Arch Chemicals, Inc.

Rochester, New York (Site #828018a)

Groundwater Monitoring Report 44
Spring 2010

September 2010

Arch Chemicals, Inc.
P. O. Box 800
1200 Lower River Road
Charleston, TN 37310
Tel (423) 780-2724

September 9, 2010

Mr. James H. Craft
New York State
Department of Environmental Conservation
6274 East Avon-Lima Road
Avon, NY 14414

Re: Arch Rochester Spring 2010 Monitoring Report
Arch Chemicals (Site #628018a) 100 McKee Rd., Rochester, NY

Dear Mr. Craft:

The enclosed report presents the Spring 2010 results for the on-going groundwater and surface water monitoring program being conducted by Arch Chemicals, Inc., at its Rochester, New York, manufacturing facility.

If you have any questions regarding this submittal, please call me at (423) 780-2175.

Sincerely,

Gayle M. Taylor /jeb

Gayle M. Taylor
Manager, Environmental Issues
Arch Chemicals, Inc.

encl.

cc (w/encl): Bart Putzig, NYSDEC
Katherine Comerford, NYSDOH – Rochester Field Office
James Reidy, USEPA Region II
Francien Trubia, Arch Chemicals, Inc.
Jeffrey Brandow, MACTEC Engineering & Consulting, P.C.

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SURFACE WATER AND GROUNDWATER MONITORING PROGRAM
SPRING 2010 MONITORING REPORT

ARCH CHEMICALS
ROCHESTER PLANT SITE
ROCHESTER, NEW YORK

ARCH CHEMICALS, INC.
CHARLESTON, TENNESSEE

SEPTEMBER 2010

SURFACE WATER AND GROUNDWATER MONITORING PROGRAM
SPRING 2010 MONITORING REPORT

ARCH CHEMICALS
ROCHESTER PLANT SITE
ROCHESTER, NEW YORK

Prepared by

MACTEC Engineering & Consulting, P.C.
Portland, Maine

for

ARCH CHEMICALS, INC.
Charleston, Tennessee

September 2010

3616086023.03

Nelson M. Breton, C.G.
Principal Hydrogeologist

Jeffrey E. Brandow, P.E.
Principal Engineer

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EXECUTIVE SUMMARY

This monitoring report presents the results of an on-going groundwater and surface water monitoring program being conducted by Arch Chemicals, Inc., at its Rochester, New York, manufacturing facility. Results in this report include surface and groundwater samples collected in May 2010.

During this monitoring event, samples from a total of 47 groundwater monitoring or pumping wells and four locations associated with the Dolomite Products Quarry seep and outfall were collected and analyzed by TestAmerica in Amherst, New York.

As in prior reports, monitoring results were compared with previous average concentrations at each sampling location. Forty-two of the 47 monitoring wells sampled for chloropyridines had contaminant concentrations that were at or below their respective 5-year prior averages. Twenty-seven of the 34 monitoring wells sampled for volatile organic compounds had concentrations at or below their 5-year prior average. Contaminant contour plots are generally consistent with past observations.

Sampling locations associated with the quarry included the main quarry seep (QS-4), the quarry ditch where the quarry dewatering discharge enters the ditch (QD-1), the quarry ditch as it enters the Erie Barge Canal (QO-2), and the surface water in the canal approximately 100-feet downstream of the quarry ditch (QO-2S1). Chloropyridine concentrations in quarry seep QS-4 have declined since the Fall 2009 sampling, and are below the prior 5-year average for this location. Samples from the quarry ditch and the canal were at trace levels or were non-detect for their respective locations.

All accessible on-site monitoring wells were checked for the presence of dense non-aqueous phase liquids (DNAPL) and floating (or light) NAPL (LNAPL), using an interface probe. No DNAPL or LNAPL was observed in any of these wells.

During the period December 2009 through May 2010, the on-site groundwater extraction system pumped approximately 6.3 million gallons of groundwater to the on-site treatment system, containing an estimated 388 pounds of chloropyridines and 46 pounds of target volatile organic compounds.

In January 2010, Arch discovered that extraction well PW11 had partially collapsed and needed to be replaced. New pumping well PW16 was installed in July 2010 and will be activated by the end of August 2010.

Declines have been observed in pumping rates at wells PW14, PW15, and BR127. Arch is currently evaluating options for improving flows from these wells.

Well PW13 is demonstrating a seasonal fluctuation in pumping rates that Arch has linked to the changes in water levels in the Erie Canal. Arch plans to operate PW13 on a seasonal basis as long as sampling results indicate the well continues to recover significant amounts of site-related contaminants.

The next regular monitoring event will occur in November 2010 and will include groundwater, surface water, and seep sampling.

1.0 INTRODUCTION

In accordance with the Order on Consent executed between Arch Chemicals, Inc., and the New York State Department of Environmental Conservation (NYSDEC), effective August 21, 2003, Arch is conducting a Remedial Action program at its facility on McKee Road in Rochester, New York. As part of this program, Arch conducts twice-yearly monitoring events consisting of sampling and chemical analysis of groundwater and surface water in the vicinity of the Rochester facility.

The Spring 2010 sampling event included the collection and analysis of a total of 51 groundwater, surface water, and seep samples from off-site and on-site locations. Samples were collected May 13 through 19, 2009, for analysis of selected chloropyridines and volatile organic compounds (VOCs).

This report presents the results of the Spring 2010 monitoring event.

2.0 SAMPLE COLLECTION AND ANALYSIS

2.1 GROUNDWATER

Groundwater samples were collected from off-site wells, on-site wells and piezometers for analysis of selected chloropyridines (2-chloropyridine, 2,6-dichloropyridine, 3-chloropyridine, 4-chloropyridine, pyridine, and p-fluoroaniline) and target compound list (TCL) VOCs. Samples were collected by personnel from Test America Laboratories, Inc., (TestAmerica) and transported to their lab in Amherst, New York for analysis. Table 1 lists the wells that were sampled and the requested analyses. The off-site and on-site locations of these sampling points are shown in Figures 1 and 2, respectively. Groundwater sampling data sheets are provided in Appendix A.

Groundwater was collected with the low flow/low stress purging technique from most of the wells using bladder or peristaltic pumps. Samples from active pumping wells were collected from the discharge lines. Pumping well PW-11 is partially blocked due to well collapse, and was therefore not sampled. This well is scheduled for replacement during the Summer of 2010.

Groundwater piezometric elevations were measured on May 12, 2010. Piezometric contour maps were constructed for each water-bearing zone (overburden, bedrock, and deep bedrock) and are presented in Figures 3, 4, and 5.

All accessible on-site monitoring wells were again checked for the presence of non-aqueous phase liquid (NAPL), using an interface probe. No dense NAPL (DNAPL) or floating (light) NAPL (LNAPL) was observed in any of these wells.

2.2 SURFACE WATER

Surface water and quarry seep samples were collected as part of the on-going monitoring program for the Arch Rochester site. The location of the quarry and its outfall in relation to

the site is shown on Figure 6. Samples of the main quarry seep (QS-4), the quarry ditch where the quarry dewatering discharge enters the ditch (QD-1), the quarry ditch as it enters the Erie Barge Canal (QO-2), and the surface water in the canal approximately 100-feet downstream of the quarry ditch (QO-2S1) were collected by TestAmerica on May 14, 2010. All quarry-related samples were analyzed for the Arch suite of selected chloropyridines. The quarry locations sampled during the Spring 2010 event are shown on Figure 7.

2.3 ANALYTICAL PROCEDURES

The analytical procedures, data review findings, and validated data for this groundwater and surface water monitoring event are discussed in the following paragraphs.

Samples were analyzed for the Arch suite of selected chloropyridines and TCL VOCs by USEPA SW-846 Methods 8270C and 8260B, respectively. The reporting limits for the chloropyridines and VOCs are approximately 10 micrograms per liter (µg/L) and 5 to 25 µg/L, respectively, for undiluted samples.

2.4 QUALITY CONTROL

All laboratory analytical results were reviewed and qualified following U.S. Environmental Protection Agency Contract Laboratory Program (USEPA CLP), "National Functional Guidelines for Organic Data Review", June, 2008, as modified by USEPA Region II, "SOP No. HW-6 Revision 14", September 2006. Analytical results were evaluated for the following parameters:

* Collection and Preservation
Holding Times
* Surrogate Recoveries
Blank Contamination
* Duplicates
Laboratory Control Samples
Matrix Spike/Matrix Spike Duplicates
Miscellaneous

* - *all criteria were met for this parameter*

With the qualifications discussed below, results are determined to be usable as reported by the laboratory.

Holding Times. A subset of samples was extracted for pyridines (Method 8270C) outside the seven day holding time. The samples were initially extracted within the holding time; however, laboratory internal review indicated that the samples were initially prepared at dilutions that were unnecessarily high. The following samples required re-extraction at lower dilutions after expiration of the holding times: BR-3, PZ-105, and PZ-106. Positive and non-detected results for all semivolatile organic target compounds in these samples were qualified as estimated (J/UJ).

Blank Contamination. Methylene chloride (0.58 ug/L) was reported in the method blank associated with a subset of samples analyzed for volatile organic compounds, and carbon disulfide (0.73 ug/L) was reported in the trip blank associated with a subset of samples

collected on May 18, 2010. The low level detections of methylene chloride in samples BR-105 and BR-105D were below the blank action level and were qualified as non-detected (U). The low level detection of carbon disulfide in sample PZ-103 was below the blank action level and was qualified as non-detected (U).

Laboratory Control Samples. Three of the volatile organic laboratory control samples were inadvertently spiked with a subset (16 compounds) of target compounds rather than the full target compound list (36 compounds). The matrix spike/matrix spike duplicate set associated with one of the laboratory control samples was also incorrectly spiked. Recoveries for all target analytes that were included in the three laboratory control samples and matrix spike/matrix spike duplicate were within control limits, and all target compound recoveries in the remaining laboratory control samples that were correctly prepared were also within control limits. Therefore, based on professional judgment the associated sample results were reported unqualified.

Matrix Spike/Matrix Spike Duplicate. Percent recovery for 2-chloropyridine (134) in the matrix spike/matrix spike duplicate (MS/MSD) associated with sample PZ-103 was above the laboratory control limits of 11-123, indicating a potential high bias. The relative percent difference (RPD) between MS and MSD recoveries was 35 and above the control limit of 30. The positive detection of 2-chloropyridine in sample PZ-103 was qualified as estimated (J) and may represent a potential high bias.

Miscellaneous. Samples from 26 of the wells were analyzed at dilutions due to high concentrations of volatile organic or semivolatile organic target analytes. Non-detects are reported at elevated reporting limits.

3.0 ANALYTICAL RESULTS

3.1 GROUNDWATER

The validated results from the Spring 2010 groundwater monitoring event are provided in Tables 2 and 3. Table 4 provides a comparison of the Spring 2010 analytical results for selected chloropyridines and VOCs in representative wells to mean concentrations of the prior five years (Spring 2005 through Fall 2009). Long term trends for both selected chloropyridines and VOCs are also presented as time-series plots for representative wells in Appendix B. A summary of the analytical findings is presented below by parameter class.

3.1.1 Chloropyridines

On-Site. Chloropyridines were detected above sample quantitation limits in all 20 on-site wells sampled in the Spring 2010 event. Concentrations of chloropyridines ranged from 58 micrograms per liter (µg/L) (sum of all chloropyridine and pyridine isomer concentrations) in pumping well BR-9 to 63,000 µg/L in monitoring well B-17. Three of the 20 on-site wells exhibited total chloropyridine concentrations that were slightly above their respective means from monitoring events over the previous five years (BR-6A, PZ-105, and PZ-107).

Off-Site. Chloropyridines were detected above sample quantitation limits in 23 of the 27 off-site wells that were sampled. Concentrations of total selected chloropyridines ranged from not detected (in wells BR-103, BR-116, MW-114, and NESS-W) to approximately 2,900 µg/L in well BR-106 west of McKee Road. Two of the 27 off-site wells contained total chloropyridine concentrations slightly above their respective 5-year prior means (BR-113D and BR-116D).

Concentration Contours. Chloropyridine distribution in groundwater is shown as a set of concentration contours on Figure 8. The contours were developed using data from both overburden and bedrock monitoring wells. Contours are approximated (shown as dashed lines) where they are based on data from previous sampling rounds.

3.1.2 Selected VOCs.

On-Site. Selected VOCs were detected in 18 of the 20 on-site wells sampled in the Spring 2010 event. Total concentrations of selected VOCs ranged from not detected (in wells BR-8 and PZ-105) to 820,000 µg/L in PZ-106 for the sum of the principal site-related contaminants (carbon tetrachloride, chloroform, methylene chloride, tetrachloroethene, and trichloroethene). Five of the 20 on-site wells (BR-127, MW-127, PW-12, PZ-106, and PZ-107) contained concentrations of total VOCs above their 5-year prior means.

In addition to the selected VOCs, other notable constituents detected in on-site wells include toluene (in 16 out of 20 wells), carbon disulfide (14 of 20), chlorobenzene (13 of 20), benzene (12 of 20), bromoform (8 of 20), vinyl chloride (6 of 20), 1,2-dichloroethene (6 of 20), total xylenes (4 of 20), ethylbenzene (3 of 20), 1,1-dichloroethane (3 of 20), acetone (2 of 20), and 1,2-dichloroethane (2 of 20).

Off-Site. Selected VOCs were detected in five of the 14 off-site wells sampled for VOCs in the Spring 2010 event. Total concentrations of selected VOCs ranged from not detected (in BR-103, BR-106, BR-114, BR-126, MW-103, PZ-101, PZ-102, PZ-103, and PZ-104) to 23 µg/L (in MW-114). Two of the off-site wells (MW-106 and MW-114) had selected VOC concentrations slightly above their prior 5-year means. In addition to the selected VOCs, other notable constituents detected in off-site wells include benzene (in 10 out of 14 wells), chlorobenzene (10 of 14), 1,2-dichloroethene (7 of 14), toluene (4 of 14), 1,1-dichloroethane (3 of 14), vinyl chloride (3 of 14), carbon disulfide (2 of 14), and total xylenes (2 of 14).

Concentration Contours. The distribution of selected VOCs in groundwater is shown as a set of concentration contours on Figure 9. These contours were developed using both overburden and bedrock groundwater data, and are dashed where approximated using data from previous sampling rounds.

3.2 SURFACE WATER

Results from the Spring 2010 canal and quarry monitoring event are presented in Table 5, and summarized below. In general, chloropyridine concentrations in the quarry and canal samples remain low, and have declined slightly from the Fall 2009 sampling event.

3.2.1 Quarry

One quarry seep (QS-4) was sampled in the Spring 2010 monitoring event, and contained 136 µg/L total chloropyridines.

3.2.2 Quarry Discharge Ditch

Two locations within the quarry discharge ditch were sampled and analyzed for chloropyridines: QD-1, at the point where the quarry's dewatering discharge enters the ditch; and QO-2, at the location where the ditch discharges to the canal. Total chloropyridines were detected in the sample from QD-1 at an estimated concentration of 2.2 µg/L. Chloropyridines were not detected in the sample at QO-2.

3.2.3 Barge Canal

One sample was collected from the Erie Barge Canal location (QO-2S1, approximately 100 feet downstream of QO-2). Chloropyridines were not detected in this sample.

4.0 EXTRACTION SYSTEM PERFORMANCE AND MAINTENANCE

Table 6 is a summary of the system flow measurements for the on-site extraction wells from December 2009 through May 2010. The total volume pumped during the six-month period was approximately 6.3 million gallons.

Table 7 provides a calculation of mass removal rates since the previous groundwater monitoring event (i.e., from December 2009 through May 2010). Arch estimates that approximately 46 pounds of target VOCs and 388 pounds of chloropyridine compounds were removed by the groundwater extraction system and treated by the plant's activated carbon adsorption units over that time period.

In January 2010, while attempting to remove the pump from extraction well PW11, Arch discovered the well had partially collapsed. The pump could not be removed, and was damaged in the attempt. In response, Arch has drilled a new well to replace PW11. The new well, designated PW16, was relocated approximately 60 feet north of PW11 due primarily to access issues. PW16 was drilled in July 2010, and will be activated by the end of August 2010. Preliminary indications are that the new well will be able to pump at around 5 gallons per minute, which is slightly higher than the previous pumping rates at PW11.

Declines in pumping rates are evident in wells PW14, PW15, and BR127. Arch is currently evaluating options to attempt to improve flows from these wells.

Well PW13 is demonstrating a seasonal fluctuation in pumping rates that Arch has been able to link to the systematic drawdown of water levels in the Erie Canal. Arch anticipates that we will continue to see limited flow from this well during the winter months, but intends to operate PW13 as long as sampling results indicate the well is recovering significant amounts of site-related contaminants (primarily during the summer months).

5.0 NEXT MONITORING EVENT

The next regular monitoring event will occur in November 2010 and will include groundwater, surface water, and seep sampling.

Table 8 shows the current monitoring program for the Arch Rochester site.

Figures

Legend

- Outline of Arch Property Boundary
- Monitoring Well

NOTES

1. Source - Topographic Quadrangle 7.5-Minute Series

N

0 250 500 1,000 Feet

Prepared by DBW | Checked by JEB

I-390

ERIE BARGE CANAL

FIRTH RIXSON

ARCH

BUFFALO RD. BUSINESS CENTER

MW-103/BR-103

MW-108/BR-108

PZ-102

BR-111/BR-111D

BR-106/MW-106

PZ-103

MW-16

AID TO HOSPITALS

ARM

BR-126

MW-105/BR-105

BR-112/BR-112D

MW-104/BR-104

BUFFALO ROAD

MW-114/BR-114

12-6

CUMBERLAND FARMS PETROLEUM TERMINAL

OW-105

NESS-W

NESS-E

8-8

7-6

BR-113/BR-113D

LEXINGTON

11-8

GENERAL RAIL SIGNAL CO.

9-6

RW-1

10-6

13-4

OW-102A

OW-103

Morey

DOLOMITE PRODUCTS QUARRY

BR-122D

PFAUDLER

BR-117/BR-117D

BR-121D (Abandoned)

BR-118/BR-118D

BR-123D

BR-116/BR-116D

I-390

ERIE BARGE CANAL

BR-120D (Abandoned)

BR-119D (Abandoned)

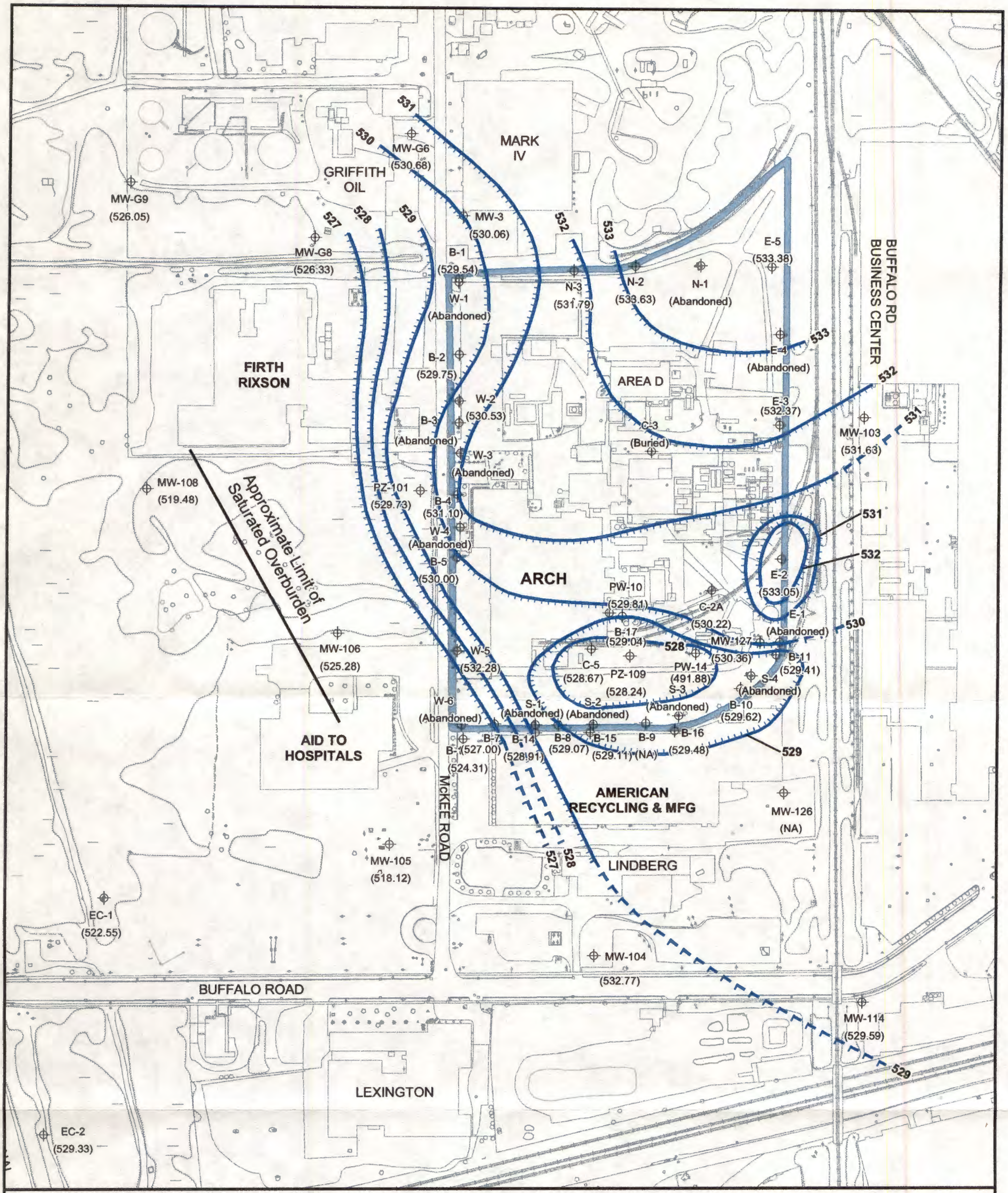
BR-124D

LETTINGTON DRIVE

Figure 1
Off-Site Groundwater Monitoring Well Locations

Arch Chemicals
Rochester, NY
MACTEC, Inc.

Document: P:\Projects\Arch\Rochester\GIS\MapDocuments\Fall 2009\Arch_OffsiteWells_Fig1.mxd PDF: P:\Projects\Arch\Rochester\GIS\Figures\Monitoring_Fall2009\Figure1_OffsiteWells.pdf



Legend

- Outline of Arch Property Boundary
- 528 — Overburden Piezometric Elevation Contour (MSL)
- Interpreted Groundwater Flow Direction
- MW-114 (528.76) — Piezometric Elevation at Well or Piezometer

N

NOTES:

1. Water Levels Measured on May 12, 2010
2. NA = Not Available
3. Dashed Contours Reflect Uncertainty
4. Water levels in the following wells were interpreted to be anomalous and not used in contouring: W-5 and MW-104

0 100 200 400 Feet

Prepared by DBW | Checked by NMB

Figure 3
Spring 2010
Overburden Groundwater
Interpreted Piezometric Contours

Arch Chemicals
Rochester, NY
MACTEC, Inc.

