ct	samplesby: s, preservation, et adicated? Canisters Pressuri Sample I.D.	c.)? ((ized	YES YES Tedlar®	NO NO Bags Infla	ated N
Cooler Breakdown: . Were all bo . Did all bottl . Were correct . Air Samples Explain any discrep pH 12 2 Residual Chlorine (+/-) 5-9**	Reagent NaOH HNO3 H2SO4 for TCN & Phenol P/PCBs (608 only)	YES	nalysi ith cus tests in ct	by:	c.)? ((ized	YES YES Tedlar®	NO NO Bags Infla	added
Cooler Breakdown: Were all bo Did all both Were correct Air Samples Explain any discrep pH 12 2 Residual Chlorine (+/-) 5-9** ES = All samples OK *If pH adjustment is req VC	Reagent NaOH HNO3 H2SO4 for TCN & Phenol P/PCBs (608 only) NO = Samured, use NaOH and/or OC Vial pH Verification Tested after Analysis) Following Samples Exhibited pH > 2	YES ples wern H ₂ SO ₄	e preser	samplesby:by:	c.)? ((ized Rea	YES YES Tedlar®	NO NO Bags Infla	added
Cooler Breakdown: . Were all bo 2. Did all both 3. Were correct 4. Air Samples Explain any discrep pH 12 2 2 Residual Chlorine (+/-) 5-9** TES = All samples OK *If pH adjustment is reco VC	Reagent NaOH HNO3 H2SO4 for TCN & Phenol P/PCBs (608 only) NO = Samured, use NaOH and/or OC Vial pH Verification Tested after Analysis) Following Samples Exhibited pH > 2	val to -03 c (i.e. a gree w for the bes Inta YES ples wer H ₂ SO ₄	e preser	samplesby:_by:	c.)? ((ized Rea	YES YES Tedlar®	NO NO Bags Infla	ated Added

P:\QAQC\QA_DOCUM\SOP\DRAFT\Attachments\Cooler Receipt And Preservation Check Form.doc

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A FULL SERVICE ENVIRONMENTAL LABORATORY

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APR - 3 2003

URS

March 31, 2003

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

PROJECT: GRIFFIN IRM Submission #:R2316058

Dear Mr. Armstrong

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

all

Mark/Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of _____ 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 Diractor to comply with NELAC standards prior to report submittal. Muchaelt lesson



CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2316058

Lab ID	<u>Client ID</u>
625948	EFF-3-14-03

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

All samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

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







Effective 11/4/2002

ORGANIC QUALIFIERS

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- X As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

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

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COLUMBIA ANALYTICAL SE ICES

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

Date Sampled : 03/14/03 Date Received: 03/14/03 Sub	Order	#: 625948 #: R2316058	Sample Matr: Analytical	ix: WATER Run 88723
ANALYTE		PQL	RESUL	T UNITS
DATE ANALYZED : 03/18/	03			
ANALYTICAL DILUTION:	2.00			
CETONE		20	40 U	UG/L
ACE I ONE		5.0	10 U	UG/L
POMODICHLOROMETHANE		5.0	10 U	UG/L
ADMOEDRM		5.0	10 U	UG/L
POMOMETHANE		5.0	10 U	UG/L
- BITANONE (MEK)		10	20 U	UG/L
ADDON DISHLETDE		10	20 U	UG/L
ARBON TETRACHLORIDE		5.0	10 U	UG/L
THLOROBENZENE		5.0	10 U	UG/L
THLOROETHANE		5.0	10 U	UG/L
THLOROFORM		5.0	10 U	UG/L
HLOROMETHANE		5.0	10 U	UG/L
IBROMOCHLOROMETHANE		5.0	10 U	UG/L
1-DICHLOROETHANE		5.0	10 U	UG/L
.2-DICHLOROETHANE		5.0	10 U	UG/L
,1-DICHLOROETHENE		5.0	10 U	UG/L
IS-1,2-DICHLOROETHENE		5.0	10 U	UG/L
RANS-1,2-DICHLOROETHENE		5.0	10 U	UG/L
,2-DICHLOROPROPANE		5.0	10 U	UG/L
IS-1, 3-DICHLOROPROPENE		5.0	10 0	UG/L
TRANS-1, 3-DICHLOROPROPENE		5.0	10 0	UG/L
THYLBENZENE		5.0	10 0	
-HEXANONE		10	20 0	
AETHYLENE CHLORIDE		5.0	10 0	
-METHYL-2-PENTANONE (MIBK)		10	20 0	
STYRENE		5.0	10 0	
1,1,2,2-TETRACHLOROETHANE		5.0	10 0	
TETRACHLOROETHENE		5.0	10 0	
TOLUENE		5.0	10 1	UG/L
1, 1, 1-TRICHLOROETHANE		5.0	10 1	UG/L
L, I, Z-TRICHLOKOETHANE		5.0	210	UG/L
INVI CHIORDE		5.0	10 1	UG/L
VINID CHLORIDE		5.0	10 1	UG/L
1+P-XYLENE		5.0	10 0	J UG/L
SURROGATE RECOVERIES	QC 1	LIMITS		
-BROMOFLUOROBENZENE	(83	- 118 %)	104	8
COLUENE-D8	(91	- 113 %)	106	Ŷ
TBROMOFLUOROMETHANE	(87	- 115 %)	101	of o

CLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS METHOD: 8260B TCL

BORATORY CONTROL SAMPLE SUMMARY 88723 ANALYTICAL RUN # : **REFERENCE ORDER #:** 626697 OC LIMITS % RECOVERY TRUE VALUE ANALYTE : 03/18/03 TE ANALYZED 1.0 JALYTICAL DILUTION: 50 - 15090 20.0 CETONE 70 - 13098 20.0 BENZENE 70 - 13095 20.0 BROMODICHLOROMETHANE 70 - 13098 20.0 BROMOFORM 50 - 150104 20.0 BROMOMETHANE 50 - 150 98 20.0 -BUTANONE (MEK) 95 70 - 13020.0 CARBON DISULFIDE 70 - 13097 20.0 ARBON TETRACHLORIDE 70 - 13020.0 96 CHLOROBENZENE 70 - 13092 20.0 CHLOROETHANE 70 - 13096 20.0 CHLOROFORM 70 - 13097 20.0 CHLOROMETHANE 70 - 13091 20.0 DIBROMOCHLOROMETHANE 70 - 13097 20.0 1,1-DICHLOROETHANE 70 - 13082 20.0 1,2-DICHLOROETHANE 70 - 130105 20.0 1,1-DICHLOROETHENE 98 70 - 13020.0 CIS-1, 2-DICHLOROETHENE 70 - 13095 20.0 **TRANS-1,2-DICHLOROETHENE** 70 - 13092 20.0 , 2-DICHLOROPROPANE 70 - 13099 20.0 CIS-1, 3-DICHLOROPROPENE 70 - 13095 20.0 TRANS-1, 3-DICHLOROPROPENE 70 - 130104 20.0 ETHYLBENZENE 70 - 130100 20.0 2-HEXANONE 70 - 13096 20.0 METHYLENE CHLORIDE 70 - 130101 20.0 4-METHYL-2-PENTANONE (MIBK) 70 - 13020.0 101 STYRENE 70 - 13097 20.0 1,1,2,2-TETRACHLOROETHANE 70 - 130105 20.0 **TETRACHLOROETHENE** 70 - 130102 20.0 **FOLUENE** 130 70 -94 20.0 1,1,1-TRICHLOROETHANE 70 - 13094 1,1,2-TRICHLOROETHANE 20.0 70 - 13020.0 100 TRICHLOROETHENE 70 - 13020.0 94 VINYL CHLORIDE 70 - 130100 20.0 **O-XYLENE** 70 - 130101 40.0 M+P-XYLENE
COLUMBIA ANALYTICAL SE CES

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

Date Sampled : Date Received:	Order Submission	#: 62 #:	6696	Sample Matrix: Analytical Run	WATER 88723
ANALYTE			PQL	RESULT	UNITS
DATE ANALYZED : 03 ANALYTICAL DILUTION:	/18/03 1.00				
ACETONE			20	20 U	UG/L
DENZENE			5.0	5.0 U	UG/L
DOMODICULODOMETHANE			5.0	5.0 U	UG/L
DOMOFORM			5.0	5.0 U	UG/L
SROMOFORM DOMOMETUN NE			5.0	5.0 U	UG/L
DIWANONE (MEK)			10	10 U	UG/L
2-BUIANONE (MEK)			10	10 U	UG/L
ARBON DISULFIDE			5.0	5.0 U	UG/L
CARBON TETRACHLORIDE			5.0	5.0 U	UG/L
HLOROBENZENE			5.0	5.0 U	UG/L
CHLOROETHANE			5.0	5.0 U	UG/L
			5.0	5.0 U	UG/L
TEDROMETHANE			5.0	5.0 U	UG/L
1 DIGULOROMEIHANE			5.0	5.0 U	UG/L
L, I-DICHLOROEIHANE			5.0	5.0 U	UG/L
L, 2-DICHLOROETHANE			5.0	5.0 U	UG/L
L, I-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
L, 2-DICHLOROPROPANE			5.0	5.0 U	UG/L
CIS-1, 3-DICHLOROPROPENE			5.0	5.0 U	UG/L
TRANS-1, 3-DICHLOROPROPEN	E		5.0	5.0 U	UG/L
ETHYLBENZENE			10	10 U	UG/L
2-HEXANONE			5 0	5.0 U	UG/L
METHYLENE CHLORIDE	DV)		10	10 U	UG/L
4-METHYL-2-PENIANONE (MI	DK/		5 0	5.0 U	UG/L
STIRENE	TP		5.0	5.0 U	UG/L
I, I, Z, Z-IEIRACHLOROEINAN			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
I, I, Z-IRICHLOROEINANE			5.0	5.0 U	UG/L
TRICHLOROETHENE			5.0	5.0 U	UG/L
VINIL CHLORIDE			5.0	5.0 U	UG/L
M+P-XYLENE			5.0	5.0 U	UG/L
SURROGATE RECOVERIES	QC	LIMITS	3		
4-BROMOFLUOROBENZENE	(83	- 118	8 8)	102	\$
	(01	- 115	121	107	*
TOLUENE-D8	131	- ++-	0 0 /		

Project Name	Project Number	01791						ANALY	SIS RI	EQUES	TED (nclude	e Metho	d Nu	mber a	and Co	ontaine	r Pres	ervative)		
Project Manager	Report CC	1010101	000000	,	PRE	SERVAT	VE	1	T	1		-				1				-		
Ken Atmstrong	Cath	letine #	alko			1				1 0												
URS			-		Se		/	/ /	11	808	5 /0	St /	4/2	init.	1	1	8/	/	/	/ Pres	NONE	
634 St Ch	۲ <u>۲</u>				AINE		13	30	100	2/9	SUN	10	C/A	5/ 3	ED	L / C	3/	/	/ /	2.	INO3	
Claud 1 a	1. 144	12			CONT		0/0	0/ 5	8/0	0000	200	140	ACT	AL	Sou	S	1	11	//	4. 1	NãOH In. Acetate	
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(216) 622-2400	(21	6) 622-	246	4	MBEF	Swe	120/	ST/	0 00	Rich	NE/a	A's	ALS	ALSO	2/2	ory	/	/	/	8. (Other	
Bob Fabian	Sampler's Printed I	Inted Name Fabian Bob Fabian ONLY SAMPLING DATE TIME MA	Sampler's Printed Name Bob Fabian			N	000	00000	DES	0 2 2 80 S	2/20/2		A Bel	ME	ME	20	//	1	11	ALTE		RKS/
CLIENT SAMPLE ID	FOR OFFICE USE ONL	Y SAMP	LING	MATRIX											1			Í	- The P and			
EFF - 3-14-03	625948	3-14-03	11:15	WATER	3			-	1						V			-				
	P. P. P. P.	-11-2	1112	FICA	10				1			-										
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PECIAL INSTRUCTIONS/COMMENTS							TURN	ROUNE	CHARGE		NTS		REPO	RT RE	QUIRE	MENTS	3		INVOIC	CE INFOR	MATION	
							24 hr		48 hr	5	day		II. Besul	s + OC	Summar	rias		POr				
							ST	ANDARD					(LCS, DI	JP, MS/	MSD as	required)	10#				
						1	EQUESTE	D FAX D	ATE			-	III. Resu Summar	ts + QC ies	and Cal	libration		BILL	U:			
							FOLIEPTE	D DEDOI					IV. Data	Validatio	on Repor	t with A	aw Data					
- 0400 [7]							EQUESTE	UREPUI	TI DATE				V. Speice	lized Fo	orms / Ci	ustom R	eport					
			CII		10. 1	· N							Edata		Yes _	N	0	SUBM	ISSIOP	77	605	
RELINQUISHED BY	RECEIVED BY		RE	LINQUISHED	BY	T		REC	EIVED E	BY			RI	ELINQU	JISHED	BY		-	F	RECEIVED	DBY	
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Bob Fabian	Signature (OOK	Sig	mature			1	lignature					Signa	ture					Signat	hie			
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3-14-03 12:10	31403 121	O Fir	m									Firm	-					Firm		_		
ater I me	Date/Time	Da				1	Hate/ I Ime					Date/	OTH					Date/T	Ime			

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

Project/Client	wice			Submission Numb	er_ 160	58.	
Cooler received on	3/14/03 by:	ume	_COI	JRIER: CAS U	JPS FEDEX	CD&L	CLIENT
 Were custo Were custo Did all bott Did any VC Were Create Where did to 	dy seals on outside dy papers properly les arrive in good DA vials have sign r Ice packs presen the bottles originat	e of coo y filled condition ificant i t? e?	oler? out (in on (un air but	uk, signed, etc.)? broken)? bbles?	YES YES YES YES	NO N	N/A
7. Temperatur	e of cooler(s) upon	n receip	ot:	34			
Is the tempe	erature within 0° -	6° C?:	(Yes Yes	Yes	Yes	Yes
If No, Expl	ain Below		1	No No	No	No	No
Date/Time	Temperatures Take	en: 3	14/1	3 1210			
f out of Temperat	Date : title labels complete e labels and tags a t containers used f	roval to $\frac{14}{14}$ e (<i>i.e.</i> a gree with for the t	Run 03 nalysis ith cus tests in	Samplesby: s, preservation, etc. tody papers? adicated?	BC)? YES YES YES	NO NO NO	
f out of Temperat Cooler Breakdown: Were all bot Did all bott Were correc Air Samples Explain any discrep	Date : The labels complete the labels and tags a t containers used f : Cassettes / Tub ancies:	e (i.e. a gree without the topes Inta	Run /03 nalysis ith cus tests in ct	Samples	BC)? YES YES ed Tedlar®	NO NO Bags Infl	ated N/.
f out of Temperat Cooler Breakdown: Were all bot Did all bott Were correc Air Samples Explain any discrep	Date : The labels complete the labels and tags a t containers used f :: Cassettes / Tub ancies:	yes	Run 03 nalysis ith cus ith cus ith cus ith cus NO	Samples	P P YES ed Tedlar® Reagent	NO NO Bags Infl Vol.	ated N/.
f out of Temperat Cooler Breakdown: Were all bot Did all bottl Were correc Air Samples Explain any discrep	Date : The labels complete the labels and tags a t containers used f :: Cassettes / Tub ancies: Reagent	yYES	Run 03 nalysis ith cus ith cus tests in ct	Samples	P P YES ed Tedlar® Reagent	NO NO Bags Infl Vol.	ated N/. Added
f out of Temperat Cooler Breakdown: Were all bot Did all bottl Were correct Air Samples Explain any discrep pH 12	Date :	yES	Run 03 nalysis ith cus tests in ct NO	Samplesby: s, preservation, etc. tody papers? adicated? Canisters Pressuriz	P P YES ed Tedlar® Reagent	NO NO Bags Infl Vol.	ated N/.
f out of Temperat Cooler Breakdown: . Were all bot Did all bott . Did all bott . Were correc . Air Samples Explain any discrep pH 12 2	Date :	yES	Run /03 nalysis ith cus tests in ct NO	Samplesby: s, preservation, etc. tody papers? adicated? Canisters Pressuriz	B C)? YES YES red Tedlar® Reagent	NO NO Bags Infl Vol.	ated N/.
If out of Temperat Cooler Breakdown: . Were all bot 2. Did all bottl 3. Were correct 4. Air Samples Explain any discrep pH 12 2 2 2 2 2 2	Date :	yES	Run /03 nalysis ith cus tests in ct NO	Samplesby:	B C)? YES YES red Tedlar® Reagent	NO NO Bags Infl Vol.	ated N/.
f out of Temperat Cooler Breakdown: Did all bottl Did all bottl Were correct Air Samples Explain any discrep pH 12 2 2 Residual Chlorine (+/-)	Reagent NaOH HNO3 H2SO4	YES	Run /03 nalysis ith cus tests in ct NO	Samplesby:	B L)? YES YES ed Tedlar® Reagent	NO NO Bags Infl Vol.	ated N/.
f out of Temperat Cooler Breakdown: Were all bot Did all bott Were correct Air Samples Explain any discrep pH 12 2 Residual Chlorine (+/-) 5-9** ES = All samples OK	Reagent NaOH HNO3 H2SO4 for TCN & Phenol P/PCBs (608 only) NO = Sam	voval to ye (i.e. a gree with for the to bes Inta YES ples were th SO	Run /03 nalysis ith cus tests in ct NO e preserved	Samples	PC OK to adjust	NO NO Bags Infl Vol.	ated N/

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A FULL SERVICE ENVIRONMENTAL DABORATORY

MAY - 6 2003

URS

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April 30, 2003

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

PROJECT:GRIFFIN IRM 13807296.00000 Submission #:R2316509

Dear Mr. Armstrong

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of ____ 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. Muchan Kerny



CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2316509

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

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

ll samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

o 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.







Effective 11/4/2002

ORGANIC QUALIFIERS

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- X As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

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

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COLUMBIA ANALYTICAL SE	CES		VOLAT METHO Repor	ILE ORGANIC D 8260B TCL ted: 04/30/	S 03	
URS Corporation Project Reference: GRIFFI Client Sample ID : EFF-04	N IRM 13 -17-03	380729	96.00000			
Date Sampled : 04/17/03 Date Received: 04/17/03 Su	Order	#: 63 #: R2	33661 2316509	Sample Ma Analytica	trix: 1 Run	WATER 90127
ANALYTE			PQL	RES	ULT	UNITS
DATE ANALYZED : 04/29 ANALYTICAL DILUTION:	/03 1.00		-			
CETONE			20	20	U	UG/L
ENZENE			5.0	5.0	U	UG/L
ROMODICHLOROMETHANE			5.0	8.4		UG/L
ROMOFORM			5.0	5.0	U	UG/L
ROMOMETHANE			5.0	5.0	U	UG/L
-BUTANONE (MEK)			10	10	U	UG/L
ARBON DISULFIDE			10	10	U	UG/L
ARBON TETRACHLORIDE			5.0	5.0	U	UG/L
HLOROBENZENE			5.0	5.0	Ū	UG/L
HLOROETHANE			5.0	5.0	U	UG/L
HLOROFORM			5.0	25	-	UG/L
HLOROMETHANE			5.0	5.0	U	UG/L
IBROMOCHLOROMETHANE			5.0	5.0	U	UG/L
,1-DICHLOROETHANE			5.0	5.0	U	UG/L
, 2-DICHLOROETHANE			5.0	5.0	U	UG/L
,1-DICHLOROETHENE			5.0	5.0	U	UG/L
IS-1,2-DICHLOROETHENE			5.0	5.0	U	UG/L
RANS-1,2-DICHLOROETHENE			5.0	5.0	U	UG/L
,2-DICHLOROPROPANE			5.0	5.0	U	UG/L
IS-1,3-DICHLOROPROPENE			5.0	5.0	U	UG/L
RANS-1, 3-DICHLOROPROPENE			5.0	5.0	U	UG/L
THYLBENZENE			5.0	5.0	U	UG/L
-HEXANONE			10	10	U	UG/L
ETHYLENE CHLORIDE			5.0	5.0	U	UG/L
-METHYL-2-PENTANONE (MIBK)			10	10	U	UG/L
TYRENE			5.0	5.0	U	UG/L
, 1, 2, 2-TETRACHLOROETHANE			5.0	5.0	U	UG/L
ETRACHLOROETHENE			5.0	5.0	U	UG/L
DLUENE			5.0	5.0	U	UG/L
1, 1-TRICHLOROETHANE			5.0	5.0	U	UG/L
I, 2-TRICHLOROETHANE			5.0	5.0	U	UG/L
CICHLOROETHENE			5.0	5.0	U	UG/L
INTE CHLORIDE			5.0	5.0	U	UG/L
P-XYLENE			5.0	5.0	U	UG/L UG/L
SURROGATE RECOVERIES	QC L	IMITS		5.0	5	
BROMOFLUOROBENZENE	(92	110	8)	00		9
DLUENE-D8	(91	- 112	8)	104		9
BROMOFLUOROMETHANE	(87	- 115	8)	97		9
	(07		01	51		0
						0004

Project	/Client	1 1	a	recy	Submission Numb	er	1650	29
Cooler	received on	4/12/03 by: 8	Be	Co	URIER: CAS L	JPS FEDEX	CD&L	CLIENT
k. k. k.	Were custo Were custo Did all bott Did any VC Were Ice on Where did to Temperatur	dy seals on outside dy papers properly les arrive in good DA vials have sign r Ice packs presen the bottles originat re of cooler(s) upon	e of co y filled conditi ificant t? te? n receij	oler? out (ir on (un air bul	nk, signed, etc.)? broken)? bbles?	YES YES YES CAS/R	NO NO NO NO NO CLIE	N/A ENT
. 3	Is the tempe	erature within 0° -	6° C?:	1	Yes Yes	Yes	Yes	Yes
	If No, Expl Date/Time	ain Below Temperatures Take	en:	4/1	No No 7/03	No	No 1140	No
-1	Thermomet	er ID: 161 or (IRG	UN)	Reading From: T	emp Blank	or Sam	ple Bottle
ooler]	Breakdown: Were all bot Did all bottl Were correc Air Samples	Date : ttle labels complete e labels and tags a tt containers used f :: Cassettes / Tub	e (<i>i.e.</i> a gree w for the bes Inta	18 inalysi ith cus tests in act	Samples	B2)? TES TES ed Tedlar®	NO NO NO Bags Infla	
ooler 1	Breakdown: Were all bot Did all bottl Were correc Air Samples any discrep	Date : ttle labels complete e labels and tags a et containers used f s: Cassettes / Tub ancies:	e (<i>i.e.</i> a gree w for the bes Inta	Run 18 malysi ith cus tests in act	Samples	B2)? TES YES ed Tedlar®	NO NO NO Bags Infla	ated N/
ooler 1	Breakdown: Were all bot Did all bottl Were correc Air Samples any discrep	Date : ttle labels complete e labels and tags a et containers used f s: Cassettes / Tub ancies:	e (i.e. a gree w for the bes Inta	NO Run 18 malysi ith cus ith cus ith cus in tests in act	Samples	BE)? TES ed Tedlar® Reagent	NO NO Bags Infla Vol. 4	nted N/
ooler]] xplain	Breakdown: Were all bot Did all bottl Were correc Air Samples any discrep	Date : ttle labels complete e labels and tags a st containers used f :: Cassettes / Tub ancies: Reagent	e (i.e. a gree w for the bes Inta	Run 18 malysi ith cus ith cus ith cus ith cus ith cus	Samples	BE)? TES ed Tedlar® Reagent	NO NO Bags Infla Vol. 4	nted N/
ooler]	Breakdown: Were all bot Did all bottl Were correc Air Samples any discrep pH 12	Date : Date : ttle labels complete e labels and tags a tt containers used f :: Cassettes / Tub ancies: Reagent NaOH	e (i.e. a gree w for the bes Inta	NO	Samples	Reagent	NO NO Bags Infla Vol. A	nted N/
ooler]	Breakdown: Were all bot Did all bottl Were correc Air Samples any discrep pH 12 2	Date : Date : ttle labels complete e labels and tags a tt containers used f s: Cassettes / Tub ancies: Reagent NaOH HNO ₃	e (i.e. a gree w for the bes Inta	NO	Samples	Reagent	NO NO Bags Infla Vol. 4	nted N/
ooler]	Breakdown: Were all bot Did all bottl Were correc Air Samples any discrep pH 12 2 2	Date : Date : ttle labels complete e labels and tags a st containers used f s: Cassettes / Tub ancies: Reagent NaOH HNO ₃ H ₂ SO ₄	e (i.e. a gree w for the bes Inta	NO	Samples	Reagent	NO NO Bags Infla Vol. 4	ated N/A
cooler]	Breakdown: Were all bot Did all bottl Were correc Air Samples any discrep pH 12 2 2 Chlorine (+/-)	Date : Date : ttle labels complete e labels and tags a st containers used f :: Cassettes / Tub ancies: Reagent NaOH HNO ₃ H ₂ SO ₄ for TCN & Phenol	YES	NO	Samples	Reagent	NO NO Bags Infla Vol. 4	ated N/
xplain	Breakdown: Were all bot Did all bottl Were correc Air Samples any discrep pH 12 2 2 2 Chlorine (+/-) 5-9**	Date : Date : ttle labels complete e labels and tags a t containers used f :: Cassettes / Tub ancies: Reagent NaOH HNO ₃ H ₂ SO ₄ for TCN & Phenol P/PCBs (608 only)	YES	NO	Samples	Reagent	NO NO Bags Infla Vol. 4	ated N/
cooler]	Breakdown: Were all bot Did all bottl Were correc Air Samples any discrep pH 12 2 2 Chlorine (+/-) 5-9** samples OK justment is requ	Date : Date : ttle labels complete e labels and tags a st containers used f s: Cassettes / Tub ancies: Reagent NaOH HNO ₃ H ₂ SO ₄ for TCN & Phenol P/PCBs (608 only) NO = Samp aired, use NaOH and/or	val to 4 e (i.e. a gree w for the bes Inta YES VES ples were H ₂ SO ₄	NO	Samples	PC OK to adjust	NO NO Bags Infla Vol. A	nted N/
cooler] xplain cesidual S = All f pH adj	Breakdown: Were all bot Did all bottl Were correc Air Samples any discrep pH 12 2 2 Chlorine (+/-) 5-9** samples OK justment is required VOA (T	Date :	oval to 4 e (i.e. a gree w for the bes Inta YES VES ples were H ₂ SO ₄	NO	Samples	PC OK to adjust	NO NO Bags Infla Vol. 4	ated N/A
cooler]	Breakdown: Were all bot Did all bottl Were correc Air Samples any discrep pH 12 2 2 Chlorine (+/-) 5-9** samples OK justment is requ	Date :	val to (i.e. a gree w for the bes Inta YES ples were H ₂ SO ₄	P Run 18 malysi ith cus tests in tests NO e preserver	Samples	PC OK to adjust	NO NO Bags Infla Vol. 4	

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A FULL SERVICE ENVIRONMENTAL LABORATORY

June 3, 2003

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



1150

PROJECT:GRIFFIN IRM 13807296.00000 Submission #:R2316868

Dear Ms. Palko

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of _____ 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.



CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2316868

Lab ID	<u>Client ID</u>
641115	 EFF-05-14-03

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

All samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

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







Effective 11/4/2002

ORGANIC QUALIFIERS

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- X As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

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

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COLUMBIA ANALYTICAL SER. LCES

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

Date Sampled : 05/13/03 Date Received: 05/14/03 S	Order ubmission	#: 641115 #: R2316868	Sample Matrix: Analytical Run	WATER 91077
ANALYTE		PQL	RESULT	UNITS
DATE ANALYZED : 05/2 ANALYTICAL DILUTION:	1/03 1.00			
ACETONE		20	20 U	UG/L
BENZENE		5.0	5 0 II	UG/L
BROMODICHLOROMETHANE		5.0	50 11	UG/L
BROMOFORM		5.0	5.0 11	UG/L
BROMOMETHANE		5.0	5.0 U	UG/L
2-BUTANONE (MEK)		10	10 U	UG/L
CARBON DISULFIDE		10	10 U	UG/L
CARBON TETRACHLORIDE		5.0	5.0 U	UG/L
CHLOROBENZENE		5.0	5.0 U	UG/L
CHLOROETHANE		5.0	5.0 U	UG/L
CHLOROFORM		5.0	5.0 U	UG/L
CHLOROMETHANE		5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE		5.0	5.0 U	UG/L
1,1-DICHLOROETHANE		5.0	5.0 U	UG/L
1,2-DICHLOROETHANE		5.0	5.0 U	UG/L
1,1-DICHLOROETHENE		5.0	5.0 U	UG/L
CIS-1, 2-DICHLOROETHENE		5.0	5.0 U	UG/L
TRANS-1, 2-DICHLOROETHENE		5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE		5.0	5.0 U	UG/L
CIS-1, 3-DICHLOROPROPENE		5.0	5.0 U	UG/L
TRANS-1, 3-DICHLOROPROPENE		5.0	5.0 U	UG/L
ETHYLBENZENE		5.0	5.0 U	UG/L
2-HEXANONE		10	10 U	UG/L
METHYLENE CHLORIDE		5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE		5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE		5.0	5.0 U	UG/L
TETRACHLOROETHENE		5.0	5.0 U	UG/L
TOLUENE		5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE		5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE		5.0	5.0 U	UG/L
TRICHLOROETHENE		5.0	65	UG/L
VINIL CHLORIDE		5.0	5.0 U	UG/L
M+P-XYLENE		5.0	5.0 U	UG/L UG/L
SURROGATE RECOVERIES	QC L	IMITS		
4-BROMOFLUOROBENZENE	(83	- 118 %)	108	\$
TOLUENE-D8	(91	- 113 %)	102	÷
DIBROMOFLUOROMETHANE	(87	- 115 %)	105	÷

DIBROMOFLUOROMETHANE

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COLUMBIA ANALYTICAL SER. LCES

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

Date Sampled : Date Received:	Order Submission	#: 642747 #:	Sample Matrix: Analytical Run	WATER 91077
ANALYTE		PQL	RESULT	UNITS
DATE ANALYZED : 0	5/21/03			
ANALYTICAL DILUTION:	1.00			
ACETONE		20	20 U	UG/L
BENZENE		5.0	5.0 U	UG/L
BROMODICHLOROMETHANE		5.0	5.0 U	UG/L
BROMOFORM		5.0	5.0 U	UG/L
BROMOMETHANE		5.0	5.0 U	UG/L
2-BUTANONE (MEK)		10	10 U	UG/L
CARBON DISULFIDE		10	10 U	UG/L
CARBON TETRACHLORIDE		5.0	5.0 U	UG/L
CHLOROBENZENE		5.0	5.0 U	UG/L
CHLOROETHANE		5.0	5.0 U	UG/L
CHLOROFORM		5.0	5.0 U	UG/L
CHLOROFORM		5.0	5.0 U	UG/L
DIROMOCHLOROMETHANE		5.0	5.0 U	UG/L
1 1-DICHLOPOETHANE		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
TELLO DICHLOROEINENE		5.0	5 0 U	UG/L
TDANG 1 2 DICHLOROEINENE		5.0	50 11	UG/L
1 2 DIGULODODDODANE		5.0	5.0 1	UG/L
1,2-DICHLOROPROPANE		5.0	5.0 1	UG/L
CIS-1, 3-DICHLOROPROPENE	I	5.0	5.0 0	UG/L
TRANS-1, 3-DICHLOROPROPE	IN E.	5.0	5.0 0	UC/L
ETHYLBENZENE		5.0	10 11	UG/L
2-HEXANONE		10	50 1	UG/L
METHYLENE CHLORIDE	TDY	5.0	10 11	UG/L
4-MEINIL-2-PENTANONE (M	ILDR)	10	5.0.11	UG/L
JIKENE	NE	5.0	5.0 11	UG/L
T, T, Z, Z-TEIRACHLOROETHA		5.0	5.0 11	UG/L
TE TRACHLOROETHENE		5.0	5.0 11	UG/L
1 1 1 TRATOUL OROBRITANE		5.0	5.0 11	UG/L
1, 1, 2 TRICHLOROETHANE		5.0	5.0 11	UG/L
I, I, Z-TRICHLOROETHANE		5.0	5.0 0	UG/L
TRICHLOROETHENE		5.0	5.0 0	UG/L
VINIL CHLOKIDE		5.0	5.0 11	UG/L
U-AILENE M.D. VVIENE		5.0	5.0 11	UG/L
M+F-AILENE		5.0	5.0 0	0071
SURROGATE RECOVERIES	QC I	LIMITS		
4-BROMOFLUOROBENZENE	(83	- 118 %)	105	S
TOLUENE-D8	(91	- 113 %)	101	*
DIBROMOFLUOROMETHANE	(87	- 115 %)	103	8

Project Name	Project Number	-						ANA	Vele	DEC	HIEST	ED /	nolud	Math	ad No.	mber	and Or	mtels	. Dec		(hea)		
Project Manage	138072 Report CC	94.0	5000		DDC	0000	mur I	ANA	1313	I	0231		ACTUCK	meth	oa Nu	mber	and Co		r rre	servati	ve)	-	
company/Address	Contherine	Pal	ka		PHE	SERVA		+	+	+			-	-	Hel			-)	-	$ \rightarrow $		Preserval	ive Key
1034 St. Clarc					INERS		/	/	/	/	/	/	1		/	/	/	/	/	/	/	1. HCL 2. HNO3 3. H2SO	4
Cleveland, off	44113				CONTAI		Delle	DCLP	205	2010	OCLP	L belo	DUVED ts bein	4 5 4	/	/	1	1	/	/ /	/	4. NãOH 5. Zn. Ac 6. MeOH 7. NaHS	etate O ₄
(216) 622-240D amplers Signation	Samplar's Printed Name	2144	4		UMBER OF	SVOA	S SUOA	04's	CIDES	1000	15, TOB	LS. D.G.	Commen	EP/	/	/	/	/	/	/	1	8. Other	
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMP	LING TIME	MATRIX	Z	GCM	GC/M	BC V	D 8081	PCB'S	META	META	Voci		/	/	/	/ /	/	/ AL	R LTERNA	EMARKS/	IPTION
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							24	hr	48 k	r _	5 d	iny .		II. Resu	its + QC	Summ	aries		PO#			-	
							(STANDA	RD					(LCS, C	oup, MS/	MSD at	s required;)	All	TO		_	
							REQUEST	TED FAX	DATE				-	III. Resi Summa	uits + QC ries	C and C	alibration			10.			
							REQUEST	TED REP	ORT DA	ATE				IV. Data	Validatio	on Repo	ort with Re	w Data					
										_				V. Speid	alized F	iorms / (Custom Re	aport		1		10	/
AMPLE RECEIPT: CONDITION/CO	OLER TEMP:		CUS	TODY SEA	S: Y	N								Edata	_	_ Yes	No	0	SUB	MISSION	68	-68	
HELINQUISHED BY	RECEIVED BY		REL	INQUISHED	ЗY			R	CEIVE	DBY				R	ELINQU	UISHE	D BY			1	RECE	IVED BY	
Melisse Nemeth	Signature Strand	min Sign	nature			-	Signature						Signat	Ire					Signa	ature			
) RS Buffal	Printed Nings	Yian Prin	ited Name			-	Printed Na	ime					Printec	Name				-	Printe	ad Name	-		
5.1400 9:20	Firm / CAS	Firm	n		-	1	im						Firm		-				Firm				
ath/Time	Date/Time C DIAR 9776	Dat	e/Time			-	Date/Time						Data	-			_		Date/	Time			

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

roject/Client	ves		S	ubmission Numb	er_Ra-1686		
Cooler received or	n <u>5/14/03</u> by: <u>01</u>	p2_(COUI	RIER: CAS	JPS FEDEX	CD&L	CLIENT
Were custo Were custo Did all bot Did any V Were Ice o Where did Temperatu	ody seals on outside o ody papers properly f tiles arrive in good co OA vials have signif or Ice packs present? the bottles originate are of cooler(s) upon	of coole filled ou ondition icant air ? receipt:	er? at (ink a (unb) r bubb	, signed, etc.)? roken)? bles?	YES YES YES YES CAS/T	(2) N N N N N N N N N N N N N N N N N N N	N/A ENT
Is the temp	perature within 0° - 6	° C?:		Yes Yes	Yes	Yes	Yes
If No, Ext	plain Below		G	No No	No	No	No
Date/Time	Temperatures Take	n: 5	1410	3 925			
Thermom	eter ID: 161 or (IR GU	N)	Reading From:	Temp Blank	or (Sar	mple Bottle
Cooler Breakdown Were all b Did all bot Were corre Air Sampl	n: Date : <u>Joint</u> ottle labels complete ttle labels and tags ag ect containers used for les: Cassettes / Tub	(<i>i.e.</i> an gree with or the terms Intac	alysis h cust ests in	by:	c.)? (TES (YES) (TES) Tedlar	NO NO NO r® Bags In	flated N/
Cooler Breakdown Were all b Did all bot Were corr Air Sampl Explain any discre	n: Date : <u>971</u> ottle labels complete ttle labels and tags ag ect containers used for es: Cassettes / Tub epancies:	(<i>i.e.</i> an gree with or the tees Intac	alysis h cust ests in et	by:	c.)? TES TES ized Tedla	NO NO NO r® Bags In	flated N/
Cooler Breakdown Were all b Did all bot Were corr Air Sampl Explain any discre	n: Date : <u>971</u> ottle labels complete ttle labels and tags ag ect containers used for es: Cassettes / Tub epancies:	yee with or the te es Intac	alysis h cust ests in t	by:	c.)? (PES) (YES) (TES) Tedlar (Reagent	NO NO NO r® Bags In Vo	flated N/
Cooler Breakdown Were all b Did all bot Were corr Air Sampl Explain any discre	n: Date : ottle labels complete ttle labels and tags ag ect containers used for es: Cassettes / Tub epancies: Reagent	yee with or the te es Intac	alysis h cust ests in et (by:	c.)? (PES) (PES) (Ted)au Reagent	NO NO P Bags In Vo	flated N/
Cooler Breakdown Were all b Did all bot Were corr Air Sampl Explain any discre pH 12	n: Date : ottle labels complete ttle labels and tags ag ect containers used for es: Cassettes / Tub epancies: Reagent NaOH	yee with or the te es Intac	alysis h cust ests in et	by:	c.)? (PES) (PES) (TES) Tedlar Reagent	NO NO NO r® Bags In Vo	flated N/
Cooler Breakdown Were all b Did all bot Were corr Air Sampl Explain any discret pH 12 2	n: Date : ottle labels complete ttle labels and tags ag ect containers used for les: Cassettes / Tub epancies: Reagent NaOH HNO3	yee with or the te es Intac	alysis h cust ests in t NO	by:	c.)? (PES) (PES) (TES) Tedlar Reagent	NO NO NO r® Bags In Vo	flated N/
Cooler Breakdown Were all b Did all box Were corru Air Sampl Explain any discret pH 12 2 2	n: Date : ottle labels complete ttle labels and tags ag ect containers used for les: Cassettes / Tub epancies: Reagent NaOH HNO ₃ H ₂ SO ₄	YES	alysis h cust ests in t NO	by:	c.)? (PES) (PES) (PES) Tedlar Reagent	NO NO NO r® Bags In Vo	flated N/
Cooler Breakdown Were all b Did all bot Did all bot Were corro A Air Sampl Explain any discret pH 12 2 2 Residual Chlorine (+	n: Date : ottle labels complete ttle labels and tags ag ect containers used for les: Cassettes / Tub epancies: Reagent NaOH HNO3 H2SO4 -/- for TCN & Phenol	YES	alysis h cust ests in t NO	by:	c.)? (PES) (TES) (TES) Tedlar Reagent	NO NO NO r® Bags In Vo	flated N/
Cooler Breakdown Were all b Did all boi Were corro Air Sampl Explain any discre pH 12 2 2 Residual Chlorine (+ 5-9**	n: Date : ottle labels complete ttle labels and tags ag ect containers used for les: Cassettes / Tube epancies: Reagent NaOH HNO3 H2SO4 -/-) for TCN & Phenol P/PCBs (608 only)	YES	alysis h cust ests in t NO	by:	c.)? TES TES Tedla Reagent	NO NO NO r® Bags In Vo	flated N/
Cooler Breakdown Were all b Did all boy Were correst Air Sampl Explain any discret pH 12 2 Residual Chlorine (+ 5-9** YES = All samples Ol	n: Date : ottle labels complete ttle labels and tags ag ect containers used for es: Cassettes / Tub epancies: Reagent NaOH HNO3 H2SO4 -/-) for TCN & Phenol P/PCBs (608 only) K NO = Sam required, use NaOH and/or	YES ples were r H ₂ SO ₄	nalysis h cust ests in t NO	by:	c.)? TES TES Tedla: Reagent PC OK to ad	NO NO NO r® Bags In Vo	flated N/

Other Comments:

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A FULL SERVICE ENVIRONMENTAL LABORATORY

June 9, 2003

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

D)៤លាយាយ JUN 1 2 2003

URS

PROJECT: GRIFFIN IRM Submission #:R2316890

Dear Ms. Palko

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Tant - uto

Mark Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of _____ 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. Mutual K Very



CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2316890

Lab ID	<u>Client ID</u>
641471	EFF-5-15-03

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

All samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

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







Effective 11/4/2002

ORGANIC QUALIFIERS

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C- This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- X As specified in Case Narrative.

CAS/Rochester Lab ID # for State Certifications

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

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COLUMBIA ANALYTICAL SERVICES

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

Date Sampled : 05/15/03 Ord Date Received: 05/15/03 Submissi	ler #: 641471 \$ Lon #: R2316890	Sample Matrix: Analytical Run	WATER 91075
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/21/03			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1.1-DICHLOROETHANE	5.0	5.0 U	UG/L
1.2-DICHLOROETHANE	5.0	5.0 U	UG/L
1.1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1.2-DICHLOROETHENE	5.0	5.0 U	UG/L
1.2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1, 3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1.3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 0	UG/L
TRICHLOROETHENE	5.0	100	UG/L
VINYL CHLORIDE	5.0	5.0 0	UG/L
O-XYLENE	5.0	5.0 0	UG/L
M+P-XYLENE	5.0	5.0 0	UG/L
SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE (8	83 - 118 %)	108	÷
TOLUENE-D8 (S	91 - 113 %)	101	90
DIBROMOFILIOROMETHANE (8	87 - 115 %)	103	8

OLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS METHOD: 8260B TCL

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 642741	ANALYT	ICAL RUN # :	91075
ANALYTE	TRUE VALUE	* RECOVERY	QC LIMITS
DATE ANALYZED : 05/21/03			
ANALYTICAL DILUTION: 1.0			
	20.0	96	50 - 150
ACETONE	20.0	. 90	70 - 130
BENZENE	20.0	04	70 - 130
BROMODICHLOROMETHANE	20.0	88	70 - 130
BROMOFORM	20.0	78	70 - 130
BROMOMETHANE	20.0	96	50 - 150
2-BUTANONE (MEK)	20.0	90	50 - 150
CARBON DISULFIDE	20.0	122	70 - 130
CARBON TETRACHLORIDE	20.0	84	70 - 130
CHLOROBENZENE	20.0	84	70 - 130
CHLOROETHANE	20.0	94	70 - 130
CHLOROFORM	20.0	94	70 - 130
CHLOROMETHANE	20.0	100	70 - 130
DIPROMOCULOROMETHANE	20.0	82	70 - 130
1 1 DICHLOROFTHANE	20.0	90	70 - 130
1 2 DICHLOROETHANE	20.0	92	70 - 130
1 1 DICHLOROETHANE	20 0	88	70 - 130
CIG 1 2 DIGULOBOETUENE	20.0	87	70 - 130
TRANK 1 2 DICHLOROETHENE	20.0	83	70 - 130
TRANS-1, Z-DICHLOROETHENE	20.0	86	70 - 130
1, 2-DICHLOROPROPANE	20.0	94	70 - 130
CIS-1, 3-DICHLOROPROPENE	20.0	02	70 - 130
TRANS-1, 3-DICHLOROPROPENE	20.0	92	70 - 130
ETHYLBENZENE	20.0	02	70 - 130
2-HEXANONE	20.0	99	70 - 130
METHYLENE CHLORIDE	20.0	89	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	92	70 - 130
STYRENE	20.0	84	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	85	70 - 130
TETRACHLOROETHENE	20.0	77	70 - 130
TOLUENE	20.0	82	70 - 130
1,1,1-TRICHLOROETHANE	20.0	80	70 - 130
1,1,2-TRICHLOROETHANE	20.0	86	70 - 130
TRICHLOROETHENE	20.0	81	70 - 130
VINYL CHLORIDE	20.0	93	70 - 130
O-XYLENE	20.0	83	70 - 130
M+P-XYLENE	40.0	79	70 - 130

COLUMBIA ANALYTICAL SERVICES

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

Date Sampled : Date Received:	Order # Submission #	: 642739 :	Sample Matrix: Analytical Run	WATER 91075
ANALYTE		PQL	RESULT	UNITS
DATE ANALYZED :	05/21/03			
ANALYTICAL DILUTION:	1.00			
ACETONE		20	20 U	UG/L
BENZENE		5.0	5.0 U	UG/L
BROMODICHLOROMETHANE		5.0	5.0 U	UG/L
ROMODICILLOROMAIIMANA		5.0	5.0 U	UG/L
POMOMETHANE		5.0	5.0 U	UG/L
D_DITANONE (MEY)		10	10 11	UG/L
ADDON DIGHTETDE		10	10 11	UG/L
ARBON DISULFIDE		10	E O IT	
ARBON TETRACHLORIDE		5.0	5.0 0	
HLOROBENZENE		5.0	5.0 0	
CHLOROETHANE		5.0	5.0 0	UG/L
CHLOROFORM		5.0	5.0 0	
CHLOROMETHANE		5.0	5.0 0	UG/L
DIBROMOCHLOROMETHANE		5.0	5.0 0	UG/L
L, 1-DICHLOROETHANE		5.0	5.0 U	UG/L
,2-DICHLOROETHANE		5.0	5.0 0	UG/L
,1-DICHLOROETHENE		5.0	5.0 0	UG/L
CIS-1,2-DICHLOROETHENE	2	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHE	INE	5.0	5.0 U	UG/L
,2-DICHLOROPROPANE		5.0	5.0 U	UG/L
IS-1, 3-DICHLOROPROPEN	IE	5.0	5.0 U	UG/L
RANS-1, 3-DICHLOROPROF	PENE	5.0	5.0 U	UG/L
THYLBENZENE		5.0	5.0 U	UG/L
-HEXANONE		10	10 U	UG/L
ETHYLENE CHLORIDE		5.0	5.0 U	UG/L
-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
TYRENE		5.0	5.0 U	UG/L
,1,2,2-TETRACHLOROETH	ANE	5.0	5.0 U	UG/L
ETRACHLOROETHENE		5.0	5.0 U	UG/L
OLUENE		5.0	5.0 U	UG/L
1.1-TRICHLOROETHANE		5.0	5.0 U	UG/L
1.2-TRICHLOROETHANE		5.0	5.0 U	UG/L
RICHLOROETHENE		5.0	5.0 U	UG/L
INVI. CHLORIDE		5.0	5 0 11	UG/L
YVI.ENE		5.0	5.0 11	UG/L
I+P-XYLENE		5.0	5.0 U	UG/L
SURROGATE RECOVERIES	QC LI	MITS		
BROMOFLUOROBENZENE	(83 -	118 %)	105	\$
OLUENE-D8	(91 -	113 %)	101	*
			101	0.

Project Name Griffin.	Project Number	91.01	neen					ANALY	SIS RE	QUES	TED (I	nclude	Metho	od Nu	mber a	and Co	ontain	er Pres	ervative)	
Project Manager	Report CC	in P	11/0		PRE	SERVAT			1					-			5				
Company/Address		ine 10	enpe				1	1	1	3		0)	olà	<u></u>		-1	I	-+	1	Pr	eservative K
124 SI Man					INERS		1 3/	9	10	000	SUONS	5/	HOH	Tom	mo	Mo	7/	/	/ ,	1.	HCL HNO3
A) ST. Clair	1.1.1				ONTA		000	00	2/00	120	1000	PALS 04'S	CTEA	AL	te la	ACA	5/	/ /	/ /	3. 4.	H ₂ SO ₄ NaOH Zn Acetate
cleveland Off	44113 FAX#				OFO	10	22/20	1001	SO8	120	120	AN SU	A SOL	Lo Lo	DIS	12/	/	/	/	6. 7.	MeOH NaHSO4
(214)622-2400	(214) 6	22-24	164		MBER	ISM	S22/	0210	B10	A'S	THA.	A'S	ALS	741.00	100	1/	/	/	/	8.	Other
Allant	Samprei s Printed Nam	ELISSA	NEM	ETH	NN	00	000	200	8/50	150	100	NA O	ME	ME	13	1		/ /	ALTE	REN	ARKS/ DESCRIPTIO
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMP DATE	TIME	MATRIX																-	
FF-5-15-03		5.15.03	1330	W	3										X						
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																				-	
							_						_								
PECIAL INSTRUCTIONS/COMMENTS	1. 1. A						TUDN		DEOU		ITO		DEDO	DT DI							
letais							RI	JSH (SUR	CHARGE	S APPLY)		I. Result	is Only	QUIRE	MENTS	>		INVOI	CE INFO	UHMATION
							24 h	r	48 hr	5	day	-	II. Result	ts + QC	Summa	ries	n	PO#	-		
							REQUEST	ANDARD	TE				III. Resu	lts + Q	C and Ca	libration	·)	BILL T	D:	-	
													Summar	Validati	ion Beno	et with D	nu Data	-			
							REQUEST	D REPOR	T DATE				V. Speice	alized F	Forms / C	ustom A	leport		,		
AMPLE RECEIPT: CONDITION/COC	DLER TEMP:		CUS	STODY SEA	IS V	N					-		Edata		_Yes	N	io	SUBM	SSION :	68	90
RELINQUISHED	RECEIVED BY		REL	LINQUISHED	BY	1		RECE	IVED B	Y			RI	ELINQ	UISHED	BY		-	F	RECEIV	ED BY
Mensur/1	Signature Stignature	Sig	nature				Signature				-	Signat	ure					Signat	178		
rinted Name	Printed Name	Prir	nted Name				Printed Nar	ne				Printer	i Name	-				Printed	Name		
5.15.93 1405	Firm5/15/03 14	405 Fir	n				Firm					Firm						Firm		-	
)ate/Time	Date/Vime	Dat	te/Time			-	Date/Time					Date/T	ime					Date/Ti	me	-	

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A FULL SERVICE ENVIRONMENTAL LABORATORY

July 17, 2003

Mr. Larry Szuhay UES Corporation 8.) West St. Claire Ave. Suite 500 Cleveland, OH 44113

PROJECT:GRIFFIN 13807296.00000 Submission #:R2317294

Dear Mr. Szuhay

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson C:ient Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of 10 pages

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.



CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2317294

> Lab ID 649977

Client ID EFF-061803

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

All samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

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

Lab Name: CAS/ROCH		Contract: URS	EFF-	061803
Lab Code: 10145	Case No.: R3-17294	SAS No.:	SDG No.: N	AW95-60
Matrix: (soil/water) W/	TER	Lab Sample	ID: 649977 1	0
		Lab Gampie		
Sample wt/vol: 5.0	(g/ml) <u>ML</u>	Lab File ID:	B0447.D	
Level: (low/med) LO	W	Date Receiv	ved: 06/19/03	
% Moisture: not dec		Date Analyz	ed: 06/26/03	
	ID: 0.22 (mm)	Dilution End	tor: 10	
GC Column: DB624	ID: <u>0.32</u> (mm)	Dilution Fac	1.0	
Soil Extract Volume	(uL)	Soil Aliquot	Volume:	(
	CON		ITS.	
CARNO	COMPOUND (us/	CENTRATION UN	n .	0
CAS NO.	CONFOUND (ug/L		/ ba	G.
74-87-3	Chloromethane		10	U
75-01-4	Vinyl chloride		10	U
74-83-9	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	U
75-35-4	1,1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1,2-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		78	
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloropropen	e	10	U
79-00-5	1,1,2-Trichloroethane		10	U
124-48-1	Dibromochloromethane		10	U
	Bromoform		10	U
75-25-2	A Mothyl 2 nontanona		10	U
75-25-2 108-10-1	4-welligi-z-pentanone		10	U
75-25-2 108-10-1 108-88-3	Toluene			
75-25-2 108-10-1 108-88-3 591-78-6	Toluene 2-Hexanone		10	U
75-25-2 108-10-1 108-88-3 591-78-6 127-18-4	Toluene 2-Hexanone Tetrachloroethene		10 10	UUU
75-25-2 108-10-1 108-88-3 591-78-6 127-18-4 108-90-7	Toluene 2-Hexanone Tetrachloroethene Chlorobenzene		10 10 10	
75-25-2 108-10-1 108-88-3 591-78-6 127-18-4 108-90-7 100-41-4	Toluene 2-Hexanone Tetrachloroethene Chlorobenzene Ethylbenzene		10 10 10 10	
75-25-2 108-10-1 108-88-3 591-78-6 127-18-4 108-90-7 100-41-4 108-38-3/106-42-3	4-Methyl-2-pentatione Toluene 2-Hexanone Tetrachloroethene Chlorobenzene Ethylbenzene (m+p)Xylene		10 10 10 10 10	
75-25-2 108-10-1 108-88-3 591-78-6 127-18-4 108-90-7 100-41-4 108-38-3/106-42-3 95-47-6	4-Methyl-2-pentatione Toluene 2-Hexanone Tetrachloroethene Chlorobenzene Ethylbenzene (m+p)Xylene o-Xylene		10 10 10 10 10 10	

Lab Name:	CAS/RO	DCH	ATTVELT I	DENTIFIE	D COMPO	URS		EFF	-06180	13
Lab Code:	10145		Case No.:	R3-17294	SAS No	.:	s	DG No.:	MW9S	-603
Matrix: (soil/	water)	WATER	2		Lat	Sample	D:	649977	1.0	
Sample wt/v	ol:	5.0	(g/ml)	ML	Lat	File ID:		B0447.D		
Level: (low/	med)	LOW	1 11		Dat	te Receiv	ved:	06/19/03		
% Moisture:	not dec.				Dat	e Analyz	ed:	06/26/03		
GC Column:	DB624	ID:	0.32 (n	nm)	Dilu	ution Fac	tor:	1.0		
Soil Extract	Volume		(uL)		Soi	I Aliquot	Volu	me:		(uL
Number TIC:	s found:	0		CON (ug/l	ICENTRAT _ or ug/Kg)		ITS: L			
CAS NO.		COMP	DUND			RT	ES	T. CONC		Q

