DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- In accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Richardson Smith Gardner and Associates, Inc.

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Joan Smyth, P.G. Phone: 919-828-0577 x 122

E-mail: joan@rsgengineers.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Davidson County Lined MSW Landfill	220 Landfill Road Lexington, NC 27292	29-06	.1600	October 10, 2007

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify)
☐ Other(specify)

Notification attached?

☐ No. No groundwater or surface water standards were exceeded.
☒ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Joan Smyth, P.G.	Senior Hydrogeologist	919-828-0577 x 122
Facility Representative Name (Print)	Title	(Area Code) Telephone Number

Signature: Joan Smyth Date: 11/20/07

Affix NC Licensed/ Professional Geologist/Engineer Seal here:

NORTH CAROLINA LICENSED SEAL 1369 GEOLOGIST JOAN A. SMYTH

Revised 01/2007

Ground Water Monitoring Report

October 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

November 2007

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

Ground Water Monitoring Report
Davidson County Landfill
Lined MSW Landfill
October 2007 Semi - Annual Report

Prepared for:

Davidson County Integrated Solid Waste
1242 Old Highway 29
Thomasville, NC 27360

RSG Project No. **Davdco - 4**

Joan A. Smyth 11/20/07

Joan A. Smyth, P.G.
Senior Hydrogeologist

NORTH CAROLINA LICENSED SEAL 1369 GEOLOGIST JOAN A. SMYTH

November 2007

RICHARDSON SMITH GARDNER & ASSOCIATES
Engineering and Geological Services
14 N. Boylan Avenue
Raleigh, North Carolina 27603

Davidson County Lined MSW Landfill

Ground Water Monitoring Report
October 2007 Monitoring Event

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1.0 Introduction

On October 10th and 11th, 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 shown on **Figure 1**. Monitoring well MW-2 was not sampled because the well had insufficient water. 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 dry during this event and therefore no samples could be collected. 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 seven inorganic

constituents (barium, cobalt, copper, lead, total chromium, vanadium and zinc) in seven wells (MW-3, MW-4, MW-5, MW-7, MW-8, MW-10 & MW-11). Three inorganic constituents: cobalt, lead and vanadium were detected above the 2L standards. Cobalt and vanadium were detected at concentrations above the 2L standard because they do not have a 2L standard.

Laboratory analysis of ground water indicated no detectable levels of organic constituents in any of the wells. The laboratory results are summarized 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, copper, vanadium and zinc. The laboratory report is included in **Appendix A**.

2.3 Statistical Analysis

Statistical analysis of the laboratory data indicated statistically significant increases of five constituents: barium (MW-3 & MW-7s), cobalt (MW-4, MW-7s, MW-8 & MW-11), lead (MW-7s & MW-8), total chromium (MW-11, MW-4, MW-7s & MW-8) and vanadium (MW-11, MW-3, MW-4, MW-7S & MW-8). The statistical analysis results are summarized in **Table 4**.

2.4 2L/MCL Statistical Analysis

For wells that showed statistically significant differences from background concentrations, additional analysis was performed. 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).

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-4, MW-7s, MW-8 & MW-11), lead (MW-7s & MW-8), total chromium (MW-11, MW-4, MW-7s & MW-8) and vanadium (MW-11, MW-3, MW-4, MW-7S & MW-8). The results are summarized 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 0.003 feet/day (MW-6) to 0.898

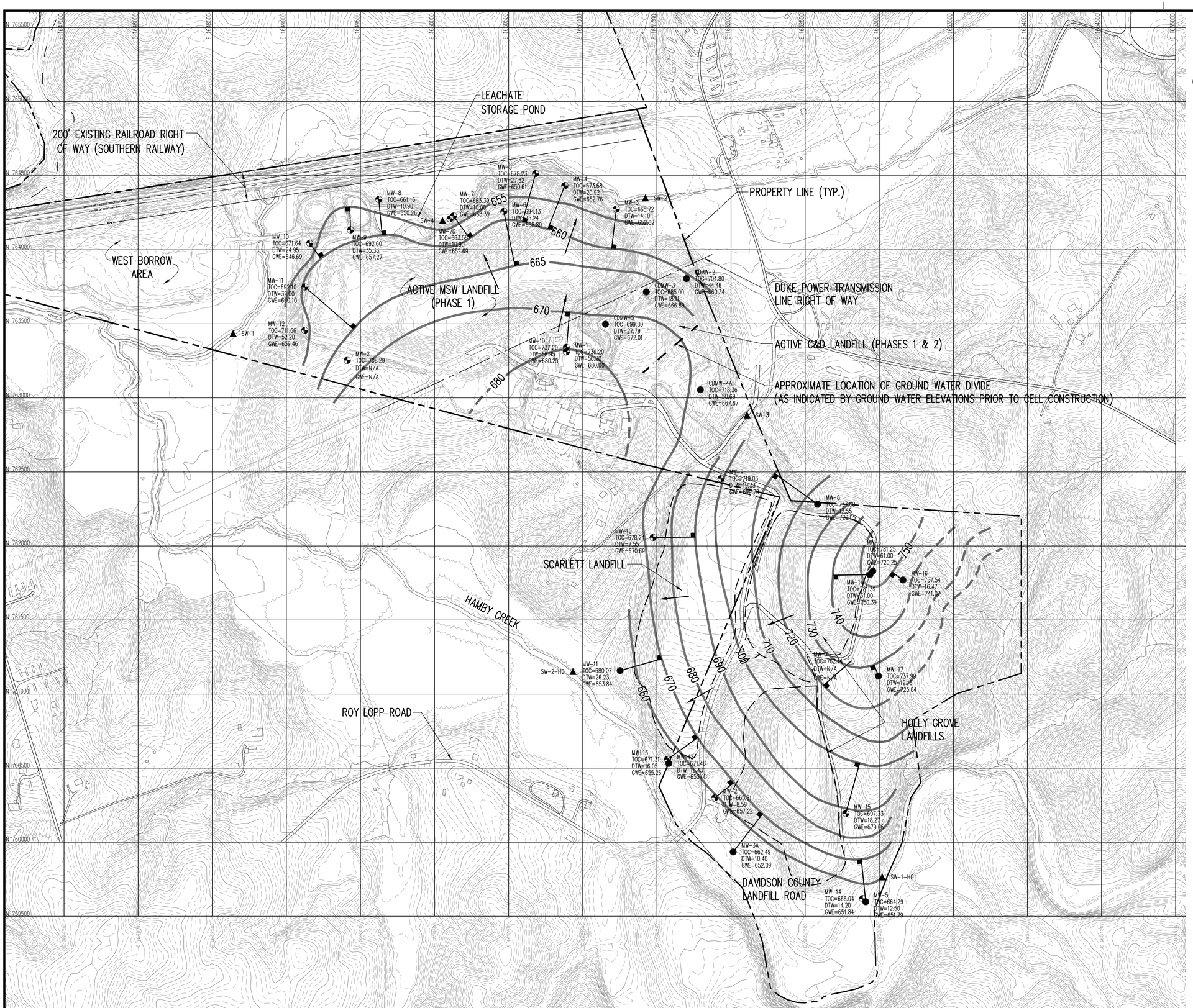
feet/day (MW-10). These calculations are included in **Table 1**. The data indicates that ground water underneath the lined MSW landfill is flowing generally to the north and northwest towards Jimmy's Creek. This is consistent with ground water flow patterns previously seen at this site. The potentiometric surface map (**Figure 1**) is also attached for your review.

4.0 Conclusions

The results presented above the C&D landfill indicate detectable levels of five inorganic constituents. Some of these results indicated statistical significance. The presence of inorganic constituents is likely due to the presence of suspended solids in the sample. In the future, turbidity of each sample will be evaluated to further examine these levels.

The next ground water monitoring event will be completed in spring 2008. The results of this event will be reported to NCDENR upon completion of statistical analysis of laboratory data.

Figures



LEGEND

MW-1A	PREVIOUSLY INSTALLED MONITORING WELL
MW-5	BEDROCK MONITORING WELL
MW-7	ABANDONED MONITORING WELL
SW-1	EXISTING SURFACE WATER MONITORING STATION
	GROUND WATER SURFACE COUNTOUR
	DIRECTION OF GROUNDWATER FLOW
	PROPERTY LINE
	WASTE BOUNDARY
	MEASUREMENT FOR HYDRAULIC GRADIENT CALCULATION

NOTE

1. GROUND WATER DATA RECORDED ON OCTOBER 10, 11, & 12, 2007 BY RSG PERSONNEL.

REFERENCES

1. OVERALL TOPOGRAPHY PER NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, CONTOUR AND ELEVATION DATA GENERATED FROM LIGHT DETECTION AND RANGING (LIDAR) DATA OBTAINED FROM THE NORTH CAROLINA FLOOD MAPPING PROGRAM AND DATED SEPTEMBER 2004. TOPOGRAPHY IN ACTIVE C&D AND MSW AREAS FROM SPATIAL DATA, AERIAL DATED 5/7/07.

