

# **Ground Water Monitoring Report**

**April 2007 Monitoring Event**

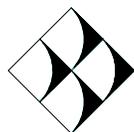
**Davidson County  
Lined MSW Landfill  
Lexington, North Carolina  
NC Solid Waste Permit # 29-06**

Prepared for:

**Davidson County Integrated Solid Waste**

1242 Old Highway 29  
Thomasville, NC 27360-0024

**August 2007**



**Richardson Smith Gardner & Associates, Inc.**  
Engineering and Geological Services  
14 North Boylan Avenue  
Raleigh, North Carolina 27603

**Davidson County Lined MSW Landfill**

**Ground Water Monitoring Report  
April 2007 Monitoring Event**

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## 1.0 Introduction

On April 18<sup>th</sup> 2007, Richardson Smith Gardner & Associates (RSG) personnel performed the required semi-annual ground water monitoring event at the Davidson County Lined Landfill. This sampling event satisfies the requirements of the monitoring programs for this site. The following report summarizes the monitoring event, sampling procedures, field and laboratory results, statistical analysis, and ground water characterization as required by NC Solid Waste Regulations. Also included are summary tables of ground water measurements, field parameters, detected constituents, and statistical analysis results, as well as time versus concentration graphs, and the laboratory analytical report.

## 2.0 Davidson County Lined MSW Landfill

### 2.1 Sampling Procedures

Ground water sampling was performed at 12 well locations. In addition, semi-annual surface water monitoring was performed at one (1) location upstream and one (1) location down stream of the landfill.

Sampling procedures followed the protocols set forth in the site's Sampling and Analysis Plan and the North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities. Each well was gauged to determine ground water depth and then purged of a minimum of three well volumes or until dry. The wells were purged and allowed to stabilize prior to sample collection. Ground water purging and sample collections were performed using a factory sealed Teflon™ bailer.

A field measurement of temperature, pH, and conductivity was taken at each well and surface water sampling location. Samples were collected in laboratory containers provided by Environment 1, Inc. (NC Laboratory Certification # 10). Upon collection, the samples were sealed, placed on ice, and transported to the laboratory. Field blanks were also collected for quality control purposes.

During the sampling process, each well was inspected for signs of damage or unusual conditions. All wells were found to be in good condition and free of obstructions.

Samples from surface water points SW-1 and SW-2, located upstream and downstream of the landfill on Jimmy's Creek, were collected during ground water sample collection. Surface water sample point SW-3, the landfill under-drain outfall, was found to be dry at the time of sampling, as it has been during all previous events. The surface water locations are show in **Figure 1**.

### 2.2 Field and Laboratory Results

All samples were transported to the laboratory facility under proper chain of custody analyzed at the specified DWM Practical Quantitation Limits for Appendix I constituents. The laboratory

analysis is included in **Appendix A**.

Ground water and field measurements are included as **Tables 1 and 2**, respectively. Due to lowered Practical Quantitation levels (PQLs), the laboratory analysis detected nine inorganic constituents (Barium Beryllium, Cadmium, Cobalt, Copper, Lead, Total Chromium, Vanadium and Zinc) in MW-3, MW-4, MW-5, MW-7, MW-7D, MW-8, MW-9, MW-10 & MW-11 and one organic constituent (Methylene Chloride) in MW-4. It should be noted that Methylene Chloride is a common laboratory contaminant. This well was resampled on June 14, 2007 to confirm/deny the detection of Methylene Chloride. Analysis of water from this second sampling event indicated no detectable levels of organic constituents including Methylene Chloride. Results are included in **Table 3**.

A leachate sample was also collected from the lined landfill. This sample was analyzed for Appendix I constituents as well as BOD, COD, Nitrate, and Total Phosphorus. Analysis of this sample indicated detectable levels of BOD, COD, total phosphorous, Sulfate and Nitrate. The laboratory report is included in **Appendix A**.

### **2.3 Statistical Analysis**

Statistical analysis was found for six constituents, Barium (MW-11, MW-3 & MW-4), Cadmium (MW-4), Cobalt (MW-11, MW-3, MW-4 & MW-8), Lead (MW-11, MW-8), Total Chromium (MW-4, MW-7S, MW-8, MW-9) And Vanadium (MW-11, MW-3, MW-4, MW-7S & MW-8). Results are included in **Table 4**.

### **2.4 2L/MCL Statistical Analysis**

For wells that showed statistically significant differences from background concentrations, additional analysis was performed. This analysis has recently been required as part of ongoing Assessment monitoring for landfills in North Carolina. To perform the analysis, the respective 2L standard or MCL was determined for each parameter with statistically significant results. Each compliance well with statistical significance was re-analyzed against the lower of the 2L or MCL standard as a Ground Water Protection Standard (GWPS).

This analysis was performed using tolerance interval analysis. Since a smaller subset of wells was analyzed during this step, the compliance well data were retested for normal distribution. If the data were normally distributed, parametric tolerance intervals were constructed for each well and compared to the GWPS for each parameter. For those wells not exhibiting normal distribution, Poisson tolerance intervals were constructed. If the distribution of the data was marginally normal, both tests were run to cross-check the results. All of these cross-checks yielded the same results from both test methods.

The statistical results for this additional analysis are presented in **Table 4**. An upper tolerance limit higher than the GWPS standard was considered to be a statistically significant result. This analysis indicated statistically significant results for Cobalt (MW-11, MW-3, MW-4 & MW-8), Lead (MW-11, MW-8), Total Chromium (MW-4, MW-7S, MW-8 & MW-9) and Vanadium

(MW-11, MW-3, MW-4, MW-7S & MW-8). Results are included in **Table 4**.

### **3.0 Site Ground Water Characterization**

A potentiometric surface map was prepared for the entire site from ground water elevation data collected during this sampling event. Ground water velocity was calculated for each monitoring well on-site using the equation  $V = (KI)/n$  where:

K = hydraulic conductivity

I = ground water gradient

n = porosity

Ground water velocities at the lined MSW landfill ranged from 0.109 feet/day (MW-1) to 1.074 feet/day (MW-11). These calculations are included in **Table 1**. The data indicates that ground water underneath the lined MSW landfill is flowing generally to the north and northwest towards Jimmy's Creek. This is consistent with ground water flow patterns previously seen at this site. The potentiometric surface map (**Figure 1**) is also attached for your review.

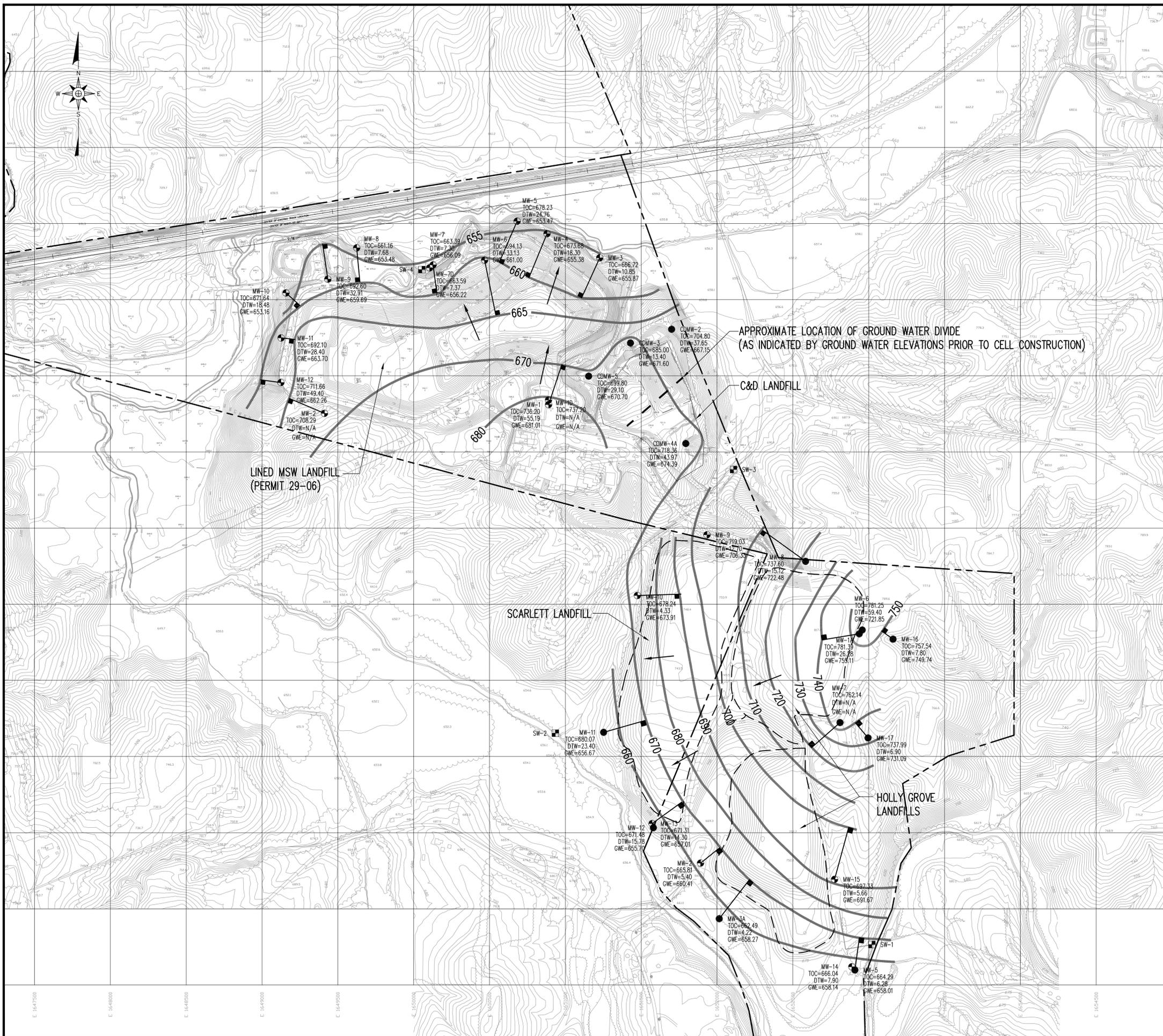
### **4.0 Conclusions**

There has been an increase in statistically significant detections during this ground water monitoring event. In the cases of statistical significance for inorganic constituents, this is likely due to new PQL requirements for laboratories issued by NCDENR.

The next ground water monitoring event will be completed in fall 2007. The results of this event will be reported to NCDENR upon completion of statistical analysis of laboratory data.

