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REPORT OF
SEMI-ANNUAL WATER QUALITY MONITORING
Series 5
October 2004

SWEPSONVILLE LANDFILL
GRAHAM, ALAMANCE COUNTY, NORTH CAROLINA

Prepared For:

Alamance County
Graham, North Carolina

Prepared By:

MACTEC Engineering and Consulting, Inc.
Greensboro, North Carolina

Received
Waste Management

MACTEC Project 6262-03-0108

November 2004

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November 29, 2004

Mr. Larry Rose
North Carolina Department of Environment and Natural Resources
Solid Waste Section
Mail Service Center 1646
Raleigh, North Carolina 27699-1646

Subject: **Report of Semi-Annual Water Quality Monitoring**
Series 5 – October 2004
Swepsonville Landfill
Graham, Alamance County, North Carolina
MACTEC Project 6262-03-0108

Dear Mr. Rose:

On behalf of Alamance County, MACTEC Engineering and Consulting, Inc. (MACTEC), is pleased to present this Report of Semi-Annual Water Quality Monitoring for the above referenced site. This report summarizes the field activities, laboratory analytical results, and conclusions from the semi-annual sampling event performed in October 2004.

The surface water and groundwater samples were collected in general accordance with the North Carolina Department of Environment and Natural Resources (NCDENR) North Carolina Administrative Code (NCAC), Title 15A, Subchapter 13B (15A NCAC 13B), Sections .0601, and .1630 through .1637.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

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Staff Geologist

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Attachments

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TABLE OF CONTENTS

Page

1.0 PROJECT BACKGROUND 1

2.0 FIELD ACTIVITIES 1

3.0 ANALYTICAL RESULTS 2

3.1 Groundwater Analytical Results 2
3.2 Surface Water Analytical Results 3

4.0 CONCLUSIONS 4

TABLES

Table 1 – Groundwater Elevation Table
Table 2 – Groundwater and Surface Water Field Parameters
Table 3 – Summary of Groundwater and Surface Water Analytical Results

FIGURES

Figure 1 – Site Location Map
Figure 2 – Monitoring Well and Surface Water Location Map

APPENDIX

Laboratory Data and Chain-of-Custody Documentation

1.0 PROJECT BACKGROUND

MACTEC Engineering and Consulting, Inc. (MACTEC) was contracted by Alamance County to conduct semi-annual water quality monitoring at the Swepsonville Landfill. The Swepsonville Landfill is located in Graham, North Carolina (Figure 1).

Prior to MACTEC's semi-annual sampling events beginning in October 1999, BPA Environmental & Engineering, Inc. (BPA) conducted semi-annual water quality monitoring events at the Swepsonville Landfill. BPA sampled the existing eleven monitoring wells and collected two surface water samples from October 1995 until March 1999. Groundwater samples from the previous monitoring events were analyzed for Appendix I constituents, which included volatile organic compounds (VOCs) and metals including mercury.

2.0 FIELD ACTIVITIES

On October 18 and 19, 2004, MACTEC conducted the second semi-annual sampling event for the year 2004 at the Swepsonville Landfill. The field activities were performed in general accordance with the requirements of the North Carolina Department of Environment and Natural Resources (NCDENR), North Carolina Administrative Code (NCAC), Title 15A, Subchapter 13B (15A NCAC 13B), Sections .0601, and .1630 through .1637. A total of eleven monitoring wells and two surface water locations (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7A, MW-7B, MW-8A, MW-8B, MW-9, SW-1 and SW-2) were sampled as part of this monitoring event (Figure 2).

Prior to sampling, the depth-to-groundwater was measured in the eleven monitoring wells using an electric water level indicator. The water level indicator was decontaminated between uses according to the following procedure:

- washed with potable water and phosphate-free detergent solution;
- rinsed with potable water; and
- rinsed with distilled water.

The depth-to-groundwater measurements (presented in Table 1) were not converted to groundwater elevations because survey data indicated that only the top of the steel outer protective casing was surveyed and depth-to-water measurements were previously referenced to the top of the PVC riser casing.

The pH, temperature, dissolved oxygen and specific conductivity of the groundwater and surface water samples were measured in the field using a Horiba U-10 combination meter. These measurements are presented in Table 2.

The monitoring wells were purged by bailing an equivalent of three casing volumes of water from the wells or to dryness using a one-liter capacity disposable Teflon™ bailer. The water samples were collected in laboratory-decontaminated bottles. The sample containers were labeled with identifying numbers and information, preserved on ice, and shipped along with a chain-of-custody document to Environmental Science Corporation Laboratories, Inc., a North Carolina licensed laboratory, located in Mt. Juliet, Tennessee for analysis.

The groundwater samples from the monitoring wells and surface water samples were analyzed for Appendix I constituents which include VOCs using U.S. Environmental Protection Agency (USEPA) Method 8260B and metals using USEPA Method 6010. Mercury was analyzed using USEPA Method 245.1. Laboratory reports and chain-of-custody documentation are included in the Appendix.

3.0 ANALYTICAL RESULTS

3.1 Groundwater Analytical Results

The groundwater analytical results were compared to the North Carolina groundwater quality standards established in NCDENR Title15A NCAC Subchapter 2L Section .0202, Groundwater Quality Standards (2L Groundwater Quality Standards). The detected groundwater analytical results are summarized in Table 3.

