Periodic Review Report
for
The Taylor's Lane Compost Site
NYSDEC Site No. 360021

By
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I. Introduction

A. Site Summary

The Taylor's Lane Compost Site is located in the Village of Mamaroneck, New York. The site was used as a municipal solid waste (MSW) landfill prior to 1970. In 1987 the site was classified as a Class 2, inactive hazardous waste site by the New York State Department of Environmental Conservation (NYSDEC). The Remedial Investigation/Feasibility Study (RI/FS) Report, completed by Malcolm Pirnie in April 1993 characterized the site as containing sporadic and discontinuous Volatile Organic Compounds (VOC's), Semi-Volatile Organic Compounds (SVOC's), Low level concentrations of Pesticides, sporadic low level concentrations of PCB's and Inorganics (Metals) detected in the fill throughout the site (hypothesized to be resultant from incomplete combustion of ash, cinder and slag in the fill)

B. Effectiveness of the Remedial Program

1. During the reporting period, investigative activities were conducted to address the continued off-site migration of leachate from the site.
2. It is apparent that the cover system alone can not control the production of leachate on the site, and will need to be coupled with additional remedial action to meet this objective.

C. Compliance

1. The Site Management Plan (SMP) (formerly known as the Post-Closure Operation and Maintenance Plan) calls for routine site inspection, periodic groundwater and landfill gas monitoring, routine maintenance and reporting. These activities have been conducted as outlined. While the results of the semi-annual landfill gas and groundwater monitoring have been reported to the NYSDEC, descriptions of the site inspections and other maintenance activities have not previously been formalized in an annual report.
2. A report including the results of the semi-annual monitoring as well as the site inspections and routine maintenance activities will be produced annually starting with this year.

D. Recommendations

1. At current there are no recommended changes to the SMP, however, depending on the remedial activities eventually agreed upon for the further containment of leachate on the site, the SMP will need to be changed to include those activities in the future.
2. Assuming that the requested frequency of the Periodic Review Report (PRR) is annually, then we would not recommend any change in this frequency.
3. At present, until such time as the ongoing leachate issues can be resolved, the requirements for discontinuing site management can not be met.

II. Site Overview

A. Site Description

The Taylor's Lane Compost Site is a seven and a half (7.5) acre, inactive hazardous waste disposal site located between East Boston Post Road on the north, Taylor's Lane on the West, Shadow Lane on the South and Greenhaven Lane on the east, in the Village of Mamaroneck. The site is bounded by a gas station, several single family residences, an automobile dealership and a nursery, and is immediately east across Taylor's Lane from Magid Pond and Otter Creek. Prior to 1970 the site was used as a MSW disposal site, where industrial and incinerator ash were also disposed of, after which (until 1987) the site was used to compost leaves collected in Mamaroneck and the surrounding communities. The site was characterized during the RI/FS to contain sporadic and discontinuous VOC's and SVOC's, low level concentrations of pesticides, sporadic low level concentrations of PCB's as well as inorganics detected in the fill throughout the site.

B. Site Chronology

Prior to 1970	Site used as a MSW landfill and for disposal of industrial and incinerator ash
1970 - 1987	Site used to compost leaves collected from residential properties in Mamaroneck and surrounding communities.
July 1987	Field investigation conducted by Malcolm Pirnie to access subsurface environmental conditions, under NYSDEC supervision.
December 1988	Site Classified by NYSDEC as a Class 2 Hazardous Waste Site and placed on the New York State Superfund Registry
August 1989	Village enters into Administrative Order of Consent with NYSDEC to perform a four (4) stage remedial program (Remedial Investigation (RI), Feasibility Study (FS), Remedial Design (RD) and Implementation)
1990 - 1992	Malcolm Pirnie conducts RI of site culminating in a two (2) volume RI Report
1992 - 1993	Malcolm Pirnie completes FS Report for site
1993 - 1995	Remedial design phase completed by Wehran Engineering (now part of Shaw Environmental)
1995 - 1997	Implementation phase (construction) of remedial action completed by Breco Mechanical (contractor)
2004	NYSDEC performs a field study to investigate continued leachate seeps form the site
January 2005	Shaw-Emcon performs a Hydrologic Evaluation for the site to characterize the current site hydrology and leachate issues
2005 - Present	Due to evidence of leachate seeps along Taylor's Lane and the back yards of certain residences on Greenhaven Road and Shadow Lane, further investigation as to the post-closure continuing production of leachate, including additional well installations and pump tests are conducted to determine a remedial plan of action to address this issue.

III. Evaluation of Remedy

A. Performance, Effectiveness and Protection provided by the Remedy

The stated Remedial Goals in the Record of Decision (ROD) for the site are:

1. Limit exposure to contaminated soils
2. Limit the infiltration of surface water through the fill thereby reducing leachate production
3. control off-site leachate migration
4. Limit off-site groundwater contamination

The installation of the capping system and the fence around the site has proved effective in limiting the exposure to the contaminated soils. Relative to the leachate production in the site, based on the anecdotal evidence of leachate seeps at the Weinstein and Markowicz properties adjacent to the Eastern border of the site, and the results of the NYSDEC 2004 Site Investigation, the completion of the cap does not appear to have lessened the production of leachate on the site. As per the aforementioned report, the slightly elevated levels of arsenic found in the various samples taken were used to determine moderate leachate impact from the site. However, although suspected to be leachate related, neither the moderately elevated levels of arsenic found in the sump at the Weinstein Residence and nor the surface ponding at the Markowicz Residence can be definitively attributed to leachate impact, nor can the arsenic levels found in Magid Pond. Specifically as discussed in Volume I of the FS prepared by Malcolm Pirnie in 1993, Section 1.1 "...Although contaminant levels were elevated relative to sediment guidelines, *it was determined* [in the ecological risk assessment performed during the RI phase of the work] that the contaminants were not directly related to the site..." Table 1-2 of the FS Document presents the backup data for this assessment. Additionally, the long term groundwater monitoring as per the SMP has shown a continuing trend in a lessening of contaminant levels in the groundwater surrounding the landfill (Table III-1 Below). None-the-less, it is apparent, from the correspondence from the NYSDEC that the state is of the opinion that "the groundwater wells on the west side of Taylor's Lane have pesticides, arsenic, cadmium, copper, lead, mercury and/or zinc migrating off-site towards Magid Pond..." in sufficient quantities as to merit the implementation of the Contingent Remedy as per the 1993 ROD. The Village is meeting with the State and the Westchester County Department of Environmental Facilities (WCDEF) on 9/16/09 to discuss the potential for moving forward with the Contingent Remedy (Remedy 2B - a slurry wall and leachate extraction wells) in accordance with the ROD or whether to reopen the ROD to evaluate if, based on current technology and site knowledge, a different Contingent Remedy is more appropriate. Important to these discussions is the maximum leachate flow rate WCDEF can accept at the Mamaroneck WWTP, which, according to initial discussions is around 50 gpm with a maximum term of three (3) to five (5) years (i.e. This is not a permanent solution). This flow rate limitation may drive how the eventual groundwater controls are enacted. Additionally, the Village is applying to the State to obtain Grant Funding through a new State Assistance Contract (SAC) for both the IRM's implemented to dat as well as the long term groundwater controls to be implemented in the future. Depending on the results of the aforementioned meeting, the continuation of the remedial action at the site would follow the three Stages as Outlined in the Title 3 Guidelines.

Stage I: Remedial Investigation and Feasibility Study (RI/FS)

The original RI/FS, prepared by Malcolm Pirnie, Inc., and completed in 1993, outlined the Selected Contingency Remedy (Alternative 2B) for groundwater control to be installation of a slurry wall around the site and the installation of contaminant wells for the further extraction of leachate with disposal to the local Public Owned Treatment Works (POTW). Subsequent to evidence of a leachate buildup under the cap at the site, several additional studies have been conducted at the site since early 2005 for the purpose

alternatives, screen said alternatives, perform detailed analysis of same, remedy selection, data validation and citizen participation.

Stage II: Remedial Design (RD)

The scope of the RD activities will include all engineering activities required for the development of designs, plans, specifications and contract documents necessary to implement the selected remedial action as defined in the 1993 RI/FS ROD (with the exception of the elimination of a pre-treatment system determined to be un-necessary for disposal of leachate to the POTW) or an altermnative Contingent Remedy as the case may be.