Figures

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**LEGEND**

- MW-1A PREVIOUSLY INSTALLED MONITORING WELL
- MW-5 BEDROCK MONITORING WELL
- SW-1 EXISTING SURFACE WATER MONITORING STATION
- GROUND WATER SURFACE CONTOUR
- DIRECTION OF GROUNDWATER FLOW
- PROPERTY LINE
- WASTE BOUNDARY
- MEASUREMENT FOR HYDRAULIC GRADIENT CALCULATION

**NOTE:**

1. GROUND WATER DATA RECORDED ON APRIL 18, 2007 BY RSG PERSONNEL.



NO.	DATE	REVISION

**RICHARDSON SMITH GARDNER & ASSOCIATES**  
 Engineering and Geological Services  
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PROJECT TITLE:  
 SEAL  
 SEAL

DAVIDSON COUNTY LANDFILLS

POTENTIOMETRIC SURFACE MAP  
 LINED LANDFILL, C&D AND  
 HOLLY GROVE LANDFILLS  
 (SPRING 2007)

DESIGNED BY: J.A.S.	DRAWN BY: J.A.L.
CHECKED BY:	PROJECT NO.: DAVDCO-4
SCALE: AS SHOWN	DATE: JUNE 2007
FILE NAME: DAVDCO-D0382	DRAWING NO.:
SHEET NO.:	<b>FIG. 1</b>

Tables



**Table 2**  
**Field Parameters**  
**Davidson County Lined Landfill**  
**4/18/2007**

Well	pH (Std. Units)	Conductivity (umhos)	Temp. (celsius)
MW-1	6.5	590	16.5
MW-2	---	---	---
MW-3	6.4	210	11.5
MW-4	6.2	120	12
MW-5	6.4	160	13
MW-6	7.2	240	15
MW-7	6.3	120	11.5
MW-7d	6.5	60	13
MW-8	5.7	60	11.5
MW-9	6.8	300	14.5
MW-10	6.7	1290	12.5
MW-11	6.5	190	13.5
MW-12	7.1	500	14.5
SW-1	7.8	140	13.5
SW-2	7.6	140	13.5

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MW-10	6.7	1290	12.5
MW-11	6.5	190	13.5
MW-12	7.1	500	14.5
SW-1	7.8	140	13.5
SW-2	7.6	140	13.5

**Table 4**  
**Davidson County Lined Landfill**  
**Statistical Analysis Summary**  
**4/18/2007**

Location	Parameter	Result (mg/l)	Test Units	%ND	CL	Test	Statistically Significant?	2L/MCL statistical analysis	Method for MCL analysis
MW-11	Barium	0.144	mg/l	95.1	---	PPL - 1/2 DL	N	---	---
MW-3	Barium	0.464	mg/l	95.1	---	PPL - 1/2 DL	N	---	---
MW-4	Barium	0.361	mg/l	95.1	---	PPL - 1/2 DL	N	---	---
MW-5	Barium	0.117	mg/l	95.1	---	PPL - 1/2 DL	Y	N	MCL-PTI
MW-7S	Barium	0.120	mg/l	95.1	---	PPL - 1/2 DL	Y	N	---
MW-8	Barium	0.410	mg/l	95.1	---	PPL - 1/2 DL	Y	N	---
MW-11	Beryllium	0.001	mg/l	93.05	---	PPL - 1/2 DL	N	---	---
MW-8	Beryllium	0.001	mg/l	93.05	---	PPL - 1/2 DL	N	---	---
MW-4	Cadmium	0.005	mg/l	94.44	---	PPL - 1/2 DL	Y	Y	MCL-PTI
MW-11	Cobalt	0.011	mg/l	83.59	86.7	NPTL	Y	Y	MCL-PTI
MW-3	Cobalt	0.014	mg/l	83.59	86.7	NPTL	Y	Y	MCL-PTI
MW-4	Cobalt	0.028	mg/l	83.59	86.7	NPTL	Y	Y	MCL-PTI
MW-8	Cobalt	0.072	mg/l	83.59	86.7	NPTL	Y	Y	MCL-PTI
MW-11	Copper	0.053	mg/l	95.37	---	PPL - 1/2 DL	N	---	---
MW-3	Copper	0.047	mg/l	95.37	---	PPL - 1/2 DL	N	---	---
MW-4	Copper	0.099	mg/l	95.37	---	PPL - 1/2 DL	N	---	---
MW-7S	Copper	0.042	mg/l	95.37	---	PPL - 1/2 DL	N	---	---
MW-8	Copper	0.100	mg/l	95.37	---	PPL - 1/2 DL	N	---	---
MW-9	Copper	0.020	mg/l	95.37	---	PPL - 1/2 DL	N	---	---
MW-11	Lead	0.017	mg/l	88.88	92.9	NPPL	Y	Y	MCL-PTI
MW-8	Lead	0.031	mg/l	88.88	92.9	NPPL	Y	Y	MCL-PTI
MW-11	Total Chromium	0.05	mg/l	71.23	83.9	NPTL	N	---	---
MW-4	Total Chromium	0.024	mg/l	71.23	83.9	NPTL	Y	Y	MCL-PTI
MW-7S	Total Chromium	0.014	mg/l	71.23	83.9	NPTL	Y	Y	MCL-PTI
MW-8	Total Chromium	0.068	mg/l	71.23	83.9	NPTL	Y	Y	MCL-PTI
MW-9	Total Chromium	0.013	mg/l	71.23	83.9	NPTL	Y	Y	MCL-PTI
MW-11	Vanadium	0.11	mg/l	82.05	83.9	NPTL	Y	Y	MCL-PTI
MW-3	Vanadium	0.075	mg/l	82.05	83.9	NPTL	Y	Y	MCL-PTI
MW-4	Vanadium	0.098	mg/l	82.05	83.9	NPTL	Y	Y	MCL-PTI
MW-7S	Vanadium	0.05	mg/l	82.05	83.9	NPTL	Y	Y	MCL-PTI
MW-8	Vanadium	0.233	mg/l	82.05	83.9	NPTL	Y	Y	MCL-PTI
MW-10	Zinc	0.02	mg/l	87.04	73.5	NPTL	N	---	---
MW-11	Zinc	0.111	mg/l	87.04	73.5	NPTL	N	---	---
MW-3	Zinc	0.111	mg/l	87.04	73.5	NPTL	N	---	---
MW-4	Zinc	0.179	mg/l	87.04	73.5	NPTL	N	---	---
MW-5	Zinc	0.018	mg/l	87.04	73.5	NPTL	N	---	---
MW-7D	Zinc	0.011	mg/l	87.04	73.5	NPTL	N	---	---
MW-7S	Zinc	0.055	mg/l	87.04	73.5	NPTL	N	---	---
MW-8	Zinc	0.14	mg/l	87.04	73.5	NPTL	N	---	---
MW-9	Zinc	0.016	mg/l	87.04	73.5	NPTL	N	---	---

Upgradient well : MW -1s

Appendix A

Laboratory Analytical Report

# Environment 1, Incorporated

P.O. BOX 7085, 114 OAKMONT DRIVE  
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208  
FAX (252) 756-0633

Drinking Water ID: 37715  
Wastewater ID: 10

ID#: 6038

DAVIDSON COUNTY (LINED)  
MS. JOAN SMYTH  
RICHARDSON SMITH GARDNER  
14 N. BOYLAN AVENUE  
RALEIGH ,NC 27603

DATE COLLECTED: 04/19/07  
DATE REPORTED : 05/03/07

REVIEWED BY: 

PARAMETERS	MW-1S	MW-2	MW-3	MW-4	MW-5	Analysis		Method Code
						Date	Analyst	
Antimony, ug/l	< 6.0	Missing	< 6.0	< 6.0	< 6.0	04/26/07	LFJ	EPA200.8
Arsenic, ug/l	< 10	Missing	< 10	< 10	< 10	04/26/07	LFJ	EPA200.8
Barium, ug/l	< 100	Missing	464	361	117	04/26/07	LFJ	EPA200.8
Beryllium, ug/l	< 1.0	Missing	< 1.0	< 1.0	< 1.0	04/26/07	LFJ	EPA200.8
Cadmium, ug/l	< 1.0	Missing	< 1.0	5	< 1.0	04/26/07	LFJ	EPA200.8
Cobalt, ug/l	< 10	Missing	14	28	< 10	04/26/07	LFJ	EPA200.8
Copper, ug/l	< 10	Missing	47	99	< 10	04/26/07	LFJ	EPA200.8
Total Chromium, ug/l	< 10	Missing	< 10	24	< 10	04/26/07	LFJ	EPA200.8
Lead, ug/l	< 10	Missing	< 10	< 10	< 10	04/26/07	LFJ	EPA200.8
Nickel, ug/l	< 50	Missing	< 50	< 50	< 50	04/26/07	LFJ	EPA200.8
Selenium, ug/l	< 10	Missing	< 10	< 10	< 10	04/26/07	LFJ	EPA200.8
Silver, ug/l	< 10	Missing	< 10	< 10	< 10	04/26/07	LFJ	EPA200.8
Thallium, ug/l	< 5.0	Missing	< 5.0	< 5.0	< 5.0	04/26/07	LFJ	EPA200.8
Vanadium, ug/l	< 25	Missing	75	98	< 25	04/26/07	LFJ	EPA200.8
Zinc, ug/l	< 10	Missing	111	179	18	04/26/07	LFJ	EPA200.8
8260 (Duplicate)		Missing				/ /		
8260 (Duplicate)		Missing				/ /		

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DATE COLLECTED: 04/19/07  
DATE REPORTED : 05/03/07

REVIEWED BY: 

PARAMETERS	MW-6	MW-7D	MW-8	MW-7S	MW-9	Analysis		Method Code
						Date	Analyst	
Antimony, ug/l	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	04/26/07	LFJ	EPA200.8
Arsenic, ug/l	< 10	< 10	< 10	< 10	< 10	04/26/07	LFJ	EPA200.8
Barium, ug/l	< 100	< 100	410	120	< 100	04/26/07	LFJ	EPA200.8
Beryllium, ug/l	< 1.0	< 1.0	1	< 1.0	< 1.0	04/26/07	LFJ	EPA200.8
Cadmium, ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	04/26/07	LFJ	EPA200.8
Cobalt, ug/l	< 10	< 10	72	< 10	< 10	04/26/07	LFJ	EPA200.8
Copper, ug/l	< 10	< 10	100	42	20	04/26/07	LFJ	EPA200.8
Total Chromium, ug/l	< 10	< 10	68	14	13	04/26/07	LFJ	EPA200.8
Lead, ug/l	< 10	< 10	31	< 10	< 10	04/26/07	LFJ	EPA200.8
Nickel, ug/l	< 50	< 50	< 50	< 50	< 50	04/26/07	LFJ	EPA200.8
Selenium, ug/l	< 10	< 10	< 10	< 10	< 10	04/26/07	LFJ	EPA200.8
Silver, ug/l	< 10	< 10	< 10	< 10	< 10	04/26/07	LFJ	EPA200.8
Thallium, ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	04/26/07	LFJ	EPA200.8
Vanadium, ug/l	< 25	< 25	233	50	< 25	04/26/07	LFJ	EPA200.8
Zinc, ug/l	< 10	11	140	55	16	04/26/07	LFJ	EPA200.8

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RALEIGH, NC 27603

CLIENT ID: 6038  
ANALYST: MAO  
DATE COLLECTED: 04/19/07  
DATE REPORTED: 05/03/07

Page: 1

REVIEWED BY: 