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Legend

- Bedrock Well ('D' Designates Deep Well)
- 500 — Deep Bedrock Elevation Contour (MSL)
- Interpreted Groundwater Flow Direction
- Outline of Arch Property Boundary
- BR-116D (509.03) Piezometric Elevation at Deep Bedrock Well

NOTES
1. Water Levels Measured on May 12, 2010
2. Dashed Contours Reflect Uncertainty

N

0 250 500 1,000 Feet

Prepared by DBW | Checked by NMB

ERIE BARGE CANAL
I-390
FIRTH RIXSON
BUFFALO RD. BUSINESS CENTER
BR-9
BR-103
ARCH
BR-111D (511.35)
BR-111
BR-108
AID TO HOSPITALS
BR-106
BR-3D (479.55)
ARM
BR-112D (511.57)
BR-112
BR-105
BR-105D (510.73)
BR-104
BUFFALO ROAD
BR-114
CUMBERLAND FARMS PETROLEUM TERMINAL
BR-113
BR-113D (511.55)
LEXINGTON
GENERAL RAIL SIGNAL CO.
DOLOMITE PRODUCTS QUARRY
BR-122D (501.04)
PFAUDLER
BR-117D (497.36)
BR-117
BR-118
BR-118D (499.28)
BR-116D (509.47)
BR-116
BR-123D (508.08)
BR-124D (505.81)
LETTINGTON DRIVE
498
500
502
504
505
506
508
510

Figure 5
Spring 2010
Deep Bedrock Groundwater
Interpreted Piezometric Contours

Arch Chemicals
Rochester, NY
MACTEC, Inc.

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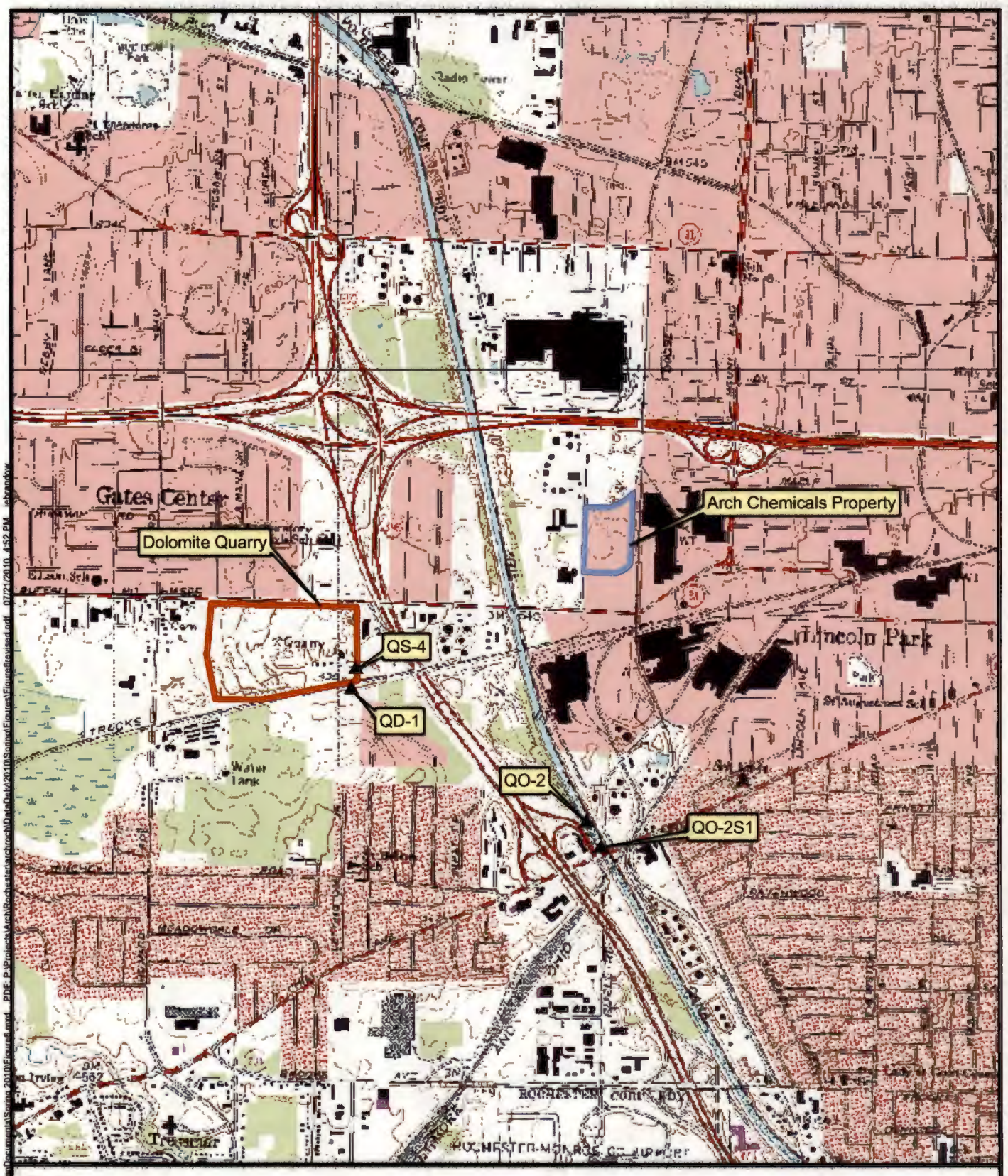


Figure 6
Sample Locations
Erie Barge Canal

Arch Chemicals
Rochester, New York
MACTEC, Inc.

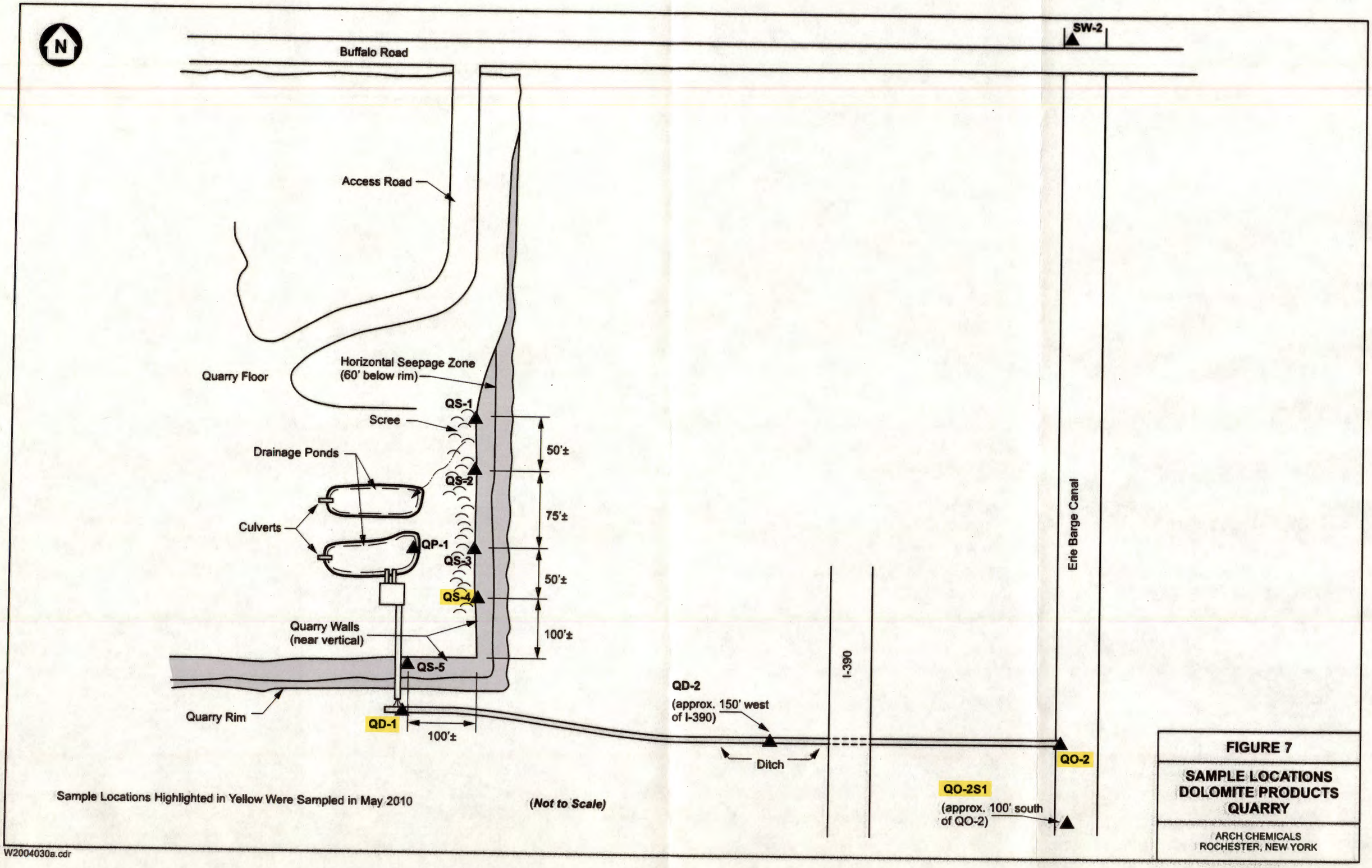
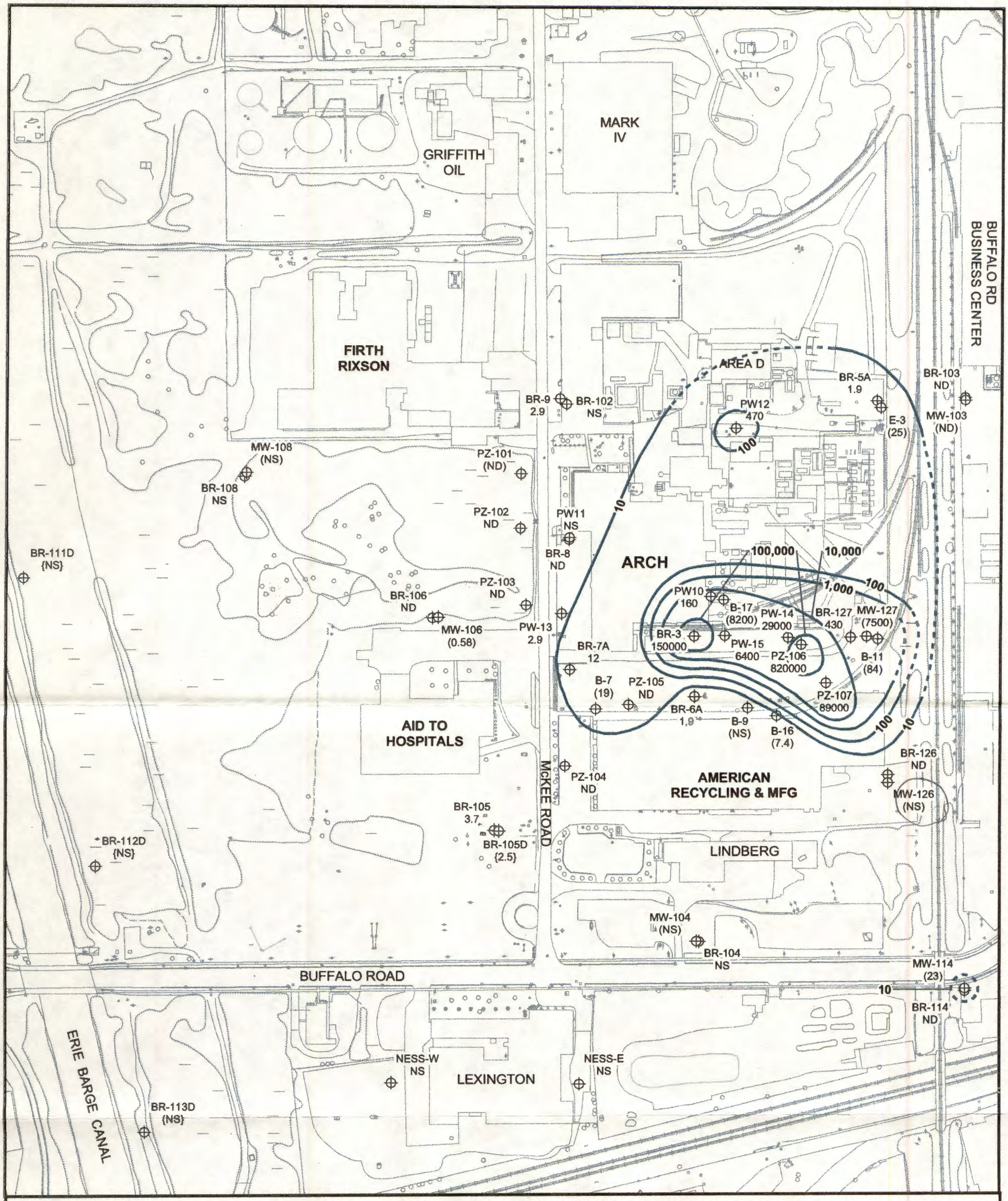


FIGURE 7

SAMPLE LOCATIONS
DOLOMITE PRODUCTS QUARRY

ARCH CHEMICALS
ROCHESTER, NEW YORK

W2004030a.cdr



Legend

100	VOC Concentration Contour
BR-105D {2.5}	Outline of Arch Property Boundary
{1000}	Deep Bedrock Well
(1000)	Overburden Well
1000	Bedrock Well
NS	Not Sampled
ND	Not Detected

0 100 200 Feet

N

Prepared by BJS | Checked by NMB

NOTES:

1. Samples Collected in May, 2009
2. Selected VOCs consist of Carbon tetrachloride, Methylene chloride Chloroform, TCE, and PCE.
3. Concentration contours represented for Bedrock Wells and selected Overburden and Deep Bedrock Wells.
4. Dashed concentration contours represent inferences from historical analytical results.
5. Concentrations are in µg/L

Figure 9
Spring 2010
Selected Volatile Organic Compound Concentration Contours

Arch Chemicals
Rochester, NY
MACTEC, Inc.

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Tables

TABLE 1
SPRING 2010 GROUNDWATER SAMPLING AND ANALYTICAL PROGRAM

ARCH CHEMICALS, INC
ROCHESTER, NEW YORK

			ANALYSIS	PYRIDINES	VOCs
SITE / AREA	WELL / POINT	DATE	QC TYPE		
SITE / AREA AID TO HOSPITALS	BR-106	5/19/2010	Sample	X	X
	BR-108	5/18/2010	Sample	X	
	MW-106	5/19/2010	Sample	X	X
	PZ-101	5/18/2010	Sample	X	X
	PZ-102	5/18/2010	Sample	X	X
	PZ-103	5/18/2010	Sample	X	X
AMERICAN RECYCLE MANUF. (58 MCKEE ROAD)	B-16	5/14/2010	Sample	X	X
	BR-126	5/18/2010	Sample	X	X
	PZ-104	5/18/2010	Duplicate	X	X
	PZ-104	5/18/2010	Sample	X	X
ARCH ROCHESTER	B-11	5/14/2010	Sample		X
	B-11	5/17/2010	Sample	X	
	B-17	5/14/2010	Sample	X	X
	B-7	5/14/2010	Sample	X	X
	BR-127	5/13/2010	Sample	X	X
	BR-3	5/13/2010	Sample	X	X
	BR-5A	5/17/2010	Sample	X	X
	BR-6A	5/17/2010	Sample	X	X
	BR-7A	5/17/2010	Sample	X	X
	BR-8	5/13/2010	Sample	X	X
	BR-9	5/17/2010	Sample	X	X
	E-3	5/14/2010	Sample	X	X
	MW-127	5/13/2010	Sample	X	X
	PW10	5/14/2010	Sample	X	X
	PW12	5/13/2010	Sample	X	X
	PW13	5/17/2010	Sample	X	X
	PW14	5/17/2010	Sample	X	X
	PW15	5/17/2010	Sample	X	X
	PZ-105	5/13/2010	Sample	X	X
	PZ-106	5/13/2010	Sample	X	X
	PZ-107	5/13/2010	Sample	X	X
DOLOMITE PRODUCTS, INC.	BR-117D	5/14/2010	Sample	X	
	BR-118D	5/14/2010	Sample	X	
	QD-1	5/14/2010	Sample	X	
	QS-4	5/14/2010	Sample	X	
BUFFALO RD BUSINESS CTR (formerly Gerber property, formerly Kodak property)	BR-103	5/18/2010	Sample	X	X
	MW-103	5/18/2010	Sample	X	X
ERIE BARGE CANAL(Samples in canal or property along canal)	BR-112D	5/19/2010	Sample	X	
	BR-113D	5/17/2010	Sample	X	
	BR-122D	5/14/2010	Sample	X	
	BR-123D	5/14/2010	Sample	X	
	QO-2	5/14/2010	Sample	X	
	QO-2S1	5/14/2010	Sample	X	
JACKSON WELDING	BR-114	5/18/2010	Sample	X	X
	MW-114	5/18/2010	Sample	X	X
LEXINGTON MACHINING	NESS-E	5/18/2010	Sample	X	
	NESS-W	5/18/2010	Sample	X	
PFAUDLER, INC.	BR-116	5/17/2010	Sample	X	
	BR-116D	5/17/2010	Sample	X	
RG & E RIGHT OF WAY	BR-104	5/17/2010	Sample	X	
	BR-105	5/19/2010	Sample	X	X
	BR-105D	5/19/2010	Sample	X	X
	MW-104	5/17/2010	Sample	X	

TABLE 2
SPRING 2010 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	B-11	B-16	B-17	B-7	BR-103	BR-104	BR-105	BR-105D	BR-106	BR-108	BR-112D
SAMPLE DATE:	5/17/2010	5/14/2010	5/14/2010	5/14/2010	5/18/2010	5/17/2010	5/19/2010	5/19/2010	5/19/2010	5/18/2010	5/19/2010
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)											
2,6-Dichloropyridine	920	380	2200 J	310	9.4 U	9.4 U	100	36 J	620	3.3 J	1.9 J
2-Chloropyridine	3,800	570	57,000	330	9 U	4 J	640	260	2,200	33	19
3-Chloropyridine	62 J	250 U	10000 U	50 U	9.4 U	9.4 U	100 U	14 J	16 J	9.7 U	9.4 U
4-Chloropyridine	200 U	250 U	10000 U	50 U	9.4 U	9.4 U	100 U	50 U	100 U	9.7 U	9.4 U
p-Fluoroaniline	200 U	250 U	10000 U	50 U	9.4 U	9.4 U	100 U	12 J	80 J	9.7 U	9.4 U
Pyridine	500 U	620 U	3600 J	120 U	24 U	24 U	250 U	120 U	250 U	24 U	24 U

Notes:
U = Compound not detected; value represents sample quantitation limit.
J = Estimated value

TABLE 2
SPRING 2010 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-113D	BR-114	BR-116	BR-116D	BR-117D	BR-118D	BR-122D	BR-123D	BR-126	BR-127	BR-3
SAMPLE DATE:	5/17/2010	5/18/2010	5/17/2010	5/17/2010	5/14/2010	5/14/2010	5/14/2010	5/14/2010	5/18/2010	5/13/2010	5/13/2010
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)											
2,6-Dichloropyridine	2.4 J	9.9	9.4 U	6.9 J	9.6 U	3.6 J	16	5.7 J	330	390	3000 J
2-Chloropyridine	28	33	9 U	55	6 J	48	130	62	1,100	3,000	24,000 J
3-Chloropyridine	9.4 U	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.4 U	9.4 U	100 U	62 J	1200 J
4-Chloropyridine	9.4 U	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.4 U	9.4 U	100 U	250 U	1000 UJ
p-Fluoroaniline	9.4 U	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	1.3 J	9.4 U	100 U	250 U	1000 UJ
Pyridine	24 U	24 U	24 U	1.1 J	24 U	24 U	24 U	24 U	250 U	56 J	2000 J

Notes:
U = Compound not detected; value represents sample quantitation limit.
J = Estimated value

TABLE 2
SPRING 2010 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-5A	BR-6A	BR-7A	BR-8	BR-9	E-3	MW-103	MW-104	MW-106	MW-114	MW-127
SAMPLE DATE:	5/17/2010	5/17/2010	5/17/2010	5/13/2010	5/17/2010	5/14/2010	5/18/2010	5/17/2010	5/19/2010	5/18/2010	5/13/2010
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)											
2,6-Dichloropyridine	28	920	1100	34	11	41	9.4 U	9.5 U	410 J	9.4 U	90 J
2-Chloropyridine	170	5,100	7,800	37	45	31	9 U	3 J	1,100	9 U	140 J
3-Chloropyridine	19 U	140 J	1000 U	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	500 U	9.4 U	250 U
4-Chloropyridine	19 U	500 U	1000 U	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	500 U	9.4 U	250 U
p-Fluoroaniline	26	500 U	1000 U	6.1 J	1.6 J	9.4 U	1.9 J	9.5 U	500 U	9.4 U	250 U
Pyridine	4.4 J	1200 U	2500 U	24 U	24 U	24 U	24 U	24 U	1200 U	24 U	620 U

Notes:
U = Compound not detected; value represents sample quantitation limit.
J = Estimated value

TABLE 2
SPRING 2010 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	NESS-E	NESS-W	PW10	PW12	PW13	PW14	PW15	PZ-101	PZ-102	PZ-103	PZ-104
SAMPLE DATE:	5/18/2010	5/18/2010	5/14/2010	5/13/2010	5/17/2010	5/17/2010	5/17/2010	5/18/2010	5/18/2010	5/18/2010	5/18/2010
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Duplicate
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)											
2,6-Dichloropyridine	9.4 U	9.4 U	11000	520	150	210 J	2300 J	11	210	290	250
2-Chloropyridine	2 J	9 U	5,200	1,000	790	1,700	33,000	2 J	530	730 J	1,300
3-Chloropyridine	9.4 U	9.4 U	160 J	100 U	100 U	49 J	5000 U	9.4 U	50 U	250 U	100 U
4-Chloropyridine	9.4 U	9.4 U	1000 U	100 U	100 U	250 U	5000 U	9.4 U	50 U	250 U	100 U
p-Fluoroaniline	9.4 U	9.4 U	1000 U	130	100 U	250 U	5000 U	9.4 U	25 J	32 J	100 U
Pyridine	24 U	24 U	2500 U	250 U	250 U	89 J	3400 J	24 U	120 U	620 U	250 U

Notes:
U = Compound not detected; value represents sample quantitation limit.
J = Estimated value

TABLE 2
SPRING 2010 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PZ-104	PZ-105	PZ-106	PZ-107
SAMPLE DATE:	5/18/2010	5/13/2010	5/13/2010	5/13/2010
QC TYPE:	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)				
2,6-Dichloropyridine	240	1500 J	3600 J	1300
2-Chloropyridine	1,300	16,000 J	12,000 J	6,800
3-Chloropyridine	100 U	87 J	1000 UJ	120 J
4-Chloropyridine	100 U	500 UJ	1000 UJ	500 U
p-Fluoroaniline	100 U	500 UJ	1000 UJ	500 U
Pyridine	250 U	1200 UJ	320 J	360 J

Notes:
U = Compound not detected; value represents sample quantitation limit.
J = Estimated value

TABLE 3
SPRING 2010 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	B-11	B-16	B-17	B-7	BR-103	BR-105	BR-105D	BR-106	BR-114
SAMPLE DATE:	5/14/2010	5/14/2010	5/14/2010	5/14/2010	5/18/2010	5/19/2010	5/19/2010	5/19/2010	5/18/2010
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)									
1,1,1-Trichloroethane	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	10 U	0.87 J	80 U	5 U	5 U	0.73 J	2 J	5 U	5 U
1,1-Dichloroethene	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	10 U	5 U	80 U	5 U	5 U	5 U	5 U	0.52 J	5 U
1,2-Dichloroethene (total)	20 U	0.72 J	160 U	10 U	1.1 J	14	8.4 J	0.84 J	0.88 J
1,2-Dichloropropane	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	50 U	25 U	400 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Hexanone	50 U	25 U	400 U	25 U	25 U	25 U	25 U	25 U	25 U
4-Methyl-2-pentanone	50 U	25 U	400 U	25 U	25 U	25 U	25 U	25 U	25 U
Acetone	50 U	25 U	400 U	25 U	25 U	25 U	25 U	25 U	25 U
Benzene	10 U	1.4 J	91	0.63 J	5 U	1.6 J	5.2	16	3.4 J
Bromodichloromethane	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	10 U	5 U	230	0.43 J	5 U	5 U	5 U	5 U	5 U
Bromomethane	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	17	3.4 J	80 U	8.9	5 U	5 U	1.2 J	5 U	5 U
Carbon tetrachloride	13	2.1 J	120	6	5 U	1.7 J	5 U	5 U	5 U
Chlorobenzene	10 U	3.9 J	340	9.1	5 U	5.2	4 J	160	5 U
Chlorodibromomethane	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	48	2.6 J	2100	6.4	5 U	1.1 J	2.5 J	5 U	5 U
Chloromethane	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethyl benzene	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	8.8 J	5 U	4300	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	14	2.7 J	1700	6.2	5 U	0.91 J	5 U	5 U	5 U
Toluene	5.6 J	0.89 J	320	2.2 J	5 U	5 U	5 U	0.9 J	5 U
trans-1,3-Dichloropropene	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	10 U	5 U	80 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl acetate	50 U	25 U	400 U	25 U	25 U	25 U	25 U	25 U	25 U
Vinyl chloride	10 U	5 U	80 U	5 U	8.5	9.8	1.9 J	5 U	5 U
Xylenes, Total	30 U	15 U	240 U	0.74 J	15 U	15 U	15 U	0.69 J	15 U

Notes: U = Compound not detected; value represents sample quantitation limit.