Twelve VOCs were detected in the groundwater samples. Of these, seven VOCs including benzene, cis-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethene, 1,2-dichloroethane, tetrachloroethene (PCE), trichloroethene (TCE) and vinyl chloride were detected at concentrations exceeding their respective 2L Groundwater Quality Standards. As shown on Table 3, groundwater samples from monitoring wells MW-1, MW-2, MW-4, MW-7A and MW-7B contained chemical contaminants at concentrations exceeding their respective 2L Groundwater Quality Standards. Other VOCs were detected in wells MW-2, MW-4, MW-7A and MW-7B at concentrations below their respective 2L Groundwater Quality Standards. No VOCs were detected in wells MW-3, MW-5, MW-6, MW-8A, MW-8B, or MW-9.

Twelve metals, including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium and zinc were detected in groundwater samples collected at the site. Of these, only antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, lead, nickel and vanadium were detected at concentrations exceeding their respective 2L Groundwater Quality Standards. As shown on Table 3, groundwater samples from wells MW-2, MW-5, MW-7A, MW-8B, and MW-9 contained metal concentrations exceeding their respective 2L Groundwater Quality Standards. Other metals were detected in wells MW-1, MW-2, MW-3, MW-4, MW-7A, MW-8B, and MW-9 at concentrations below their respective 2L Groundwater Quality Standards. No metals were detected in wells MW-6, MW-7B and MW-8A.

3.2 Surface Water Analytical Results

The surface water analytical results are also summarized on Table 3. The VOC cis-1,2-dichloroethene was detected in the surface water sample SW-1 at a concentration below the 2B Surface Water Quality standard. The metal zinc was detected in surface water sample SW-2 at a concentration exceeding its 2B Surface Water Quality Standard.

Twelve VOCs were detected in the groundwater samples. Of these, seven VOCs including benzene, cis-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethene, 1,2-dichloroethane, tetrachloroethene (PCE), trichloroethene (TCE) and vinyl chloride were detected at concentrations exceeding their respective 2L Groundwater Quality Standards. As shown on Table 3, groundwater samples from monitoring wells MW-1, MW-2, MW-4, MW-7A and MW-7B contained chemical contaminants at concentrations exceeding their respective 2L Groundwater Quality Standards. Other VOCs were detected in wells MW-2, MW-4, MW-7A and MW-7B at concentrations below their respective 2L Groundwater Quality Standards. No VOCs were detected in wells MW-3, MW-5, MW-6, MW-8A, MW-8B, or MW-9.

Twelve metals, including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium and zinc were detected in groundwater samples collected at the site. Of these, only antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, lead, nickel and vanadium were detected at concentrations exceeding their respective 2L Groundwater Quality Standards. As shown on Table 3, groundwater samples from wells MW-2, MW-5, MW-7A, MW-8B, and MW-9 contained metal concentrations exceeding their respective 2L Groundwater Quality Standards. Other metals were detected in wells MW-1, MW-2, MW-3, MW-4, MW-7A, MW-8B, and MW-9 at concentrations below their respective 2L Groundwater Quality Standards. No metals were detected in wells MW-6, MW-7B and MW-8A.

3.2 Surface Water Analytical Results

The surface water analytical results are also summarized on Table 3. The VOC cis-1,2-dichloroethene was detected in the surface water sample SW-1 at a concentration below the 2B Surface Water Quality standard. The metal zinc was detected in surface water sample SW-2 at a concentration below its 2B Surface Water Quality Standard.

4.0 CONCLUSIONS

Based on the analytical data described above, the following conclusions are presented:

- Seven VOCs including benzene, cis-1,2-DCE, 1,2-dichloroethane, 1,1-dichloroethene, PCE, TCE, and vinyl chloride were detected in water samples from the monitoring wells at concentrations exceeding their respective 2L Groundwater Quality Standards. Several other VOCs were also detected in at least one of the groundwater samples; however, the concentrations were below their respective 2L Groundwater Quality Standards.
- The detected VOC concentrations have generally decreased since the October 1999 sampling event. No VOCs were detected in wells MW-3, MW-5, MW-6, MW-8A, MW-8B, or MW-9.
- Twelve metals were detected in groundwater samples collected at the site. Of these, only antimony, arsenic, barium, cadmium, chromium, cobalt, lead, nickel and vanadium were detected at concentrations exceeding their respective 2L Groundwater Quality Standards. Since no 2L Groundwater Quality Standards have been established for antimony, beryllium, cobalt and vanadium, the method detection limit is considered the standard. The remaining metals were detected at concentrations below their respective 2L Groundwater Quality Standards. No metals were detected in wells MW-6, MW-7B or MW-8A.
- The VOC cis-1,2-dichloroethene was detected in surface water sample SW-1 at a concentration below its 2B Surface Water Quality Standard. No metals were detected in surface water sample SW-1. Zinc was detected in surface water sample SW-2 at a contaminant concentration exceeding its respective 2B Surface Water Quality Standard.
- Metal concentrations have continued to fluctuate in the groundwater samples collected on-site.