VOLATILE ORGANICS  
EPA METHOD 8260B

PARAMETERS, ug/l	Date Analyzed: 05/01/07 MW-1S	05/01/07 MW-3	05/01/07 MW-4	05/01/07 MW-5	05/01/07 MW-6
1. Chloromethane	<5.00	<5.00	<5.00	<5.00	<5.00
2. Vinyl Chloride	<5.00	<5.00	<5.00	<5.00	<5.00
3. Bromomethane	<10.00	<10.00	<10.00	<10.00	<10.00
4. Chloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
5. Trichlorofluoromethane	<5.00	<5.00	<5.00	<5.00	<5.00
6. 1,1-Dichloroethene	<5.00	<5.00	<5.00	<5.00	<5.00
7. Acetone	<100.00	<100.00	<100.00	<100.00	<100.00
8. Iodomethane	<10.00	<10.00	<10.00	<10.00	<10.00
9. Carbon Disulfide	<100.00	<100.00	<100.00	<100.00	<100.00
10. Methylene Chloride	<5.00	<5.00	6.10	<5.00	<5.00
11. trans-1,2-Dichloroethene	<5.00	<5.00	<5.00	<5.00	<5.00
12. 1,1-Dichloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
13. Vinyl Acetate	<50.00	<50.00	<50.00	<50.00	<50.00
14. Cis-1,2-Dichloroethene	<5.00	<5.00	<5.00	<5.00	<5.00
15. 2-Butanone	<100.00	<100.00	<100.00	<100.00	<100.00
16. Bromochloromethane	<3.00	<3.00	<3.00	<3.00	<3.00
17. Chloroform	<5.00	<5.00	<5.00	<5.00	<5.00
18. 1,1,1-Trichloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
19. Carbon Tetrachloride	<5.00	<5.00	<5.00	<5.00	<5.00
20. Benzene	<3.00	<3.00	<3.00	<3.00	<3.00
21. 1,2-Dichloroethane	<3.00	<3.00	<3.00	<3.00	<3.00
22. Trichloroethene	<3.00	<3.00	<3.00	<3.00	<3.00
23. 1,2-Dichloropropane	<3.00	<3.00	<3.00	<3.00	<3.00
24. Bromodichloromethane	<3.00	<3.00	<3.00	<3.00	<3.00
25. Cis-1,3-Dichloropropene	<5.00	<5.00	<5.00	<5.00	<5.00
26. 4-Methyl-2-Pentanone	<100.00	<100.00	<100.00	<100.00	<100.00
27. Toluene	<5.00	<5.00	<5.00	<5.00	<5.00
28. trans-1,3-Dichloropropene	<5.00	<5.00	<5.00	<5.00	<5.00
29. 1,1,2-Trichloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
30. Tetrachloroethene	<3.00	<3.00	<3.00	<3.00	<3.00
31. 2-Hexanone	<50.00	<50.00	<50.00	<50.00	<50.00
32. Dibromochloromethane	<3.00	<3.00	<3.00	<3.00	<3.00
33. 1,2-Dibromoethane	<3.00	<3.00	<3.00	<3.00	<3.00
34. Chlorobenzene	<3.00	<3.00	<3.00	<3.00	<3.00
35. 1,1,1,2-Tetrachloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
36. Ethylbenzene	<5.00	<5.00	<5.00	<5.00	<5.00
37. Xylenes	<4.00	<4.00	<4.00	<4.00	<4.00
38. Dibromomethane	<10.00	<10.00	<10.00	<10.00	<10.00
39. Styrene	<10.00	<10.00	<10.00	<10.00	<10.00
40. Bromoform	<3.00	<3.00	<3.00	<3.00	<3.00
41. 1,1,2,2-Tetrachloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
42. 1,2,3-Trichloropropane	<8.00	<8.00	<8.00	<8.00	<8.00
43. 1,4-Dichlorobenzene	<3.00	<3.00	<3.00	<3.00	<3.00
44. 1,2-Dichlorobenzene	<5.00	<5.00	<5.00	<5.00	<5.00
45. 1,2-Dibromo-3-Chloropropane	<13.00	<13.00	<13.00	<13.00	<13.00
46. Acrylonitrile	<200.00	<200.00	<200.00	<200.00	<200.00
47. trans-1,4-Dichloro-2-Butene	<100.00	<100.00	<100.00	<100.00	<100.00

# Environment 1, Incorporated

Drinking Water ID: 37713  
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE  
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208  
FAX (252) 756-0633

CLIENT: DAVIDSON COUNTY (LINED)  
MS. JOAN SMYTH  
RICHARDSON SMITH GARDNER  
14 N. BOYLAN AVENUE  
RALEIGH, NC 27603

CLIENT ID: 6038  
ANALYST: MAO  
DATE COLLECTED: 04/19/07  
DATE REPORTED: 05/03/07

Page: 2

REVIEWED BY: 

## VOLATILE ORGANICS EPA METHOD 8260B

PARAMETERS, ug/l	Date Analyzed: 05/01/07 MW-7D	05/01/07 MW-8	05/02/07 MW-7S	05/02/07 MW-9
1. Chloromethane	<5.00	<5.00	<5.00	<5.00
2. Vinyl Chloride	<5.00	<5.00	<5.00	<5.00
3. Bromomethane	<10.00	<10.00	<10.00	<10.00
4. Chloroethane	<5.00	<5.00	<5.00	<5.00
5. Trichlorofluoromethane	<5.00	<5.00	<5.00	<5.00
6. 1,1-Dichloroethene	<5.00	<5.00	<5.00	<5.00
7. Acetone	<100.00	<100.00	<100.00	<100.00
8. Iodomethane	<10.00	<10.00	<10.00	<10.00
9. Carbon Disulfide	<100.00	<100.00	<100.00	<100.00
10. Methylene Chloride	<5.00	<5.00	<5.00	<5.00
11. trans-1,2-Dichloroethene	<5.00	<5.00	<5.00	<5.00
12. 1,1-Dichloroethane	<5.00	<5.00	<5.00	<5.00
13. Vinyl Acetate	<50.00	<50.00	<50.00	<50.00
14. Cis-1,2-Dichloroethene	<5.00	<5.00	<5.00	<5.00
15. 2-Butanone	<100.00	<100.00	<100.00	<100.00
16. Bromochloromethane	<3.00	<3.00	<3.00	<3.00
17. Chloroform	<5.00	<5.00	<5.00	<5.00
18. 1,1,1-Trichloroethane	<5.00	<5.00	<5.00	<5.00
19. Carbon Tetrachloride	<5.00	<5.00	<5.00	<5.00
20. Benzene	<3.00	<3.00	<3.00	<3.00
21. 1,2-Dichloroethane	<3.00	<3.00	<3.00	<3.00
22. Trichloroethene	<3.00	<3.00	<3.00	<3.00
23. 1,2-Dichloropropane	<3.00	<3.00	<3.00	<3.00
24. Bromodichloromethane	<3.00	<3.00	<3.00	<3.00
25. Cis-1,3-Dichloropropene	<5.00	<5.00	<5.00	<5.00
26. 4-Methyl-2-Pentanone	<100.00	<100.00	<100.00	<100.00
27. Toluene	<5.00	<5.00	<5.00	<5.00
28. trans-1,3-Dichloropropene	<5.00	<5.00	<5.00	<5.00
29. 1,1,2-Trichloroethane	<5.00	<5.00	<5.00	<5.00
30. Tetrachloroethene	<3.00	<3.00	<3.00	<3.00
31. 2-Hexanone	<50.00	<50.00	<50.00	<50.00
32. Dibromochloromethane	<3.00	<3.00	<3.00	<3.00
33. 1,2-Dibromoethane	<3.00	<3.00	<3.00	<3.00
34. Chlorobenzene	<3.00	<3.00	<3.00	<3.00
35. 1,1,1,2-Tetrachloroethane	<5.00	<5.00	<5.00	<5.00
36. Ethylbenzene	<5.00	<5.00	<5.00	<5.00
37. Xylenes	<4.00	<4.00	<4.00	<4.00
38. Dibromomethane	<10.00	<10.00	<10.00	<10.00
39. Styrene	<10.00	<10.00	<10.00	<10.00
40. Bromoform	<3.00	<3.00	<3.00	<3.00
41. 1,1,2,2-Tetrachloroethane	<5.00	<5.00	<5.00	<5.00
42. 1,2,3-Trichloropropane	<8.00	<8.00	<8.00	<8.00
43. 1,4-Dichlorobenzene	<3.00	<3.00	<3.00	<3.00
44. 1,2-Dichlorobenzene	<5.00	<5.00	<5.00	<5.00
45. 1,2-Dibromo-3-Chloropropane	<13.00	<13.00	<13.00	<13.00
46. Acrylonitrile	<200.00	<200.00	<200.00	<200.00
47. trans-1,4-Dichloro-2-Butene	<100.00	<100.00	<100.00	<100.00

# CHAIN OF CUSTODY RECORD

Environment 1, Inc.  
 P.O. Box 7085, 114 Oakmont Dr.  
 Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CLIENT: 6038 Week: 11

DAVIDSON COUNTY (LINED)  
 MS. JOAN SMYTH  
 RICHARDSON SMITH GARDNER  
 14 N. BOYLAN AVENUE  
 RALEIGH NC 27603

(919) 828-0577

SAMPLE LOCATION	COLLECTION		TOTAL CHLORINE, mg/l	AT COLLECTION	TEMPERATURE, °C	# OF CONTAINERS	DISINFECTION		Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2	CHLORINE NEUTRALIZED AT COLLECTION
	DATE	TIME					CHLORINE	UV					
MW-1S	4/19/07	13:30			16.5	3	<input type="checkbox"/>						
MW-2	insufficient well volume					4	<input type="checkbox"/>						
MW-3	4/19/07	16:45			11.5	3	<input type="checkbox"/>						
MW-4	4/19/07	10:15			12	3	<input type="checkbox"/>						
MW-5	4/19/07	16:40			13	3	<input type="checkbox"/>						
MW-6	4/19/07	11:10			13	3	<input type="checkbox"/>						
MW-7D	4/19/07	8:40			13.0	3	<input type="checkbox"/>						
MW-8	4/19/07	8:10			11.5	3	<input type="checkbox"/>						
MW-7S	4/19/07	8:30			11.5	3	<input type="checkbox"/>						
MW-9	4/19/07	11:30			14.5	3	<input type="checkbox"/>						

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
<i>Britt Ranson</i>	4/19/07 5:30	UPS	
		<i>Joan Smyth</i>	4/19/07 11:50

RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

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# CHAIN OF CUSTODY RECORD

Environment 1, Inc.  
 P.O. Box 7085, 114 Oakmont Dr.  
 Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CLIENT: 6038 B      Week: 11

DAVIDSON COUNTY (LINED)  
 MS. JOAN SMYTH  
 RICHARDSON SMITH GARDNER  
 14 N. BOYLAN AVENUE  
 RALEIGH NC 27603

(919) 828-0577

SAMPLE LOCATION	COLLECTION		TOTAL CHLORINE, mg/l	AT COLLECTION TEMPERATURE, °C	# OF CONTAINERS	Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	COMMENTS
	DATE	TIME											
MW-10	4/19/07	11:35		12.5	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
MW-11	4/19/07	11:45		13.5	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
MW-12	4/19/07	12:00		14.5	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
SW-1	4/19/07	13:45		13.5	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
SW-2	4/19/07	14:15		13.5	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Equipment Blank	4/19/07				2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Trip Blank	4/19/07				2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
RELINQUISHED BY (SIG.) (SAMPLER)										4/19/07	5:30	UPS	
RELINQUISHED BY (SIG.)													
RELINQUISHED BY (SIG.)													