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ab Name: CAS/RO	СН	Contract: UR	s Vi	SLKU3
ab Code: 10145	Case No.: R3-17294	SAS No.:	SDG No.:	MW9S-603
Aatrix: (soil/water)	WATER	Lab Sa	mple ID: 655804	
sample wt/vol:	5.0 (g/ml) <u>ML</u>	Lab File	ID: <u>B0443.D</u>	
evel: (low/med)	LOW	Date Re	eceived:	
Moisture: not dec		Date Ar	aluzed: 06/26/03	
		Date A	alyzeu. 00/20/03	
GC Column: DB624	_ ID: <u>0.32</u> (mm)	Dilution	Factor: 1.0	
oil Extract Volume	(uL)	Soil Alia	uot Volume:	(ul
-	CON	CENTRATION	UNITS:	
CAS NO.	COMPOUND (ug/L	or ug/Kg)	UG/L	Q
74 97 2	Chloromothono		10	
75-01-4	Vinyl chloride		10	U
74-83-9	Bromomethane		10	- U
75-00-3	Chloroethane		10	- U
67-64-1	Acetone		10	U
75-35-4	1.1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1,2-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		10	U
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloropropen	e	10	U
19-00-5		*	10	0
75.25.2	Bromoform		10	
108-10-1	A-Methyl-2-pentanana	-	10	
108-88-3	Toluene		10	11
591-78-6	2-Hexanone		10	U U
127-18-4	Tetrachloroethene		10	U U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-	3 (m+p)Xylene		10	U
95-47-6	o-Xvlene		10	U
00110				
100-42-5	Styrene		10	U

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	VOLATILE) 1E E ORGANICS	ANALY	SIS DATA SHEET	EPA S	AMPLE NO.
Lab Name: CAS/	TENTA ROCH	TIVELY IDEN		COMPOUNDS Contract: URS	v	BLK03
Lab Code: 1014	<u>;</u> c	ase No.: R3-	17294	SAS No.:	SDG No.:	MW9S-603
Matrix: (soil/water)	WATER	1.123		Lab Sample	e ID: 655804	
Sample wt/vol:	5.0	(g/ml) ML		Lab File ID	B0443.0)
Level: (low/med)	LOW			Date Recei	ved:	
% Moisture: not dec).			Date Analy	zed: 06/26/03	3
GC Column: DB6	24 ID: (0.32 (mm)		Dilution Fac	ctor: 1.0	
Soil Extract Volume		(uL)		Soil Aliquot	Volume:	(uL)
Number TICs found	: 0		CONC (ug/L	CENTRATION UN or ug/Kg) UG	ITS: /L	
CAS NO.	COMPC	DUND		RT	EST. CON	c. Q

2A WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CAS/ROCH			Contract:	URS	and the second second	
Lab Code:	10145	Case No.:	R3-17294	SAS No	:	SDG No.:	MW9S-603

	EPA	SMC1	SMC2	SMC3	TOT
	SAMPLE NO.	#	#	#	001
01	VBLK01	105	101	92	0
02	VBLK01MS	105	100	90	0
03	MW9S-603	111	99	89	0
04	MW10S-603	112	100	89	0
05	MW10D-603	113	99	89	0
06	VBLK02	102	100	86	0
07	VBLK02MS	101	102	87	0
08	MW9D-603	101	101	89	0
09	MW1-603	101	100	86	0
10	MW2S-603	103	101	86	0
11	MW3-603	104	99	86	0
12	VBLK03	84	106	98	0
13	VBLK03MS	85	106	97	0
14	MW11D-603	84	106	98	0
15	MWY(DUP)-6	84	105	95	0
16	EFF-061803	86	106	97	0
17	TRIP BLANK	86	105	96	0

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

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM II VOA-1

ect Name	Project Number						AM	ALYSK	S REQL	JEST	ED (Inc	dude i	lethod	Numbe	r and C	ontainer	Preser	rvative)	
GRIFFIL	1380124	2.000	00		DDE	CEDVATI		•	T	Т	T	T	T	1	1		T		
LARRY SEUHAN	Catheria	Palk	0		FRE	SERVAIL	VE	1 11					11	1					
mpany/Address							11	/	/	1	1	1	/	1	/ /	1	/	/ / Pres	NONE
8001 CLAPPORATION					ERS		11	/	/	/	/	1	1	/ /	1	/	1	/ / 2.3	HNO3
tost St. Clair					ITAIN	1	a		1 01	4	[moj	0.00	1 /	/	/	1	/ /	4.	NaOH Zn. Acetate
Cleveland, of 4411	3				CON	1 /	201	3	Lou I	20	S be	128	/	/	1	/ /	/	6.	MeOH NaHSO4
1211) (1.20)241m	FAX8	.77	741.1		ROF	1,5	22.2	01/0	18	8/6	NS:S	Tem	/	/	11	1	/	8.	Other
plery Signature	Sampler's Printed Nam	18	CTUT		MBE	191	and su	000	0	S, TO	S. D	<u></u>	1	11	1	/	1	/ .	
Mrak Je	CHUCK S	IEGEL	NING		- ₹	Nege Star	202	18/50	188	TAL .	TA I	15		./	/	1	11	DEM	ADVO
CLIENT SAMPLE ID	LAB ID	DATE	TIME	MATRIX		100	00000	40	20	NE NE	List	0-	1	1	1	11	-1	ALTERNATE	DESCRIPTIO
NW95-603	649969	6-18.03	1155	GW	3		_					X	-	-					
MW9D - 403	70		1145		11							11	-						
MWIDS - 403	71		1210		11		_		_	-		++	_						
AWOD-603	72		1201		11				-			++							
MW/10-403	73		1005		++-		_					++				+	_		
11W13-603-11.N	State of the second		لر		11	+						++							
MWX (MS)-603 1	MUSD (83)		1012		11		_			-	-	+	-+-						
MWK (MSD)-603	V (83)		1013		11					-	-	++	-						
MWY (DUP)-603		X	1049	V	V				-	_		-	-+-		-	+			
FFF - 061803	77	6-18-03		GW	3							VI	PEPOD	TREOU	DEMEN	Te			ORMATION
ECIAL INSTRUCTIONS/COMMENTS							TURNAF	IOUND I H (SURCI	HEQUIH	APPLY	15		I. Results	Only	INEMEN	13			
MS/MSD ON	MW 5P						24 hr	4	8 kr _	6	day		II. Results	+ QC Sur	nmaries		PO#		
	14.1.1						STAI	DARD					(LCS, DU	, MS/MS	D as requi	red)	BILL TO	0:	
DUP ON	CWM						REQUESTED	FAX DAT	E			-	III. Result Summarie	+ QC an s	d Calibrati	ion			
									-				IV. Data V	alidation F	eport with	Raw Data			_
~							REQUESTED	REPORT	DATE				V. Speical	zed Form	s / Custon	n Report			
													Edata	Ye	s	No	SUBM	PONS 21	77.90
MPLE RECEIPT: CONDITION/COC			CU	STODY SE	ALS:	Y N		RECE	VED BY	-		-	RE	LINQUIS	HED BY		+ /	RECEIV	ED BY
HELINQUISHED BY	RECEIVED BY																		
next liser A	Signature O	S	ignature				Signature					Signat	ure				Signati	ent	
nted Name	Printed Name	P	rinted Name				Printed Name					Printe	I Name				Printed	Name	
TELISSA NEMETH	Film Film	F	lirm				Firm					Firm					Firm		
UES COLP	CAS U						D					Data	Ima				Date/T	ime	

Ct Name GRIFFIN	Project Number	12.00	000				1	ANALYS	SIS REC	QUEST	ED (In	clude	Metho	d Num	ber an	d Con	tainer	Prese	rvative)		_
Manager	Report CC	Falko			PRE	SERVAT	IVE							151								
any/Address		- 1101-0					1	11	1	1	1	1	1		1	/	1	/	/	/ Pre	NONE	(ey
SOO, LOREOZATION					ERS		11	/	1	/	/	/	1	1	1	/	/	/	1	2.	HNO3 H2SO4	
34 St. Clair					ITAIN		4	4	1	1 a	10mil	E H	T	1	11	1	/ /	1	/ /	4. 5.	NãOH Zn. Acetat	te
Cleveland off 4411	3				CON	/	De	00	V D	00	IL b	100	1	1	1	/	1	/	/	6. 7.	MeOH NaHSO4	
11.31.22.2.401	FAX:	17-241	.4		ERO	1/10	50 A 40	601	Sog	808		Tal	1	/	/	1	/	/	/	8.	Other	-
Her's Signature Hr.	a C Sampler's Printed Na	me	.,		IUMBI	SVO	000	104	50.5	100	ALS.	00-	-/	1	1	/	1	/	/			
All A	FOR OFFICE USE ONLY	SAM	PLING	-	2	SCA 826	Sale .	ES.	808	NET 00	MEL	95	/	11	11	1	//	1	ALT	REN	ARKS/	ON
CLIENT SAMPLE ID	LABID	DATE	TIME	MATRIX	7	1-9		9-1	9-0	1-2		X				1	1	1				
MW1-103	79	6.18.03	Dayo	aw	1							1					1					
MW25-603	Pn		1041		11																	
MW 3 - 603	PI		10310		Ħ																	
MINISS-1.03	82		1024		Π													-				
MWSD - 100.3	83		1014									1	_		_			_				
MW15-603	84		1058		11				-			+	-		-	-	-	-+				
MW100-603	85		1108		11				-	-		+	-		-			-+				-
MW 75 - 603	P6	++	1122		11				-	-		t	-		-	-	-	-				-
MWTD -603	87	IV	1116	V	V		TURN	ABOUN	D REQL	JIREME	NTS	V	REP	ORT RE	QUIRE	MENTS	1		INVO	ICE INF	FORMATION	1
CIAL INSTRUCTIONS/COMMENTS							R	USH (SUI	RCHARGI	ES APPL	Y)		_ I. Res	its Only								
							24 1	r	_40 hr		5 day	-	II. Res	ults + QC DUP, MS/	Summar MSD as	ries required)	PO#				
							S	TANDARI	ATE				_III. Re	suits + QC	C and Cal	libration		BILL	TO:			
													Summ	aries			Dete					
9							REQUEST	ED REPO	RT DATE	-		-	_ IV. Da	la Validati	on Hepor	nt waan na	anort					-
					-							1-	Edat	B	Yes	N	0	SUB	MESION	チノフ	294	
MPLE RECEIPT: CONDITION/C	OOLER TEMP:		CL	ISTODY SE	ALS:	YN		DEC	FIVED	BY		+-		RELINO	UISHED	BY		+ 1	c cy	RECE	IVED BY	
RELINQUISHED BY	RECEIVED BY		R	ELINQUISHE	UBY			net												-		
Act 1: 1. An	Signature	-	Signature				Signature					Sign	ature					Sign	ature			
Ned Name	Printed Name	5	Printed Name				Printed Na	UTTO				Prin	ted Nam	9				Print	ed Name	-		
MELLSSK/ NEMERE	Firm	m	Firm		-		Firm					Firm)					Firm				_
UKS COLP	CD	-	Date/Time				Date/Time	1				Date	/Time					Date	Time			

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

roject/Client	URS		S	ubmission Number	r_1720	14	
Cooler received on_	whields by	P	cou	RIER: CAS U	PS FEDEX	CD&L	CLIENT
Were custor Were custor Did all bottl Did any VO Were Ice or Where did t	ly seals on outside ly papers properly the es arrive in good co A vials have significe Ice packs present? the bottles originate	of cool filled o ondition icant a ? ?	er? ut (ink n (unb ir bubl	x, signed, etc.)? roken)? bles?	YES YES CAS/R	NO NO NO CLI	N/A ENT
Is the temperature	rature within 0° - 6	° C?:	<u>-</u> ا	Yes Yes	Yes	'Yes	Yes
If No. Evol	ain Below	- On	0	No? No	No	No	No
n no, expr				-1 ONRY	.225		
f out of Temperat Cooler Breakdown: Were all bot Did all bottl Were correc	er ID: 161 or ture, Client Appro- Date : title labels complete e labels and tags ag ot containers used for	IR GU	Run S Allowing the custometry in the custometry	Reading From: T Samples <u>Sq me</u> <u>S</u> by: <u>by</u> : <u>by: <u>by</u>: <u>by</u>: <u>by: by: <u>by</u>: <u>by: by: by: by: by: <u>by: by: by: by: by: by: <u>by: by: by: by: by: by: by: by: by: by: </u></u></u></u></u>	emp Blank M. Cere of M. Cere	NO NO NO NO NO	flated
Thermometer f out of Temperat Cooler Breakdown: Were all bot Did all bott Were correct Mere correct Air Samples Explain any discrep	er ID: 161 of ture, Client Appro- Date : tile labels complete e labels and tags agent to containers used for s: Cassettes / Tube ancies:	IR GL	Run S A / C halysis th cus th cus th cus th cus th cus	Reading From: T Samples <u>Jame</u> <u>Bamples Jame</u> by: by: by: by: by: by: by: by: by: by: by: by: canisters Pressuria	emp Blank M. Cere of M. Cere	NO NO NO Bags In	flated
Thermometer f out of Temperat Cooler Breakdown: Were all bot Did all bott Were correct Mere correct Air Samples Explain any discrep	er ID: 161 of Date: Date: title labels complete e labels and tags ag t containers used for s: Cassettes / Tub ancies:	IR GL	\mathbf{Run} \mathbf{S} \mathbf{Run} \mathbf{Run} \mathbf{S} \mathbf{Run} \mathbf{Run} \mathbf{Runn} \mathbf{Run} \mathbf{Runn} \mathbf{Runn} \mathbf{Runn} \mathbf{Runn} \mathbf{Runn} \mathbf{Runn} \mathbf{Runn} \mathbf{Runn} \mathbf{Runn} \mathbf{Runnn} \mathbf{Runnnn} $Runnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn$	Reading From: T Samples <u>Jame</u> 3 by: 5, preservation, etc tody papers? dicated? Canisters Pressuriz Sample I.D.	emp Blank Mar Cereif Mar Cereif Mar Cereif VES VES VES VES VES VES VES Reagent	NO NO NO Bags In Vo	flated
Thermometer f out of Temperat Cooler Breakdown: Were all bot Did all bottl Were correct Air Samples Explain any discrep	er ID: 161 of mure, Client Appro- Date : title labels complete e labels and tags ag t containers used for s: Cassettes / Tub- ancies: Reagent	IR GL	Run S A / C nalysis th cust th cust th cust not NO	Reading From: T Samples <u>Janu</u> 3 by: 5, preservation, etc tody papers? dicated? Canisters Pressuriz Sample I.D.	emp Blank Mar Cereif Mar Cereif Mar Cereif VES VES VES VES VES VES VES VES	NO NO NO Bags In	flated
Thermometer f out of Temperat Cooler Breakdown: Were all bot Did all bottl Were correct Air Samples Explain any discrep pH 12	er ID: 161 of Date: Date: tile labels complete e labels and tags ag t containers used for s: Cassettes / Tube ancies: Reagent NaOH	IR GL	Run S nalysis th cus th cus th cus NO	Reading From: T Samples <u>Jame</u> 3 by: 5, preservation, etc tody papers? dicated? Canisters Pressuriz	emp Blank	NO NO NO B Bags In	flated N
Thermometer f out of Temperat Cooler Breakdown: Were all bot Did all bottl Did all bottl Were correct Air Samples Explain any discrep pH 12 2	er ID: 161 of Ture, Client Appro- Date : tile labels complete e labels and tags ag t containers used for ancies: Reagent NaOH HNO ₃	IR GU	Run S nalysis th cus th cus th cus NO	Reading From: T Samples <u>Janu</u> <u>3</u> by: <u>5</u> , preservation, etc tody papers? dicated? Canisters Pressuria	emp Blank	NO NO NO Bags In	flated
Thermometer f out of Temperat Cooler Breakdown: Were all both Did all both Did all both Were correct Air Samples Explain any discrep pH 12 2 2 2	er ID: 161 of ure, Client Appro- Date : title labels complete e labels and tags ag et containers used for s: Cassettes / Tub- ancies: Reagent NaOH HNO ₃ H ₂ SO ₄	IR GU	Run S // C halysis th cust ests in ct NO	Reading From: T Samples <u>Jame</u> <u>3</u> by: s, preservation, etc tody papers? adicated? Canisters Pressuria	emp Blank	NO NO NO Bags In	flated
Thermometer f out of Temperat Cooler Breakdown: Were all bot Did all bottl Did all bottl Were correct Air Samples Explain any discrep pH 12 2 2 Residual Chlorine (+/-)	er ID: 161 of ure, Client Appro- Date : tile labels complete e labels and tags age t containers used for : Cassettes / Tub- ancies: Reagent NaOH HNO ₃ H ₂ SO ₄ for TCN & Phenol	IR GU	Run S nalysis th cus ests in ct	Reading From: T Samples <u>Jame</u> <u>3</u> by: s, preservation, etc tody papers? dicated? Canisters Pressuriz	emp Blank	NO NO NO B Bags In	flated
Thermometer f out of Temperat Cooler Breakdown: Were all bot Did all bott Were correct Air Samples Explain any discrep pH 12 2 2 Residual Chlorine (+/- 5-9**	er ID: 161 of ure, Client Appro- Date : tile labels complete e labels and tags age t containers used for : Cassettes / Tub- ancies: Reagent NaOH HNO ₃ H ₂ SO ₄ for TCN & Phenol P/PCBs (608 only)	IR GL	Run S nalysis th cus ests in ct	Reading From: T Samples <u>Jame</u> <u>James</u> s, preservation, etc tody papers? dicated? Canisters Pressuria Sample I.D.	PC OK to adju	NO NO NO B Bags In Vo	flated

Other Comments:


A FULL SERVICE ENVIRONMENTAL LABORATORY

July 25, 2003

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

PROJECT:GRIFFIN 13807296 Submission #:R2317618

Dear Mr. Szuhay

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of _____ 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.

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CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2317618

Lab ID	<u>Client ID</u>
656048	EFF-071403

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

All samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

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







Effective 6/12/2003

INORGANIC QUALIFIERS

C (Concentration) qualifier -

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

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

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

M (Method) qualifier:

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

CAS/Rochester Lab ID # for State Certifications

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

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COLUMBIA ANALYTICAL SERV	VOLAT METHOI Report	LE ORGANICS 8260B TCL ed: 07/25/03	
URS Corporation Project Reference: GRIFFIN 138072 Client Sample ID : EFF-071403	96		
Date Sampled : 07/14/03 Order Date Received: 07/14/03 Submission	#: 656048 #: R2317618	Sample Matrix: Analytical Run	WATER 93433
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/16/03			
ANALYTICAL DILUTION: 1.00			
	20	20 11	IIC/I.
ACETONE	20	20 U	
BENZENE	5.0	5.0 0	
BROMODICHLOROMETHANE	5.0	5.0 0	
BROMOFORM	5.0	5.0 0	UG/L
BROMOMETHANE	5.0	5.0 0	UG/L
2-BUTANONE (MEK)	10	10 0	UG/L
CARBON DISULFIDE	10		UG/L
CARBON TETRACHLORIDE	5.0	5.0 0	UG/L
CHLOROBENZENE	5.0	5.0 0	
CHLOROETHANE	5.0	5.0 0	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-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
TETHYLENE 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
.1.2.2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
ETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
, 1, 1-TRICHLOROETHANE	5.0	5.0 U	UG/L
,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
D-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	8
TOLUENE-D8 (91	- 113 %)	102	8
DIBROMOFLUOROMETHANE (87	- 115 %)	110	8

COLUMBIA ANALYTICAL SERV IS

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

Date Sampled : Date Received:	Order # Submission #	: 658754 :	Sample Matrix: WATER Analytical Run 93433					
ANALYTE		PQL	RESU	LT UNITS				
DATE ANALYZED : 0	7/16/03							
ANADITICAD DIBOTION.	2.00							
CETONE		20	20					
ENZENE		5.0	5.0					
ROMODICHLOROMETHANE		5.0	5.0					
ROMOFORM		5.0	5.0					
ROMOMETHANE		5.0	5.0					
-BUTANONE (MEK)		10	10					
ARBON DISULFIDE		10	10					
ARBON TETRACHLORIDE		5.0	5.0					
CHLOROBENZENE		5.0	5.0					
CHLOROETHANE		5.0	5.0					
CHLOROFORM		5.0	5.0					
CHLOROMETHANE		5.0	5.0					
IBROMOCHLOROMETHANE		5.0	5.0					
,1-DICHLOROETHANE		5.0	5.0					
,2-DICHLOROETHANE		5.0	5.0					
,1-DICHLOROETHENE		5.0	5.0					
CIS-1,2-DICHLOROETHENE		5.0	5.0					
RANS-1,2-DICHLOROETHEN	E	5.0	5.0					
,2-DICHLOROPROPANE		5.0	5.0					
IS-1, 3-DICHLOROPROPENE		5.0	5.0					
RANS-1, 3-DICHLOROPROPE	NE	5.0	5.0					
THYLBENZENE		5.0	5.0					
-HEXANONE		10	10					
METHYLENE CHLORIDE		5.0	5.0					
-METHYL-2-PENTANONE (M	IIBK)	10	10					
STYRENE		5.0	5.0					
.,1,2,2-TETRACHLOROETHA	NE	5.0	5.0					
ETRACHLOROETHENE		5.0	5.0					
OLUENE		5.0	5.0					
,1,1-TRICHLOROETHANE		5.0	5.0					
,1,2-TRICHLOROETHANE		5.0	5.0					
RICHLOROETHENE		5.0	5.0					
INYL CHLORIDE		5.0	5.0					
)-XYLENE		5.0	5.0					
+P-XYLENE		5.0	5.0	0 00/1				
SURROGATE RECOVERIES	QC LI	MITS						
BROMOFLUOROBENZENE	(83 -	118 %)	102	8				
OLUENE-D8	(91 -	113 %)	99	8				
TROMOFILIOROMETHANE	(87 -	115 %)	105	8				

nevern N	Project Number	91.						ANALY	SIS RE	QUES	STED (Include	Meth	od Nu	mber a	nd Co	ntain	er Pre	servative)					
Project Manager	Report CC	Rall			PRE	ESERVATIV	E		Γ		Γ					Т								
Cheveland SH	44113 FAX#		4411 3 IFAX#		St. Clair eland OH 44113		14113 IFAX#		F CONTAINERS		Dar	600	200	000	L Lub	OLVED Is bein			1	1	1		Pr 0. 1. 2. 3. 4. 5. 6. 7.	eservative Ker NONE HCL HNO3 H2SO4 NaOH Zn. Acetate MeOH NaHSO4
211, 22 2400 f amplers signature	Sampler's Printed Nam	Sampler's Printed Name			JMBER O	VOA's	SVOA	1000	0.000 0.000	S. TOT	Somen S			/	/	8. Other								
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMP	PLING TIME	MATRIX	ž	Lechie	50 N	PESTI	PCB's	METAL	METAL	25-		/ ,	1	//	/	/	REN	ARKS/				
EFF-071403		7.14.00	1603	GW	3				~			X			1	1	1		ALIERNAIE	DESCRIPTION				
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	and the second second						-			st	-				-		-	-						
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tals						REQ	TURNAF RUSI 24 hr STAN UESTED	OUND F I (SURCH ARD DARD	REQUIF IARGES	REMEN APPLY)	ITS) fany		REPOI . Results I. Result LCS, DL II. Result Summari	RT REQ s Only bs + QC S JP, MS/M hts + QC s les	QUIREM Summarie SD as rea and Caliba	ENTS a quired) ration		PÖ# BILL T	INVOICE INFO	RMATION				
QAPP						REQ	VESTED	REPORT	DATE			'	V. Data \ . Speica	Validation	Report w	vith Raw om Repo	Data							
PLE RECEIPT: CONDITION/COC	DLER TEMP:		CUS	TODY SEAL	S: Y	N			-		-		Edata	Y	/es	No		SUBM	ISSIGNET (1	P				
HELINGUISHED BY	RECEIVED BY		RELI	NQUISHED B	Y			RECEIV	ED BY				RE	LINQUIS	SHED B	1			RECEIVE	D BY				
Chilis A In	Signator An	Sign	ature			Signa	iture					Signatur	Ð					Signat	179					
Name ELISSA NEMERI	Phinted North Serie und Colo	Print	ed Name			Printe	d Name					Printed I	lame				-	Printed	Name					
RS CORP 1645	Firm CA3, 1	Firm				Firm						Firm						Firm						
allilla	Date/Time-7/11/02 11	dis Date	Time			Date/	Time					Data/Tim						Data						

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

*	ORS	•		Submission	Number_	R2-1761	2	
ooler received or	2/14/03 by	BC	_co	URIER: C	AS UPS	FEDEX	CD&L	CLIEN
Were custo Were custo Did all bot Did any Vo Were Ice o Where did Temperatu	ody seals on outside ody papers properly tles arrive in good OA vials have sign r Ice packs presen the bottles originat re of cooler(s) upon	e of coo filled conditionificant t? e? n receip	oler? out (in on (un air bul	uk, signed, e broken)? bbles?	tc.)?	YES YES YES CAS/R	NO NO NO NO CLI	N/A ENT
Is the temp	erature within 0° -	6° C?:		Yes	Yes	Yes	'Yes	Yes
If No, Exp	lain Below		0	No	No	No	No	No
Date/Time	Temperatures Tak	en:	71	4/03			16.	50
Were corre Air Sample plain any discrep	ct containers used f s: Cassettes / Tub pancies:	tor the toes Inta	ct	ndicated? Canisters Pr	essurized	Tedlar®	NO Bags Infl	ated N
· ·		YES	NO	Sample I.D.	R	eagent	Vol.	Added
pH	Reagent							
12	NaOH			·.	•			
2	HNO3							
2	H ₂ SO ₄					•.		
anidual Chloring (+)) for TCN & Phenol							•
esidual Chionne (+/-							:	
5-9**	P/PCBs (608 only)	1			-		the second se	
5-9** S = All samples OK fpH adjustment is rec V(P/PCBs (608 only) NO = Sam uired, use NaOH and/or DC Vial pH Verification Tested after Analysis). Following Samples Exhibited pH > 2	ples were $r H_2 SO_4$	e preser	ved at lab as list	ed PC	COK to adjust	pH	

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A FULL SERVICE ENVIRONMENTAL LABORATORY

September 2, 2003

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

Ele en un SEP - 8 2003 URS

PROJECT:GRIFFIN 13807296 Submission #:R2318043

Dear Mr. Szuhay

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Mark Wilson Client Service Manager

Enc.



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

THIS IS AN ANALYTICAL TEST REPORT FOR:

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

Report Contains a total of 8 pages

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

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



CASE NARRATIVE

This report contains analytical results for the following samples: Submission #: R2318043

Lab ID	<u>Client ID</u>
664661	EFF-081503

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

All samples were preserved in accordance with approved analytical methods.

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

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

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







Effective 6/12/2003

ORGANIC QUALIFIERS

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- X As specified in Case Narrative.
- * This flag identifies compounds associated with a quality control parameter which exceeds laboratory limits.

CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated Delaware Accredited Connecticut ID # PH0556 Florida ID # E87674 Massachusetts ID # M-NY032 Navy Facilities Engineering Service Center Approved Nebraska Accredited

NELAP Accredited New York ID # 10145 New Jersey ID # NY004 New Hampshire ID # 294100 A/B Pennsylvania Registration 68-786 Rhode Island ID # 158 South Carolina ID #91012 West Virginia ID # 292

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COLUMBIA ANALYTICAL SERVICES

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

Date Sampled : 08/14/03 Date Received: 08/15/03 Sub	Order #: 664661	Sample Matrix Analytical Run	WATER 94495
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 08/21/	03		
ANALYTICAL DILUTION:	1.00		
ACETONE	2	11.00	
BENZENE	5		UG/L
BROMODICHLOROMETHANE	5.0	5.00	
BROMOFORM	5.0	5.00	UG/L
BROMOMETHANE	5.0	5.00	UG/L
2-BUTANONE (MEK)	5.0	5.00	UG/L
CARBON DISILFIDE	10		
CARBON TETRACHLOPIDE	10		UG/L
CHLOROBENZENE	5.0	5.00	UG/L
CHLOROFTHANE	5.0	5.00	UG/L
CHLOROFORM	5.0	5.00	UG/L
CHLOROMETHANE	5.0	5.00	UG/L
	5.0	5.0 0	UG/L
	5.0	5.00	UG/L
1 2-DICHLOROFTUNE	5.0	5.0 0	UG/L
1 1-DICHLOROFTURNE	5.0	5.00	UG/L
CIG-1 2-DICHLOROETHENE	5.0	5.00	UG/L
TPANG-1 2-DICHLOROEINENE	5.0	5.00	UG/L
1 2-DICHLORODDODANE	5.0	5.0 0	UG/L
CIG-1 2 DICULOPOPPOPPUE	5.0	5.00	UG/L
TRANG 1 2 DIGULOROPROPENE	5.0	5.0 U	UG/L
TRANS-I, 3-DICHLOROPROPENE	5.0	5.0 U	UG/L
2 HEVANOVE	5.0	5.0 U	UG/L
	10	10 U	UG/L
METHINE CHLORIDE	5.0	5.0 U	UG/L
*-MEINIL-2-PENTANONE (MIBK)	10	10 U	UG/L
	5.0	5.0 U	UG/L
E, I, Z, Z-TETRACHLOROETHANE	5.0	5.0 U	UG/L
LE I RACHLOROETHENE	5.0	5.0 U	UG/L
	5.0	5.0 U	UG/L
1, 1, 1 - TRICHLOROETHANE	5.0	5.0 U	UG/L
L, L, Z-TRICHLOROETHANE	5.0	5.0 U	UG/L
INTERIOROETHENE	5.0	110	UG/L
INYL CHLORIDE	5.0	5.0 U	UG/L
D-XILENE	5.0	5.0 U	UG/L
1+P-XYLENE	5.0	5.0 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
BROMOFLUOROBENZENE	(83 - 118 %)	105	*
OLUENE-D8	(91 - 112 %)	110	9
IBROMOFILIOROMETHANE		100	0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS METHOD: 8260B TCL

ABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 665597	ANALYT	ICAL RUN # :	94495
ANALYTE	TRUE VALUE	* RECOVERY	QC LIMITS
ATE ANALYZED : 08/20/03 NALYTICAL DILUTION: 1.0			
ACETONE	20.0	107	50 - 150
BENZENE	20.0	101	70 - 130
BROMODICHLOROMETHANE	20.0	99	70 - 130
BROMOFORM	20.0	84	70 - 130
BROMOMETHANE	20.0	98	50 - 150
2-BUTANONE (MEK)	20.0	98	50 - 150
CARBON DISULFIDE	20.0	83	70 - 130
CARBON TETRACHLORIDE	20.0	96	70 - 130
CHLOROBENZENE	20.0	90	70 - 130
CHLOROETHANE	20.0	103	70 - 130
CHLOROFORM	20.0	97	70 - 130
CHLOROMETHANE	20.0	126	70 - 130
DIBROMOCHLOROMETHANE	20.0	91	70 - 130
1,1-DICHLOROETHANE	20.0	104	70 - 130
1,2-DICHLOROETHANE	20.0	98	70 - 130
1,1-DICHLOROETHENE	20.0	111	70 - 130
CIS-1, 2-DICHLOROETHENE	20.0	101	70 - 130
TRANS-1, 2-DICHLOROETHENE	20.0	105	70 - 130
1,2-DICHLOROPROPANE	20.0	96	70 - 130
CIS-1, 3-DICHLOROPROPENE	20.0	92	70 - 130
TRANS-1, 3-DICHLOROPROPENE	20.0	93	70 - 130
ETHYLBENZENE	20.0	95	70 - 130
2-HEXANONE	20.0	98	70 - 130
METHYLENE CHLORIDE	20.0	101	70 - 130
4-METHYL-2-PENTANONE (MIBK)	20.0	99	70 - 130
STYRENE	20.0	91	70 - 130
1,1,2,2-TETRACHLOROETHANE	20.0	85	70 - 130
TETRACHLOROETHENE	20.0	89	70 - 130
TOLUENE	20.0	98	70 - 130
1,1,1-TRICHLOROETHANE	20.0	102	70 - 130
1,1,2-TRICHLOROETHANE	20.0	95	70 - 130
TRICHLOROETHENE	20.0	109	70 - 130
VINYL CHLORIDE	20.0	111	70 - 130
O-XYLENE	20.0	93	70 - 130
M+P-XYLENE	40.0	97	70 - 130

COLUMBIA ANALYTICAL SERVICES

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

Date Sampled : Date Received:	Order Submission	#: 665596 #:	Sample Matrix: Analytical Run	WATER 94495
ANALYTE		PQL	RESULT	UNITS
DATE ANALYZED : 08/ ANALYTICAL DILUTION:	21/03 1.00	1		-
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 11	UG/L
, 1-DICHLOROETHANE		5.0	5 0 11	UG/L
, 2-DICHLOROETHANE		5.0	5 0 11	UG/L
, 1-DICHLOROETHENE		5.0	5 0 11	UG/L
CIS-1,2-DICHLOROETHENE		5.0	5.0 11	UG/L
RANS-1,2-DICHLOROETHENE		5.0	5.0 11	UG/L
, 2-DICHLOROPROPANE	·	5.0	5.0 11	UG/L
CIS-1, 3-DICHLOROPROPENE		5.0	5.0 11	UG/L
RANS-1, 3-DICHLOROPROPENE		5.0	5.0 U	UG/L
THYLBENZENE		5.0	5.0 U	UG/L
-HEXANONE		10	10 11	UG/L
ETHYLENE CHLORIDE		5.0	5.0 U	UG/L
-METHYL-2-PENTANONE (MIBH	()	10	10 U	UG/L
TYRENE		5.0	5.0 U	UG/L
,1,2,2-TETRACHLOROETHANE		5.0	5.0 U	UG/L
ETRACHLOROETHENE		5.0	5.0 U	UG/L
OLUENE		5.0	5.0 U	UG/L
,1,1-TRICHLOROETHANE		5.0	5.0 U	UG/L
,1,2-TRICHLOROETHANE		5.0	5.0 U	UG/L
RICHLOROETHENE		5.0	5.0 U	UG/L
INYL CHLORIDE		5.0	5.0 U	UG/L
-XYLENE		5.0	5.0 U	UG/L
+P-XYLENE		5.0	5.0 U	UG/L
SURROGATE RECOVERIES	QC L	IMITS		
-BROMOFLUOROBENZENE	(83 -	- 118 %)	102	*
OLUENE-D8	(91 -	- 113 %)	111	*
IBROMOFLUOROMETHANE	(87 -	115 9)	100	0.

Project Name GRIFEN	Project Number	138071	9/0				A	NALYS	SIS RE	QUES	TED (Include	Meth	nod Nu	mber a	and Ca	ontain	er Pre	eervative)	
Troject Manager LARRY SZUHAY	Report CC	THERINE	PALY	n	PRE	SERVATIN	Æ													
UPS CORP							1	1	1	1	-	1	1		1	1		+	Preservative Ke	
800 ST CLAR					NERS		//	/	1	/	/	1		/	/	/	/	/	1. HCL 2. HNO3 3. HoSQ	
CLEVERAND DH	44113				ONTAI		die		1		3/ 3	A Partie	5/	1	/	/	/	/	4. NaOH 5. Zn. Acetate	
2110 - 1072 - 2400	FAX# 2110	- 1.17	17-241.4		AOFC		A Sta	50	0	ents	SSO Bents	1	/ /	/ /	1	1	//	7. NaHSO4		
moier's Signature / Sect /	List the Sample's Printed Name		Al-	-A.	UMBEF	100	120		1000	000			1	/	/	/	/	/		
CLIENT SAMPLE ID	FOR OFFICE USE O	ILY SAI	MPLING	MATDIN	Ž	1000		A Page			METAL	50	2/	1	/	/	/	/	REMARKS/	
EFF-081503		8/14/0.	3 1515	GW	3	-4		-0	-0		1-6	3		f	-1		\vdash	f	ALTERNATE DESCRIPTION	
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CIAL INSTRUCTIONS/COMMENTS tais							TURNAR	OUND	REQUI	REMEN	ITS		REPO	DRT RE	QUIRE	MENTS	5	T	INVOICE INFORMATION	
						-	FIUS	I (SURCI	HARGE	S APPLY)	-	I. Resu	its Only						
							STAN	DARD	un .			-	II. Resu	ilts + QC DUP, MS/N	Summai MSD as I	ries required	ŋ	PO#		
						RE	QUESTED	AX DAT	E			-	III. Real Summa	ults + QC	and Cal	ibration		BILL	10:	
						DE	NIEGTED	EDODT	DATE				IV. Date	Validatio	n Repor	t with Re	aw Data			
								EFUNI	LANIE			_	V. Speid	alized Fo	mms / Cu	ustom R	eport			
MPLE RECEIPT: CONDITION/CO	OLER TEMP:		CU	STODY SEA	LS: Y	N							Edeta		Yes _	N	0	SUBM	199471SUY3	
RELINQUISHED BY	RECEIVED BY		RE	LINQUISHED	BY			RECEN	VED BY	1			R	ELINQU	ISHED	BY		1	RECEIVED BY	
MELISSA NEWEAT	Signature		Signature			Sig	ature					Signati	Jre					Simatura		
DRS - RUFFMD	Printed Name	on le	Printed Name			Priz	ted Name					Printed	Name					Printec	d Name	
14/03	Firm CAS	3. F	1m			Firm	T					Firm						Firm		
	Data		Sale Press						_											

		Coulor	Receipt	Allu	rreserva	inon ci	ICCA P	JI III		
Project/Clier	nt	URS			Submiss	ion Nun	nber	1804	13	
Cooler receiv	ved on_	8/15/03 by:	CHOR	_cot	JRIER:	CAS	UPS	FEDEX	CD&L	CLIENT
1. Were 2. Were 3. Did a 4. Did a 5. Were 6. When 7. Temp	e custod custod all bottl my VO c Ice or re did th perature	ly seals on outsi ly papers proper es arrive in good A vials have sig Ice packs prese he bottles origin e of cooler(s) up	de of coo ly filled l condition ificant ant? ate? on receip	oler? out (in on (un air but	k, signed broken)? bbles?	1, etc.)?		YES YES YES YES YES YES YES SAS/R	NO NO NO NO NO CLIII	N/A ENT
Is the	tempe	rature within 0°	- 6° C?:		Yes	Yes		Yes	Yes	Yes
If No	, Expla	ain Below		(NO	No		No	No	No
Date/	Time T	emperatures Ta	ken:	e	15/03	1615				
Therr	nomete	er ID: 161 of	RG	UN	Reading	From:	Temp	Blank o	Sam	ple Bottle
Wara	the second second	0	-		tous pup	CISI		YEST	NO	
Air Sa Explain any d	amples: liscrepa	containers used Cassettes / Trancies:	l for the tubes Inta	tests in ict	dicated? Canister	s Pressu	rized	Tedlar®	NO NO Bags Infl	ated N/
Air Sa Explain any c	correct amples liscrepa	t containers used Cassettes / Trancies:	I for the tubes Inta	tests in act NO	Canister Sample	s Pressu I.D.	rized C	YES Tedlar®	NO NO Bags Infl Vol.	ated N/A
Air Si Explain any c	amples:	containers used Cassettes / Trancies: Reagent	l for the pubes Inta	no	Canister Sample	s Pressu	rized C	YES Tedlar®	NO NO Bags Infl Vol.	ated N/
Air Si Explain any c pH	amples:	containers used Cassettes / Trancies: Reagent NaOH	YES	NO	Canister Sample	s Pressu	rized R	YES Tedlar®	NO NO Bags Infl Vol.	ated N/
Air S Explain any c pH 12 2	amples	containers used Cassettes / Trancies: Reagent NaOH HNO ₃	YES	NO	Canister	s Pressu I.D.	rized R	YES Tedlar®	NO NO Bags Infl Vol.	ated N/
Air S Explain any c pH 12 2 2	amples	containers used Cassettes / Trancies: Reagent NaOH HNO ₃ H ₂ SO ₄	YES	NO	Canister Sample	s Pressu I.D.	R	YES Tedlar®	NO NO Bags Infl Vol.	ated N/
Air S Explain any c pH 12 2 Residual Chlori	ne (+/-)	containers used Cassettes / Trancies: Reagent NaOH HNO ₃ H ₂ SO ₄ for TCN & Phenol	YES	NO	Sample	s Pressu I.D.	R	redlar®	NO NO Bags Infl Vol.	ated N/.
Air S Explain any c pH 12 2 Residual Chlorin 5-9** ES = All sampl	ne (+/-)	containers used Cassettes / Trancies: Reagent NaOH HNO ₃ H ₂ SO ₄ for TCN & Phenol P/PCBs (608 only) NO = Sa	YES	NO	Sample	s Pressu	R	YES Tedlar®	NO NO D Bags Infl Vol.	ated N/.

1

P:\QAQC\QA_DOCUM\SOP\DRAFT\Attachments\Cooler Receipt And Preservation Check Form.doc

Appendix o Monitoring Well Groundwater Analytical Results



August 13, 2003

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

PROJECT: GRIFFIN 13807296.00000 Submission #: R2317294

Dear Ms. Schuler:

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

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Tall. Ar

Mark Wilson Client Service Manager

Enc.

Receipt date corrected -

CASE NARRATIVE

COMPANY: URS Greiner WCC Griffin IRM SUBMISSION #: R2217294

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

VOLATILE ORGANICS

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

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

All initial and continuing calibrations were compliant.

All blank spike recoveries were within QC limits.

All surrogate standard recoveries were within QC limits.

All Internal standard areas were within QC limits.

All samples were analyzed within the required holding times.

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

SDG #: MW9S	5-603	BATCH CO	OMPLETE:yes		DATE REV DATE DUE	ISED: : 07/12/03		
SUBMISSION	R231/294	DATE: 06	(18/03		PROTOCO	L: ASPB		
CLIENT:	URS Corporation	CUSTOD	SEAL PRESENT/ABSENT:		SHIPPING	No.:		
CLIENT REP:	Mark Wilson	CHAIN OF	CUSTODY PRESENT/ABSEN	T:	SUMMARY	PKG: Y_	X N	
PROJECT:	GRIFFIN 13807296.00000	IMATRIX	PEOLIESTED PARAMETERS	DATE	DATE	pH	%	REMARKS
CAS JOB #	CLIENT/EPA ID	MATRIA	REQUEUTED FAId METERIC	SAMPLED	RECEIVED	(SOLIDS)	SOLIDS	AMPLE CONDITIO
649969	MW9S-603	WATER	95-1	6/18/03	6/19/03			
649970	MW9D-603	WATER	95-1	6/18/03	6/19/03			
649971	MW/10S-603	WATER	95-1	6/18/03	6/19/03			
649972	MW10D-603	WATER	95-1	6/18/03	6/19/03			
649973	MW11D-603	WATER	95-1	6/18/03	6/19/03			
649974	MWY(DUP)-603	WATER	95-1	6/18/03	6/19/03			
649977	EEE-061803	WATER	95-1	6/18/03	6/19/03			
640078	MW1-603	WATER	95-1	6/18/03	6/19/03			
640070	MW2S-603	WATER	95-1	6/18/03	6/19/03			
640090	MW20-000	WATER	95-1	6/18/03	6/19/03			
649900	M/A/A-603	WATER	95-1	6/18/03	6/19/03			
640092	MW4-003	WATER	95-1	6/18/03	6/19/03			
649962	MW50-603	WATER	QC 95-1	6/18/03	6/19/03			
049903	MW000-003	WATER	95-1	6/18/03	6/19/03			
049904	MAGD 603	WATER	95-1	6/18/03	6/19/03			
649985	NIN/78 603	WATER	95-1	6/18/03	6/19/03			
649986	WW75-003	WATER	95-1	6/18/03	6/19/03			
649987	MVV7D-003		95-1					
670201	Trip Dearch	1.	45-1					
650204	COOLER DIGION		10					
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		_						
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				1				







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

Columina	CHANN GENCUSTED DY MABGERATORY AND LYSIG REGULES OF THE)" ••••
Services INC.	0 14 14 00 0.4 0 00 0 Basharter NV 14600 0850 + (585) 288-5380 + 800-695-7222 v11 + FAX (585) 288-8475 PAGE OF 2	AS Contact
An Employee - Owned Company	One Mustara St., Suite 230 (Hochestell, NY 14003/0603 (060) 200/060 400 600 600 722 ATT 110 (060) 200 500 722	

Project Name	oject Name						ANALYSIS REQUESTED (include Method Number and Container Preservative)															
GRUFFILL Project Manager	1580124L Report CC	e . COD	00		PRE	SERVATI	VE					T	1		T	1	1					
LARRY SECHAN	Catherine	Palk	0			1								nci j							eservati	ve Key
Company/Address	· · · · · · · · · · · · · · · · · · ·						11	1	/	1	1	/	/	1	1	/	/	1	1	0.	NONE	
1899.1 CL 01					LERS		11	/	/	1	1.	1.	1	1	1	/	1	/	1	2.	HNO3 H2SO	4
tot st. Clair					NTAIP	1 /	d	4	1 9	1 9	alone la	ED P	5/		/	/	/	/	/ /	4, 5.	Zn. Ac	etate
Cleveland, of 44113	Cleveland, OH 44113				- S	1/	d'a	60	00	00	1 p	SOLL TIS b	1	/	1	1	1	/ /	/	7.	NaHS	04
(2112) (10717) 2400 / (216) 622 · 2464				ERO	14.	200	601	See ES	808			/	/	/	/	/	/	1	8.	Other		
Sample's Signature	Sampler's Printed Nam	0			INBI	12	150	202	10	10/57	ILS IS	00/-	-/	/	/	/	/	/	/			
And Dege	OR OFFICE USE ONLY	SAMP	LING		Z	SC/	Sel S	EST 802			IST IN	12	1	1 .	/	/	/	/	/	RE	MARKS/	IPTION
CLIENT SAMPLE ID	LAB ID	DATE	TIME	MATRI	(100	00/01	940	140	120	142		-		-		-		ALI	ERNATI	DESCH	PHON
MW95-603 6	19969	6-18:03	1155	GW	3	+ +		-				X		-			-		-			
MW9D - 403	70		1145		++			-	-			+				-						
MW105 - 403	71		120						-	-					-	-				-		
MWIDD-603	72		1201	++	++	+ +		-								-	-					
MW/110 -403	73		1005	++	++	+ +			-	-				-								
-1AW13-603- M.N			6			+ +		+	-		-			-			-					
MWX (MS)-603 M	120 (83)		1012					-	-	-			-		-	-						
MWK (MSD)-603	V (85)		1013		11				-	-	-		-		-			-				
MWY (DUP)-403	14	V	1049	V	V		_		-	-	-	1	-	-				-				
FFF - 041803	77	6-18:03		GW	3		TUDNI		DEOU	IDEME	INTS	Y	BEP	ORT RE	OUIRI	EMEN	rs	1	INVO	DICE IN	FORMAT	TION
SPECIAL INSTRUCTIONS/COMMENTS							RU	ISH (SUR	CHARGE	ES APPL	2)	-	_L Res	Its Only								
Metals MS/MSD ON	MW 5P						24 hr		. 48 hr		5 day	_	_ II. Res	ults + Q	Summ	arles		PO	1			
N.P. I. I	1.1.7						\$1	ANDARD)				(LCS,	DUP, ME	MSU a	a requir	90)	BILL	TO:	-		
DUP ON N	CWI						REQUESTE	D FAX D	ATE			-	Summ	suns + Q laries	C and C	Anorand	80	-				
												_	_ IV, Da	ta Valida	ion Rep	ort with	Raw Da	ta				
UT ·							REQUESTE	D REPO	HT DATE			_	_ V. Spi	icalized	Forms /	Custom	Report				_	
										-		-	Edat	a	Yes		No	SUI	BMISPION	23	172	94
SAMPLE RECEIPT: CONDITION/COOLE	SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SA				EALS:	YN		REC	EIVED	BY		+		RELINC	UISHE	DBY		+	1-	RECE	IVED BY	
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gnature Signature Signature					Signature					Sigr	ature					Sig	nature		-			
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MELISSA NEMETH FIT	ELISSA NEMETH FIRM					Firm					Firm	1					Firr	n				
Date/Title Da	CHS U	- 10	Date/Time				Date/Time					Dat	e/Time					Dat	e/Time			
4/18/03 1325	La 12/03 1325 Date/Time Date/Time Date/Time											_	-									SCOC-11

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

www.caslab.com	Project Number						AN	ALYSI	S REQ	UEST	ED (Inc	iude	Nethod	Number	and C	ontainer	Prese	rvative)	
GRIFFIN	138072	912.000	000									T		T	1			TT	
ject Manager	Report CC	Files			PRE	SERVATIV	/E						ic	1					No. Ko
LARRY DZVIHAY	Lathean	1,010					11	1	1	1	1	/	/	1	/ /	/	1	11	0. NONE
URS CORPORMION	- the second				SE		11	/	/	1	/	1	/	/ /	/	/	/	/ /	2. HNO3
134 St. Mair					AINE			/	1	1.	1 1	100	1 /	/	/	1	1	/ /	4. NaOH 5. Zn. Acetate
Aleria i all dalla	6				INO	/	10	3	CLP /	CL	pel	Plot	/	1	/	/ /	/	/	6. MeOH 7. NaHSO4
Cleveland off 4911	C FAX#		,		OFO	1 /00	4 8 0	11/60	0	8	Serts Serts	Jent	/	/	11	1 /	/	/	8. Other
1211) 422,24ay	1214/10	22-244	4		BEA	10	252	000	200	000		LILO	/	11	1	/	/	/	
npler's Signature	CC Sampler's Printed N	ame			NUN	SNS NS	50/2	12 C	El so	ALS	TAL	1-0	11	/	/	1	/	/	
- CHICK IN	FOR OFFICE USE ONLY	SAMP	LING	MATRIX		190	2000		200	ME	List M	9	/ /	/	/	11	1	ALTERN	REMARKS/
CLIENT SAMPLE ID	649978	6.18.03	0930	641	3							X							
101175 102	79	1	0940		1										-				
NW 23 - 603	Po		1041		Π									_	-		_		
MW 3-603	PI		10310		Π									_			-+		
NW 7 6000	82		1024		Π												-		
MWSS-605	83		1014		Π									_	-				
MW5D-605	84		1058									1		_	_	+			
NW63-605	PT		1108																
NIV LED - 60.3	P6		1122		Π							1		_	_		_		
MW 15-605	P7		1116	V	V	1						V						110105	INFORMATION
MW D-043		1 1	1101				TURNA	ROUND	REQU	IREME	NTS		REPOR	T REQU	REMEN	ITS		INVOICE	INFORMATION
letals							RU!	H (SURC	CHARGE	S APPL	Y)	-	I. Mesuna	Ony			004		
							24 hr	NDADD	48 hr		o cany	-	(LCS, DU	P, MS/MS	D as requ	ired)	104		
							BEQUESTEI	FAX DA	TE			-	_ tit. Resul	s + QC an	d Calibrat	lion	BILL	TO:	
	*								_				Summan	86 	Dama and and	h Daw Data			
-							REQUESTE	REPOR	T DATE			-	IV. Data	Andarion 1	seport wit	n New Data	-		
D						100						-	_ V. Speici	IZEG FOIT	IS / CUSIO	Me	SUB	MASSION :	> all
ee QAPP			CL	ISTODY SE	ALS:	YN							Edata	YE		NO	11	LIST	1277
AMPLE RECEIPT: CONDITION/CC RELINQUISHED BY	RECEIVED BY		R	ELINQUISHE	DBY			RECI	EIVED E	3Y			RI	LINQUIS	HED BY			ne.	OEIVED D.
. /							Signature					Sign	ture				Sign	ature	
signature Air on the	Signature		Signature				Drinted New	0				Print	ed Name				Print	led Name	
Inted Avame	Printed Name	ŝ	Printed Name				Finted Wall					Firm					Firm	1	
MELLSSK NEMEST	Firm		Firm				Fam								-				······

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

	Cooler Rec	eipt A	na Pre	servation Check F	01 m		
roject/Client	ORS		Sul	bmission Number	1720	14.	
Cooler received on	heles by	<u>p_(</u>	COUR	IER: CAS UPS	FEDEX	CD&L	CLIEN
Were custody Were custody Did all bottle	y seals on outside of papers properly first arrive in good co	of coole illed ou ndition	er? it (ink, i (unbro	signed, etc.)? oken)?	YES TES YES	NO NO NO	N/A
Were Ice or I Where did the	ce packs present? e bottles originate?				YES CAS/R	NO CLI	ENT
Is the temperature	of cooler(s) upon f	° C?:	Y	es Yes	Yes	'Yes	Yes
If No, Explai	in Below		N	No No	No	No	No
Date/Time To	emperatures Taker	1:	(d)18	108 1385 MRY	335		
Thermometer If out of Temperatu Cooler Breakdown: 1. Were all bott	Date :	val to	Run S <i>alysis</i> ,	amples <u>Jame</u> <u>3</u> by: <u>by</u> : <u>by: by: by: by: by: by: by: by: by: by: </u>	My receif	NO	W 614
Thermometer If out of Temperatu Cooler Breakdown: 1. Were all bott 2. Did all bottle 3. Were correct 4. Air Samples: Explain any discrepa	Date : le labels complete labels and tags ag containers used for Cassettes / Tub ancies:	val to (i.e. argree withor the toes Intac	Run S Run S halysis, th custo ests inco	amples <u>Jame</u> <u>3</u> by: <u>Jame</u> preservation, etc.)? ody papers? licated? Canisters Pressurized	A Cecent A Cecent VES TES Tedlar	NO NO NO ® Bags Ir	
Thermometer If out of Temperatu Cooler Breakdown: 1. Were all bott 2. Did all bottle 3. Were correct 4. Air Samples: Explain any discrepa	Date : le labels complete labels and tags ag containers used for Cassettes / Tube	val to (i.e. ar gree with or the to es Intac YES	Run S Run S nalysis, th custo ests inc ct C	amples <u>Jame</u> <u>amples Jame</u> <u>Jameservation</u> , etc.)? preservation, etc.)? ody papers? dicated? Canisters Pressurized Sample I.D.	A Cecer A Cecer VES TES Tedlar Reagent	NO NO NO ® Bags In	aflated I
Thermometer If out of Temperatu Cooler Breakdown: 1. Were all bott 2. Did all bottle 3. Were correct 4. Air Samples: Explain any discrepa	Date : le labels complete labels and tags ag containers used for Cassettes / Tube ancies: Reagent	val to val to (i.e. ar gree with or the to es Intac YES	Run S Run S nalysis, th custo ests inc ct C	amples <u>Jq mu</u> <u>3</u> by: <u>J</u> preservation, etc.)? ody papers? dicated? Canisters Pressurized Sample I.D.	A Cecerif VES VES TES Tedlar Reagent	NO NO NO Bags In	aflated
Thermometer If out of Temperatu Cooler Breakdown: 1. Were all bottle 3. Were correct 4. Air Samples: Explain any discrepa pH 12	Date:	val to val to (i.e. ar gree with or the to es Intac YES	Run S Run S alysis, th custo ests inco ct C	amples <u>Jq mu</u> <u>3</u> by: <u>J</u> preservation, etc.)? ody papers? licated? Canisters Pressurized Sample 1.D.	A Cecer A Cecer VES TES Tedlar Reagent	NO NO NO Bags Ir	aflated
Thermometer If out of Temperatur Cooler Breakdown: 1. Were all bottle 3. Were correct 4. Air Samples: Explain any discrepa pH 12 2	Inf. Iof Iof Inre, Client Appro Date :	val to val to (i.e. ar gree with or the to YES	Run S Run S alysis, th custo ests inco ct C	amples <u>Jq mu</u> <u>3</u> by: <u>J</u> preservation, etc.)? ody papers? licated? Canisters Pressurized	A Cecer A Cecer VES Tedlar Reagent	NO NO NO Bags In	aflated
Thermometer If out of Temperatur Cooler Breakdown: 1. Were all bottle 3. Were correct 4. Air Samples: Explain any discrepa pH 12 2 2	Inc. Ioi Ioi Inc. Client Appro Date :	val to val to (i.e. ar gree with or the to es Intac YES	N Run S Run S alysis, th custo ests inconstruction NO	amples <u>J9 mu</u> <u>3</u> by: <u>J</u> preservation, etc.)? ody papers? licated? Canisters Pressurized Sample I.D.	A receif A receif VES TES Tedlar Reagent	NO NO NO Bags In	aflated I
Thermometer If out of Temperatur Cooler Breakdown: 1. Were all bottle 3. Were correct 4. Air Samples: Explain any discrepa pH 12 2 Residual Chlorine (+/-)	Inc. Ioi Ioi Inc. Client Appro Date :	val to val to (i.e. ar pree with or the to es Intac YES	N Run S Run S alysis, th custo ests inconstruction NO	amples <u>J9 mu</u> <u>3</u> by: <u>1</u> preservation, etc.)? ody papers? licated? Canisters Pressurized Sample I.D.	A receif A receif VES TES Tedlar Reagent	NO NO NO Bags In	mple Both
Thermometer If out of Temperatur Cooler Breakdown: 1. Were all bottle 3. Were correct 4. Air Samples: Explain any discrepa pH 12 2 Residual Chlorine (+/-) 5-9**	Reagent NaOH HNO3 H2SO4 for TCN & Phenol P/PCBs (608 only)	val to val to (i.e. ar gree with or the to es Intac YES	N Run S Run S alysis, th custo ests inco ct C	amples <u>Jq mu</u> <u>3</u> by: <u>J</u> preservation, etc.)? ody papers? licated? Canisters Pressurized Sample I.D.	PC OK to ad	NO NO NO Bags Ir	mple Both