Stage III: Remedial Action Construction and Construction Oversight (RA)

The scope for the RA activities will include the Interim Remedial Measures (IRM's) implemented to date to limit public exposure to leachate impacted groundwater as well the additional IRM to be implemented in the next three months, and all those activities necessary to implement the selected Contingency Remedy as per the 1993 RI/FS ROD as noted above or or an altermnative Contingent Remedy, as the case may be.

Preliminary Costs and Schedules for each of the options discussed above are presented below. The general estimated cost of the remedial program is $2,838,781 for implementation of the Contingency Remedy 2B as per the 1993 ROD (without Pre-Treatment), or $3,286,801 to reopen the ROD and pursue a potential Pump & Treat System with effluent disposal via a SPDES Permit.. These figures are Capital Expenditures Only, and include all anticipated stages of the project and are based on the original estimates in the 1993 RI/FS updated to 2009 dollars and incorporate the additional site knowledge gained through the testing and IRM's implemented since 2005. Detailed Cost Analyses are Presented as Tables III-2 and III-3

		Option A	***Option B***
Stage I: RI/FS	Estimated Total Cost	$353,051	$353,051
Stage II: RD	Estimated Total Cost	$312,164	$469,887
Stage II: RA	Estimated Total Cost	$2,383,566	$2,593,862
Total Project	Estimated Total Cost	$3,048,781	$3,416,800

Estimated Progress Schedule

Stage:		***Option A***	***Option B***
Stage I: RI/FS		1/1/05 - 5/1/10	1/1/05 - 5/1/10
Stage II: RD		5/1/10 - 12/31/10	5/1/10 - 12/31/10
Stage II: RA	IRM's	1/1/05 - 12/1/09	1/1/05 - 12/1/09
	Remedy	3/1/11 - 3/31/12	3/1/11 - 9/30/12

Table III-1
Historic Groundwater
Arsenic and VOC Results

Well	MW-1S	MW-1D	MW-2S			MW-2D	MW-3S	MW-3D
Date / Parameter GW Stand.	Arsenic 25.0 µg/L	Arsenic 25.0 µg/L	Arsenic 25.0 µg/L	CH_2:CHCl 2.0µg/L	1,2-DCE 5.0 µg/L	Arsenic 25.0 µg/L	Arsenic 25.0 µg/L	Arsenic 25.0 µg/L
5/22/97	3.7	4.9	4.4	4.0	2.0	7.9	7.1	7.2
11/14/97	17.2	5.2	5.9	21.0	3.0	4.6	14.4	9.1
5/19/98	8.3	9.1	7.6	17.0	3.0	7.6	15.2	13.1
11/5/98	24.5	34.2	21.4	14.0	3.0	13.4	U	U
5/25/99	U	U	U	13.0	2.0	U	U	U
11/18/99	U	U	U	6.0	U	U	7.8	U
6/28/00	U	U	U	7.8	1.6	U	3.6	U
11/15/00	11.2	U	U	U	U	U	U	U
6/20/01	U	U	U	7.6	1.2	U	6.9	U
11/29/01	U	U	U	U	U	U	U	U
6/26/02	U	U	U	1.6	U	U	U	U
11/19/02	U	U	U	U	U	U	U	U
6/24/03	U	U	U	3.3	U	U	U	U
11/17/03	U	U	U	1.2	U	U	U	U
6/21/04	U	U	U	0.96	U	U	U	U
11/22/04	U	U	U	0.64	U	U	U	U
6/22/2005	U	U	U	7.70	1.1	U	U	U
11/22/2005	U	U	U	4.10	U	U	U	U
7/5/2006	U	U	U	6.40	0.6	U	U	U
11/27/2006	U	U	U	4.00	U	U	22.6	U
6/27/2007	U	U	U	2.50	U	U	U	21.9
1/9/2008	U	U	U	2.20	U	U	U	U
7/23/2008	19.9	U	U	2.80	0.5	U	11.6	U
2/20/2009	12.0	U	U	1.30	U	U	U	U

Taylors Lane Compost Site Periodic Review Report
Taylors Lane Table III-2

Cost Estimate Option A: Implement Contingency Remedy in accordance with the 1993 ROD, Remedy 2B (Slurry wall and leachate extraction wells)

	Total Project Cost
Stage I: RI/FS	
Pump testing to institute Intermediate Remedial measures (IRM's)	
January 2005 Hydrogeologic Evaluation of Taylors Lane Site	$11,086
June 2007 IRM Evaluation Report	$8,485
November 2008 Pump Test	$41,600
May 2009 Pump test	$61,880
FS for Long Term Solution and IRM	
Additional Pump Testing and implementation of Leachate Well Extraction System IRM	$200,000
Supplemental FS Vol 3	$30,000
Stage I Subtotal	***$353,051***
Stage II: RD	
Engineering Design to Implement IRM's	
Engineering Design of IRMs	$20,000
Engineering Design to Implement Contingency Remedy	
Engineering Design of Alternative 2B	$292,164
Stage II Subtotal	***$312,164***
Stage II: RA	
Implementation of IRM's	
Relocation of MW-1S, 1D, 2S, 2D, 3S & 3D to prevent leachate overflows on Taylor's Lane	$36,450
Installation of exterior sump pumps to cutoff leachate flow to the weinstein residence	$9,800
Implementation of Alternative 2B	
Slurry Wall and Contaminant Wells	$2,337,316
Stage III Subtotal	***$2,383,566***
Project Total	**$3,048,781**

	1993 RI/FS		2009		Assumptions
ENR CCI	5071		8549		2009 Changes
	Capital	O&M	Capital	O&M	
[redacted]	[redacted]	[redacted]	Completed		Completed as selected remedy 2A
GROUNDWATER CONTROL					
Slurry Walls	$965,000		$1,626,856		$15/sf(depth 30ft - perimeter 2100 ft)
Containment Wells					2 Collection Wells
- Well Installation	$36,300		$61,197		$18,150 each well (2 wells)
- Step - Drawdown test	$2,760		$4,653		2 people; 2 days
- Pumps	$3,000		$5,058		$1,500 each pump
[redacted]	[redacted]		[redacted]		
PRE-TREATMENT			Not Necessary for POTW		
Equalization Tank	$50,000		N/A		Allowance
Feed Pumps	$6,000		N/A		4 @ $1,500 each pump
Lime Softening	$288,000	$48,000	N/A	N/A	50 gpm two - stage package plant
Sludge Dewatering	$140,000	$2,000	N/A	N/A	Alfa-Laval PM - 38000
[redacted]	[redacted]	[redacted]	[redacted]		
DISPOSAL					
Discharge to POTW					
- Conveyance to POTW	(1)	(1)	$250,000		
- POTW Fees	(1)	(1)		$15,000	
- Monitoring	(1)	(1)		(1)	
Sludge Disposal		$220,000	N/A	N/A	Generating 900 tons/yr; 20% sludge solids
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
ALLOWANCES					
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
Engineering (15%)	$352,987		$292,164		
Contingency (20%)	$470,649	$63,930	$389,553	$3,000	
ECONOMIC ANALYSIS					See Economic Parameters below
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
Present Worth	$6,498,572		$82,435		
Total Present Worth	$9,675,455		$2,711,915		

Not Necessary for POTW Disposal as per 2008 Sampling Results

N/A

(1) Costs not available from Westchester County DEF as of 10/92; but would be included during remedial design.