0 300' 600' 900'

NO.	DATE	REVISION

RICHARDSON SMITH GARDNER & ASSOCIATES
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SEAL

SEAL

PROJECT TITLE: DAVIDSON COUNTY LANDFILL LEXINGTON COUNTY, NC

DRAWING TITLE: POTENTIOMETRIC SURFACE MAP LINED LANDFILL, C&D AND HOLLY GROVE LANDFILLS (FALL 2007)

DESIGNED BY: J.A.S.	DRAWN BY: C.T.J.
CHECKED BY:	PROJECT NO.: DAVDCO-4
SCALE: AS SHOWN	DATE: NOV. 2007
FILE NAME: DAVDCO-D0431	
SHEET NO.	DRAWING NO. FIG.1

G:\CAD\Davidson\Davidco-4\sheets\DAVDCO-D0431.dwg - 11/16/2007 2:11 PM

Tables

Table 1
Ground Water Elevations & Velocities
Davidson County Lined Landfill
10/10/2007

Well	TOC Elevation (feet)	Water Level (feet)	GW Elev (feet)	Hyd. Cond. (ft/day)	Porosity (%)	Gradient (ft/ft)	Velocity (ft/day)
MW-1	736.20	56.2	680.00	0.14	0.1	0.04	0.056
MW-1d	737.20	56.95	680.25	NA	NA	0.04	NA
MW-2	708.29	NA	NA	0.17	0.1	NA	NA
MW-3	666.72	14.1	652.62	0.62	0.1	0.025	0.155
MW-4	673.68	20.92	652.76	1.31	0.2	0.022	0.144
MW-5	678.23	27.62	650.61	NA	0.2	0.033	NA
MW-6	694.13	35.24	658.89	0.02	0.1	0.016	0.003
MW-7	663.39	10	653.39	0.38	0.15	0.036	0.091
MW-7d	663.59	10.9	652.69	NA	NA	0.04	NA
MW-8	661.16	10.9	650.26	0.57	0.15	0.042	0.160
MW-9	692.60	35.33	657.27	2.65	0.1	0.015	0.398
MW-10	671.64	24.95	646.69	0.88	0.1	0.102	0.898
MW-11	692.10	32	660.10	4.13	0.1	0.009	0.372
MW-12	711.66	52.2	659.46	0.58	0.1	0.023	0.133

Notes

Velocity Calculated from V=K*I/n where:

V = velocity
K = Hydraulic Conductivity
I = Gradient
n = Porosity

Hydraulic Conductivity data from slug tests performed in 1994
Porosity values assumed from Groundwater & Wells (Driscoll)

Table 2
Field Parameters
Davidson County Lined Landfill
10/10/2007

Well	pH (Std. Units)	Conductivity (umhos)	Temp. (celsius)
MW-1	6.7	330	18
MW-2	---	---	---
MW-3	6.5	200	17
MW-4	6.3	90	17
MW-5	6.6	140	15.5
MW-6	7.4	260	16.5
MW-7	6.6	120	17
MW-7d	6.6	100	17
MW-8	6.2	100	16
MW-9	6.9	290	17
MW-10	6.8	270	16
MW-11	6.7	300	16
MW-12	7.3	450	17
SW-1	---	---	---
SW-2	---	---	---

Table 3
Detected Inorganic Constituents
Davidson County Lined Landfill
10/10/07

Parameter	PQL	2L	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-7d	MW-8	MW-9	MW-10	MW-11	MW-12	SW-1	SW-2
Antimony	6	---	0.1 J	NS	0.1 J	ND	ND	0.3 J	0.1 J	ND	ND	ND	ND	ND	ND	NS	NS
Arsenic	10	50	ND	NS	0.6 J	0.8 J	0.6 J	ND	2.4 J	ND	0.9 J	ND	ND	1.1 J	ND	NS	NS
Barium	100	2000	31.6 J	NS	**377**	**271**	**135**	25.5 J	**535**	16 J	**183**	7.2 J	31.5 J	80.6 J	3.3 J	NS	NS
Beryllium	1	---	ND	NS	0.4 J	0.4 J	0.2 J	ND	2 J	ND	0.5 J	ND	0.4 J	0.7 J	ND	NS	NS
Cadmium	1	5	0.1 J	NS	0.2 J	0.7 J	0.1 J	0.2 J	0.6 J	0.3 J	0.2 J	ND	0.3 J	0.4 J	0.1 J	NS	NS
Cobalt	10	---	1 J	NS	**14**	**12**	6.4 J	0.6 J	**21**	1.2 J	**20**	1.4 J	5 J	8.3 J	0.9 J	NS	NS
Copper	10	1000	2.1 J	NS	**47**	**45**	**15**	2.8 J	**78**	5.6 J	**30**	6.4 J	9.6 J	**31**	2.1 J	NS	NS
Total Chromium	10	50	1.5 J	NS	6.2 J	**18**	9.7 J	0.4 J	**26**	0.8 J	**21**	4.9 J	**12**	**26**	2.3 J	NS	NS
Lead	10	15	0.6 J	NS	3.8 J	5.7 J	2.9 J	0.8 J	**12**	0.3 J	**29**	0.6 J	2.4 J	7.5 J	0.5 J	NS	NS
Manganese	50	---	33 J	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS
Nickel	50	100	2.1 J	NS	**11.4**	10.4 J	6.8 J	1.2 J	18 J	0.7 J	12 J	2.5 J	7.8 J	14.7 J	2.8 J	NS	NS
Selenium	10	50	2.5 J	NS	1.6 J	ND	ND	ND	0.9 J	ND	ND	ND	0.4 J	0.5 J	ND	NS	NS
Silver	10	18	ND	NS	ND	ND	ND	ND	0.6 J	ND	ND	ND	ND	ND	ND	NS	NS
Thallium	5	---	ND	NS	0.2 J	0.2 J	ND	ND	0.1 J	ND	ND	ND	ND	0.1 J	ND	NS	NS
Vanadium	25	---	3.1 J	NS	**50**	**43**	22.1 J	2.3 J	**60**	4.3 J	**61**	17 J	**28**	**50**	11.6 J	NS	NS
Zinc	10	2100	4.9 J	NS	**103**	**122**	**24**	7.3 J	**238**	9.2 J	**71**	6.6 J	**19**	**50**	3.7 J	NS	NS
Organic Constituents																	
Acetone	100	700	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3 J	ND	NS	NS

ND	-	Not detected
Shading	-	Levels above 2L standard or no 2L standard
Bold Letters	-	Constituent detected above PQL limit
J	-	Constituents detected below PQL limit
NS	-	Not sampled

All PQLs, 2L Standards and Results are in ug/l.

Table 4
Davidson County Lined Landfill
Statistical Analysis Summary
10/10/2007

Location	Parameter	Result (mg/l)	Test Units	%ND	CL	Test	Statistically Significant?	2L/MCL statistical analysis	Method for MCL analysis
MW-3	Barium	0.377	mg/l	91.8	---	PPL with 1/2 DL	Y	N	MCL -Poisson's Tolerance Interval
MW-4	Barium	0.271	mg/l	91.8	---	PPL with 1/2 DL	N	---	---
MW-5	Barium	0.135	mg/l	91.8	---	PPL with 1/2 DL	N	---	---
MW-7S	Barium	0.535	mg/l	91.8	---	PPL with 1/2 DL	Y	N	MCL -Poisson's Tolerance Interval
MW-8	Barium	0.183	mg/l	91.8	---	PPL with 1/2 DL	N	---	---
MW-7S	Beryllium	0.002	mg/l	96.42	---	PPL with 1/2 DL	N	---	---
MW-3	Cobalt	0.014	mg/l	82.51	87.1	NPTL	N	---	---
MW-4	Cobalt	0.012	mg/l	82.51	87.1	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-7S	Cobalt	0.021	mg/l	82.51	87.1	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-8	Cobalt	0.02	mg/l	82.51	87.1	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-11	Copper	0.031	mg/l	82.51	87.1	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-3	Copper	0.047	mg/l	92.63	---	PPL with 1/2 DL	N	---	---
MW-4	Copper	0.045	mg/l	92.63	---	PPL with 1/2 DL	N	---	---
MW-5	Copper	0.015	mg/l	92.63	---	PPL with 1/2 DL	N	---	---
MW-7S	Copper	0.078	mg/l	92.63	---	PPL with 1/2 DL	N	---	---
MW-8	Copper	0.03	mg/l	92.63	---	PPL with 1/2 DL	N	---	---
MW-7S	Lead	0.012	mg/l	90.58	---	PPL with 1/2 DL	Y	Y	MCL -Poisson's Tolerance Interval
MW-8	Lead	0.029	mg/l	90.58	---	PPL with 1/2 DL	Y	Y	MCL -Poisson's Tolerance Interval
MW-10	Total Chromium	0.012	mg/l	69.53	84	NPTL	N	---	---
MW-11	Total Chromium	0.026	mg/l	69.53	84	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-4	Total Chromium	0.018	mg/l	69.53	84	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-7S	Total Chromium	0.026	mg/l	69.53	84	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-8	Total Chromium	0.021	mg/l	69.53	84	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-10	Vanadium	0.028	mg/l	79.44	81.8	NPTL	N	---	---
MW-11	Vanadium	0.05	mg/l	79.44	81.8	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-3	Vanadium	0.05	mg/l	79.44	81.8	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-4	Vanadium	0.043	mg/l	79.44	81.8	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-7S	Vanadium	0.06	mg/l	79.44	81.8	NPTL	Y	Y	MCL - Parametric Tolerance Interval
MW-8	Vanadium	0.061	mg/l	79.44	81.8	NPTL	Y	Y	MCL - Parametric Tolerance Interval