Other Comments:

VC	1A LATILE ORGANICS ANALY	SIS DATA SHE	FT	EPA SA	MPLE NO
Lab Name: CAS/ROC	н	Contract: URS		MW9	S-603
Lab Code: 10145	Case No : R3-17294	SAS No :	22	C No . M	MOS 60
Lub 0000. 10140		0.0110		JO NO 1	1493-00
Matrix: (soil/water)	VATER	Lab Sam	ple ID:	649969 1.0)
Sample wt/vol: 5	.0 (a/ml) ML	Lab File	ID:	B0399.D	
		Data Da		00/40/00	
	000	Date Re	ceived:	06/18/03	
% Moisture: not dec.		Date Ana	alyzed:	06/25/03	
GC Column: DB624	ID: 0.32 (mm)	Dilution	Factor:	10	
		Dilation	uotor.	1.0	
Soil Extract Volume	(uL)	Soil Aliq	uot Volu	me:	(u
	CON	CENTRATION	UNITS:		
CAS NO.	COMPOUND (ug/L	or ug/Kg)	JG/L		Q
74 07 0	Oblassethers			10	
74-87-3	Chioromethane			10	<u> </u>
74.82.0	Promomothene			10	0
75-00-3	Chloroothana			10	0
67-64-1	Acetone			10	
75-35-4	1 1 Dichloroethene			10	
75-09-2	Methylene chloride			10	
75-15-0	Carbon disulfide			10	
156-60-5	trans 1 2 Dichloroothono			10	0
75-34-3	1 1 Dichloroethane			10	
78-93-3	2-Butanone			10	0
156-59-2	cis_1 2-Dichloroethene			10	
67-66-3	Chloroform			10	
107-06-2	1.2-Dichloroethane	and the second sec		10	
71-55-6	1 1 1-Trichloroethane			10	
56-23-5	Carbon tetrachloride			10	11
71-43-2	Benzene			10	
79-01-6	Trichloroethene			10	U
75-27-4	Bromodichloromethane			10	U
10061-01-5	cis-1.3-Dichloropropene			10	<u> </u>
10061-02-6	trans-1.3-Dichloropropen	e		10	U
79-00-5	1.1.2-Trichloroethane			10	U
124-48-1	Dibromochloromethane			10	U
75-25-2	Bromoform			10	U
108-10-1	4-Methyl-2-pentanone			10	U
108-88-3	Toluene			10	U
591-78-6	2-Hexanone			10	U
127-18-4	Tetrachloroethene			10	U
108-90-7	Chlorobenzene			10	U
100-41-4	Ethylbenzene			10	U
108-38-3/106-42-3	3 (m+p)Xylene			10	U
95-47-6	o-Xylene	· · · · · · · · · · · · · · · · · · ·		10	U
100-42-5	Styrene			10	U
79-34-5	1,1,2,2-Tetrachloroethan	e		10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET	EPA SAMPLE NO.
TENTATIVELY IDENTIFIED COMPOUNDS	

Lab Name:	CAS/RC	осн	19	Contract:	URS	V9S-603		
Lab Code:	10145		Case No.: R3-1	7294 SAS N	o.:	SDG No .:	MW9S-60	
Matrix: (soil/	water)	WATE	R	La	ab Sample ID	D: 649969	1.0	
Sample wt/ve	ol:	5.0	(g/ml) ML	La	ab File ID:	B0399.0)	
Level: (low/r	med)	LOW		D	ate Received	1: 06/18/0:	3	
% Moisture:	not dec.		11 - A	D	ate Analyzed	1: 06/25/0	3	
GC Column:	DB624	D:	0.32 (mm)	D	ilution Factor	r: 1.0		
Soil Extract	Volume		(uL)	S	oil Aliquot Vo	olume:	(uL	L)
Number TIC:	s found:	0		CONCENTRA (ug/L or ug/Kg	TION UNITS	6:		
CAS NO.		COMP	POUND		RT	EST. CON	c. Q	

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Lab Name: CAS/ROC	H	Contract: URS	5	0-003
Lab Code: 10145	Case No.: R3-17294	SAS No .:	SDG No.: N	1W9S-60
Matrix: (soil/water)	VATER	Lab Sar	nple ID: 649970 1.	0
			1D. D0400 D	
Sample wt/vol: 5	0.0 (g/ml) <u>ML</u>	Lab File	B0409.D	
Level: (low/med)	.ow	Date Re	eceived: 06/18/03	
% Moisture: not dec.		Date Ar	alyzed: 06/25/03	
GC Column: DB624	ID: 0.32 (mm)	Dilution	Factor: 1.0	
Soil Extract Volume	(ul.)	Soil Alic	nuot Volume:	(ut.)
	(uL)	Convinc		()
	CON	CENTRATION	UNITS:	
CAS NO.	COMPOUND (ug/L	or ug/Kg)	UG/L	Q
74-87-3	Chloromethane		10	
75-01-4	Vinyl chloride		10	0
74-83-9	Bromomethane		10	
75-00-3	Chloroethane		10	UT
67-64-1	Acetone		10	0,1
75-35-4	1,1-Dichloroethene		10	
75-09-2	Methylene chloride		10	0
75-15-0	Carbon disulfide		10	0
156-60-5	trans-1,2-Dichloroethen	e	10	0
75-34-3	1,1-Dichloroethane		10	UT
78-93-3	2-Butanone		10	03
156-59-2	cis-1,2-Dichloroethene		10	
67-66-3	Chioroform 1.2 Diablassathana		10	
74 55 6	1,2-Dichloroethane		10	
/1-55-0	1,1,1-Trichloroethane		10	U
30-23-3	Carbon tetrachionde	·	10	
70.01.6	Trichloroothono		10	UT
79-01-0	Bromodiobloromothana		10	
10-21-4	biomodicinorometrane		10	U
10061-01-5	trans_1.3-Dichloropropert		10	U
79.00.5	1 1 2-Trichloroethane		10	U U
124-48-1	Dibromochloromethane	1	10	Ŭ
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-pentanone		10	TU
108-88-3	Toluene		10	U
591-78-6	2-Hexanone		10	UT
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42	2-3 (m+p)Xvlene		10	U
95-47-6	o-Xylene		10	U
100-42-5	Styrene		10	U
70 24 5	1 1 2 2 Totrachloroeths	ne	10	UT

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	1	OLATI	1E LE ORGANICS ANAL	YSIS DATA SHEET	EPA SAMPLE NO.
		TENT	TATIVELY IDENTIFIE	DCOMPOUNDS	MW9D-603
Lab Name:	CAS/RC	DCH		Contract: URS	
Lab Code:	10145		Case No.: R3-17294	SAS No.:	SDG No.: MW9S-60
Matrix: (soil/	water)	WATE	R	Lab Sample ID): <u>649970</u> 1.0
Sample wt/w	ol:	5.0	(g/mi) ML	Lab File ID:	B0409.D
Level: (low/	med)	LOW		Date Received	: 06/18/03
% Moisture:	not dec.		<u></u>	Date Analyzed	: 06/25/03
GC Column	DB62	4 ID:	0.32 (mm)	Dilution Factor	: 1.0
Soil Extract	Volume		(uL)	Soil Aliquot Vo	olume: (uL)

		CONCENTRATI	ON UNI	TS:		
Number TICs found:	0	(ug/L or ug/Kg)	UG	<u>L</u>		
CAS NO.	COMPOUND		RT	EST. CONC.	Q	

			EPA SAM	PLE NO.
	DLATILE ORGANICS ANALY		MW10	5-603
Lab Name: CAS/ROC		Jontract. UKS		
Lab Code: 10145	Case No.: R3-17294	SAS No.: S	DG No .: M	V9S-60
Matrix: (soil/water)	WATER	Lab Sample ID:	649971 1.0	1
Sample wt/vol:	5.0 (a/ml) MI	Lab File ID:	B0400 D	
Sample wuvol.		Lab File ID.	D0400.D	-
Level: (low/med)	LOW	Date Received:	06/18/03	
% Moisture: not dec.		Date Analyzed:	06/25/03	
CC Column: DP624	ID: 0.32 (mm)	Dilution Eactor:	10	
GC Column. DB024	_ 1D. 0.32 (1111)	Dilution Factor.	1.0	-
Soil Extract Volume	(uL)	Soil Aliquot Vol	ume:	(uL)
	CON	CENTRATION UNITS:		
CAS NO.	COMPOUND (ug/L	or ug/Kg) UG/L		Q
Prov	1			
74-87-3	Chloromethane		10	0
75-01-4	Vinyl chloride		10	0
/4-83-9	Bromomethane		10	0
75-00-3	Chloroethane		10	0
67-64-1	Acetone		10	0
75-35-4	1,1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	0
75-15-0	Carbon disulfide		10	0
156-60-5	trans-1,2-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	0
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		10	0
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		10	0
56-23-5	Carbon tetrachloride		10	0
71-43-2	Benzene		10	0
/9-01-6	Irichloroethene		10	U
15-21-4	Bromodichloromethane		10	0
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloroproper	1e	10	0
/9-00-5	1,1,2-1 richloroethane		10	0
124-48-1	Dibromocnioromethane		10	0
15-25-2	Bromotorm		10	0
108-10-1	4-Methyl-2-pentanone		10	U
108-88-3			10	0
591-/8-0	Z-Mexanone		10	0
12/-18-4	Chlorobosso		10	0
108-90-7	Chlorobenzene		10	0
100-41-4			10	0
108-38-3/106-42	2-3 (m+p)Xylene		10	0
95-47-6	0-Xylene		10	0
100-42-5	Styrene		10	0

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Lab Name: CAS/RC	TENTATIVELY IDENTIFIE	D COMPOUND Contract: UR	ns Rs	MW1	05-603
Lab Code: 10145	Case No.: R3-17294	SAS No.:	SI	DG No.: N	W9S-60
Matrix: (soil/water)	WATER	Lab Sa	ample ID:	649971 1.	00
Sample wt/vol:	5.0 (g/ml) ML	Lab Fil	le ID:	B0400.D	
Level: (low/med)	LOW	Date R	Received:	06/18/03	
% Moisture: not dec.		Date A	nalyzed:	06/25/03	
GC Column: DB624	4 ID: <u>0.32</u> (mm)	Dilutio	n Factor:	1.0	
Soil Extract Volume	(uL)	Soil Al	liquot Volu	me:	(uL)
	со	NCENTRATIO	N UNITS:		
Number TICs found:	(ug	/L or ug/Kg)	UG/L		
CAS NO.	COMPOUND	R	ES	ST. CONC.	Q

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Lab Name: CAS/ROCH		Contract: URS	MIVVIC	ID-603	
ab Code: 10145	Case No.: R3-17294	SAS No.:	SDG No.: M	W9S-60	
Matrix: (soil/water) WA	ATER	Lab Sam	ole ID: 649972 1.0)	
Sample wt/vol: 50	(a/ml) MI	Lah File I	D. B0401 D		
		Labinei		_	
Level: (low/med) LO	W	Date Rec	eived: 06/18/03		
% Moisture: not dec.		Date Ana	lyzed: 06/25/03		
GC Column: DB624	ID: 0.32 (mm)	Dilution F	actor: 1.0		
Soil Extract Volume	(ul.)	Soil Aliqu	ot Volume:	(1)	
	(uc)	Ooli Aliqu	or volume.	(0.	
	CON	CENTRATION L	INITS:		
CAS NO.	COMPOUND (ug/L	or ua/Ka) L	IG/L	Q	
	(-9-				
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	1,1-Dichloroethene 10			
75-09-2	Methylene chloride	U			
75-15-0	Carbon disulfide	U			
156-60-5	trans-1,2-Dichloroethene	trans-1,2-Dichloroethene 10			
75-34-3	1,1-Dichloroethane		10	0	
78-93-3	2-Butanone		10	0	
156-59-2	cis-1,2-Dichloroethene		10	0	
67-66-3	Chloroform		10	0	
107-06-2	1,2-Dichloroethane		10		
71-55-6	1,1,1-Irichloroethane		10		
30-23-5	Carbon tetrachionde		10	0	
70.01.6	Triphloroothono		10	0	
79-01-0	Bromodichloromothano	-	10	J	
10061 01 5	biomodicitioromethalle		10	11	
10061-01-5	trans-1 3-Dichloropropere	10	10		
79-00-5	1 1 2-Trichloroethane		10	U	
124-48-1	Dibromochloromethane	-	10	U U	
75-25-2	Bromoform		10	U	
108-10-1	4-Methyl-2-pentanone		10	U	
108-88-3	Toluene		10	U	
591-78-6	2-Hexanone		10	U	
127-18-4	Tetrachloroethene		10	U	
108-90-7	Chlorobenzene		10	U	
100-41-4	Ethylbenzene		10	U	
108-38-3/106-42-3	(m+p)Xylene		10	U	
95-47-6	o-Xylene		10	U	
100-42-5	Styrene		10	U	
79-34-5	1 1 2 2-Tetrachloroethar	ne	10	U	

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VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

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Lab Name:	CAS/RC	DCH	TIVELTIDENT	Cont	ract: URS		MW	10D-60	03
Lab Code:	10145	0	ase No.: R3-1	7294 SA	AS No.:	S	DG No.:	MW95	5-60
Matrix: (soil/	water)	WATER	-		Lab Sam	ple ID:	649972	1.0	-
Sample wt/v	ol:	5.0	(g/ml) <u>ML</u>		Lab File	ID:	B0401.C)	
Level: (low/r	med)	LOW	<u></u>		Date Red	ceived:	06/18/03	3	1.0
% Moisture:	not dec.				Date Ana	alyzed:	06/25/03	3	
GC Column:	DB624	ID: ().32 (mm)		Dilution I	Factor:	1.0		
Soil Extract	Volume -		(uL)		Soil Aliqu	uot Vol	ume:	_	_ (uL)
				CONCEN	TRATION	UNITS:			
Number TIC:	s found:	0		(ug/L or u	ig/Kg) l	JG/L			
CAS NO.		COMPO	UND		RT	E	ST. CON	D.	Q

EPA SAMPLE NO.

ab Name: CAS/ROC	н	Contract: URS	MVV1	1D-603
ab Code: 10145	Case No.: R3-17294	SAS No .:	SDG No.: N	W9S-60
Matrix: (soil/water) V	VATER	Lab Samp	le ID: 649973 1.0	0
Sample w/vol: 5	.0 (g/ml) ML	Lab File IL): <u>B0445.D</u>	
_evel: (low/med) L	OW	Date Rece	ived: 06/18/03	
% Moisture: not dec.		Date Analy	zed: 06/26/03	
GC Column: DB624	ID: 0.32 (mm)	Dilution E	actor: 10	-
	<u></u> (mm)	Dilution	1.0	
Soll Extract Volume	(uL)	Soil Alique	t Volume:	(uL
	CON	CENTRATION U	NITS:	
CAS NO.	COMPOUND (ug/L	or ug/Kg) U	G/L	Q
74-87-3	Chloromethane		10	U
75-01-4	Vinyl chloride		10	U
74-83-9	Bromomethane		10	U
/5-00-3	Chloroethane		10	U
67-64-1	Acetone		10	03
75-35-4	1,1-Dichloroethene		10	0
75-09-2	Methylene chloride		10	0
/5-15-0	Carbon disulfide		10	0
150-00-5	trans-1,2-Dichloroethene		10	
79-04-3	1,1-Dichloroethane		10	UT
18-93-3	2-Butanone		10	03
150-59-2	cis-1,2-Dichloroethene		10	
07-00-3	Chloroform		10	0
107-00-2	1,2-Dichloroethane		10	0
71-33-0	1,1,1-1 nchloroethane		10	0
71 42 2			10	
71-43-2	Benzene		10	0
79-01-0	Promodiobleremethene		10	
10-21-4	Bromodichloromethane		10	
10061-01-5	cis-1,3-Dichloropropene		10	0
70.00 5	1 1 2 Triphlereethere	ie	10	0
19-00-5	Dibremechleremethere		10	
75 25 2	Dibromochioromethane		10	0
109 10 1	A Motbyl 2 postanona		10	TIT
108-88-2	Toluene		10	11
591-78-6	2 Hevenone		10	117
127-18-4	Tetrachloroethono		10	11
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42	3 (m+n)Xylene		10	
95-47-6			10	11
100-42-5	Styrene		10	U
100-42-0	Othene		10	0

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	1E VOLATILE ORGANICS ANA	LYSIS DATA SHEET	EPA SAMPLE NO.
Lab Name: CAS	TENTATIVELY IDENTIFII	ED COMPOUNDS Contract: URS	MW11D-603
Lab Code: 1014	5 Case No.: R3-1729	4 SAS No.: S	DG No.: MW9S-60
Matrix: (soil/water)	WATER	Lab Sample ID:	649973 1.0
Sample wt/vol:	5.0 (g/ml) ML	Lab File ID:	B0445.D
Level: (low/med)	LOW	Date Received:	06/18/03
% Moisture: not de	C	Date Analyzed:	06/26/03
GC Column: DB	624 ID: 0.32 (mm)	Dilution Factor:	1.0
Soil Extract Volum	e (uL)	Soil Aliquot Vol	ume: (uL)
	CC (ug	DNCENTRATION UNITS: g/L or ug/Kg) UG/L	
Number TICs found	d:		
CAS NO	COMPOLIND	RTE	ST CONC Q

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	1A		EPA SAN	MPLE NO.
Lab Name: CAS/R	OCH	Contract: URS	MWY(D	UP)-603
Lab Code: 10145	Case No : P3-17204	SAS No .	SDG No : M	09-20
Lab Couc. 10145	Case No	0/01/0	000 NO M	vv30-00
Matrix: (soil/water)	WATER	Lab Sample I	D: 649974 1.0	
Sample wt/vol:	5.0 (g/ml) ML	Lab File ID:	B0446.D	
Level: (low/med)	LOW	Date Receive	d. 06/18/03	
Level. (low/mea)	LOW	Date Necelve	d. 00/10/05	-
% Moisture: not dec.		Date Analyze	d: 06/26/03	
GC Column: DB62	4 ID: 0.32 (mm)	Dilution Facto	or: 1.0	
Soil Extract Volume	(uL)	Soil Aliquot V	olume:	(uL)
	CON	ICENTRATION UNIT	S:	
CAS NO.	COMPOUND (ug/L	or ug/Kg) UG/L		Q
74 07 0	Oblassmathana		10	
74-07-3	Vipul ablarida		10	0
75-01-4	Bromomothana		10	0
75.00.2	Chloroothano		10	0
67-64-1	Acetone		10	UT
75-35-4	1 1-Dichloroethene		10	03
75-00-2	Methylene chloride		10	
75-15-0	Carbon disulfide		10	
156-60-5	trans-1 2-Dichloroethen	0	10	0
75-34-3	1 1-Dichloroethane	<u> </u>	10	
78-93-3	2-Butanone		10	UT
156-59-2	cis-1 2-Dichloroethene		10	11
67-66-3	Chloroform		10	U
107-06-2	1.2-Dichloroethane		10	U
71-55-6	1.1.1-Trichloroethane		10	u
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		56	
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloroprope	ne	10	U
79-00-5	1,1,2-Trichloroethane		10	U
124-48-1	Dibromochloromethane		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-pentanone		10	UJ
108-88-3	Toluene		10	U
591-78-6	2-Hexanone		10	UJ
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-4	2-3 (m+p)Xylene		10	U
95-47-6	o-Xylene	-	10	U
100-42-5	Styrene		10	U
79-34-5	1,1,2,2-Tetrachloroetha	ne	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

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Lab Name:	CAS/RC	CH	VELTIDENTI	Contract:	URS	MWY	(DUP)-603
Lab Code:	10145	Ca	se No.: <u>R3-172</u>	94 SAS N	0.:	SDG No.:	MW9S-60
Matrix: (soil/v	vater)	WATER		La	ab Sample II	D: 649974	1.0
Sample wt/vo	ol:	5.0	(g/ml) ML	La	ab File ID:	B0446.)
Level: (low/n	ned)	LOW		Da	ate Receive	d: 06/18/0	3
% Moisture: r	not dec.			D	ate Analyze	d: 06/26/0	3
GC Column:	DB624	ID: 0.	32 (mm)	Di	ilution Facto	or: 1.0	
Soil Extract V	/olume	_	_ (uL)	S	oil Aliquot V	olume:	(uL)
			С	ONCENTRA	TION UNIT	S:	
Number TICs	found:	0	- (ı	ig/L or ug/Kg) <u>UG/L</u>		
CASNO		COMPOL	IND		PT	EST CON	

EPA SAMPLE NO.

Name: CAS/ROC	H	Contract: URS	3	
Code: 10145	Case No.: R3-17294	SAS No .:	SDG No .: M	W9S-60
trix: (soil/water) V	VATER	Lab Sar	nple ID: 649977 1.0)
molo wtheol:		Lab Eile	ID. B0447 D	
		Laurie	DU. DU447.D	
vel: (low/med) L	WO	Date Re	ceived: 06/18/03	
Moisture: not dec.		Date An	alyzed: 06/26/03	
Column: DB624	ID: 0.32 (mm)	Dilution	Factor: 1.0	
I Extract Volume	(uL)	Soil Alic	uot Volume:	(uL)
	CON	CENTRATION	UNITS:	
CAS NO.	COMPOUND (ug/L	or ug/Kg)	UG/L	Q
74-87-3	Chloromethane		10	U
75-01-4	Vinvl chloride		10	U
74-83-9	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	UJ
75-35-4	1.1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1,2-Dichloroethen	е	10	U
75-34-3	1,1-Dichloroethane		10	U
78-93-3	2-Butanone		10	UJ
156-59-2	cis-1,2-Dichloroethene		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		78	
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloroprope	ne	10	U
79-00-5	1,1,2-Trichloroethane		10	U
124-48-1	Dibromochloromethane		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-pentanone		10	UJ
108-88-3	Toluene		10	U
591-78-6	2-Hexanone		10	UJ
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-	3 (m+p)Xylene		10	U
95-47-6	o-Xylene		10	U
100-42-5	Styrene		10	U
	Code: 10145 trix: (soil/water) V mple wt/vol: 5 rel: (low/med) L Voisture: not dec. 5 Column: DB624 I Extract Volume 5 CAS NO. 74-87-3 75-01-4 74-83-9 75-01-4 74-83-9 75-00-3 67-64-1 75-35-4 75-09-2 75-15-0 156-60-5 75-34-3 78-93-3 156-59-2 67-66-3 107-06-2 71-55-6 56-23-5 71-43-2 79-01-6 75-27-4 10061-02-6 79-00-5 124-48-1 75-25-2 108-10-1 108-88-3 591-78-6 127-18-4 108-90-7 100-41-4 108-38-3/106-42- 95-47-6 95-47-6 95-47-6	Code: 10145 Case No.: R3-17294 trix: (soil/water) WATER nple wt/vol: 5.0 (g/ml) ML rel: (low/med) LOW Moisture: not dec.	a Code: 10145 Case No.: R3-17294 SAS No.: trix: (soil/water) WATER Lab San nple wt/vol: 5.0 (g/ml) ML Lab File rel: (low/med) LOW Date Re Moisture: not dec.	Code: 10145 Case No.: R3-17294 SAS No.: SDG No.: M trix: (soil/water) WATER Lab Sample ID: 649977 1.0 mple wt/vol: 5.0 (g/ml) ML Lab Sample ID: 649977 1.0 rel: (low/med) LOW Date Received: 06/18/03 voisture: not dec.