J = Estimated value.

TABLE 3
SPRING 2010 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-126	BR-127	BR-3	BR-5A	BR-6A	BR-7A	BR-8	BR-9	E-3
SAMPLE DATE:	5/18/2010	5/13/2010	5/13/2010	5/17/2010	5/17/2010	5/17/2010	5/13/2010	5/17/2010	5/14/2010
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)									
1,1,1-Trichloroethane	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	800 U	5 U	5 U	3 J	5 U	7.5	5 U
1,1-Dichloroethene	5 U	5 U	800 U	5 U	5 U	5 U	5 U	1.5 J	5 U
1,2,4-Trimethylbenzene	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5 U	5 U	800 U	5 U	5 U	5 U	6.4	5 U	5 U
1,2-Dichloroethene (total)	10 U	13	1600 U	11	10 U	3 J	10 U	170	10 U
1,2-Dichloropropane	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	25 U	25 U	4000 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Hexanone	25 U	25 U	4000 U	25 U	25 U	25 U	25 U	25 U	25 U
4-Methyl-2-pentanone	25 U	25 U	4000 U	25 U	25 U	25 U	25 U	25 U	25 U
Acetone	25 U	25 U	4000 U	25 U	25 U	25 U	25 U	13 J	25 U
Benzene	1.8 J	2.8 J	800 U	10	0.62 J	16	1.1 J	58	5 U
Bromodichloromethane	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	5 U	5 U	480	5 U	5 U	5 U	5 U	5 U	0.52 J
Bromomethane	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	5 U	48	6600	5 U	1.9 J	5.2	5 U	5 U	7.8
Carbon tetrachloride	5 U	38	58000	5 U	5 U	2.3 J	5 U	5 U	4.8 J
Chlorobenzene	1.4 J	3.8 J	800 U	21	2.5 J	400	32	7.2	1.9 J
Chlorodibromomethane	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	5 U	360	85000	0.98 J	0.58 J	5.2	5 U	5 U	13
Chloromethane	5 U	5 U	760	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethyl benzene	5 U	5 U	800 U	5 U	5 U	5 U	5 U	3.4 J	5 U
Methylene chloride	5 U	16	9300	5 U	5 U	4.7 J	5 U	1.5 J	0.98 J
Styrene	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5 U	13	2400	5 U	5 U	5 U	5 U	5 U	6
Toluene	5 U	24	3000	3.5 J	8	4.8 J	5 U	2 J	2 J
trans-1,3-Dichloropropene	5 U	5 U	800 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5 U	6.8	800 U	0.93 J	1.3 J	5 U	5 U	1.4 J	5 U
Vinyl acetate	25 U	25 U	4000 U	25 U	25 U	25 U	25 U	25 U	25 U
Vinyl chloride	5 U	6.2	800 U	4.8 J	8.4	6.9	5 U	110	5 U
Xylenes, Total	15 U	15 U	2400 U	1.9 J	15 U	15 U	15 U	15 U	15 U

Notes: U = Compound not detected; value represents sample quantitation limit.
J = Estimated value.

TABLE 3
SPRING 2010 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	MW-103	MW-106	MW-114	MW-127	PW10	PW12	PW13	PW14	PW15
SAMPLE DATE:	5/18/2010	5/19/2010	5/18/2010	5/13/2010	5/14/2010	5/13/2010	5/17/2010	5/17/2010	5/17/2010
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)									
1,1,1-Trichloroethane	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
1,1,2-Trichloroethane	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
1,1-Dichloroethane	5 U	5 U	5 U	100 U	10 U	100 U	7	400 U	80 U
1,1-Dichloroethene	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
1,2,4-Trimethylbenzene	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
1,2-Dichloroethane	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	200 U	20 U	200 U	31	800 U	160 U
1,2-Dichloropropane	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
1,3,5-Trimethylbenzene	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
2-Butanone	25 U	25 U	25 U	500 U	50 U	500 U	25 U	2000 U	400 U
2-Hexanone	25 U	25 U	25 U	500 U	50 U	500 U	25 U	2000 U	400 U
4-Methyl-2-pentanone	25 U	25 U	25 U	500 U	50 U	500 U	25 U	2000 U	400 U
Acetone	25 U	25 U	25 U	500 U	50 U	500 U	25 U	2000 U	400 U
Benzene	5 U	18	5 U	100 U	10 U	100 U	17	400 U	85
Bromodichloromethane	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
Bromoform	5 U	5 U	5 U	49 J	19	100 U	5 U	400 U	80 U
Bromomethane	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
Carbon disulfide	5 U	5 U	5 U	2000	10 U	58 J	5 U	280 J	240
Carbon tetrachloride	5 U	5 U	5 U	940	39	100 U	5 U	1800	310
Chlorobenzene	5 U	180	5 U	100 U	10 U	4500	42	400 U	150
Chlorodibromomethane	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
Chloroethane	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
Chloroform	5 U	5 U	14	6400	42	160	0.98 J	25000	4500
Chloromethane	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
Ethyl benzene	5 U	5 U	5 U	100 U	10 U	360	0.75 J	400 U	80 U
Methylene chloride	5 U	5 U	5 U	85 J	11	260	5 U	2500	830
Styrene	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
Tetrachloroethene	5 U	5 U	3.1 J	42 J	63	54 J	0.75 J	400 U	690
Toluene	5 U	0.74 J	5 U	100 U	6.6	7300	0.96 J	400 U	250
trans-1,3-Dichloropropene	5 U	5 U	5 U	100 U	10 U	100 U	5 U	400 U	80 U
Trichloroethene	5 U	0.58 J	6.2	100 U	10 U	100 U	1.2 J	400 U	100
Vinyl acetate	25 U	25 U	25 U	500 U	50 U	500 U	25 U	2000 U	400 U
Vinyl chloride	5 U	5 U	5 U	100 U	10 U	100 U	60	400 U	80 U
Xylenes, Total	15 U	15 U	15 U	300 U	27	2200	15 U	1200 U	240 U

Notes: U = Compound not detected; value represents sample quantitation limit.

J = Estimated value.

TABLE 3
SPRING 2010 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PZ-101	PZ-102	PZ-103	PZ-104	PZ-104	PZ-105	PZ-106	PZ-107
SAMPLE DATE:	5/18/2010	5/18/2010	5/18/2010	5/18/2010	5/18/2010	5/13/2010	5/13/2010	5/13/2010
QC TYPE:	Sample	Sample	Sample	Duplicate	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)								
1,1,1-Trichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
1,1,2-Trichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
1,1-Dichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
1,1-Dichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
1,2,4-Trimethylbenzene	5 U	5 U	0.82 J	5 U	5 U	5 U	10000 U	10 U
1,2-Dichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	7.4 J
1,2-Dichloroethene (total)	10 U	10 U	1.8 J	10 U	10 U	10 U	20000 U	8.2 J
1,2-Dichloropropane	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
1,3,5-Trimethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
2-Butanone	25 U	25 U	25 U	25 U	25 U	25 U	50000 U	50 U
2-Hexanone	25 U	25 U	25 U	25 U	25 U	25 U	50000 U	50 U
4-Methyl-2-pentanone	25 U	25 U	25 U	25 U	25 U	25 U	50000 U	50 U
Acetone	25 U	25 U	25 U	25 U	25 U	25 U	50000 U	84
Benzene	5 U	13	47	1.6 J	1.6 J	18	10000 U	13
Bromodichloromethane	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	8.1 J
Bromoform	5 U	5 U	5 U	5 U	5 U	5 U	4200	650
Bromomethane	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
Carbon disulfide	5 U	5 U	5 U	5 U	5 U	6.4	120000	7800
Carbon tetrachloride	5 U	5 U	5 U	5 U	5 U	5 U	52000	24000
Chlorobenzene	3.6 J	220	1300	6.5	6.8	140	10000 U	10 U
Chlorodibromomethane	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	37
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
Chloroform	5 U	5 U	5 U	5 U	5 U	5 U	750000	56000
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
Ethyl benzene	5 U	5 U	1.9 J	5 U	5 U	5 U	10000 U	10 U
Methylene chloride	5 U	5 U	5 U	5 U	5 U	5 U	19000	7800
Styrene	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
Tetrachloroethene	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	1000
Toluene	5 U	5 U	3.2 J	5 U	5 U	2.2 J	10000 U	23
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
Trichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	7.9 J
Vinyl acetate	25 U	25 U	25 U	25 U	25 U	25 U	50000 U	50 U
Vinyl chloride	5 U	5 U	5 U	5 U	5 U	5 U	10000 U	10 U
Xylenes, Total	15 U	15 U	4.6 J	15 U	15 U	15 U	30000 U	30 U

Notes: U = Compound not detected; value represents sample quantitation limit.
J = Estimated value.

TABLE 4
COMPARISON OF SPRING 2010
CHLOROPYRIDINES AND VOLATILE ORGANICS CONCENTRATIONS
IN GROUNDWATER TO PREVIOUS RESULTS (ug/L)

ARCH ROCHESTER
SEMI-ANNUAL GROUNDWATER MONITORING REPORT

WELL	SELECTED CHLOROPYRIDINES				SELECTED VOCs			
	# EVENTS IN PRIOR 5 YRS	HISTORIC MAXIMUM	5-YEAR MEAN	MAY-2010 RESULT	# EVENTS IN PRIOR 5 YRS	HISTORIC MAXIMUM	5-YEAR MEAN	MAY-2010 RESULT
ON-SITE WELLS/LOCATIONS								
B-11	0	1,700		4,800	0	570		84
B-17	5	28,000,000	470,000	63,000	5	350,000	15,000	8,200
B-7	5	9,100	1,000	640	5	260	32	19
BR-127	10	29,000	7,100	3,500	10	1,300	170	**430**
BR-3	5	6,500,000	70,000	30,000	5	920,000	180,000	160,000
BR-5A	10	1,700	290	230	10	9,400	24	1.9
BR-6A	10	140,000	5,900	**6,200**	10	26,000	150	1.9
BR-7A	10	510,000	27,000	8,900	10	3,000	140	12
BR-8	5	57,000	230	77	5	6,900	11	ND
BR-9	10	720	110	58	10	160	5.7	2.9
E-3	5	600	150	72	5	12,000	36	25
MW-127	10	15,000	6,300	230	10	180	570	**7,500**
PW10	10	240,000	91,000	16,000	10	120,000	11,000	160
PW11	10	27,000	1,100		10	30,000	100	
PW12	10	15,000	2,500	1,700	10	120,000	460	**470**
PW13	10	7,500	1,700	940	10	920	210	2.9
PW14	10	29,000	22,000	2,100	10	160,000	33,000	29,000
PW15	6	730,000	250,000	39,000	6	8,200	6,400	6,400
PZ-105	10	190,000	10,000	**18,000**	10	9,700	130	ND
PZ-106	10	120,000	64,000	16,000	10	1,400,000	330,000	**820,000**
PZ-107	10	11,000	7,600	**8,600**	10	12,000	2,000	**89,000**
OFF-SITE WELLS/LOCATIONS								
B-16	0	33,000		950	0	4,500		7.4
BR-103	5	400	11	ND	5	38	7.6	ND
BR-104	5	3,100	4.8	4.4		9		
BR-105	10	24,000	920	740	10	310	3.7	3.7
BR-105D	10	10,000	770	320	10	230	4.2	2.5
BR-106	10	25,000	3,900	2,900	10	6,300	0.062	ND
BR-108	5	1,700	37	36		ND		
BR-112D	5	310	49	21		4.3		
BR-113D	5	490	28	**30**		2.8		
BR-114	5	520	190	43	5	12	0.24	ND
BR-116	5	12	ND	ND		84		
BR-116D	5	710	22	**63**		120		
BR-117D	5	80	7.8	5.5		1.9		
BR-118D	5	330	63	52		6.6		
BR-122D	1	650	ND	150		ND		
BR-123D	5	860	87	68		4		
BR-126	9	9,000	3,700	1,400	9	230	64	ND
MW-103	5	97	19	1.9	5	750	18	ND
MW-104	5	180	3.6	2.5		1		

TABLE 4
COMPARISON OF SPRING 2010
CHLOROPYRIDINES AND VOLATILE ORGANICS CONCENTRATIONS
IN GROUNDWATER TO PREVIOUS RESULTS (ug/L)

ARCH ROCHESTER
SEMI-ANNUAL GROUNDWATER MONITORING REPORT

WELL	SELECTED CHLOROPYRIDINES				SELECTED VOCs			
	# EVENTS IN PRIOR 5 YRS	HISTORIC MAXIMUM	5-YEAR MEAN	MAY-2010 RESULT	# EVENTS IN PRIOR 5 YRS	HISTORIC MAXIMUM	5-YEAR MEAN	MAY-2010 RESULT
MW-106	10	130,000	6,700	1,500	10	450	0.29	**0.58**
MW-114	5	18	ND	ND	5	24	19	**23**
MW-16	5	360	7		1	8	8	
NESS-E	5	5,000	150	2.4		700		
NESS-W	5	2,100	1.0	ND		89		
PZ-101	10	27,000	220	13	10	6.1	0.25	ND
PZ-102	10	58,000	1,300	760	10	10,000	2.4	ND
PZ-103	10	73,000	8,200	1,100	10	44,000	4.8	ND
PZ-104	10	9,100	2,400	1,500	10	40	0.14	ND
QD-1	6	11	5.8	2.2		ND		
QO-2	11	380	5.4	ND		ND		
QO-2S1	11	27	0.86	ND		ND		
QS-4	11	3,400	200	140	1	ND	ND	

Note:
1) Number of samples and mean reflect 5-year sampling period from May 2005 through November 2009. Historic maximum based on all available results from March 1990 through November 2009.
2) Chloropyridines represented by: 2-Chloropyridine, 2,6-Dichloropyridine, 3-Chloropyridine, 4-Chloropyridine, p-Fluoroaniline, and Pyridine.
3) Selected VOCs represented by Carbon Tetrachloride, Chloroform, Methylene Chloride, Tetrachloroethene, and Trichloroethene.
4) **Bold and shade** - May 2010 exceeds 5-year mean.
5) ND = Not detected
BLANK = Not sampled

TABLE 5
SPRING 2010 QUARRY SEEP AND OUTFALL WATER SAMPLE RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	QS-4	QO-2	QO-2S1	QD-1
SAMPLE DATE:	5/14/2010	5/14/2010	5/14/2010	5/14/2010
QC TYPE:	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)				
2,6-Dichloropyridine	26	9.4 U	9.4 U	9.4 U
2-Chloropyridine	110	9.4 U	9.4 U	2.2 J
3-Chloropyridine	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloropyridine	9.4 U	9.4 U	9.4 U	9.4 U
p-Fluoroaniline	9.4 U	9.4 U	9.4 U	9.4 U
Pyridine	24 U	24 U	24 U	24 U

Notes:
U = Compound not detected; value represents sample quantitation limit.
J = Estimated value

TABLE 6
EXTRACTION WELL WEEKLY FLOW MEASUREMENTS - DECEMBER 2009 THROUGH MAY 2010

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

Week Ending	BR-5A [Gal./Wk.]	BR-7A [Gal./Wk.]	BR-9 [Gal./Wk.]	PW-11 [Gal./Wk.]	PW-13 [Gal./Wk.]	PW-14 [Gal./Wk.]	PW-15 [Gal./Wk.]	BR-127 [Gal./Wk.]	Total [Gal.]
Dec '09									
12/06/09	34,749	57,244	18,787	2,415	1,074	1,769	25,343	88,061	229,442
12/13/09	35,666	76,669	19,667	2,436	10	1,420	28,389	75,319	239,576
12/20/09	38,480	75,973	18,108	2,830	6,822	1,582	27,427	63,862	235,084
12/27/09	39,232	69,694	16,521	2,664	10,957	1,435	25,323	35,544	201,370
								Total [Gal.]	905,472
Jan '10									
01/03/10	38,901	76,066	27,452	1,103	987	1,119	24,634	74,729	244,991
01/10/10	36,839	76,752	27,677	1,401	0	1,075	22,367	63,804 *	229,915
01/17/10	35,759	81,398	24,164	1,367	5	1,305	20,502	67,752 *	232,252
01/24/10	36,835	70,805	30,237	363	1	1,424	33,955	67,752 *	241,372
01/31/10	35,943	70,707	34,223	0	0	1,416	29,162	67,752 *	239,203
								Total [Gal.]	1,187,734
Feb '10									
02/07/10	34,999	73,355	37,579	0	0	1,306	22,064	67,752 *	237,055
02/14/10	32,592	78,670	29,062	0	0	1,038	31,142	67,752 *	240,256
02/21/10	32,458	100,494	31,498	0	6	1,048	33,810	11,726 **	211,040
02/28/10	20,159	84,649	30,654	0	0	192	31,905	14,796 **	182,355
								Total [Gal.]	870,706
Mar '10									
03/07/10	36,299	82,905	25,597	0	1	407	19,339	21,661 **	186,209
03/14/10	29,232	83,647	42,224	0	15	713	23,367	37,163	216,361
03/21/10	29,177	89,094	48,958	0	21	898	15,086 **	37,342	220,576
03/28/10	27,801	89,927	48,850	0	12	911	17,031 **	36,681	221,213
								Total [Gal.]	844,359
Apr '10									
04/04/10	27,304	91,346	48,742	0	32	909	26,989	36,473	231,795
04/11/10	26,114	88,068	47,861	0	38	915	24,315	35,579	222,890
04/18/10	24,382	87,317	45,603	0	42	885	17,458 **	34,326	210,013
04/25/10	22,314	74,241	72,854	0	30,301	1,000	10,519 **	32,436	243,665
								Total [Gal.]	908,363
May '10									
05/02/10	21,743	61,186	84,587	0	82,947	1,140	8,509 **	29,863	289,975
05/09/10	21,041	64,081	78,412	0	87,275	1,168	32,921	27,912	312,810
05/16/10	22,620	59,906	80,527	0	95,484	1,203	43,786	27,987	331,513
05/23/10	21,190	52,981	76,606	0	91,329	1,181	40,482	26,173	309,942
05/30/10	19,671	51,552	79,194	0	90,829	1,178	38,833	24,854	306,111
								Total [Gal.]	1,550,351
Total 6 Mo. Removal (Gal.)	781,500	1,968,727	1,125,644	14,579	498,188	28,638	674,658	1,175,051	6,266,986

Notes:
1) * - Flow rate is estimated due to a meter failure or reading error
2) ** - Flow rate adversely affected by pump failure or pluggage in discharge line

TABLE 7

MASS REMOVAL SUMMARY
PERIOD: DECEMBER 2009 - MAY 2010

ARCH ROCHESTER
SPRING 2010 GROUNDWATER MONITORING REPORT

Well	Total Vol. Pumped (gallons)	Avg. VOC Conc. (ppm)	Avg. PYR. Conc. (ppm)	VOCs Removed (pounds)	PYR. Removed (pounds)
BR-5A	782,000	0.002	0.20	0.01	1.3
BR-7A	1,969,000	0.006	11	0.10	173
BR-9	1,126,000	0.002	0.047	0.02	0.4
PW-11	15,000	0.000	0.30	0.0	0.0
PW-13	498,000	0.004	1.0	0.02	4
PW-14	29,000	35	3.2	8.6	1
PW-15	675,000	5.9	32	33	177
BR-127	1,175,000	0.43	3.2	4.2	31
Totals:	6,269,000			46	388

Note: VOC and pyridine concentrations used in this table are an average of the analytical results from the Fall 2009 and Spring 2010 sampling events for each well

TABLE 8
2010 SAMPLING SCHEDULE
ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

ARCH ROCHESTER						2010					
MONITORING PROGRAM						SPRING		FALL		TOTAL	
	Well	zone	area	Frequency/Parameters	Purpose	Pyridines	VOCs	Pyridines	VOCs	Pyridines	VOCs
OFF-SITE	MW-103	OB	BRBC	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
MONITORING	BR-103	BR	BRBC	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
	MW-104	OB	BUFFALO RD	annual monitoring, PYR	trend monitoring	1				1	0
	BR-104	BR	BUFFALO RD	annual monitoring, PYR	trend monitoring	1				1	0
	BR-105	BR	AID-HOSP	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	BR-105D	BR deep	AID-HOSP	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	MW-106	OB	AID-HOSP	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	BR-106	BR	AID-HOSP	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	BR-108	BR	AID-HOSP	annual monitoring, PYR	trend monitoring	1				1	0
	BR-112D	BR deep	NYSDOT	annual monitoring, PYR	trend monitoring	1				1	0
	BR-113D	BR deep	NYSDOT	annual monitoring, PYR	trend monitoring	1				1	0
	MW-114	OB	JACKSON	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
	BR-114	BR	JACKSON	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
	BR-116	BR	PFAUDLER	annual monitoring, PYR	trend monitoring	1				1	0
	BR-116D	BR deep	PFAUDLER	annual monitoring, PYR	trend monitoring	1				1	0
	BR-117D	BR deep	QUARRY	annual monitoring, PYR	trend monitoring	1				1	0
	BR-118D	BR deep	QUARRY	annual monitoring, PYR	trend monitoring	1				1	0
	BR-122D	BR deep	QUARRY	annual monitoring, PYR	trend monitoring	1				1	0
	BR-123D	BR deep	QUARRY	annual monitoring, PYR	trend monitoring	1				1	0
	NESS-E	BR deep	NESS	annual monitoring, PYR	trend monitoring	1				1	0
	NESS-W	BR deep	NESS	annual monitoring, PYR	trend monitoring	1				1	0
	PZ-101	BR	McKee Rd	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	PZ-102	BR	McKee Rd	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	PZ-103	BR	McKee Rd	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	PZ-104	BR	ARM	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	BR-126	BR	ARM	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1	2	2
	B-16	OB	ARM	semi-annual monitoring, VOCs & PYR	continue until replaced by trench	1	1	1	1	2	2
	MW-16	BR	Gen'l Circuits	annual monitoring, PYR	trend monitoring			1		1	0
ON-SITE	PZ-107	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
MONITORING	PZ-106	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1	2	2
	PZ-105	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1	2	2
	BR-127	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	BR-3	BR	ON-SITE	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
	BR-8	BR	ON-SITE	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
	BR-9	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1	2	2
	BR-5A	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1	2	2
	BR-6A	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1	2	2
	BR-7A	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1	2	2
	B-17	OB	ON-SITE	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
	B-7	OB	ON-SITE	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
	B-11	OB	ON-SITE	semi-annual monitoring, VOCs & PYR	continue until replaced by trench	1	1	1	1	2	2
	E-3	OB	ON-SITE	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
	MW-127	OB	ON-SITE	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	PW10	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1	2	2
	PW12	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1	2	2
	PW13	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1	2	2
	PW14	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1	2	2
	PW15	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1	2	2
	PW16	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	NA	NA	1	1	1	1
QUARRY/CANAL	QS-4	quarry seep	QUARRY	semi-annual monitoring, PYR	trend monitoring	1		1		2	0
MONITORING	QD-1	quarry ditch	DITCH	semi-annual monitoring, PYR	trend monitoring	1		1		2	0
	QO-2	quarry outfall	DITCH	semi-annual monitoring, PYR	trend monitoring	1		1		2	0
	QO-2S1	canal at outfall	CANAL	semi-annual monitoring, PYR	surface water monitoring	1		1		2	0
TOTAL SAMPLES						51	34	31	26	82	60

Revised: 07/21/10

Prepared by: JEB Checked by: NMB

Appendix A

Groundwater Field Sampling Data Sheets

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

FIELD REPORT

TestAmerica Laboratories, Inc.

