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OF NORTH CAROLINA

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4-17-2000
App I

SPRING 2000 SEMIANNUAL WATER QUALITY MONITORING REPORT

FOR

THE JACKSON COUNTY MUNICIPAL SOLID WASTE LANDFILL

Prepared for
JACKSON COUNTY MSWLF
Sylva, North Carolina

JUN 2000

Prepared by
THE FLETCHER GROUP, INC.
Asheville, North Carolina

June 9, 2000

John M. Chase
Environmental Technician

NORTH CAROLINA PROFESSIONAL SEAL 20200 6-9-00 ENGINEER JAMES S. McELDUFF

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Called Chad Parker
(Jackson Co. Solid Waste)
7/12/00 & asked him to evaluate possible alternatives to correcting contaminant problem @ MWH or protective measures for GW users.
I suggested annual sampling of potable wells DG of area. He said he would discuss this issue w/ Jay Denton & get back w/ me.

Chad called back & said Jay Denton approved adding a potable well to the sampling program (to be sampled annually). I wrote a letter to Co. approving this revision.

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1.0 INTRODUCTION

The Jackson County Solid Waste Department maintains a closed landfill located approximately three quarters of a mile west of Dillsboro, North Carolina, north of Old Dillsboro Road (Old US 74). Entrance to the landfill is by State Road (SR) 1539. The site location is shown on Figure 1. The permit for the landfill requires semiannual monitoring of groundwater and surface water quality. This report serves as the first semiannual groundwater and surface water monitoring report for 2000. The data are being submitted in accordance with requirements stipulated in the North Carolina Department of Environment and Natural Resources (DENR) Solid Waste Management Rules 15A North Carolina Administrative Code (NCAC) 13B. The data and report also comply with the subsequent memorandum regarding Appendix II monitoring from DENR, dated April 21, 1995. This report provides an evaluation of the groundwater and surface water quality. Statistical analyses of groundwater data and groundwater flow information are also provided for the landfill.

This report contains the following items:

- Water level measurements and elevations for the landfill monitoring wells;
- Surface water sampling locations;
- Groundwater and surface water quality analytical results with chain-of-custody forms;
- Field blank and laboratory blank analytical results;
- Summary of the statistical analyses of constituents detected during this sampling event;
- Map showing groundwater flow direction; and,
- Field data sampling logs.

2.0 SEMIANNUAL MONITORING

2.1 Groundwater and Surface Water Sampling

The Jackson County Landfill monitoring wells (MW-1 through MW-5) and the surface water sample locations (SW-1 and SW-2) were sampled by The Fletcher Group, Inc. on April 17, 2000. The monitoring well locations are shown on Figure 2. Surface water samples were collected where the property lines intersect the Tuckasegee River. A duplicate sample and a trip blank were also analyzed by the laboratory.

Prior to sampling the groundwater, static water level measurements were taken in each well from the referenced measuring point. Each well was then purged and sampled using a disposable bailer. Samples were obtained after a minimum of three well volumes had been purged and consistent pH, specific conductivity, and temperature readings had been collected. Purge water was collected and stored onsite in secure drums. A summary of water level measurements and field indicator parameters is included in Table 1. Copies of the Field Data Sampling Logs are included in Appendix A.

Groundwater and surface water samples were analyzed for the following parameters:

- Volatile Organic Compounds (VOCs) using EPA Method 8260 App I
- Appendix I metals using various EPA Methods from the 6010/7000 series

The samples were analyzed by Pace Analytical Services, Inc. (Pace), a North Carolina certified laboratory, in Huntersville, North Carolina. Proper chain-of-custody documentation was followed during collection and transport of each sample.

On January 6, 1999, The Fletcher Group obtained two memoranda from the DWM. These memoranda, dated January 18, 1995 and April 21, 1995 address water quality sampling at MSWLF facilities. These documents specified that method detection limits for various Appendix I and Appendix II analytes must be at or below Practical Quantitation Limits (PQLs) as specified in the memoranda. The detection limits utilized during the Spring 2000 sampling event met the PQLs specified by DWM.

2.2 Analytical Results

The laboratory analytical results are summarized in Tables 2 and 3. The Pace laboratory analytical reports and chain-of-custody forms are included in Appendix B.

Analytical results for the Appendix I metals analyses are shown in Table 2. As shown, barium, beryllium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc were detected in one or more of the monitoring wells. The table also shows that the concentration of barium in MW-4 was detected at 2.4 milligrams per liter (mg/L), which exceeds the NCAC Title 15A, Subchapter 2L groundwater quality standards (2L standards). The 2L standard for barium is 2.0 mg/L. All other metals detected in the monitoring wells and surface water samples were found at concentrations less than the 2L standards.

The analytical results for VOCs are shown in Tables 3. Two VOC compounds were found in excess of the 2L standards in MW-1. Benzene was detected at a concentration of 6.0 micrograms per liter (µg/L) and chloroethane was detected at a concentration of 10 µg/L. The 2L standards for these compounds are 1.0 µg/L and 2.8 µg/L respectively. No other VOCs were detected in the monitoring wells or surface water samples at concentrations greater than the 2L standards.

2.3 Hydrogeology

Groundwater at the landfill occurs under water table conditions in fractured bedrock near the top of the landfill along northern property boundary (MW-1) and in saprolite near the toe of the landfill in wells MW-3, MW-4, and MW-5. Water level data collected from MW-1, MW-3 and MW-4 (see Table 5) indicate that the predominant horizontal shallow (saprolite) groundwater flow direction is to the southwest toward the Tuckasegee River. Figure 3 depicts the estimated generalized groundwater flow direction based on the groundwater measurements made by The Fletcher Group on April 17, 2000.

There is no table 5

The groundwater flow rate in saprolite was calculated using information from three sources: the hydraulic conductivity data reported by Law Engineering in 1994, average hydraulic gradients calculated using the April 2000 water level data, and an average effective porosity for sand and silt mixtures of 30

to 35 percent. Using these data, the calculated groundwater flow rate in saprolite ranged from approximately 323 to 377 feet/year (ft/yr) in the upper portion of the site and 259 to 302 ft/yr in the lower portion of the site. The groundwater flow rate calculations are summarized in Appendix C.

2.4 Statistical Analyses

The statistical testing procedure Analysis of Variance (ANOVA) was performed on all five of the monitoring wells at the landfill for each total metal and VOC. For this procedure, the Single Factor ANOVA option in the EXCEL 5.0 analysis tool-pack was used. The ANOVA method was used to determine if the differences in the total metal or VOC concentrations observed at each well are significant enough to suggest that there is a possibility of true contamination in the set of wells. The ANOVA procedure tests the null hypothesis that the mean concentration of each analyte is equal in each well. If the means for a particular constituent are not equal, then the alternative hypothesis that at least one of the wells differs from the rest is evaluated. This is determined by comparing the computed F-statistic to the critical (or tabulated) F-statistic. If the computed F-statistic exceeds the critical F-statistic, the null hypothesis is rejected and one or more of the wells may be contaminated. If the critical F-statistic exceeds the computed F-statistic, then the null hypothesis is accepted and the possibility of contamination is rejected. All laboratory analyses performed to date were taken into account. Non-detect observations were evaluated using one-half of the reported detection limit. The ANOVA statistical calculations for each constituent are summarized in Appendix D.

According to the statistical analysis, the total metals barium, chromium, cobalt, copper, nickel and vanadium showed significant deviation from the mean. Barium was detected at a concentration of 2.4 mg/L in MW-4, which is above the 2L standard of 2.0 mg/L. The concentrations of chromium, copper, and nickel were each below the respective 2L standard. A 2L standard has not been established for cobalt or vanadium. The statistical analysis showed that the remaining metal constituents do not show evidence of contamination.

Statistical analyses of VOC results showed twelve compounds with significant deviation from the mean. A summary of the ANOVA evaluation is included in Appendix D. Of the twelve VOCs showing

significant deviation from the mean only two (benzene and chloroethane) were detected above the 2L standard in the most recent sampling event. Additionally, six of the VOCs showing significant deviation were not detected.

3.0 CONCLUSIONS

The semiannual groundwater monitoring was conducted on April 17, 2000 at the Jackson County Landfill.

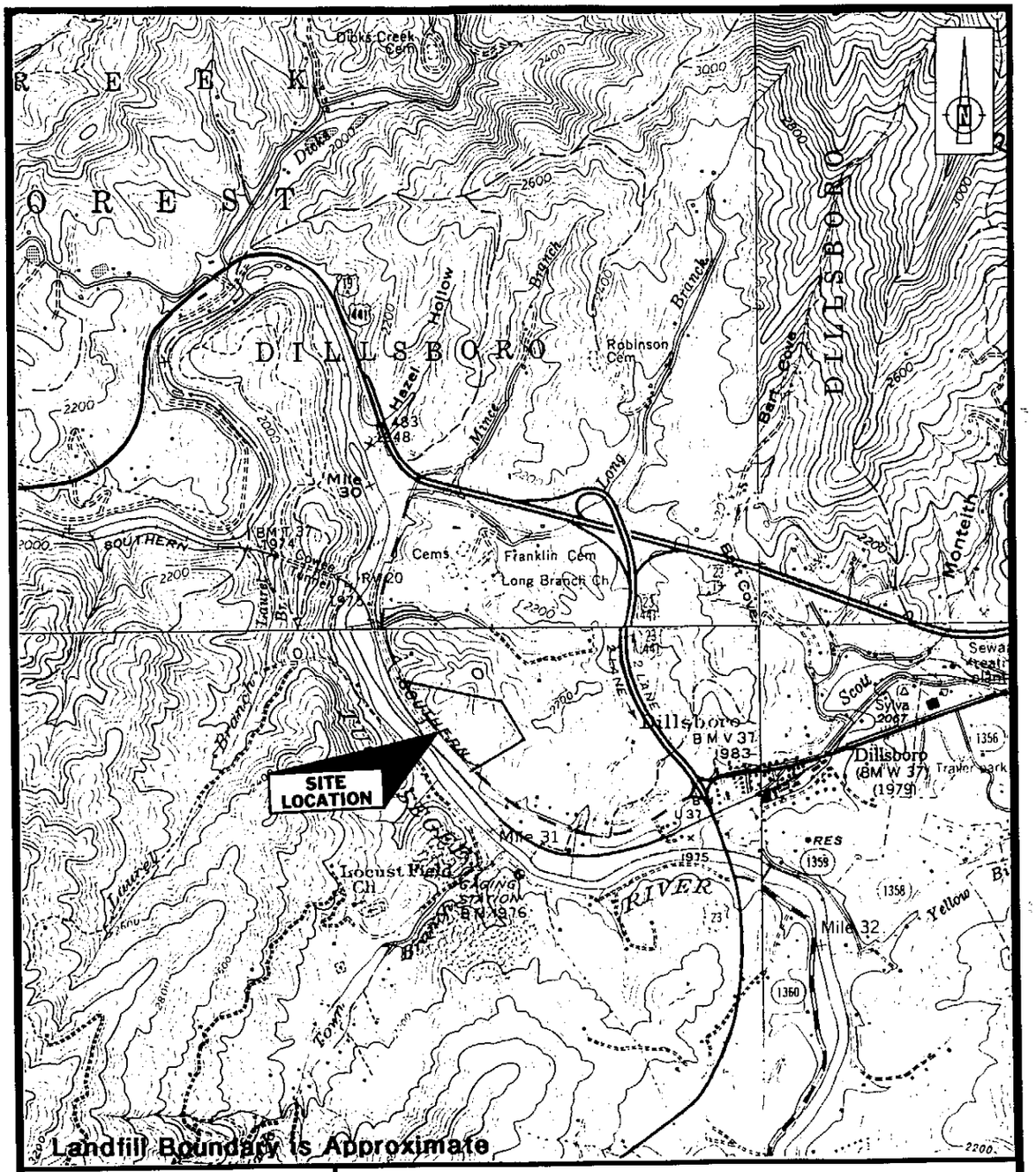
Metals

Barium, chromium, cobalt, copper, nickel, and vanadium showed significant deviation. However, review of the data from individual sampling locations (monitoring wells MW-1 through MW-5 and two surface water points) reveals that only the concentration of barium at MW-4 exceeded the 2L standards. None of the other samples contained metals with exceedances of the 2L standards.