ECONOMIC PARAMETERS

	1993	2009	
j =	0.040	0.030	(inflation)
I =	0.080	0.060	(interest)
n =	30.000	5.000	(project life)

Table taken from original Table 3-3 of the FS Prepared by Malcolm Pirnie, Inc and revised for updated Capital Costs and current proposed program changes

Taylors Lane Compost Site Periodic Review Report
Taylors Lane Table III-3

Cost Estimate Option B: Reopen the ROD for a Pump & Treat solution w/ no Slurry Wall and direct discharge through SPDES Permit

	Total Project Cost
Stage I: RI/FS	
Pump testing to institute Intermediate Remedial measures (IRM's)	
January 2005 Hydrogeologic Evaluation of Taylors Lane Site	$11,086
June 2007 IRM Evaluation Report	$8,485
November 2008 Pump Test	$41,600
May 2009 Pump test	$61,880
Supplemental FS for Reopening the ROD	
FS Phase II Report	$100,000
Stage I Subtotal	***$223,051***
Stage II: RD	
Engineering Design to Implement IRM's	
Engineering Design of IRMs	$20,000
Engineering Design to Implement Contingency Remedy	
Engineering Design of Alternative 2B	$449,887
Stage II Subtotal	***$469,887***
Stage II: RA	
Implementation of IRM's	
Relocation of MW-1S, 1D, 2S, 2D, 3S & 3D to prevent leachate overflows on Taylor's Lane	$36,450
Installation of exterior sump pumps to cutoff leachate flow to the weinstein residence	$9,800
Implementation of Alternative 2B	
Slurry Wall and Contaminant Wells	$2,547,612
Stage III Subtotal	***$2,593,862***
Project Total	**$3,286,801**

Taylors Lane Compost Site Periodic Review Report
Taylors Lane Table III-3

Cost Estimate Option B: Reopen the ROD for a Pump & Treat solution w/ no Slurry Wall and direct discharge through SPDES Permit

	Total Project Cost
Stage I: RI/FS	
Pump testing to institute Intermediate Remedial measures (IRM's)	
January 2005 Hydrogeologic Evaluation of Taylors Lane Site	$11,086
June 2007 IRM Evaluation Report	$8,485
November 2008 Pump Test	$41,600
May 2009 Pump test	$61,880
FS for Long Term Solution and IRM	
Additional Pump Testing and implementation of Leachate Well Extraction System IRM	$200,000
Supplemental FS Vol 3	$30,000
Stage I Subtotal	***$353,051***
Stage II: RD	
Engineering Design to Implement IRM's	
Engineering Design of IRMs	$20,000
Engineering Design to Implement Contingency Remedy	
Engineering Design of Alternative 2B	$449,887
Stage II Subtotal	***$469,887***
Stage II: RA	
Implementation of IRM's	
Relocation of MW-1S, 1D, 2S, 2D, 3S & 3D to prevent leachate overflows on Taylor's Lane	$36,450
Installation of exterior sump pumps to cutoff leachate flow to the weinstein residence	$9,800
Implementation of Alternative 2B	
Slurry Wall and Contaminant Wells	$2,547,612
Stage III Subtotal	***$2,593,862***
Project Total	**$3,416,801**

III. Evaluation of Remedy

	1993 RI/FS		2009		Assumptions
ENR CCI	5071		8549		2009 Changes
	Capital	O&M	Capital	O&M	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Completed as selected remedy 2A
GROUNDWATER CONTROL					
Slurry Walls	$965,000				$15/sf(depth 30ft - perimeter 2100 ft) *Eliminated*
Containment Wells					2 Collection Wells *7 Collection Wells*
- Well Installation	$36,300		$214,189		$18,150 each well (2 wells)
- Step - Drawdown test	$2,760		$4,653		2 people; 2 days
- Pumps	$3,000		$17,702		$1,500 each pump
[illegible]	[illegible]		[illegible]		
PRE-TREATMENT			Not Necessary for POTW		
Equalization Tank	$50,000		$84,293		Allowance
Feed Pumps	$6,000		$10,115		4 @ $1,500 each pump
Lime Softening	$288,000	$48,000	$971,056	$48,000	50 gpm two - stage package plant *700 gpm plant*
Sludge Dewatering	$140,000	$2,000	$236,021	$2,000	Alfa-Laval PM - 38000
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
DISPOSAL					
Discharge to POTW					
- Conveyance to POTW	(1)	(1)	N/A	N/A	
- POTW Fees	(1)	(1)	N/A	N/A	
- Monitoring	(1)	(1)	N/A	$24,000	*$2,000/month Effluent Sampling*
Sludge Disposal		$220,000	N/A	$220,000	Generating 900 tons/yr; 20% sludge solids
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
ALLOWANCES					
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Engineering (15%)	$352,987		$449,887		
Contingency (20%)	$470,649	$63,930	$599,849	$58,800	
ECONOMIC ANALYSIS					See Economic Parameters below
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Present Worth	$6,498,572		$1,615,721		
Total Present Worth	$9,675,455		$5,664,705		

(1) Costs not available from Westchester County DEF as of 10/92; but would be included during remedial design.

ECONOMIC PARAMETERS

	1993	*2009*	
j =	0.040	0.030	(inflation)
I =	0.080	0.060	(interest)
n =	30.000	5.000	(project life)

Table taken from original Table 3-3 of the FS Prepared by Malcolm Pirnie, Inc and revised for updated Capital Costs and current proposed program changes

IV. IC/EC Requirements

A. IC/EC Requirements and Compliance

1. Institutional Controls (IC) on the Site are Land-Use Restrictions. Engineering Controls (EC) are the Part 360 Cap and the Fencing System. The Goal of these IC/EC Controls is to limit Human Exposure to the Waste
2. Each of these goals is currently fully implemented and functioning as designed.
3. No current corrective measures are required for the currently implemented IC/EC's
4. Currently evaluations are being conducted as discussed above for implementation of additional EC's for groundwater control.

B. IC/EC Certification

1. Certification Attached

V. Monitoring Plan Requirements

A. Components of the Monitoring Plan

The Monitoring Plan calls for Semi-Annual Groundwater Sampling of the Downstream Wells to the west of the site as well as simultaneous monitoring of the Landfill Gas (LFG) wells on the site. A full report of these activities is submitted to the Department on a Semi Annual Basis. A Copy of the latest Report was recently sent to the Department.

B. Monitoring Completed During the Period

Two sampling events were completed during the period. The results of the Groundwater Sampling are included in this report as Table V-1

C. Comparisons with Remedial Objectives

While the trending of the sampling indicates an overall decrease in the quantity and level of the excedences for contaminants of concern in the groundwater surrounding the site, the State appears to have determined that these excedences constitute off-site mitigation of said contaminants in quantities sufficient as to require implementation for the Contingent Remedy. (Charts presented as Figures V-1 through V-7)

D. Monitoring Deficiencies

Monitoring was fully compliant with the requirements of the State

E. Recommendations & Conclusions

Currently only Well 2S is monitored for VOC's and none of the wells are monitored for Iron. We would recommend at least once annually all the wells be monitored for VOC's and Iron be added to the sampling contaminant list. In addition, wells 9S and 9D which are up-gradient of the Landfill should also be analyzed to provide a baseline for groundwater entering the landfill waste mass.