The next semi-annual water quality monitoring event is scheduled for October 2004.

TABLES

Table 3
Summary of Groundwater and Surface Water Analytical Results
Swepsonville Landfill
Series 5- October 2004

Sample ID	Collection Date	Benzene	Chlorobenzene	Chloroethane	cis-1,2-Dichloroethene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloropropane	1,2-Dichloroethane	trans-1,2-Dichloroethene	Tetrachloroethene	MTBE	Toluene	1,1,1-Trichloroethane	Trichloroethene	Vinyl Chloride	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Selenium	Silver	Vanadium	Zinc
		Volatile Organic Compounds (ug/L)																	Appendix I Metals (mg/L)														
NCDENR 2L GW Quality Stds		1	50	2800	70	75	620	700	7	0.56	0.38	70	0.70	200	1000	200	2.8	0.015	NE	0.010	2	NE	0.005	0.050	NE	1.000	0.015	0.0011	0.1	0.05	0.018	NE	2.10
NCDENR 2B Surface Water Quality Stds		1.19	488	860	340	488	488	3400	0.057	0.52	0.38	680	0.8	NE	11	3460	3.08	2	0.014	0.050	1.8	0.0065	0.002	0.011	0.065	0.001	0.025	0.000012	0.025	0.005	0.00006	0.047	0.050
MW-1	10/15/1999	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	9	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	<0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	4/12/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.002	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	0.086
	10/11/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.003	<0.01	0.013	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	0.110
	4/11/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4.7	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	0.0023	0.0028	<0.01	0.013	<0.20	0.014	<0.0005	<0.05	<0.005	<0.01	<0.04	0.110
	10/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4.6	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.3	<1	<5	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	0.018	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	0.110
	10/10/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.4	<5	<5	<1	<1	<1	<0.005	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.01	<0.01	<0.04	0.089
	4/4/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.8	<5	<5	<1	<1	<1	<0.030	<0.010	0.900	<0.002	<0.005	0.025	0.025	<0.20	0.032	0.00052	<0.050	<0.020	<0.01	0.0810	0.160
	10/17/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.2	<5	<5	<1	<1	<1	<0.030	<0.010	<0.5	<0.002	<0.005	<0.010	<0.010	<0.20	0.015	<0.0005	<0.050	<0.020	<0.01	<0.04	0.066
	4/15/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.1	<5	<5	<1	<1	<1	<0.030	<0.010	0.530	<0.002	<0.005	0.017	0.022	<0.20	0.019	<0.0005	<0.050	0.020	<0.01	0.0600	0.160
	10/18/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.5	<5	<5	<1	<1	<1	<0.030	<0.010	<0.5	<0.002	<0.005	<0.010	<0.010	<0.20	<0.01	<0.0005	<0.050	<0.020	<0.01	<0.04	0.055
MW-2	10/13/1999	<10	<10	<10	45	<5	<5	170	23	8	<5	<5	38	<5	<5	9	49	<10	<0.01	0.011	0.090	0.002	0.006	0.066	0.05	<0.20	0.013	<0.0002	0.062	<0.05	<0.01	0.220	0.26
	4/17/2000	<10	<10	<10	18	<5	<5	57	9	<5	<5	<5	15	<5	<5	<5	17	<10	<0.01	<0.01	1.000	<0.002	0.006	0.042	0.039	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	0.100	0.170
	10/11/2000	<10	<10	<10	28	<5	<5	77	13	<5	<5	<5	23	<5	<5	<5	30	<10	<0.01	<0.010	1.00	<0.002	0.004	0.030	0.029	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	0.100	0.13
	4/11/2001	<1	<10	2.3	18	<1	<1	56	7.3	2.6	<1	<1	13	<1	<1	<1	16	1.6	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	0.014	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/12/2001	1.7	1.5	<1	42	1.8	<1	120	17	<1	<1	1.4	32	<1	<1	4.4	43	<1	<0.002	<0.005	0.600	<0.002	<0.002	0.030	0.019	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	0.100	0.130
	4/9/2002	<1	<1	2.5	50	1.6	<1	80	30	<1	<1	1.5	37	<1	<5	5.3	51	26	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/10/2002	<1	<1	2.1	36	1.6	<1	94	5.5	4.4	<1	<1	11	<5	<5	<5	30	1.6	<0.005	<0.01	0.550	0.0023	<0.005	0.027	0.015	<0.20	0.012	<0.0005	<0.05	<0.01	<0.01	0.110	0.180
	4/4/2003	<1	<1	3.6	46	2.0	<1	130	20	<1	<1	1.2	29	<5	<5	2.9	40	2.5	<0.030	<0.010	1.300	<0.002	<0.005	0.120	0.051	<0.20	<0.01	<0.0005	<0.05	0.061	<0.01	0.420	0.320
	10/17/2003	1.3	<1	2.3	22	<1	<1	59	7.8	3.5	<1	1.3	13	<5	<5	<1	18	3.1	<0.030	<0.010	0.990	<0.002	<0.005	0.085	0.044	<0.20	0.023	<0.0005	0.0610	<0.02	<0.01	0.270	0.220
	4/15/2004	<1	<1	2.5	20	1.1	<1	45	6.4	1.9	<1	<1	14	<5	<5	<1	16	6.3	<0.030	<0.010	1.500	<0.002	0.0064	0.130	0.058	<0.20	0.030	<0.0005	0.0960	0.003	<0.01	0.420	0.440
	10/18/2004	<1	<1	2.4	41	1.6	<1	72	85	<1	1.78	1.2	14	<5	<5	1.4	27	4.4	0.039	<0.010	4.2	<0.002	0.0150	0.340	0.120	0.210	0.045	<0.0005	0.20	<0.02	<0.01	1.300	0.940
MW-3	10/14/1999	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.002	0.024	0.016	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	0.061	0.064
	4/12/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.002	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	0.053
	10/11/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.002	0.014	0.011	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	0.073
	4/11/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	0.031	0.025	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	0.0790	0.120
	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	0.021	0.011	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	0.070	<0.05
	10/10/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.005	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.01	<0.01	<0.04	0.120
	4/4/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	0.016	0.012	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	0.046	<0.05
	10/17/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	0.013	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	4/15/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	0.015	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	0.072	0.083