Organic Compounds

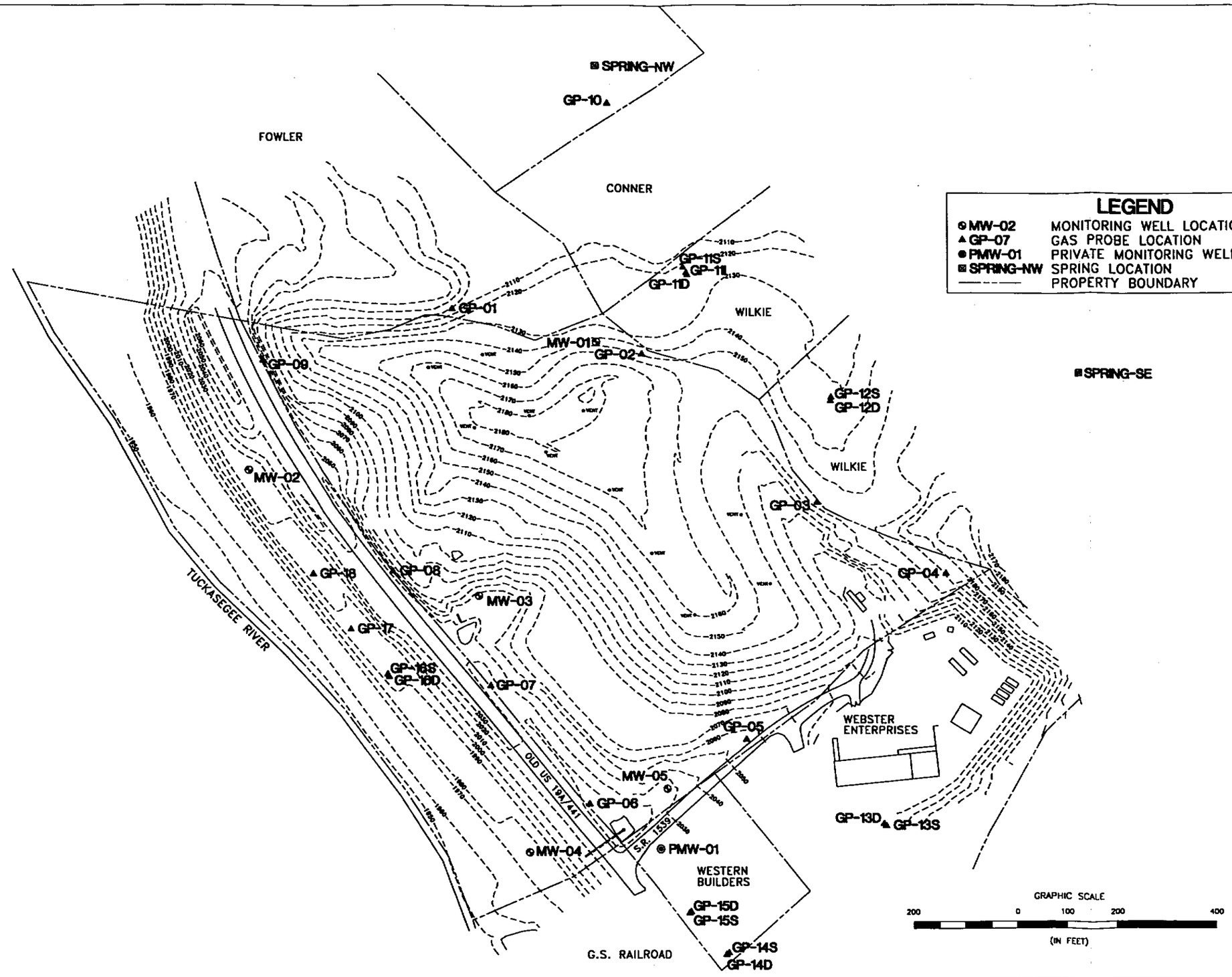
In the current round, only 6 of the 12 compounds with significant deviation were detected. A comparison of results from the April 2000 and October 1999 sampling events indicates that the same compounds appear with significant deviations in both events, except 1,1,1,2-Tetrachloroethane, which showed significant deviation in April 2000 and not October 1999.

FIGURES



Jackson County Landfill
Project No. 2040.07
October 21, 1999
Scale: 1 inch = 2000'
THE FLETCHER GROUP, INC.

FIGURE 1
Site Location Map
Jackson County Landfill
Dillsboro, North Carolina
U.S.G.S. Topographic Map - 7.5 Minute Quadrangles
Greens Creek, Whittier, Sylva North & Sylva South



LEGEND

MW-02	MONITORING WELL LOCATION
GP-07	GAS PROBE LOCATION
PMW-01	PRIVATE MONITORING WELL LOCATION
SPRING-NW	SPRING LOCATION
———	PROPERTY BOUNDARY

NOTES:

1. TOPOGRAPHY IS FOR REPRESENTATIVE PURPOSES ONLY AND NOT FOR CONSTRUCTION. THIS TOPOGRAPHY WAS OBTAINED FROM McGILL ASSOCIATES AND IS BASED ON A COMPILATION OF AN AERIAL SURVEY AND SEVERAL LAND SURVEYS.

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ASHEVILLE, NORTH CAROLINA

FIGURE 2
MONITORING WELL AND GAS PROBE LOCATION MAP
JACKSON COUNTY LANDFILL
JACKSON COUNTY, NORTH CAROLINA

DRAWN BY: JOHNC. PROJ MAN: CDC DATE: 02-11-99 CADD FILENAME: P:\OASHVIL\JACKSON_CO.040\LANDFILL.01\204001F2.DWG

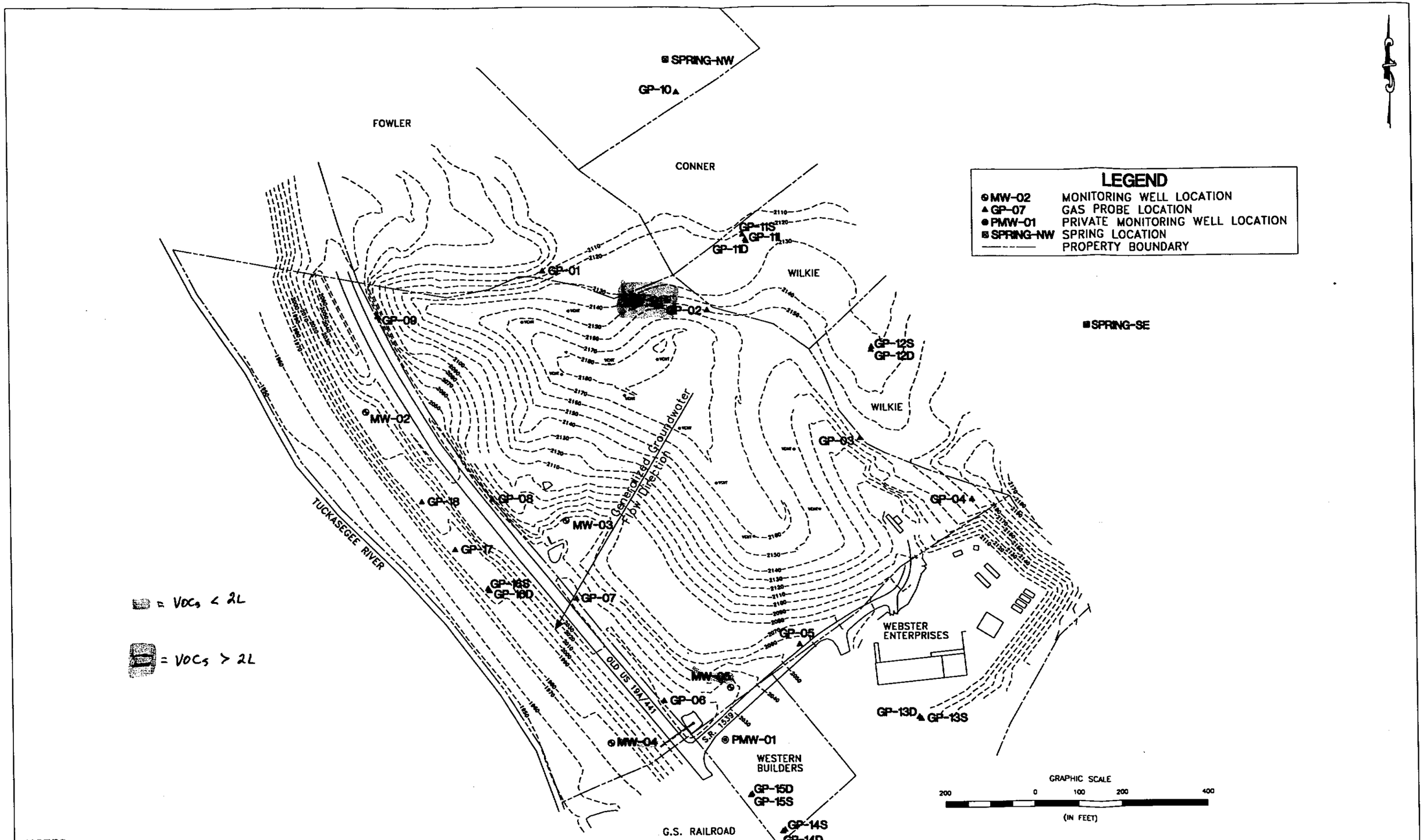

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FIGURE 3
GROUNDWATER FLOW DIRECTION - APRIL 17, 2000
JACKSON COUNTY LANDFILL
JACKSON COUNTY, NORTH CAROLINA

DRAWN BY: JOHNC. PROJ MAN: CDE DATE: 02-11-99 CADD FILENAME: P:\OASHVIL\JACKSON_CO.040\LANDFILL.01\204001F2.DWG

TABLES

TABLE 1

FIELD INDICATOR PARAMETERS
JACKSON COUNTY LANDFILL

April 17, 2000

JACKSON COUNTY, NORTH CAROLINA

Well ID	Date	Time Sample Collected	Water Level Depth (feet)	pH	Temperature (°C)	Specific Conductivity (umhos/cm)
MW-1	4/17/2000	9:45	95.60	4.62	13.8	104
MW-2	4/17/2000	11:15	26.40	5.65	14.8	107
MW-3	4/17/2000	12:00	51.25	5.17	16.2	168
MW-4	4/17/2000	14:15	28.05	5.05	16.1	404
MW-5	4/17/2000	13:15	50.2	5.64	16.8	333

TABLE 2

APPENDIX I METALS ANALYTICAL RESULTS
JACKSON COUNTY LANDFILL

April 17, 2000

JACKSON COUNTY, NORTH CAROLINA

Compound	Units	MW-1	MW-2	MW-3	MW-3DUP	MW-4	MW-5	SW-1	SW-2	NC 2L Standard
Antimony	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NL
Arsenic	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.05
Barium	mg/L	0.086	0.037	0.095	0.086	2.4	0.31	0.02	0.014	2.0
Beryllium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.0021	<0.001	<0.001	NL
Cadmium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	0.011	0.022	<0.002	<0.002	0.05
Cobalt	mg/L	0.078	<0.005	0.0079	0.011	0.0079	0.028	<0.005	<0.005	NL
Copper	mg/L	0.0027	<0.002	<0.002	<0.002	0.016	0.046	<0.002	<0.002	1.0
Lead	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.005	<0.005	0.015
Mercury	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0011
Nickel	mg/L	0.0061	<0.005	<0.005	<0.005	0.0082	0.025	<0.005	<0.005	0.1
Selenium	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.05
Silver	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.018
Thallium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	NL
Tin	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NL
Vanadium	mg/L	<0.005	<0.005	<0.005	<0.005	0.014	0.035	<0.005	<0.005	NL
Zinc	mg/L	0.015	<0.01	0.019	<0.01	0.054	0.12	0.011	0.014	2.1

Note: < indicates compound not detected at or above the concentration shown (PACE detection limit)
NL = means no NC 2L standard established

TABLE 3

VOLATILE ORGANIC COMPOUNDS ANALYTICAL RESULTS
US EPA METHOD 8260
JACKSON COUNTY LANDFILL

April 17, 2000

JACKSON COUNTY, NORTH CAROLINA

Compound	Units	MW-1	MW-2	MW-3	MW-3DUP	MW-4	MW-5	SW-1	SW-2	NC 2L Standard
1,1,1,2-Tetrachloroethane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
1,1,1-Trichloroethane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	200
1,1,2,2-Tetrachloroethane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
1,1,2-Trichloroethane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
1,1-Dichloroethane	µg/L	25	<5	<5	<5	<5	<5	<5	<5	700
1,1-Dichloroethene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	7
1,2,3-Trichloropropane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
1,2-Dibromo-3-Chloropropane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	0.025
1,2-Dibromoethane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
1,2-Dichlorobenzene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
1,2-Dichloroethane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	0.38
1,2-Dichloropropane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	0.56
1,3-Dichlorobenzene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	620
1,4-Dichlorobenzene	µg/L	<5	<5	5.1	<5	6.2	13	<5	<5	75
2-Butanone	µg/L	<100	<100	<100	<100	<100	<100	<100	<100	170
2-Hexanone	µg/L	<50	<50	<50	<50	<50	<50	<50	<50	NL
4-Methyl-2-Pentanone	µg/L	<50	<50	<50	<50	<50	<50	<50	<50	NL
Acetone	µg/L	<100	<100	<100	<100	<100	<100	<100	<100	700
Acrylonitrile	µg/L	<100	<100	<100	<100	<100	<100	<100	<100	NL
Benzene	µg/L	6.0	<5	<5	<5	<5	<5	<5	<5	1
Bromochloromethane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
Bromodichloromethane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
Bromoform	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	0.19
Bromomethane	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	NL
Carbon Disulfide	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
Carbon Tetrachloride	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	0.3
Chlorobenzene	µg/L	<5	<5	<5	<5	<5	5.0	<5	<5	50
Chloroethane	µg/L	10	<10	<10	<10	<10	<10	<10	<10	2.8
Chloroform	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	0.19
Chloromethane	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	2.6

Notes: < indicates compound not detected at or above the concentration shown (PACE detection limit)
µg/L = micrograms per liter
NL = indicates the compound was not listed on the NC 2L Standards list

TABLE 3

VOLATILE ORGANIC COMPOUNDS ANALYTICAL RESULTS
US EPA METHOD 8260
JACKSON COUNTY LANDFILL

April 17, 2000

JACKSON COUNTY, NORTH CAROLINA

Compound	Units	MW-1	MW-2	MW-3	MW-3DUP	MW-4	MW-5	SW-1	SW-2	NC 2L Standard
cis-1,2-Dichloroethene	µg/L	9.8	<5	<5	<5	15	44	<5	<5	70
cis-1,3-Dichloropropene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
Dibromochloromethane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
Dibromomethane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
Ethylbenzene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	29
Iodomethane	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
Methylene Chloride	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	5
Styrene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	100
Tetrachloroethene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	0.7
Toluene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	1000
trans-1,2-Dichloroethene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	70
trans-1,3-Dichloropropene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
trans-1,4-Dichloro-2-Butene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	NL
Trichloroethene	µg/L	<5	<5	<5	<5	<5	<5	<5	<5	2.8
Trichlorofluoromethane	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	2100
Vinyl Acetate	µg/L	<50	<50	<50	<50	<50	<50	<50	<50	NL
Vinyl Chloride	µg/L	<10	<10	<10	<10	<10	<10	<10	<10	0.015
Xylene (Total)	µg/L	16	<10	<10	<10	<10	<10	<10	<10	530