Table 4
Davidson County Lined Landfill
Statistical Analysis Summary
10/10/2007

Location	Parameter	Result (mg/l)	Test Units	%ND	CL	Test	Statistically Significant?	2L/MCL statistical analysis	Method for MCL analysis
MW-10	Zinc	0.019	mg/l	81.81	79.4	NPTL	N	---	---
MW-11	Zinc	0.05	mg/l	81.81	79.4	NPTL	N	---	---
MW-3	Zinc	0.103	mg/l	81.81	79.4	NPTL	N	---	---
MW-4	Zinc	0.122	mg/l	81.81	79.4	NPTL	N	---	---
MW-5	Zinc	0.024	mg/l	81.81	79.4	NPTL	N	---	---
MW-7S	Zinc	0.238	mg/l	81.81	79.4	NPTL	N	---	---
MW-8	Zinc	0.071	mg/l	81.81	79.4	NPTL	N	---	---

Legend:

%ND	Method chosen due to percent non-detects
NPTL	Non-parametric Tolerance Limit (Inter-well comparision)
PPL	Poisson Prediction Limit with 1/2 Detection Limit

Highlighting indicates statistical significance

Upgradient well : MW -1s

Appendix A

Laboratory Analytical Report

Environment 1, Incorporated

REC'D NOV 01 2007

Drinking Water ID: 17[illegible]
Wastewater ID: 10

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

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

ID#: 6038

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

DATE COLLECTED: 10/10/07
DATE REPORTED : 10/26/07

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-1S	MW-2	MW-3	MW-4	MW-5	Analysis Date	Analyst	Method Code
Total Alkalinity, mg/l	1.0	1.0	253					10/11/07	TRB	SM2320B
Chloride, mg/l	5.0	5.0	41					10/12/07	MDM	SM4500-CLB
Total Dissolved Residue, mg/l	1.0	1.0	398					10/12/07	TRB	SM2540C
Sulfate, mg/l	5.0	250.0	26.5 J					10/15/07	TRB	SM4500-SO4
Antimony, ug/l	0.05	6.0	0.1 J	Missing	0.1 J			10/16/07	LFJ	EPA200.8
Antimony, ug/l	0.05	6.0				--- U	--- U	10/17/07	LFJ	EPA200.8
Arsenic, ug/l	0.47	10.0	--- U	Missing	0.6 J			10/16/07	LFJ	EPA200.8
Arsenic, ug/l	0.47	10.0				0.8 J	0.6 J	10/17/07	LFJ	EPA200.8
Barium, ug/l	0.04	100.0	31.6 J	Missing	377			10/16/07	LFJ	EPA200.8
Barium, ug/l	0.04	100.0				271	135	10/17/07	LFJ	EPA200.8
Beryllium, ug/l	0.08	1.0	--- U	Missing	0.4 J			10/16/07	LFJ	EPA200.8
Beryllium, ug/l	0.08	1.0				0.4 J	0.2 J	10/17/07	LFJ	EPA200.8
Cadmium, ug/l	0.06	1.0	0.1 J	Missing	0.2 J			10/16/07	LFJ	EPA200.8
Cadmium, ug/l	0.06	1.0				0.7 J	0.1 J	10/17/07	LFJ	EPA200.8
Cobalt, ug/l	0.41	10.0	1.0 J	Missing	14			10/16/07	LFJ	EPA200.8
Cobalt, ug/l	0.41	10.0				12	6.4 J	10/17/07	LFJ	EPA200.8
Copper, ug/l	7.60	10.0	2.1 J	Missing	47			10/16/07	LFJ	EPA200.8
Copper, ug/l	7.60	10.0				45	15	10/17/07	LFJ	EPA200.8
Total Chromium, ug/l	0.24	10.0	1.5 J	Missing	6.2 J			10/16/07	LFJ	EPA200.8
Total Chromium, ug/l	0.24	10.0				18	9.7 J	10/17/07	LFJ	EPA200.8
Iron, ug/l	12.0	300.0	721					10/24/07	ADD	SM3111B
Manganese, ug/l	0.51	50.0	33 J					10/16/07	LFJ	EPA200.8
Lead, ug/l	0.07	10.0	0.6 J	Missing	3.8 J			10/16/07	LFJ	EPA200.8
Lead, ug/l	0.07	10.0				5.7 J	2.9 J	10/17/07	LFJ	EPA200.8
Mercury, ug/l	0.13	0.20	--- U					10/16/07	LFJ	EPA200.8
Nickel, ug/l	13.4	50.0	2.1 J	Missing	11.4 J			10/16/07	LFJ	EPA200.8
Nickel, ug/l	13.4	50.0				10.4 J	6.8 J	10/17/07	LFJ	EPA200.8
Selenium, ug/l	0.35	10.0	2.5 J	Missing	1.6 J			10/16/07	LFJ	EPA200.8
Selenium, ug/l	0.35	10.0				--- U	--- U	10/17/07	LFJ	EPA200.8
Silver, ug/l	0.52	10.0	--- U	Missing	--- U			10/16/07	LFJ	EPA200.8
Silver, ug/l	0.52	10.0				--- U	--- U	10/17/07	LFJ	EPA200.8
Thallium, ug/l	0.07	5.0	--- U	Missing	0.2 J			10/16/07	LFJ	EPA200.8
Thallium, ug/l	0.07	5.0				0.2 J	--- U	10/17/07	LFJ	EPA200.8
Vanadium, ug/l	0.42	25.0	3.1 J	Missing	50			10/16/07	LFJ	EPA200.8
Vanadium, ug/l	0.42	25.0				43	22.1 J	10/17/07	LFJ	EPA200.8
Zinc, ug/l	2.70	10.0	4.9 J	Missing	103			10/16/07	LFJ	EPA200.8
Zinc, ug/l	2.70	10.0				122	24	10/17/07	LFJ	EPA200.8

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

Environment 1, Incorporated

Drinking Water ID: 37913
Wastewater ID: 10

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

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

ID#: 6038

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

DATE COLLECTED: 10/10/07
DATE REPORTED : 10/26/07

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-6	MW-7D	MW-8	MW-7S	MW-9	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.05	6.0	0.3 J	--- U	--- U	0.1 J	--- U	10/17/07	LFJ	EPA200.8
Arsenic, ug/l	0.47	10.0	--- U	--- U	0.9 J	2.4 J	--- U	10/17/07	LFJ	EPA200.8
Barium, ug/l	0.04	100.0	25.5 J	16.0 J	183	535	7.2 J	10/17/07	LFJ	EPA200.8
Beryllium, ug/l	0.08	1.0	--- U	--- U	0.5 J	2	--- U	10/17/07	LFJ	EPA200.8
Cadmium, ug/l	0.06	1.0	0.2 J	0.3 J	0.2 J	0.6 J	--- U	10/17/07	LFJ	EPA200.8
Cobalt, ug/l	0.41	10.0	0.6 J	1.2 J	20	21	1.4 J	10/17/07	LFJ	EPA200.8
Copper, ug/l	7.60	10.0	2.8 J	5.6 J	30	78	6.4 J	10/17/07	LFJ	EPA200.8
Total Chromium, ug/l	0.24	10.0	0.4 J	0.8 J	21	26	4.9 J	10/17/07	LFJ	EPA200.8
Lead, ug/l	0.07	10.0	0.8 J	0.3 J	29	12	0.6 J	10/17/07	LFJ	EPA200.8
Nickel, ug/l	13.4	50.0	1.2 J	0.7 J	12 J	18 J	2.5 J	10/17/07	LFJ	EPA200.8
Selenium, ug/l	0.35	10.0	--- U	--- U	--- U	0.9 J	--- U	10/17/07	LFJ	EPA200.8
Silver, ug/l	0.52	10.0	--- U	--- U	--- U	0.6 J	--- U	10/17/07	LFJ	EPA200.8
Thallium, ug/l	0.07	5.0	--- U	--- U	--- U	0.1 J	--- U	10/17/07	LFJ	EPA200.8
Vanadium, ug/l	0.42	25.0	2.3 J	4.3 J	61	60	17 J	10/17/07	LFJ	EPA200.8
Zinc, ug/l	2.70	10.0	7.3 J	9.2 J	71	238	6.6 J	10/17/07	LFJ	EPA200.8

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

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
ANALYST: MAO
DATE COLLECTED: 10/10/07
DATE REPORTED: 10/26/07

Page: 1

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	10/12/07 MW-1S	10/12/07 MW-3	10/12/07 MW-4	10/12/07 MW-5	10/12/07 MW-6
Date Analyzed:							
1. Chloromethane	0.18	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.34	1.0	--- U	--- U	--- U	--- U	--- U
3. Bromomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.29	10.0	--- U	--- U	--- U	--- U	--- U
5. Trichlorofluoromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.14	5.0	--- U	--- U	--- U	--- U	--- U
7. Acetone	1.21	100.0	--- U	--- U	--- U	--- U	--- U
8. Iodomethane	0.12	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.14	1.0	--- U	--- U	--- U	--- U	--- U
11. trans-1,2-Dichloroethene	0.13	5.0	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.16	5.0	--- U	--- U	--- U	--- U	--- U
13. Vinyl Acetate	0.20	5.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	--- U	--- U	--- U	--- U	--- U
15. 2-Butanone	0.85	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
21. 1,2-Dichloroethane	0.12	1.0	--- U	--- U	--- U	--- U	--- U
22. Trichloroethene	0.13	1.0	--- U	--- U	--- U	--- U	--- U
23. 1,2-Dichloropropane	0.17	1.0	--- U	--- U	--- U	--- U	--- U
24. Bromodichloromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.13	1.0	--- U	--- U	--- U	--- U	--- U
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
31. 2-Hexanone	1.00	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.13	3.0	--- U	--- U	--- U	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.48	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	--- U	--- U	--- U	--- U	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	--- U	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U	--- U	--- U	--- U	--- U