REMEDIAL INVESTIGATION SAMPLING
ARCH CHEMICAL
ROCHESTER, NEW YORK

SPRING 2010 Event

Prepared For:

MacTec, Inc.
511 Congress Street
Portland, Maine 04101

Attention: Mr. Nelson Breton

Prepared By:

TestAmerica Inc
Audubon Business Center
10 Hazelwood Drive
Amherst, New York 14228-2298

NY5A5762

Written By: Roger Senf

Reviewed By: [signature]

Date: 6-18-10

1.0 INTRODUCTION

This report describes the sampling of the following points:

- Fourty-seven (47) groundwater samples (PW-11 not sampled)
- One (1) barge canal sample
- Two (2) quarry outfall samples
- One (1) quarry seep sample

These activities were in support of the Phase II Remediation Investigation being conducted at the Arch Chemical facility in Rochester, New York. The samples were collected from May 13 – 19, 2010 by TestAmerica Inc (TAL) Field personnel.

2.0 METHODOLOGIES

2.1 Water Level Measurements

Static water levels in all groundwater wells were measured from the top of the well casing/riser with an electronic water level indicator. All well bottoms were sounded with the weighted steel measuring tape. All measurements were recorded to the nearest hundredth of a foot (0.01 feet). The length of the measuring device which contacted the water was cleaned between wells with a deionized water rinse and paper towel wipe. These data are presented on Sampling Summary Table and Field Observation forms.

2.2 Well Purging

Monitoring wells were evacuated prior to sampling employing one of the following methods:

1) Purging three (3) times the standing water volume using precleaned or dedicated 1.25" X 5' stainless steel bailers, 2" X 5' polyvinyl chloride bailers, peristaltic pump or QED Low-Flow Bladder pumps.
2) Evacuated with the low flow/low stress puring technique using either QED Low-Flow Bladder pumps or a variable rate peristaltic pump.

   Wells that were purged of three (3) standing volumes were mainly wells located on or very near the Erie Canal and historically purged with this method prior to sampling. The remaining wells were evacuated with a low flow/low stress purging technique. This technique involves the use of a variable flow rate bladder or peristaltic pump. The pumps were employed to purge the monitoring wells at a flow rate such that drawdown of the water column from static conditions is minimal. Field measurements of pH, specific conductance, temperature, ORP, dissolved oxygen and turbidity are monitored every 3-5

minutes until stabilization of parameters is realized. Once stabilization has occurred, sampling can be conducted. All purged water was collected into 55-gallon drums for disposal at the on-site wastewater treatment facility. Data pertaining to each evacuation are presented on the Sampling Summary Table and field Observation Forms.

2.3 Surface Water Samples

Surface water samples were collected from one (1) location on the Erie Barge Canal, two (2) outfall samples and one (1) seep location. Sample locations were noted on the Field Forms.

3.0 SAMPLING

3.1 Monitoring Wells

All groundwater wells were sampled using precleaned or dedicated 1.25" X 1.25" X 5' stainless steel bailers, perisaltic pumps or bladder (SamplePro) pumps when low flow purging techniques were used. Each bailer was constructed with teflon, bottom-filling check valve and was assembled without glues or welds. New ¼" poly rope was attached to each bailer. The bailer was slowly lowered into the water column, minimizing agitation and devolatilization. Low density polyethylene (LDPE) tubing was used with both the bladder (QED) and the peristaltic pumps. The bladder pumps were decontaminated between sample locations in accordance with the work plan. Personnel exercised care in all aspects of the sampling to ensure the collection of a representative sample An additional sample container was collected from each well in order to facilitate the measurement of field analytical parameters. Data pertaining to sampling are presented on the Sampling Summary Table and the Field Observation Forms.

3.2 Canal Sampling

When possible, samples were collected directly from the canal into appropriate sample containers. Otherwise, samples were collected with the use of a unique, laboratory-cleaned stainless steel bailer. The bailers were immersed just below the surface and removed. Sample was poured directly into the appropriate container. An additional container was collected to facilitate the measurement of field parameters. Additional data pertaining to these samples is presented in the Sampling Summary Table and Field Observation Forms.

3.3 Seep Sampling

Groundwater samples were collected from seeps at the quarry (QS4) located on Buffalo Road. The samples were collected with the use of a laboratory cleaned stainless steel bucket and was then poured directly into the appropriate containers. An additional container was

collected to facilitate the measurement of field parameters. Data pertaining to this sampling is presented in the Sampling Summary Table and Field Observation Forms.

4.0 SAMPLE CONTAINERS

Monitoring wells and surface water samples requiring analysis for volatile organics were collected into 40 ml glass vials with teflon septa. Samples for semi-volatile and Pyridine analysis were collected into one (1) liter amber glass bottles with teflon-lined caps. All bottles were purchased new and cleaned (Protocol A, 300 series) from Environmental Supply Services. Each container was labeled with the following information:

- Sample Identification (Well/Point I.D.)
- Date
- Project Number
- Sampler's Initials

5.0 FIELD MEASUREMENTS

On-site field measurements were made of each sample's pH, specific conductance and temperature. All measurements were made in accordance with protocols outlined in Methods for Chemical Analysis of Water and Wastes (EPA – 600/4-79-9020). These data were presented on the Sampling Summary Table and Field Observation Forms.

6.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

6.1 Trip Blanks

Trip blanks were collected with each sample shipment requiring volatile organic analysis. Each trip blank consisted of two 40 ml glass vials with teflon septa which were filled with deionized water at the TAL laboratory. These blanks were transported to the site, stored with field collected samples and submitted to the TAL facility for analysis.

6.2 Equipment Rinse Blank

Equipment rinse blanks were collected as required by the work plan.

7.0 CHAIN OF CUSTODY

Chain of custody was initiated at the time of sample collection and maintained through delivery to the TAL facility in Amherst, New York. Copies of these documents are included in the analytical report package.

SEMI-ANNUAL GROUNDWATER ELEVATION REPORT
ARCH CHEMICAL ROCHESTER, N.Y.

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
B-1	05/12/10	8.21		-8.21	1203	NO L-NAPL ; NO D-NAPL
B-10		9.18		-9.18	1100	NO L-NAPL ; NO D-NAPL
B-11		6.59		-6.59	1122	NO L-NAPL ;NO D-NAPL 11.55 BOT.
B-13		12.76		-12.76	1304	
B-14		9.04		-9.04	1252	
B-15		6.18		-6.18	1255	
B-16		6.73		-6.73	1259	NO L-NAPL ;NO D-NAPL 13.20 BOT.
B-17		9.70		-9.70	1149	NO L-NAPL ; NO D-NAPL
B-2		9.27		-9.27	1205	NO L-NAPL ; NO D-NAPL
B-4		11.77		-11.77	1033	NO L-NAPL ; NO D-NAPL
B-5		10.21		-10.21	1028	NO L-NAPL ; NO D-NAPL
B-7		14.11		-14.11	1239	NO L-NAPL ; NO D-NAPL
B-8		9.81		-9.81	1107	NO L-NAPL ; NO D-NAPL
BR-1		7.55		-7.55	1039	NO L-NAPL ; NO D-NAPL
BR-102		22.70		-22.70	1210	
BR-103		6.71		-6.71	1155	
MW-103		1.62		-1.62	1156	
BR-104		9.96		-9.96	1200	
MW-104		4.77		-4.77	1201	
BR-105		23.08		-23.08	1256	
BR-105D		25.76		-25.76	1257	
MW-105		18.79		-18.79	1254	
BR-106		22.46		-22.46	1305	
MW-106		10.16		-10.16	1307	
BR-108		28.51		-28.51	1335	
MW-108		21.21		-21.21	1336	
BR-111		28.47		-28.47	1246	
BR-111D		28.99		-28.99	1245	
BR-112A		27.11		-27.11	1238	
BR-112D		36.34		-36.34	1240	
BR-113		31.26		-31.26	1215	
BR-113D		31.38		-31.38	1216	

SEMI-ANNUAL GROUNDWATER ELEVATION REPORT
ARCH CHEMICAL ROCHESTER, N.Y.

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
BR-114	05/12/10	13.75		-13.75	1205	
MW-114		10.10		-10.10	1206	
BR-116		28.52		-28.52	1140	
BR-116D		35.75		-35.75	1142	
BR-117		24.00		-24.00	1052	CASCADING WELL
BR-117D		49.80		-49.80	1050	
BR-118		33.39		-33.39	1042	
BR-118D		48.65		-48.65	1040	
BR-122D		45.30		-45.30	1130	
BR-123D		45.54		-45.54	1125	
BR-124D		31.64		-31.64	1120	
BR-126		8.51		-8.51	1245	
BR-127		8.83			1126	NO L-NAPL
MW-127		6.51			1127	NO L-NAPL ; NO D-NAPL
BR-2		9.61		-9.61	1131	NO L-NAPL ; NO D-NAPL
BR-2A		10.87		-10.87	1130	NO L-NAPL ; NO D-NAPL
BR-2D		0.05		-0.05	1134	NO L-NAPL ; NO D-NAPL
BR-3		9.60		-9.60	1114	NO L-NAPL
BR-3D		58.12		-58.12	1113	NO L-NAPL ; NO D-NAPL
BR-4		7.12		-7.12	1140	NO L-NAPL
BR-5		13.82		-13.82	1050	NO L-NAPL ; NO D-NAPL
BR-5A		19.33		-19.33	1051	
BR-6A		13.99		-13.99	1111	
BR-7		31.26		-31.26	1236	
BR-7A		20.02		-20.02	1235	NO L-NAPL ; NO D-NAPL
BR-8		10.16		-10.16	1031	NO L-NAPL ; NO D-NAPL
BR-9		35.18		-35.18	1209	NO L-NAPL
C-2A		9.44		-9.44	1132	NO L-NAPL ; NO D-NAPL
C-3						BURIED
C-5		10.96		-10.96	1115	NO L-NAPL ; NO D-NAPL
E-2		5.27		-5.27	1141	NO L-NAPL ; NO D-NAPL
E-3		4.22		-4.22	1052	NO L-NAPL ; NO D-NAPL

SEMI-ANNUAL GROUNDWATER ELEVATION REPORT
ARCH CHEMICAL ROCHESTER, N.Y.

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
E-5	05/12/10	5.93		-5.93	1045	NO L-NAPL ; NO D-NAPL
EC-1		17.44		-17.44	1230	
EC-2		12.67		-12.67	1217	
ERIE CANAL		32.97		-32.97	1225	
MW-16		11.64		-11.64	1147	
MW-3		5.83		-5.83	1355	
MW-G6		3.97		-3.97	1402	
MW-G7						NOT LOCATED
MW-G8		7.92		-7.92	1407	
MW-G9		10.55		-10.55	1412	
N-2		3.70		-3.70	1041	NO L-NAPL ; NO D-NAPL
N-3		5.59		-5.59	1200	NO L-NAPL
NESS-E		15.74		-15.74	1208	
NESS-W		31.48		-31.48	1212	
PW-10		8.95		-8.95	1151	
PW-11		26.01		-26.01	1027	NO L-NAPL
PW-12		6.21		-6.21	1055	
PW-13		33.51		-33.51	1232	NO L-NAPL; NO D NAPL
PW-14		45.15		-45.15	1120	NO L-NAPL
PW-15		29.76		-29.76	1117	NO L-NAPL
PZ-101		13.22		-13.22	1223	
PZ-102		15.68		-15.68	1225	
PZ-103		12.19		-12.19	1227	
PZ-104		14.02		-14.02	1306	
PZ-105		9.62		-9.62	1109	NO L-NAPL ; NO D-NAPL
PZ-106		11.75		-11.75	1119	NO L-NAPL ; NO D-NAPL
PZ-107		10.77		-10.77	1102	NO L-NAPL ; NO D-NAPL
PZ-109		10.35		-10.35	1109	NO L-NAPL; NO D-NAPL
W-2		9.79		-9.79	1208	NO L-NAPL ; NO D-NAPL
W-5		6.25		-6.25	1230	NO L-NAPL ; NO D-NAPL

Sampling Summary Table
ARCH CHEMICAL
JUNE 2010
RI SAMPLING/ROCHESTER NY FACILITY

Sample Point	Water Level Date	Water Level Time	Water Level (ft)*	Water Elevation (ft)**	Bottom Of Well (ft)*	Field Measurements Date	Field Measurements Time	pH (STD) (Units)	Spec. Cond. (umhos)	Temp (°C)	Turb. (NTU)	Other Field Measurements
B-11	05/14/2010	1153	5.11	N/A	N/A	05/17/2010	1136	7.52	1786	14.0	99.80	EH(mv)= -10 DO(ppm)= 0.68
	Comments: SL.TURBID GREY/PURGED TO DRY											
B-16	05/14/2010	1345	7.02	N/A	N/A	05/14/2010	1410	7.20	2326	15.4	3.99	EH(mv)= -20 DO(ppm)= 0.85
	Comments: CLEAR											
B-17	05/14/2010	1020	9.81	N/A	N/A	05/14/2010	1050	8.90	10300	13.0	5.82	EH(mv)= -89 DO(ppm)= 0.73
	Comments: CLEAR AMBER											
B-7	05/14/2010	1259	13.98	N/A	N/A	05/14/2010	1325	6.98	1824	14.4	19.70	EH(mv)= -26 DO(ppm)= 0.84
	Comments: CLEAR											
BR-103	05/18/2010	1310	6.62	N/A	N/A	05/18/2010	1335	7.45	870	13.2	5.52	EH(mv)= -87 DO(ppm)= 0.70
	Comments: CLEAR											
BR-104	05/17/2010	1017	10.92	N/A	N/A	05/17/2010	1140	7.85	395	12.1	23.20	EH(mv)= -2 DO(ppm)= 0.85
	Comments: CLEAR											
BR-105	05/19/2010	1146	22.86	N/A	N/A	05/19/2010	1329	7.38	2177	14.1	0.32	EH(mv)= -124 DO(ppm)= 0.64
	Comments: CLEAR											
BR-105D	05/19/2010	1146	25.55	N/A	N/A	05/19/2010	1204	6.87	34300	16.2	0.62	EH(mv)= -315 DO(ppm)= 0.70
	Comments: CLEAR											
BR-106	05/19/2010	1018	23.88	N/A	N/A	05/19/2010	1050	6.90	4387	12.3	6.13	EH(mv)= -64 DO(ppm)= 0.75
	Comments: CLEAR											
BR-108	05/18/2010	1010	28.51	N/A	29.75	05/18/2010	1442	7.29	1521	11.0	77.90	EH(mv)= 23
	Comments: SL.TURBID BROWN											
BR-112D	05/19/2010	1349	36.27	N/A	72.26	05/19/2010	1424	7.29	2787	10.8	6.07	EH(mv)= -221 DO(ppm)= 0.98
	Comments: CLEAR											
BR-113D	05/17/2010	1355	31.28	N/A	N/A	05/17/2010	1430	7.19	2569	12.7	1.53	EH(mv)= -277 DO(ppm)= 0.24
	Comments: CLEAR											
BR-114	05/18/2010	1010	13.64	N/A	N/A	05/18/2010	1045	6.70	2063	14.3	1.28	EH(mv)= -79 DO(ppm)= 0.28
	Comments: CLEAR											
BR-116	05/17/2010	1250	28.25	N/A	N/A	05/17/2010	1325	6.93	3471	16.0	4.50	EH(mv)= -65 DO(ppm)= 0.89
	Comments: CLEAR											
BR-116D	05/17/2010	1155	35.60	N/A	N/A	05/17/2010	1230	10.00	1429	14.3	33.10	EH(mv)= -122 DO(ppm)= 0.56
	Comments: CLEAR BLACK PARTICULATES											
BR-117D	05/14/2010	1035	49.79	N/A	N/A	05/14/2010	1110	6.69	3644	10.9	57.80	EH(mv)= -311 DO(ppm)= 0.26
	Comments: BLACK TINT											

SG - Specific Gravity
EH - Redox
DO - Dissolved Oxygen

* From Top of Riser
** Elevation Above Sea Level

Sample Point	Water Level Date	Water Level Time	Water Level (ft)*	Water Elevation (ft)**	Bottom Of Well (ft)*	Field Measurements Date	Field Measurements Time	pH (STD) (Units)	Spec. Cond. (umhos)	Temp (°C)	Turb. (NTU)	Other Field Measurements
BR-118D	05/14/2010	1120	48.63	N/A	N/A	05/14/2010	1155	7.51	1811	10.7	29.80	EH(mv)= -306 DO(ppm)= 0.16
	Comments: SL. TINT											
BR-122D	05/14/2010	1405	44.96	N/A	N/A	05/14/2010	1440	7.20	2353	10.6	17.70	EH(mv)= -278 DO(ppm)= 0.18
	Comments: BLACK TINT											
BR-123D	05/14/2010	1315	45.53	N/A	N/A	05/14/2010	1350	7.58	2224	11.5	22.10	EH(mv)= -165 DO(ppm)= 0.37
	Comments: BLACK TINT											
BR-126	05/18/2010	1344	8.65	N/A	N/A	05/18/2010	1416	7.21	1101	12.5	29.90	EH(mv)= -37 DO(ppm)= 0.63
	Comments: SL.TURBID											
BR-127	05/13/2010	1430	8.91	N/A	N/A	05/13/2010	1431	8.29	2956	14.2	4.24	EH(mv)= -141
	Comments: CLEAR											
BR-3	05/13/2010	1217	9.61	N/A	N/A	05/13/2010	1245	7.04	12300	13.4	65.80	EH(mv)= -143 DO(ppm)= 0.77
	Comments: SL.TURBID YELLOW											
BR-5A	05/17/2010	1220	14.29	N/A	N/A	05/17/2010	1223	7.77	1765	14.3	18.85	EH(mv)= -117
	Comments: CLEAR											
BR-6A	05/17/2010	1040	13.86	N/A	N/A	05/17/2010	1110	7.17	4409	15.0	45.90	EH(mv)= -114 DO(ppm)= 0.95
	Comments: SL.TURBID TAN											
BR-7A	05/17/2010	1300	30.19	N/A	N/A	05/17/2010	1304	7.37	3007	15.1	61.90	EH(mv)= -109
	Comments: SL.TURBID GREY											
BR-8	05/13/2010	1003	10.13	N/A	N/A	05/13/2010	1030	7.10	5862	13.1	29.20	EH(mv)= -91 DO(ppm)= 0.73
	Comments: CLEAR YELLOW TINT											
BR-9	05/17/2010	1230	35.56	N/A	N/A	05/17/2010	1233	7.18	2586	15.2	370.00	EH(mv)= -75
	Comments: TURBID RED											
E-3	05/13/2010	1442	4.30	N/A	N/A	05/14/2010	1231	7.60	876	12.9	48.90	EH(mv)= -52 DO(ppm)= 1.11
	Comments: SL.TURBID											
MW-103	05/18/2010	1330	1.79	N/A	N/A	05/18/2010	1405	7.39	805	14.8	4.76	EH(mv)= 11 DO(ppm)= 0.88
	Comments: CLEAR											
MW-104	05/17/2010	1015	7.98	N/A	N/A	05/17/2010	1100	7.41	963	13.0	303.00	EH(mv)= 17 DO(ppm)= 0.76
	Comments: TURBID TAN											
MW-106	05/19/2010	1018	10.66	N/A	N/A	05/19/2010	1122	6.86	2502	11.4	10.11	EH(mv)= -52 DO(ppm)= 0.95
	Comments: CLEAR											
MW-114	05/18/2010	1056	9.95	N/A	N/A	05/18/2010	1120	7.04	2288	15.0	4.50	EH(mv)= 11 DO(ppm)= 0.97
	Comments: CLEAR											