Notes: < indicates compound not detected at or above the concentration shown (PACE detection limit)
µg/L = micrograms per liter
NL = indicates the compound was not listed on the NC 2L Standards list

TABLE 4

MONITORING WELL AND WATER TABLE ELEVATIONS
JACKSON COUNTY LANDFILL

April 17, 2000

JACKSON COUNTY, NORTH CAROLINA

Well ID	Units	Ground Surface Elevation	TOC Elevation	Depth to Water	Water Elevation	Depth to Bedrock	Bedrock Elevation	Screened Interval	Screened Elevation
MW-1	Feet	2169.40	2171.42	95.60	2075.82	83.00	2086.40	95 to 110	2074.40 to 2059.40
MW-2	Feet	2013.15	2015.38	26.40	1988.98	13.00	2000.15	45 to 60	1968.15 to 1953.15
MW-3	Feet	2044.16	2045.53	51.25	1994.28	57.00	1987.16	48.5 to 63.5	1995.66 to 1980.66
MW-4	Feet	1976.68	1980.77	28.05	1952.72	Unknown	Unknown	25 to 40	1951.68 to 1936.68
MW-5	Feet	2027.38	2028.97	50.2	1978.77	Unknown	Unknown	50 to 60	1977.38 to 1967.38

Notes: Elevations based on a survey completed on April 9, 1999 by Davenport & Assoc., Inc
TOC = Top of Casing
Depth to Bedrock and Screened Interval taken from boring logs completed on April 21, 22, & 23, 1992 by S&ME
Water Elevation based on TOC Elevation minus Depth to Water (measured from TOC)
Bedrock Elevation based on Ground Surface Elevation minus Depth to Bedrock (measured from ground surface)
Screened Elevation based on Ground Surface Elevation minus Screened Interval (measured from ground surface)

APPENDICES

APPENDIX A

FIELD DATA SAMPLING LOGS

THE FLETCHER GROUP

48 Patton Avenue, Suite 303
Asheville, North Carolina 28801
(828) 281-3350 Fax: (828) 281-3351

WELL SAMPLING LOG

FACILITY NAME: Jackson Co. Landfill DATE: 4-17-00
LOCATION: Dillsboro, NC SAMPLING TIME: 9:45
SAMPLING PERSONNEL: JMC, TB WEATHER: Cloudy, cool

WELL NUMBER: MW-01 WELL DEPTH (WD): 115.10 DATE: 4-17-00
WELL DIAMETER: 2" WATER LEVEL (WL): 95.60 DATE: 4-17-00
TYPE OF CASING: PVC LENGTH OF WATER COLUMN: 19.5 FEET
MEASURING POINT: TOC (WD) - (WL) = (LWC)
COMMENTS: Calibrated pH and Temp meter using 4.01 + 10.01 solutions, readings Good. ONE CASING VOLUME: 3.3 GALLONS
(LWC) x (WCV)
THREE CASING VOLUMES: 9.9 GALLONS
ACTUAL VOLUME PURGED: 10.0 GALLONS

WELL CASING VOLUMES (WCV)

2" = 0.17 Gal/Ft 3" = 0.38 Gal/Ft 4" = 0.66 Gal/Ft 6" = 1.5 Gal/Ft 8" = 2.6 Gal/Ft 12" = 5.8 Gal/Ft

PURGE METHOD: BAILER-TEFLON BAILER-DISP. DEDICATED PUMP HOMELITE GRUNDFOS OTHER:
SAMPLE METHOD: BAILER-TEFLON BAILER-DISP. DEDICATED PUMP HOMELITE GRUNDFOS OTHER:

READING	GALLONS PURGED	pH UNITS	SPECIFIC CONDUCTANCE umhos/cm	TEMPERATURE C°	COLOR	TURBIDITY	COMMENTS
1	5	4.68	104	13.8	clear	none	
2	7.5	4.61	103	13.8	"	"	
3	8.5	4.66	104	13.7	"	"	
4	10	4.62	104	13.8	"	"	
5							
6							
7							
8							
9							

SAMPLING CONTAINER	NUMBER OF CONTAINERS	CONSTITUENTS SAMPLED
125 ml PLASTIC		
250 ml PLASTIC		
500 ml PLASTIC	1	Metals - App I + Tin
40 ml GLASS	4	VOCs - 8260
250 ml GL		
500 ml GLASS		
1 L GLASS		

PROTECTIVE CASING: Y PAD: Y LOCK: Y VEGETATION: Y COMMENTS:

Sampling Personnel Signature: John M. Chase Date: 4-17-00

THE FLETCHER GROUP

48 Patton Avenue, Suite 303
Asheville, North Carolina 28801
(828) 281-3350 Fax: (828) 281-3351

WELL SAMPLING LOG

FACILITY NAME: Jackson Co. Landfill DATE: 4-17-00
LOCATION: Dillsboro, NC SAMPLING TIME: 11:15
SAMPLING PERSONNEL: JMC, TKB WEATHER: Cloudy, Cool

WELL NUMBER: MW-02 WELL DEPTH (WD): 61.90 DATE: 4-17-00
WELL DIAMETER: 2" WATER LEVEL (WL): 26.40 DATE: 4-17-00
TYPE OF CASING: PVC LENGTH OF WATER COLUMN: 35.5 FEET
MEASURING POINT: TOC (WD) - (WL) = (LWC)
COMMENTS: ONE CASING VOLUME: 6.0 GALLONS
(LWC) x (WCV)
THREE CASING VOLUMES: 18.0 GALLONS
ACTUAL VOLUME PURGED: 19.0 GALLONS

WELL CASING VOLUMES (WCV)
2" = 0.17 Gal/Ft 3" = 0.38 Gal/Ft 4" = 0.66 Gal/Ft 6" = 1.5 Gal/Ft 8" = 2.6 Gal/Ft 12" = 5.8 Gal/Ft

PURGE METHOD: BAILER-TEFLON BAILER-DISP. DEDICATED PUMP HOMELITE GRUNDFOS OTHER:
SAMPLE METHOD: BAILER-TEFLON BAILER-DISP. DEDICATED PUMP HOMELITE GRUNDFOS OTHER:

READING	GALLONS PURGED	pH UNITS	SPECIFIC CONDUCTANCE umhos/cm	TEMPERATURE C°	COLOR	TURBIDITY	COMMENTS
1	13.0	5.42	108	14.8	Clear	Clear	
2	15.0	5.54	107	14.6	Clear	Clear	
3	18.0	5.65	107	14.8	"	"	
4							
5							
6							
7							
8							
9							

SAMPLING CONTAINER	NUMBER OF CONTAINERS	CONSTITUENTS SAMPLED
125 ml PLASTIC		
250 ml PLASTIC		
500 ml PLASTIC	1	metals - App I + Tin
40 ml GLASS	4	VOCs - 8260
250 ml GL		
500 ml GLASS		
1 L GLASS		

PROTECTIVE CASING: Y PAD: Y LOCK: Y VEGETATION: Y COMMENTS:

Sampling Personnel Signature: Tom Clause Date: 4-17-00

THE FLETCHER GROUP

48 Patton Avenue, Suite 303
Asheville, North Carolina 28801
(828) 281-3350 Fax: (828) 281-3351

WELL SAMPLING LOG

FACILITY NAME: Jackson County Landfill DATE: 4-17-00
LOCATION: Dillsboro, NC SAMPLING TIME: 12:00
SAMPLING PERSONNEL: JMC, TKB WEATHER: cloudy, cool

WELL NUMBER: MW-03 WELL DEPTH (WD): 62.50 DATE: 4-17-00
WELL DIAMETER: 2" WATER LEVEL (WL): 51.25 DATE: 4-17-00
TYPE OF CASING: PVC LENGTH OF WATER COLUMN: 11.25 FEET
MEASURING POINT: TOC (WD) - (WL) = (LWC)
COMMENTS: ONE CASING VOLUME: 1.91 GALLONS
Duplicate Sample taken @ 12:05 (LWC) x (WCV)
THREE CASING VOLUMES: 5.73 GALLONS
ACTUAL VOLUME PURGED: GALLONS

WELL CASING VOLUMES (WCV)

2" = 0.17 Gal/Ft 3" = 0.38 Gal/Ft 4" = 0.66 Gal/Ft 6" = 1.5 Gal/Ft 8" = 2.6 Gal/Ft 12" = 5.8 Gal/Ft

PURGE METHOD: BAILER-TEFLON ~~BAILER-DISP.~~ DEDICATED PUMP HOMELITE GRUNDFOS OTHER:
SAMPLE METHOD: BAILER-TEFLON ~~BAILER-DISP.~~ DEDICATED PUMP HOMELITE GRUNDFOS OTHER:

READING	GALLONS PURGED	pH UNITS	SPECIFIC CONDUCTANCE umhos/cm	TEMPERATURE C°	COLOR	TURBIDITY	COMMENTS
1	4	5.07	171	17.1	Clear	None	
2	5	5.15	171	16.4	"	"	
3	6	5.17	168	16.2	"	"	
4							
5							
6							
7							
8							
9							

SAMPLING CONTAINER	NUMBER OF CONTAINERS	CONSTITUENTS SAMPLED
125 ml PLASTIC		
250 ml PLASTIC		
500 ml PLASTIC	1	Metals + Tin (App.I)
40 ml GLASS	4	VOCs — 8260
250 ml GL		
500 ml GLASS		
1 L GLASS		

PROTECTIVE CASING: Y PAD: Y LOCK: Y VEGETATION: Y COMMENTS:

Sampling Personnel Signature: John M. Clare Date: 4-17-00

THE FLETCHER GROUP

48 Patton Avenue, Suite 303
Asheville, North Carolina 28801
(828) 281-3350 Fax: (828) 281-3351

WELL SAMPLING LOG

FACILITY NAME: Jackson Co. Landfill DATE: 4-17-00
LOCATION: Dillsboro, NC SAMPLING TIME: 14:15
SAMPLING PERSONNEL: JMC, TKB WEATHER: Cloudy

WELL NUMBER: MW-04 WELL DEPTH (WD): 42.60 DATE: 4-17-00
WELL DIAMETER: 2" WATER LEVEL (WL): 28.05 DATE: 4-17-00
TYPE OF CASING: PVC LENGTH OF WATER COLUMN: 14.55 FEET
MEASURING POINT: TOC (WD) - (WL) = (LWC)
COMMENTS: ONE CASING VOLUME: 2.4 GALLONS
(LWC) x (WCV)
THREE CASING VOLUMES: 7.4 GALLONS
ACTUAL VOLUME PURGED: GALLONS

WELL CASING VOLUMES (WCV)
2" = 0.17 Gal/Ft 3" = 0.38 Gal/Ft 4" = 0.66 Gal/Ft 6" = 1.5 Gal/Ft 8" = 2.6 Gal/Ft 12" = 5.8 Gal/Ft

PURGE METHOD: BAILER-TEFLON BAILER-DISP. DEDICATED PUMP HOMELITE GRUNDFOS OTHER:
SAMPLE METHOD: BAILER-TEFLON BAILER-DISP. DEDICATED PUMP HOMELITE GRUNDFOS OTHER:

READING	GALLONS PURGED	pH UNITS	SPECIFIC CONDUCTANCE umhos/cm	TEMPERATURE C°	COLOR	TURBIDITY	COMMENTS
1	5	5.11	397	17.5	tan	medium	
2	6	5.11	397	16.4	tan	medium	
3	7	5.05	404	16.1	tan	"	
4							
5							
6							
7							
8							
9							

SAMPLING CONTAINER	NUMBER OF CONTAINERS	CONSTITUENTS SAMPLED
125 ml PLASTIC		
250 ml PLASTIC		
500 ml PLASTIC	1	Metals + Tin - App 1
40 ml GLASS	4	VOCs - 8260
250 ml GL		
500 ml GLASS		
1 L GLASS		

PROTECTIVE CASING: Y PAD: Y LOCK: Y VEGETATION: Y COMMENTS:

Sampling Personnel Signature: Jason M. Carson Date: 4-17-00

THE FLETCHER GROUP

48 Patton Avenue, Suite 303
Asheville, North Carolina 28801
(828) 281-3350 Fax: (828) 281-3351

WELL SAMPLING LOG

FACILITY NAME: Jackson Co. Landfill DATE: 4-17-00
LOCATION: Dillsboro NC SAMPLING TIME: 13:15
SAMPLING PERSONNEL: JMC WEATHER: Cloudy

WELL NUMBER: MW-05 WELL DEPTH (WD): 79.90 DATE: 4-17-00
WELL DIAMETER: 2" WATER LEVEL (WL): 50.20 DATE: 4-17-00
TYPE OF CASING: PVC LENGTH OF WATER COLUMN: 29.7 FEET
MEASURING POINT: TOC (WD) - (WL) = (LWC)
COMMENTS: purged 12 gallons, slow recharge, sampled at 12 gallons, readings consistent
ONE CASING VOLUME: 5.0 GALLONS
(LWC) x (WCV)
THREE CASING VOLUMES: 15 GALLONS
ACTUAL VOLUME PURGED: 15 GALLONS

WELL CASING VOLUMES (WCV)

2" = 0.17 Gal/Ft 3" = 0.38 Gal/Ft 4" = 0.66 Gal/Ft 6" = 1.5 Gal/Ft 8" = 2.6 Gal/Ft 12" = 5.8 Gal/Ft