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

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
ANALYST: MAO
DATE COLLECTED: 10/10/07
DATE REPORTED: 10/26/07

REVIEWED BY: _____

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	10/12/07 MW-7D	10/18/07 MW-8	10/18/07 MW-7S	10/19/07 MW-9
Date Analyzed:			10/12/07	10/18/07	10/18/07	10/19/07
1. Chloromethane	0.18	1.0	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.34	1.0	--- U	--- U	--- U	--- U
3. Bromomethane	0.26	10.0	--- U	--- U	--- U	--- U
4. Chloroethane	0.29	10.0	--- U	--- U	--- U	--- U
5. Trichlorofluoromethane	0.13	1.0	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.14	5.0	--- U	--- U	--- U	--- U
7. Acetone	1.21	100.0	--- U	--- U	--- U	--- U
8. Iodomethane	0.12	10.0	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.14	1.0	--- U	--- U	--- U	--- U
11. trans-1,2-Dichloroethene	0.13	5.0	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.16	5.0	--- U	--- U	--- U	--- U
13. Vinyl Acetate	0.20	5.0	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	--- U	--- U	--- U	--- U
15. 2-Butanone	0.85	100.0	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U	--- U	--- U
20. Benzene	0.16	1.0	--- U	--- U	--- U	--- U
21. 1,2-Dichloroethane	0.12	1.0	--- U	--- U	--- U	--- U
22. Trichloroethene	0.13	1.0	--- U	--- U	--- U	--- U
23. 1,2-Dichloropropane	0.17	1.0	--- U	--- U	--- U	--- U
24. Bromodichloromethane	0.13	1.0	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U	--- U	--- U
27. Toluene	0.13	1.0	--- U	--- U	--- U	--- U
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.16	1.0	--- U	--- U	--- U	--- U
31. 2-Hexanone	1.00	50.0	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.13	3.0	--- U	--- U	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	--- U	--- U	--- U
37. Xylenes	0.48	5.0	--- U	--- U	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	--- U	--- U	--- U	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U	--- U	--- U	--- U

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

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

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

CHAIN OF CUSTODY RECORD

CLIENT: 6038 **Week: 40**

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

(919) 828-0577

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2	CHLORIDE	SULFATE	ALKALINITY	TDS
						L2	L2	L2	L2				
						P	G	G	G	P	P	P	P
						A	E	E	E	A	A	A	A
MW-1S	10/10/07	2:19			3					✓	✓	✓	✓
~~MW-2~~					4								
MW-3		2:06			3								
MW-4		1:53			3								
MW-5		1:42			3								
MW-6		8:30			3								
MW-7D		8:56			3								
MW-8		9:23			3								
MW-7S		8:51			3								
MW-9		9:13			3								

PARAMETERS

CHLORINE NEUTRALIZED AT COLLECTION

pH CHECK (LAB)

CONTAINER TYPE, P/G

CHEMICAL PRESERVATION

A - NONE D - NAOH
B - HNO_3 E - HCL
C - H_2SO_4 F - ZINC ACETATE
G - NA THIOSULFATE

CLASSIFICATION:

☐ WASTEWATER (NPDES)
☐ DRINKING WATER
☐ DWQ/GW
☒ SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY
Y N

SAMPLES COLLECTED BY: (Please Print) Byron S. Hackney

SAMPLES RECEIVED IN LAB AT 3.8 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
Byron S Hackney	10/10/07 5pm	Arnetha Ladner	10/11/07 10:30
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS: MW-2 Dry No sample collected

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.

FORM #5

№ 152226

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

ID#: 6038 A

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

DATE COLLECTED: 10/11/07
DATE REPORTED : 10/30/07

REVIEWED BY:

PARAMETERS	MDL	SWSL	Leachate	Analysis Date	Analyst	Method Code
BOD, mg/l	2.0	2.0	42	10/12/07	ANO	SM5210B
COD, mg/l	10.0	10.0	347	10/16/07	TRB	HACH8000
Nitrate Nitrogen, mg/l	0.03	10.0	0.07 J	10/12/07	SSR	EPA353.2
Total Phosphorus, mg/l	0.04	0.04	0.56	10/22/07	SSR	EPA365.4
Sulfate, mg/l	5.0	250.0	64.2 J	10/15/07	TRB	SM4500-SO4E
Antimony, ug/l	0.05	6.0	0.9 J	10/22/07	CMF	EPA200.8
Arsenic, ug/l	0.47	10.0	7.9 J	10/22/07	LFJ	EPA200.8
Barium, ug/l	0.04	100.0	89.5 J	10/22/07	CMF	EPA200.8
Beryllium, ug/l	0.08	1.0	0.1 J	10/22/07	CMF	EPA200.8
Cadmium, ug/l	0.06	1.0	--- U	10/22/07	CMF	EPA200.8
Cobalt, ug/l	0.41	10.0	7.2 J	10/22/07	CMF	EPA200.8
Copper, ug/l	0.20	10.0	14	10/22/07	CMF	EPA200.8
Total Chromium, ug/l	0.24	10.0	7.5 J	10/22/07	CMF	EPA200.8
Lead, ug/l	0.07	10.0	1.1 J	10/22/07	CMF	EPA200.8
Nickel, ug/l	0.66	50.0	45.1 J	10/22/07	CMF	EPA200.8
Selenium, ug/l	0.35	10.0	9.9 J	02/24/07	CMF	EPA200.8
Silver, ug/l	0.52	10.0	--- U	02/24/07	CMF	EPA200.8
Thallium, ug/l	0.07	5.0	--- U	10/22/07	CMF	EPA200.8
Vanadium, ug/l	0.42	25.0	27	10/22/07	CMF	EPA200.8
Zinc, ug/l	0.20	10.0	31	10/22/07	CMF	EPA200.8

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

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 A

ANALYST: MAO
DATE COLLECTED: 10/11/07
DATE ANALYZED: 10/24/07
DATE REPORTED: 10/30/07

Page: 1

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	Leachate
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	7.20 J
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	1.00 J
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	0.20 J
28. trans-1,3-Dichloropropene	0.14	1.0	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U
30. Tetrachloroethene	0.16	1.0	--- U
31. 2-Hexanone	1.00	50.0	--- U
32. Dibromochloromethane	0.14	3.0	--- 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	5.0	--- 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	3.0	--- 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	13.0	--- 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 Quanititation Limits.

Environment 1, Inc.
P.O. [redacted]085, 114 Oakmont Dr.
Greenville, NC 27858

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

CHAIN OF CUSTODY RECORD

CLIENT: 6038 A **Week:** 40

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

(919) 828-0577

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	BOD	COD	Nitrate	PO4	Sulfate	Metals	EPA 8260B	8260 Dup. 1									
CHLORINE NEUTRALIZED AT COLLECTION																						
pH CHECK (LAB)							L2		L2		L2	L2	L2									
CONTAINER TYPE, P/G						P	P	P	P	P	P	G	G									
CHEMICAL PRESERVATION						A	C	A	C	A	A	E	E									
Leachate	10-11-07	8am			8																	

PARAMETERS

A - NONE
B - HNO_3
C - H_2SO_4
D - NAOH
E - HCL
F - ZINC ACETATE
G - NA THIOSULFATE

CLASSIFICATION:
☐ WASTEWATER (NPDES)
☐ DRINKING WATER
☐ DWQ/GW
☒ SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY: (Y) N

SAMPLES COLLECTED BY: (Please Print) Byron S. Hackney

SAMPLES RECEIVED IN LAB AT 10 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
Byron S Hackney	10-11-07 4:30p	Anthony Scott	10/12/07 10:00
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS:

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.