SG - Specific Gravity
EH - Redox
DO - Dissolved Oxygen

* From Top of Riser
** Elevation Above Sea Level

Sampling Summary Table
ARCH CHEMICAL
JUNE 2010
RI SAMPLING/ROCHESTER NY FACILITY

Sample Point	Water Level Date	Water Level Time	Water Level (ft)*	Water Elevation (ft)**	Bottom Of Well (ft)*	Field Measurements Date	Field Measurements Time	pH (STD) (Units)	Spec. Cond. (umhos)	Temp (°C)	Turb. (NTU)	Other Field Measurements	
MW-127	05/13/2010	1350	6.68	N/A	N/A	05/13/2010	1410	7.61	2099	13.7	4.23	EH(mv)= -70	DO(ppm)= 0.93
	Comments: CLEAR												
NESS-E	05/18/2010	1230	15.58	N/A	N/A	05/18/2010	1300	7.35	1241	15.7	22.70	EH(mv)= -91	DO(ppm)= 0.69
	Comments: SL.TURBID ORANGE TINT												
NESS-W	05/18/2010	1148	31.28	N/A	N/A	05/18/2010	1215	7.11	2226	12.9	3.86	EH(mv)= -129	DO(ppm)= 0.57
	Comments: CLEAR												
PW-10	05/14/2010	1039	8.90	N/A	N/A	05/14/2010	1130	8.09	4680	15.3	67.60	EH(mv)= -88	DO(ppm)= 0.71
	Comments: SL.TURBID AMBER												
PW-12(BR-101)	05/13/2010	1536	6.21	N/A	N/A	05/13/2010	1600	7.02	2948	12.7	39.70	EH(mv)= -114	DO(ppm)= 0.74
	Comments: CLEAR												
PW-13	05/17/2010	1245	21.17	N/A	N/A	05/17/2010	1248	7.12	2601	13.6	6.20	EH(mv)= -105	
	Comments: CLEAR												
PW-14	05/17/2010	1150	21.07	N/A	N/A	05/17/2010	1153	6.90	3513	15.6	100.00	EH(mv)= -17	
	Comments: SL.TURBID TAN												
PW-15	05/17/2010	1205	24.02	N/A	N/A	05/17/2010	1209	8.90	7155	15.2	63.60	EH(mv)= -155	
	Comments: SL.TURBID AMBER												
PZ-101	05/18/2010	1200	13.53	N/A	N/A	05/18/2010	1222	6.91	4590	12.6	4.91	EH(mv)= 45	DO(ppm)= 0.87
	Comments: CLEAR												
PZ-102	05/18/2010	1110	15.83	N/A	N/A	05/18/2010	1136	7.19	6378	12.0	31.90	EH(mv)= -91	DO(ppm)= 0.87
	Comments: SL.TURBID/ORANGE												
PZ-103	05/18/2010	1027	12.44	N/A	N/A	05/18/2010	1052	6.96	5648	12.1	3.56	EH(mv)= -144	DO(ppm)= 0.94
	Comments: CLEAR												
PZ-104	05/18/2010	1244	14.11	N/A	N/A	05/18/2010	1306	7.33	1648	13.4	5.34	EH(mv)= -117	DO(ppm)= 0.82
	Comments: CLEAR												
PZ-104	05/18/2010	1244	14.11	N/A	N/A	05/18/2010	1307	7.31	1650	13.5	5.29	EH(mv)= -117	DO(ppm)= 0.81
	Comments: CLEAR/DUP												
PZ-105	05/13/2010	1048	10.65	N/A	N/A	05/13/2010	1115	7.55	3772	14.6	82.50	EH(mv)= -195	DO(ppm)= 0.83
	Comments: SL.TURBID/GREY												
PZ-106	05/13/2010	1303	11.94	N/A	N/A	05/13/2010	1330	6.20	14210	13.5	7.12	EH(mv)= -26	DO(ppm)= 0.79
	Comments: CLEAR YELLOW TINT												
PZ-107	05/13/2010	1136	10.80	N/A	N/A	05/13/2010	1205	6.60	6588	13.4	3.37	EH(mv)= -151	DO(ppm)= 0.92
	Comments: CLEAR												

SG - Specific Gravity
EH - Redox
DO - Dissolved Oxygen

* From Top of Riser
** Elevation Above Sea Level

Sampling Summary Table
ARCH CHEMICAL
JUNE 2010
RI SAMPLING/ROCHESTER NY FACILITY

Sample Point	Water Level Date	Water Level Time	Water Level (ft)*	Water Elevation (ft)**	Bottom Of Well (ft)*	Field Measurements Date	Field Measurements Time	pH (STD) (Units)	Spec. Cond. (umhos)	Temp (°C)	Turb. (NTU)	Other Field Measurements
QD-1	05/14/2010	1055	0.00	N/A	N/A	05/14/2010	1100	8.11	1590	14.8	N/A	EH(mv)= -165
	Comments: CLEAR											
QO-2	05/14/2010	1500	0.00	N/A	N/A	05/14/2010	1505	8.22	1581	15.3	N/A	EH(mv)= -179
	Comments: CLEAR											
QO-2S1	05/14/2010	1515	0.00	N/A	N/A	05/14/2010	1525	8.14	675	14.9	N/A	EH(mv)= -162
	Comments: CLEAR											
QS-4	05/14/2010	1550	0.00	N/A	N/A	05/14/2010	1600	8.17	815	11.7	N/A	EH(mv)= -137
	Comments: CLEAR											

SG - Specific Gravity
EH - Redox
DO - Dissolved Oxygen

* From Top of Riser
** Elevation Above Sea Level

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: B-11

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-14-10 / 1153

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: (X) Unlocked ( ) Good
( ) Loose ( ) Flush Mount
( ) Damaged ______

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

KINK IN RISER 5 FT DOWN

PURGE INFORMATION:

Date / Time Initiated: 5-14-10 / 1155

Date / Time Completed: 5-14-10 / 1215

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 5.11

Elevation. G/W MSL: ______

Well Total Depth, Feet: 11.55

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal: ______

Dedicated: (Y) / N

Total Volume Purged, Gal: ______

Purged To Dryness (Y) / ~~(N)~~

Purge Observations: LO FLOW

Start ~~Grey~~ TURBID Finish TURBID

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
	ML/M	WL							
1200	60			15.6	7.65	1830	177	-23	0.82
1205				14.9	7.50	1798	116	-20	0.80
1210				14.9	7.47	1790	136	-18	0.77
1215				14.8	7.45	1788	129	-16	0.70

SAMPLED @ 1215 / 5-14-10 Before going dry

Paul Liu

Field Form
Revision 0
03/14/02

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID B-11

ate/Time 5-17-10 / 1135 Water Level @ Sampling, Feet: 5.09

ethod of Sampling: ______ Dedicated: Y / N

ulti-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other (DO)
1136	14.0	7.52	1.7.8C	99.8	-10	0.68

ISTRUMENT CHECK DATA:

urbidity Serial #: ______ NTU std. = ______ NTU ______ NTU std. = ______ NTU

olutions: ______

I Serial #: ______ 4.0 std.= ______ 7.0 std.= ______ 10.0 std. = ______

olutions: ______

onductivity Serial #: ______ ______ umhos/cm= ______ ______ umhos/cm= ______

olutions: ______

ENERAL INFORMATION:

eather conditions @ time of sampling: ______

ample Characteristics: SL Turbid Gray

OMMENTS AND OBSERVATIONS: Sample Pyramid well went dry

while sample 5-14-10 (VOAs only)

ertify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific otocals.

5/17/10 By: [signature] Company: TAC

PAGE 2 OF 2

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: B-16

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-14-10 / ~~1345~~

Cond of seal: ( ) Good ( ) Cracked ( ) None (X) Buried %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-14-10 / 1350

Date / Time Completed: 5-14-10 / 1410

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 7.02

Elevation. G/W MSL:

Well Total Depth, Feet: 13.20

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLOW

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz) MW	Purge Rate (gpm/htz) WC	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1355	200	7.12		15.1	7.18	2306	8.09	-29	0.91
1400	↓	↓		15.3	7.19	2326	5.06	-20	0.88
1405				15.3	7.20	2326	4.42	-20	0.86
1410	↓	↓		15.4	7.20	2326	3.99	-20	0.85

Sample @ 1410 / 5.14.10

Rev 2

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: ___/___/___ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH Sample Point ID: B-17

Field Personnel: PL, JJ, RS Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-14-10 / 1020 Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: — Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-14-10 / 1030 Date / Time Completed: 5-14-10 / 1050

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 9.81 Elevation. G/W MSL:

Well Total Depth, Feet: Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: Dedicated: (Y) / N

Total Volume Purged, Gal: Purged To Dryness Y / (N)

Purge Observations: LO-FLO Start Amb- Clr Finish Clr Amb-

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
	New	WL							
1035	120	9.83		13.1	8.90	10,270	8.33	-87	0.80
1040				12.9	8.90	10,300	7.04	-88	0.77
1045				13.5	8.91	10,310	6.00	-89	0.75
1050	↓	↓		13.0	8.90	10,300	5.82	-89	0.73

SAMPLE @ 1050 5-14-10

Rev 2

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: 316733 NTU std. = ____ NTU 10 NTU std. = 10 NTU

Solutions: RT00 928

pH Serial #: 6215171 4.0 std.= 4.00 7.0 std.= 7.00 10.0 std. = _____

Solutions: 4-RT00 918 7-RT00 925

Conductivity Serial #: 6215171 1000 umhos/cm= 1000 _____ umhos/cm= _____

Solutions: RT00 926

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals.

Date: / / By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: B7

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-14-10 / 1259

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-14-10 / 1302

Date / Time Completed: 5-14-10 / 1325

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 13.48

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLOW

Start TURB. ORANGE Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1305	MP/W 100	WL 14.29		14.2	7.09	1835	86.4	-15	0.93
1310	↓	14.37		14.3	7.00	1829	41.9	-20	0.90
1315	↓	14.40		14.1	7.00	1825	29.2	-23	0.87
1320	↓	↓		14.2	7.00	1825	22.5	-25	0.85
1325	↓	↓		14.4	6.98	1824	19.7	-26	0.84

Started @ 1325 / 5-14-10

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____NTU std. = _____NTU _____NTU std. = _____NTU

Solutions: _____

pH Serial #: _____ 4.0 std.=_____ 7.0 std.=_____ 10.0 std. =_____

Solutions: _____

Conductivity Serial #: _____ _____umhos/cm=_____ _____umhos/cm=_____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals.

__/__/____ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH Sample Point ID: BR-103

Field Personnel: PL, JD, RS Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1310 Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: — Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1312 Date / Time Completed: 5-18-10 / 1335

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 6.62 Elevation. G/W MSL:

Well Total Depth, Feet: Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal: Dedicated: (Y) / N

Total Volume Purged, Gal: Purged To Dryness Y / (N)

Purge Observations: LO-FLOW Start CLEAR Finish CLEAR

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1320	ML/M 180	6.68		13.0	7.54	874	8.64	-91	0.72
1325		6.68		13.1	7.51	871	8.34	-93	0.72
1330		6.70		13.1	7.47	870	5.93	-89	0.71
1335	↓	6.70		13.2	7.45	870	5.52	-87	0.70

SAMPLED AT 1335 / 5-18-10

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BJ

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals.

_____ / _____ / _____ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-104

Field Personnel: R. SENF

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 5-17-10 / 1017

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-17-10 / 1115

Date / Time Completed: 5-17-10 / 1140

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 10.92

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC PUMP

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start CLEAR Finish CLEAR

PURGE DATA: (if applicable)

Time	Purge Rate ~~(gpm/htz)~~		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1125	ml/min 90	WL 11.25		11.7	7.76	394	31.3	3	0.95
1130	80	11.30		11.9	7.83	395	29.9	1	0.86
1135	80	11.24		12.0	7.85	395	25.9	0	0.85
1140	80	11.20		12.1	7.85	395	23.2	-2	0.85

SAMPLED AT 1145/5-17-10

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals.

_____ / / _____ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-105

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-19-10 / 1146

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-19-10 1309

Date / Time Completed: 5-19-10 / 1329

Surf. Meas. Pt: ( ) Prot. Casing ( ) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 22.86

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: Lo-Flo

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1314	150 ml/min	22.90		14.4	7.69	2209	1.08	-145	0.68
1319				14.2	7.44	2184	0.73	-130	0.70
1324				14.2	7.42	2162	0.43	-129	0.65
1329				14.1	7.38	2177	0.32	-124	0.64

Sampled at 1329 / 5-19-10

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

ate/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

ethod of Sampling: _____ **Dedicated:** Y / N

ulti-phased/ layered: ( ) Yes ( ) No **If YES:** ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

STRUMENT CHECK DATA:

rbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

lutions: _____

I Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

ions: _____

nductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

lutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

_____

_____

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ertify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific otocals.

te ___/___/___ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-105D

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-19-10 / 1146

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 5-19-10 1149

Date / Time Completed: 5-19-10 / 1204

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 25.55

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1154	ml/min 100	25.85		16.2	6.73	33,670	0.80	-296	0.74
1159	"	"		16.2	6.93	34,040	1.18	-311	0.71
1204	"	"		16.2	6.87	34,300	0.62	-315	0.70

Sampled at 1204 / 5-19-10

John Stolk

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

te/Time _____ / _____ Water Level @ Sampling, Feet: _____

thod of Sampling: _____ Dedicated: Y / N

lti-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

STRUMENT CHECK DATA:

rbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

lutions: _____

Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

utions: _____

nductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

utions: _____

NERAL INFORMATION:

ather conditions @ time of sampling: _____

nple Characteristics: _____

MMENTS AND OBSERVATIONS: _____

_____

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rtify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific tocals.

___ / / _____ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH Sample Point ID: BR-106

Field Personnel: PL, JJ, RS Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-19-10 / 1018 Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: — Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-19-10 / 1025 Date / Time Completed: 5-19-10 / 1050

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 23.88 Elevation. G/W MSL:

Well Total Depth, Feet: Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: Dedicated: (Y) N

Total Volume Purged, Gal: Purged To Dryness Y / (N)

Purge Observations: LO-FLO Start Slightly Turbid Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1030	150 mL/min	23.88		12.5	6.77	4570	49.2	18	0.81
1035		23.82		12.5	6.82	4497	26.0	-38	0.78
1040				12.3	6.85	4367	9.80	-64	0.78
1045				12.4	6.86	4422	8.70	-61	0.77
1050				12.3	6.90	4387	6.13	-64	0.75

Samples at 1050 / 5-19-10

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: 364075 NTU std. = ____ NTU 10 NTU std. = 10 NTU

Solutions: RT00928

pH Serial #: 6203713 4.0 std.= 4.02 7.0 std.= 7.0 10.0 std. = _____

Solutions: 4 - RT00918 7 - RT00925

Conductivity Serial #: 6203713 1000 umhos/cm= 1000 _____ umhos/cm= _____

Solutions: RT00926

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date 1 1 By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-108

Field Personnel: PL, JJ, KS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1010

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked (X) Good
( ) Loose ( ) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1012

Date / Time Completed: 5-18-10 / 1015

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 28.51

Elevation. G/W MSL: ____

Well Total Depth, Feet: 29.75

Method of Well Purge: SS BAILER ~~Peristaltic~~

One (1) Riser Volume, Gal: 0.81

Dedicated: (Y) / N

Total Volume Purged, Gal: 1.0 to Dry

Purged To Dryness (Y) / N

Purge Observations: ____

Start Turbid Brown Finish Turbid Brown

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO

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MW-108 - 21.21

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID BR-108

Date/Time 5-18-10 , 1442 Water Level @ Sampling, Feet: 28.44

Method of Sampling: S/S Bailer Dedicated: (Y) / N

Multi-phased/ layered: ( ) Yes (X) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1442	11.0	7.29	1521	77.9	23	

INSTRUMENT CHECK DATA:

Turbidity Serial #: 316733 NTU std. = ____ NTU 10 NTU std. = 10 NTU

Solutions: RT00928

pH Serial #: 6203713 4.0 std.= 4.03 7.0 std.= 6.98 10.0 std. = ____

Solutions: 4 - RT00918 7 - RT00925

Conductivity Serial #: 6203713 1000 umhos/cm= 1000 ____ umhos/cm= ____

Solutions: RT03941

GENERAL INFORMATION:

Weather conditions @ time of sampling: RAIN 60°

Sample Characteristics: Slight then very turbid.

COMMENTS AND OBSERVATIONS:

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

5/18/10 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: ARCH Sample Point ID: BR-112D

Field Personnel: PL, JJ, RS Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-19-10 / 1349 Cond of seal: ( ) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: ____ Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose ( ) Flush Mount ( ) Damaged ____

If prot.casing; depth to riser below: ____

Gas Meter (Calibration/ Reading): % Gas: - / - % LEL: - / -

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) - / -

PURGE INFORMATION:

Date / Time Initiated: 5-19-10 / 1355 Date / Time Completed: 5-19-10 / 1424

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 36.27 Elevation. G/W MSL: ____

Well Total Depth, Feet: 72.15 Method of Well Purge: Bailer ~~Peristaltic~~

One (1) Riser Volume, Gal: 5.86 Dedicated: Y / (N)

Total Volume Purged, Gal: 18.0 Purged To Dryness Y / (N)

Purge Observations: ____ Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1405		6.0	10.8	7.30	2629	48.3	-189	1.01
1414		12.0	11.4	7.32	2802	11.33	-221	0.98
1424		18.0	10.8	7.29	2787	6.07	-221	0.98
		Gallons						

Sampled at 1424 / 5-19-10

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID BR-112D

ite/Time 5-19-10 / 1424 Water Level @ Sampling, Feet: 36.22

ethod of Sampling: Bailer Dedicated: Y (N)

ulti-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other (DO)
424	10.8	7.29	2787	6.07	-221	0.98

STRUMENT CHECK DATA:

rbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

lutions: _____

Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

lutions: _____

nductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

lutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: Sunny 70°

mple Characteristics: Clear

OMMENTS AND OBSERVATIONS: _____

ertify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific ocals.

5/19/10 By: John Stec Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-113 D

Field Personnel: R. SENF

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 5-17-10 / 1355

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked (X) Good
( ) Loose ( ) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-17-10 / 1405

Date / Time Completed: 5-17-10 / 1430

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 31.28

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: SAMPLE PRO BLADDER PUMP

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start CLEAR Finish CLEAR

PURGE DATA: (if applicable)

Time	Purge Rate ~~(gpm/htz)~~		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1415	130	31.30		12.7	7.19	2530	1.46	-238	0.31
1420	130	31.30		12.6	7.17	2550	—	-223	0.25
1425	↓	31.30		12.7	7.18	2561	1.50	-277	0.24
1430	↓	↓		12.7	7.19	2569	1.53	-277	0.24
		31.30							

SAMPLED AT 1435 / 5-17-10

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific rotocals.

___ / / ___ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BF-114

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1010

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / < % LEL: — / -

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / -

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1015

Date / Time Completed: 5-18-10 / 1045

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 13.64

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: CO-FLOW

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
	ml/m	wl							
1030	200	13.66		14.6	6.54	2076	1.58	-82	0.32
1035	↓	↓		14.0	6.62	2065	1.32	-81	0.30
1040				14.2	6.65	2065	1.30	-80	0.29
1045	↓	↓		14.3	6.70	2063	1.28	-79	0.28

SAMPLE @ 1045 / 5-18-10

Pd 2

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

Method of Sampling: _____ **Dedicated:** Y / N

Multi-phased/ layered: ( ) Yes ( ) No **If YES:** ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: 36Y075 **NTU std. =** ____ **NTU** 10 **NTU std. =** 10 **NTU**
Solutions: RT00926

pH Serial #: 6215171 **4.0 std.=** 4.00 **7.0 std.=** 7.00 **10.0 std. =** _____
Solutions: 4-RT00918 7-RT00925

Conductivity Serial #: 6215171 1000 **umhos/cm=** 1000 _____ **umhos/cm=** _____
Solutions: RT00926

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals.

By: _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: ~~MW-4RS~~ BR-116

Field Personnel: RS/RK

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 5-17-10 / 1250

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-17-10 / 1255

Date / Time Completed: 5-17-10 / 1325

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 28.25

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: SAMPLE PRO BLADDER PUMP

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start CLEAR Finish CLEAR

PURGE DATA: (if applicable)

Time	Purge Rate ~~(gpm/hr)~~		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1310	150	28.30		15.9	6.97	3459	8.44	-63	0.92
1315	150	28.30		15.7	6.95	3472	5.76	-58	0.89
1320	150	|		15.9	6.94	3477	4.64	-62	0.88
1325	150	↓		16.0	6.93	3471	4.50	-65	0.89
	2 PV	28.30							

SAMPLED AT 1325/5-17-10

BG

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

[redacted]/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU
Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____
Solutions: _____

[redacted]nductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____
olutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals.

[redacted] ___/___/___ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-116D

Field Personnel: RS/RK

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 5-17-10 / 1155

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

if prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-17-10 / 1200

Date / Time Completed: 5-17-10 / 1230

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 35.60

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: SAMPLE PRO BLADDER PUMP

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: CO-FLO

Start CLEAR Finish CLEAR-BLACK PARTICU

PURGE DATA: (if applicable)

Time	Purge Rate ~~(gpm/mL)~~		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1215	150 mL	35.65		13.5	10.06	1412	26.0	-72	0.57
1220	150	35.65		14.1	10.09	1422	30.1	-118	0.57
1225	↓	35.65		14.3	10.02	1429	32.5	-120	0.56
1230	↓	↓		14.3	10.00	1429	33.1	-122	0.56

SAMPLED AT 1235/5-17-10

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: **POINT ID** _____

Date/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

Method of Sampling: _____ **Dedicated:** **Y / N**

Multi-phased/ layered: **( ) Yes** **( ) No** **If YES:** **( ) light** **( ) heavy**

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ **NTU std. =** _____ **NTU** _____ **NTU std. =** _____ **NTU**

Solutions: _____

pH Serial #: _____ **4.0 std.=** _____ **7.0 std.=** _____ **10.0 std. =** _____

Solutions: _____

Conductivity Serial #: _____ _____ **umhos/cm=** _____ _____ **umhos/cm=** _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals.

a ___ / ___ / ___ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-117D

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-14-10 / 1035

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-14-10 / 1040

Date / Time Completed: 5-14-10 / 1110

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 49.79

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start BLACK TINT Finish BLACK TINT

PURGE DATA: (if applicable)

Time	Purge Rate ~~(gpm/htz)~~		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1050	and 150	WV		11.1	6.82	3983	69.3	-290	0.37
1100	150			11.0	6.77	3707	60.5	-307	0.28
1105	150			10.9	6.75	3660	59.1	-309	0.27
1110	150			10.9	6.69	~~36,440~~ a.s 3644	57.8	-311	0.26

SAMPLED AT 1110 / 5-14-10

Field Form
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BJ

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: **POINT ID** _____

ate/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

ethod of Sampling: _____ **Dedicated:** **Y / N**

ulti-phased/ layered: **( ) Yes** **( ) No** **If YES:** **( ) light** **( ) heavy**

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

ISTRUMENT CHECK DATA:

ırbidity Serial #: _____ **NTU std. =** _____ **NTU** _____ **NTU std. =** _____ **NTU**

olutions: _____

l Serial #: _____ **4.0 std.=** _____ **7.0 std.=** _____ **10.0 std. =** _____

olutions: _____

onductivity Serial #: _____ _____ **umhos/cm=** _____ _____ **umhos/cm=** _____

olutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

ertify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific otocals.