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v	1E OLATILE ORGANICS ANAL	YSIS DATA SHEET	EPA SAN	IPLE NO.
Lab Name: CAS/RC	TENTATIVELY IDENTIFIE	D COMPOUNDS Contract: URS	EFF-0	61803
Lab Code: 10145	Case No.: R3-17294	SAS No.: S	DG No.: M	W9S-60
Matrix: (soil/water)	WATER	Lab Sample ID	649977 1.0	
Sample wt/vol:	5.0 (g/ml) ML	Lab File ID:	B0447.D	
Level: (low/med)	LOW	Date Received	06/18/03	
% Moisture: not dec.		Date Analyzed:	06/26/03	
GC Column: DB624	ID: 0.32 (mm)	Dilution Factor:	1.0	
Soil Extract Volume	(uL)	Soil Aliquot Vo	lume:	(uL)
Number Tion (much	CO (ug	NCENTRATION UNITS	:	
Number HCs found:				
CAS NO.	COMPOUND	RT E	ST. CONC.	Q

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ab Name: CAS/ROCH		Contract: URS	M	W1-603
ab Code: 10145	Case No.: R3-17294	SAS No .:	SDG No.:	MW9S-60
Aatrix: (soil/water) W/	TER	Lab Sample	- D· 649978	10
				1.0
ample wt/vol: 5.0	(g/ml) <u>ML</u>	Lab File ID:	B0410.0	2
evel: (low/med) LO	W	Date Receive	ed: 06/18/0	3
6 Moisture: not dec.		Date Analyze	ed: 06/25/0	3
C Column: DB624	ID: 0.32 (mm)	Dilution Fact	or: 1.0	
oil Extract Volume	(11)	Soil Aliquet \	/olume:	(11
	(uc)			
	CON	ICENTRATION UNIT	TS:	
CAS NO.	COMPOUND (ug/L	or ug/Kg) UG/L		Q
74-87-3	Chloromethane		10	0
75-01-4	Promomothere		10	0
74-03-9	Chloroothono		10	
67 64 1	Apotopo		10	UT
75 25 4	1 1 Dichloroothono		10	
75.00.2	Nothylana oblasida		10	0
75-15-0	Carbon disulfide		10	
156-60-5	trans 1 2 Dichloroothon	0	10	0
75-34-3	1 1 Dichloroethane	U	10	U
78-03-3	2 Butanono		10	UT
156-59-2	cis_1 2-Dichloroethene		10	
67-66-3	Chloroform		10	
107-06-2	1.2-Dichloroethane		10	
71-55-6	1 1 1 Trichloroethane		10	
56-23-5	Carbon tetrachloride		10	
71-43-2	Benzene		10	- u
79-01-6	Trichloroethene	-	10	UT
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1 3-Dichloropropene		10	U
10061-02-6	trans-1.3-Dichloroprope	ne	10	U
79-00-5	1,1,2-Trichloroethane		10	U
124-48-1	Dibromochloromethane		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-pentanone		10	UJ
108-88-3	Toluene		10	U
591-78-6	2-Hexanone		10	UJ
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-3	(m+p)Xylene		10	U
95-47-6	o-Xylene		10	U
100 10 5	Churana	-	10	

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	VOLATILE ORGANICS	ANALYSIS DATA SHEE	T EPA S	AMPLE NO.
Lab Name: CAS	TENTATIVELY IDEN	TIFIED COMPOUNDS Contract: URS	M	W1-603
Lab Code: 101	45 Case No.: R3	17294 SAS No.:	SDG No.:	MW9S-60
Matrix: (soil/water) WATER	Lab Samp	le ID: 649978	1.0
Sample wt/vol:	5.0 (g/ml) MI	Lab File ID): B0410.D	
Level: (low/med)	LOW	Date Rece	ived: 06/18/03	
% Moisture: not d	ec	Date Analy	zed: 06/25/03	
GC Column: DE	3624 ID: 0.32 (mm)	Dilution Fa	actor: 1.0	
Soil Extract Volum	ne (uL)	Soil Alique	ot Volume:	(uL)
			NITS:	
Number TICs four	nd: 0		<u>s/L</u>	
CAS NO.	COMPOUND	RT	EST. CON	. Q

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ab Name: CAS/ROC	н	Contract: URS	MW2	2S-603
ab Code: 10145	Case No.: R3-17294	SAS No .:	SDG No .: N	1W9S-60
Matrix: (soil/water) V	ATER	Lab Sampl	e ID: 649979 1.	0
Sample wt/vol: 5		Lab File IC	BOA11 D	1
		Laurneit	. 00411.0	
_evel: (low/med) L	OW	Date Rece	ived: 06/18/03	
% Moisture: not dec.		Date Analy	zed: 06/25/03	
GC Column: DB624	ID: 0.32 (mm)	Dilution Fa	ctor: 1.0	
Soil Extract Volume	(ul.)	Soil Alique	t Volume:	(u)
	(uL)	Oon Anguo		(u.
	CON	CENTRATION UN	NITS:	
CAS NO	COMPOLIND (ug/		3/1	0
0.0110.	(ug/L			~
74-87-3	Chloromethane		10	U
75-01-4	Vinyl chloride		10	U
74-83-9	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	UJ
75-35-4	1,1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1,2-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
78-93-3	2-Butanone		10	03
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
/1-43-2	Benzene		10	
79-01-6	Irichloroethene		4	J.
10-21-4	Bromodicnioromethane		10	
10001-01-5	cis-1,3-Dichloropropene	-	10	0
70.00 5	1 1 2 Triphloroothopo	le	10	
124 48 1	Dibromochloromothano		10	
75-25-2	Bromoform		10	
108-10-1	A-Methyl-2-pentanona		10	IIT
108-88-3	Toluene		10	11
591-78-6	2-Hexanone		10	UJ
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-	3 (m+p)Xylene		10	U
95-47-6	o-Xylene		10	U
100-42-5	Styrene		10	U
79-34-5	1122-Tetrachloroethar	ne	10	115

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ASP 2000

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VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

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Lab Name:	CAS/RC	CH		Contr	act: URS		MV	V2S-60	3
Lab Code:	10145	C:	ase No.: R3-1	7294 SA	S No.:	s	DG No.:	MW95	5-60
Matrix: (soil/	water)	WATER	alse .		Lab Sam	ple ID:	649979	1.0	
Sample wt/v	ol:	5.0	_ (g/ml) <u>ML</u>	-	Lab File	ID:	B0411.0)	
Level: (low/r	med)	LOW			Date Re	ceived:	06/18/03	3	2.0
% Moisture:	not dec.				Date An	alyzed:	06/25/0	3	10.0
GC Column:	DB624	ID: 0	.32 (mm)		Dilution	Factor:	1.0		
Soil Extract	Volume		(uL)		Soil Aliq	uot Vol	ume:		(uL)
Number TIC:	s found:	0		CONCEN (ug/L or ug	TRATION g/Kg)	UNITS: UG/L			
CAS NO.		сомро	UND		RT	E	ST. CON	C.	Q

EPA SAMPLE NO.

Lab Name: CAS/ROCH	(Contract: URS	MW	3-603
Lab Code: 10145	Case No.: R3-17294	SAS No.:	SDG No.: N	1W9S-60
Matrix: (soil/water) WA	TER	Lab Sample	ID: 649980 1.	0
			DO440 D	
Sample wt/vol: 5.0	(g/ml) <u>ML</u>	Lab File ID:	B0412.D	
evel: (low/med) LO	N	Date Receive	ed: 06/18/03	
6 Moisture: not dec.		Date Analyze	ed: 06/25/03	
GC Column: DB624	ID: 0.32 (mm)	Dilution Fact	or: 1.0	
Soil Extract Volume	(ul.)	Soil Aliquot	/olume:	(uL)
	()			
	CON	CENTRATION UNIT	rs:	
CAS NO.	COMPOUND (ug/L	or ug/Kg) UG/L	-	Q
74-87-3	Chloromethane		10	U
75-01-4	Vinyl chloride		10	U
74-83-9	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	UJ
75-35-4	1.1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1,2-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
78-93-3	2-Butanone		10	UJ
156-59-2	cis-1,2-Dichloroethene		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		40	
75-27-4	Bromodichloromethane		10	0
10061-01-5	cis-1,3-Dichloropropene		10	0
10061-02-6	trans-1,3-Dichloropropen	e	10	U
79-00-5	1,1,2-I richloroethane		10	0
75.05.0	Dibromocniorometnane		10	
109 10 1	A Mothyl 2 pontonono		10	UT
108-88-2	Toluene		10	05
591-78-6	2-Hevanone		10	UT
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-3	(m+p)Xylene		10	U
95-47-6	o-Xvlene		10	U
100-42-5	Styrene		10	U
70.04.5	1 1 2 2 Totrachloroothan	0	10	117

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ASP 2000

141	1E VOLATILE ORGANICS	ANALYSIS DA	TA SHEET	EPA SA	MPLE NO.
Lab Name: CAS/R	OCH	Contrac	t: URS	MV	V3-603
Lab Code: 10145	Case No.: R3-	17294 SAS	No.:	SDG No.:	MW9S-60
Matrix: (soil/water)	WATER	1	ab Sample	ID: 649980 1	0.1
Sample wt/vol:	5.0 (g/ml) ML		Lab File ID:	B0412.D	
Level: (low/med)	LOW	1	Date Receiv	ved: 06/18/03	
% Moisture: not dec		1	Date Analyz	zed: 06/25/03	
GC Column: DB62	24 ID: 0.32 (mm)	S. 1.	Dilution Fac	tor: 1.0	
Soil Extract Volume	(uL)	22 2	Soil Aliquot	Volume:	(uL)
1 3 3 4		CONCENTR (ug/L or ug/ł		ITS: /L	
Number TICs found	0			1	
CAS NO.	COMPOUND		RT	EST. CON	2. Q

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			MW4	-603
Lab Name: CAS/ROCH		Contract: URS		
Lab Code: 10145	Case No.: R3-17294	SAS No.: S	DG No.: M	W9S-60
Matrix: (soil/water) WA	TER	Lab Sample ID:	649981 1.0)
Sample wt/vol: 5.0	(a/ml) ML	Lab File ID:	19771.D	
	(9/11) 112	Data Data da	00/40/00	
Level: (low/med) LO	<u></u>	Date Received:	06/18/03	
% Moisture: not dec.		Date Analyzed:	06/27/03	
GC Column: RTX502.	ID: 0.53 (mm)	Dilution Factor:	1.0	
		Only Allowed Mark		
Soll Extract Volume	(uL)	Soli Aliquot Vol	ume:	(u
	CON	CENTRATION LINITS		
CAS NO	COMPOUND (ug/			0
			-	-
74-87-3	Chloromethane		10	U
75-01-4	Vinyl chloride		10	U
74-83-9	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	UJ
75-35-4	1,1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1,2-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		79	
78-87-5	1,2-Dichloropropane		10	U
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloroproper	ne	10	U
79-00-5	1,1,2-Trichloroethane		10	U
124-48-1	Dibromochloromethane		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-pentanone		10	U
108-88-3	Toluene		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-3	(m+p)Xylene		10	U
95-47-6	o-Xylene		10	U
100-42-5	Styrene		10	U
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VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

MW4-603 Contract: URS Lab Name: CAS/ROCH Case No.: R3-17294 SAS No.: SDG No.: MW9S-60 10145 Lab Code: Lab Sample ID: 649981 1.0 Matrix: (soil/water) WATER 19771.D Lab File ID: 5.0 (g/ml) ML Sample wt/vol: Date Received: 06/18/03 Level: (low/med) LOW Date Analyzed: 06/27/03 % Moisture: not dec. Dilution Factor: 1.0 GC Column: RTX502. ID: 0.53 (mm) (uL) Soil Aliquot Volume: Soil Extract Volume (uL) CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Number TICs found: 0 EST. CONC. Q COMPOUND RT CAS NO.

EPA SAMPLE NO.

VOLA	1A TILE ORGANICS ANALY	SIS DATA SHEET	EPA SA	MPLE NO.
Lab Name: CAS/ROCH		Contract: URS	MW	55-603
Lab Code: 10145	Case No.: R3-17294	SAS No.: S	DG No .: M	AW9S-60
Motrix: (coil/water) 10/A		Lab Camala ID.	-	0
Wathx: (soll/water) VVA	IER	Lab Sample ID:	649982 1.	.0
Sample wt/vol: 5.0	(g/ml) ML	Lab File ID:	19772.D	
Level: (low/med) LO	N	Date Received:	06/18/03	
% Moisture: not dec		Date Applyzod:	06/28/02	
		Date Analyzeu.	00/20/03	
GC Column: RTX502.	D: 0.53 (mm)	Dilution Factor:	1.0	
Soil Extract Volume	(uL)	Soil Aliquot Vol	ume:	(uL)
	CON			
CASNO		CENTRATION UNITS:		-
CAS NO.	COMPOUND (Ug/L	or ug/kg) UG/L		Q
74-87-3	Chloromethane		10	11
75-01-4	Vinvl chloride		10	
74-83-9	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	UT
75-35-4	1 1-Dichloroethene		10	03
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	
156-60-5	trans-1 2-Dichloroethene		10	J
75-34-3	1 1-Dichloroethane		10	
78-93-3	2-Butanone		10	
156-59-2	cis-1 2-Dichloroethene		10	
67-66-3	Chloroform		10	
107-06-2	1 2-Dichloroethane		10	
71-55-6	1 1 1-Trichloroethane		2	0
56-23-5	Carbon tetrachloride		10	<u> </u>
71-43-2	Benzene		10	
79-01-6	Trichloroethene		66	
78-87-5	1 2-Dichloropropage		10	
75-27-4	Bromodichloromethane		10	
10061-01-5	cis-1.3-Dichloropropene		10	U
10061-02-6	trans-1.3-Dichloropropen	e	10	U
79-00-5	1.1.2-Trichloroethane	-	10	Ŭ
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	Ū
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-3	(m+p)Xylene		10	U
95-47-6	o-Xylene		10	U
100-42-5	Styrene		10	U
79-34-5	1.1.2.2-Tetrachloroethan	6	10	11

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1 VOLATILE ORGANIC	E S ANALYSIS DATA SHEET EPA SAMPLE NO.
TENTATIVELY IDE	NTIFIED COMPOUNDS Contract: URS
Lab Code: 10145 Case No.: R	3-17294 SAS No.: SDG No.:MW9S-60
Matrix: (soil/water) WATER	Lab Sample ID: 649982 1.0
Sample wt/vol: 5.0 (g/ml) M	AL Lab File ID: 19772.D
Level: (low/med) LOW	Date Received: 06/18/03
% Moisture: not dec.	Date Analyzed: 06/28/03
GC Column: RTX502. ID: 0.53 (mm	n) Dilution Factor: 1.0
Soil Extract Volume (uL)	Soil Aliquot Volume: (ul
Number TIOn founds	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L
CAS NO. COMPOUND	RT EST. CONC. Q

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	1A		EPA SA	MPLE NO.
VOL	ATILE ORGANICS ANALY	SIS DATA SHEET	MWS	5D-603
ab Name: CAS/ROCH		Contract: URS		
ab Code: 10145	Case No.: R3-17294	SAS No.: S	DG No .: N	AW9S-60
Matrix: (soil/water) W/	ATER	Lab Sample ID:	649983 1.	0
		Lub Gumpie ib.		
Sample w/vol: 5.0	(g/ml) <u>ML</u>	Lab File ID:	19789.D	
evel: (low/med) LO	W	Date Received:	06/18/03	
6 Moisture: not dec.		Date Analyzed:	06/28/03	-
C Column: DTV502	ID: 0.52 (mm)	Dilution Easter	1.0	
SC Column. RTASUZ.	ID: 0.53 (mm)	Dilution Factor:	1.0	
Soil Extract Volume	(uL)	Soil Aliquot Volu	ume:	(uL)
01010	CON	CENTRATION UNITS:		
CAS NO.	COMPOUND (ug/L	or ug/Kg) UG/L		Q
74-87-3	Chloromethane		10	U I
75-01-4	Vinyl chloride		10	U
74-83-9	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	Ŭ
75-35-4	1 1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	
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	
56-23-5	Carbon tetrachloride		10	LI
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		110	
78-87-5	1.2-Dichloropropane		10	U
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloropropen	e	10	U
79-00-5	1,1,2-Trichloroethane		10	U
124-48-1	Dibromochloromethane		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-pentanone		10	U
108-88-3	Toluene		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-3	(m+p)Xylene		10	U
95-47-6	o-Xylene		10	U
100-42-5	Styrene		10	U

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	VOLA	1E TILE ORGANICS ANAL	YSIS DATA SHEET	EPA SAMPLE NO.
Lab Name:		NTATIVELY IDENTIFIE	D COMPOUNDS	MW5D-603
Lab Code:	10145	Case No.: <u>R3-17294</u>	SAS No.: S	DG No.: MW9S-60
Matrix: (soil/w	vater) WA	TER	Lab Sample ID:	649983 1.0
Sample wt/vo	l: <u>5.0</u>	(g/ml) ML	Lab File ID:	19789.D
Level: (low/m	ned) LON	N	Date Received:	06/18/03
% Moisture: n	ot dec.		Date Analyzed:	06/28/03
GC Column:	RTX502.	D: 0.53 (mm)	Dilution Factor:	1.0

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

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

CAS NO.

Number TICs found: 0

COMPOUND

Soil Extract Volume (uL)

RT EST. C

EST. CONC.

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VC	DLATILE ORGANICS ANALYS	IS DATA SHEET		
Lab Name: CAS/ROC	СН Со	ontract: URS	MW6	S-603
Lab Code: 10145	Case No.: R3-17294	SAS No.: S	DG No.: N	1W9S-60
Matrix: (soil/water)	WATER	Lab Sample ID:	649984 1	0
		Luo oumpio ID.		
Sample wt/vol:	5.0 (g/ml) <u>ML</u>	Lab File ID:	19773.D	
Level: (low/med)	LOW	Date Received:	06/18/03	
- % Moisture: not dec.		Date Analyzed:	06/28/03	
CC Column: DTV502	1D: 0.52 (mm)	Dilution Easter	1.0	
GC Column. KTA502	<u>. ID. 0.55</u> (IIIII)	Dilution Factor.	1.0	
Soil Extract Volume	(uL)	Soil Aliquot Vol	ume:	(uL)
	CONCI	ENTRATION UNITS:		
CAS NO.	COMPOUND (ug/L o	r ug/Kg) UG/L		Q
74-87-2	Chloromethane		10	11
75-01-4	Vinvl chloride		10	11
74-83-0	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	UT
75-35-4	1 1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	Ŭ
75-15-0	Carbon disulfide		10	Ŭ
156-60-5	trans-1.2-Dichloroethene		10	U
75-34-3	1.1-Dichloroethane		10	Ŭ
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		8	J
78-87-5	1,2-Dichloropropane		10	U
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloropropene		10	U
79-00-5	1,1,2-Trichloroethane		10	U
124-48-1	Dibromochloromethane		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-pentanone		10	0
108-88-3	Toluene		10	U
591-78-6	2-Hexanone		10	
12/-18-4	I etrachloroethene		10	0
108-90-7	Chlorobenzene		10	0
100-41-4			10	0
108-38-3/106-42	-3 (m+p)Xylene		10	U
100 42 5	0-Aylene Styropo		10	0
100-42-5	Styrene		10	0

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1E VOLATILE ORGANICS A	NALYSIS DATA SHEET EPA SAMPLE NO.
TENTATIVELY IDENT Lab Name: CAS/ROCH	Contract: URS MW6S-603
Lab Code: 10145 Case No.: R3-17	294 SAS No.: SDG No.: MW9S-60
Matrix: (soil/water) WATER	Lab Sample ID: 649984 1.0
Sample wt/vol: 5.0 (g/ml) ML	Lab File ID: 19773.D
Level: (low/med) LOW	Date Received: 06/18/03
% Moisture: not dec.	Date Analyzed: 06/28/03
GC Column: RTX502. ID: 0.53 (mm)	Dilution Factor: 1.0
Soil Extract Volume (uL)	Soil Aliquot Volume: (uL)
Number TICs found:0	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L
CAS NO. COMPOUND	RT EST. CONC. Q

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VOL	ATILE ORGANICS ANALY	SIS DATA SHEET	EPA SAI	VIPLE NO.
Lab Name: CAS/ROCH		Contract: URS	MW6	D-603
Lab Code: 10145	Coco No : D2 17204	SAS No: S	DC No · M	0.0 20/0/
Lab Code: 10145	Case No.: R3-17294	SAS NU.: 3		10092-00
Matrix: (soil/water) W/	ATER	Lab Sample ID:	649985 1.	0
Sample wt/vol: 5.0	(a/ml) MI	Lab File ID:	19774.D	
Level: (low/med) LC		Date Received:	06/18/03	
% Moisture: not dec.		Date Analyzed:	06/28/03	
GC Column: RTX502	ID: 0.53 (mm)	Dilution Eactor:	1.0	
		Dilation r dotoi:	1.0	
Soil Extract Volume	(uL)	Soil Aliquot Vol	ume:	(uL)
	CONC	CENTRATION UNITS:		
CAS NO.	COMPOUND (ug/L	or ug/Kg) UG/L		Q
74.07.0	Ohlennethere		10	
75.01.4	Visul oblasida		10	
75-01-4	Promomothano		10	
74-03-9	Chloroethane		10	11
67-64-1	Acetone		10	UT
75-35-4	1 1-Dichloroethene		10	
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1.2-Dichloroethene		10	U
75-34-3	1.1-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		4	J
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		70	
78-87-5	1,2-Dichloropropane		10	0
10061.01.5	Bromodichioromethane		10	
10061-01-5	trans 1.2 Dichloropropene	0	10	
79-00-5	1 1 2-Trichloroethane		10	U
124-48-1	Dibromochloromethane		10	ŭ
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-pentanone		10	U
108-88-3	Toluene		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-3	(m+p)Xylene		10	U
95-47-6	o-Xylene		10	U
100-42-5	Styrene		10	U

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28/2/03

	V		1E E ORGANICS	ANALY	SIS DATA S	HEET	EPA S		NO.
Lab Name:	CAS/RC	TENTA	TIVELY IDEN	ITIFIED	COMPOUN Contract: U	DS RS	MM	/6D-60	3
Lab Code:	10145	(Case No.: R3-	-17294	SAS No .:	S	DG No.:	MW9S	5-60
Matrix: (soil/v	water)	WATER	2		Lab S	ample ID:	649985	1.0	
Sample wt/vo	ol:	5.0	(g/ml) <u>M</u>		Lab F	ile ID:	19774.D		4
Level: (low/r	med)	LOW			Date	Received:	06/18/03		
% Moisture:	not dec.				Date	Analyzed:	06/28/03		
GC Column:	RTX50	02. ID:	0.53 (mm)		Diluti	on Factor:	1.0	-	
Soil Extract	Volume		(uL)		Soil A	liquot Volu	ume:		_ (uL)
Number TIC:	s found:	1		CON (ug/L	CENTRATIC . or ug/Kg)	ON UNITS: UG/L	1		
CAS NO.		COMP	OUND			RT E	ST. CON	D.	Q

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007446-09-5

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Sulfur dioxide

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Lab Name: CAS/ROC	Н	Contract: URS	MV	N7S-603
Lab Code: 10145	Case No.: R3-17294	SAS No .:	SDG No .:	MW9S-60
Matrix: (soil/water)		I ab Sample II	- 640086	10
	VATER	Lab Sample IL	. 043300	1.0
Sample wt/vol: 5	.0 (g/ml) <u>ML</u>	Lab File ID:	19775.D	
Level: (low/med) L	WO	Date Receive	d: 06/18/0	3
% Moisture: not dec.		Date Analyzed	1: 06/28/0	3
CC Column: DTV502	ID: 0.52 (mm)	Dilution Easte	- 10	
	<u>. ID. 0.55</u> (IIIII)	Dirucion Facto	1. 1.0	
Soil Extract Volume	(uL)	Soil Aliquot V	olume:	(uL)
	CON	ICENTRATION UNIT	S:	
CAS NO.	COMPOUND (ug/L	or ug/Kg) UG/L		Q
74.07.0	Ohlennethere		10	
74-87-3	Chloromethane		10	0
77.82.0	Bromomothano		10	0
75-00-3	Chloroethano		10	
67-64-1	Acetone		10	UT
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	9	10	U
75-34-3	1.1-Dichloroethane		10	U
78-93-3	2-Butanone	-	10	U
156-59-2	cis-1,2-Dichloroethene		2	J
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		2	J
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		130	
78-87-5	1,2-Dichloropropane		10	U
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
70.00 5	trans-1,3-Dichloroproper	ne	10	U
124 49 4	1,1,2-1 richloroethane		10	0
75-25-2	Bromoform		10	
108-10-1	4-Methyl-2-pentanone		10	11
108-88-3	Toluene		10	U
591-78-6	2-Hexanone		10	U U
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42	-3 (m+p)Xylene		10	U
95-47-6	o-Xylene		10	U
100-42-5	Styrene		10	U
79-34-5	1.1.2.2-Tetrachloroethan	ne	10	U

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	,	/OLATI		1E CS ANAL	YSIS DAT	A SHEET	EPA S		10.
Lab Name:	CAS/RC	TEN ⁻	FATIVELY ID	ENTIFIE	COMPO Contract:		MV	N7S-603	
Lab Code:	10145		Case No.:	R3-17294	SAS No	o.:	SDG No.:	MW9S-6	50
Matrix: (soil/	/water)	WATE	R		La	b Sample ID	649986	1.0	
Sample wt/v	vol:	5.0	(g/ml)	ML	La	b File ID:	19775.D		
Level: (low/	/med)	LOW			Da	ate Received	1: 06/18/0:	3	
% Moisture:	not dec.				Da	ate Analyzed	: 06/28/0	3	
GC Column	RTX5	02. ID:	0.53 (m	m)	Di	lution Factor	r: <u>1.0</u>		
Soil Extract	Volume		(uL)		Sc	il Aliquot Vo	lume:		(uL)
Number TIC	s found:	()	CON (ug/	NCENTRA L or ug/Kg	TION UNITS	S:		

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CAS NO. COMPOUND RT EST. CONC. Q

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	1A		EPA SA	MPLE NO.
		SIS DATA SHEET	MW	7D-603
Lab Name. CAS/ROC			_	
Lab Code: 10145	Case No.: R3-1/294	SAS NO.:	SDG No.: 1	MW9S-60
Matrix: (soil/water)	NATER	Lab Sample ID	: 649987 1	.0
Sample wt/vol:	50 (q/ml) MI	Lab File ID:	19776 D	
			10770.0	
Level: (low/med)	WO	Date Received	: 06/18/03	
% Moisture: not dec.		Date Analyzed	: 06/28/03	
GC Column: RTX502	ID: 0.53 (mm)	Dilution Eactor	10	
		Didition racion		
Soil Extract Volume	(uL)	Soil Aliquot Vo	lume:	(uL
	CON	CENTRATION UNITS	:	
CAS NO.	COMPOUND (ug/L	or ug/Kg) UG/L		Q
	1			
74-87-3	Chloromethane		10	U
/5-01-4	Vinyl chloride		2	J
/4-83-9	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	03
75-35-4	1,1-Dichloroethene		10	0
75-09-2	Methylene chloride		10	U
/5-15-0	Carbon disulfide		10	0
156-60-5	trans-1,2-Dichloroethene		10	0
75-34-3	1,1-Dichloroethane		10	U
/8-93-3	2-Butanone		10	U
130-39-2	CIS-1,2-Dichloroethene		16	11
107.06.2	1.2 Dichloroothono		10	0
71.55.6	1.1.1 Trichloroothano		10	0
56-23-5	Carbon tetrachloride		10	
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		120	0
78-87-5	1.2-Dichloropropage		10	11
75-27-4	Bromodichloromethane		10	
10061-01-5	cis-1 3-Dichloropropene		10	
10061-02-6	trans-1 3-Dichloropropere	ne l	10	U U
79-00-5	1.1.2-Trichloroethane		10	u
124-48-1	Dibromochloromethane		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-pentanone		10	U
108-88-3	Toluene		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42	-3 (m+p)Xylene		10	U
95-47-6	o-Xylene		10	U
100-42-5	Styrene		10	U
79-34-5	1,1,2,2-Tetrachloroethar	ne	10	U

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ASP 2000

	1E VOLATILE ORGANICS ANA	LYSIS DATA SHEET	EPA SA	MPLE NO.
Lab Name: CAS/R	TENTATIVELY IDENTIFIE	ED COMPOUNDS Contract: URS	MW	7D-603
Lab Code: 10145	Case No.: R3-1729	4 SAS No.: S	DG No.:	AVV9S-60
Matrix: (soil/water)	WATER	Lab Sample ID:	649987 1.	.0
Sample wt/vol:	5.0 (g/ml) ML	Lab File ID:	19776.D	
Level: (low/med)	LOW	Date Received:	06/18/03	
% Moisture: not dec.		Date Analyzed:	06/28/03	
GC Column: RTX	602. ID: 0.53 (mm)	Dilution Factor:	1.0	
Soil Extract Volume	(uL)	Soil Aliquot Vol	ume:	(uL)
	cc	DINCENTRATION UNITS		
Number TICs found:	(ug	J/L or ug/Kg) UG/L		
CAS NO.	COMPOUND	RT E	ST. CONC	Q