№ 152225

FORM #5

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

ID#: 6038 B

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

DATE COLLECTED: 10/10/07
DATE REPORTED : 10/30/07

REVIEWED BY:

PARAMETERS	MDL	SWSL	MW-10	MW-11	MW-12	SW-1	SW-2	Analysis Date	Analyst	Method Code
Antimony, ug/l	0.05	6.0	--- U	--- U	--- U	Missing	Missing	10/17/07	LFJ	EPA200.8
Arsenic, ug/l	0.47	10.0	--- U	1.1 J	--- U	Missing	Missing	10/17/07	LFJ	EPA200.8
Barium, ug/l	0.04	100.0	31.5 J	80.6 J	3.3 J	Missing	Missing	10/17/07	LFJ	EPA200.8
Beryllium, ug/l	0.08	1.0	0.4 J	0.7 J	--- U	Missing	Missing	10/17/07	LFJ	EPA200.8
Cadmium, ug/l	0.06	1.0	0.3 J	0.4 J	0.1 J	Missing	Missing	10/17/07	LFJ	EPA200.8
Cobalt, ug/l	0.41	10.0	5 J	8.3 J	0.9 J	Missing	Missing	10/17/07	LFJ	EPA200.8
Copper, ug/l	0.20	10.0	9.6 J	31	2.1 J	Missing	Missing	10/17/07	LFJ	EPA200.8
Total Chromium, ug/l	0.24	10.0	12	26	2.3 J	Missing	Missing	10/17/07	LFJ	EPA200.8
Lead, ug/l	0.07	10.0	2.4 J	7.5 J	0.5 J	Missing	Missing	10/17/07	LFJ	EPA200.8
Nickel, ug/l	0.66	50.0	7.8 J	14.7 J	2.8 J	Missing	Missing	10/17/07	LFJ	EPA200.8
Selenium, ug/l	0.35	10.0	0.4 J	0.5 J	--- U	Missing	Missing	10/17/07	LFJ	EPA200.8
Silver, ug/l	0.52	10.0	--- U	--- U	--- U	Missing	Missing	10/17/07	LFJ	EPA200.8
Thallium, ug/l	0.07	5.0	--- U	0.1 J	--- U	Missing	Missing	10/17/07	LFJ	EPA200.8
Vanadium, ug/l	0.42	25.0	28	50	11.6 J	Missing	Missing	10/17/07	LFJ	EPA200.8
Zinc, ug/l	0.20	10.0	19	50	3.7 J	Missing	Missing	10/17/07	LFJ	EPA200.8
8260 (duplicate)	0.20	10.0				Missing	Missing	/ /		

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

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: 10/10/07
DATE REPORTED: 10/30/07

REVIEWED BY:

VOLATILE ORGANICS
EPA METHOD 8260B

PARAMETERS, ug/l	Date Analyzed: MDL	SWSL	10/23/07 MW-10	10/23/07 MW-11	10/23/07 MW-12	10/23/07 Equipment Blank	10/24/07 Trip Blank
1. Chloromethane	0.18	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.34	1.0	--- U	--- U	--- U	--- U	--- U
3. Bromomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.29	10.0	--- U	--- U	--- U	--- U	--- U
5. Trichlorofluoromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.14	5.0	--- U	--- U	--- U	--- U	--- U
7. Acetone	1.21	100.0	--- U	2.30 J	--- U	--- U	1.30 J
8. Iodomethane	0.12	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.14	1.0	--- U	--- U	--- U	0.20 J	0.20 J
11. trans-1,2-Dichloroethene	0.13	5.0	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.16	5.0	--- U	--- U	--- U	--- U	--- U
13. Vinyl Acetate	0.20	5.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	--- U	--- U	--- U	--- U	--- U
15. 2-Butanone	0.85	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
21. 1,2-Dichloroethane	0.12	1.0	--- U	--- U	--- U	--- U	--- U
22. Trichloroethene	0.13	1.0	--- U	--- U	--- U	--- U	--- U
23. 1,2-Dichloropropane	0.17	1.0	--- U	--- U	--- U	--- U	--- U
24. Bromodichloromethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.13	1.0	--- U	--- U	--- U	--- U	--- U
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
31. 2-Hexanone	1.00	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.13	3.0	--- U	--- U	--- U	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.48	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	--- U	--- U	--- U	--- U	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	--- U	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U	--- U	--- U	--- U	--- U

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

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

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

CHAIN OF CUSTODY RECORD

CLIENT: 6038 B **Week: 40**

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

(919) 828-0577

DISINFECTION: ☐ CHLORINE ☐ UV ☐ NONE ☐ _____

CHLORINE NEUTRALIZED AT COLLECTION																			
pH CHECK (LAB)			12	12	12	12													
CONTAINER TYPE, P/G			P	G	G	G													
CHEMICAL PRESERVATION			A	E	E	E													
SAMPLE LOCATION	COLLECTION DATE	COLLECTION TIME	TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Metals	EPA 8260B	8260 Dup. 1	8260 Dup. 2										
MW-10	10/10/07	9:41			4														
MW-11	↓	1:25			3														
MW-12	↓	1:15			3														
~~SW-1~~	↓				3														
~~SW-2~~	↓				3														
Equipment Blank	↓	5 pm			2														
Trip Blank	↓				2														

PARAMETERS

A - NONE
B - HNO_3
C - H_2SO_4
D - NAOH
E - HCL
F - ZINC ACETATE
G - NA THIOSULFATE

CLASSIFICATION:
- ☐ WASTEWATER (NPDES)
- ☐ DRINKING WATER
- ☐ DWQ/GW
- ☒ SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY: Y N

SAMPLES COLLECTED BY: (Please Print) Byron S. Hackney

SAMPLES RECEIVED IN LAB AT 4.8 °C

RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
Byron S. Hackney	10/10/07 5pm	[illegible]	10/11/07 1100
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME

COMMENTS: SW-1 + SW-2 (Art no sample collected)

Instructions for completing this form are on the reverse side.

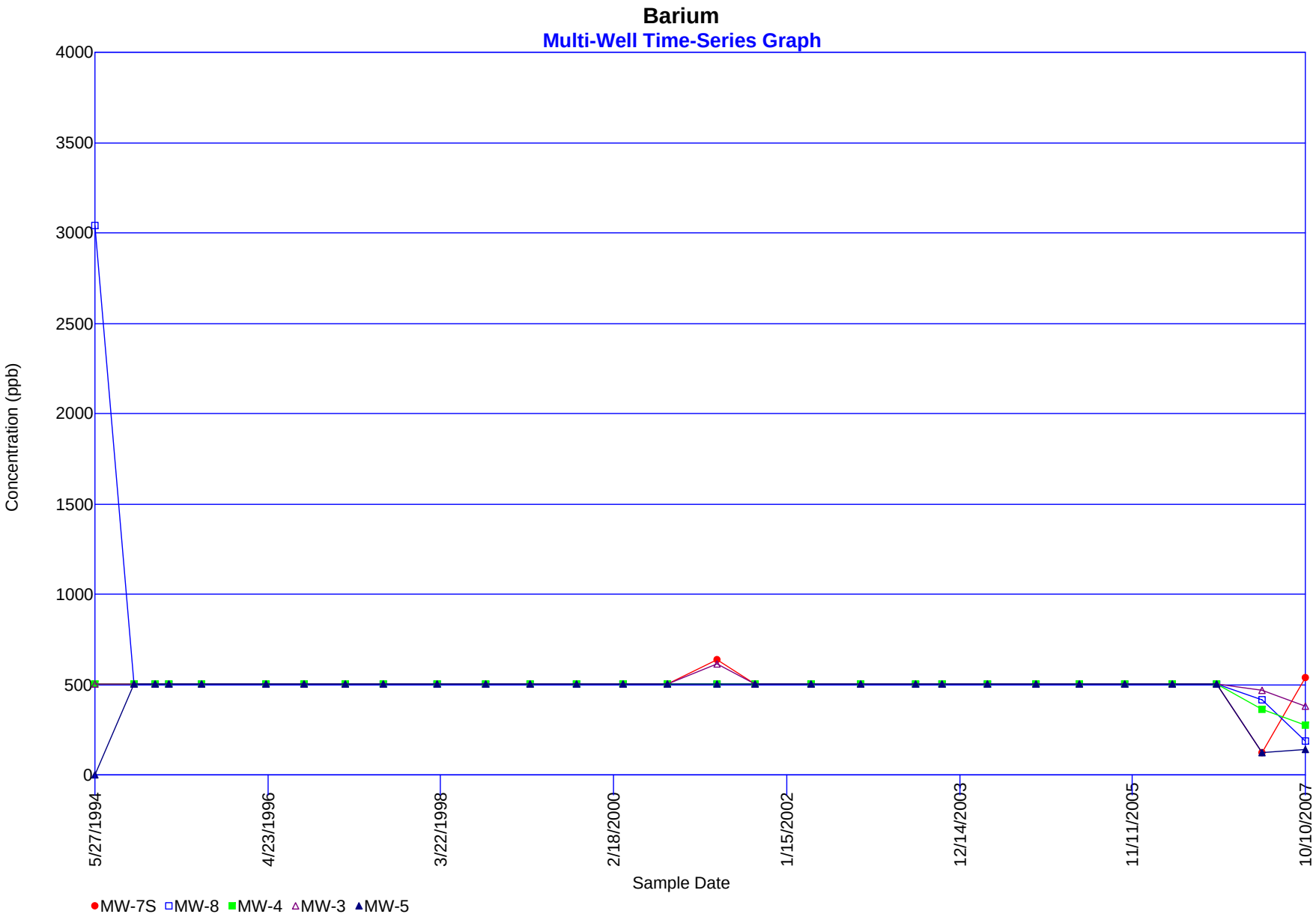
Sampler must place a "C" for composite sample or a "G" for Grab sample in the blocks above for each parameter requested.