PURGE METHOD: BAILER-TEFLON BAILER-DISP DEDICATED PUMP HOMELITE GRUNDFOS OTHER:
SAMPLE METHOD: BAILER-TEFLON BAILER-DISP DEDICATED PUMP HOMELITE GRUNDFOS OTHER:

READING	GALLONS PURGED	pH UNITS	SPECIFIC CONDUCTANCE umhos/cm	TEMPERATURE C°	COLOR	TURBIDITY	COMMENTS
1	10	5.64	335	17.9	brown	high	well dry, slow recharge
2	11	5.65	329	17.2	tan	low	fresh water recharge
3	12	5.64	333	16.8	tan	low	
4							
5							
6							
7							
8							
9							

SAMPLING CONTAINER	NUMBER OF CONTAINERS	CONSTITUENTS SAMPLED
125 ml PLASTIC		
250 ml PLASTIC		
500 ml PLASTIC	1	metals + Tin - Appl
40 ml GLASS	1	VOCs - 8260
250 ml GL		
500 ml GLASS		
1 L GLASS		

PROTECTIVE CASING: Y PAD: Y LOCK: Y VEGETATION: Y COMMENTS:

Sampling Personnel Signature: John M. Clune Date: 4-17-00

APPENDIX B

LABORATORY ANALYTICAL REPORTS

Pace Analytical™

Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

May 01, 2000

Mr. Jim McElduff
The Fletcher Group
78 1/2 Patton Ave.
Suite 303
Asheville, NC 28801

RE: Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Dear Mr. McElduff:

Enclosed are the results of analyses for sample(s) received by the laboratory on April 18, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Kerr
Project Manager

Enclosures

Laboratory Certification IDs	
NC Wastewater	12
NC Drinking Water	37706
SC	99006

REPORT OF LABORATORY ANALYSIS

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Laboratory Certification IDs	
KY Drinking Water	90090
TN UST List	
VA Drinking Water	213

Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

DATE: 05/01/00
PAGE: 1

he Fletcher Group
78 1/2 Patton Ave.
uite 303
sheville, NC 28801

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

ttn: Mr. Jim McElduff
hone: (828)281-3350

olid results are reported on a dry weight basis

Pace Sample No: 92952670 | Date Collected: 04/17/00 | Matrix: Water
Client Sample ID: MW-01 | Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
etals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	04/25/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	04/25/00	RWF	7440-38-2	
Barium	0.086	mg/l	0.005	04/25/00	RWF	7440-39-3	
Beryllium	ND	mg/l	0.001	04/25/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	04/25/00	RWF	7440-43-9	
Chromium	ND	mg/l	0.002	04/25/00	RWF	7440-47-3	
Cobalt	0.078	mg/l	0.005	04/25/00	RWF	7440-48-4	
Copper	0.0027	mg/l	0.002	04/25/00	RWF	7440-50-8	
Lead	ND	mg/l	0.005	04/25/00	RWF	7439-92-1	
Nickel	0.0061	mg/l	0.005	04/25/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	04/25/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	04/25/00	RWF	7440-22-4	
Tin	ND	mg/l	0.005	04/25/00	RWF	7440-31-5	
Vanadium	ND	mg/l	0.005	04/25/00	RWF	7440-62-2	
Zinc	0.015	mg/l	0.01	04/25/00	RWF	7440-66-6	
Date Digested				04/25/00			
Mercury in Water	Method: EPA 7470				Prep Method: EPA 7470		
Mercury	ND	mg/l	0.0002	04/25/00	AST	7439-97-6	
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	04/28/00	AST	7440-28-0	
Date Digested				04/27/00			
C/MS Volatiles							

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

REPORT OF LABORATORY ANALYSIS

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Laboratory Certification IDs
KY Drinking Water 90090
TN UST List
VA Drinking Water 213

Pace Analytical™

Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952670 | Date Collected: 04/17/00 | Matrix: Water
Client Sample ID: MW-01 | Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	04/20/00	CBD	74-87-3	
Vinyl Chloride	ND	ug/l	10	04/20/00	CBD	75-01-4	
Bromomethane	ND	ug/l	10	04/20/00	CBD	74-83-9	
Chloroethane	10	ug/l	10	04/20/00	CBD	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	04/20/00	CBD	75-69-4	
Acetone	ND	ug/l	100	04/20/00	CBD	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	04/20/00	CBD	75-35-4	
Iodomethane	ND	ug/l	5	04/20/00	CBD	74-88-4	
Acrylonitrile	ND	ug/l	100	04/20/00	CBD	107-13-1	
Methylene Chloride	ND	ug/l	5	04/20/00	CBD	75-09-2	
Carbon Disulfide	ND	ug/l	5	04/20/00	CBD	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-60-5	
1,1-Dichloroethane	25	ug/l	5	04/20/00	CBD	75-34-3	
Vinyl Acetate	ND	ug/l	50	04/20/00	CBD	108-05-4	
2-Butanone	ND	ug/l	100	04/20/00	CBD	78-93-3	
cis-1,2-Dichloroethene	9.8	ug/l	5	04/20/00	CBD	156-59-2	
Chloroform	ND	ug/l	5	04/20/00	CBD	67-66-3	
Bromochloromethane	ND	ug/l	5	04/20/00	CBD	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	04/20/00	CBD	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	04/20/00	CBD	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	04/20/00	CBD	56-23-5	
Benzene	6.0	ug/l	5	04/20/00	CBD	71-43-2	
Trichloroethene	ND	ug/l	5	04/20/00	CBD	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	04/20/00	CBD	78-87-5	
Dibromomethane	ND	ug/l	5	04/20/00	CBD	74-95-3	
Bromodichloromethane	ND	ug/l	5	04/20/00	CBD	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	04/20/00	CBD	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-01-5	
Toluene	ND	ug/l	5	04/20/00	CBD	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	04/20/00	CBD	79-00-5	
2-Hexanone	ND	ug/l	50	04/20/00	CBD	591-78-6	
Dibromochloromethane	ND	ug/l	5	04/20/00	CBD	124-48-1	
Tetrachloroethene	ND	ug/l	5	04/20/00	CBD	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	04/20/00	CBD	106-93-4	
Chlorobenzene	ND	ug/l	5	04/20/00	CBD	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	630-20-6	
Ethylbenzene	ND	ug/l	5	04/20/00	CBD	100-41-4	
m&p-Xylene	ND	ug/l	10	04/20/00	CBD	7816-60-0	

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

REPORT OF LABORATORY ANALYSIS

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Laboratory Certification IDs
KY Drinking Water 90090
TN UST List
VA Drinking Water 213

Pace Analytical™

Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952670 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-01 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Styrene	ND	ug/l	5	04/20/00	CBD	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	16	ug/l	5	04/20/00	CBD	95-47-6	
Bromoform	ND	ug/l	5	04/20/00	CBD	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	04/20/00	CBD	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	04/20/00	CBD	110-57-6	
1,3-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	541-73-1	
1,4-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	04/20/00	CBD	96-12-8	
Dibromofluoromethane (S)	103	%		04/20/00	CBD	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%		04/20/00	CBD	17060-07-0	
Toluene-d8 (S)	98	%		04/20/00	CBD	2037-26-5	
4-Bromofluorobenzene (S)	102	%		04/20/00	CBD	460-00-4	

Pace Analytical™

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952688 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-02 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	04/25/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	04/25/00	RWF	7440-38-2	
Barium	0.037	mg/l	0.005	04/25/00	RWF	7440-39-3	
Beryllium	ND	mg/l	0.001	04/25/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	04/25/00	RWF	7440-43-9	
Chromium	ND	mg/l	0.002	04/25/00	RWF	7440-47-3	
Cobalt	ND	mg/l	0.005	04/25/00	RWF	7440-48-4	
Copper	ND	mg/l	0.002	04/25/00	RWF	7440-50-8	
Lead	ND	mg/l	0.005	04/25/00	RWF	7439-92-1	
Nickel	ND	mg/l	0.005	04/25/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	04/25/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	04/25/00	RWF	7440-22-4	
Tin	ND	mg/l	0.005	04/25/00	RWF	7440-31-5	
Vanadium	ND	mg/l	0.005	04/25/00	RWF	7440-62-2	
Zinc	ND	mg/l	0.01	04/25/00	RWF	7440-66-6	
Date Digested				04/25/00			
Mercury in Water	Method: EPA 7470				Prep Method: EPA 7470		
Mercury	ND	mg/l	0.0002	04/25/00	AST	7439-97-6	
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	04/28/00	AST	7440-28-0	
Date Digested				04/27/00			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	04/20/00	CBD	74-87-3	
Vinyl Chloride	ND	ug/l	10	04/20/00	CBD	75-01-4	
Bromomethane	ND	ug/l	10	04/20/00	CBD	74-83-9	
Chloroethane	ND	ug/l	10	04/20/00	CBD	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	04/20/00	CBD	75-69-4	
Acetone	ND	ug/l	100	04/20/00	CBD	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	04/20/00	CBD	75-35-4	
Iodomethane	ND	ug/l	5	04/20/00	CBD	74-88-4	
Acrylonitrile	ND	ug/l	100	04/20/00	CBD	107-13-1	

Pace Analytical™

Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078

Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952688 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-02 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Methylene Chloride	ND	ug/l	5	04/20/00	CBD	75-09-2	
Carbon Disulfide	ND	ug/l	5	04/20/00	CBD	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	04/20/00	CBD	75-34-3	
Vinyl Acetate	ND	ug/l	50	04/20/00	CBD	108-05-4	
2-Butanone	ND	ug/l	100	04/20/00	CBD	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-59-2	
Chloroform	ND	ug/l	5	04/20/00	CBD	67-66-3	
Bromochloromethane	ND	ug/l	5	04/20/00	CBD	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	04/20/00	CBD	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	04/20/00	CBD	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	04/20/00	CBD	56-23-5	
Benzene	ND	ug/l	5	04/20/00	CBD	71-43-2	
Trichloroethene	ND	ug/l	5	04/20/00	CBD	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	04/20/00	CBD	78-87-5	
Dibromomethane	ND	ug/l	5	04/20/00	CBD	74-95-3	
Bromodichloromethane	ND	ug/l	5	04/20/00	CBD	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	04/20/00	CBD	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-01-5	
Toluene	ND	ug/l	5	04/20/00	CBD	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	04/20/00	CBD	79-00-5	
2-Hexanone	ND	ug/l	50	04/20/00	CBD	591-78-6	
Dibromochloromethane	ND	ug/l	5	04/20/00	CBD	124-48-1	
Tetrachloroethene	ND	ug/l	5	04/20/00	CBD	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	04/20/00	CBD	106-93-4	
Chlorobenzene	ND	ug/l	5	04/20/00	CBD	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	630-20-6	
Ethylbenzene	ND	ug/l	5	04/20/00	CBD	100-41-4	
m&p-Xylene	ND	ug/l	10	04/20/00	CBD	7816-60-0	
Styrene	ND	ug/l	5	04/20/00	CBD	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	04/20/00	CBD	95-47-6	
Bromoform	ND	ug/l	5	04/20/00	CBD	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	04/20/00	CBD	96-18-4	
1,3-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	541-73-1	
1,4-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	04/20/00	CBD	96-12-8	
Dibromofluoromethane (S)	100	%		04/20/00	CBD	1868-53-7	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952688 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-02 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
1,2-Dichloroethane-d4 (S)	102	%		04/20/00	CBD	17060-07-0	
Toluene-d8 (S)	99	%		04/20/00	CBD	2037-26-5	
4-Bromofluorobenzene (S)	102	%		04/20/00	CBD	460-00-4	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952696 | Date Collected: 04/17/00 | Matrix: Water
Client Sample ID: MW-03 | Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	04/25/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	04/25/00	RWF	7440-38-2	
Barium	0.095	mg/l	0.005	04/25/00	RWF	7440-39-3	
Beryllium	ND	mg/l	0.001	04/25/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	04/25/00	RWF	7440-43-9	
Chromium	ND	mg/l	0.002	04/25/00	RWF	7440-47-3	
Cobalt	0.0079	mg/l	0.005	04/25/00	RWF	7440-48-4	
Copper	ND	mg/l	0.002	04/25/00	RWF	7440-50-8	
Lead	ND	mg/l	0.005	04/25/00	RWF	7439-92-1	
Nickel	ND	mg/l	0.005	04/25/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	04/25/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	04/25/00	RWF	7440-22-4	
Tin	ND	mg/l	0.005	04/25/00	RWF	7440-31-5	
Vanadium	ND	mg/l	0.005	04/25/00	RWF	7440-62-2	
Zinc	0.019	mg/l	0.01	04/25/00	RWF	7440-66-6	
Date Digested				04/25/00			
Mercury in Water	Method: EPA 7470				Prep Method: EPA 7470		
Mercury	ND	mg/l	0.0002	04/25/00	AST	7439-97-6	
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	04/28/00	AST	7440-28-0	
Date Digested				04/27/00			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	04/20/00	CBD	74-87-3	
Vinyl Chloride	ND	ug/l	10	04/20/00	CBD	75-01-4	
Bromomethane	ND	ug/l	10	04/20/00	CBD	74-83-9	
Chloroethane	ND	ug/l	10	04/20/00	CBD	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	04/20/00	CBD	75-69-4	
1,1-Dichloroethene	ND	ug/l	5	04/20/00	CBD	75-35-4	
Methylene Chloride	ND	ug/l	5	04/20/00	CBD	75-09-2	
trans-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	04/20/00	CBD	75-34-3	

Laboratory Certification IDs
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NC Drinking Water 37706
SC 99006