	10/18/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	0.018	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	0.049	<0.05
MW-4	10/15/1999	<10	<10	<10	410	7	<10	45	<5	<5	<5	<5	48	<5	<5	<5	57	16	<0.01	<0.01	<0.5	<0.002	0.002	<0.01	0.072	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	0.14	0.061
	4/12/2000	<10	<10	<10	390	<5	<10	43	<5	<5	<5	<5	61	<5	<5	<5	51	35	<0.01	<0.01	<0.5	<0.002	0.002	<0.01	0.071	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	10/11/2000	<10	<10	11	450	5	<10	55	<5	<5	<5	<5	69	<5	<5	<5	73	17	<0.01	<0.01	<0.5	<0.002	0.002	<0.01	0.077	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	4/11/2001	<1	<1	6.9	340	4.4	<1	40	1.2	1.9	1.4	1.9	35	3.3	<1	<1	52	8.4	<0.002	<0.005	<0.5	<0.002	0.002	<0.01	0.11	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/12/2001	2	1.5	<1	360	4.9	1.4	33	2.2	<1	<1	2.8	32	2	<1	<1	78	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	0.110	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	4/9/2002	1	3.9	<1	350	4.6	<1	21	<1	<1	<1	2.4	18	1.5	<5	<1	71	23	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	0.012	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/10/2002	<20	<20	<20	290	<20	<20	53	<20	<20	<20	<20	<20	<100	<100	<20	51	<20	<0.005	<0.01	<0.5	<0.002	<0.005	<0.01	0.012	<0.20	0.012	<0.0005	<0.05	<0.01	<0.01	<0.04	0.190
	4/4/2003	1.7	<1	5.5	420	6.8	1.0	45	1.6	<1	<1	2.8	4.7	<5	<5	<1	58	12	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	0.160	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	10/17/2003	1.2	<1	4.2	420	6.4	1.4	49	2.0	1.9	1.6	3.4	3.3	<5	<5	<1	53	12	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	0.140	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	4/15/2004	1.1	<1	4.3	260	8.0	1.7	44	1.9	2.4	1.8	3.1	1.4	<5	<5	<1	39	18	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	0.130	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	10/18/2004	<5	<5	<5	340	<5	<5	46	<5	<5	<5	<5	<5	<25	<25	<5	40	9.2	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	0.130	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	0.068
MW-5	10/15/1999	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.001	0.018	0.012	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	0.099	<0.05
	4/12/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.004	0.042	0.026	<0.20	0.016	<0.0002	<0.05	<0.05	<0.01	0.130	0.097
	10/11/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	0.011	<0.5	0.003	0.006	0.079	0.043	<0.20	0.029	0.0002	<0.05	<0.05	<0.01	0.230	0.180
	4/11/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	0.0031	0.026	0.015	<0.20	0.014	<0.0005	<0.05	<0.005	<0.01	0.099	0.075
	10/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.0026	<0.005	0.670	<0.002	<0.002	0.056	0.035	<0.20	0.024	<0.0005	<0.05	<0.005	<0.01	0.210	0.150
	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/10/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.005	<0.01	<0.5	<0.002	<0.005	<0.01	0.023	<0.20	<0.01	<0.0005	<0.05	<0.01	<0.01	<0.04	<0.05
	4/4/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	0.500	<0.002	<0.005	0.092	0.043	<0.20	0.016	<0.0005	<0.05	0.057	<0.01	0.290	0.170
	10/17/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	0.065	0.035	<0.20	0.021	<0.0005	<0.05	<0.02	<0.01	0.190	0.100
	4/15/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	0.044	0.055
	10/18/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	0.011	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
MW-6	10/15/1999	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	<0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	4/12/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	10/11/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	0.056
	4/11/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	0.0022	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/10/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.005	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.01	<0.01	<0.04	<0.05
	4/4/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	10/17/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	4/15/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	10/18/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
MW-7A	10/16/1999	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	<0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	4/12/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	10/11/2000	<10	<10	<10	<5	<5	<5	8	<5	<5	<5	<5	6	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.002	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	0.15
	4/11/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/12/2001	<1	<1	<1	4	<1	<1	7	<1	<1	<1	<1	5.9	<1	<1	<1	3.0	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.05	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/10/2002	<1	<1	1.0	1.6	<1	<1	2.4	<1	<1	<1	<1	1.4	<5	<5	<1	<1	<1	<0.005	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.01	<0.01	<0.04	<0.05
	4/4/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.1	<5	<5	<1	<1	<1	<0.03	<0.01	1.00	<0.002	<0.005	0.053	0.100	<0.20	0.015	<0.0005	<0.05	0.061	<0.01	0.440	0.510
	10/17/2003	<1	<1	<1	<1	<1	<1	1.2	<1	<1	<1	<1	1.7	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	0.013	0.022	<0.20	0.011	<0.0005	<0.05	<0.02	<0.01	0.087	0.088
	4/15/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.0	<5	<5	<1	<1	<1	0.056	<0.01	0.78	<0.002	0.011	0.046	0.069	<0.20	<0.01	<0.0005	<0.05	0.020	<0.01	0.290	0.480
	10/18/2004	<1	<1	<1	1.2	<1	<1	1.1	<1	<1	<1	<1	1.7	<5	<5	<1	<1	<1	<0.03	<0.01	0.88	<0.002	<0.005	0.039	0.057	<0.20	0.016	<0.0005	<0.05	<0.02	<0.01	0.290	0.350