DISINFECTION  
 CHLORINE  
 UV  
 NONE

CHLORINE NEUTRALIZED AT COLLECTION  
 PH CHECK (LAB)  
 CONTAINER TYPE, P/G  
 CHEMICAL PRESERVATION  
 A - NONE    D - NAOH  
 B - HNO<sub>3</sub>    E - HCL  
 C - H<sub>2</sub>SO<sub>4</sub>    F - ZINC ACETATE  
 G - NA THIOSULFATE

CLASSIFICATION:  
 WASTEWATER (NPDES)  
 DRINKING WATER  
 DWQGW  
 SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY  
 Y     N

SAMPLES COLLECTED BY:  
 (Please Print)  
 BRITT RANSUM

SAMPLES RECEIVED IN LAB AT 2.8 °C

COMMENTS:  
 All samples grab

Instructions for completing this form are on the reverse side.

# Environment 1, Incorporated

P.O. BOX 7085, 114 OAKMONT DRIVE  
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208  
FAX (252) 756-0633

Drinking Water ID: 37715  
Wastewater ID: 10

ID#: 6038 B

DAVIDSON COUNTY (LINED)  
MS. JOAN SMYTH  
RICHARDSON SMITH GARDNER  
14 N. BOYLAN AVENUE  
RALEIGH ,NC 27603

DATE COLLECTED: 04/19/07  
DATE REPORTED : 05/03/07

REVIEWED BY: 

PARAMETERS	MW-10	MW-11	MW-12	SW-1	SW-2	Analysis		Method Code
						Date	Analyst	
Antimony, ug/l	<6.0	<6.0	<6.0	<6.0	<6.0	04/26/07	LFF	EPA200.8
Arsenic, ug/l	< 10	< 10	< 10	< 10	< 10	04/26/07	LFF	EPA200.8
Barium, ug/l	< 100	144	< 100	< 100	< 100	04/26/07	LFF	EPA200.8
Beryllium, ug/l	<1.0	1	<1.0	<1.0	<1.0	04/26/07	LFF	EPA200.8
Cadmium, ug/l	<1.0	<1.0	<1.0	<1.0	<1.0	04/26/07	LFF	EPA200.8
Cobalt, ug/l	< 10	11	< 10	< 10	< 10	04/26/07	LFF	EPA200.8
Copper, ug/l	< 10	53	< 10	< 10	< 10	04/26/07	LFF	EPA200.8
Total Chromium, ug/l	< 10	50	< 10	< 10	< 10	04/26/07	LFF	EPA200.8
Lead, ug/l	< 10	17	< 10	< 10	< 10	04/26/07	LFF	EPA200.8
Nickel, ug/l	< 50	< 50	< 50	< 50	< 50	04/26/07	LFF	EPA200.8
Selenium, ug/l	< 10	< 10	< 10	< 10	< 10	04/26/07	LFF	EPA200.8
Silver, ug/l	< 10	< 10	< 10	< 10	< 10	04/26/07	LFF	EPA200.8
Thallium, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0	04/26/07	LFF	EPA200.8
Vanadium, ug/l	< 25	110	< 25	< 25	< 25	04/26/07	LFF	EPA200.8
Zinc, ug/l	20	111	< 10	< 10	< 10	04/26/07	LFF	EPA200.8

# Environment 1, Incorporated

Drinking Water ID: 37123  
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE  
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208  
FAX (252) 756-0633

CLIENT: DAVIDSON COUNTY (LINED)  
MS. JOAN SMYTH  
RICHARDSON SMITH GARDNER  
14 N. BOYLAN AVENUE  
RALEIGH, NC 27603

CLIENT ID: 6038 B  
ANALYST: MAO  
DATE COLLECTED: 04/19/07  
DATE ANALYZED: 05/02/07  
DATE REPORTED: 05/03/07

Page: 1

REVIEWED BY: 

## VOLATILE ORGANICS EPA METHOD 8260B

PARAMETERS, ug/l	MW-10	MW-11	MW-12	SW-1	SW-2
1. Chloromethane	<5.00	<5.00	<5.00	<5.00	<5.00
2. Vinyl Chloride	<5.00	<5.00	<5.00	<5.00	<5.00
3. Bromomethane	<10.00	<10.00	<10.00	<10.00	<10.00
4. Chloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
5. Trichlorofluoromethane	<5.00	<5.00	<5.00	<5.00	<5.00
6. 1,1-Dichloroethene	<5.00	<5.00	<5.00	<5.00	<5.00
7. Acetone	<100.00	<100.00	<100.00	<100.00	<100.00
8. Iodomethane	<10.00	<10.00	<10.00	<10.00	<10.00
9. Carbon Disulfide	<100.00	<100.00	<100.00	<100.00	<100.00
10. Methylene Chloride	<5.00	<5.00	<5.00	<5.00	<5.00
11. trans-1,2-Dichloroethene	<5.00	<5.00	<5.00	<5.00	<5.00
12. 1,1-Dichloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
13. Vinyl Acetate	<50.00	<50.00	<50.00	<50.00	<50.00
14. Cis-1,2-Dichloroethene	<5.00	<5.00	<5.00	<5.00	<5.00
15. 2-Butanone	<100.00	<100.00	<100.00	<100.00	<100.00
16. Bromochloromethane	<3.00	<3.00	<3.00	<3.00	<3.00
17. Chloroform	<5.00	<5.00	<5.00	<5.00	<5.00
18. 1,1,1-Trichloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
19. Carbon Tetrachloride	<5.00	<5.00	<5.00	<5.00	<5.00
20. Benzene	<3.00	<3.00	<3.00	<3.00	<3.00
21. 1,2-Dichloroethane	<3.00	<3.00	<3.00	<3.00	<3.00
22. Trichloroethene	<3.00	<3.00	<3.00	<3.00	<3.00
23. 1,2-Dichloropropane	<3.00	<3.00	<3.00	<3.00	<3.00
24. Bromodichloromethane	<3.00	<3.00	<3.00	<3.00	<3.00
25. Cis-1,3-Dichloropropene	<5.00	<5.00	<5.00	<5.00	<5.00
26. 4-Methyl-2-Pentanone	<100.00	<100.00	<100.00	<100.00	<100.00
27. Toluene	<5.00	<5.00	<5.00	<5.00	<5.00
28. trans-1,3-Dichloropropene	<5.00	<5.00	<5.00	<5.00	<5.00
29. 1,1,2-Trichloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
30. Tetrachloroethene	<3.00	<3.00	<3.00	<3.00	<3.00
31. 2-Hexanone	<50.00	<50.00	<50.00	<50.00	<50.00
32. Dibromochloromethane	<3.00	<3.00	<3.00	<3.00	<3.00
33. 1,2-Dibromoethane	<3.00	<3.00	<3.00	<3.00	<3.00
34. Chlorobenzene	<3.00	<3.00	<3.00	<3.00	<3.00
35. 1,1,1,2-Tetrachloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
36. Ethylbenzene	<5.00	<5.00	<5.00	<5.00	<5.00
37. Xylenes	<4.00	<4.00	<4.00	<4.00	<4.00
38. Dibromomethane	<10.00	<10.00	<10.00	<10.00	<10.00
39. Styrene	<10.00	<10.00	<10.00	<10.00	<10.00
40. Bromoform	<3.00	<3.00	<3.00	<3.00	<3.00
41. 1,1,2,2-Tetrachloroethane	<5.00	<5.00	<5.00	<5.00	<5.00
42. 1,2,3-Trichloropropane	<8.00	<8.00	<8.00	<8.00	<8.00
43. 1,4-Dichlorobenzene	<3.00	<3.00	<3.00	<3.00	<3.00
44. 1,2-Dichlorobenzene	<5.00	<5.00	<5.00	<5.00	<5.00
45. 1,2-Dibromo-3-Chloropropane	<13.00	<13.00	<13.00	<13.00	<13.00
46. Acrylonitrile	<200.00	<200.00	<200.00	<200.00	<200.00
47. trans-1,4-Dichloro-2-Butene	<100.00	<100.00	<100.00	<100.00	<100.00

# Environment 1, Incorporated

Drinking Water ID: 37715  
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE  
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208  
FAX (252) 756-0633

CLIENT: DAVIDSON COUNTY (LINED)  
MS. JOAN SMYTH  
RICHARDSON SMITH GARDNER  
14 N. BOYLAN AVENUE  
RALEIGH, NC 27603

CLIENT ID: 6038 B  
ANALYST: MAO  
DATE COLLECTED: 04/19/07  
DATE ANALYZED: 05/02/07  
DATE REPORTED: 05/03/07

Page: 2

REVIEWED BY: 

VOLATILE ORGANICS  
EPA METHOD 8260B

PARAMETERS, ug/l	Trip Blank
1. Chloromethane	< 5.00
2. Vinyl Chloride	< 5.00
3. Bromomethane	< 10.00
4. Chloroethane	< 5.00
5. Trichlorofluoromethane	< 5.00
6. 1,1-Dichloroethene	< 5.00
7. Acetone	< 100.00
8. Iodomethane	< 10.00
9. Carbon Disulfide	< 100.00
10. Methylene Chloride	< 5.00
11. trans-1,2-Dichloroethene	< 5.00
12. 1,1-Dichloroethane	< 5.00
13. Vinyl Acetate	< 50.00
14. Cis-1,2-Dichloroethene	< 5.00
15. 2-Butanone	< 100.00
16. Bromochloromethane	< 3.00
17. Chloroform	< 5.00
18. 1,1,1-Trichloroethane	< 5.00
19. Carbon Tetrachloride	< 5.00
20. Benzene	< 3.00
21. 1,2-Dichloroethane	< 3.00
22. Trichloroethene	< 3.00
23. 1,2-Dichloropropane	< 3.00
24. Bromodichloromethane	< 3.00
25. Cis-1,3-Dichloropropene	< 5.00
26. 4-Methyl-2-Pentanone	< 100.00
27. Toluene	< 5.00
28. trans-1,3-Dichloropropene	< 5.00
29. 1,1,2-Trichloroethane	< 5.00
30. Tetrachloroethene	< 3.00
31. 2-Hexanone	< 50.00
32. Dibromochloromethane	< 3.00
33. 1,2-Dibromoethane	< 3.00
34. Chlorobenzene	< 3.00
35. 1,1,1,2-Tetrachloroethane	< 5.00
36. Ethylbenzene	< 5.00
37. Xylenes	< 4.00
38. Dibromomethane	< 10.00
39. Styrene	< 10.00
40. Bromoform	< 3.00
41. 1,1,2,2-Tetrachloroethane	< 5.00
42. 1,2,3-Trichloropropane	< 8.00
43. 1,4-Dichlorobenzene	< 3.00
44. 1,2-Dichlorobenzene	< 5.00
45. 1,2-Dibromo-3-Chloropropane	< 13.00
46. Acrylonitrile	< 200.00
47. trans-1,4-Dichloro-2-Butene	< 100.00

# Environment 1, Incorporated

REC'D MAY 11 2007

P.O. BOX 7085, 114 OAKMONT DRIVE  
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208  
FAX (252) 756-0633