V. Monitoring Plan Requirements

Table V-1
Taylors Lane Historical GW Sampling

Well	MW-1S						MW-1D						MW-2S										MW-2D						MW-3S						MW-3D					
Parameter	Arsenic	Cadmium	Copper	Lead	Mercury	Zinc	Arsenic	Cadmium	Copper	Lead	Mercury	Zinc	Arsenic	Cadmium	Copper	Lead	Mercury	Zinc	Vinyl Chloride	1,2-Dichloroethene	MTBE	Tert-Butyl-Alcohol	Arsenic	Cadmium	Copper	Lead	Mercury	Zinc	Arsenic	Cadmium	Copper	Lead	Mercury	Zinc	Arsenic	Cadmium	Copper	Lead	Mercury	Zinc
GW Standard	25.0	5.0	200.0	25.0	0.7	2,000	25.0	5.0	200.0	25.0	0.7	2,000	25.0	5.0	200.0	25.0	0.7	2,000	2.0	5.0	10.0	20	25.0	5.0	200.0	25.0	0.7	2,000	25.0	5.0	200.0	25.0	0.7	2,000	25.0	5.0	200.0	25.0	0.7	2,000
5/22/1997	3.7	U	5.7	U	U	20.0	4.9	U	3.6	U	U	17.2	4.4	U	19.9	4.4	U	31.3	**4.0**	2.0			7.9	U	U	U	U	12.6	7.1	U	18.8	12.7	U	83.7	7.2	U	14.5	21.2	U	931.0
11/14/1997	17.2	3.3	46.5	2.4	U	74.2	5.2	U	13.1	U	U	37.0	5.9	1.2	34.2	2.9	U	75.0	**21.0**	3.0			4.6	0.9	7.7	U	U	10.6	14.4	2.8	74.3	**36.1**	U	102.0	9.1	1.9	35.3	18.2	U	514.0
5/19/1998	8.3	0.8	9.3	1.4	U	130.0	9.1	0.2	3.7	U	U	12.7	7.6	0.7	5.7	0.8	U	23.7	**17.0**	3.0			7.6	0.4	4.5	U	U	51.4	15.2	1.3	26.8	14.6	U	48.7	13.1	2.6	12.3	16.6	U	806.0
11/5/1998	24.5	1.1	8.3	U	U	13.9	**34.2**	U	16.6	U	U	27.9	13.4	0.9	13.9	U	U	23.3	**14.0**	3.0			13.4	1.2	77.4	U	U	8.8	U	4.2	15.5	6.1	U	29.9	U	U	85.8	23.5	U	659.0
5/25/1999	U	1.4	6.8	U	U	15.0	U	U	21.4	U	U	36.7	U	U	7.2	U	U	16.2	**13.0**	2.0			U	U	18.5	U	U	20.4	U	U	9.4	13.0	U	21.8	U	4.9	17.5	12.7	U	558.0
11/18/1999	U	2.8	21.8	U	U	26.8	U	U	23.1	U	U	38.0	U	2.1	103.0	21.0	0.09	95.6	**6.0**	U			U	U	7.6	U	U	21.3	7.8	4.8	**478.0**	**68.0**	0.27	102.0	U	1.6	22.1	3.6	U	101.0
6/28/2000	U	1.1	U	U	0.05	7.9	U	U	15.0	**44.4**	U	104.0	U	1.4	36.0	7.2	0.02	202.0	**7.8**	1.6			U	U	U	U	U	26.8	3.6	1.1	**255.0**	**98.5**	0.34	432.0	U	U	U	17.5	0.04	941.0
11/15/2000	11.2	U	87.0	U	U	U	U	U	38.4	**91.8**	U	1,650	U	U	U	8.1	U	52.8	U	U			U	U	U	U	U	72.6	U	U	43.2	22.5	U	122.0	U	**5.1**	U	19.6	U	**2,040**
6/20/2001	U	3.2	10.3	1.7	U	25.0	U	2.3	17.7	**37.9**	U	630.0	U	4.0	145.0	**45.2**	U	274.0	**7.6**	1.2	**190.0**		U	U	17.1	5.1	U	U	6.9	4.5	**520.0**	**62.3**	0.28	314.0	U	U	16.0	7.3	U	246.0
11/29/2001	U	U	U	U	U	U	U	U	U	U	U	29.5	U	U	25.9	U	U	23.1	U	U	**82.0**	**270.0**	U	U	U	U	U	U	U	U	**204.0**	21.5	U	56.5	U	U	U	U	U	56.4
6/26/2002	U	U	U	U	U	U	U	U	23.0	U	U	28.2	U	U	U	5.9	U	**76.8**	**1.6**	U	**50.0**	**130.0**	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
11/19/2002	U	U	U	U	U	U	U	U	40.0	5.6	U	69.6	U	U	47.0	13.2	U	65.2	U	U	**56.0**	**210.0**	U	U	U	U	U	42.9	U	U	U	5.1	U	U	U	U	U	U	U	U
6/24/2003	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	**3.3**	U	**270.0**	U	U	U	U	U	U	55.5	U	U	U	6.8	U	U	U	U	U	U	U	U
11/17/2003	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	1.2	U	**250.0**	**120.0**	U	U	U	U	U	55.5	U	U	U	21.5	U	38.6	U	U	U	U	U	U
6/21/2004	U	U	U	U	U	21.0	U	U	U	U	U	U	U	U	U	U	U	U	1.0	U	**380.0**	**90.0**	U	U	U	U	U	U	U	U	27.4	17.8	U	45.7	U	U	U	U	U	U
11/22/2004	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	0.6	U	**380.0**	**200.0**	U	U	U	U	U	U	U	U	56.0	10.1	U	113.0	U	U	U	12.4	U	U
6/22/2005	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	7.7	1.1	**16.0**	**23.0**	U	U	U	U	U	U	U	U	U	U	U	113.0	U	U	U	U	U	U
11/22/2005	U	U	U	U	U	20.5	U	U	31.2	10.7	U	144.0	U	U	U	U	U	32.9	**4.1**	U	**61.0**	**90.0**	U	U	U	U	U	U	U	U	U	11.3	U	33.3	U	U	U	5.6	U	58.6
7/5/2006	U	U	U	U	U	25.0	U	U	U	U	U	51.0	U	U	U	U	U	U	**6.4**	0.6	**63.0**	**110.0**	U	U	U	U	U	U	U	U	26.0	6.0	U	U	U	U	U	U	U	U
11/27/2006	U	U	21.6	U	U	23.3	U	U	64.1	13.2	U	352.0	U	U	28.5	13.2	U	**84.7**	**4.0**	U	**70.0**	**110.0**	U	U	U	U	U	U	22.6	**10.4**	38.7	**54.2**	U	64.4	U	U	U	7.3	U	65.5
6/27/2007	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	**2.5**	U	**93.0**	**250.0**	U	U	U	U	U	U	U	U	U	U	U	U	21.9	U	106.0	**72.5**	U	1,150
1/9/2008	U	U	51.8	6.7	U	`38	U	U	37.5	11.0	U	343.0	U	U	U	U	U	31.7	**2.2**	U	**74.0**	**350.0**	U	U	U	U	U	U	U	U	74.5	5.9	U	45.6	U	U	U	11.5	U	148.0
7/23/2008	19.9	U	U	**26.5**	U	38.9	U	U	U	6.5	U	U	U	U	U	10.4	U	U	**2.8**	0.5	**12.0**	**37.0**	U	U	U	10.4	U	U	11.6	U	U	16.1	U	69.5	U	U	U	U	U	61.4
2/20/2009	12.0	U	U	5.7	U	U	U	U	U	U	U	U	U	U	U	U	U	U	1.3	U	**16.0**	**43.0**	U	U	U	U	U	U	U	U	U	U	U	45.0	U	U	U	U	U	44.0