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952696 | Date Collected: 04/17/00 | Matrix: Water
Client Sample ID: MW-03 | Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
cis-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-59-2	
Chloroform	ND	ug/l	5	04/20/00	CBD	67-66-3	
Bromochloromethane	ND	ug/l	5	04/20/00	CBD	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	04/20/00	CBD	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	04/20/00	CBD	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	04/20/00	CBD	56-23-5	
Benzene	ND	ug/l	5	04/20/00	CBD	71-43-2	
Trichloroethene	ND	ug/l	5	04/20/00	CBD	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	04/20/00	CBD	78-87-5	
Dibromomethane	ND	ug/l	5	04/20/00	CBD	74-95-3	
Bromodichloromethane	ND	ug/l	5	04/20/00	CBD	75-27-4	
Toluene	ND	ug/l	5	04/20/00	CBD	108-88-3	
1,1,2-Trichloroethane	ND	ug/l	5	04/20/00	CBD	79-00-5	
Dibromochloromethane	ND	ug/l	5	04/20/00	CBD	124-48-1	
Tetrachloroethene	ND	ug/l	5	04/20/00	CBD	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	04/20/00	CBD	106-93-4	
Chlorobenzene	ND	ug/l	5	04/20/00	CBD	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	630-20-6	
Ethylbenzene	ND	ug/l	5	04/20/00	CBD	100-41-4	
m&p-Xylene	ND	ug/l	10	04/20/00	CBD	7816-60-0	
Styrene	ND	ug/l	5	04/20/00	CBD	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	04/20/00	CBD	95-47-6	
Bromoform	ND	ug/l	5	04/20/00	CBD	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	04/20/00	CBD	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	04/20/00	CBD	110-57-6	
1,3-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	541-73-1	
1,4-Dichlorobenzene	5.1	ug/l	5	04/20/00	CBD	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	04/20/00	CBD	96-12-8	
Dibromofluoromethane (S)	100	%		04/20/00	CBD	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%		04/20/00	CBD	17060-07-0	
Toluene-d8 (S)	98	%		04/20/00	CBD	2037-26-5	
4-Bromofluorobenzene (S)	102	%		04/20/00	CBD	460-00-4	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952704 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-03DUP Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	04/25/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	04/25/00	RWF	7440-38-2	
Barium	0.086	mg/l	0.005	04/25/00	RWF	7440-39-3	
Beryllium	ND	mg/l	0.001	04/25/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	04/25/00	RWF	7440-43-9	
Chromium	ND	mg/l	0.002	04/25/00	RWF	7440-47-3	
Cobalt	0.011	mg/l	0.005	04/25/00	RWF	7440-48-4	
Copper	ND	mg/l	0.002	04/25/00	RWF	7440-50-8	
Lead	ND	mg/l	0.005	04/25/00	RWF	7439-92-1	
Nickel	ND	mg/l	0.005	04/25/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	04/25/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	04/25/00	RWF	7440-22-4	
Tin	ND	mg/l	0.005	04/25/00	RWF	7440-31-5	
Vanadium	ND	mg/l	0.005	04/25/00	RWF	7440-62-2	
Zinc	ND	mg/l	0.01	04/25/00	RWF	7440-66-6	
Date Digested				04/25/00			
Mercury in Water	Method: EPA 7470				Prep Method: EPA 7470		
Mercury	ND	mg/l	0.0002	04/25/00	AST	7439-97-6	
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	04/28/00	AST	7440-28-0	
Date Digested				04/27/00			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	04/20/00	CBD	74-87-3	
Vinyl Chloride	ND	ug/l	10	04/20/00	CBD	75-01-4	
Bromomethane	ND	ug/l	10	04/20/00	CBD	74-83-9	
Chloroethane	ND	ug/l	10	04/20/00	CBD	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	04/20/00	CBD	75-69-4	
Acetone	ND	ug/l	100	04/20/00	CBD	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	04/20/00	CBD	75-35-4	
Iodomethane	ND	ug/l	5	04/20/00	CBD	74-88-4	
Acrylonitrile	ND	ug/l	100	04/20/00	CBD	107-13-1	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952704 | Date Collected: 04/17/00 | Matrix: Water
Client Sample ID: MW-03DUP | Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Methylene Chloride	ND	ug/l	5	04/20/00	CBD	75-09-2	
Carbon Disulfide	ND	ug/l	5	04/20/00	CBD	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	04/20/00	CBD	75-34-3	
Vinyl Acetate	ND	ug/l	50	04/20/00	CBD	108-05-4	
2-Butanone	ND	ug/l	100	04/20/00	CBD	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-59-2	
Chloroform	ND	ug/l	5	04/20/00	CBD	67-66-3	
Bromochloromethane	ND	ug/l	5	04/20/00	CBD	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	04/20/00	CBD	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	04/20/00	CBD	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	04/20/00	CBD	56-23-5	
Benzene	ND	ug/l	5	04/20/00	CBD	71-43-2	
Trichloroethene	ND	ug/l	5	04/20/00	CBD	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	04/20/00	CBD	78-87-5	
Dibromomethane	ND	ug/l	5	04/20/00	CBD	74-95-3	
Bromodichloromethane	ND	ug/l	5	04/20/00	CBD	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	04/20/00	CBD	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-01-5	
Toluene	ND	ug/l	5	04/20/00	CBD	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	04/20/00	CBD	79-00-5	
2-Hexanone	ND	ug/l	50	04/20/00	CBD	591-78-6	
Dibromochloromethane	ND	ug/l	5	04/20/00	CBD	124-48-1	
Tetrachloroethene	ND	ug/l	5	04/20/00	CBD	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	04/20/00	CBD	106-93-4	
Chlorobenzene	ND	ug/l	5	04/20/00	CBD	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	630-20-6	
Ethylbenzene	ND	ug/l	5	04/20/00	CBD	100-41-4	
m&p-Xylene	ND	ug/l	10	04/20/00	CBD	7816-60-0	
Styrene	ND	ug/l	5	04/20/00	CBD	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	04/20/00	CBD	95-47-6	
Bromoform	ND	ug/l	5	04/20/00	CBD	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	04/20/00	CBD	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	04/20/00	CBD	110-57-6	
1,3-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	541-73-1	
1,4-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	04/20/00	CBD	96-12-8	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952704 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-03DUP Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Dibromofluoromethane (S)	102	%		04/20/00	CBD	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%		04/20/00	CBD	17060-07-0	
Toluene-d8 (S)	98	%		04/20/00	CBD	2037-26-5	
4-Bromofluorobenzene (S)	102	%		04/20/00	CBD	460-00-4	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952712 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-04 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	04/25/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	04/25/00	RWF	7440-38-2	
Barium	2.4	mg/l	0.005	04/25/00	RWF	7440-39-3	
Beryllium	ND	mg/l	0.001	04/25/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	04/25/00	RWF	7440-43-9	
Chromium	0.011	mg/l	0.002	04/25/00	RWF	7440-47-3	
Cobalt	0.0079	mg/l	0.005	04/25/00	RWF	7440-48-4	
Copper	0.016	mg/l	0.002	04/25/00	RWF	7440-50-8	
Lead	ND	mg/l	0.005	04/25/00	RWF	7439-92-1	
Nickel	0.0082	mg/l	0.005	04/25/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	04/25/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	04/25/00	RWF	7440-22-4	
Tin	ND	mg/l	0.005	04/25/00	RWF	7440-31-5	
Vanadium	0.014	mg/l	0.005	04/25/00	RWF	7440-62-2	
Zinc	0.054	mg/l	0.01	04/25/00	RWF	7440-66-6	
Date Digested				04/25/00			
Mercury in Water	Method: EPA 7470				Prep Method: EPA 7470		
Mercury	ND	mg/l	0.0002	04/25/00	AST	7439-97-6	
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	04/28/00	AST	7440-28-0	
Date Digested				04/27/00			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	04/20/00	CBD	74-87-3	
Vinyl Chloride	ND	ug/l	10	04/20/00	CBD	75-01-4	
Bromomethane	ND	ug/l	10	04/20/00	CBD	74-83-9	
Chloroethane	ND	ug/l	10	04/20/00	CBD	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	04/20/00	CBD	75-69-4	
Acetone	ND	ug/l	100	04/20/00	CBD	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	04/20/00	CBD	75-35-4	
Iodomethane	ND	ug/l	5	04/20/00	CBD	74-88-4	
Acrylonitrile	ND	ug/l	100	04/20/00	CBD	107-13-1	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952712 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-04 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Methylene Chloride	ND	ug/l	5	04/20/00	CBD	75-09-2	
Carbon Disulfide	ND	ug/l	5	04/20/00	CBD	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	04/20/00	CBD	75-34-3	
Vinyl Acetate	ND	ug/l	50	04/20/00	CBD	108-05-4	
2-Butanone	ND	ug/l	100	04/20/00	CBD	78-93-3	
cis-1,2-Dichloroethene	15	ug/l	5	04/20/00	CBD	156-59-2	
Chloroform	ND	ug/l	5	04/20/00	CBD	67-66-3	
Bromochloromethane	ND	ug/l	5	04/20/00	CBD	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	04/20/00	CBD	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	04/20/00	CBD	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	04/20/00	CBD	56-23-5	
Benzene	ND	ug/l	5	04/20/00	CBD	71-43-2	
Trichloroethene	ND	ug/l	5	04/20/00	CBD	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	04/20/00	CBD	78-87-5	
Dibromomethane	ND	ug/l	5	04/20/00	CBD	74-95-3	
Bromodichloromethane	ND	ug/l	5	04/20/00	CBD	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	04/20/00	CBD	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-01-5	
Toluene	ND	ug/l	5	04/20/00	CBD	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	04/20/00	CBD	79-00-5	
2-Hexanone	ND	ug/l	50	04/20/00	CBD	591-78-6	
Dibromochloromethane	ND	ug/l	5	04/20/00	CBD	124-48-1	
Tetrachloroethene	ND	ug/l	5	04/20/00	CBD	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	04/20/00	CBD	106-93-4	
Chlorobenzene	ND	ug/l	5	04/20/00	CBD	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	630-20-6	
Ethylbenzene	ND	ug/l	5	04/20/00	CBD	100-41-4	
m&p-Xylene	ND	ug/l	10	04/20/00	CBD	7816-60-0	
Styrene	ND	ug/l	5	04/20/00	CBD	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	04/20/00	CBD	95-47-6	
Bromoform	ND	ug/l	5	04/20/00	CBD	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	04/20/00	CBD	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	04/20/00	CBD	110-57-6	
1,3-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	541-73-1	
1,4-Dichlorobenzene	6.2	ug/l	5	04/20/00	CBD	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	04/20/00	CBD	96-12-8	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952712 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-04 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Dibromofluoromethane (S)	102	%		04/20/00	CBD	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%		04/20/00	CBD	17060-07-0	
Toluene-d8 (S)	98	%		04/20/00	CBD	2037-26-5	
4-Bromofluorobenzene (S)	103	%		04/20/00	CBD	460-00-4	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952720 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-05 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	04/25/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	04/25/00	RWF	7440-38-2	
Barium	0.31	mg/l	0.005	04/25/00	RWF	7440-39-3	
Beryllium	0.0021	mg/l	0.001	04/25/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	04/25/00	RWF	7440-43-9	
Chromium	0.022	mg/l	0.002	04/25/00	RWF	7440-47-3	
Cobalt	0.028	mg/l	0.005	04/25/00	RWF	7440-48-4	
Copper	0.046	mg/l	0.002	04/25/00	RWF	7440-50-8	
Lead	0.011	mg/l	0.005	04/25/00	RWF	7439-92-1	
Nickel	0.025	mg/l	0.005	04/25/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	04/25/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	04/25/00	RWF	7440-22-4	
Tin	ND	mg/l	0.005	04/25/00	RWF	7440-31-5	
Vanadium	0.035	mg/l	0.005	04/25/00	RWF	7440-62-2	
Zinc	0.12	mg/l	0.01	04/25/00	RWF	7440-66-6	
Date Digested				04/25/00			
Mercury in Water	Method: EPA 7470				Prep Method: EPA 7470		
Mercury	ND	mg/l	0.0002	04/25/00	AST	7439-97-6	
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	04/28/00	AST	7440-28-0	
Date Digested				04/27/00			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	04/20/00	CBD	74-87-3	
Vinyl Chloride	ND	ug/l	10	04/20/00	CBD	75-01-4	
Bromomethane	ND	ug/l	10	04/20/00	CBD	74-83-9	
Chloroethane	ND	ug/l	10	04/20/00	CBD	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	04/20/00	CBD	75-69-4	
Acetone	ND	ug/l	100	04/20/00	CBD	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	04/20/00	CBD	75-35-4	
Iodomethane	ND	ug/l	5	04/20/00	CBD	74-88-4	
Acrylonitrile	ND	ug/l	100	04/20/00	CBD	107-13-1	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952720 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-05 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Methylene Chloride	ND	ug/l	5	04/20/00	CBD	75-09-2	
Carbon Disulfide	ND	ug/l	5	04/20/00	CBD	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	04/20/00	CBD	75-34-3	
Vinyl Acetate	ND	ug/l	50	04/20/00	CBD	108-05-4	
2-Butanone	ND	ug/l	100	04/20/00	CBD	78-93-3	
cis-1,2-Dichloroethene	44	ug/l	5	04/20/00	CBD	156-59-2	
Chloroform	ND	ug/l	5	04/20/00	CBD	67-66-3	
Bromochloromethane	ND	ug/l	5	04/20/00	CBD	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	04/20/00	CBD	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	04/20/00	CBD	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	04/20/00	CBD	56-23-5	
Benzene	ND	ug/l	5	04/20/00	CBD	71-43-2	
Trichloroethene	ND	ug/l	5	04/20/00	CBD	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	04/20/00	CBD	78-87-5	
Dibromomethane	ND	ug/l	5	04/20/00	CBD	74-95-3	
Bromodichloromethane	ND	ug/l	5	04/20/00	CBD	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	04/20/00	CBD	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-01-5	
Toluene	ND	ug/l	5	04/20/00	CBD	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	04/20/00	CBD	79-00-5	
2-Hexanone	ND	ug/l	50	04/20/00	CBD	591-78-6	
1,3-Dichloropropane	ND	ug/l	5	04/20/00	CBD	142-28-9	
Dibromochloromethane	ND	ug/l	5	04/20/00	CBD	124-48-1	
Tetrachloroethene	ND	ug/l	5	04/20/00	CBD	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	04/20/00	CBD	106-93-4	
Chlorobenzene	ND	ug/l	5	04/20/00	CBD	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	630-20-6	
Ethylbenzene	ND	ug/l	5	04/20/00	CBD	100-41-4	
m&p-Xylene	ND	ug/l	10	04/20/00	CBD	7816-60-0	
Styrene	ND	ug/l	5	04/20/00	CBD	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	04/20/00	CBD	95-47-6	
Bromoform	ND	ug/l	5	04/20/00	CBD	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	04/20/00	CBD	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	04/20/00	CBD	110-57-6	
1,3-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	541-73-1	
1,4-Dichlorobenzene	13	ug/l	5	04/20/00	CBD	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	95-50-1	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952720 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: MW-05 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	04/20/00	CBD	96-12-8	
Dibromofluoromethane (S)	103	%		04/20/00	CBD	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%		04/20/00	CBD	17060-07-0	
Toluene-d8 (S)	98	%		04/20/00	CBD	2037-26-5	
4-Bromofluorobenzene (S)	102	%		04/20/00	CBD	460-00-4	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952738 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: SW-01 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	04/26/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	04/26/00	RWF	7440-38-2	
Barium	0.02	mg/l	0.005	04/26/00	RWF	7440-39-3	
Beryllium	ND	mg/l	0.001	04/26/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	04/26/00	RWF	7440-43-9	
Chromium	ND	mg/l	0.002	04/26/00	RWF	7440-47-3	
Cobalt	ND	mg/l	0.005	04/26/00	RWF	7440-48-4	
Copper	ND	mg/l	0.002	04/26/00	RWF	7440-50-8	
Lead	ND	mg/l	0.005	04/26/00	RWF	7439-92-1	
Nickel	ND	mg/l	0.005	04/26/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	04/26/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	04/26/00	RWF	7440-22-4	
Tin	ND	mg/l	0.005	04/26/00	RWF	7440-31-5	
Vanadium	ND	mg/l	0.005	04/26/00	RWF	7440-62-2	
Zinc	0.011	mg/l	0.01	04/26/00	RWF	7440-66-6	
Date Digested				04/25/00			
Mercury in Water	Method: EPA 7470				Prep Method: EPA 7470		
Mercury	ND	mg/l	0.0002	04/25/00	AST	7439-97-6	
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	04/28/00	AST	7440-28-0	
Date Digested				04/27/00			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	04/20/00	CBD	74-87-3	
Vinyl Chloride	ND	ug/l	10	04/20/00	CBD	75-01-4	
Bromomethane	ND	ug/l	10	04/20/00	CBD	74-83-9	
Chloroethane	ND	ug/l	10	04/20/00	CBD	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	04/20/00	CBD	75-69-4	
Acetone	ND	ug/l	100	04/20/00	CBD	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	04/20/00	CBD	75-35-4	
Iodomethane	ND	ug/l	5	04/20/00	CBD	74-88-4	
Acrylonitrile	ND	ug/l	100	04/20/00	CBD	107-13-1	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952738 | Date Collected: 04/17/00 | Matrix: Water
Client Sample ID: SW-01 | Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Methylene Chloride	ND	ug/l	5	04/20/00	CBD	75-09-2	
Carbon Disulfide	ND	ug/l	5	04/20/00	CBD	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	04/20/00	CBD	75-34-3	
Vinyl Acetate	ND	ug/l	50	04/20/00	CBD	108-05-4	
2-Butanone	ND	ug/l	100	04/20/00	CBD	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-59-2	
Chloroform	ND	ug/l	5	04/20/00	CBD	67-66-3	
Bromochloromethane	ND	ug/l	5	04/20/00	CBD	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	04/20/00	CBD	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	04/20/00	CBD	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	04/20/00	CBD	56-23-5	
Benzene	ND	ug/l	5	04/20/00	CBD	71-43-2	
Trichloroethene	ND	ug/l	5	04/20/00	CBD	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	04/20/00	CBD	78-87-5	
Dibromomethane	ND	ug/l	5	04/20/00	CBD	74-95-3	
Bromodichloromethane	ND	ug/l	5	04/20/00	CBD	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	04/20/00	CBD	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-01-5	
Toluene	ND	ug/l	5	04/20/00	CBD	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	04/20/00	CBD	79-00-5	
2-Hexanone	ND	ug/l	50	04/20/00	CBD	591-78-6	
Dibromochloromethane	ND	ug/l	5	04/20/00	CBD	124-48-1	
Tetrachloroethene	ND	ug/l	5	04/20/00	CBD	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	04/20/00	CBD	106-93-4	
Chlorobenzene	ND	ug/l	5	04/20/00	CBD	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	630-20-6	
Ethylbenzene	ND	ug/l	5	04/20/00	CBD	100-41-4	
m&p-Xylene	ND	ug/l	10	04/20/00	CBD	7816-60-0	
Styrene	ND	ug/l	5	04/20/00	CBD	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	04/20/00	CBD	95-47-6	
Bromoform	ND	ug/l	5	04/20/00	CBD	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	04/20/00	CBD	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	04/20/00	CBD	110-57-6	
1,3-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	541-73-1	
1,4-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	95-50-1	
Dibromofluoromethane (S)	102	%		04/20/00	CBD	1868-53-7	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952738 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: SW-01 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
1,2-Dichloroethane-d4 (S)	106	%		04/20/00	CBD	17060-07-0	
Toluene-d8 (S)	96	%		04/20/00	CBD	2037-26-5	
4-Bromofluorobenzene (S)	101	%		04/20/00	CBD	460-00-4	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952746 | Date Collected: 04/17/00 | Matrix: Water
Client Sample ID: SW-02 | Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	04/26/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	04/26/00	RWF	7440-38-2	
Barium	0.014	mg/l	0.005	04/26/00	RWF	7440-39-3	
Beryllium	ND	mg/l	0.001	04/26/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	04/26/00	RWF	7440-43-9	
Chromium	ND	mg/l	0.002	04/26/00	RWF	7440-47-3	
Cobalt	ND	mg/l	0.005	04/26/00	RWF	7440-48-4	
Copper	ND	mg/l	0.002	04/26/00	RWF	7440-50-8	
Lead	ND	mg/l	0.005	04/26/00	RWF	7439-92-1	
Nickel	ND	mg/l	0.005	04/26/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	04/26/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	04/26/00	RWF	7440-22-4	
Tin	ND	mg/l	0.005	04/26/00	RWF	7440-31-5	
Vanadium	ND	mg/l	0.005	04/26/00	RWF	7440-62-2	
Zinc	0.014	mg/l	0.01	04/26/00	RWF	7440-66-6	
Date Digested				04/25/00			
Mercury in Water	Method: EPA 7470				Prep Method: EPA 7470		
Mercury	ND	mg/l	0.0002	04/25/00	AST	7439-97-6	
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	04/28/00	AST	7440-28-0	
Date Digested				04/27/00			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	04/20/00	CBD	74-87-3	
Vinyl Chloride	ND	ug/l	10	04/20/00	CBD	75-01-4	
Bromomethane	ND	ug/l	10	04/20/00	CBD	74-83-9	
Chloroethane	ND	ug/l	10	04/20/00	CBD	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	04/20/00	CBD	75-69-4	
Acetone	ND	ug/l	100	04/20/00	CBD	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	04/20/00	CBD	75-35-4	
Iodomethane	ND	ug/l	5	04/20/00	CBD	74-88-4	
Acrylonitrile	ND	ug/l	100	04/20/00	CBD	107-13-1	