Table 1
Groundwater Elevation Data
Swepsonville Landfill - October 2004

Well Number	Total Well Depth (TOC)*	Top of Casing**	Date	Depth to Groundwater	Groundwater Elevation
MW-1	33.00	574.67	10/18/2004	21.73	552.94
MW-2	29.90	510.67	10/18/2004	26.30	484.37
MW-3	24.10	466.63	10/18/2004	8.41	458.22
MW-4	50.00	497.57	10/18/2004	33.14	464.43
MW-5	19.00	476.56	10/18/2004	10.23	466.33
MW-6	50.00	529.50	10/18/2004	20.46	509.04
MW-7A	64.02	553.09	10/18/2004	20.73	532.36
MW-7B	31.05	554.12	10/18/2004	22.41	531.71
MW-8A	65.00	591.08	10/18/2004	21.75	569.33
MW-8B	26.00	591.25	10/18/2004	21.55	569.70
MW-9	27.50	568.78	10/18/2004	14.73	554.05

Notes:

1) All data reported in feet above National Geodetic Vertical Datum (NGVD).
2) Depth to ground water measured from top of PVC riser pipe.
3) Top of casing (TOC) surveyed by Landmark Surveying, Inc.
*TOC=Top of PVC Casing
** Top of Steel Casing

Prepared By _____ Date 11/04
Checked By _____ Date 11/04

Table 2
Groundwater and Surface Water Field Parameters
Swepsonville Landfill - October 2004

Parameter	Field Results												
Sample ID	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7A	MW-7B	MW-8A	MW-8B	MW-9	SW-1	SW-2
Date	10/18/2004	10/18/2004	10/18/2004	10/18/2004	10/18/2004	10/18/2004	10/18/2004	10/18/2004	10/18/2004	10/18/2004	10/18/2004	10/18/2004	10/18/2004
Temperature (°C)	18.5	18.6	NM	18.4	NM	16.3	14.8	15.2	14.6	14.6	15.9	NM	NM
Specific Conductance (mS)	86	311	NM	708.0	NM	208.0	151.5	180.8	61.7	17.68	59	NM	NM
pH (SU)	6.09	6.51	NM	6.49	NM	6.63	6.84	6.62	7.58	6.93	6.63	NM	NM