Drinking Water ID: 37715  
Wastewater ID: 10

ID#: 6038 A

DAVIDSON COUNTY (LINED)  
MS. JOAN SMYTH  
RICHARDSON SMITH GARDNER  
14 N. BOYLAN AVENUE  
RALEIGH ,NC 27603

DATE COLLECTED: 04/20/07  
DATE REPORTED : 05/08/07

REVIEWED BY: 

PARAMETERS	Leachate	Analysis		Method	
		Date	Analyst	Code	
BOD, mg/l	Missing	/ /			
COD, mg/l	163	04/26/07	TRB	HACH8000	
Nitrate Nitrogen, mg/l	0.07	04/25/07	TWA	EPA353.2	
Total Phosphorus, mg/l	0.72	04/26/07	SSR	EPA365.4	
Sulfate, mg/l	15.1	04/25/07	TRB	EPA375.4	
Antimony, ug/l	< 6.0	04/30/07	CMF	EPA200.8	
Arsenic, ug/l	< 10	04/30/07	CMF	EPA200.8	
Barium, ug/l	328	04/30/07	CMF	EPA200.8	
Beryllium, ug/l	< 1.0	04/30/07	CMF	EPA200.8	
Cadmium, ug/l	< 1.0	04/30/07	CMF	EPA200.8	
Cobalt, ug/l	22	04/30/07	CMF	EPA200.8	
Copper, ug/l	< 10	04/30/07	CMF	EPA200.8	
Total Chromium, ug/l	16	04/30/07	CMF	EPA200.8	
Lead, ug/l	< 10	04/30/07	CMF	EPA200.8	
Nickel, ug/l	< 50	04/30/07	CMF	EPA200.8	
Selenium, ug/l	< 10	04/30/07	CMF	EPA200.8	
Silver, ug/l	< 10	04/30/07	CMF	EPA200.8	
Thallium, ug/l	< 5.0	04/30/07	CMF	EPA200.8	
Vanadium, ug/l	< 25	04/30/07	CMF	EPA200.8	
Zinc, ug/l	458	04/30/07	CMF	EPA200.8	

# Environment 1, Incorporated

Drinking Water ID: 37715  
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE  
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208  
FAX (252) 756-0633

CLIENT: DAVIDSON COUNTY (LINED)  
MS. JOAN SMYTH  
RICHARDSON SMITH GARDNER  
14 N. BOYLAN AVENUE  
RALEIGH, NC 27603

CLIENT ID: 6038 A  
ANALYST: MAO  
DATE COLLECTED: 04/20/07  
DATE ANALYZED: 05/04/07  
DATE REPORTED: 05/08/07

Page: 1

REVIEWED BY: 

## VOLATILE ORGANICS EPA METHOD 8260B

PARAMETERS, ug/l	Leachate
1. Chloromethane	< 5.00
2. Vinyl Chloride	< 5.00
3. Bromomethane	< 10.00
4. Chloroethane	< 5.00
5. Trichlorofluoromethane	< 5.00
6. 1,1-Dichloroethene	< 5.00
7. Acetone	< 100.00
8. Iodomethane	< 10.00
9. Carbon Disulfide	< 100.00
10. Methylene Chloride	< 5.00
11. trans-1,2-Dichloroethene	< 5.00
12. 1,1-Dichloroethane	< 5.00
13. Vinyl Acetate	< 50.00
14. Cis-1,2-Dichloroethene	< 5.00
15. 2-Butanone	< 100.00
16. Bromochloromethane	< 3.00
17. Chloroform	< 5.00
18. 1,1,1-Trichloroethane	< 5.00
19. Carbon Tetrachloride	< 5.00
20. Benzene	< 3.00
21. 1,2-Dichloroethane	< 3.00
22. Trichloroethene	< 3.00
23. 1,2-Dichloropropane	< 3.00
24. Bromodichloromethane	< 3.00
25. Cis-1,3-Dichloropropene	< 5.00
26. 4-Methyl-2-Pentanone	< 100.00
27. Toluene	6.20
28. trans-1,3-Dichloropropene	< 5.00
29. 1,1,2-Trichloroethane	< 5.00
30. Tetrachloroethene	< 3.00
31. 2-Hexanone	< 50.00
32. Dibromochloromethane	< 3.00
33. 1,2-Dibromoethane	< 3.00
34. Chlorobenzene	< 3.00
35. 1,1,1,2-Tetrachloroethane	< 5.00
36. Ethylbenzene	5.80
37. Xylenes	20.20
38. Dibromomethane	< 10.00
39. Styrene	< 10.00
40. Bromoform	< 3.00
41. 1,1,2,2-Tetrachloroethane	< 5.00
42. 1,2,3-Trichloropropane	< 8.00
43. 1,4-Dichlorobenzene	3.80
44. 1,2-Dichlorobenzene	< 5.00
45. 1,2-Dibromo-3-Chloropropane	< 13.00
46. Acrylonitrile	< 200.00
47. trans-1,4-Dichloro-2-Butene	< 100.00



P.O. BOX 7085, 114 OAKMONT DRIVE  
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208  
FAX (252) 756-0633

CLIENT: DAVIDSON COUNTY (LINED)  
MS. JOAN SMYTH  
RICHARDSON SMITH GARDNER  
14 N. BOYLAN AVENUE  
RALEIGH, NC 27603

CLIENT ID: 6038  
ANALYST: MAO  
DATE COLLECTED: 06/14/07  
DATE ANALYZED: 06/21/07  
DATE REPORTED: 07/06/07

Page: 1

REVIEWED BY: 

VOLATILE ORGANICS  
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	MW-4
1. Chloromethane	0.18	1.0	--- U
2. Vinyl Chloride	0.34	1.0	--- U
3. Bromomethane	0.26	10.0	--- U
4. Chloroethane	0.29	10.0	--- U
5. Trichlorofluoromethane	0.13	1.0	--- U
6. 1,1-Dichloroethene	0.14	5.0	--- U
7. Acetone	1.21	100.0	--- U
8. Iodomethane	0.12	10.0	--- U
9. Carbon Disulfide	0.14	100.0	--- U
10. Methylene Chloride	0.14	1.0	--- U
11. trans-1,2-Dichloroethene	0.13	5.0	--- U
12. 1,1-Dichloroethane	0.16	5.0	--- U
13. Vinyl Acetate	0.20	5.0	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	--- U
15. 2-Butanone	0.85	100.0	--- U
16. Bromochloromethane	0.11	3.0	--- U
17. Chloroform	0.13	5.0	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U
20. Benzene	0.16	1.0	--- U
21. 1,2-Dichloroethane	0.12	1.0	--- U
22. Trichloroethene	0.13	1.0	--- U
23. 1,2-Dichloropropane	0.17	1.0	--- U
24. Bromodichloromethane	0.13	1.0	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U
27. Toluene	0.13	1.0	--- U
28. trans-1,3-Dichloropropene	0.14	1.0	--- U
29. 1,1,2-Trichloroethane	0.20	5.0	--- U
30. Tetrachloroethene	0.16	1.0	--- U
31. 2-Hexanone	1.00	50.0	--- U
32. Dibromochloromethane	0.14	1.0	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U
34. Chlorobenzene	0.13	3.0	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U
36. Ethylbenzene	0.16	1.0	--- U
37. Xylenes	0.48	4.0	--- U
38. Dibromomethane	0.17	10.0	--- U
39. Styrene	0.16	1.0	--- U
40. Bromoform	0.11	3.0	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	1.0	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	1.0	--- U
46. Acrylonitrile	1.49	200.0	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

# CHAIN OF CUSTODY RECORD

Environmental 1, Inc.  
 P.O. Box 7085, 114 Oakmont Dr.  
 Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CLIENT: 6038

DAVIDSON CO (LW30)

SAMPLE LOCATION	COLLECTION		TOTAL CHLORINE, mg/l	AT COLLECTION	TEMPERATURE, °C	AT COLLECTION	# OF CONTAINERS	DISINFECTION				CHLORINE NEUTRALIZED AT COLLECTION	
	DATE	TIME						CHLORINE	UV	NONE			
MW 4	6/14/07	8:30					3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		CHLORINE NEUTRALIZED AT COLLECTION	
TRIP BLANK							2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		PH CHECK (LAB)	
								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		CONTAINER TYPE, P/G	
								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		CHEMICAL PRESERVATION	
												A - NONE D - NAOH B - HNO <sub>3</sub> E - HCL C - H <sub>2</sub> SO <sub>4</sub> F - ZINC ACETATE G - NA THIOSULFATE	
												PARAMETERS	
												CLASSIFICATION:	
												<input type="checkbox"/> WASTEWATER (NPDES)	
												<input type="checkbox"/> DRINKING WATER	
												<input type="checkbox"/> DMG/GW	
												<input checked="" type="checkbox"/> SOLID WASTE SECTION	
												CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY	
												SAMPLES COLLECTED BY: (Please Print) <b>Britt Ransom</b>	
												SAMPLES RECEIVED IN LAB AT <u>7:00</u> °C	
RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	COMMENTS:				DATE/TIME					
<i>Bob Ransom</i>	6/14/07 17:00	UPS	6/14/07 17:00										
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME										
		<i>Handwritten Signature</i>	6/15/07 10:00						All samples Grab				
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME										
			6/15/07 9:00										

Instructions for completing this form are on the reverse side.

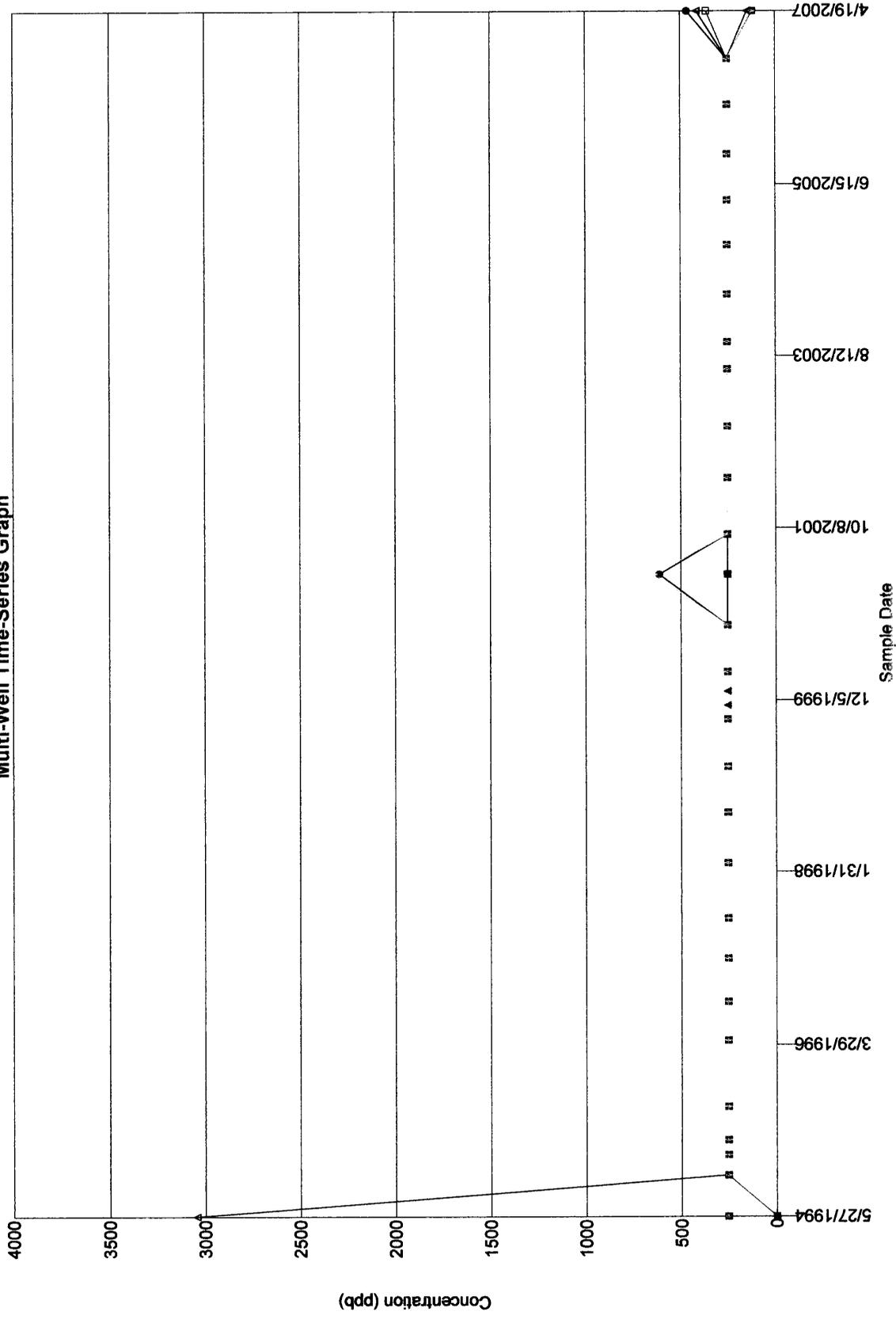
Sampler must place a "C" for composite sample or a "G" for Grab sample in the blocks above for each parameter requested.