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Phone: 704.875.9092
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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952746 | Date Collected: 04/17/00 | Matrix: Water
Client Sample ID: SW-02 | Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Methylene Chloride	ND	ug/l	5	04/20/00	CBD	75-09-2	
Carbon Disulfide	ND	ug/l	5	04/20/00	CBD	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	04/20/00	CBD	75-34-3	
Vinyl Acetate	ND	ug/l	50	04/20/00	CBD	108-05-4	
2-Butanone	ND	ug/l	100	04/20/00	CBD	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-59-2	
Chloroform	ND	ug/l	5	04/20/00	CBD	67-66-3	
Bromochloromethane	ND	ug/l	5	04/20/00	CBD	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	04/20/00	CBD	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	04/20/00	CBD	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	04/20/00	CBD	56-23-5	
Benzene	ND	ug/l	5	04/20/00	CBD	71-43-2	
Trichloroethene	ND	ug/l	5	04/20/00	CBD	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	04/20/00	CBD	78-87-5	
Dibromomethane	ND	ug/l	5	04/20/00	CBD	74-95-3	
Bromodichloromethane	ND	ug/l	5	04/20/00	CBD	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	04/20/00	CBD	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-01-5	
Toluene	ND	ug/l	5	04/20/00	CBD	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	04/20/00	CBD	79-00-5	
2-Hexanone	ND	ug/l	50	04/20/00	CBD	591-78-6	
Dibromochloromethane	ND	ug/l	5	04/20/00	CBD	124-48-1	
Tetrachloroethene	ND	ug/l	5	04/20/00	CBD	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	04/20/00	CBD	106-93-4	
Chlorobenzene	ND	ug/l	5	04/20/00	CBD	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	630-20-6	
Ethylbenzene	ND	ug/l	5	04/20/00	CBD	100-41-4	
m&p-Xylene	ND	ug/l	10	04/20/00	CBD	7816-60-0	
Styrene	ND	ug/l	5	04/20/00	CBD	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	04/20/00	CBD	95-47-6	
Bromoform	ND	ug/l	5	04/20/00	CBD	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	04/20/00	CBD	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	04/20/00	CBD	110-57-6	
1,3-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	541-73-1	
1,4-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	95-50-1	
Dibromofluoromethane (S)	102	%		04/20/00	CBD	1868-53-7	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952746 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: SW-02 Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
1,2-Dichloroethane-d4 (S)	108	%		04/20/00	CBD	17060-07-0	
Toluene-d8 (S)	97	%		04/20/00	CBD	2037-26-5	
4-Bromofluorobenzene (S)	102	%		04/20/00	CBD	460-00-4	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952753 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: TRIP BLANK Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	04/20/00	CBD	74-87-3	
Vinyl Chloride	ND	ug/l	10	04/20/00	CBD	75-01-4	
Bromomethane	ND	ug/l	10	04/20/00	CBD	74-83-9	
Chloroethane	ND	ug/l	10	04/20/00	CBD	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	04/20/00	CBD	75-69-4	
Acetone	ND	ug/l	100	04/20/00	CBD	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	04/20/00	CBD	75-35-4	
Iodomethane	ND	ug/l	5	04/20/00	CBD	74-88-4	
Acrylonitrile	ND	ug/l	100	04/20/00	CBD	107-13-1	
Methylene Chloride	ND	ug/l	5	04/20/00	CBD	75-09-2	
Carbon Disulfide	ND	ug/l	5	04/20/00	CBD	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	04/20/00	CBD	75-34-3	
Vinyl Acetate	ND	ug/l	50	04/20/00	CBD	108-05-4	
2-Butanone	ND	ug/l	100	04/20/00	CBD	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	04/20/00	CBD	156-59-2	
Chloroform	ND	ug/l	5	04/20/00	CBD	67-66-3	
Bromochloromethane	ND	ug/l	5	04/20/00	CBD	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	04/20/00	CBD	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	04/20/00	CBD	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	04/20/00	CBD	56-23-5	
Benzene	ND	ug/l	5	04/20/00	CBD	71-43-2	
Trichloroethene	ND	ug/l	5	04/20/00	CBD	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	04/20/00	CBD	78-87-5	
Dibromomethane	ND	ug/l	5	04/20/00	CBD	74-95-3	
Bromodichloromethane	ND	ug/l	5	04/20/00	CBD	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	04/20/00	CBD	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-01-5	
Toluene	ND	ug/l	5	04/20/00	CBD	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	04/20/00	CBD	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	04/20/00	CBD	79-00-5	
2-Hexanone	ND	ug/l	50	04/20/00	CBD	591-78-6	
Dibromochloromethane	ND	ug/l	5	04/20/00	CBD	124-48-1	
Tetrachloroethene	ND	ug/l	5	04/20/00	CBD	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	04/20/00	CBD	106-93-4	
Chlorobenzene	ND	ug/l	5	04/20/00	CBD	108-90-7	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Pace Sample No: 92952753 Date Collected: 04/17/00 Matrix: Water
Client Sample ID: TRIP BLANK Date Received: 04/18/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
1,1,1,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	630-20-6	
Ethylbenzene	ND	ug/l	5	04/20/00	CBD	100-41-4	
m&p-Xylene	ND	ug/l	10	04/20/00	CBD	7816-60-0	
Styrene	ND	ug/l	5	04/20/00	CBD	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	04/20/00	CBD	95-47-6	
Bromoform	ND	ug/l	5	04/20/00	CBD	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	04/20/00	CBD	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	04/20/00	CBD	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	04/20/00	CBD	110-57-6	
1,3-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	541-73-1	
1,4-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	04/20/00	CBD	95-50-1	
Dibromofluoromethane (S)	101	%		04/20/00	CBD	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%		04/20/00	CBD	17060-07-0	
Toluene-d8 (S)	98	%		04/20/00	CBD	2037-26-5	
4-Bromofluorobenzene (S)	102	%		04/20/00	CBD	460-00-4	