Notes:
NM- Not Measured
mS - milli Siemens
SU - Standard Units

Prepared by: [illegible] Date: 11/04
Checked by: [illegible] Date: 11/04

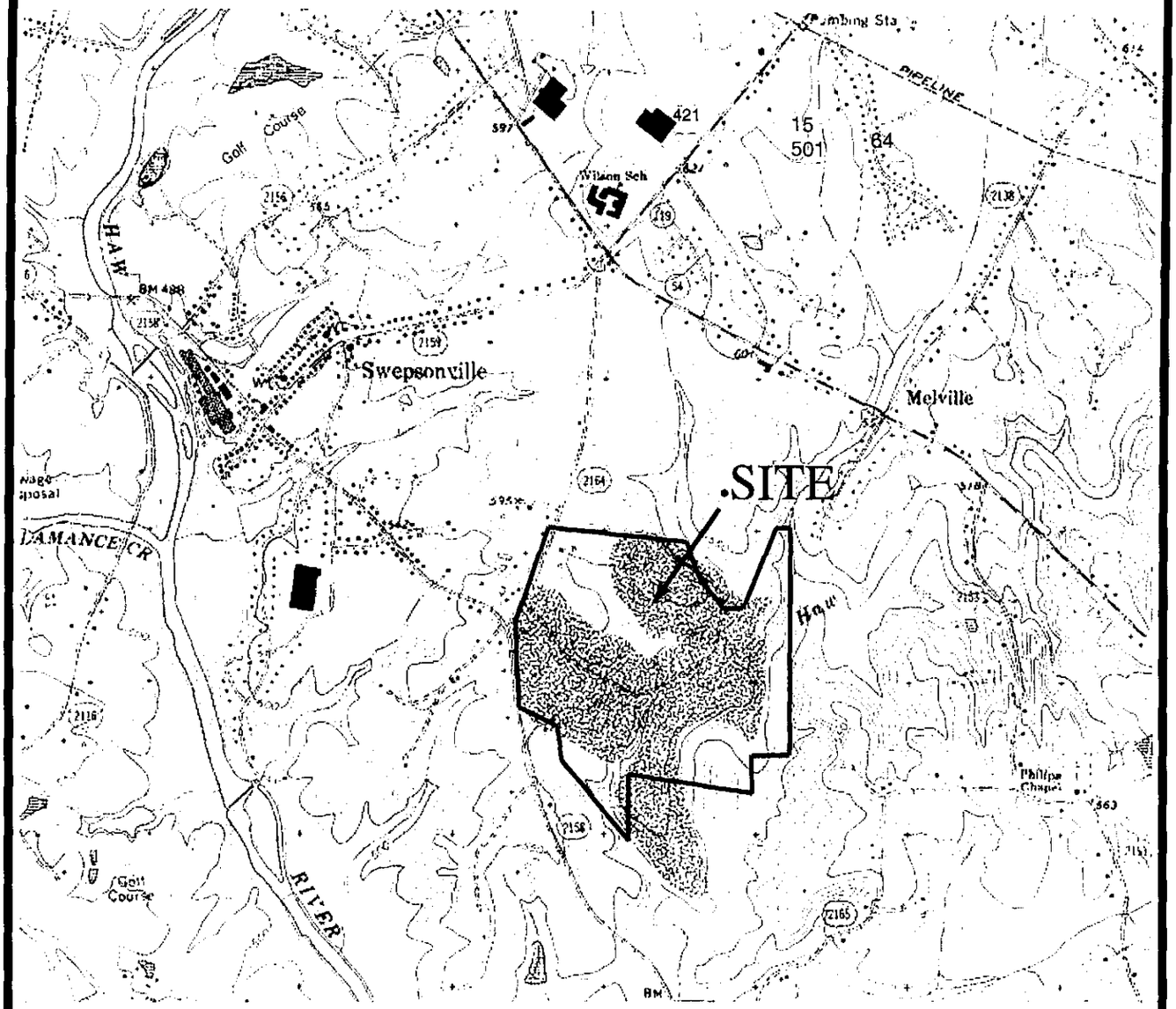
FIGURES

Table 3
Summary of Groundwater and Surface Water Analytical Results
Swepsonville Landfill
Series 5- October 2004