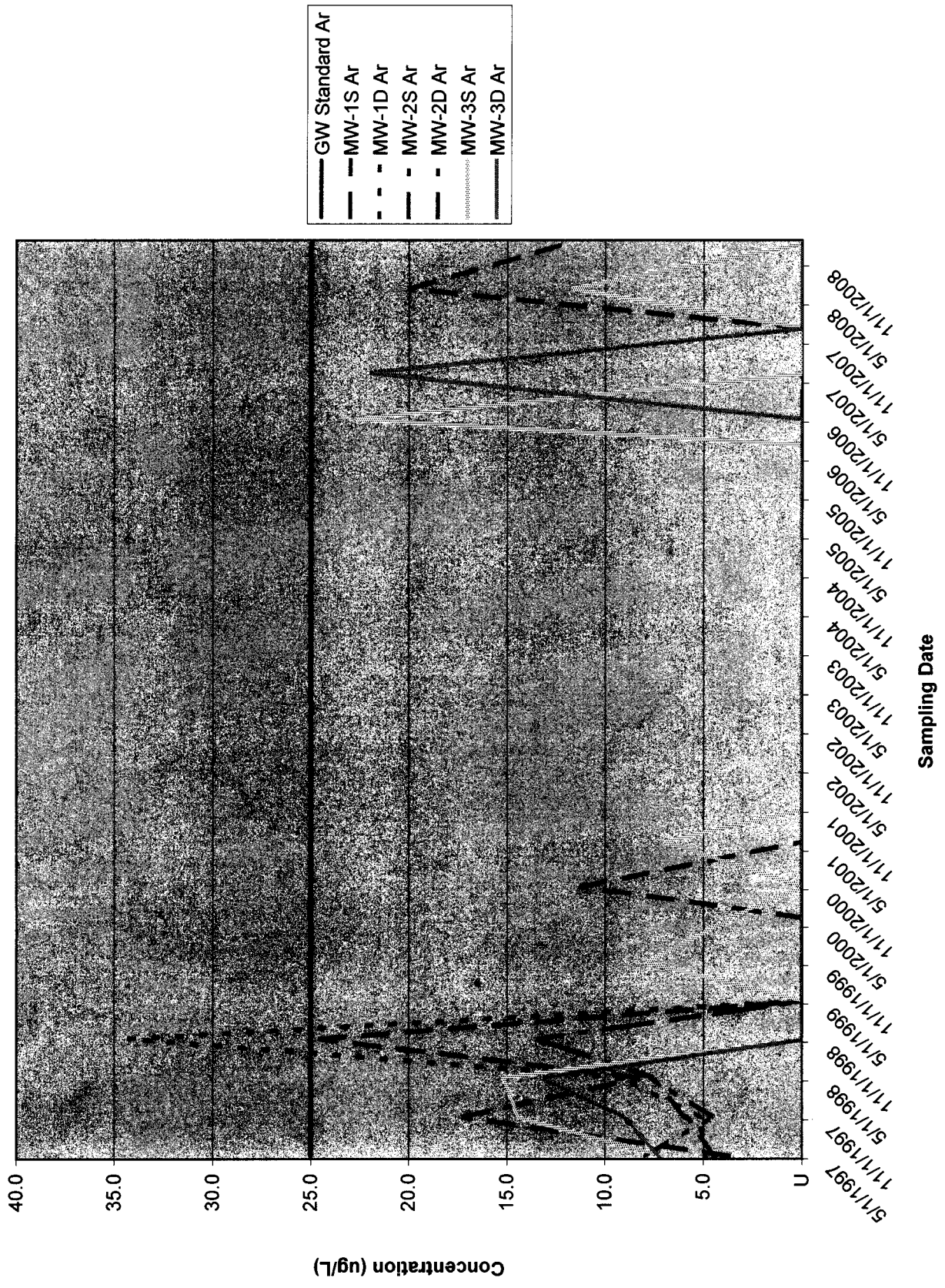
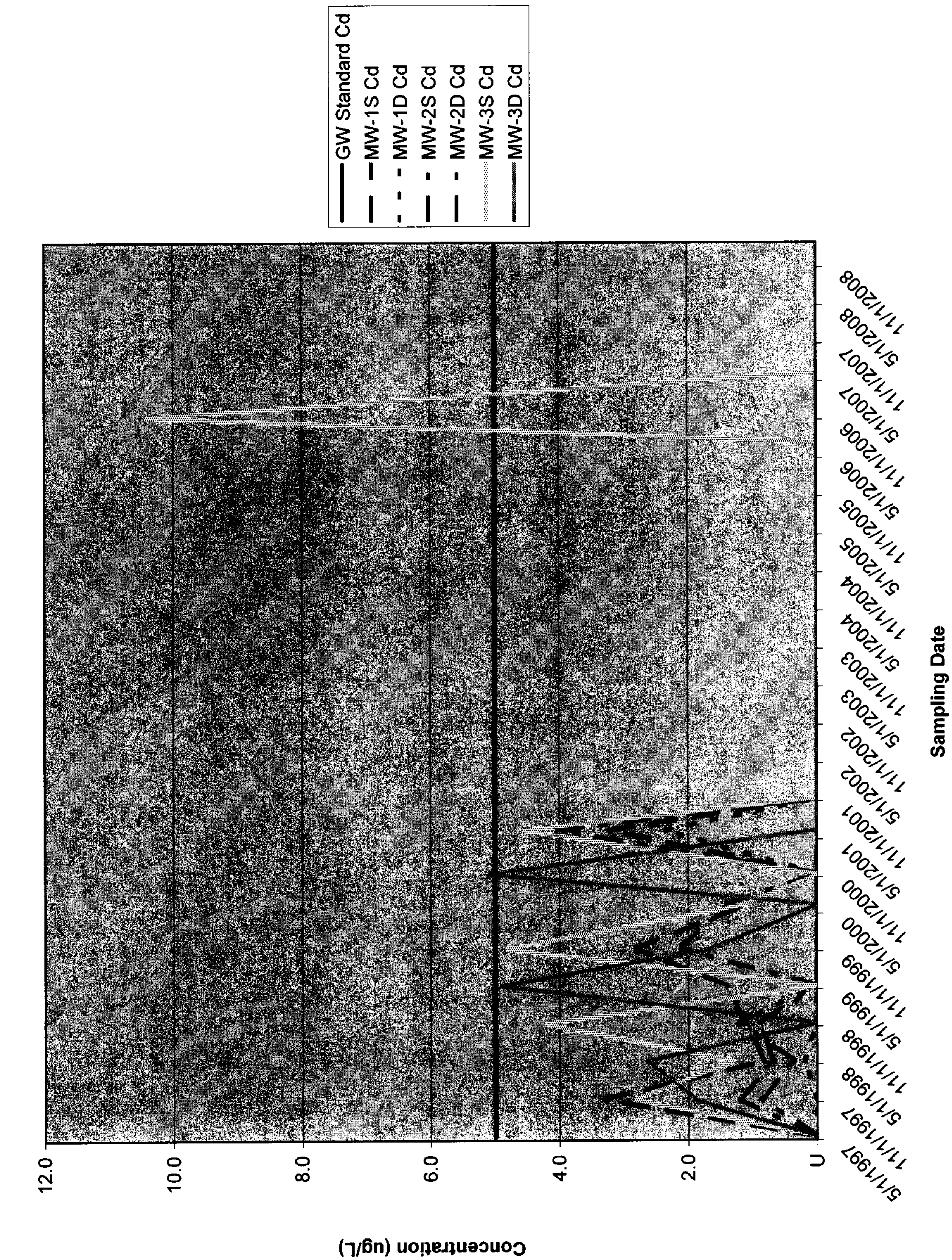