FORM #5

№ 152224

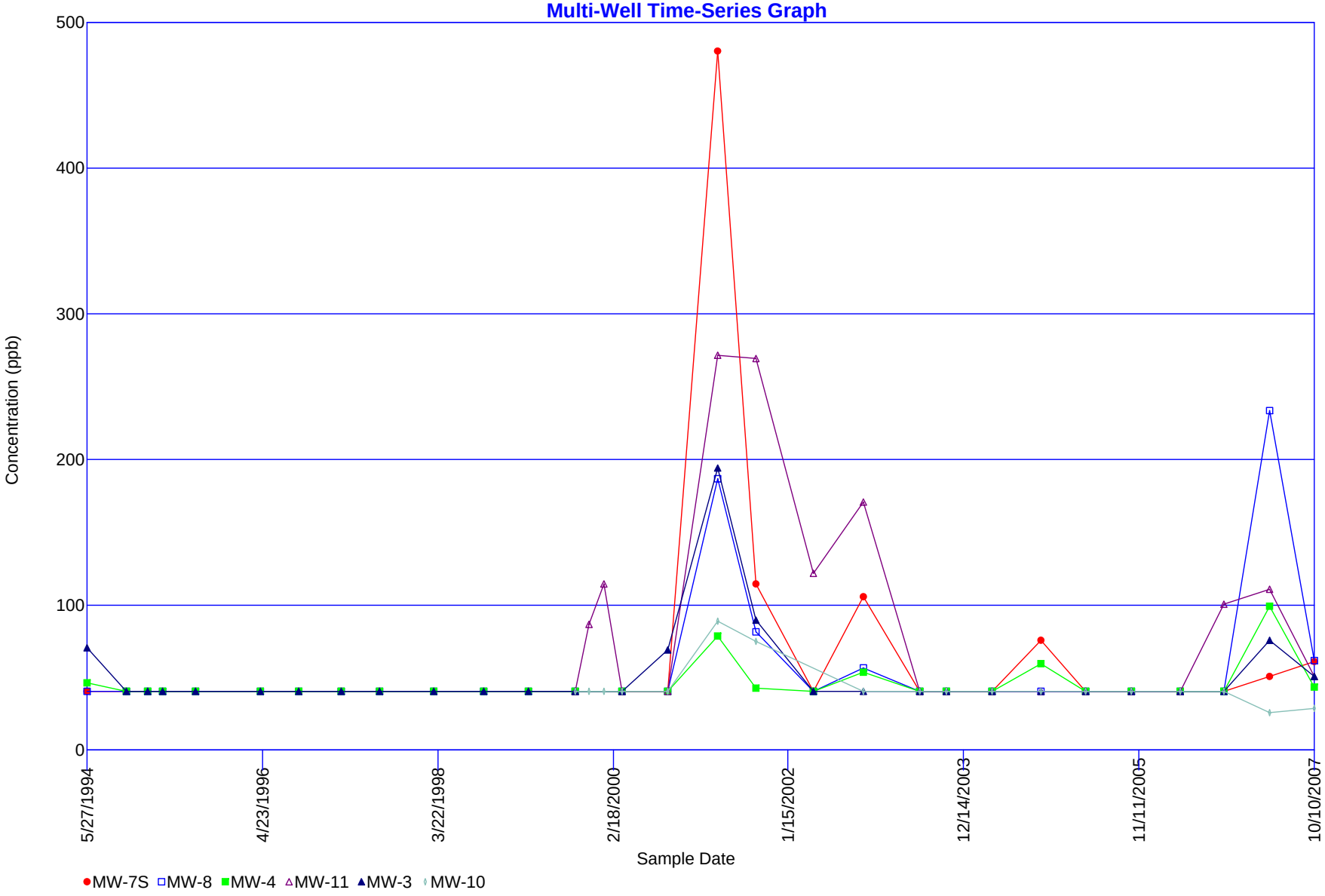
Appendix B

Time vs. Concentration Graphs


Barium
Multi-Well Time-Series Graph
Concentration (ppb)
4000
3500
3000
2500
2000
1500
1000
500
0
5/27/1994
4/23/1996
3/22/1998
2/18/2000
1/15/2002
12/14/2003
11/11/2005
10/10/2007
Sample Date
MW-7S
MW-8
MW-4
MW-3
MW-5