Sample ID	Sampling Date	Volatile Organic Compounds (mg/L)																	Inorganic (mg/L)												
		Benzene	Chlorobenzene	Chloroform	1,2-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene (cis)	1,2-Dichloroethene (trans)	Methylene Chloride	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	Vinyl Chloride	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Copper	Iron	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
NCDENR 2L GW Quality Stds		1	50	2000	70	75	620	700	7	0.56	0.38	70	0.70	200	1000	280	2.8	0.015	NE	0.010	2	NE	0.005	0.050	NE	1.000	0.015	0.0011	0.1	0.05	0.018	NE	2.10
NCDENR 2B Surface Water Quality Stds		1.19	488	360	340	488	488	3400	4.657	0.22	0.38	680	0.8	NE	11	2460	3.08	2	0.014	0.050	1.0	0.0065	0.082	0.011	0.665	0.001	0.025	0.000012	0.025	0.005	0.00006	0.047	0.050
MW-7B	10/15/1999	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	4/12/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.005	0.019	0.029	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	0.12	0.13
	10/11/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	0.014	0.73	0.004	0.008	0.043	0.068	<0.20	0.028	0.0002	<0.05	<0.05	<0.01	0.37	0.32
	4/11/2001	<1	1.4	1.4	<1	<1	<1	2.8	<1	<1	<1	<1	1.9	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/12/2001	<1	<1	<1	2	<1	<1	4.4	<1	<1	<1	<1	3.4	<1	<1	<1	2.1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	0.016	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	0.0088	0.088
	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/10/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<0.005	<0.01	<0.5	<0.007	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.01	<0.01	<0.04	0.078
	4/4/2003	<1	<1	<1	<1	<1	<1	2.3	<1	<1	<1	<1	2.2	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	10/17/2003	1.8	<1	2.1	6.0	<1	<1	8.0	<1	<1	<1	<1	5.4	<5	<5	<1	2.4	1.1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	4/15/2004	1.3	<1	2.1	5.1	<1	<1	6.3	<1	<1	<1	<1	6.0	<5	<5	<1	2.0	1.2	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	0.024	<0.04	<0.05
	10/18/2004	2.1	<1	<1	7.4	<1	<1	7.3	<1	<1	<1	<1	4.9	<5	<5	<1	2.5	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
MW-2A	10/18/1999	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	<0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	4/17/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	<0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	10/12/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	0.14
	4/11/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/10/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<0.005	<0.01	<0.5	<0.005	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.01	<0.01	<0.04	0.053
	4/4/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.05	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	10/17/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.05	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	4/15/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	10/18/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
MW-8B	10/18/1999	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	<0.001	<0.01	0.012	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	0.071
	4/17/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.002	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	0.068
	10/12/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	0.016	0.53	0.003	0.006	<0.01	0.041	<0.20	0.022	<0.0002	<0.05	<0.05	<0.01	0.06	0.230
	4/11/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/12/2001	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.002	0.010	5.900	<0.002	<0.002	<0.01	0.230	<0.20	<0.01	<0.0005	<0.05	0.044	<0.01	<0.04	0.560
	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/10/2002	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.20	NT	NT	NT	NT	NT	NT	NT
	4/4/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	1.8	<0.002	<0.005	0.012	0.094	<0.20	0.024	<0.0005	<0.05	0.050	<0.01	0.16	0.81
	10/17/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	0.012	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	0.06
	4/15/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	1.2	<0.002	0.0003	0.014	0.065	<0.20	0.013	<0.0005	<0.05	<0.02	<0.01	0.11	0.40
	10/18/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	0.92	0.0035	<0.005	0.009	0.053	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	0.10	0.42
MW-9	10/14/1999	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	0.012	<0.5	0.002	0.002	0.016	0.11	<0.20	0.011	<0.0002	<0.05	<0.05	<0.01	0.051	0.092
	4/17/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	0.003	0.022	0.04	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	0.028	0.170
	10/12/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	0.016	<0.5	0.004	0.006	0.081	0.096	<0.20	0.020	<0.0002	<0.05	<0.05	<0.01	0.170	0.250
	4/11/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	0.0021	0.015	0.050	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	0.075
	10/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.0045	0.005	<0.5	<0.002	<0.002	0.017	0.041	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	0.079
	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	0.017	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/10/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.005	<0.01	<0.5	<0.005	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.01	<0.01	<0.04	<0.05
	4/4/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	0.032	0.053	<0.20	0.011	<0.0005	<0.05	0.022	<0.01	0.097	0.300
	10/17/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	0.045	0.054	<0.20	0.015	<0.0005	<0.05	<0.02	<0.01	0.099	0.180
	4/15/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	0.013	<0.5	<0.002	<0.005	0.049	0.049	<0.20	0.011	<0.0005	<0.05	<0.02	<0.01	0.013	0.170
	10/18/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	0.056	0.066	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	0.130	0.230
SW-1	10/16/1999	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.001	<0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	4/12/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	<0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	10/11/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	<0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	4/11/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/10/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.005	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.01	<0.01	<0.04	<0.05
	4/4/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	10/17/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	4/15/2004-1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	0.021	<0.04	<0.05
	10/18/2004	<1	<1	<1	2.50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
SW-2	10/14/1999	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	<0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	4/12/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	<0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	0.051
	10/11/2000	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	<0.01	<0.5	<0.002	<0.001	<0.01	<0.01	<0.20	<0.01	<0.0002	<0.05	<0.05	<0.01	<0.04	<0.05
	4/11/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.03	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/12/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.03	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	0.062
	4/9/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<0.002	<0.005	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.005	<0.01	<0.04	<0.05
	10/10/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.005	<0.01	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.01	<0.01	<0.04	0.089
	4/4/2003	<1	<1	<1	1.2	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	10/17/2003	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.002	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	4/15/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.5	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	<0.05
	10/18/2004	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<0.03	<0.01	<0.05	<0.002	<0.005	<0.01	<0.01	<0.20	<0.01	<0.0005	<0.05	<0.02	<0.01	<0.04	0.110

Notes:
BOLD - Concentration exceeds the 2L Groundwater Quality Standards or 2B Water Quality Criteria.
MDL - Method Detection Limit
North Carolina Administrative Code Title 15A NCAC 2B .0211, Fresh Surface Water Quality Standards For Class C Waters, dated February 1, 1976 as amended April 1, 2003.
2L Groundwater Quality Standard - North Carolina Administrative Code Title 15A, NCDENR, Subchapter 2L, Section .0200, Classifications and Water Quality Standards dated November 9, 1993 as amended on April 14, 1998
NE - Not Established
NT - Not Tested
Laboratory detection limits were lowered for the volatiles for the April 2001 sampling event as the laboratory subcontractor was changed.