Figure V-1 Historical GW Trends

Figure V-2 Historical GW Trends



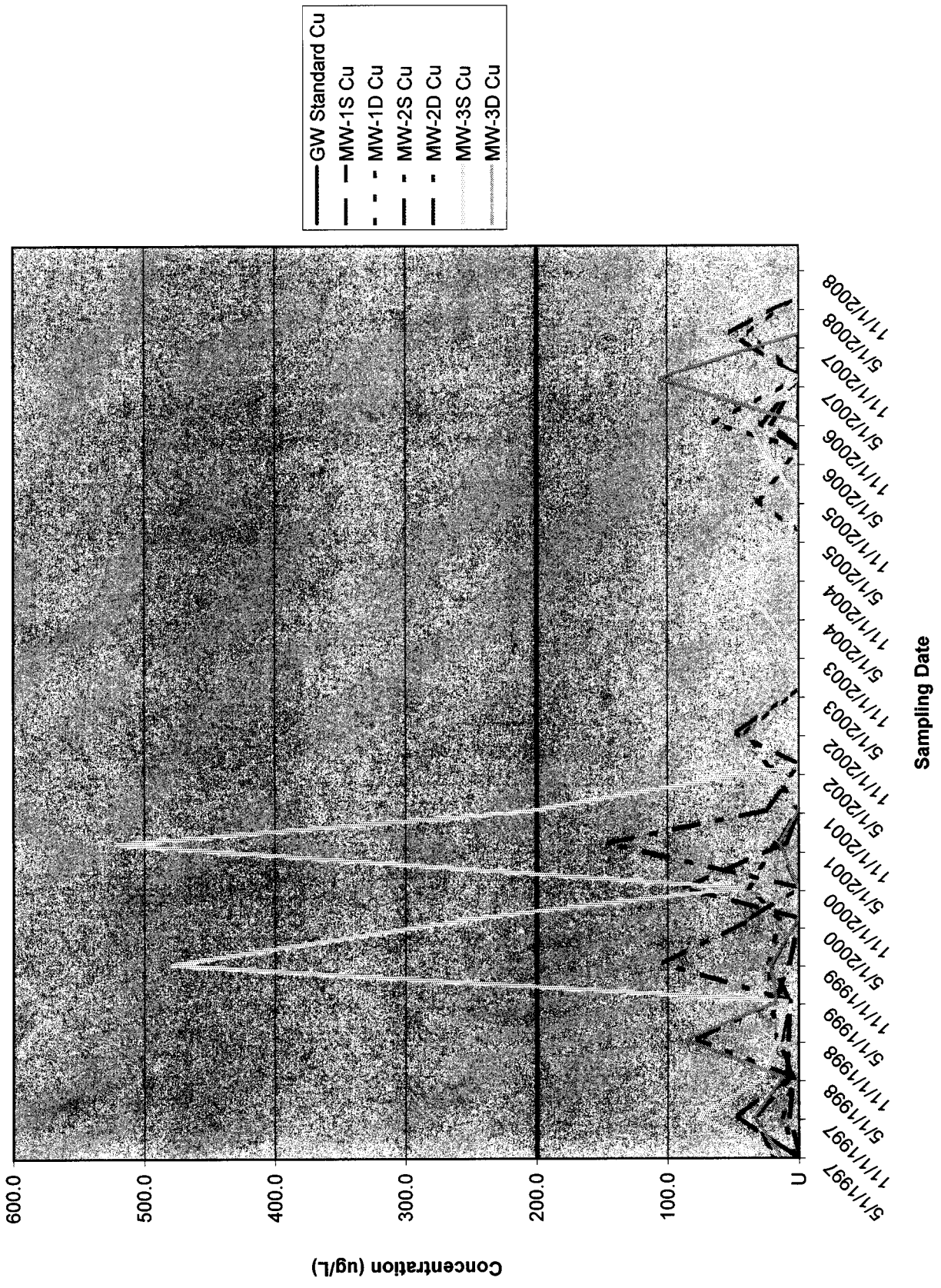


Figure V-3 Historical GW Trends

Figure V-4 Historical GW Trends

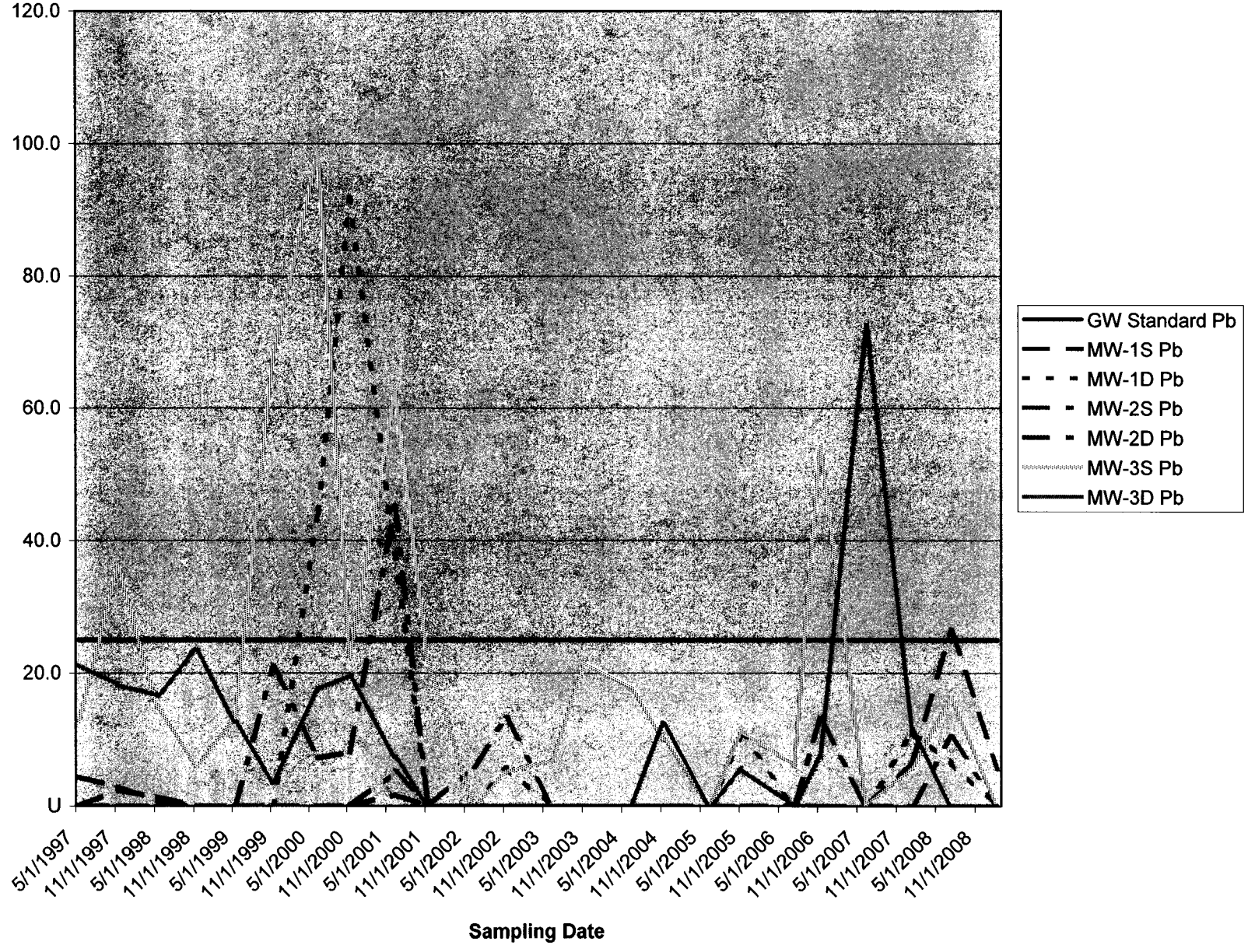