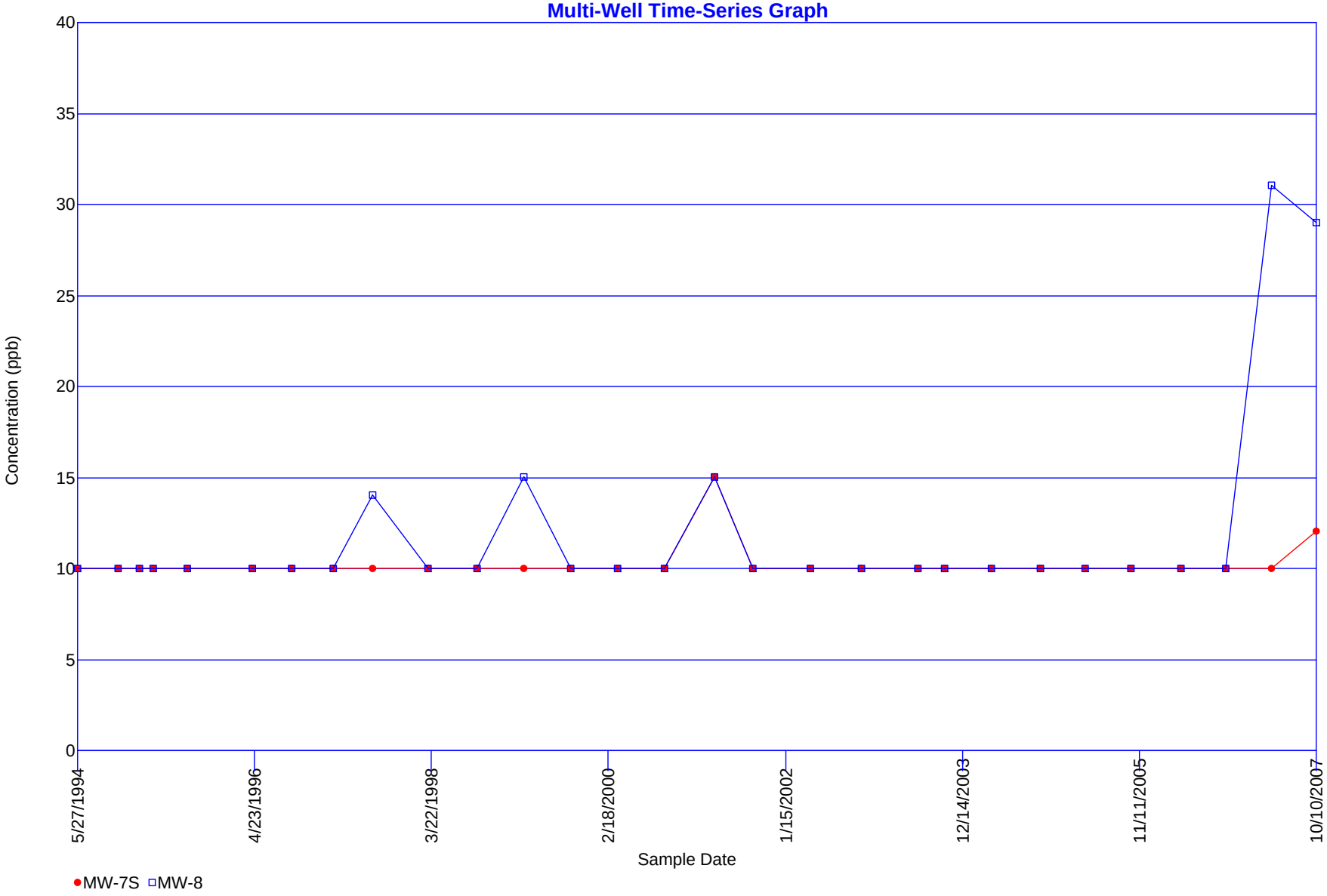
Vanadium

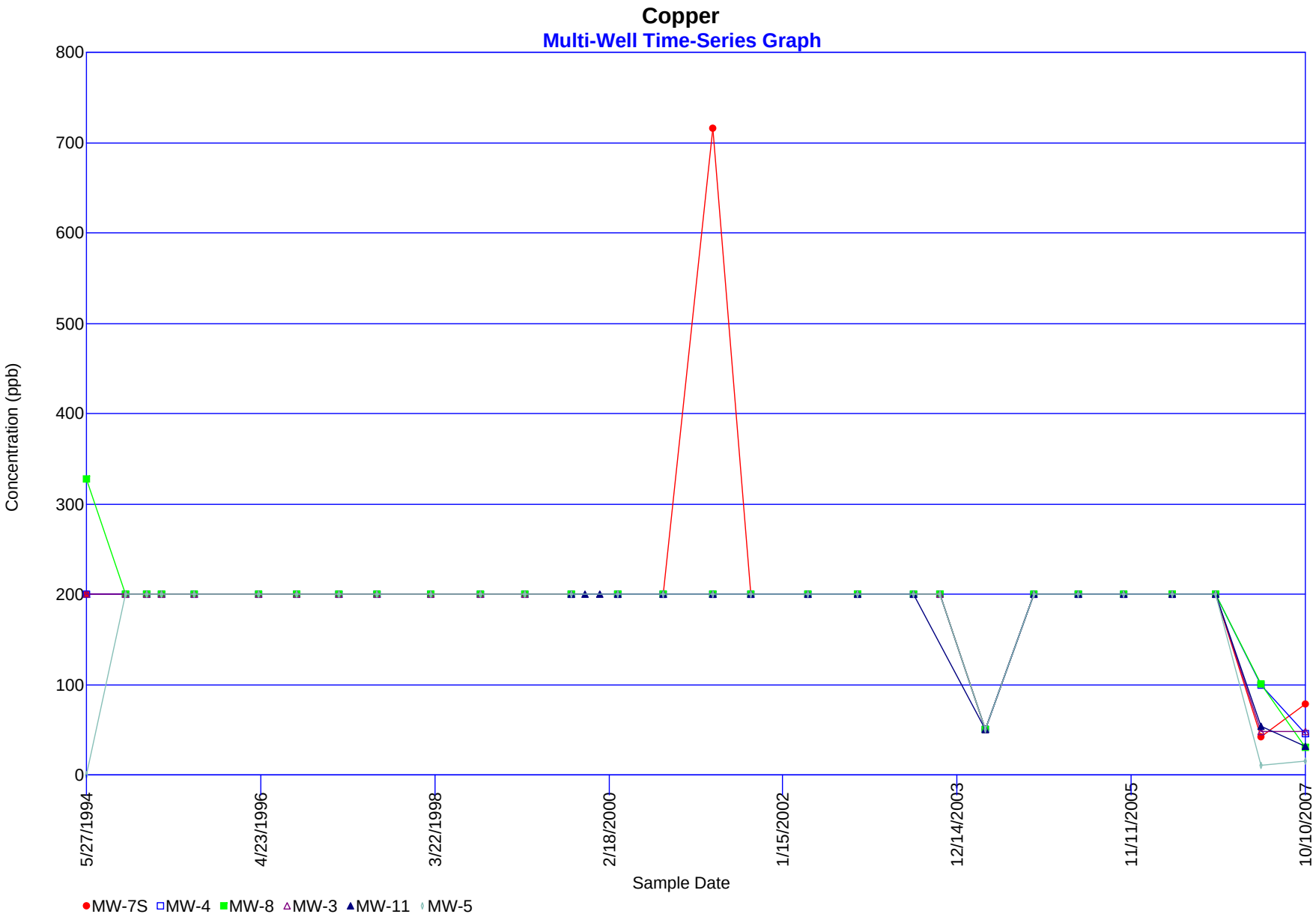
Multi-Well Time-Series Graph



Lead

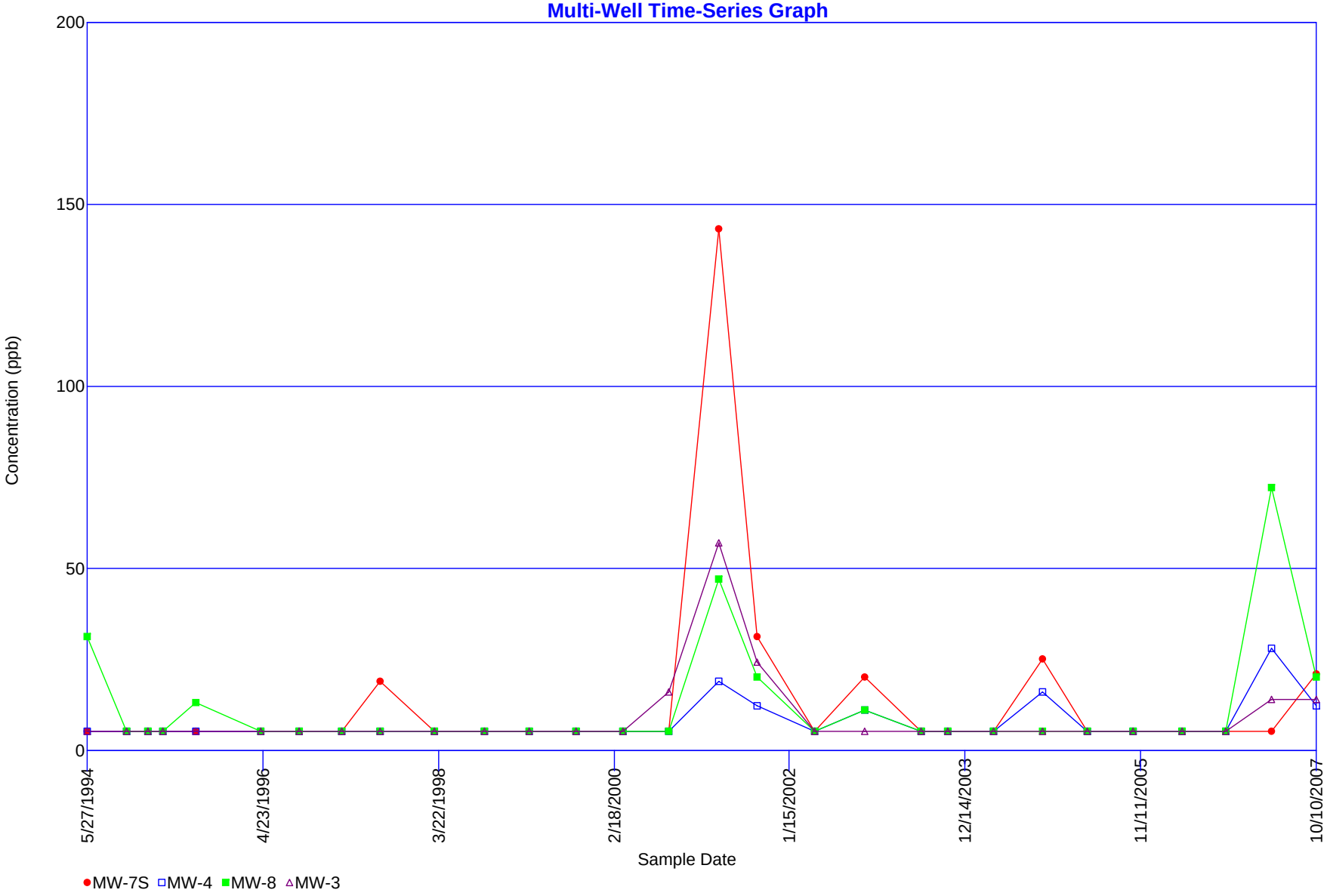
Multi-Well Time-Series Graph

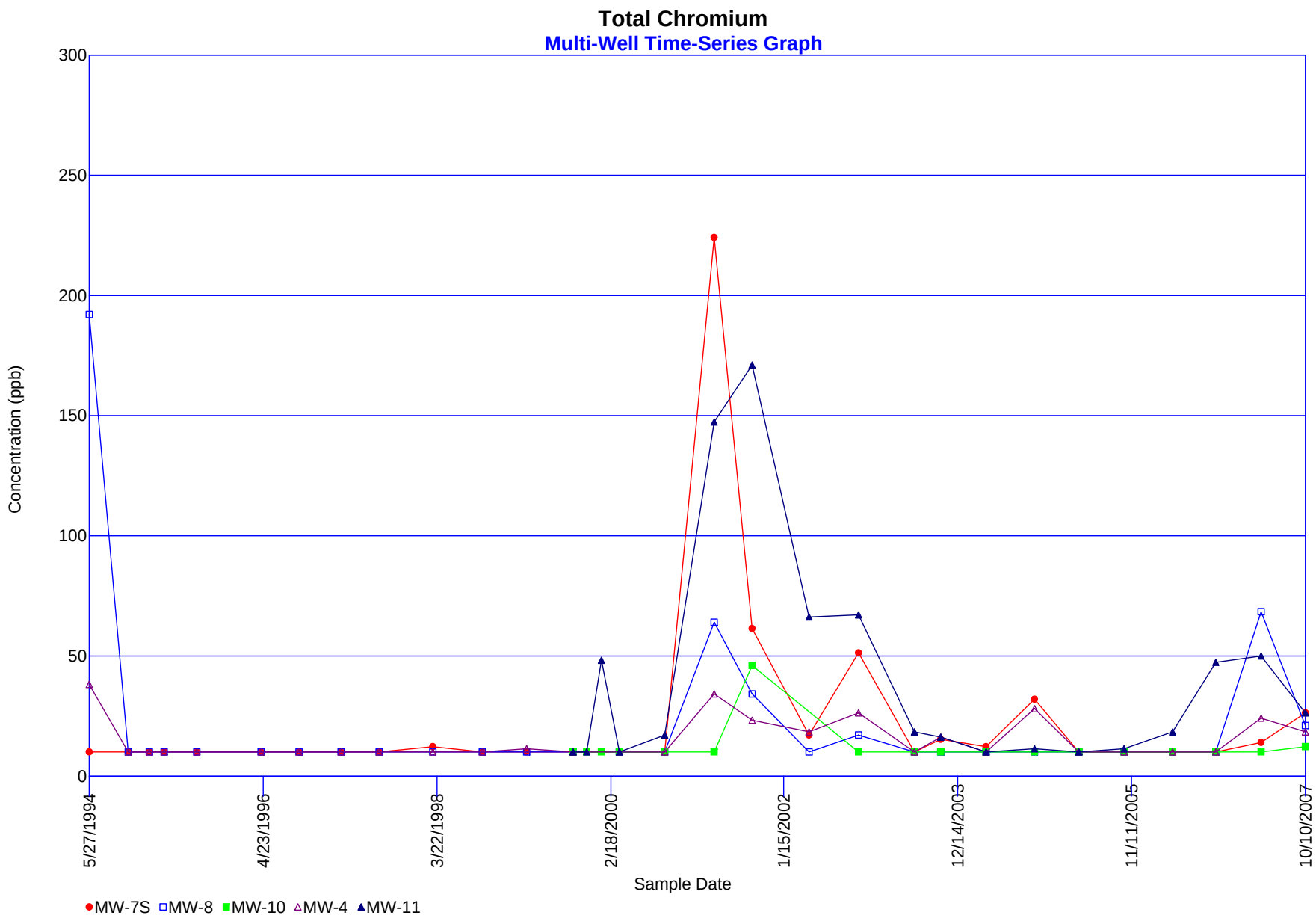


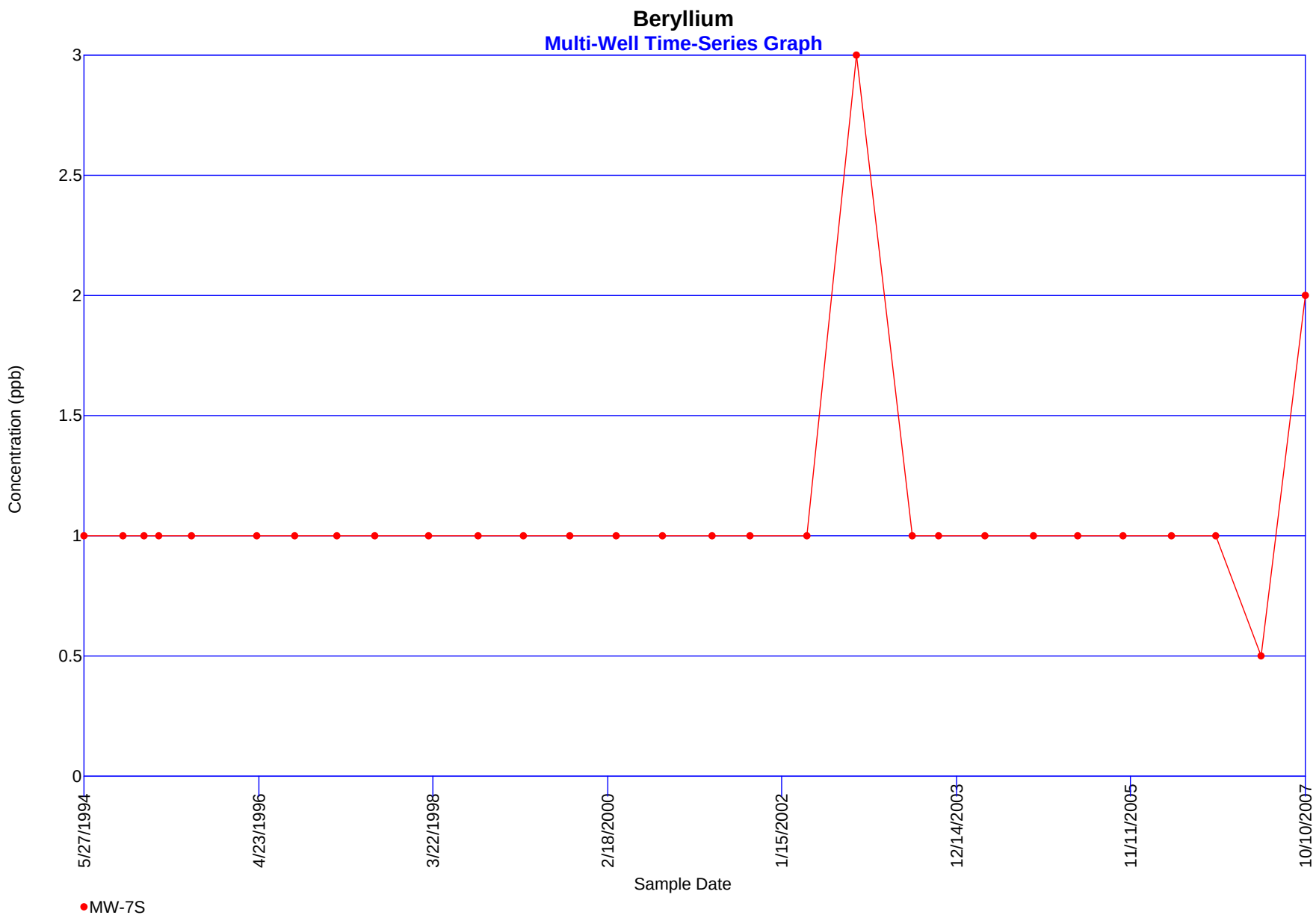

Copper
Multi-Well Time-Series Graph
Concentration (ppb)
800
700
600
500
400
300
200
100
0
5/27/1994
4/23/1996
3/22/1998
2/18/2000
1/15/2002
12/14/2003
11/11/2005
10/10/2007
Sample Date
MW-7S
MW-4
MW-8
MW-3
MW-11
MW-5