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ame: CAS/ROCH	Contract:	URS	BLANK
ode: 10145	Case No.: R3-17294 SAS No.	SDG No.:	MW9S-60
	TED	b Sample ID: 650207 1	0
(soll/water) VVA	IERLa	D Sample ID. 030207 1	
le wt/vol: 5.0	(g/ml) <u>ML</u> La	b File ID: B0448.D	
(low/med) LOV	N Da	te Received: 06/18/03	
isture: not dec	Da	te Analyzed: 06/26/03	
	D: 0.32 (mm) Di	lution Eactor: 1.0	
xtract Volume	(uL) Sc	bil Aliquot Volume:	(uL)
	CONCENTRA	TION UNITS:	
AS NO.	COMPOUND (ug/L or ug/Kg) UG/L	Q
			1 11 1
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	0
74-83-9	Bromomethane	10	0
75-00-3	Chloroethane	10	U
67-64-1	Acetone	10	01
75-35-4	1,1-Dichloroethene	10	U
75-09-2	Methylene chloride	10	U
75-15-0	Carbon disulfide	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	10	UJ
156-59-2	cis-1,2-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1.3-Dichloropropene	10	U
10061-02-6	trans-1 3-Dichloropropene	10	U
79-00-5	1.1.2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-pentanone	10	U.T
108-88-3	Toluene	10	U
591-78-6	2-Hexanone	10	UJ
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3/106-42-3	(m+n)Xylene	10	U
95-47-6	o-Xylene	10	- u
100.42.5	Styrene	10	
100-42-3	Olyrene	10	

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v	1E OLATILE ORGANICS ANAL	YSIS DATA SHEET	EPA SA	AMPLE NO.
Lab Name: CAS/RO	TENTATIVELY IDENTIFIE	D COMPOUNDS Contract: URS	TRIP	BLANK
Lab Code: 10145	Case No.: R3-17294	SAS No.: S	DG No.:	MW9S-60
Matrix: (soil/water)	WATER	Lab Sample ID:	650207 1	.0
Sample wt/vol:	5.0 (g/ml) ML	Lab File ID:	B0448.D	
Level: (low/med)	LOW	Date Received:	06/18/03	
% Moisture: not dec.		Date Analyzed:	06/26/03	
GC Column: DB624	ID: 0.32 (mm)	Dilution Factor:	1.0	
Soil Extract Volume	(uL)	Soil Aliquot Volu	ume:	(uL)
	CO	NCENTRATION UNITS:		
Number TICs found:	0			
CAS NO.	COMPOUND	RT E	ST. CONC	. Q

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	1A		EPA SA	MPLE NO.
Lab Name: CAS/R	VOLATILE ORGANICS ANALY	Contract: URS	COOL	ER BLK
				114100 00
Lab Code: 10145	Case No.: <u>R3-1/294</u>	SAS NO.: 8	SUG NO.: M	10032-00
Matrix: (soil/water)	WATER	Lab Sample ID:	650209 1.	.0
Sample wt/vol:	5.0 (g/ml) MI	Lab File ID:	19790 D	
Sample wovor.		Lab The ID.	10700.0	
Level: (low/med)	LOW	Date Received:	06/18/03	
% Moisture: not dec.		Date Analyzed:	06/28/03	
GC Column: RTX	502 ID: 0.53 (mm)	Dilution Factor:	1.0	
Soil Extract Volume	(uL)	Soil Aliquot Vol	ume:	(uL)
	CON	NCENTRATION UNITS:		
CAS NO.	COMPOUND (ug/l	L or ug/Kg) UG/L		Q
			40	11
74-87-3	Chloromethane		10	
75-01-4	Promomothene		10	U
74-03-9	Chloroothana		10	U U
75-00-3	Apptopp		10	
75 25 4	1 1 Dichloroothono		10	U
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1 2-Dichloroethen	e	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	9	10	0
10061-02-6	trans-1,3-Dichloroprope	ene	10	
19-00-5	Dibromochlosomothere		10	11
75.25.2	Bromoform		10	U
108-10-1	4-Methyl-2-pentanone		10	U
108-88-3	Toluene		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-	42-3 (m+p)Xylene		10	U
95-47-6	o-Xylene		10	U
100-42-5	Styrene		10	U
79-34-5	1.1.2.2-Tetrachloroetha	ane	10	U

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	1E VOLATILE ORGANICS	ANALYSIS DATA SHEET	EPA SAMPLE	NO.
Lab Name: CA	TENTATIVELY IDEN S/ROCH	TIFIED COMPOUNDS Contract: URS	COOLER B	LK
Lab Code: 101	45 Case No.: <u>R3</u>	-17294 SAS No.:	SDG No.: MW95	6-60
Matrix: (soil/wate	r) WATER	Lab Sample I	D: 650209 1.0	
Sample wt/vol:	5.0 (g/ml) M	L Lab File ID:	19790.D	_
Level: (low/med)	LOW	Date Receive	ed: 06/18/03	_
% Moisture: not o	lec.	Date Analyze	d: 06/28/03	_
GC Column: R	TX502. ID: 0.53 (mm)	Dilution Factor	or: 1.0	1
Soil Extract Volu	me (uL)	Soil Aliquot V	/olume:	_ (uL)
		CONCENTRATION UNIT	rs:	
Number TICs fou	ınd: <u>0</u>	(ug/L or ug/Kg) UG/L		
CAS NO.	COMPOUND	RT	EST. CONC.	Q

VO			EPA SA	MPLE NO.
Lab Name: CAS/ROCH	ATTLE ORGANICS ANALY	Contract: URS	MW5	D-603MS
	0			
Lab Code: 10145	Case No.: R3-1/294	SAS No.: S	SDG NO .:	MW9S-60
Matrix: (soil/water) W/	ATER	Lab Sample ID:	655970	
Sample wt/vol: 5.0	(a/ml) MI	Lab File ID:	19769 D	
			10100.0	
Level: (low/med) LO	<u></u>	Date Received:	06/18/03	
% Moisture: not dec.		Date Analyzed:	06/27/03	
GC Column: RTX502	ID: 0.53 (mm)	Dilution Factor	10	
		Bildion r dotor:	1.0	
Soil Extract Volume	(uL)	Soil Aliquot Vol	ume:	(uL
	CON	CENTRATION 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		49	
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide	-	10	U
156-60-5	trans-1,2-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		3	J
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		50	
79-01-6	Trichloroethene		160	
78-87-5	1,2-Dichloropropane		10	U
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloropropen	le	10	U
/9-00-5	1,1,2-1 richioroethane		10	0
75 25 2	Dipromocnioromethane		10	0
102-20-2	A Mothyl 2 postonene		10	
100-10-1	Toluone		10	
501.79.6	2 Hevenone		40	11
127-18-4	Tetrachloroethono		10	
108-90-7	Chlorobenzene		10	0
100-41-4	Ethylbenzene		10	11
108-38-3/106-42-3	(m+n)Xylene		10	
95-47-6	o-Xvlene		10	
100-42-5	Styrene		10	
700-42-5	4 1 0 0 Totrophoroothon	10	10	

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VO	1A ATILE ORGANICS ANALY	SIS DATA SHEET	EPA SA	MPLE NO.
Lab Name: CAS/ROCI	4	Contract: URS	MW5D-6	503MSD
Lab Code: 10145	Case No.: R3-17294	SAS No .:	SDG No .: N	1W9S-60
Matrix: (soil/water) W		Lab Sample II	0. 655971	
			. 000011	
Sample w/vol: <u>5.</u>	0 (g/ml) <u>ML</u>	Lab File ID:	19770.D	
Level: (low/med) Lo	WC	Date Received	d: 06/18/0	3
% Moisture: not dec		Date Analyzer	. 06/27/03	
		Date Analyzet	. 00/2//05	
GC Column: RTX502.	ID: 0.53 (mm)	Dilution Facto	r: <u>1.0</u>	
Soil Extract Volume	(uL)	Soil Aliquot Vo	olume:	(uL
	CON	CENTRATION UNIT	S:	
CAS NO.	COMPOUND (ug/L	or ug/Kg) UG/L		Q
74-87-3	Chloromethane		10	U
75-01-4	Vinyl chloride		10	U
74-83-9	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	U
75-35-4	1,1-Dichloroethene		50	
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1,2-Dichloroethene	9	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
/1-43-2	Benzene		49	
79-01-6	Irichloroethene		160	
75-07-5	1,2-Dichloropropane		10	U
15-21-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
70.00 5	1 1 2 Triphlangethange	ne	10	U
124.48.1	Dibromachlaramatha		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-pentanona		10	U
108-88-3	Toluene		10	
591-78-6	2-Hexanone		10	11
127-18-4	Tetrachloroethene		10	11
108-90-7	Chlorobenzene		49	
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-3	3 (m+p)Xvlene		10	U
95-47-6	o-Xvlene		10	U
100-42-5	Styrene		10	U
79-34-5	1122-Tetrachloroetha	ne	10	11

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	Vic			EPA	SAMPLE NO.
Lab Name:	CAS/ROCH		Contract: URS		VBLK01
Lab Code:	10145	Case No.: R3-17294	SAS No.:	SDG No.:	MW9S-603
Lab File ID:	B0397.D		Lab Sampl	e ID: 655795	5
Date Analyz	ed: 06/25/03		Time Anal	zed: 12:55	
GC Column:	DB624 ID	: <u>0.32</u> (mm)	Heated P	urge: (Y/N)	N
Instrument II	D: GCMS#5			1993	

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME
01	VBLK01MS	655797	B0398.D	13:35
02	MW9S-603	649969 1.0	B0399.D	14:10
03	MW10S-603	649971 1.0	B0400.D	14:51
04	MW10D-603	649972 1.0	B0401.D	15:26

COMMENTS

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Lab Name: CAS/ROCH	1	Contract: URS	V	BLK01
Lab Code: 10145	Case No.: R3-17294	SAS No.:	SDG No.:	MW9S-603
Matrix: (soil/water) W	ATER	Lab Sampl	e ID: 655795	
Sample wt/vol: 5 (Lab File ID	· B0397 D	
Sample wuvoi. <u>5.0</u>		Labilieid		
Level: (low/med) LC	W	Date Recei	ved:	
% Moisture: not dec.		Date Analy	zed: 06/25/03	1
GC Column: DB624	ID: 0.32 (mm)	Dilution Fa	ctor: 1.0	
		D ll All a		
Soil Extract Volume	(uL)	Soil Aliquoi	Volume:	(u
	001		HTC.	
	CON	CENTRATION UN	115:	~
CAS NO.	COMPOUND (ug/L	or ug/Kg) UG	i/L	Q
74-87-2	Chloromethane		10	U
75-01-4	Vinyl chloride		10	U
74_83_0	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	U
75-35-4	1 1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1.2-Dichloroethene		10	U
75-34-3	1.1-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		10	U
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloropropen	e	10	U
79-00-5	1,1,2-Irichloroethane		10	0
124-48-1	Dibromocniorometnane		10	0
15-25-2	A Mothyl 2 postanone		10	
108-10-1	Toluono		10	
100-00-3 501 79 6			10	
127 19 4	Tetrachloroethene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-3	(m+n)Xylene		10	U
95-47-6	o-Xvlene		10	U
100-42-5	Styrene		10	U
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VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

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Lab Name: <u>CAS/ROCH</u>	Contract: URS	VBLK01
Lab Code: 10145 Case No.:	R3-17294 SAS No.: SDG No.	.: MW9S-603
Matrix: (soil/water) WATER	Lab Sample ID: 65579	95
Sample wt/vol: 5.0 (g/ml)	ML Lab File ID: B039	7.D
Level: (low/med) LOW	Date Received:	
% Moisture: not dec.	Date Analyzed: 06/25	/03
GC Column: DB624 ID: 0.32 (m	m) Dilution Factor: 1.0	
Soil Extract Volume (uL)	Soil Aliquot Volume:	(uL)
	CONCENTRATION UNITS:	
Number TICs found: 0		
CAS NO. COMPOUND	RT EST. CO	NC. Q

EPA SAMPLE NO.

			NK SI IMMARY	EPA SAMPLE NO.	
Lab Name:	CAS/ROCH		Contract: URS	V	BLK02
Lab Code:	10145	Case No.: R3-17294	SAS No.: S	DG No.:	MW9S-603
Lab File ID:	B0407.D	Contraction of the	Lab Sample ID:	655798	
Date Analyz	ed: 06/25/03	221.12 2.13	Time Analyzed:	19:00	
GC Column:	DB624 ID	: <u>0.32</u> (mm)	Heated Purge:	(Y/N)	N
Instrument II	D: GCMS#5	193			

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME
01	VBLK02MS	655799	B0408.D	19:35
02	MW9D-603	649970 1.0	B0409.D	20:11
03	MW1-603	649978 1.0	B0410.D	20:46
04	MW2S-603	649979 1.0	B0411.D	21:21
05	MW3-603	649980 1.0	B0412.D	21:57

COMMENTS

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V	DLATILE ORGANICS ANALY	SIS DATA SHEET		
ab Name: CAS/RO	СН	Contract: URS	VB	LK02
ab Code: 10145	Case No.: R3-17294	SAS No.:	SDG No .: M	1W9S-603
latrix: (soil/water)	WATER	Lab Sample I	D: 655798	
ample wt/vol-	5.0 (a/mi) MI	Lab File ID.	B0407 D	
		Lab i lie ib.	00407.0	
evel: (low/med)	LOW	Date Receive	ed:	in
Moisture: not dec.		Date Analyze	d: 06/25/03	
C Column: DB624	ID: 0.32 (mm)	Dilution Facto	pr: 1.0	
all Enderset Maluma				
oil Extract Volume	(uL)	Soil Aliquot V	olume:	(ul
	CON	CENTRATION UNIT	S:	
CAS NO.	COMPOUND (ug/L	or ug/Kg) UG/L		Q
74.87.3	Chloromethane		10	
75-01-4	Vinyl chloride		10	
74-83-9	Bromomethane		10	- U
75-00-3	Chloroethane		10	u
67-64-1	Acetone		10	U
75-35-4	1.1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1.2-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		10	U
75-27-4	Bromodichloromethane	-	10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloropropend	9	10	0
19-00-5	1,1,2-1 nchloroethane		10	U
75 25 2	Dibromochloromethane		10	U
109 10 1	A Methyl 2 pontanono		10	0
108-88-3	Toluene		10	11
591-78-6	2-Hexanone		10	11
127-18-4	Tetrachloroethene		10	U U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
108-38-3/106-42-	3 (m+p)Xylene		10	U
95-47-6	o-Xylene		10	U
100-42-5	Styrene		10	U
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v	1E OLATILE ORGANICS ANA	LYSIS DATA SHEET	EPA S	AMPLE NO.
Lab Name: CAS/RO	TENTATIVELY IDENTIFIE	ED COMPOUNDS Contract: URS	V	BLK02
Lab Code: 10145	Case No.: R3-1729	4 SAS No.:	SDG No.:	MW9S-603
Matrix: (soil/water)	WATER	Lab Sample I	D: 655798	
Sample wt/vol:	5.0 (g/ml) ML	Lab File ID:	B0407.0)
Level: (low/med)	LOW	Date Receive	d:	
% Moisture: not dec.		Date Analyze	d: 06/25/03	3
GC Column: DB624	ID: 0.32 (mm)	Dilution Facto	r: 1.0	
Soil Extract Volume	(uL)	Soil Aliquot V	olume:	(uL)
Number TICs found:	CO (ug.	NCENTRATION UNIT: /L or ug/Kg) UG/L	S:	
CAS NO.	COMPOUND	RT	EST. CONC	. Q

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	VC	4A DLATILE METHOD BLANK SUMMARY		EPA SAMPLE NO.	
Lab Name:	CAS/ROCH		Contract: URS	VBLK03	
Lab Code:	10145	Case No.: R3-17294	SAS No.:	SDG No.: MW9S-6	03
Lab File ID:	B0443.D		Lab Sample	e ID: 655804	-
Date Analyze	ed: 06/26/03	and a start of the	Time Analy	zed: 17:55	
GC Column:	DB624 ID	: 0.32 (mm)	Heated Pu	rge: (Y/N) N	
Instrument II	D: GCMS#5	100			

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME
01	MW11D-603	649973 1.0	B0445.D	19:12
02	MWY(DUP)-603	649974 1.0	B0446.D	19:47
03	EFF-061803	649977 1.0	B0447.D	20:22
04	TRIP BLANK	650207 1.0	B0448.D	20:58

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ab Name: CAS/ROC	н с	ontract: URS	VB	LK03
ab Code: 10145	Case No.: R3-17294	SAS No .:	SDG No.: N	1VV9S-603
latrix: (soil/water) V	ATER	Lab Sample ID	: 655804	
ample wt/vol:		Lab File ID.	Datta D	-
		Lab File ID:	B0443.D	_
evel: (low/med) L	W	Date Received	:	
Moisture: not dec.		Date Analyzed	: 06/26/03	
C Column: DB624	ID: 0.32 (mm)	Dilution Easter	4.0	-
DB024	1D. <u>0.32</u> (mm)	Dilution Factor	1.0	_
oil Extract Volume	(uL)	Soil Aliquot Vo	lume:	(ul
CAS NO.	CONC COMPOUND (ug/L o	ENTRATION UNITS	: .	Q
74-87-3	Chloromethane		10	U
75-01-4	Vinyl chloride		10	U
74-83-9	Bromomethane		10	U
75-00-3	Chloroethane		10	U
67-64-1	Acetone		10	U
75-35-4	1,1-Dichloroethene		10	U
75-09-2	Methylene chloride		10	U
75-15-0	Carbon disulfide		10	U
156-60-5	trans-1,2-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon tetrachloride		10	U
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		10	U
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
10061-02-6	trans-1,3-Dichloropropene		10	U
79-00-5	1,1,2-Trichloroethane		10	U
124-48-1	Dibromochloromethane		10	U
10-25-2	Bromotorm		10	U
108-10-1	4-Methyl-2-pentanone		10	U
100-00-3 501 78 C	1 oluene		10	U
107 19 4	Z-riexanone		10	U
127-10-4	Chlorobornere		10	0
1 108 00 7	Chlorobenzene		10	U
108-90-7	Ethylhonnone		4.00	
108-90-7 100-41-4 108-38-3/406-40-0	Ethylbenzene		10	U
108-90-7 100-41-4 108-38-3/106-42-3 95-47-6	Ethylbenzene (m+p)Xylene		10	U
108-90-7 100-41-4 108-38-3/106-42-3 95-47-6 100-42-5	Ethylbenzene (m+p)Xylene o-Xylene Styrene		10 10 10	

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	1E VOLATILE ORGANICS	ANALYSIS DAT	A SHEET	EPA S	AMPLE NO.
Lab Name: CAS/RC	TENTATIVELY IDEN	TIFIED COMPO Contract:	UNDS	v	BLK03
Lab Code: 10145	Case No.: R3-	17294 SAS No	o.:	SDG No.:	MW9S-603
Matrix: (soil/water)	WATER	Lai	b Sample I	0: 655804	
Sample wt/vol:	5.0 (g/ml) ML	La	b File ID:	B0443.0)
Level: (low/med)	LOW	Da	te Received	d:	
% Moisture: not dec.		Da	te Analyzed	1: 06/26/03	3
GC Column: DB624	ID: <u>0.32</u> (mm)	Dil	ution Facto	r: 1.0	
Soil Extract Volume	(uL)	So	il Aliquot Vo	olume:	(uL)
Number TICs found:	0	CONCENTRAT (ug/L or ug/Kg)		S:	
CAS NO.	COMPOUND		RT	EST. CON	c. Q

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4A VOLATILE METHOD BLANK SUMMARY				EPA S	SAMPLE NO.
Lab Name:	CAS/ROCH		Contract: URS	1	BLK04
Lab Code:	10145	Case No.: R3-17294	SAS No.:	SDG No.:	MW9S-603
Lab File ID:	19766.D		Lab Sample	e ID: 655961	
Date Analyz	ed: 06/27/03		Time Analy	zed: 20:45	
GC Column:	RTX502. ID:	. <u>0.53</u> (mm)	Heated Pu	rge: (Y/N)	N
Instrument II	D: GCMS#1				

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

	EPA	LAB	LAB	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
01	VBLK04MS	655962	19768.D	22:02
02	MW5D-603MS	655970	19769.D	22:41
03	MW5D-603MSD	655971	19770.D	23:20
04	MW4-603	649981 1.0	19771.D	23:59
05	MW5S-603	649982 1.0	19772.D	00:38
06	MW6S-603	649984 1.0	19773.D	01:17
07	MW6D-603	649985 1.0	19774.D	01:56
08	MW7S-603	649986 1.0	19775.D	02:35
09	MW7D-603	649987 1.0	19776.D	03:14

COMMENTS

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FORM IV VOA

		VBI	_K04
СН	Contract: URS		
Case No.: R3-17294	SAS No.:	SDG No.: M	W9S-603
WATER	Lab Sample ID	: 655961	
	Lab Eila ID:	10766 D	
	Lab File ID:	19700.D	
LOW	Date Received	:	
	Date Analyzed:	06/27/03	
2. ID: 0.53 (mm)	Dilution Factor	1.0	
(ul.)	Soil Aliquet Vol	lumo:	(ul
(uL)	Soli Aliquot Vol	ume.	(uL
CON	CENTRATION UNITS		
COMPOLIND		,	0
COMPOUND (Ug/L	UG/L		Q
Chloromethane		10	U
Vinyl chloride		10	U
Bromomethane		10	U
Chloroethane		10	U
Acetone		10	U
1,1-Dichloroethene		10	U
Methylene chloride		10	U
Carbon disulfide		10	U
trans-1,2-Dichloroethene		10	U
1,1-Dichloroethane		10	U
2-Butanone		10	U
cis-1,2-Dichloroethene		10	U
Chloroform		10	U
1,2-Dichloroethane		10	U
1,1,1-Trichloroethane	-	10	U
Carbon tetrachioride		10	0
Benzene		10	U
		10	0
1,2-Dichloropropane		10	0
Bromodichioromethane		10	0
trans_1 3-Dichloropropene	0	10	0
1 1 2-Trichloroethane		10	U
Dibromochloromethane		10	U
Bromoform		10	U
4-Methyl-2-pentanone		10	U
Toluene		10	U
2-Hexanone		10	U
Tetrachloroethene		10	U
Chlorobenzene		10	U
Ethylbenzene		10	U
-3 (m+p)Xylene		10	U
o-Xylene		10	U
	CH Case No.: R3-17294 WATER 5.0 (g/ml) ML LOW 2. ID: 0.53 (mm) (uL) COMPOUND (ug/L Chloromethane Vinyl chloride Bromomethane Vinyl chloride Bromomethane Acetone 1,1-Dichloroethene Methylene chloride Carbon disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane 2-Butanone cis-1,2-Dichloroethene 1,1,1-Trichloroethane 2-Butanone cis-1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane Bromodichloromethane Carbon tetrachloride Benzene Trichloroethene 1,2-Dichloropropane Bromodichloromethane Cis-1,3-Dichloropropene trans-1,3-Dichloropropene 3 (m+p)Xylene	CH Contract: URS Case No.: R.3-17294 SAS No.: Sas No.	CH Contract: URS Case No.: R3-17294 SAS No.: SDG No.: M WATER Lab Sample ID: 655961 5.0 (g/ml) ML Lab File ID: 19766.D LOW Date Received:

FORMIVOA

	VOLATI	1E LE ORGANICS ANAL	YSIS DATA SHEET	EPA S	AMPLE NO.
Lab Name: (TEN CAS/ROCH	TATIVELY IDENTIFIE	D COMPOUNDS Contract: URS	v	BLK04
Lab Code:	10145	Case No.: R3-17294	SAS No.:	SDG No.:	MW9S-603
Matrix: (soil/wa	ater) WATE	R	Lab Sample	e ID: 655961	
Sample wt/vol	: 5.0	(g/ml) ML	Lab File ID:	19766.D	
Level: (low/m	ed) LOW		Date Recei	ved:	
% Moisture: no	ot dec.		Date Analy:	zed: 06/27/03	3
GC Column:	RTX502. ID:	0.53 (mm)	Dilution Fac	ctor: <u>1.0</u>	
Soil Extract Vo	olume	(uL)	Soil Aliquot	Volume:	(uL)
Number TICs	found: 0	CON (ug/l	NCENTRATION UN	ITS: /L	
CAS NO.	сом	POUND	RT	EST. CONC	c. Q

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4A VOLATILE METHOD	BLANK SUMMARY
Lab Name: CAS/ROCH	Contract: URS VBLK05
Lab Code: 10145 Case No.: R3-1	7294 SAS No.: SDG No : MW95-603
Lab File ID: 19787.D	Lab Sample ID: 655966
Date Analyzed: 06/28/03	Time Analyzed: 15:27
GC Column: RTX502. ID: 0.53 (mm)	Heated Purge: (Y/N) N
Instrument ID: GCMS#1	

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME
01	VBLK05MS	655968	19788 D	16.06
02	MW5D-603	649983 1.0	19789 D	16:45
03	COOLER BLK	650209 1.0	19790.D	17:23

COMMENTS

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FORM IV VOA

ab Name: CAS/ROC	н	Contract: UR	S	VI	BLK05	
ab Code: 10145	Case No.: R3-17294	SAS No.:	SD	G No.:	MW9S-	603
Matrix: (soil/water) V	VATER	Lab Sar	mple ID: 6	355966		
ample with ol:		Leb Elle	10. 1	0707 0		
		Lab File		9787.D		
evel: (low/med)	OW	Date Re	eceived:			
Moisture: not dec.		Date An	alyzed: 0	06/28/03		
C Column RTX502	ID: 0.53 (mm)	Dilution	Eactor: 1	0		
	1D. 0.00 (mm)	Dilution	racior.	.0		
oil Extract Volume	(uL)	Soil Alio	uot Volun	1e:		(uL
	CON	CENTRATION	LINUTO			
CARNO		CENTRATION	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	
70.04.0	Benzene			10	U	
79-01-0	1 richloroethene			10	0	_
75-27 4	1,2-Dichloropropane			10	0	-
10061-01-5	cis-1 3-Dichloropropene			10		-
10061-07-5	trans-1 3-Dichloropropene	9		10		-
79-00-5	1 1 2-Trichloroethane	5		10		-
124-48-1	Dibromochloromethane			10		-
75-25-2	Bromoform			10	U	-
108-10-1	4-Methyl-2-pentanone			10	U	-
108-88-3	Toluene			10	U	-
591-78-6	2-Hexanone	-		10	U	-
127-18-4	Tetrachloroethene			10	U	-
108-90-7	Chlorobenzene			10	U	
100-41-4	Ethylbenzene			10	U	
108-38-3/106-42-3	(m+p)Xylene			10	U	
95-47-6	o-Xylene			10	U	
100-42-5	Styrene			10	U	
70.24 5	1122 Tetrachloroothano			10	EL	1

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		VOLATILI	1E E ORGANICS AI	NALY	SIS DATA SHEET	EPA S	AMPLE NO.
Lab Name:	CAS/R		TIVELY IDENTI	FIED	COMPOUNDS Contract: URS	v	BLK05
Lab Code:	10145		Case No.: R3-17	294	SAS No.:	SDG No.:	MW9S-603
Matrix: (soil/	water)	WATER			Lab Sample	ID: 655966	
Sample wt/v	ol:	5.0	(g/ml) ML		Lab File ID:	19787.D	
Level: (low/	med)	LOW			Date Receive	ed:	
% Moisture:	not dec.	-			Date Analyze	ed: 06/28/03	3
GC Column:	RTX5	02. ID:	0.53 (mm)		Dilution Fact	or: 1.0	
Soil Extract	Volume		(uL)		Soil Aliquot	/olume:	(uL)
Number TIC	s found:	0	_	CONC (ug/L	CENTRATION UNIT or ug/Kg) UG/L	rs:	
CAS NO.		COMPO	DUND		RT	EST. CON	. Q