Figure V-5 Historical GW Trends

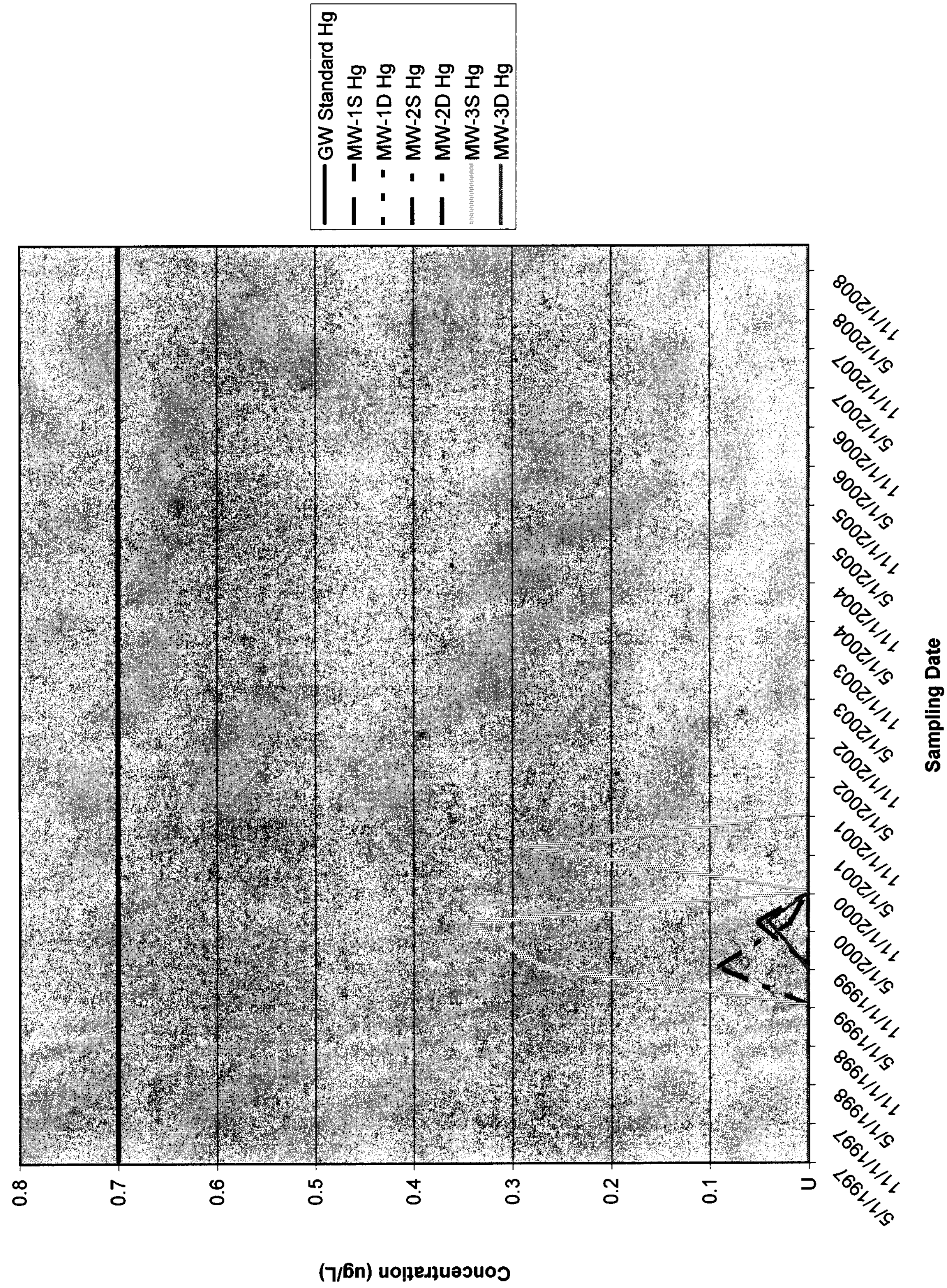


Figure V-6 Historical GW Trends

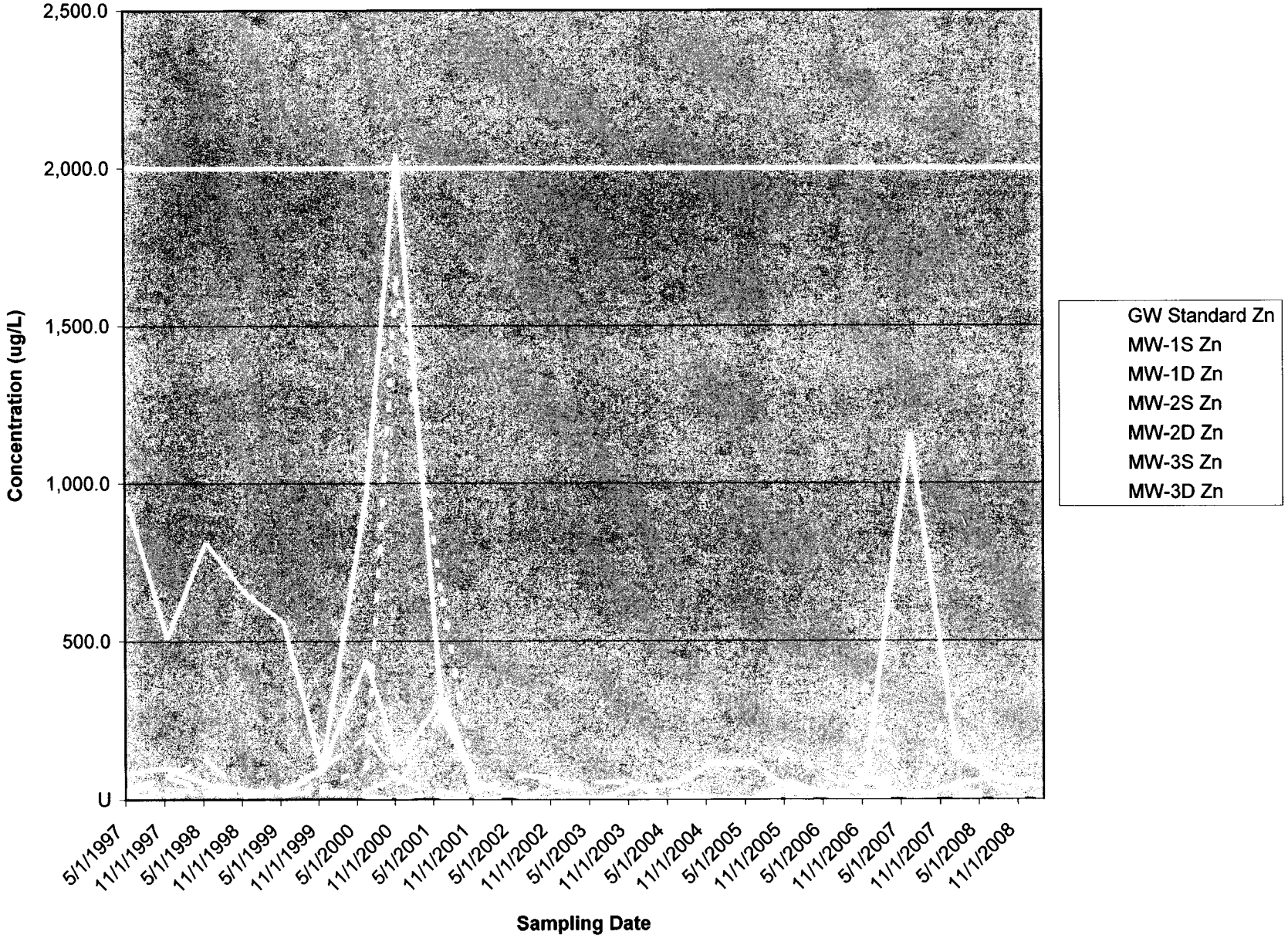
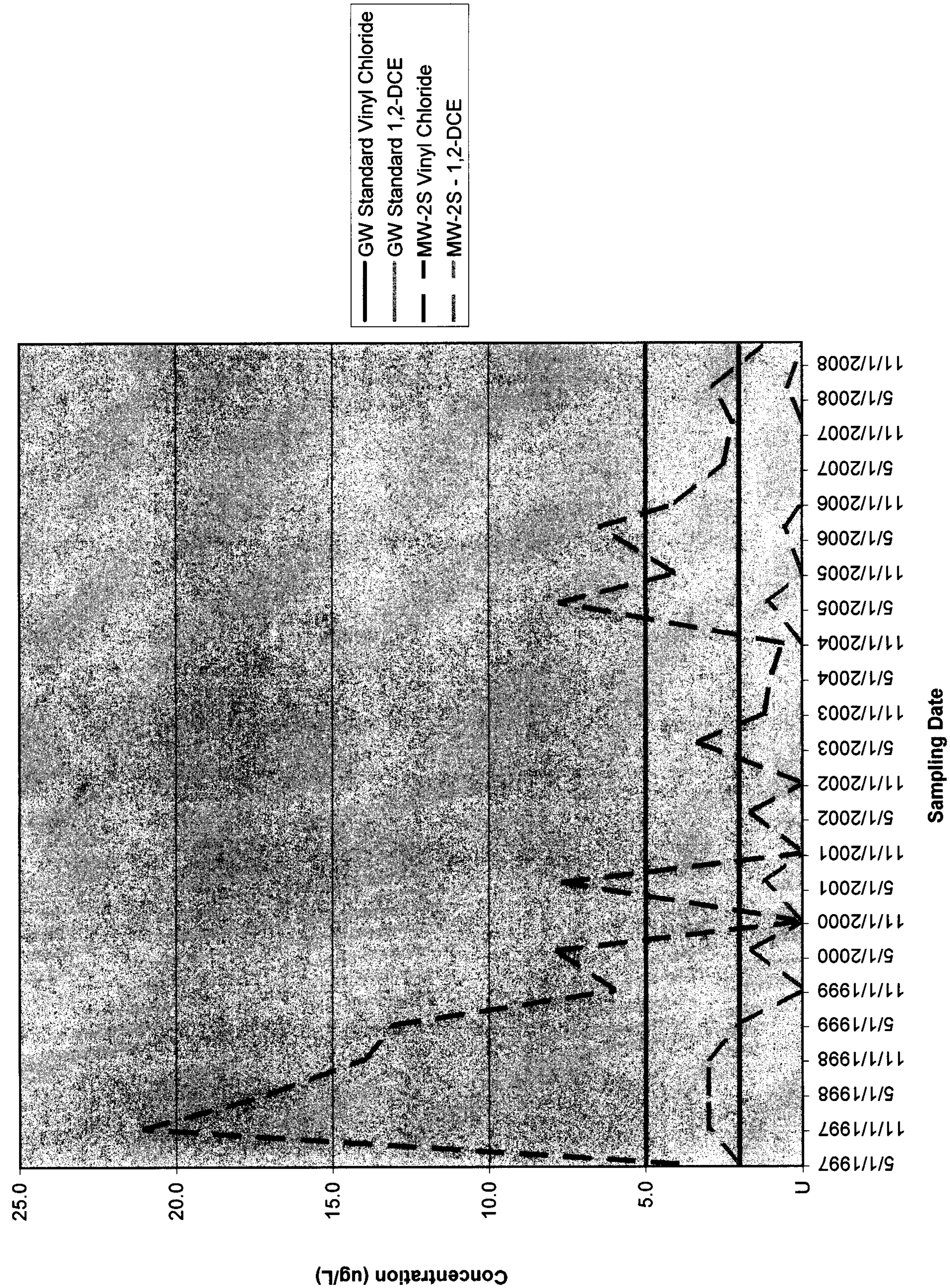