___/___/_____ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-118D

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-14-10 / 1120

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked (X) Good
( ) Loose ( ) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-14-10 / 1125

Date / Time Completed: 5-14-10 / 1155

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 48.63

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start SL. TINT Finish SL. TINT

PURGE DATA: (if applicable)

Time	Purge Rate ~~(gpm/htz)~~		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1135	ml/ 150	NL		10.9	7.42	1847	39.8	-289	0.29
1145	150			10.7	7.49	1819	29.3	-297	0.17
1150	150			10.7	7.50	1814	28.9	-301	0.17
1155	150			10.7	7.51	1811	29.8	-306	0.16

SAMPLED AT 1155/5-14-10

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Revision 0
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BJ

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: ___ / ___ / ___ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-122 D

Field Personnel: PL, JD, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-14-10 / 1405

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: ~

Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged ____

If prot.casing; depth to riser below: ____

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-14-10 / 1410

Date / Time Completed: 5-14-10 / 1440

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 44.96

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal: ____

Dedicated: Y (N)

Total Volume Purged, Gal: ____

Purged To Dryness Y (N)

Purge Observations: LOW FLOW

Start SL. TURBID BLACK Finish BLACK TINT

PURGE DATA: (if applicable)

Time	Purge Rate ~~(gpm/htz)~~		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1420	ml/min 150	WL 45.27		11.0	6.99	2405	40.5	-259	0.19
1430	130	45.25		10.8	7.13	2382	18.2	-269	0.19
1435	130	45.25		10.6	7.19	2359	17.5	-275	0.18
1440	130	45.25		10.6	7.20	2353	17.7	-278	0.18

SAMPLED AT 1440 / 5-14-10

Field Form
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BG

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: **POINT ID** _____

Date/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

Method of Sampling: _____ **Dedicated:** **Y / N**

Multi-phased/ layered: **( ) Yes** **( ) No** **If YES:** **( ) light** **( ) heavy**

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ **NTU std. =** _____ **NTU** _____ **NTU std. =** _____ **NTU**

Solutions: _____

pH Serial #: _____ **4.0 std.=** _____ **7.0 std.=** _____ **10.0 std. =** _____

Solutions: _____

Conductivity Serial #: _____ _____ **umhos/cm=** _____ _____ **umhos/cm=** _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals.

Date: ___ / ___ / ___ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-123 D

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time ~~5-14-10~~ 5-14-10 / 1315

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 5-14-10 / 1320

Date / Time Completed: 5-14-10 / 1350

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 45.53

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: CO-FLO

Start BLACK TINT Finish BLACK TINT

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1330	150		11.4	7.62	2286	20.5	-175	0.49
1340	150		11.5	7.59	2233	23.5	-167	0.38
1345	150		11.6	7.58	2231	22.9	-165	0.37
1350	↓		11.5	7.58	2224	22.1	-165	0.37

SAMPLED AT 1350 / 5-14-10

Field Form
Revision 0
03/14/02

BG

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals.

Date: ___ / ___ / ___ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-126

Field Personnel: PL, JJ, AS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1344

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good
( ) Loose (X) Flush Mount
( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1346

Date / Time Completed: 5-18-10 / 1416

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 8.65

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: Lo - FLO

Start Turbid Finish Slightly Turbid

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1351	ml/min 200	8.68		12.6	7.43	906	179	-28	0.81
1354				12.6	7.28	1034	102	-41	0.73
1401				12.5	7.25	1071	69	-37	0.68
1406				12.6	7.22	1089	29.7	-38	0.64
1411				12.5	7.21	1091	33.4	-41	0.61
1416				12.5	7.21	1101	29.9	-37	0.63

Sampled at 1416 / 5-18-10

JL Stec

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

ite/Time _____ / _____ Water Level @ Sampling, Feet: _____

ethod of Sampling: _____ Dedicated: Y / N

ulti-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

STRUMENT CHECK DATA:

rbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

lutions: _____

Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

lutions: _____

nductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

lutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: Well located aprox. 7 Feet from end of driveway.

ertify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific tocals.

e _____ / / _____ By: _____ Company: _____

LeachField Form
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FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-127

Field Personnel: PG JS

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-13-10 / 1430

Water Level @ Sampling, Feet: 8.91

Method of Sampling: SAMPLE PORT

Dedicated: Y / N

Multi-phased/ layered: ( ) Yes (X) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1431	14.2	8.29	2556	424	-141	

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUN 77°

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/13/10 By: _____ Company: TAL

FIELD OBSERVATIONS

Facility: ARCH | Sample Point ID: BR-3

Field Personnel: PL, JJ, RS | Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-13-10 / 1217

Cond of seal: ( ) Good ( ) Cracked ______ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: (X) Unlocked ( ) Good
( ) Loose ( ) Flush Mount
( ) Damaged ______

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — | % LEL: — / —

Vol. Organic Meter (Calibration/Reading): | Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 5-13-10 / 1220 | Date / Time Completed: 5-13-10 / 1245

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser | Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 9.61 | Elevation. G/W MSL: ______

Well Total Depth, Feet: ______ | Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ______ | Dedicated: (Y) / N

Total Volume Purged, Gal: ______ | Purged To Dryness Y / (N)

Purge Observations: LO-FLOW | Start: SL Turb yellow | Finish: SC Turb yellow

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
	ml/min	WL							
1225	100	10.01		13.7	7.02	11,900	109	-134	0.87
1230	↓	10.28		13.6	7.07	12,100	94.7	-139	0.85
1235	↓	10.39		13.6	7.05	12,200	86.1	-141	0.83
1240	↓	10.45		13.5	7.04	12,220	73.9	-143	0.80
1245	↓	10.49		13.4	7.04	12,300	65.8	-143	0.77

Sample @ 1245 / 5-13-10

[signature]

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FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: ___ / ___ / ___ By: _____ Company: _____

LeachField Form
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FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-5A

Field Personnel: PL, JS

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-17-10 / 1220

Water Level @ Sampling, Feet: 1429

Method of Sampling: SAMPLE PORT

Dedicated: (X) Y N

Multi-phased/ layered: ( ) Yes (X) No

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1223	14.3	7.77	1765	18.85	-117	

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUN 67°

Sample Characteristics: clear

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/17/10 By: _____ Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: MW-6A

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-17-10 / 1040

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ~~( )~~ Unlocked ( ) Good
( ) Loose ( ) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 5-17-10 / 1045

Date / Time Completed: 5-17-10 / 1110

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 13.86

Elevation. G/W MSL:

Well Total Depth, Feet: 27.10

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N) SL TURBID

SL TURBID

Purge Observations: LO-FLOW

Start TAN Finish TAN

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz) MW	Purge Rate (gpm/htz) WL	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1050	200	13.90		14.7	6.86	4429	61.9	-107	1.11
1055	|	|		14.9	7.04	~~4400~~ 4423	47.4	-110	0.98
1100	|	|		14.7	7.09	4415	47.2	-113	0.97
1105	|	|		15.0	7.13	4409	47.3	-114	0.86
1110	↓	↓		15.0	7.17	4409	45.9	-114	0.95

SAMPLE @ 1110 5-17-10

pg 2

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: 316733 NTU std. = ____ NTU 10 NTU std. = 10 NTU

Solutions: RT00928

pH Serial #: 36215171 4.0 std.= 4.00 7.0 std.= 7.00 10.0 std. = _____

Solutions: 4.00 - RT00918 7 - RT00925

Conductivity Serial #: 6215171 1000 umhos/cm= 1000 _____ umhos/cm= _____

Solutions: RT00926

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: / / By: _____ Company: _____

LeachField Form
Revision 0
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FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-7A

Field Personnel: PL, JS

Sample Matrix: GW

[X] Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-17-10 / 1300

Water Level @ Sampling, Feet: 30.19

Method of Sampling: SAMPLE PORT

Dedicated: (Y) N

Multi-phased/ layered: ( ) Yes (X) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1304	15.1	7.37	3007	61.9	-109	

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: SC Turbid GRAY

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/17/10 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-8

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-13-10 / 1003

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-13-10 / 1005

Date / Time Completed: 5-13-10 / 1036

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 10.13

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLOW

Start Clear yellow tint Finish Clear yellow tint

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1010	MCLW 200	WL 10.17		13.4	6.74	5837	46.1	-85	.82
1015	↓	↓		13.1	7.00	5850	38.9	-88	.80
1020				13.1	7.04	5855	35.3	-89	.77
1025				13.1	7.07	5860	30.6	-90	.75
1030				13.1	7.10	5862	29.2	-91	.73

SAMPLED @ 1030 / 5-13-10

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

ate/Time _____ / _____ Water Level @ Sampling, Feet: _____

ethod of Sampling: _____ Dedicated: Y / N

ulti-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

ISTRUMENT CHECK DATA:

urbidity Serial #: 316733 NTU std. = ____ NTU 10 NTU std. = 10 NTU

olutions: RT00928

H Serial #: 6215171 4.0 std.= 4.00 7.0 std.= 7.00 10.0 std. = _____

olutions: 4-RT00918, 7-RT00925

onductivity Serial #: 6215171 1000 umhos/cm= 1000 _____ umhos/cm= _____

olutions: RT00926

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

ertify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific otocals.

/ / By: _____ Company: _____

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FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-9A

Field Personnel: PL, JS

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-17-10 / 1230

Water Level @ Sampling, Feet: 35.56

Method of Sampling: SAMPLE PORT

Dedicated: (Y) N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1233	15.2	7.18	2586	370.0	-75	

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUN 67°

Sample Characteristics: TURB Red

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/17/10 By: PL 2 Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: E-3

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-13-10 / 1442

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None ( ) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good
( ) Loose ( ) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-13-10 / 1445

Date / Time Completed: 5-13-10 /

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2-0

Initial Water Level, Feet: 4.30

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness (Y) / N

Purge Observations: PURGED TO DRY

Start SL. TURB Finish SL. TURB

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID E-3

Date/Time 5-14-10 / 1230 **Water Level @ Sampling, Feet:** 4.00

Method of Sampling: Peri STACH **Dedicated:** (Y) / N

Multi-phased/ layered: ( ) Yes (X) No **If YES:** ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other (DO)
1231	12.9	7.60	876	48.9	-52	1.11

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: Sun/Cloudy 63°

Sample Characteristics: SC Turbid

COMMENTS AND OBSERVATIONS:

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals. 5/14/10

~~5/14/10~~ **By:** _____ **Company:** TAC

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: MW-103

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1330

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1345

Date / Time Completed: 5-18-10 / 1405

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 1.79

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ____

Dedicated: (Y) / N

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: LO-FLOW

Start CLEAR Finish CLEAR

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1350	ML/MIN 100	VL 2.17		14.9	7.40	752	9.66	-7	1.32
1355	100	2.28		15.0	7.37	797	5.13	7	0.91
1400	|	2.31		14.9	7.42	803	4.82	10	0.89
1405	↓	2.30		14.8	7.39	805	4.76	11	0.88

SAMPLED AT 1410/5-18-10

BJ

Field Form
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FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

ate/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

ethod of Sampling: _____ **Dedicated:** Y / N

ulti-phased/ layered: ( ) Yes ( ) No **If YES:** ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

STRUMENT CHECK DATA:

rbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

lutions: _____

l Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

lutions: _____

nductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

lutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

ertify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific otocals.

te ___/___/___ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH | Sample Point ID: MW-104

Field Personnel: R. SANE / R. KLINSKE | Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 5-17-10 / 1015

Cond of seal: ( ) Good ( ) Cracked ____ % ( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-17-10 / 1025

Date / Time Completed: 5-17-10 / 1100

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 7.98

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: (Y) N

Total Volume Purged, Gal:

Purged To Dryness Y (N)

Purge Observations: LO-FLO

Start TURBID BROWN Finish TURBID TAN

PURGE DATA: (if applicable)

Time	Purge Rate ~~(gpm/htz)~~ ml/min		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1045	80	WL 9.95		12.9	7.37	960	450	93	0.79
1050	50	10.04		13.0	7.39	969	—	21	0.77
1055	50	10.05		13.1	7.40	972	—	19	0.76
1100	50	10.05		13.0	7.41	963	303	17	0.76

SAMPLED AT 1105 / 5-17-10

Field Form
Revision 0
03/14/02

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

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_____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals.

_____ / / _____ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: MW-106

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-19-10 / 1018

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-19-10 / 1102

Date / Time Completed: 5-19-10 / 1122

Surf. Meas. Pt: ( ) Prot. Casing ( ) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 10.66

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ____

Dedicated: (Y) N

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start Slightly Turbid Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1107	ml/min 100	11.23		11.6	7.00	2435	31.8	-40	1.02
1112	"	11.38		11.6	6.86	2440	14.7	-44	1.01
1117	"	11.39		11.4	6.82	2465	12.00	-48	0.97
1122	"	"		11.4	6.86	2502	10.11	-52	0.95

Sampled at 1122/5-19-10

John Stitt

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

ate/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

ethod of Sampling: _____ **Dedicated:** Y / N

ulti-phased/ layered: ( ) Yes ( ) No **If YES:** ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

STRUMENT CHECK DATA:

rbidity Serial #: _____ **NTU std. =** _____ **NTU** _____ **NTU std. =** _____ **NTU**
lutions: _____

l Serial #: _____ **4.0 std.=** _____ **7.0 std.=** _____ **10.0 std. =** _____
lutions: _____

nductivity Serial #: _____ _____ **umhos/cm=** _____ _____ **umhos/cm=** _____
lutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

rtify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific tocals.

e _____ / / _____ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: MW-114

Field Personnel: PL, JJ, KS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1056

Cond of seal: (Y) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose ( ) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1100

Date / Time Completed: 5-18-10 / 1120

Surf. Meas. Pt: ( ) Prot. Casing (Y) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 9.85

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) N

Total Volume Purged, Gal:

Purged To Dryness Y (N)

Purge Observations: LO-FLOW

Start Clear Finish clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
	ml/m	wl							
1105	80	10.17		14.8	7.06	2304	4.88	6	1.01
1110	↓	↓		15.0	7.05	2295	5.01	10	0.98
1115				15.1	7.05	2290	4.54	12	0.98
1120	↓	↓		15.0	7.04	2288	4.50	11	0.97

Sample @ 1120 / 5-18-10

PL 2

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: ___ / ___ / ___ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: MW-127

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-13-10 / 1350

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: (X) Unlocked ( ) Good ( ) Loose ( ) Flush Mount ( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-13-10 / 1358

Date / Time Completed: 5-13-10 / 1410

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 6.68

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLOW

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1400	60	6.77		14.3	7.51	2181	6.75	-75	0.97
1405	↓	6.86		13.7	7.59	2100	5.65	-71	0.95
1410	↓	6.94		13.7	7.61	2099	4.23	-70	0.93

SAMPLE @ 1410 / 5-13-10

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: ___ / ___ / ___ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: NESS - EAST

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1230

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried MANHOLE %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged —

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1235

Date / Time Completed: 5-18-10 / 1255

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 15.58

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC PUMP

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start SL. ORANGE TINT Finish SL. TURB ORANGE TINT

PURGE DATA: (if applicable)

Time	Purge Rate ~~(gpm/htz)~~		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1240	ml/min 100	WL 16.30		15.9	7.41	1257	19.2	-86	0.67
1245	90	16.77		15.8	7.40	1245	18.7	-95	0.69
1250	90	16.98		15.8	7.37	1243	19.1	-93	0.68
1255	90	17.01		15.7	7.36	1242	21.3	-92	0.69
1300	90	17.01		15.7	7.35	1241	22.7	-91	0.69

SAMPLED AT 1300 / 5-18-10

Field Form
Revision 0
03/14/02

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

ate/Time _____ / _____ Water Level @ Sampling, Feet: _____

ethod of Sampling: _____ Dedicated: Y / N

ulti-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

ISTRUMENT CHECK DATA:

rbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

olutions: _____

l Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

ns: _____

nductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

olutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

ertify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific otocals.

te: ___/___/___ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: NEW-W

Field Personnel: PL, JJ, AS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1148

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: —/— % LEL: —/—

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) /

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1155

Date / Time Completed: 5-18-10 / 1215

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 31.28

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLOW

Start CLEAR Finish CLEAR

PURGE DATA: (if applicable)

Time	Purge Rate ~~(gpm/hr)~~		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1200	MAX 150	31.35		13.1	7.13	2225	5.45	-117	0.59
1205	|	31.35		12.9	7.09	2225	4.92	-130	0.57
1210	|	31.35		12.9	7.08	2229	4.10	-129	0.56
1215	↓	31.35		12.9	7.11	2226	3.86	-129	0.57

SAMPLED AT 1220 / 5-18-10

Field Form
Revision 0
03/14/02

BJ

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: **POINT ID** _____

ate/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

ethod of Sampling: _____ **Dedicated:** Y / N

ulti-phased/ layered: ( ) Yes ( ) No **If YES:** ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

STRUMENT CHECK DATA:

rbidity Serial #: _____ **NTU std. =** _____ **NTU** _____ **NTU std. =** _____ **NTU**
lutions: _____

l Serial #: _____ **4.0 std.=** _____ **7.0 std.=** _____ **10.0 std. =** _____
lutions: _____

nductivity Serial #: _____ _____ **umhos/cm=** _____ _____ **umhos/cm=** _____
lutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

rtify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific tocals.

e _____ / / _____ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: MW-10

Field Personnel: PL, JJ, RS

Sample Matrix: GW

Former Pump Pond MW-11

MONITORTING WELL INSPECTION:

Date/Time 5-14-10 / 1039

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None ( ) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good
( ) Loose (X) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-14-10 / 1110

Date / Time Completed: 5-14-10 / 1130

Surf. Meas. Pt: (X) Prot. Casing ( ) Riser

Riser Diameter, Inches: ____

Initial Water Level, Feet: 8.90

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ____

Dedicated: (Y) / N

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: CO FLOW

Start SC FLOW Amber Finish SC FLOW Amber

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
	ML/M	WL							
1115	200	9.03		15.2	8.01	4722	73.1	-95	0.77
1120	↓	↓		15.3	8.10	4709	72.6	-90	0.75
1125				15.3	8.09	4699	69.8	-80	0.73
1130	↓	↓		15.3	8.09	4680	67.6	-88	0.71

SAMPLE @ 1130 / 5-14-10

PL 2

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

_____ / / _____ By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PW-12

Field Personnel: PL, JJ, RS

Sample Matrix: GW

Former pumping well

MONITORTING WELL INSPECTION:

Date/Time 5-13-10 / 1536

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good
( ) Loose (X) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 5-13-10 / 1540

Date / Time Completed: 5-13-10 / 1600

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: ____

Initial Water Level, Feet: 6.21

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ____

Dedicated: (Y) / N

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: CO-FLOW

Start clear Finish clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1545	m/m 200	wl 6.31		12.8	7.19	2951	67.9	-127	0.80
1550				12.8	7.05	2944	44.3	-115	0.77
1555				12.8	7.05	2944	42.0	-119	0.74
1600				12.7	7.02	2948	39.7	-114	0.74

Sample 1600 / 5-13-10

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

Certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific Protocals.

Date _____ / / _____ By: _____ Company: _____

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: AW-13

Field Personnel: PL, JS

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-17-10 / 1245

Water Level @ Sampling, Feet: 21.17

Method of Sampling: SAMPLE PORT

Dedicated: (X) N

Multi-phased/ layered: ( ) Yes (X) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1248	13.6	7.12	2601	6.20	-105	

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUN 67°

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/17/10 By: _____ Company: TAL

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PW-14

Field Personnel: PL, JS

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-17-10 / 1150

Water Level @ Sampling, Feet: 21.07

Method of Sampling: SAMPLE PORT

Dedicated: (X) N

Multi-phased/ layered: ( ) Yes (X) No

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1153	15.6	6.90	3513	100.0	-17	

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = ____ NTU ____ NTU std. = ____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ ____ umhos/cm= ____ ____ umhos/cm= ____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: Sun 66°

Sample Characteristics: SC TURB TAN

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/17/10 By: _____ Company: TAL

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PW-15

Field Personnel: PL, JS

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-17-10 / 1205

Water Level @ Sampling, Feet: 24.02

Method of Sampling: SAMPLE PORT

Dedicated: (Y) N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1209	15.2	8.90	7155	63.6	-155	

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUN 66°

Sample Characteristics: SL TURBID AMBER

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/17/10 By: _____ Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PZ-101

Field Personnel: PL, JJ, KS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1200

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked (X) Good
( ) Loose ( ) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1202

Date / Time Completed: 5-18-10 / 1222

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 13.53

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ____

Dedicated: (Y) / N

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: Lo-Flo

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1207	150 ml/min	13.85		12.4	7.06	4645	4.81	14	0.92
1212	"	13.95		12.5	6.96	4616	5.05	39	0.90
1217	"	"		12.6	6.91	4629	4.65	42	0.91
1222	"	"		12.6	6.91	4590	4.91	45	0.87

Sampled at 1222 / 5-18-10
JL Stec

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

ate/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

ethod of Sampling: _____ **Dedicated:** Y / N

ulti-phased/ layered: ( ) Yes ( ) No **If YES:** ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

STRUMENT CHECK DATA:

rbidity Serial #: _____ **NTU std. =** _____ **NTU** _____ **NTU std. =** _____ **NTU**
lutions: _____

l Serial #: _____ **4.0 std.=** _____ **7.0 std.=** _____ **10.0 std. =** _____
lutions: _____

nductivity Serial #: _____ _____ **umhos/cm=** _____ _____ **umhos/cm=** _____
lutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

rtify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific tocals.

_____ / / _____ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PZ-102

Field Personnel: PL, JJ, KS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1110

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked (X) Good
( ) Loose ( ) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1111

Date / Time Completed: 5-18-10 / 1136

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 15.83

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start Slightly Turbid Orange Flecks

Finish Slightly Turbid Orange Flecks

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1116	100 ml/min	15.96		12.4	7.30	6366	19.82	-93	0.97
1121	"	16.02		12.0	7.19	6400	47.5	-90	0.92
1126	"	16.09		12.0	7.19	6398	34.7	-92	0.89
1131	"	16.15		12.1	7.21	6369	33.6	-90	0.88
1136	—	16.20		12.0	7.19	6378	31.9	-91	0.87

Sampled at 1136 / 5-18-10

John Stell

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

ate/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

ethod of Sampling: _____ **Dedicated:** Y / N

ulti-phased/ layered: ( ) Yes ( ) No **If YES:** ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

STRUMENT CHECK DATA:

rbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

lutions: _____

l Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

lutions: _____

nductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

lutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

_____

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_____

ertify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific otocals.

te: ___/___/___ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PZ-103

Field Personnel: PL, JJ, AS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1027

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: (X) Unlocked ( ) Good
( ) Loose ( ) Flush Mount
( ) Damaged Cap Broken

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1032

Date / Time Completed: 5-18-10 / 1052

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 12.44

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FIO

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1037	150	12.61		12.5	6.82	5658	3.58	-126	1.12
1042		12.62		12.2	6.88	5642	3.58	-137	0.98
1047				12.2	6.94	5675	3.52	-142	0.96
1052				12.1	6.96	5648	3.56	-144	0.94

Sampled at 1052 / 5-18-10
JL Stic

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

ate/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

ethod of Sampling: _____ **Dedicated:** Y / N

ulti-phased/ layered: ( ) Yes ( ) No **If YES:** ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

STRUMENT CHECK DATA:

rbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

lutions: _____

l Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

lutions: _____

nductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

lutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

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rtify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific otocals.

te ___/___/___ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PZ-104

Field Personnel: PL, JJ, AS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-18-10 / 1244

Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good ( ) Loose (X) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-18-10 / 1246

Date / Time Completed: 5-18-10 / 1306

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 14.11

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y (N)

Purge Observations: LO-FLO

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1251	mL/min 150	14.19		13.6	7.49	16666	6.60	-104	0.90
1256		14.21		13.4	7.37	1655	6.76	-116	0.82
1301		14.22		13.4	7.37	1647	5.42	-118	0.84
1306	—	1		13.4	7.33	1648	5.34	-117	0.82

Sampled at 1306 / 5-18-10 Dup taken at 1306 / 5-18.