Prepared By: BSK Date: 11/04
Checked By: JAM Date: 11/04



MACTEC

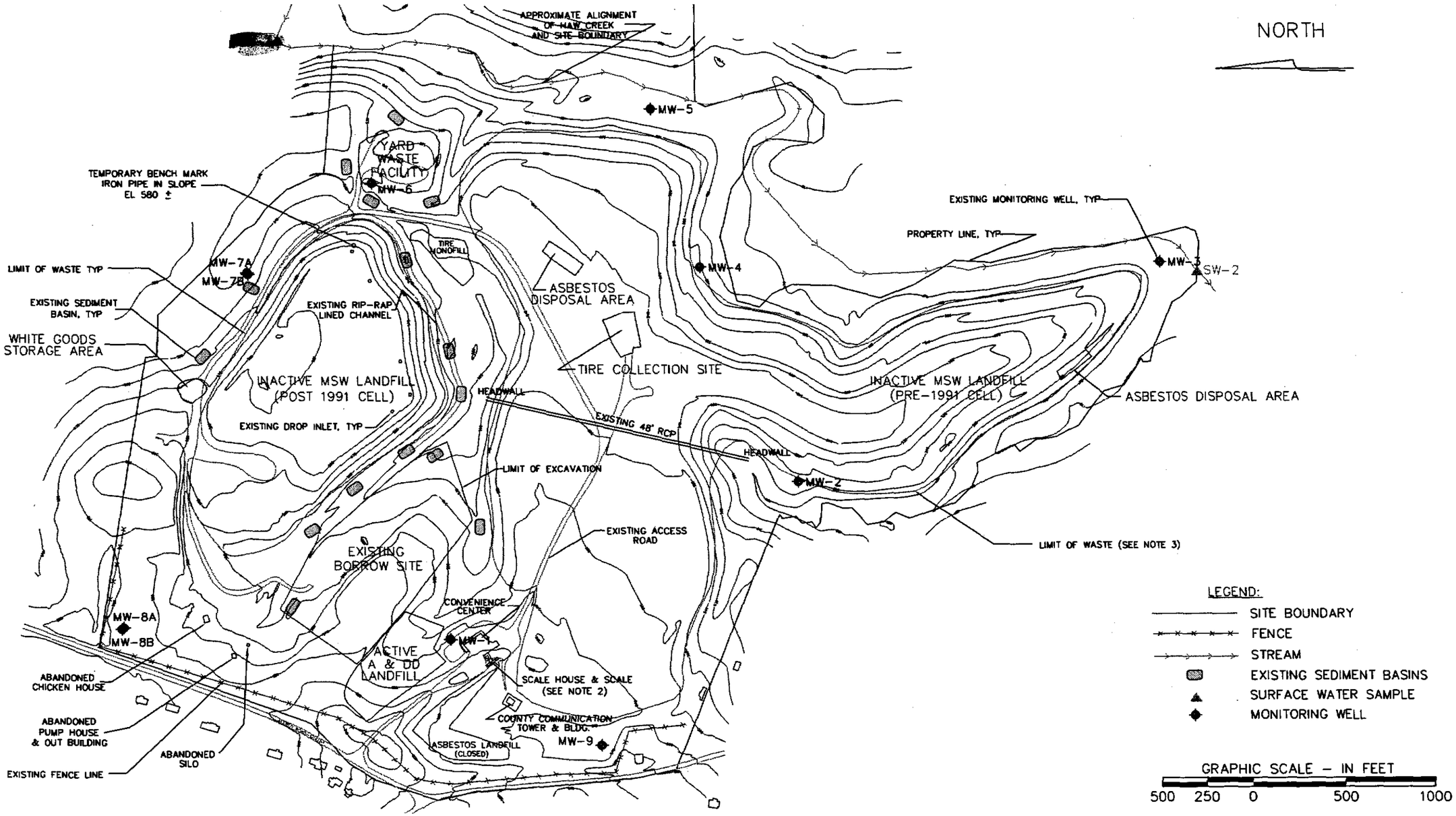
ENGINEERING AND CONSULTING, INC.
GREENSBORO, NORTH CAROLINA

SITE LOCATION MAP
SWEPSONVILLE LANDFILL
ALAMANCE COUNTY, NORTH CAROLINA

DRAWN BY JMB	DATE November 2004
ENG CHECK	PROJECT NO. 6262-03-0108
APPROVAL	FIGURE 1

SCALE: 1:24000

REF: MEBANE, N.C. 36079-A3-TF-024
1969 REVISED 1994, DMA 5156 III SE-SERIESV842



LEGEND:

- SITE BOUNDARY
- FENCE
- STREAM
- EXISTING SEDIMENT BASINS
- SURFACE WATER SAMPLE
- MONITORING WELL

GRAPHIC SCALE – IN FEET

500 250 0 500 1000

NOTES:

AERIAL SURVEY FLOWN BY WESTINGHOUSE LANDMARK GIS, INC., CARY, NC IN MAY 1993. THIS DRAWING DENOTES EXISTING GRADES FOR THAT DATE.

SCALE HOUSE AND SCALE TO BE RELOCATED TO AUSTIN QUARTER ROAD SOLID WASTE MANAGEMENT FACILITY.

EXISTING LIMITS OF WASTE ARE APPROXIMATE AS PROVIDED BY THE COUNTY.

BASE MAP FROM HAZEN AND SAWYER DRAWING; JOB NUMBER 3707, CONTRACT NUMBER 1A, DRAWING NUMBER G1, SHEET 2 OF 6, OCTOBER 1993.

= VOCs > 2L stds

= VOCs < 2B stds.

MACTEC

MACTEC ENGINEERING & CONSULTING, INC.
GREENSBORO, NC

MONITORING WELL AND SURFACE WATER LOCATIONS
SWEPSONVILLE LANDFILL
ALAMANCE COUNTY, NORTH CAROLINA

DRAWN BY: JAB	DATE: NOVEMBER 2004	CHCKD:	DATE: NOVEMBER 2004
PROJECT NO. 6262-03-0108	FIG. 2		