## Appendix B

### Time vs. Concentration Graphs

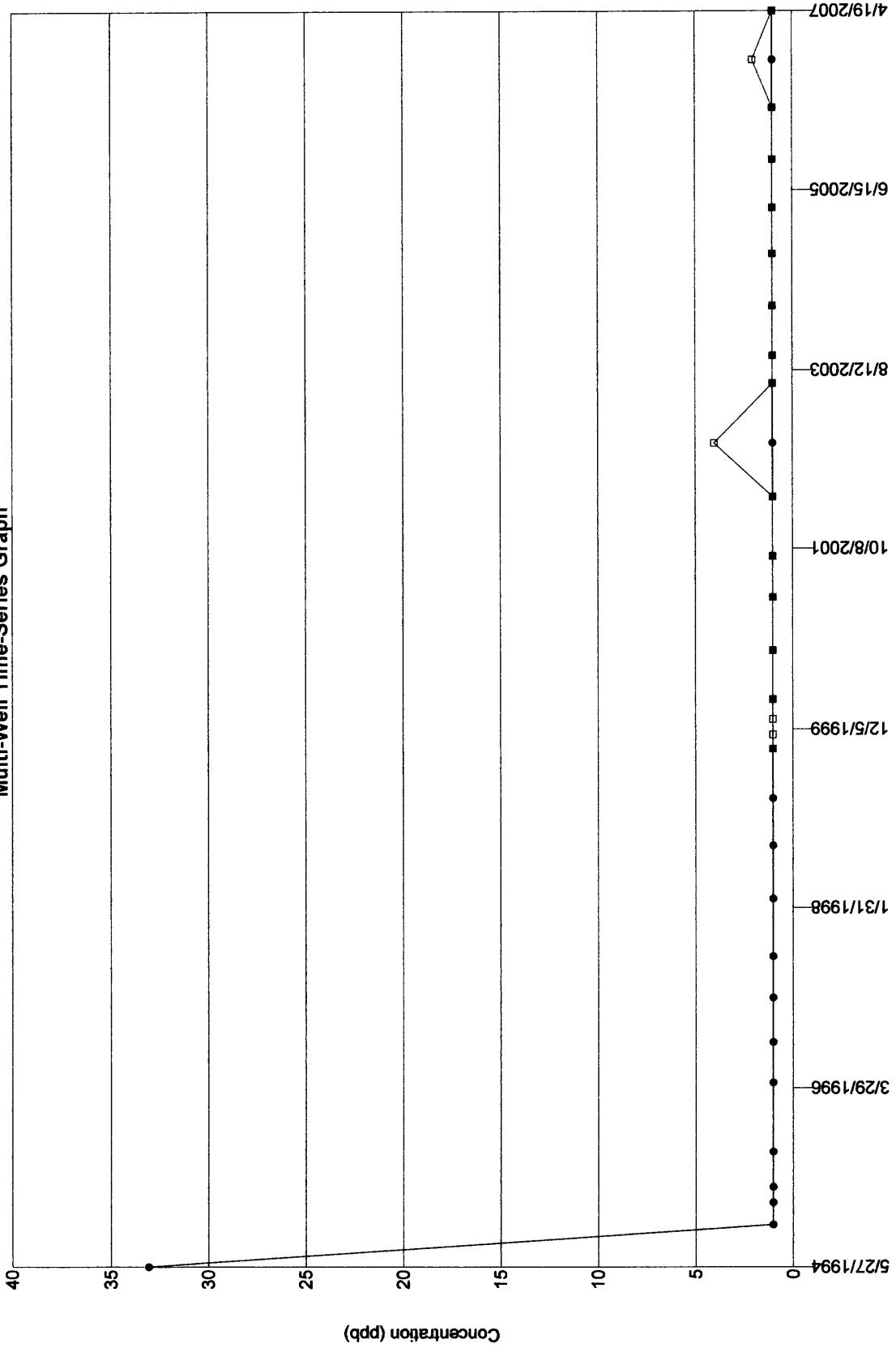
# Barium

## Multi-Well Time-Series Graph



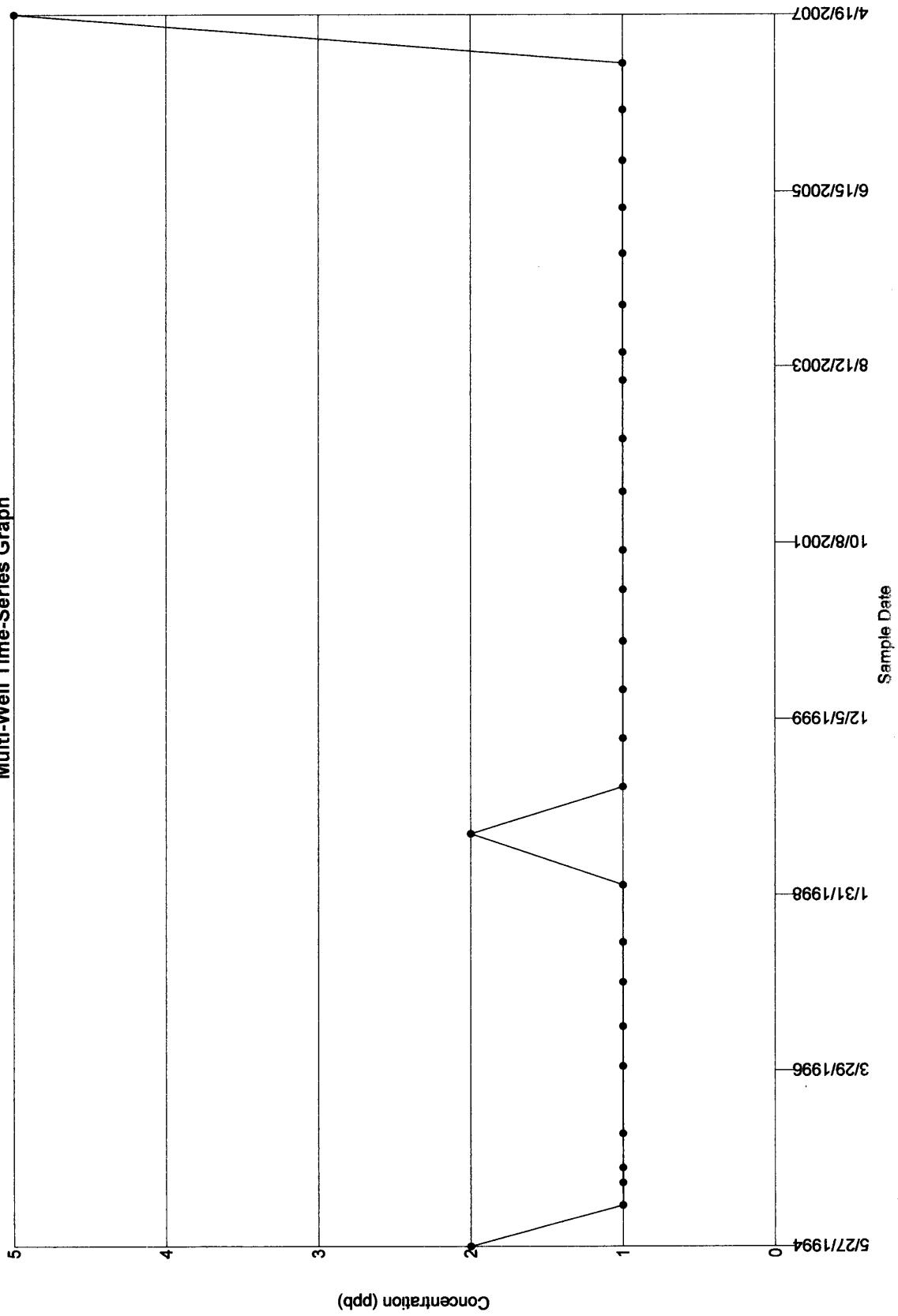
•MW-3 □MW-4 ■MW-5 ▲MW-6 ▲MW-8 ▲MW-11 MW-7S