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB)

Lab Nan	ne: CAS/ROCH	Contract: URS	-		
Lab Cod	le: 10145 Case No.: R3-17294	SAS No.: S	SDG No.:	MV	V9S-603
Lab File	ID: B0110.D	BFB Injection D	Date: 06/0	09/0	3
Instrume	ent ID: GCMS#5	BFB Injection T	ime: 13:	27	
GC Colu	umn: DB624 ID: 0.32 (mm)	Heated Purge:	(Y/N)	N	
m/e	ION ABUNDANCE CRITERIA		% REL ABUNI		VE
50	15.0 - 40.0% of mass 95		15.2		
75	30.0 - 60.0% of mass 95		38.8	-	
95	Base peak, 100% relative abundance		100.0		
96	5.0 - 9.0% of mass 95		6.3		
173	Less than 2.0% of mass 174		0.3	(0.4)1
174	50.0 - 120.0% of mass 95		78.7		
175	5.0 - 9.0% of mass 174	-	5.6	(7.1)1
176	95.0 - 101.0% of mass 174		77.5	(98.4)1
177	5.0 - 9.0% of mass 176		4.9	(6.4)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

[EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	VSTD010	B0112.D	06/09/03	14:39
02	VSTD020	VSTD020	B0113.D	06/09/03	15:14
03	VSTD050	VSTD050	B0114.D	06/09/03	15:49
04	VSTD100	VSTD100	B0115.D	06/09/03	16:25
05	VSTD200	VSTD200	B0116.D	06/09/03	17:00

5A VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB)

Lab Name:	CAS/ROCH			Contract: URS		
Lab Code:	10145	Case No.:	R3-17294	SAS No.:	SDG I	No.: MW9S-603
Lab File ID:	B0393.D			BFB Injection	Date:	06/25/03
Instrument ID	: GCMS#5			BFB Injection	Time:	10:47
GC Column:	DB624	ID: 0.32	(mm)	Heated Purge	e: (Y/N)	N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE		
50	15.0 - 40.0% of mass 95	15.6		
75	30.0 - 60.0% of mass 95	38.9		
95	Base peak, 100% relative abundance	100.0		
96	5.0 - 9.0% of mass 95	6.6		
173	Less than 2.0% of mass 174	0.1	(0.1)1
174	50.0 - 120.0% of mass 95	80.0		1.1
175	5.0 - 9.0% of mass 174	5.9	(7.4)1
176	95.0 - 101.0% of mass 174	77.2	(96.6)1
177	5.0 - 9.0% of mass 176	5.3	(6.8)2
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1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA	LAB	LAB	DATE	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
01	VSTD050	VSTD050	B0395.D	06/25/03	11:44
02	VBLK01	655795	B0397.D	06/25/03	12:55
03	VBLK01MS	655797	B0398.D	06/25/03	13:35
04	MW9S-603	649969 1.0	B0399.D	06/25/03	14:10
05	MW10S-603	649971 1.0	B0400.D	06/25/03	14:51
06[MW10D-603	649972 1.0	B0401.D	06/25/03	15:26

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB)

Lab Name	CAS/ROCH	Contract: URS	_		
Lab Code:	10145 Case No.: R3-17294	SAS No.:	SDG No.	: <u>MV</u>	V9S-603
Lab File ID: B0404.D		BFB Injection BFB Injection	Date: 00	6/25/0 7:09	03
GC Colum	nn: DB624 ID: 0.32 (mm)	Heated Purg	e: (Y/N)	N	
m/e	ION ABUNDANCE CRITERIA		% RE ABU		
50	15.0 - 40.0% of mass 95		17.	1	
75	30.0 - 60.0% of mass 95		41.	3	
95	Base peak, 100% relative abundance		100.	0	
96	5.0 - 9.0% of mass 95		6.	8	
173	Less than 2.0% of mass 174		0.	3 (0.3)1
174	50.0 - 120.0% of mass 95		86.	8	
175	5.0 - 9.0% of mass 174		6.	2 (7.1)1

5.0 - 9.0% of mass 176 1-Value is % mass 174

95.0 - 101.0% of mass 174

176

177

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EDA	LAB	LAB	DATE	TIME
SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
1 VSTD050	VSTD050	B0405.D	06/25/03	17:35
2 VBLK02	655798	B0407.D	06/25/03	19:00
3 VBLK02MS	655799	B0408.D	06/25/03	19:35
4 MW9D-603	649970 1.0	B0409.D	06/25/03	20:11
5 MW1-603	649978 1.0	B0410.D	06/25/03	20:46
6 MW2S-603	649979 1.0	B0411.D	06/25/03	21:21
7 MW3-603	649980 1.0	B0412.D	06/25/03	21:57

99.6)1

6.6)2

86.4

5.7

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB)

Lab Nan	ne: CAS/ROCH	Contract: URS	_		
Lab Cod	le: 10145 Case No.: R3-17294	SAS No.:	SDG No.:	MV	V9S-603
Lab File	ID: B0432.D	BFB Injection	Date: 06/	26/0)3
Instrume	ent ID: GCMS#5	BFB Injection 1	Time: 10:	21	-
GC Colu	Imn: DB624 ID: 0.32 (mm)	Heated Purge:	(Y/N)	N	
m/e	ION ABUNDANCE CRITERIA		% REL		
			15.0		
50	15.0 - 40.0% of mass 95		13.8	-	
75	30.0 - 60.0% of mass 95		41.1		
95	Base peak, 100% relative abundance		100.0		
96	5.0 - 9.0% of mass 95		6.4	-	
173	Less than 2.0% of mass 174		0.4	(0.5)1
174	50.0 - 120.0% of mass 95		89.9		
175	5.0 - 9.0% of mass 174		6.3	(7.0)1
176	95.0 - 101.0% of mass 174		87.0	(96.8)1
177	5.0 - 9.0% of mass 176		5.6	(6.4)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	B0433.D	06/26/03	10:54
02	VBLK03	655804	B0443.D	06/26/03	17:55
03	VBLK03MS	655804	B0444.D	06/26/03	18:37
04	MW11D-603	649973 1.0	B0445.D	06/26/03	19:12
05	MWY(DUP)-603	649974 1.0	B0446.D	06/26/03	19:47
06	EFF-061803	649977 1.0	B0447.D	06/26/03	20:22
07	TRIP BLANK	650207 1.0	B0448.D	06/26/03	20:58

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5A VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB)

Lab Name:	CAS/ROCH	Contract: URS	_	
Lab Code:	10145 Case No.: R3-17294	SAS No.:	SDG No .:	MW9S-603
Lab File ID: Instrument II	19751.D D: GCMS#1	BFB Injection BFB Injection	Date: 06/2 Time: 10:2	27/03 28 N
GC Column:	RTX502.2 ID: 0.53 (mm)	Healeu Fuige		
m/e	ION ABUNDANCE CRITERIA		% REL ABUNI	
50 1	5.0 - 40.0% of mass 95		19.1	
75 3	0.0 - 60.0% of mass 95		56.1	
95 E	Base peak, 100% relative abundance		100.0	
96 5	0 - 9.0% of mass 95		5.8	
173	ess than 2.0% of mass 174		0.4	(0.5)1
174 5	50.0 - 120.0% of mass 95		74.8	

5.0 - 9.0% of mass 176 1-Value is % mass 174

5.0 - 9.0% of mass 174

95.0 - 101.0% of mass 174

175

176

177

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

ſ	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	VSTD010	19753.D	06/27/03	11:47
02	VSTD070	VSTD020	19754.D	06/27/03	12:34
02	VSTD020	VSTD050	19755.D	06/27/03	13:18
03	VSTD100	VSTD100	19756.D	06/27/03	14:08
05	VSTD200	VSTD200	19757.D	06/27/03	14:50

7.1)1

5.7)2

100.1)1

5.3

4.3

74.8

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK **BROMOFLUOROBENZENE (BFB)**

Lab Nar	ne: CAS/ROCH	Contract: URS			
Lab Coo	le: 10145 Case No.: R3-17294	SAS No.:	SDG No.:	M	W9S-603
Lab File	ID: 19764.D	BFB Injection	Date: 06	1271	03
Instrume	ent ID: GCMS#1	BFB Injection	Time: 19	:36	
GC Colu	umn: RTX502.2 ID: 0.53 (mm)	Heated Purge	: (Y/N) _	N	
m/e	ION ABUNDANCE CRITERIA		% RE ABUN		IVE
50	15.0 - 40.0% of mass 95		20.5		
75	30.0 - 60.0% of mass 95		52.0		
95	Base peak, 100% relative abundance		100.0		
96	5.0 - 9.0% of mass 95		6.6		
173	Less than 2.0% of mass 174		0.3	(0.4)1
174	50.0 - 120.0% of mass 95		74.6		
175	5.0 - 9.0% of mass 174		5.4	(7.2)1
176	95.0 - 101.0% of mass 174		73.2	(98.1)1
177	5.0 - 9.0% of mass 176		5.6	(7.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

[EPA	LAB	LAB	DATE	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
01	VSTD050	VSTD050	19765.D	06/27/03	20:06
02	VBLK04	655961	19766.D	06/27/03	20:45
03	VBLK04MS	655962	19768.D	06/27/03	22:02
04	MW5D-603MS	655970	19769.D	06/27/03	22:41
05	MW5D-603MSD	655971	19770.D	06/27/03	23:20
06	MW4-603	649981 1.0	19771.D	06/27/03	23:59
07	MW5S-603	649982 1.0	19772.D	06/28/03	00:38
08	MW6S-603	649984 1.0	19773.D	06/28/03	01:17
09	MW6D-603	649985 1.0	19774.D	06/28/03	01:56
10	MW7S-603	649986 1.0	19775.D	06/28/03	02:35
11	MW7D-603	649987 1.0	19776.D	06/28/03	03:14

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB)

Lab Nan	ne: CAS/ROCH	Contract: URS	_		
Lab Cod	le: 10145 Case No.: R3-17294	SAS No.:	SDG No.	M	W9S-603
Lab File	ID: 19785.D	BFB Injection	Date: 06	6/28/	/03
Instrume	ent ID: GCMS#1	BFB Injection	Time: 14	k:17	
GC Colu	umn: RTX502.2 ID: 0.53 (mm)	Heated Purge	: (Y/N)	1	1
m/e	ION ABUNDANCE CRITERIA		% RE ABUI		
50	15.0 - 40.0% of mass 95		20.3	3	
75	30.0 - 60.0% of mass 95		51.	C	
95	Base peak, 100% relative abundance		100.	0	
96	5.0 - 9.0% of mass 95		6.	5	
173	Less than 2.0% of mass 174		0.	0 (0.0)1
174	50.0 - 120.0% of mass 95		72.	B	
175	5.0 - 9.0% of mass 174		5.	5 (7.6)1
176	95.0 - 101.0% of mass 174		72.	9 (100.1)1
177	5.0 - 9.0% of mass 176		5.	8 (8.0)2

1-Value is % mass 174

1

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	19786.D	06/28/03	14:48
02	VBLK05	655966	19787.D	06/28/03	15:27
03	VBLK05MS	655968	19788.D	06/28/03	16:06
04	M\A/5D_603	649983 1.0	19789.D	06/28/03	16:45
05	COOLER BLK	650209 1.0	19790.D	06/28/03	17:23

Lab N	lame: CAS/ROC	H		Contract: UF	RS	_		
Lab C	ode: 10145	Case No.	: R3-17294	SAS No.:	SDG	No.: MV	V9S-6	503
Lab F	ile ID (Standard):	B0395.D		C	Date Analyze	d: 06/25/	03	
Instru	ment ID: GCMS#	# 5		т	ime Analyze	d: 11:44		
GC C	olumn: DB624	ID: 0.32	(mm)	ŀ	leated Purge	: (Y/N)	N	
		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA	#	RT #
1	12 HOUR ST	138809	9.42	832770	11.25	87771	1	16.77
	LOWER LIMIT	69405	8.92	416385	10.75	43885	6	16.27
	UPPER LIMIT	277618	9.92	1665540	11.75	175542	2	17.27
	EPA SAMPLE NO.							
01	VBLK01	125424	9.42	735560	11.24	75863	5	16.77
02	VBLK01MS	120084	9.42	701385	11.24	70606	0	16.78
03	MW9S-603	111551	9.43	649662	11.25	66127	7	16.77
04	MW10S-603	109463	9.42	627786	11.25	63570	2	16.77
05	MW10D-603	105683	9.42	602845	11.24	61625	0	16.78

IS1	=	Bromochloromethane
IS2	=	1,4-Difluorobenzene

- 1,4-Difluorobenzene =
- 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

IS3

Lab N	ame: CAS/ROC	н		Contract: U	RS	_	
Lab C	Code: 10145	Case No.:	R3-17294	SAS No.:	SDG	No.: MW9S	-603
Lab F	ile ID (Standard):	B0405.D			Date Analyze	d: 06/25/03	
Instru	ment ID: GCMS	#5			Time Analyze	d: 17:35	
GC C	olumn: DB624	ID: 0.32	(mm)		Heated Purge	: (Y/N)1	N
		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	100416	9.44	613978	11.26	632728	16.79
	LOWER LIMIT	50208	8.94	306989	10.76	316364	16.29
	UPPER LIMIT	200832	9.94	1227956	11.76	1265456	17.29
	EPA SAMPLE NO.						
01	VBLK02	101046	9.43	574500	11.25	586416	16.78
02	VBLK02MS	100819	9.43	572323	11.25	581384	16.78
03	MW9D-603	99452	9.42	558830	11.25	560509	16.77
04	MW1-603	98066	9.43	553992	11.25	555713	16.78
05	MW2S-603	96256	9.43	548583	11.25	546806	16.78
06	MW3-603	95949	9.43	538912	11.25	547861	16.78

IS1	
IS2	

153

- Bromochloromethane1,4-Difluorobenzene
- = 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

Lab N	Name: CAS/ROCI	н	-	Contract: U	RS		
Lab (Code: 10145	Case No.	: R3-17294	SAS No.:	SDG	No .: MW9S-	603
Lab F	File ID (Standard):	B0433.D	-		Date Analyze Time Analyze	d: <u>06/26/03</u> d: 10:54	_
GC C	column: DB624	ID: 0.32	(mm)	1.1	Heated Purge	: (Y/N)N	
		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	118253	9.44	654733	11.27	693153	16.79
	LOWER LIMIT	59127	8.94	327367	10.77	346577	16.29
	UPPER LIMIT	236506	9.94	1309466	11.77	1386306	17.29
	EPA SAMPLE NO.						
01	VBLK03	184869	9.41	1139591	11.24	1224246	16.76
02	VBLK03MS	184013	9.41	1137070	11.24	1218034	16.76
03	MW11D-603	185665	9.41	1121946	11.24	1207119	16.76
04	MWY(DUP)-603	183359	9.41	1121586	11.23	1197642	16.76
05	EFF-061803	180415	9.41	1098888	11.24	1173878	16.76
06	TRIP BLANK	178841	9.41	1078482	11.24	1153935	16.76

IS1	
IS2	

IS3

- Bromochloromethane 1,4-Difluorobenzene =
- = 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

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Name: CAS/ROC	Н		Contract: UF	RS		
Code: <u>10145</u> File ID (Standard):	Case No. 19765.D	: <u>R3-17294</u>	SAS No.: _	SDG Date Analyze	No.: <u>MW9S-</u> d: <u>06/27/03</u>	603
ment ID: GCMS#	1		Т	Time Analyze	d: 20:06	
column: RTX502.2	ID: 0.53	(mm)	F	leated Purge	: (Y/N)N	
	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR ST	255990	12.21	1031846	14.28	856945	21.36
LOWER LIMIT	127995	11.71	515923	13.78	428473	20.86
UPPER LIMIT	511980	12.71	2063692	14.78	1713890	21.86
EPA SAMPLE NO.						
VBLK04	260497	12.21	1035240	14.28	843718	21.34
VBLK04MS	261342	12.22	1045964	14.27	887052	21.35
MW5D-603MS	257987	12.22	1032363	14.27	873721	21.35
MW5D-603MSP	258144	12.22	1033257	14.27	867164	21.34
MW4-603	264799	12.21	1026994	14.27	846806	21.34
MW5S-603	258206	12.21	1035492	14.27	858565	21.34
MW6S-603	246726	12.20	996205	14.27	841050	21.34
MW6D-603	248661	12.20	988752	14.27	831137	21.34
MW7S-603	258551	12.21	986694	14.27	826382	21.34
MW7D-603	252683	12.21	1009197	14.27	842950	21.34
	Name: CAS/ROC Code: 10145 File ID (Standard): ument ID: GCMS# Column: RTX502.2 12 HOUR ST LOWER LIMIT UPPER LIMIT UPPER LIMIT UPPER LIMIT EPA SAMPLE NO. VBLK04 VBLK04MS MW5D-603MS MW5D-603MS MW5D-603 MW6D-603 MW6S-603 MW7S-603 MW7S-603	Name: CAS/ROCH Code: 10145 Case No. File ID (Standard): 19765.D ument ID: GCMS#1 Column: RTX502.2 ID: 0.53 ID: 0.53 IS1 AREA # 12 HOUR ST 255990 ID: 0.53 LOWER LIMIT 127995 ID: 0.53 UPPER LIMIT 511980 ID: 0.53 VBLK04 260497 ID: 0.53 VBLK04 260497 ID: 0.53 VBLK04MS 261342 ID: 0.53 MW5D-603MS 257987 ID: 0.53 MW5D-603MS 258144 ID: 0.53 MW6S-603 258206 IMW6S-603 246726 MW6D-603 248661 ID: 0.53 MW7S-603 258551 ID: 0.53	Name: CAS/ROCH Code: 10145 Case No.: R3-17294 File ID (Standard): 19765.D	Name: CAS/ROCH Contract: UF Code: 10145 Case No.: R3-17294 SAS No.:	Name: CAS/ROCH Contract: URS Code: 10145 Case No.: R3-17294 SAS No.:	Name: CAS/ROCH Contract: URS Code: 10145 Case No.: R3-17294 SAS No.: SDG No.: MW9S- File ID (Standard): 19765.D Date Analyzed: 06/27/03 ument ID: GCMS#1 Time Analyzed: 20:06 Column: RTX502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N IS1 AREA RT # AREA RT # AREA # T 13.78 428473 UPPER LIMIT 511980 12.71 2063692 14.78 <td< td=""></td<>

IS1 = Bromochloromethane IS2 = 1,4-Difluorobenzene

= 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

IS3

Lab M	Name: CAS/RO	СН		Contract: L	JRS	_	
Lab (Code: 10145	Case No	: R3-17294	SAS No.:	SDG	No.: MW	95-603
Lab F	File ID (Standard):	19786.D	_		Date Analyze	d: 06/28/0	3
Instru	ment ID: GCMS	#1			Time Analyze	d: 14:48	
GC C	Column: RTX502	.2 ID: 0.53	(mm)		Heated Purge	: (Y/N) _	N
		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA	# RT #
	12 HOUR ST	270336	12.24	1096071	14.29	905505	21.36
	LOWER LIMIT	135168	11.74	548036	13.79	452753	20.86
	UPPER LIMIT	540672	12.74	2192142	14.79	1811010	21.86
	EPA SAMPLE NO.						
01	VBLK05	265397	12.21	1053897	14.29	874787	21.36
02	VBLK05MS	259295	12.23	1024558	14.28	856151	21.36
03	MW5D-603	264772	12.22	1045833	14.27	865933	21.34
04	COOLER BLK	262077	12.22	1016771	14.27	862078	21.35

IS1 = Bromochloromethane

- = 1,4-Difluorobenzene
- = 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

IS2

IS3

1

Appendix C Analytical Data Validation

APPENDIX C ANALYTICAL DATA VALIDATION

GRIFFIN TECHNOLOGY SITE

SYSTEM OPERATION ANNUAL GROUNDWATER SAMPLING

JUNE 2003

INTRODUCTION

This appendix presents the findings of a validation of analytical data for samples collected in June 2003 at the Griffin Technology Inc. (GTI) Site. Sampling was conducted by URS Corporation (URS) and analytical services were provided by Columbia Analytical Services, Inc. (CASI) of Rochester, New York. Sixteen primary groundwater samples and associated QC samples were collected and analyzed for volatile organic compounds (VOCs) in accordance with New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) Method 95-1.

The procedures for validation of the data followed guidance from the following documents:

- 1. Interim Remedial Measure Program Appendix B: Quality Assurance Project Plan (QAPP). July 1996. Prepared by Woodward-Clyde Consultants.
- 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

Appendix C Analytical Data Validation Griffin Technology Site Page 2 of 6

- Field duplicate results
- Compound identification and quantitation
- Overall assessment of data

The following sections present the findings of the data validation.

SIGNIFICANT PROBLEMS IDENTIFIED IN CASE NARRATIVE

No significant problems were noted in the case narrative.

RESULTS REPORTED FROM SECONDARY DILUTIONS

No secondary dilutions were required for samples in this delivery group.

SAMPLE HOLDING TIMES

The VOC holding time criterion established in the QAPP is seven days from receipt at the laboratory to analysis. Seven samples were analyzed within this time period. Two additional samples, the field duplicate, and the Trip Blank were analyzed on the eighth day after receipt, six samples and the MS/MSD were analyzed on the ninth day after receipt, and the remaining sample and the Cooler Blank were analyzed on the tenth day. Although the analyses of nine primary samples were performed beyond the *contractual* holding time of seven days, they were well within the *technical* holding time of 14 days after collection for preserved water samples. Since the laboratory documented that all samples were adequately preserved (pH<2 at the time of analysis), no qualifications were deemed necessary.

GC/MS INSTRUMENT PERFORMANCE

GC/MS instrument performance checks are performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for instrument performance checks included evaluation of possible transcription or calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. All criteria for bromofluorobenzene (BFB) for VOCs were met for this data set. Additionally, no transcription errors or calculation errors were noted during validation of the instrument performance data from this data set.

Appendix C Analytical Data Validation Griffin Technology Site Page 3 of 6

INITIAL AND CONTINUING CALIBRATION

Initial and continuing calibration criteria are established to ensure that the instruments are capable of producing acceptable qualitative and quantitative data for VOCs. All initial and continuing calibrations were performed at the required frequency.

All VOC initial calibration relative response factor (RRF) values met the acceptance criteria presented in the "Guidelines". The relative standard deviation (RSD) between response factors for acetone (35.2%) in the initial calibration dated 06/27/03 exceeded the 30% criterion. Acetone was not detected in any of the associated samples; therefore no qualification of data was required.

All VOC continuing calibration RRF values met the acceptance criterion presented in the "Guidelines". Three VOC continuing calibration analyses yielded percent difference (%D) values for one or more compounds above the "Guidelines" acceptance criterion of 25 percent These exceedances and the affected samples are summarized in the following table.

Continuing Calibration Date (Time)	Compound	%D	Associated Groundwater Samples	Qualification
06/25/03 (1735)	Trichloroethene Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone 1,1,2,2-Tetrachloroethane	25.7 41.3 42.9 37.0 42.0 26.5	MW9D-603 MW1-603 MW2S-603 MW3-603	Estimated Results (J/UJ)
06/26/03 (1054)	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	26.0 37.1 29.6 30.9	MW11D-603 MWY(DUP) -603 EFF-061803 Trip Blank	Estimated Results (UJ)
06/27/03 (2006)	Acetone	27.2	MW4-603 MW5S-603 MW6S-603 MW6D-603 MW7S-603 MW7D-603	Estimated Results (UJ)

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LABORATORY METHOD BLANKS

Laboratory method blanks evaluate the existence and magnitude of contamination problems resulting from laboratory activities. VOC laboratory method blanks were analyzed at the prescribed method frequency.

All five VOC method blank samples were reported as non-detected for TCL-VOCs and tentatively identified compounds (TICs).

TRIP BLANK SAMPLES

Trip blank samples are used to assess VOC cross-contamination during shipment to the laboratory. Two trip blank samples, identified as "Trip Blank" and "Cooler Blank", were submitted with the cooler containing aqueous samples for VOC analyses.

No target compounds or TICs were detected in either of the trip blanks.

SURROGATE SPIKE RECOVERIES

Samples analyzed for VOCs are spiked with surrogate compounds prior to analysis. Surrogate compounds are used to evaluate overall laboratory performance for sample preparation efficiency on a per sample basis. The "Guidelines" require that all VOC surrogate spike recoveries meet acceptance criteria.

All VOC surrogate spike recoveries were within the laboratory's established control limits, which indicated that the laboratory's preparation procedure was acceptable. Additionally, no errors in calculations or transcriptions were noted during the validation of the surrogate spike recoveries from this data set.

LABORATORY CONTROL SAMPLES

Laboratory control samples (LCS) are analyzed for VOCs and serve to monitor the overall performance of the steps in an analysis, including sample preparation.

Appendix C Analytical Data Validation Griffin Technology Site Page 5 of 6

All VOC LCS recoveries were within the laboratory's established control limits, indicating that the method was in control. Additionally, no errors in calculations or transcriptions were noted during the validation of the LCS recoveries from this data set.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

Matrix effects on the analytical results are evaluated by analyzing matrix spike/matrix spike duplicate (MS/MSD) samples. Sample MW5D-603 was analyzed as an MS/MSD sample for this data set.

All VOC MS/MSD recoveries and relative percent differences (RPDs) were within the method established control limits, indicating that acceptable analytical accuracy and precision were achieved for these analyses. Additionally, no errors in calculations or transcriptions were noted during validation of the MS/MSD results from this data set.

INTERNAL STANDARDS

Internal standard (I.S.) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. Internal standard area counts may not vary by more than a factor of two (-50 percent to +100 percent) from the associated continuing calibration standard area counts. The retention times of the internal standards may not vary by more than ± 30 seconds from the associated continuing calibration standard retention times.

All VOC analyses reported for the groundwater samples had acceptable internal standard area counts and retention times. Validation of the I.S. data also included verification of retention times and areas summarized on the "Volatile Internal Standard Area and RT Summary" forms (Form 8A) to those on the instrument chromatograms on a 10 percent basis; no anomalies were noted.

FIELD DUPLICATE RESULTS

Field duplicate results were used to evaluate representativeness. For aqueous samples, when analytes for both duplicate and sample values are greater than five times the quantitation limit, satisfactory representativeness is indicated by an RPD less than or equal to 50 percent.

Appendix C Analytical Data Validation Griffin Technology Site Page 6 of 6

Where one or both of the analytes of a field duplicate pair are reported at less than five times the quantitation limit, satisfactory representativeness is indicated if the field duplicate results agree within 2.5 times the quantitation limit. Field duplicate results that do not meet these criteria may indicate unsatisfactory representativeness of the results.

One field duplicate sample pair, labeled as MW3-603 and MWY(DUP)-603, was collected with this sampling event. The results reported for the field duplicate sample pair were in agreement with the above criteria, thus indicating that the aggregate sampling and analytical precision was acceptable for this data set.

COMPOUND IDENTIFICATION AND QUANTITATION

All detected compounds were checked for potential identification errors and were recalculated from the raw data. No anomalies or transcription errors were noted during validation of the reported compound identifications and quantitations.

OVERALL DATA ASSESSMENT

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision (based on the LCS, MS/MSD, and field duplicate results) were achieved for this data set. In addition, completeness, defined to be the percentage of analytical results which are judged to be valid, including estimated ("J" or "UJ") values, was 100 percent for this data set. Sample results from this investigation required some qualification based on the minor deficiencies summarized below:

• The results for one or more compounds that exceeded continuing calibration criteria were qualified as estimated ("J" or "UJ") in twelve primary samples, the field duplicate, and the Trip Blank. The individual samples and compounds qualified are presented in the "Initial and Continuing Calibration" section above.

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