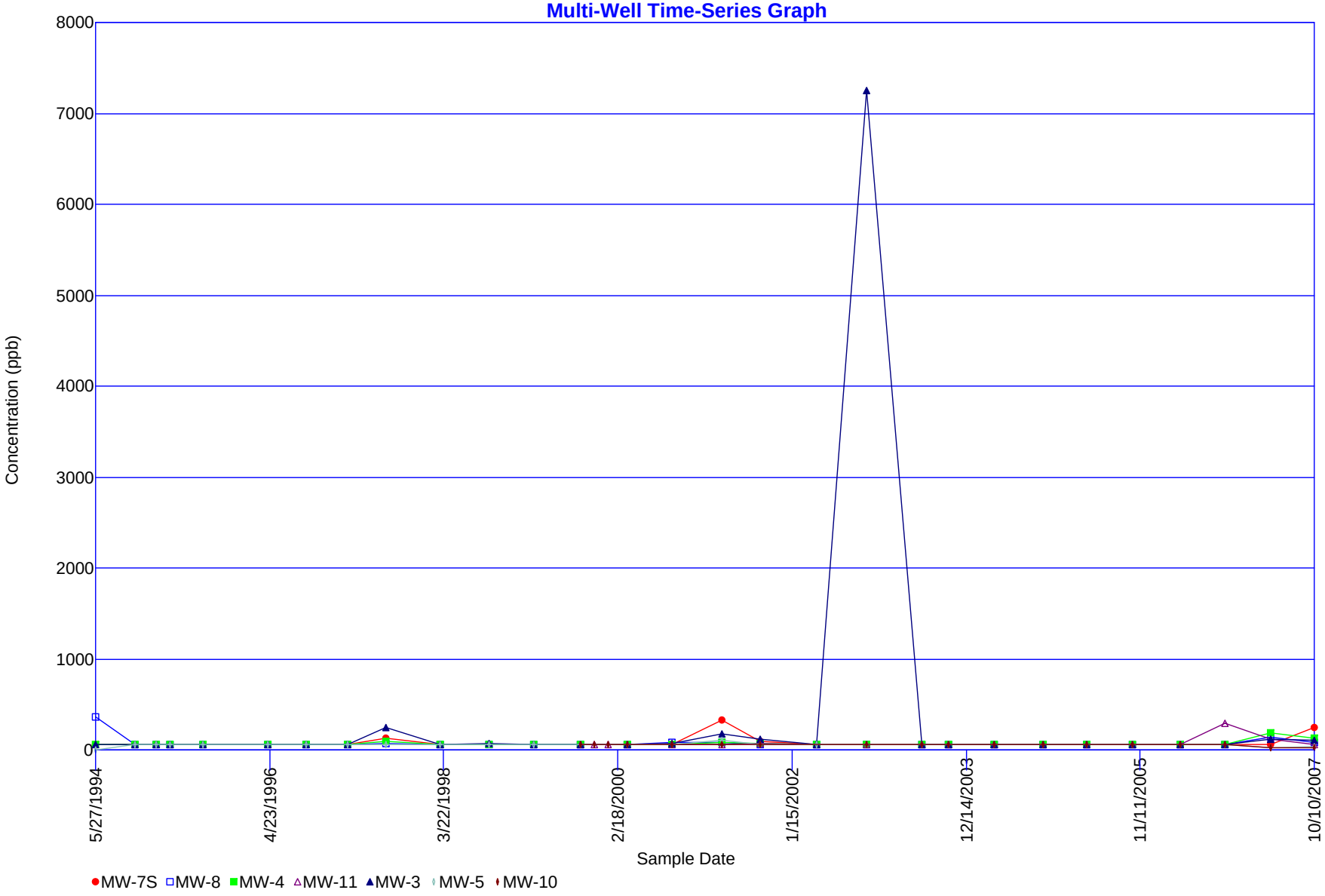
Cobalt

Multi-Well Time-Series Graph




Total Chromium
Multi-Well Time-Series Graph
Concentration (ppb)
300
250
200
150
100
50
0
5/27/1994
4/23/1996
3/22/1998
2/18/2000
1/15/2002
12/14/2003
11/11/2005
10/10/2007
Sample Date
MW-7S
MW-8
MW-10
MW-4
MW-11


Beryllium
Multi-Well Time-Series Graph
Concentration (ppb)
3
2.5
2
1.5
1
0.5
0
5/27/1994
4/23/1996
3/22/1998
2/18/2000
1/15/2002
12/14/2003
11/11/2005
10/10/2007
Sample Date
MW-7S

Zinc

Multi-Well Time-Series Graph