# Beryllium Multi-Well Time-Series Graph



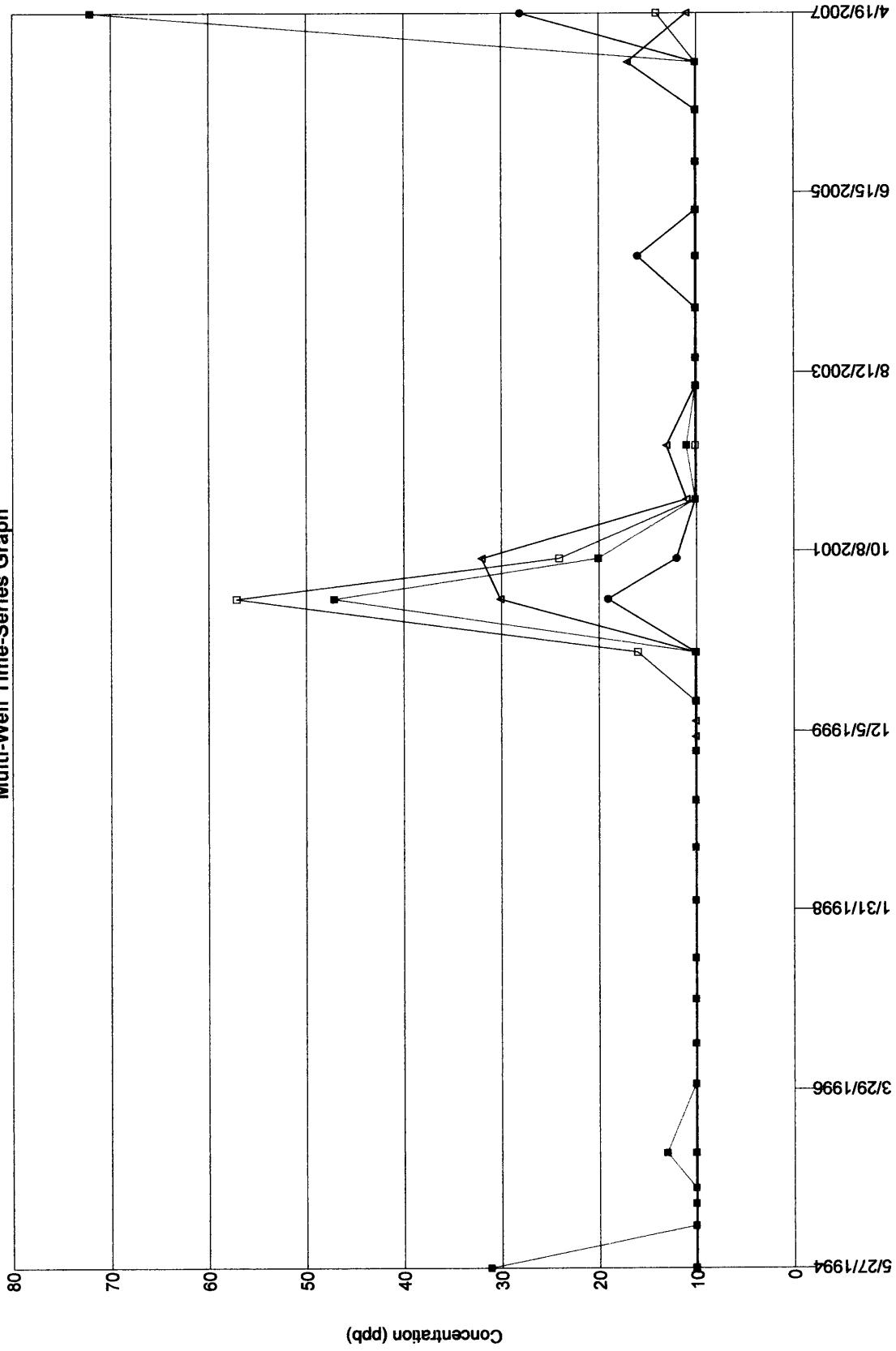
● MW-8 □ MW-11

# Cadmium Multi-Well Time-Series Graph



● MW-4

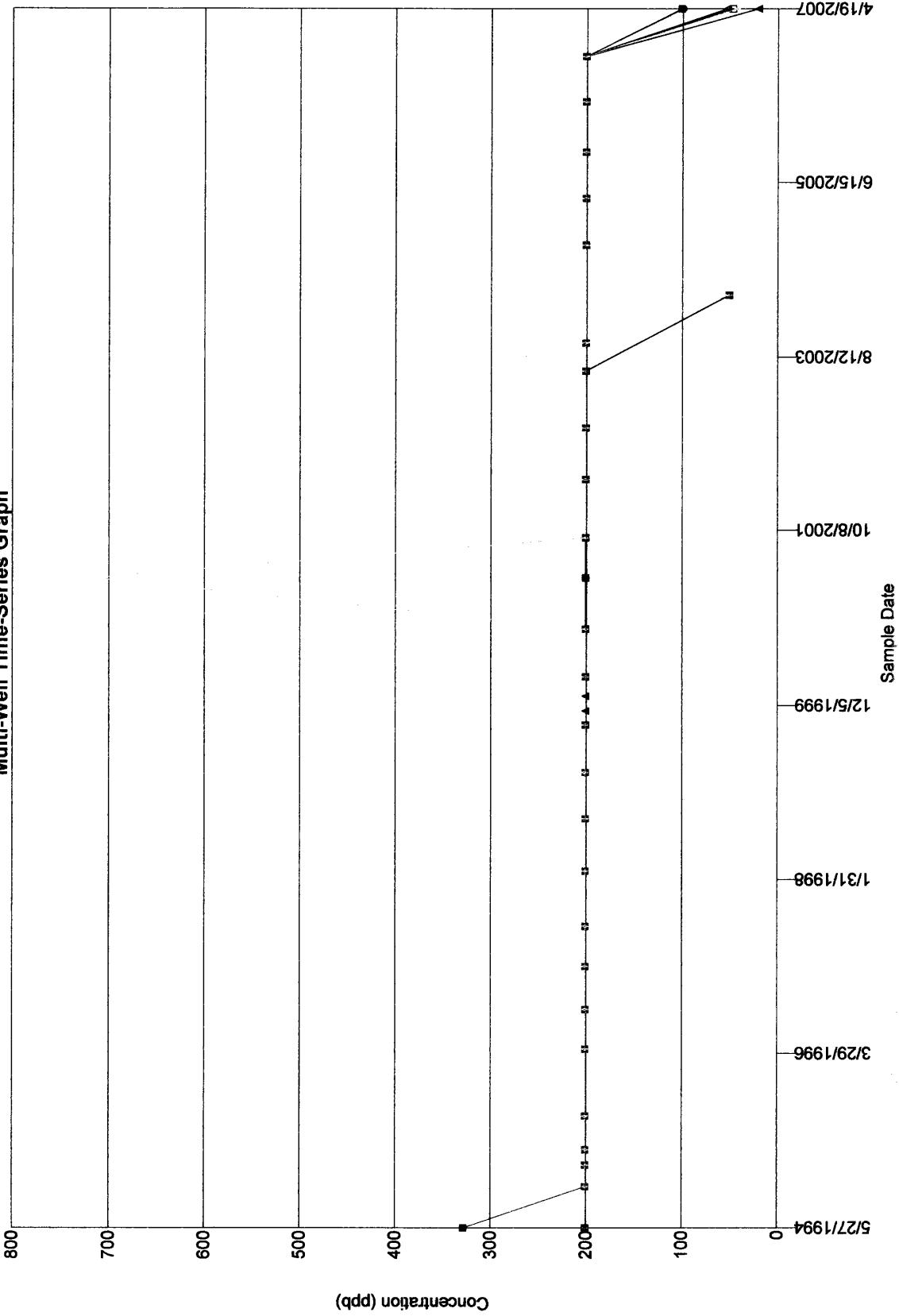
# Cobalt Multi-Well Time-Series Graph



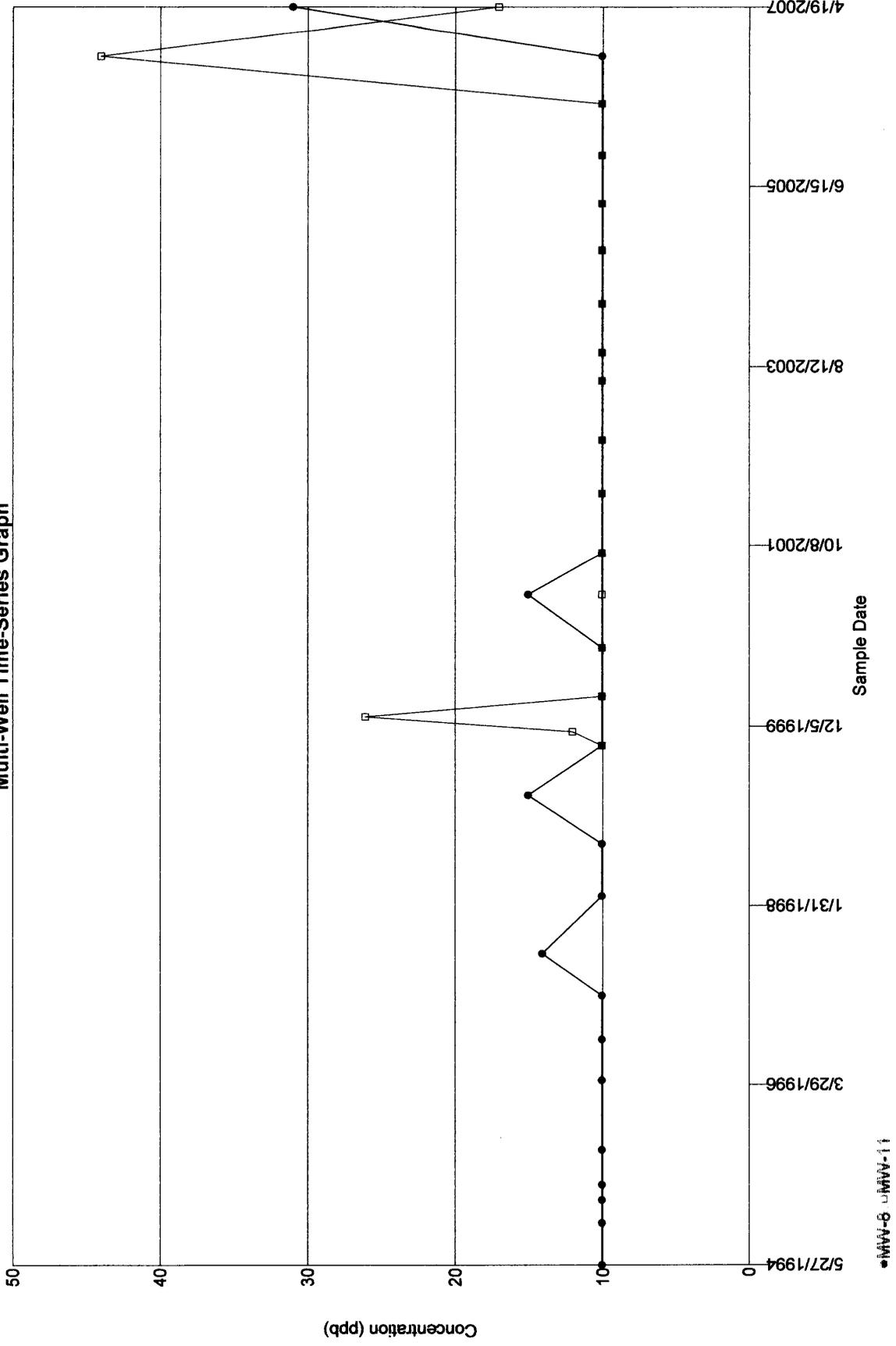
● MW-4 □ MW-3 ■ MW-8 ▲ MW-11

# Copper

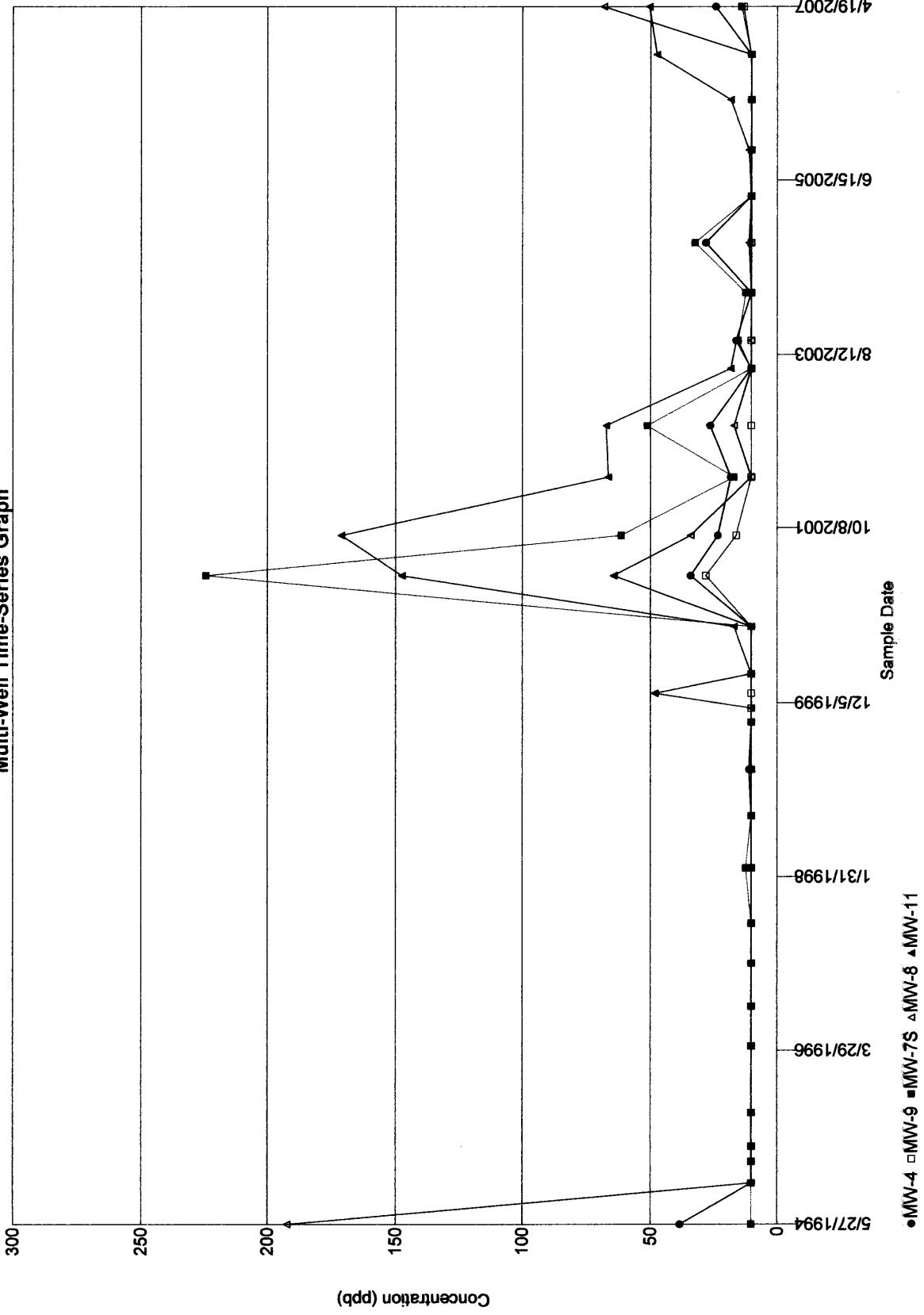