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Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

PARAMETER FOOTNOTES

D	Not Detected
NC	Not Calculable
PRL	Pace Reporting Limit
S)	Surrogate

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QUALITY CONTROL DATA

he Fletcher Group
78 1/2 Patton Ave.
Suite 303
sheville, NC 28801

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

ttn: Mr. Jim McElduff
hone: (828)281-3350

C Batch ID: 25391
nalysis Method: EPA 8260
Associated Pace Samples: 92952670 92952688 92952696 92952704 92952712 92952720 92952738 92952746 92952753

QC Batch Method: EPA 8260
Analysis Description: GC/MS VOCs by 8260

METHOD BLANK: 92956275
ssociated Pace Samples: 92952670 92952688 92952696 92952704 92952712 92952720 92952738 92952746 92952753

Parameter	Units	Method Blank Result	PRL	Footnotes
hloromethane	ug/l	ND	10	
inyl Chloride	ug/l	ND	10	
Bromomethane	ug/l	ND	10	
hloroethane	ug/l	ND	10	
richlorofluoromethane	ug/l	ND	10	
Acetone	ug/l	ND	100	
1,1-Dichloroethene	ug/l	ND	5	
odomethane	ug/l	ND	5	
Acrylonitrile	ug/l	ND	100	
Methylene Chloride	ug/l	ND	5	
arbon Disulfide	ug/l	ND	5	
rans-1,2-Dichloroethene	ug/l	ND	5	
1,1-Dichloroethane	ug/l	ND	5	
inyl Acetate	ug/l	ND	50	
-Butanone	ug/l	ND	100	
cis-1,2-Dichloroethene	ug/l	ND	5	
Chloroform	ug/l	ND	5	
romochloromethane	ug/l	ND	5	
1,1,1-Trichloroethane	ug/l	ND	5	
1,2-Dichloroethane	ug/l	ND	5	
arbon Tetrachloride	ug/l	ND	5	
enzene	ug/l	ND	5	
Trichloroethene	ug/l	ND	5	

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QUALITY CONTROL DATA

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

METHOD BLANK: 92956275
Associated Pace Samples:
92952670 92952688 92952696 92952704 92952712 92952720 92952738
92952746 92952753

Parameter	Units	Method Blank Result	PRL	Footnotes
1,2-Dichloropropane	ug/l	ND	5	
Dibromomethane	ug/l	ND	5	
Bromodichloromethane	ug/l	ND	5	
4-Methyl-2-Pentanone	ug/l	ND	50	
cis-1,3-Dichloropropene	ug/l	ND	5	
Toluene	ug/l	ND	5	
trans-1,3-Dichloropropene	ug/l	ND	5	
1,1,2-Trichloroethane	ug/l	ND	5	
2-Hexanone	ug/l	ND	50	
1,3-Dichloropropane	ug/l	ND	5	
Dibromochloromethane	ug/l	ND	5	
Tetrachloroethene	ug/l	ND	5	
1,2-Dibromoethane	ug/l	ND	5	
Chlorobenzene	ug/l	ND	5	
1,1,1,2-Tetrachloroethane	ug/l	ND	5	
Ethylbenzene	ug/l	ND	5	
m&p-Xylene	ug/l	ND	10	
Styrene	ug/l	ND	5	
o-Xylene (1,2-Dimethylbenzene)	ug/l	ND	5	
Bromoform	ug/l	ND	5	
1,1,2,2-Tetrachloroethane	ug/l	ND	5	
1,2,3-Trichloropropane	ug/l	ND	5	
trans-1,4-Dichloro-2-Butene	ug/l	ND	5	
1,3-Dichlorobenzene	ug/l	ND	5	
1,4-Dichlorobenzene	ug/l	ND	5	
1,2-Dichlorobenzene	ug/l	ND	5	
1,2-Dibromo-3-Chloropropane	ug/l	ND	5	
Dibromofluoromethane (S)	%	100		
1,2-Dichloroethane-d4 (S)	%	101		
Toluene-d8 (S)	%	100		
4-Bromofluorobenzene (S)	%	101		

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QUALITY CONTROL DATA

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 92956259 92956267

Parameter	Units	93531945	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
1,1-Dichloroethene	ug/l	0	50	48.49	97.0	43.63	87.3	11	
Benzene	ug/l	0	50	53.47	107	46.78	93.6	13	
Trichloroethene	ug/l	0	50	50.05	100	44.22	88.4	12	
Toluene	ug/l	0	50	50.42	101	44.20	88.4	13	
Chlorobenzene	ug/l	0	50	46.12	92.2	40.49	81.0	13	
Dibromofluoromethane (S)					99		103		
1,2-Dichloroethane-d4 (S)					96		99		
Toluene-d8 (S)					98		98		
4-Bromofluorobenzene (S)					100		99		

LABORATORY CONTROL SAMPLE: 92956234

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
Chloromethane	ug/l	50	42.40	84.8	
Vinyl Chloride	ug/l	50	40.88	81.8	
Bromomethane	ug/l	50	32.53	65.1	
Chloroethane	ug/l	50	42.90	85.8	
Trichlorofluoromethane	ug/l	50	46.78	93.6	
Acetone	ug/l	100	73.66	73.7	
1,1-Dichloroethene	ug/l	50	52.60	105	
Iodomethane	ug/l	100	79.21	79.2	
Acrylonitrile	ug/l	250	230.6	92.2	
Methylene Chloride	ug/l	50	52.54	105	
Carbon Disulfide	ug/l	100	118.6	119	
trans-1,2-Dichloroethene	ug/l	50	55.44	111	
1,1-Dichloroethane	ug/l	50	54.28	109	
Vinyl Acetate	ug/l	100	103.1	103	
2-Butanone	ug/l	100	81.14	81.1	
cis-1,2-Dichloroethene	ug/l	50	54.40	109	
Chloroform	ug/l	50	54.20	108	
Bromochloromethane	ug/l	50	51.42	103	
1,1,1-Trichloroethane	ug/l	50	51.25	103	
1,2-Dichloroethane	ug/l	50	46.86	93.7	
Carbon Tetrachloride	ug/l	50	50.20	100	
Benzene	ug/l	50	56.02	112	
Trichloroethene	ug/l	50	52.36	105	
1,2-Dichloropropane	ug/l	50	47.82	95.6	
Dibromomethane	ug/l	50	46.66	93.3	
Bromodichloromethane	ug/l	50	49.88	99.8	

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QUALITY CONTROL DATA

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

LABORATORY CONTROL SAMPLE: 92956234

arameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
4-Methyl-2-Pentanone	ug/l	100	95.32	95.3	
is-1,3-Dichloropropene	ug/l	50	44.72	89.4	
oluene	ug/l	50	55.74	111	
trans-1,3-Dichloropropene	ug/l	50	47.07	94.1	
,1,2-Trichloroethane	ug/l	50	47.54	95.1	
-Hexanone	ug/l	100	90.76	90.8	
1,3-Dichloropropane	ug/l	50	47.27	94.5	
Dibromochloromethane	ug/l	50	51.17	102	
etrachloroethene	ug/l	50	69.18	138	1
,2-Dibromoethane	ug/l	50	46.82	93.6	
Chlorobenzene	ug/l	50	48.93	97.9	
,1,1,2-Tetrachloroethane	ug/l	50	47.48	95.0	
thylbenzene	ug/l	50	56.09	112	
m&p-Xylene	ug/l	100	111.7	112	
tyrene	ug/l	50	52.27	105	
-Xylene (1,2-Dimethylbenzene)	ug/l	50	54.70	109	
Bromoform	ug/l	50	50.50	101	
1,1,2,2-Tetrachloroethane	ug/l	50	45.94	91.9	
,2,3-Trichloropropane	ug/l	50	46.04	92.1	
rans-1,4-Dichloro-2-Butene	ug/l	50	48.29	96.6	
1,3-Dichlorobenzene	ug/l	50	49.16	98.3	
,4-Dichlorobenzene	ug/l	50	49.32	98.6	
,2-Dichlorobenzene	ug/l	50	49.64	99.3	
1,2-Dibromo-3-Chloropropane	ug/l	50	45.03	90.1	
Dibromofluoromethane (S)				100	
,2-Dichloroethane-d4 (S)				98	
Toluene-d8 (S)				101	
4-Bromofluorobenzene (S)				100	

SAMPLE DUPLICATE: 92956242

arameter	Units	93532133	Dup. Result	RPD	Footnotes
Chloromethane	ug/l	ND	ND	NC	
inyl Chloride	ug/l	ND	ND	NC	
Bromomethane	ug/l	ND	ND	NC	
Chloroethane	ug/l	ND	ND	NC	
richlorofluoromethane	ug/l	ND	ND	NC	
cetone	ug/l	ND	ND	NC	
1,1-Dichloroethene	ug/l	ND	ND	NC	

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

REPORT OF LABORATORY ANALYSIS

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

QUALITY CONTROL DATA

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

SAMPLE DUPLICATE: 92956242

Parameter	Units	93532133	Dup. Result	RPD	Footnotes
Iodomethane	ug/l	ND	ND	NC	
Acrylonitrile	ug/l	ND	ND	NC	
Methylene Chloride	ug/l	ND	ND	NC	
Carbon Disulfide	ug/l	ND	ND	NC	
trans-1,2-Dichloroethene	ug/l	ND	ND	NC	
1,1-Dichloroethane	ug/l	ND	ND	NC	
Vinyl Acetate	ug/l	ND	ND	NC	
2-Butanone	ug/l	ND	ND	NC	
cis-1,2-Dichloroethene	ug/l	ND	ND	NC	
Chloroform	ug/l	ND	ND	NC	
Bromochloromethane	ug/l	ND	ND	NC	
1,1,1-Trichloroethane	ug/l	ND	ND	NC	
1,2-Dichloroethane	ug/l	ND	ND	NC	
Carbon Tetrachloride	ug/l	ND	ND	NC	
Benzene	ug/l	ND	ND	NC	
Trichloroethene	ug/l	ND	ND	NC	
1,2-Dichloropropane	ug/l	ND	ND	NC	
Dibromomethane	ug/l	ND	ND	NC	
Bromodichloromethane	ug/l	ND	ND	NC	
4-Methyl-2-Pentanone	ug/l	ND	ND	NC	
cis-1,3-Dichloropropene	ug/l	ND	ND	NC	
Toluene	ug/l	ND	ND	NC	
trans-1,3-Dichloropropene	ug/l	ND	ND	NC	
1,1,2-Trichloroethane	ug/l	ND	ND	NC	
2-Hexanone	ug/l	ND	ND	NC	
1,3-Dichloropropane	ug/l	ND	ND	NC	
Dibromochloromethane	ug/l	ND	ND	NC	
Tetrachloroethene	ug/l	ND	ND	NC	
1,2-Dibromoethane	ug/l	ND	ND	NC	
Chlorobenzene	ug/l	ND	ND	NC	
1,1,1,2-Tetrachloroethane	ug/l	ND	ND	NC	
Ethylbenzene	ug/l	ND	ND	NC	
m&p-Xylene	ug/l	ND	ND	NC	
Styrene	ug/l	ND	ND	NC	
o-Xylene (1,2-Dimethylbenzene)	ug/l	ND	ND	NC	
Bromoform	ug/l	ND	ND	NC	
1,1,2,2-Tetrachloroethane	ug/l	ND	ND	NC	
1,2,3-Trichloropropane	ug/l	ND	ND	NC	
trans-1,4-Dichloro-2-Butene	ug/l	ND	ND	NC	
1,3-Dichlorobenzene	ug/l	ND	ND	NC	
1,4-Dichlorobenzene	ug/l	ND	ND	NC	

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Fax: 704.875.9091

QUALITY CONTROL DATA

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

SAMPLE DUPLICATE: 92956242

arameter	Units	93532133	Dup. Result	RPD	Footnotes
1,2-Dichlorobenzene	ug/l	ND	ND	NC	
.2-Dibromo-3-Chloropropane	ug/l	ND	ND	NC	
ibromofluoromethane (S)	%	102	98	0	
1,2-Dichloroethane-d4 (S)	%	103	100	0	
oluene-d8 (S)	%	100	98	0	
-Bromofluorobenzene (S)	%	100	100	0	

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Fax: 704.875.9091

QUALITY CONTROL DATA

he Fletcher Group
78 1/2 Patton Ave.
Suite 303
sheville, NC 28801

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

ttn: Mr. Jim McElduff
hone: (828)281-3350

QC Batch ID: 25487
nalysis Method: EPA 7470
Associated Pace Samples: 92952670 92952688 92952696 92952704 92952712 92952720 92952738 92952746

QC Batch Method: EPA 7470
Analysis Description: Mercury in Water

METHOD BLANK: 92961051
ssociated Pace Samples: 92952670 92952688 92952696 92952704 92952712 92952720 92952738 92952746

Parameter	Units	Method Blank Result	PRL	Footnotes
ercury	mg/l	ND	0.0002	

ATRIX SPIKE & MATRIX SPIKE DUPLICATE: 92961069 92961077

Parameter	Units	92952670	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
ercury	mg/l	0	0.0050	0.004430	88.6	0.003930	78.6	12	

ABORATORY CONTROL SAMPLE: 92961093

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
ercury	mg/l	0.0050	0.005080	102	

AMPLE DUPLICATE: 92961085

Parameter	Units	92952688	Dup. Result	RPD	Footnotes
ercury	mg/l	ND	ND	NC	

Laboratory Certification IDs
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NC Drinking Water 37706
SC 99006

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

QUALITY CONTROL DATA

The Fletcher Group
78 1/2 Patton Ave.
Suite 303
Asheville, NC 28801

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

Attn: Mr. Jim McElduff
Phone: (828)281-3350

QC Batch ID: 25558
Analysis Method: EPA 6010
Associated Pace Samples: 92952670 92952688 92952696 92952704 92952712 92952720 92952738 92952746