Figure V-7 Historical GW Trends



VI. O&M Plan Compliance

A. Components of the O&M Plan

The O&M Plan calls for continuation of the above discussed stipulation monitoring, physical inspection of the landfill capping system for erosion and or other indicators of deterioration of the cap, and periodic mowing of vegetation to prevent deep rooted plants from developing that could damage the cap

B. Maintenance Completed During the Period

The Site was inspected on several occasions during the period. No visible signs of erosion were present and the drainage channels and culverts (including those to the east of the landfill appear to be functioning properly. The drain lines to the east were flushed to prevent iron buildup during the reporting period.

C. Evaluation of Remedial Objectives

As previously discussed, the Cap and fence appear to be meeting the objective of preventing human contact with the waste. The Village is currently evaluating, with the State, the need for additional groundwater controls at the site.

D. O & M Deficiencies

This report represents the first actual reporting on the O & M activities outside of the Semi Annual Sampling Report Sent to the State, additionally the site was mowed only once during the reporting period.

E. Recommendations & Conclusions

The future requirement for this Periodic Review Report (PRR) will satisfy the Annual O & M Reporting Requirement. While the site mowing was only conducted once during the reporting period, the vegetation at the site remained low during that time. Requirement for vegetative mowing should continue to be predicated on vegetation height rather than a specific time schedule.

VII. Overall PRR Conclusions and Recommendations

A. Compliance with the SMP

1. With the exception of the frequency of mowing, all requirements for IC/EC, Monitoring and O&M were met during the period.
2. The mowing frequency not being met did not result in any additional exposure pathways for the site.
3. We would recommend changing the requirement for mowing frequency to be predicated on vegetation height rather than a certain number of times per year.

B. Performance and Effectiveness of the Remedy

While the Cap is effective in performing its primary function (limit potential human exposure to the waste) it has been ineffective in reducing the leachate mound under the landfill. To this end, the NYSDEC is apparently now calling for implementation of the Contingent Remedy in order to control the potential for groundwater contamination from leachate at the site. The exact nature f the groundwater controls to be enacted are the subject of ongoing discussions between the Department and the Village.

C. Future PRR Submittals

Based on the potential for future remedial action related to the groundwater controls, the annual frequency of the PRR should be maintained until such time as the SMP can be closed.

Enclosure 1
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 360021

Site Name Mamaroneck Taylor's Lane Composting

Site Address: Taylors Lane Zip Code: 10543

City/Town: Mamaroneck

County: Westchester

Allowable Use(s) (if applicable, does not address local zoning): Industrial

Site Acreage: 7.9

Verification of Site Details **Box 2**

	YES	NO
1. Are the Site Details above, correct?	☒	☐
If NO, are changes handwritten above or included on a separate sheet?	☐	
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last certification?	☐	☒
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	
3. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property since the initial/last certification?	☐	☒
If YES, is documentation (or evidence that documentation has been previously submitted) included with this certification?	☐	
4. If use of the site is restricted, is the current use of the site consistent with those restrictions?	☐	☒
If NO, is an explanation included with this certification?	☐	
5. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	N/A	
If YES, is the new information or evidence that new information has been previously submitted included with this Certification?		
6. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), are the assumptions in the Qualitative Exposure Assessment still valid (must be certified every five years)?	N/A	
If NO, are changes in the assessment included with this certification?		

SITE NO. 360021 **Box 3**

Description of Institutional Controls

Parcel	Institutional Control
S_B_L Image: **004-01-79B**	Landuse Restriction

Box 4

Description of Engineering Controls

Parcel	Engineering Control
S_B_L Image: **004-01-79B**	Cover System Fencing/Access Control

Attach documentation if IC/ECs cannot be certified or why IC/ECs are no longer applicable. (See instructions)

Control Description for Site No. 360021

Parcel: 004-01-79B

The project has significant problems that have developed since closure because of leachate buildup under the geomembrane and cannot properly be construed as having been satisfactorily closed. Remedial action are being evaluated. However, the following are the salient requirements of the approved 1998 post-closure O&M plan:

1. Annual cover inspection for erosion, damage, stability and settlement.
2. Annual inspection of drainage system composed of diversion swales and culverts.
3. Annual vegetative cover inspection and mowing ferequency of approximately 4 to 6 times per year to prevent establishment of deep-rooted vegetation.
4. Semi-annual monitoring of groundwater quality for the first five years. Subsequent frequency to be decided by NYSDEC

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☒	☐

3. If this site has an Operation and Maintenance (O&M) Plan (or equivalent as required in the Decision Document);

   I certify by checking "YES" below that the O&M Plan Requirements (or equivalent as required in the Decision Document) are being met.

   Mowing Frequency not as per O&M as discussed in PRR

YES	NO
☐	☒

4. If this site has a Monitoring Plan (or equivalent as required in the remedy selection document);

   I certify by checking "YES" below that the requirements of the Monitoring Plan (or equivalent as required in the Decision Document) is being met.

YES	NO
☒	☐

IC CERTIFICATIONS
SITE NO. 360021

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 2 and/or 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Richard Slingerland (print name) at 123 Mamaroneck Avenue, Mamaroneck, NY 10543 (print business address),

am certifying as Village Manager for the Village of Mamaroneck (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Richard Slingerland
Signature of Owner or Remedial Party Rendering Certification

9-21-2009
Date

IC/EC CERTIFICATIONS

Box 7

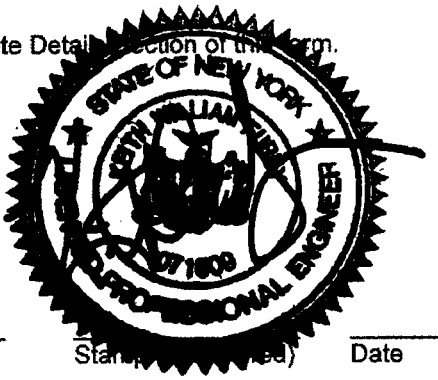
QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Keith W. Furey, P.E. (print name) at 1 Virginia Street, New City, NY 10956 (print business address),

am certifying as a Qualified Environmental Professional for the Village of Mamaroneck

(Owner or Remedial Party) for the Site named in the Site Details Section of this form.



Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification

Stamp (Affix in Box)

Date

Enclosure 2

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the six questions in the Verification of Site Details Section. Questions 5 and 6 only refer to sites in the Brownfield Cleanup Program. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional / Engineering Controls (Boxes 3, 4, and 5)

1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party is to petition the Department requesting approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control and/or certify the other SM Plan components that are applicable, continue to complete the remainder of this **Certification** form. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a statement of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

   If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) is to be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7):

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page. Where the only control is an Institutional Control on the use of the property the certification statement in Box 6 shall be completed and may be made by the property owner. Where the site has Institutional and Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional (see table below).

Table 1. Signature Requirements for Control Certification Page

Type of Control	Example of IC/EC	Required Signatures
EC which does not include a treatment system or engineered caps.	Fence, Clean Soil Cover, Individual House Water Treatment System, Vapor Mitigation System	A site or property owner or remedial party, and a QEP. (P.E. license not required)
EC that includes treatment system or an engineered cap.	Pump & Treat System providing hydraulic control of a plume, Part 360 Cap.	A site or property owner or remedial party, and a QEP with a P.E. license.

WHERE to mail the signed Certification Form by **Tuesday, September 15, 2009**:

New York State Department of Environmental Conservation

21 South Putt Corners Rd
New Paltz, NY 12561-1696

Attn: Ramanand Pergadia, Project Manager

Please note that extra postage may be required.