## Multi-Well Time-Series Graph



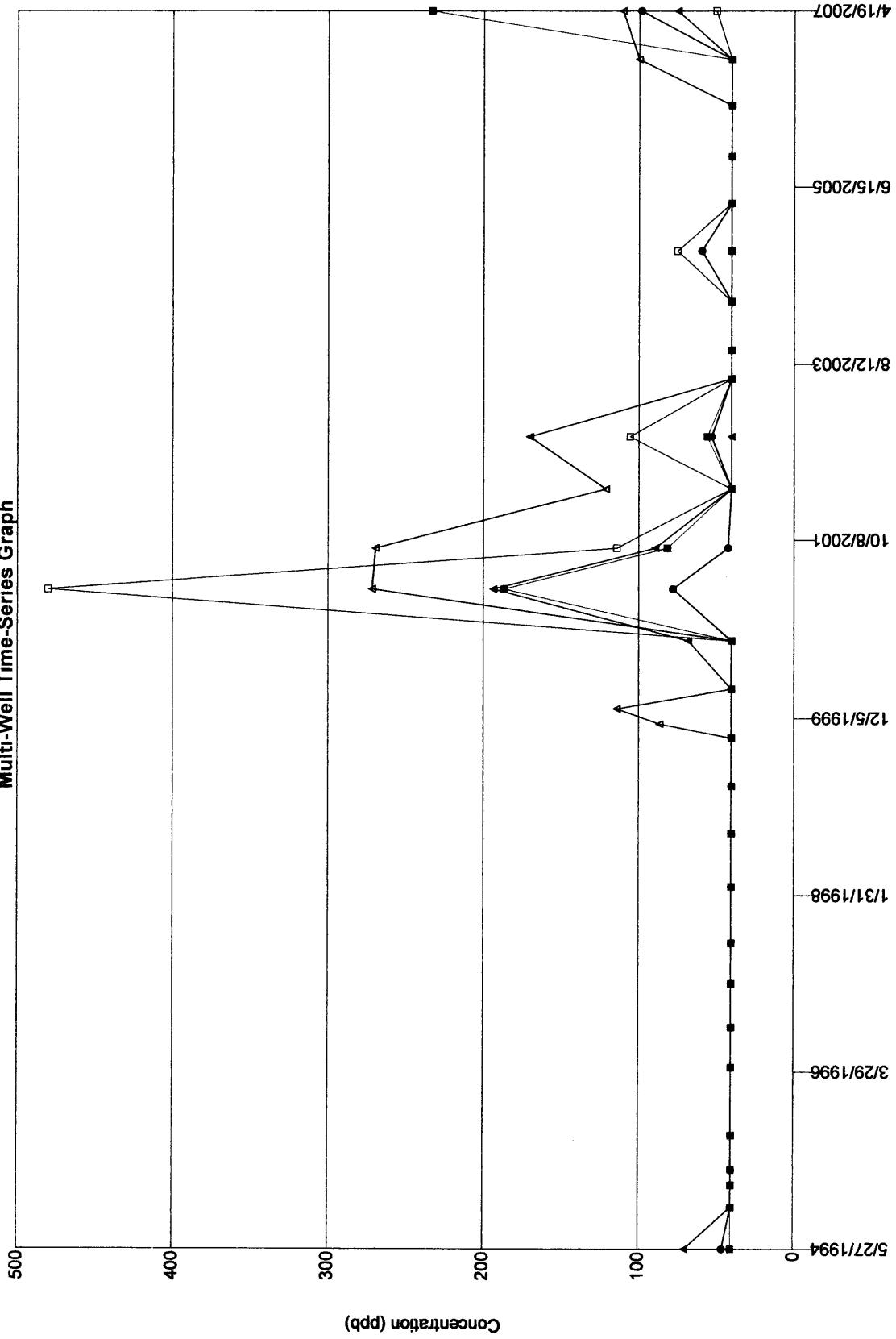
# Lead Multi-Well Time-Series Graph



# Total Chromium Multi-Well Time-Series Graph

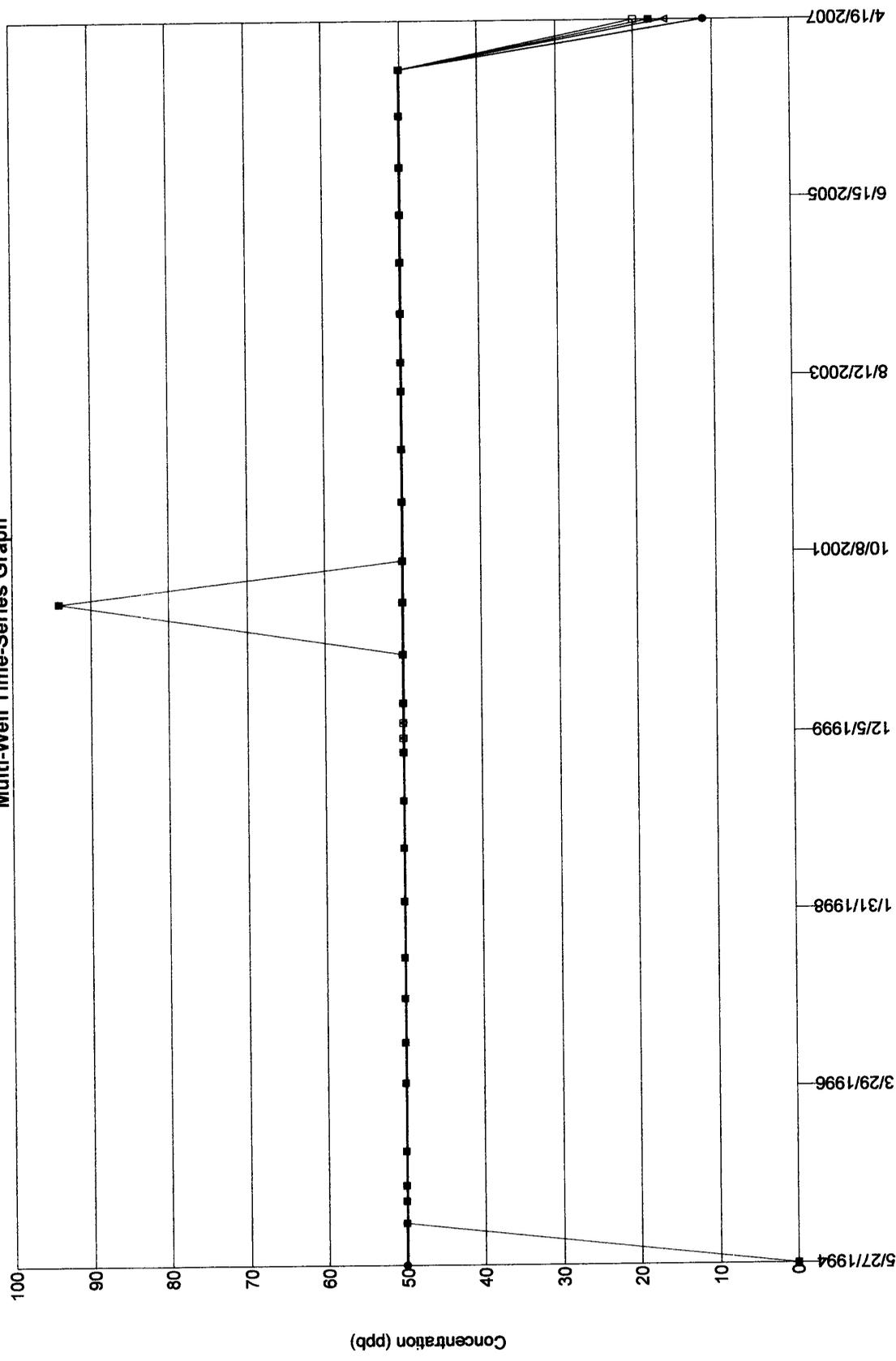


# Vanadium Multi-Well Time-Series Graph



• MW-4 □ MW-7S ■ MW-8 ▲ MW-11 ▴ MW-3

# Zinc Multi-Well Time-Series Graph



● MW-7D □ MW-10 ■ MW-5 ▲ MW-9

# Zinc Multi-Well Time-Series Graph