QC Batch Method: EPA 3010
Analysis Description: Metals by Trace ICP

METHOD BLANK: 92962968
Associated Pace Samples: 92952670 92952688 92952696 92952704 92952712 92952720 92952738 92952746

Parameter	Units	Method Blank Result	PRL	Footnotes
Antimony	mg/l	ND	0.005	
Arsenic	mg/l	ND	0.005	
Barium	mg/l	ND	0.005	
Beryllium	mg/l	ND	0.001	
Cadmium	mg/l	ND	0.001	
Chromium	mg/l	ND	0.002	
Cobalt	mg/l	ND	0.005	
Copper	mg/l	ND	0.002	
Lead	mg/l	ND	0.005	
Nickel	mg/l	ND	0.005	
Selenium	mg/l	ND	0.005	
Silver	mg/l	ND	0.002	
Tin	mg/l	ND	0.005	
Vanadium	mg/l	ND	0.005	
Zinc	mg/l	ND	0.01	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 92962976 92962984

Parameter	Units	92952670	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Antimony	mg/l	0	0.2500	0.2630	105	0.2600	104	1	
Arsenic	mg/l	0.001090	0.2500	0.2730	109	0.2710	108	1	

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QUALITY CONTROL DATA

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 92962976 92962984

Parameter	Units	92952670	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Barium	mg/l	0.08590	0.2500	0.3320	98.4	0.3260	96.0	2	
Beryllium	mg/l	0.0003200	0.2500	0.2700	108	0.2640	106	2	
Cadmium	mg/l	0.0005230	0.2500	0.2650	106	0.2590	103	2	
Chromium	mg/l	0	0.2500	0.2690	108	0.2640	106	2	
Cobalt	mg/l	0.07850	0.2500	0.3390	104	0.3350	103	2	
Copper	mg/l	0.002740	0.2500	0.2860	113	0.2790	110	3	
Lead	mg/l	0	0.2500	0.2620	105	0.2560	102	2	
Nickel	mg/l	0.006080	0.2500	0.2540	99.2	0.2460	96.0	3	
Selenium	mg/l	0.0007350	0.2500	0.2720	108	0.2670	106	2	
Silver	mg/l	0.0004120	0.2500	0.2670	107	0.2620	105	2	
Tin	mg/l	0.0001350	0.1250	0.1330	106	0.1310	105	2	
Vanadium	mg/l	0.0006870	0.2500	0.2730	109	0.2660	106	3	
Zinc	mg/l	0.01510	0.2500	0.2950	112	0.2870	109	3	

LABORATORY CONTROL SAMPLE: 92963008

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
Antimony	mg/l	0.2500	0.2560	102	
Arsenic	mg/l	0.2500	0.2690	108	
Barium	mg/l	0.2500	0.2400	96.0	
Beryllium	mg/l	0.2500	0.2620	105	
Cadmium	mg/l	0.2500	0.2580	103	
Chromium	mg/l	0.2500	0.2630	105	
Cobalt	mg/l	0.2500	0.2550	102	
Copper	mg/l	0.2500	0.2780	111	
Lead	mg/l	0.2500	0.2550	102	
Nickel	mg/l	0.2500	0.2400	96.0	
Selenium	mg/l	0.2500	0.2640	106	
Silver	mg/l	0.2500	0.2590	104	
Tin	mg/l	0.1250	0.1280	102	
Vanadium	mg/l	0.2500	0.2650	106	
Zinc	mg/l	0.2500	0.2700	108	

SAMPLE DUPLICATE: 92962992

Parameter	Units	92952688	Dup. Result	RPD	Footnotes
Antimony	mg/l	ND	ND	NC	

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NC Drinking Water 37706
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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

QUALITY CONTROL DATA

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

SAMPLE DUPLICATE: 92962992

arameter	Units	92952688	Dup. Result	RPD	Footnotes
Arsenic	mg/l	ND	ND	NC	
arium	mg/l	0.03700	0.03500	6	
eryllium	mg/l	ND	ND	NC	
Cadmium	mg/l	ND	ND	NC	
hromium	mg/l	ND	ND	NC	
obalt	mg/l	ND	ND	NC	
Copper	mg/l	ND	ND	NC	
ead	mg/l	ND	ND	NC	
ickel	mg/l	ND	ND	NC	
Selenium	mg/l	ND	ND	NC	
Silver	mg/l	ND	ND	NC	
in	mg/l	ND	ND	NC	
anadium	mg/l	ND	ND	NC	
Zinc	mg/l	ND	ND	NC	

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Fax: 704.875.9091

QUALITY CONTROL DATA

he Fletcher Group
78 1/2 Patton Ave.
Suite 303
sheville, NC 28801

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

ttn: Mr. Jim McElduff
hone: (828)281-3350

QC Batch ID: 25642
nalysis Method: EPA 7841
Associated Pace Samples: 92952670 92952688 92952696 92952704 92952712 92952720 92952738 92952746

QC Batch Method: EPA 3020
Analysis Description: Thallium, AAS Furnace

METHOD BLANK: 92966639
ssociated Pace Samples: 92952670 92952688 92952696 92952704 92952712 92952720 92952738 92952746

Parameter	Units	Method Blank Result	PRL	Footnotes
hallium	mg/l	ND	0.002	

IATRIX SPIKE & MATRIX SPIKE DUPLICATE: 92966647 92966654

Parameter	Units	92952670	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
hallium	mg/l	0.0006000	0.0250	0.02450	95.6	0.02450	95.6	0	

ABORATORY CONTROL SAMPLE: 92966670

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
hallium	mg/l	0.0250	0.02510	100	

SAMPLE DUPLICATE: 92966662

Parameter	Units	92952688	Dup. Result	RPD	Footnotes
hallium	mg/l	ND	ND	NC	

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9213411
Client Project ID: Jackson County 2040.08

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

ND	Not Detected
NC	Not Calculable
PRL	Pace Reporting Limit
RPD	Relative Percent Difference
(S)	Surrogate
[1]	The surrogate and/or spike recovery was outside acceptance limits.

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Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

536634

Page: 1 of 1

Section A — Required Client Information:

Company: THE FLETCHER GROUP
Address: 78½ Patton Avenue, Asheville, NC 28801
Phone: 828/281-3350 Fax: 287 3351

Section B — Required Client Information:

Report To: Jim McElduff
Invoice To: Same
P.O.:
Project Name: Jackson County
Project Number: 2040.08

Client Information (Check quote/contract):
Requested Due Date: STD *TAT: STD

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:
Project Manager: Tim
Project #: 13411
Profile #:
Requested Analysis: VOCs - 8260 - App 1; Metals - 6000/7000 - App 1; Vals

Section D — Required Client Information:

SAMPLE ID
One character per box. (A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED (mm / dd / yy)	TIME COLLECTED (hh:mm a/p)	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	VOCs - 8260 - App 1	Metals - 6000/7000 - App 1			Vals	Remarks / Lab ID
1	MW-01	WT	4-17-00	9:45	5	5		1	4			4	1				952650
2																	
3	MW-02	WT	4-17-00	11:15	5	5		1	4			4	1				952688
4																	
5	MW-03	WT	4-17-00	12:00	5	5		1	4			4	1				952696
6	MW-03-DUP	WT	4-17-00	12:05	5	5		1	4			4	1				952704
7	MW-04	WT	4-17-00	14:15	5	5		1	4			4	1				952712
8																	
9	MW-05	WT	4-17-00	13:15	5	5		1	4			4	1				952720
10	TRIP BLANK	WT	4-10-00		2												952753
11	SW-01	WT	4-17-00	14:00	5	5		1	4			4	1				952738
12	SW-02	WT	4-17-00	10:30	5	5		1	4			4	1				952746

Sample Condition		Sample Notes	Item No.	Relinquished By / Company	Date	Time	Accepted By / Company	Date	Time
Temp in °C:	-0.1	Samples on Ice ASAP		John M. Chase, TFG	4/17	17:00	S. Martin	4/18	10:00
Received on ICE:	(Y) / N								
Sealed Cooler:	(Y) / N								
Samples Intact:	(Y) / N								

Additional Comments:

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: John Chase
SIGNATURE of SAMPLER: John M. Chase
DATE Signed: (MM / DD / YY) 4-17-00

SEE REVERSE SIDE FOR INSTRUCTIONS

Pace Analytical Services, Inc. Form COC01 02/00

APPENDIX C

GROUNDWATER VELOCITY CALCULATION

APPENDIX C

GROUNDWATER VELOCITY CALCULATIONS
JACKSON COUNTY LANDFILL

April 17, 2000

JACKSON COUNTY, NORTH CAROLINA

Location	K[a] (cm/sec)	I (ft/ft)	n	Flow Rate V (cm/sec)	Flow Rate V (ft/sec)	Flow Rate V (ft/day)	Flow Rate V (ft/yr)
MW-5 to MW-4	7.30E-04	0.12	0.35	2.50E-04	8.21E-06	0.71	259.0
MW-5 to MW-4	7.30E-04	0.12	0.3	2.92E-04	9.58E-06	0.83	302.1
MW-1 to MW-3	7.30E-04	0.15	0.35	3.13E-04	1.03E-05	0.89	323.7
MW-1 to MW-3	7.30E-04	0.15	0.3	3.65E-04	1.20E-05	1.03	377.7

Notes: Ft = feet

K[a] = Hydraulic Conductivity (Hvorslev method) from page 13 of the March 23, 1994 document "Portion of Transition Plan", Existing Jackson County MSWLF

I = average hydraulic gradient based upon linear interpolation of groundwater measurements from April 17, 2000 and the survey data provided by Davenport & Assoc., Inc. from April 9, 1999

n = Porosity (percent) of 30% to 35% based on literature values for sand and silt mixtures

Flow rate (V) = (K*I)/n

APPENDIX D

ANOVA STATISTICAL ANALYSES

APPENDIX D

SUMMARY OF ANOVA STATISTICAL EVALUATION
JACKSON COUNTY LANDFILL

April 17, 2000

JACKSON COUNTY, NORTH CAROLINA

Compound	Conclusion
1,1,1,2-Tetrachloroethane	**Significant Deviation**
1,1,1-Trichloroethane	**Significant Deviation**
1,1,2,2-Tetrachloroethane	No Significant Deviation
1,1,2-Trichloroethane	No Significant Deviation
1,1-Dichloroethane	**Significant Deviation**
1,1-Dichloroethene	No Significant Deviation
1,2,3-Trichloropropane	No Significant Deviation
1,2-Dibromo-3-Chloropropane	No Significant Deviation
1,2-Dibromoethane	No Significant Deviation
1,2-Dichlorobenzene	No Significant Deviation
1,2-Dichloroethane	No Significant Deviation
1,2-Dichloropropane	No Significant Deviation
1,4-Dichlorobenzene	**Significant Deviation**
2-Butanone	No Significant Deviation
2-Hexanone	No Significant Deviation
4-Methyl-2-Pentanone	No Significant Deviation
Acetone	No Significant Deviation
Acrylonitrile	No Significant Deviation
Antimony	No Significant Deviation
Arsenic	No Significant Deviation
Barium	**Significant Deviation**
Benzene	**Significant Deviation**
Beryllium	No Significant Deviation
Bromochloromethane	No Significant Deviation
Bromodichloromethane	No Significant Deviation
Bromoform	No Significant Deviation
Bromomethane	No Significant Deviation
Cadmium	No Significant Deviation
Carbon Disulfide	No Significant Deviation
Carbon Tetrachloride	No Significant Deviation
Chlorobenzene	**Significant Deviation**
Chloroethane	**Significant Deviation**
Chloroform	No Significant Deviation
Chloromethane	No Significant Deviation
Chromium	**Significant Deviation**
cis-1,2-Dichloroethene	**Significant Deviation**

APPENDIX D

SUMMARY OF ANOVA STATISTICAL EVALUATION
JACKSON COUNTY LANDFILL

April 17, 2000

JACKSON COUNTY, NORTH CAROLINA

Compound	Conclusion
cis-1,3-Dichloropropene	No Significant Deviation
Cobalt	**Significant Deviation**
Copper	**Significant Deviation**
Dibromochloromethane	No Significant Deviation
Dibromomethane	No Significant Deviation
Ethylbenzene	No Significant Deviation
Iodomethane	No Significant Deviation
Lead	No Significant Deviation
Mercury	No Significant Deviation
Methylene Chloride	**Significant Deviation**
Nickel	**Significant Deviation**
Selenium	No Significant Deviation
Silver	No Significant Deviation
Styrene	No Significant Deviation
Tetrachloroethene	**Significant Deviation**
Thallium	No Significant Deviation
Tin	No Significant Deviation
Toluene	No Significant Deviation
trans-1,2-Dichloroethene	No Significant Deviation
trans-1,4-Dichloro-2-Butene	No Significant Deviation
Trichloroethene	**Significant Deviation**
Trichlorofluoromethane	No Significant Deviation
Vanadium	**Significant Deviation**
Vinyl Acetate	No Significant Deviation
Vinyl chloride	No Significant Deviation
Xylenes	**Significant Deviation**
Zinc	No Significant Deviation

78½ Patton Avenue
Asheville, North Carolina 28801
Telephone: (828) 281-3350 Facsimile: (828) 281-3351

The Fletcher Group

Transmittal Letter

To: Mr. Mark Poindexter

From: John Chase

Date: June 9, 2000

cc:

Subject: Jackson County, North Carolina

Contents:

- A copy of the Spring 2000 Semiannual Water Quality Monitoring Report for the Jackson County Municipal Solid Waste Landfill prepared by The Fletcher Group, June 9, 2000.

JUN 2000
Section