Field Form
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03/14/02

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID MW-104

ıte/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

ethod of Sampling: _____ **Dedicated:** Y / N

ılti-phased/ layered: ( ) Yes ( ) No **If YES:** ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other (DO)
1307	13.5	7.31	1650	5.29	-116	0.81

STRUMENT CHECK DATA:

rbidity Serial #: _____ **NTU std. =** _____ **NTU** _____ **NTU std. =** _____ **NTU**

lutions: _____

Serial #: _____ **4.0 std.=** _____ **7.0 std.=** _____ **10.0 std. =** _____

l ns: _____

nductivity Serial #: _____ _____ **umhos/cm=** _____ _____ **umhos/cm=** _____

lutions: _____

ENERAL INFORMATION:

ather conditions @ time of sampling: _____

mple Characteristics: _____

MMENTS AND OBSERVATIONS: _____

_____

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rtify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific tocals.

e: ___/___/___ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH | Sample Point ID: P2-105

Field Personnel: PL, JJ, RS | Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-13-10 / 1048

Cond of seal: ( ) Good ( ) Cracked ______ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good
( ) Loose (X) Flush Mount
( ) Damaged ______

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 5-13-10 / 1050

Date / Time Completed: ~~5-13-10~~ 5-13-10 / 1115

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 10.65

Elevation. G/W MSL: ______

Well Total Depth, Feet: ______

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ______

Dedicated: (Y) / N

Total Volume Purged, Gal: ______

Purged To Dryness Y / (N)

Purge Observations: LO-FLOW

Start: SC Turbid Gray Finish: SC Turbid Gray

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
	ML/m	WL							
1055	150	11.61		14.1	7.32	3796	92.2	-188	.90
1100		11.55		14.9	7.40	3790	87.6	-190	.88
1105		11.67		14.9	7.49	3784	85.2	-193	.87
1110		11.74		14.4	7.51	3780	80.7	-193	.85
1115		11.80		14.6	7.55	3772	82.5	-195	.83

Sampled @ 1115 / 5-13-10

[signature]

Field Form
Revision 0
03/14/02

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

ate/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

lethod of Sampling: _____ **Dedicated:** Y / N

ulti-phased/ layered: ( ) Yes ( ) No **If YES:** ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

ISTRUMENT CHECK DATA:

urbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

olutions: _____

H Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

ons: _____

onductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

olutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

_____

_____

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ertify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific otocals.

te: ___/___/___ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH
Sample Point ID: PZ-106
Field Personnel: PL, JJ, RS
Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-13-10 / 1303
Cond of seal: ( ) Good ( ) Cracked ______ %
( ) None ( ) Buried

Prot. Casing/riser height: —
Cond of prot. Casing/riser: ( ) Unlocked ( ) Good
( ) Loose ( ) Flush Mount
( ) Damaged ______

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —
% LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 5-13-10 / 1305
Date / Time Completed: 5-13-10 / 1330

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser
Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 11.94
Elevation. G/W MSL: ______

Well Total Depth, Feet: ______
Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ______
Dedicated: (Y) / N

Total Volume Purged, Gal: ______
Purged To Dryness Y / (N)

Purge Observations: LO-FLOW
Start SL Turbid Yellow Finish Clear Yellow

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
	meter	WL							
1310	80	11.15		13.6	6.24	14,130	19.32	-18	0.90
1315		11.20		13.7	6.20	14,160	11.18	-20	0.83
1320		11.25		13.9	6.20	14,200	8.30	-22	0.85
1325		11.29		13.7	6.20	14,200	7.26	-24	0.80
1330		11.34		13.5	6.20	14,210	7.12	-26	0.79

Sample @ 1330 / 5-13-10

[signature]

Field Form
Revision 0
03/14/02

FIELD OBSERVATIONS (continued)

AMPLING INFORMATION: POINT ID _____

ate/Time _____ / _____ **Water Level @ Sampling, Feet:** _____

ethod of Sampling: _____ **Dedicated:** Y / N

ulti-phased/ layered: ( ) Yes ( ) No **If YES:** ( ) light ( ) heavy

AMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

STRUMENT CHECK DATA:

rbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

lutions: _____

I Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

ns: _____

nductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

lutions: _____

ENERAL INFORMATION:

eather conditions @ time of sampling: _____

mple Characteristics: _____

OMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

ertify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific otocals.

te: ___/___/___ **By:** _____ **Company:** _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PZ-107

Field Personnel: PL, JD, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-13-10 / 1136

Cond of seal: ( ) Good ( ) Cracked ____ %
( ) None (X) Buried

Prot. Casing/riser height: —

Cond of prot. Casing/riser: (X) Unlocked ( ) Good
( ) Loose ( ) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / —

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-13-10 / 1140

Date / Time Completed: 5-13-10 / 1205

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 10.80

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: CO-FLOW

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
	ml/m	WL							
1145	200	11.01		13.7	6.52	6780	3.78	-141	0.97
1150				13.7	6.54	6658	3.51	-147	0.85
1155				13.9	6.55	6600	3.42	-149	0.84
1200				13.5	6.59	6590	3.40	-151	0.92
1205	↓	↓		13.4	6.60	6588	3.37	-151	0.92

SAMPLED @ 1205 5-13-10

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID _____

Date/Time _____ / _____ Water Level @ Sampling, Feet: _____

Method of Sampling: _____ Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS: _____

_____

_____

_____

_____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: ___/___/___ By: _____ Company: _____

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: GD - 1

Field Personnel: R. SHAF

Sample Matrix: S/W

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-14-10 / 1055

Water Level @ Sampling, Feet: N/A

Method of Sampling: MANUAL GRAB

Dedicated: (Y) N

Multi-phased/ layered: ( ) Yes (X) No

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1100	14.8	8.11	1590		-165	

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: CLOUDY, 58°F

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/14/10 By: [signature] Company: TAL

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: QO-2

Field Personnel: R. SENF

Sample Matrix: S/W

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-14-10 | 1500

Water Level @ Sampling, Feet: N/A

Method of Sampling: MANUAL GRAB

Dedicated: (Y) / N

Multi-phased/ layered: ( ) Yes (X) No

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP ( )	Other ( )
1505	15.3	8.22	1581		-175	

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUNNY, 65°F

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/14/10 By: [signature] Company: TAL

LeachField Form
Revision 0
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FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: 90-251

Field Personnel: R. SRNF

Sample Matrix: S/W

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-14-10 1515

Water Level @ Sampling, Feet: N/A

Method of Sampling: DIPPER

Dedicated: Y / N

Multi-phased/ layered: ( ) Yes (X) No

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1525	14.9	8.14	675		-162	

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUNNY, 65°F

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/14/10 By: BJ Company: IAC

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: QS-4

Field Personnel: R. SHAF

Sample Matrix: SOLID

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-14-10 / 1550

Water Level @ Sampling, Feet: N/A

Method of Sampling: MANUAL GRAB

Dedicated: (Y) / N

Multi-phased/ layered: ( ) Yes (X) No

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1600	11.7	8.17	~~8.75~~		-137	
			~~8.45~~ PSR 8.15			

INSTRUMENT CHECK DATA:

Turbidity Serial #: _____ NTU std. = _____ NTU _____ NTU std. = _____ NTU

Solutions: _____

pH Serial #: _____ 4.0 std.= _____ 7.0 std.= _____ 10.0 std. = _____

Solutions: _____

Conductivity Serial #: _____ _____ umhos/cm= _____ _____ umhos/cm= _____

Solutions: _____

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUNNY, 70°F

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS: _____

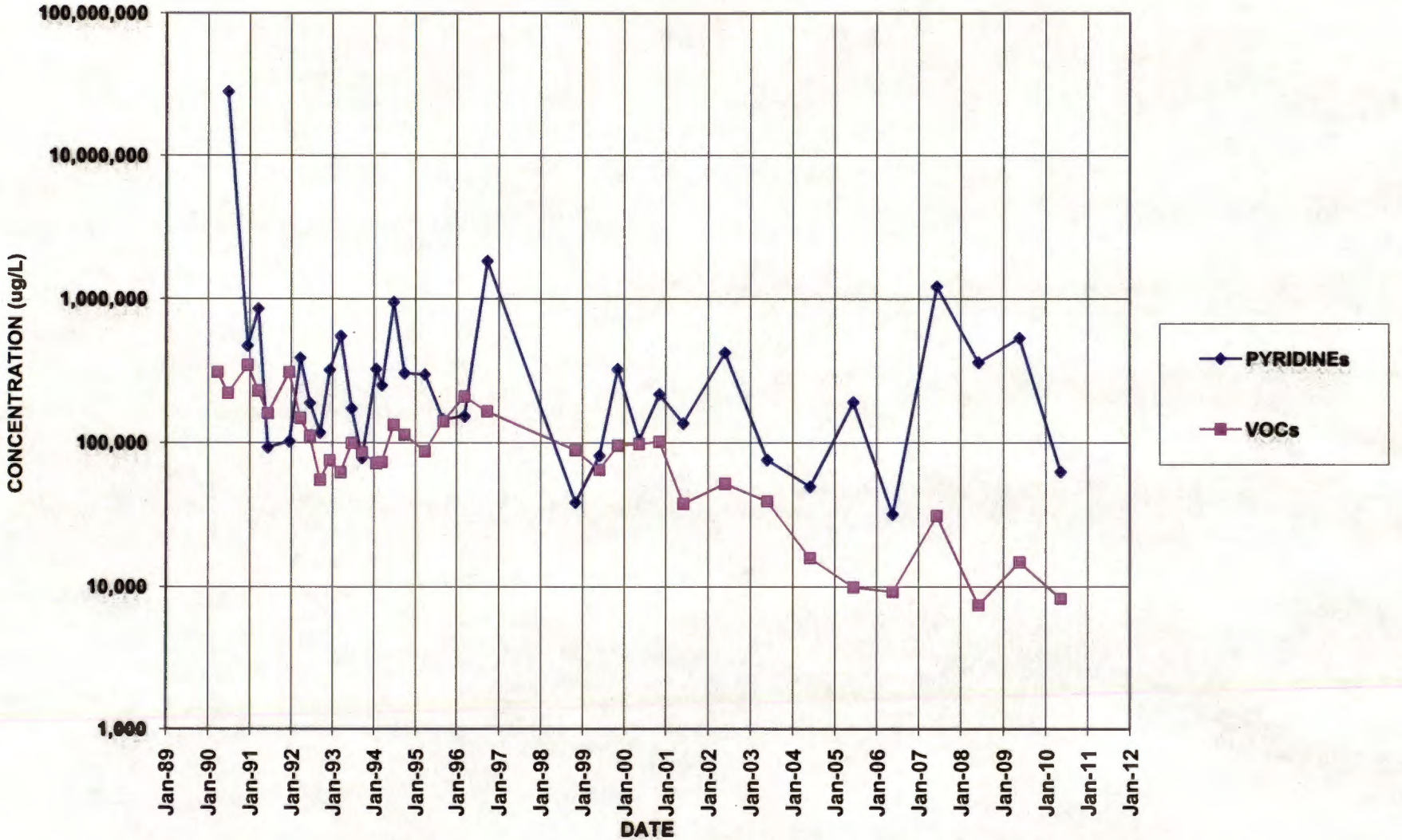
I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/14/10 By: [signature] Company: TAC

Appendix B

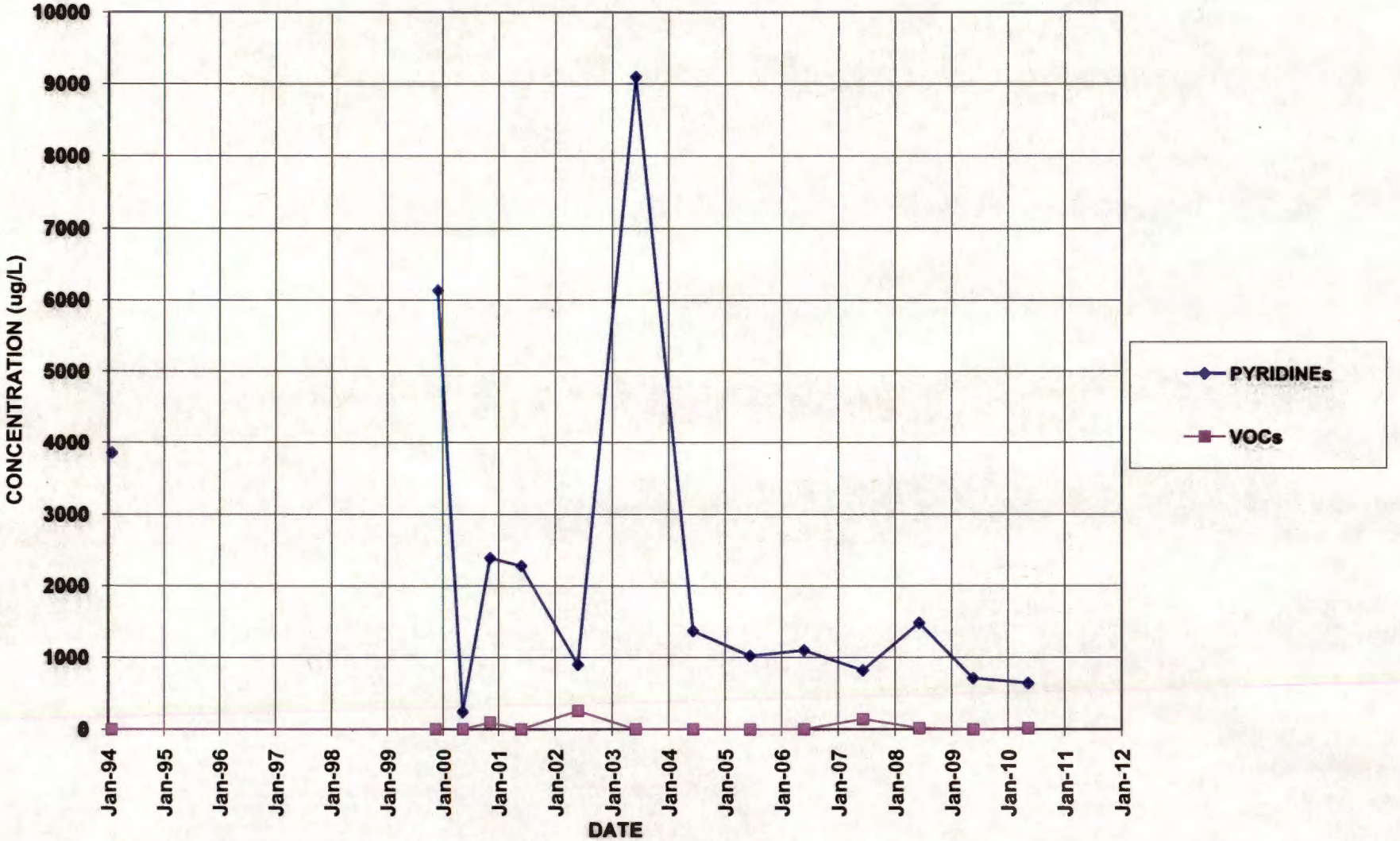
Well Trend Data

B-17



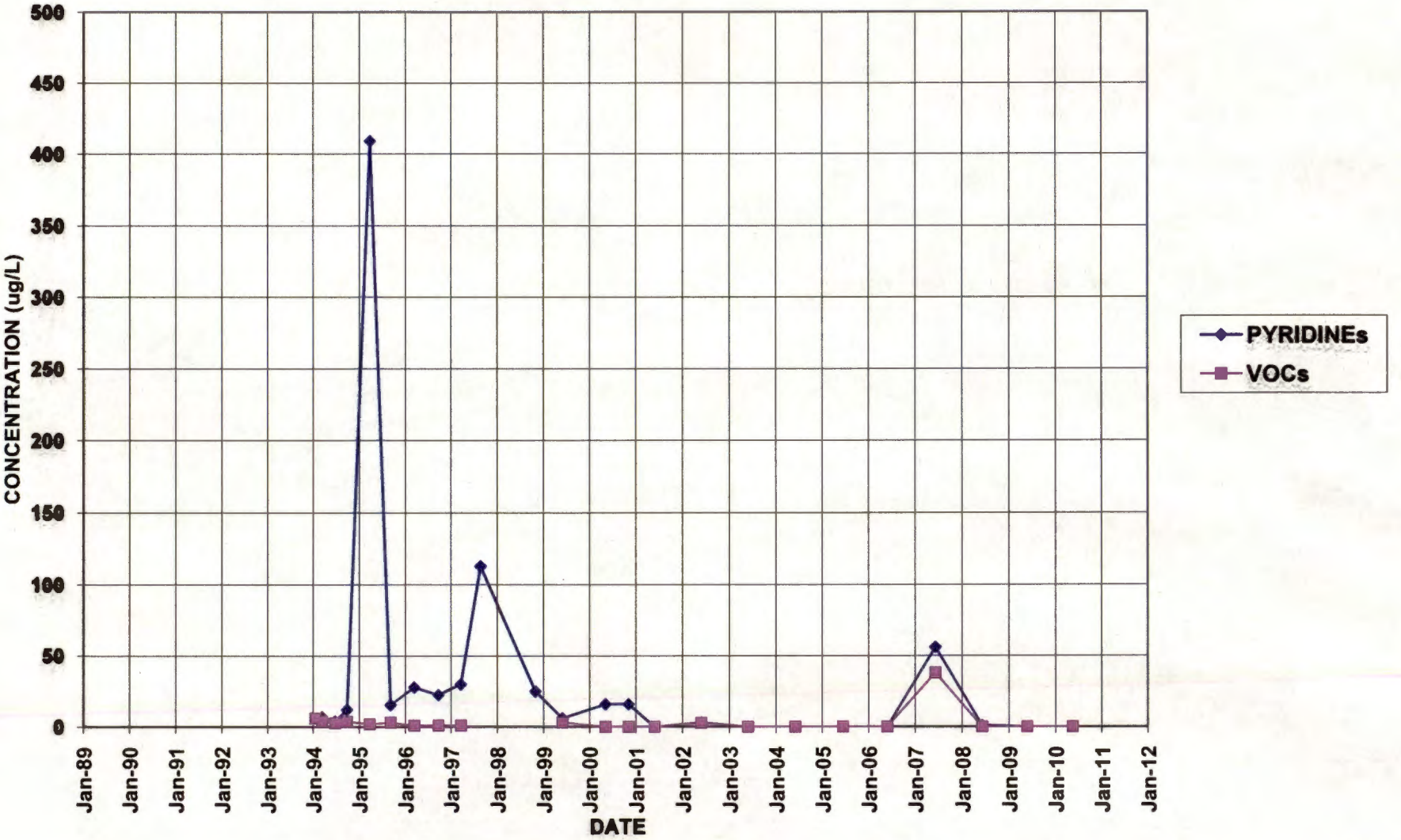
Prepared by: amb
Reviewed by: jcb

B-7



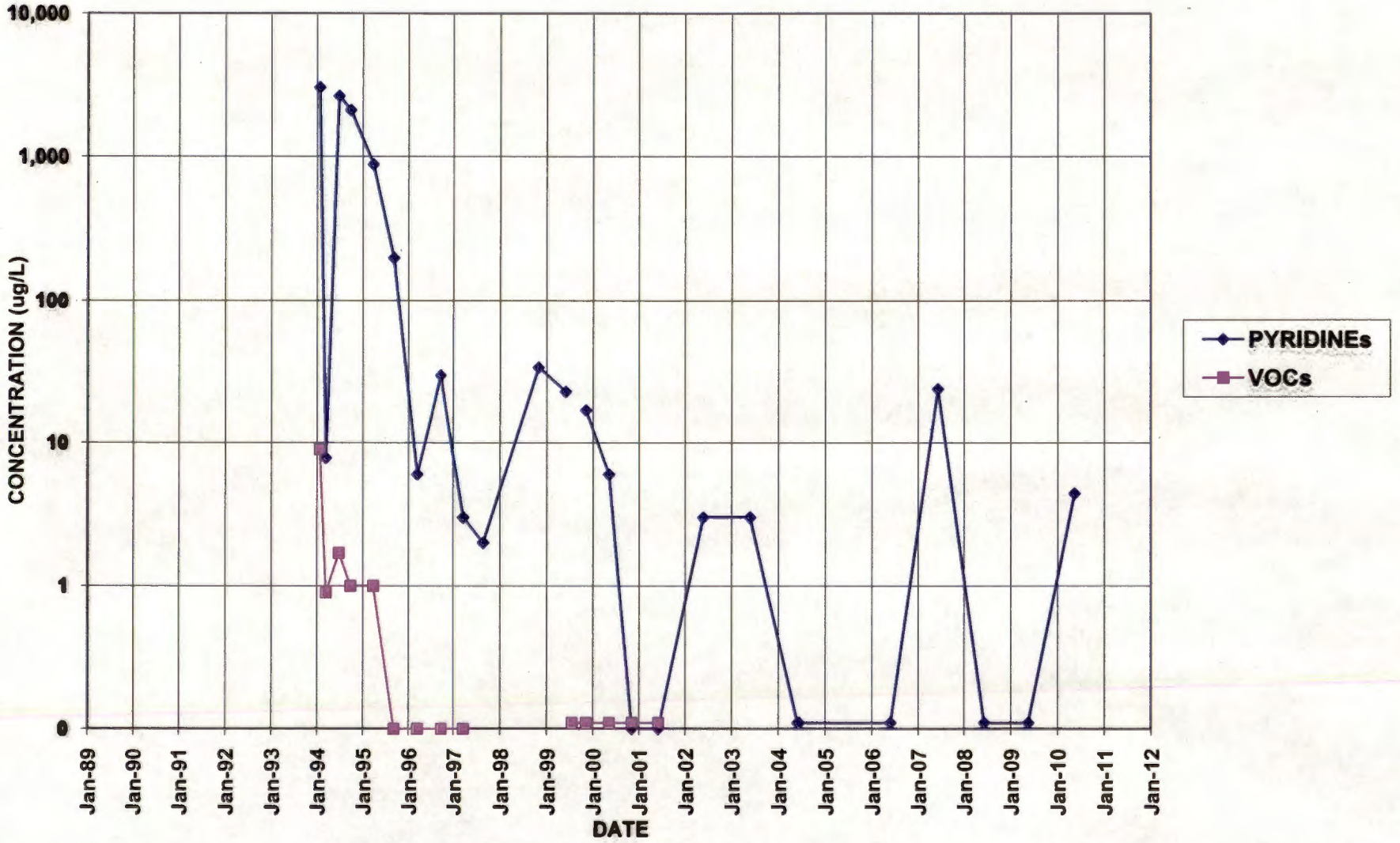
Prepared by: nmb
Reviewed by: jcb

BR-103

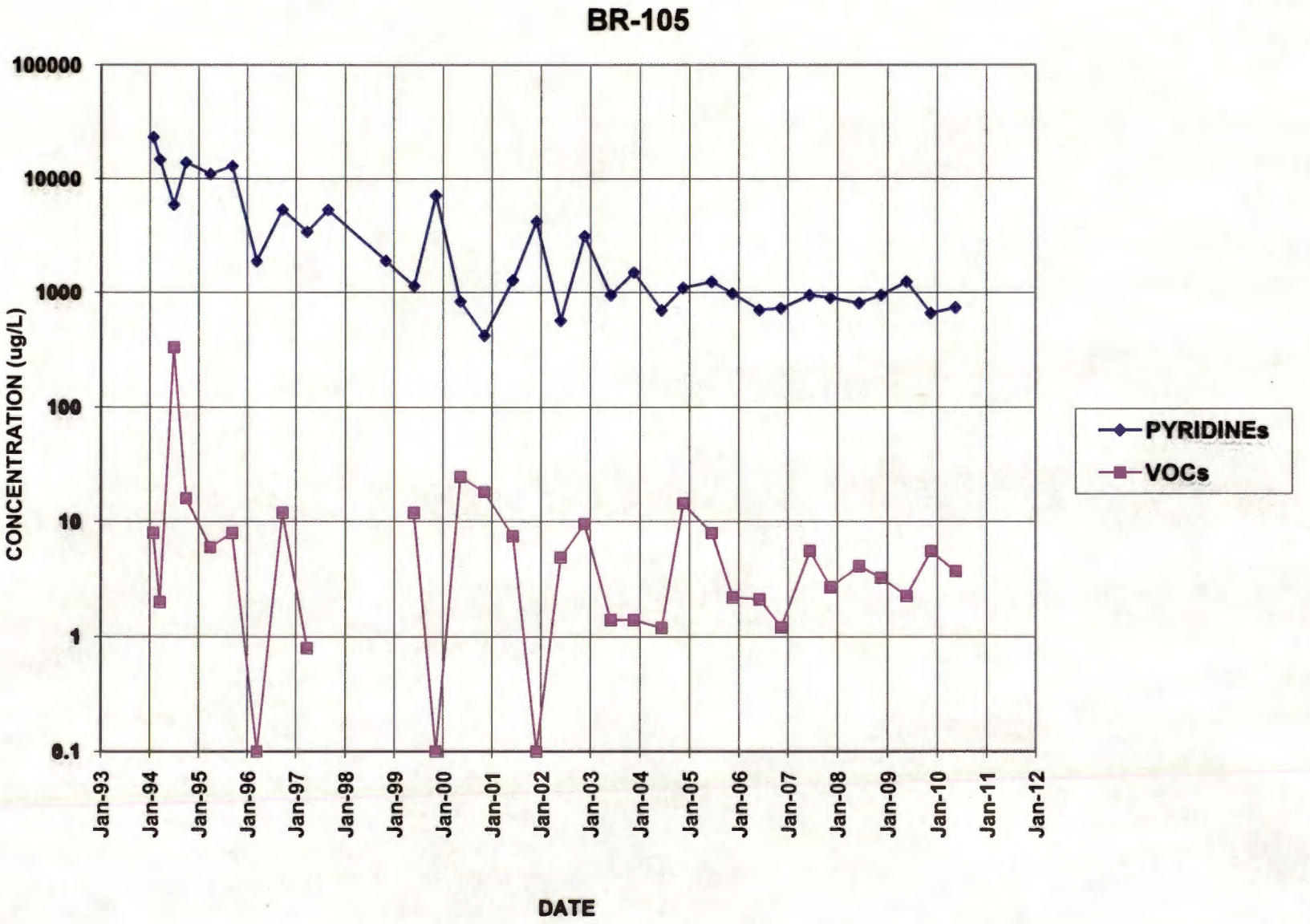


Prepared by: nmb
Reviewed by: jeb

BR-104

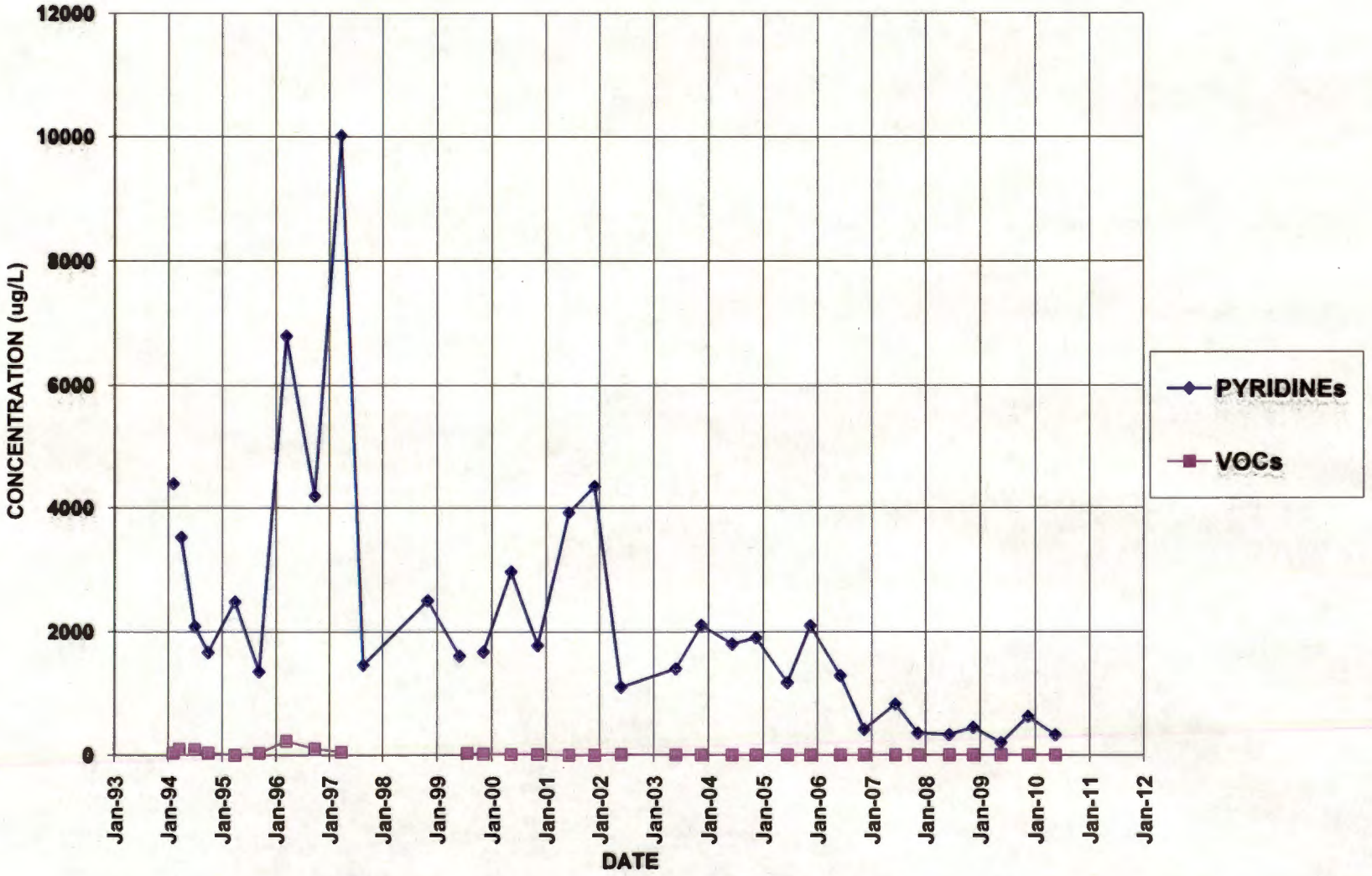


Prepared by: amb
Reviewed by: jcb



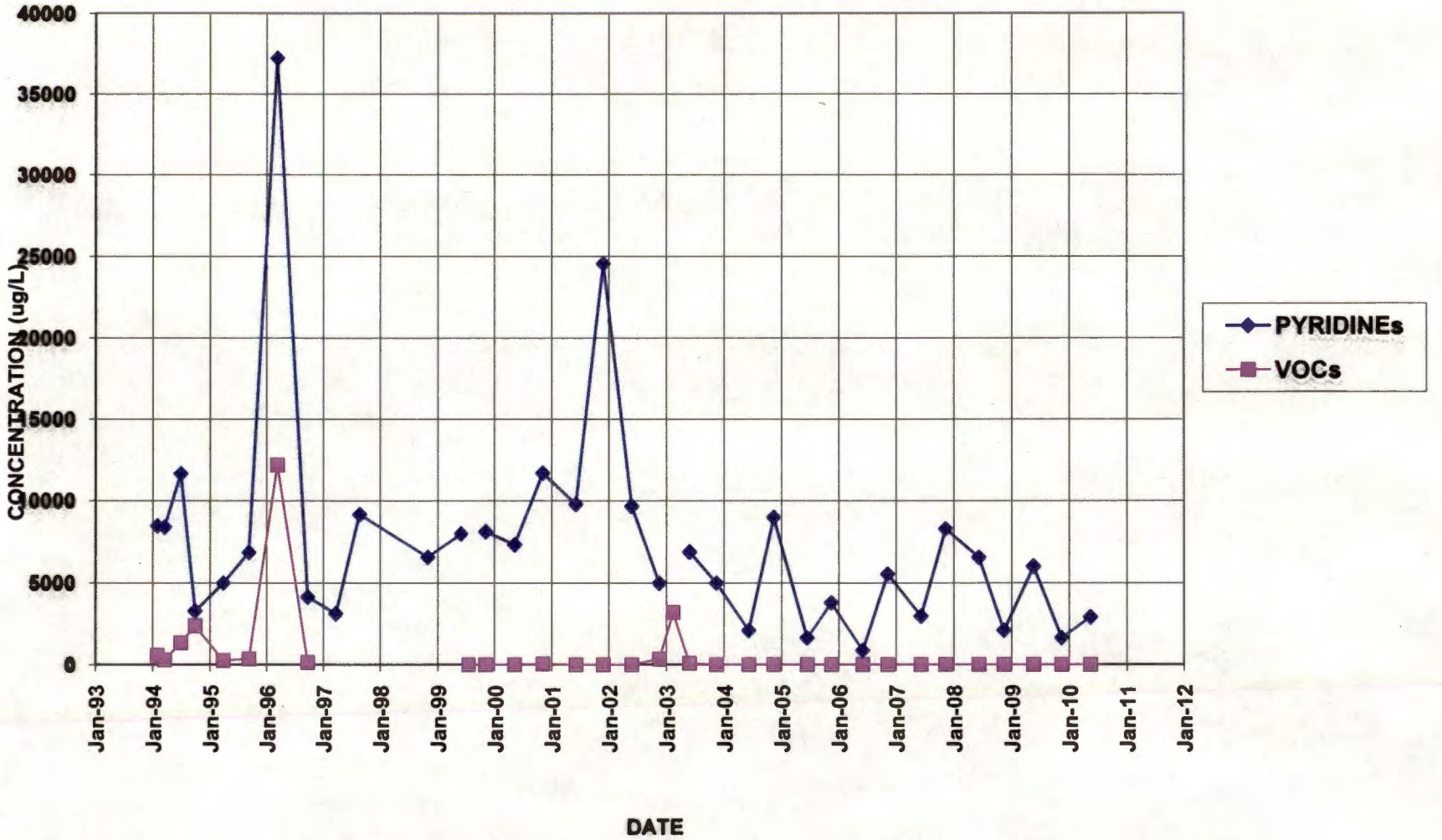
Prepared by: nmb
Reviewed by: jeb

BR-105D

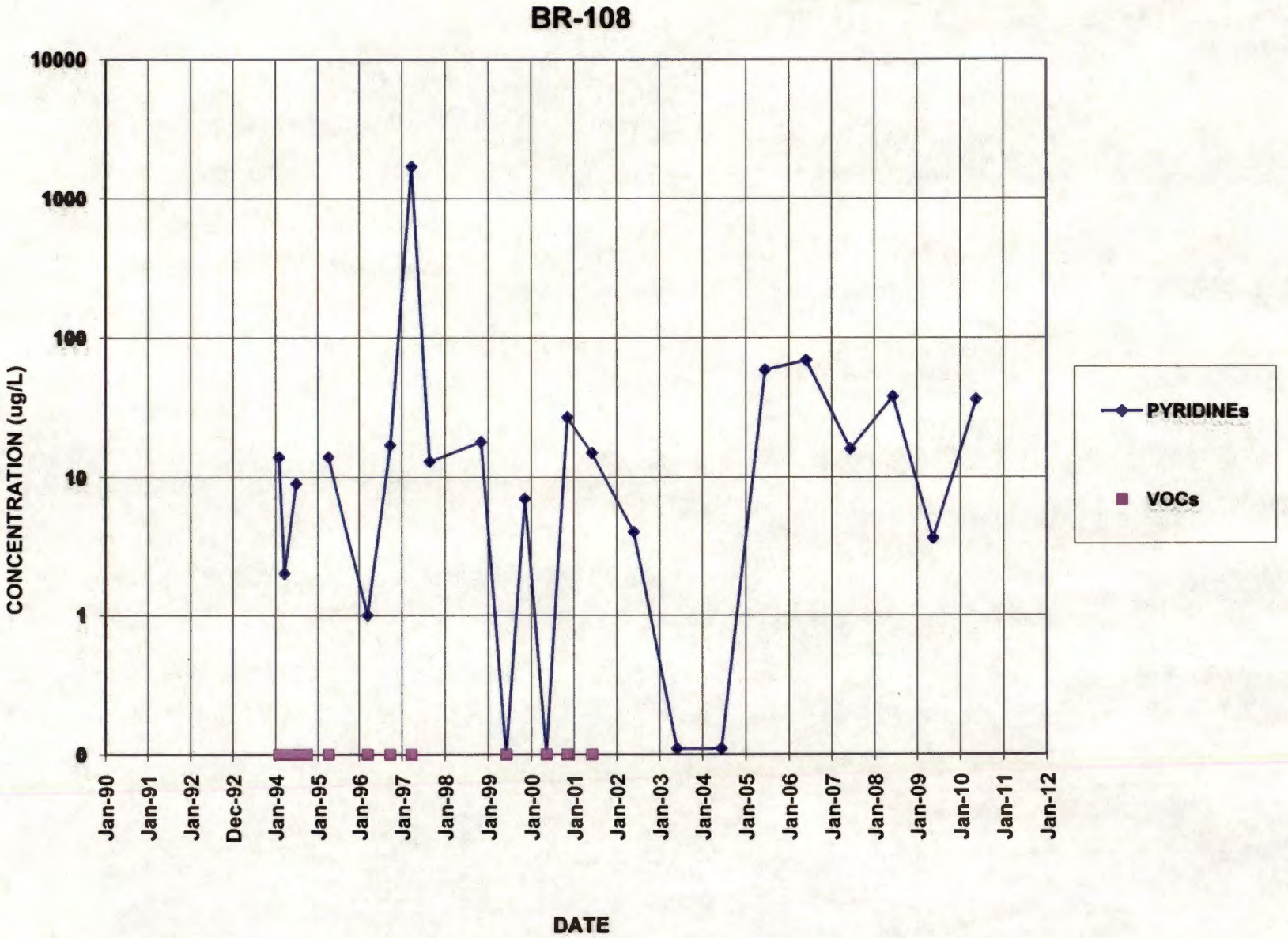


Prepared by: nmb
Reviewed by: jeb

BR-106

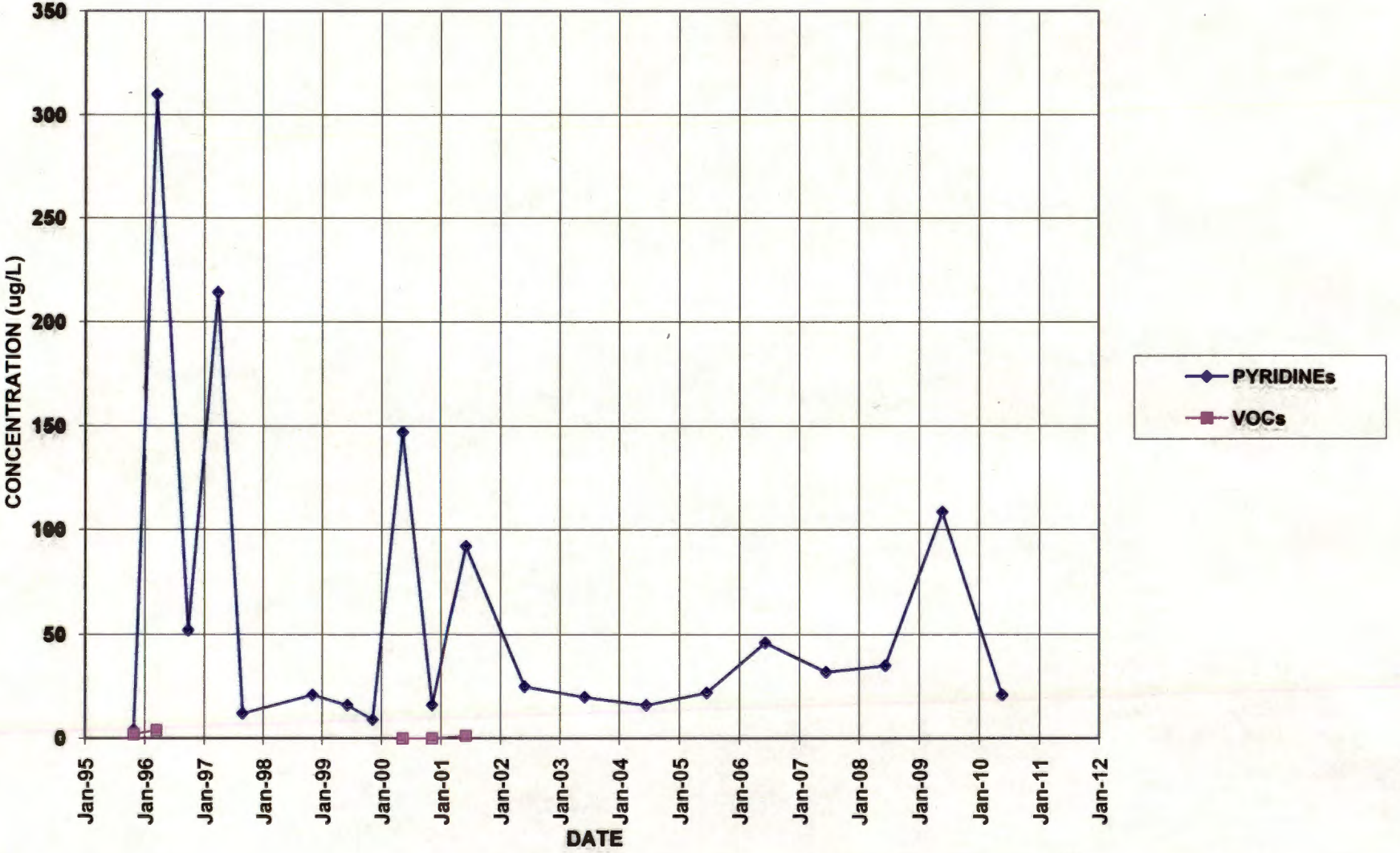


Prepared by: nmb
Reviewed by: jeb



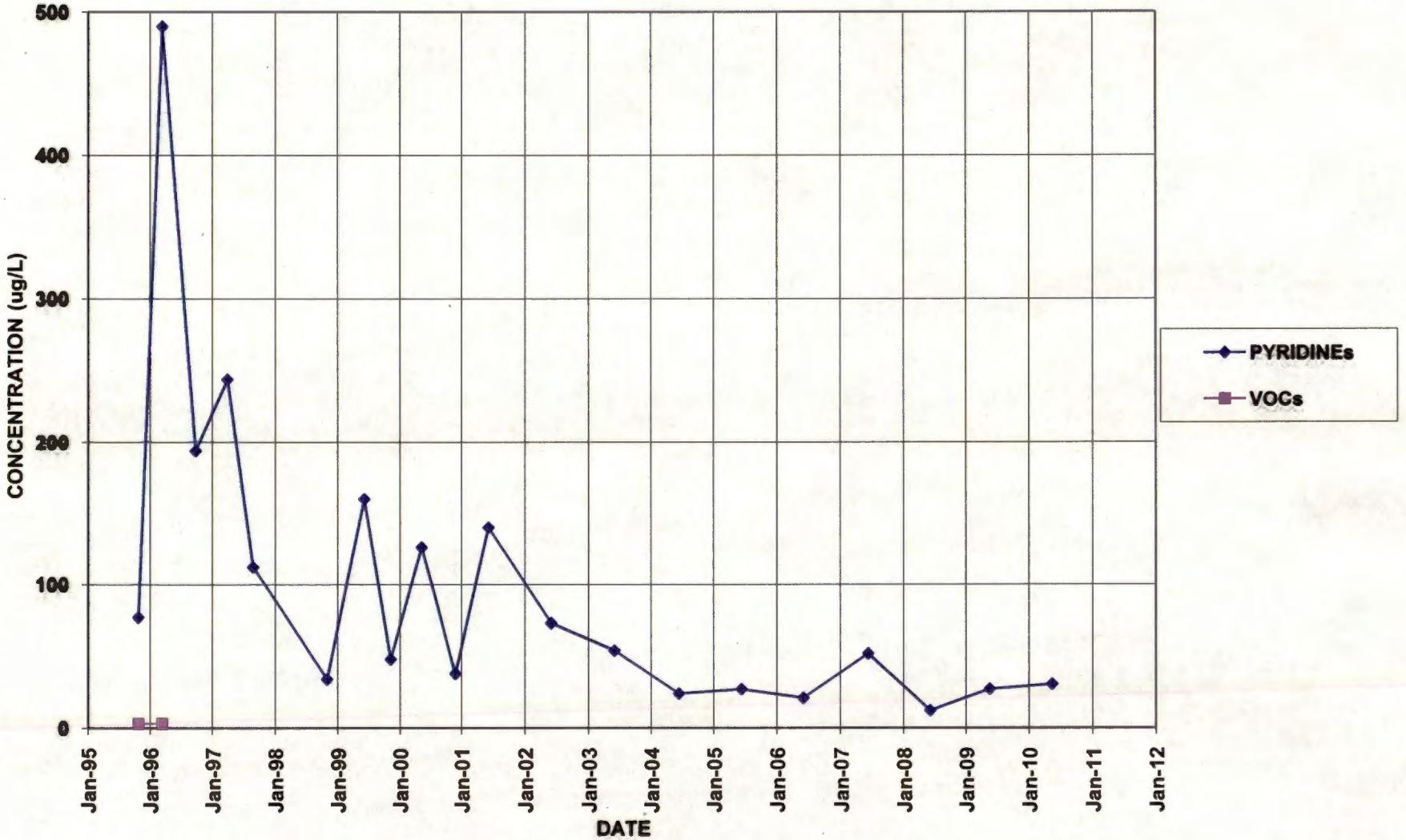
Prepared by: nmb
Reviewed by: jeb

BR-112D



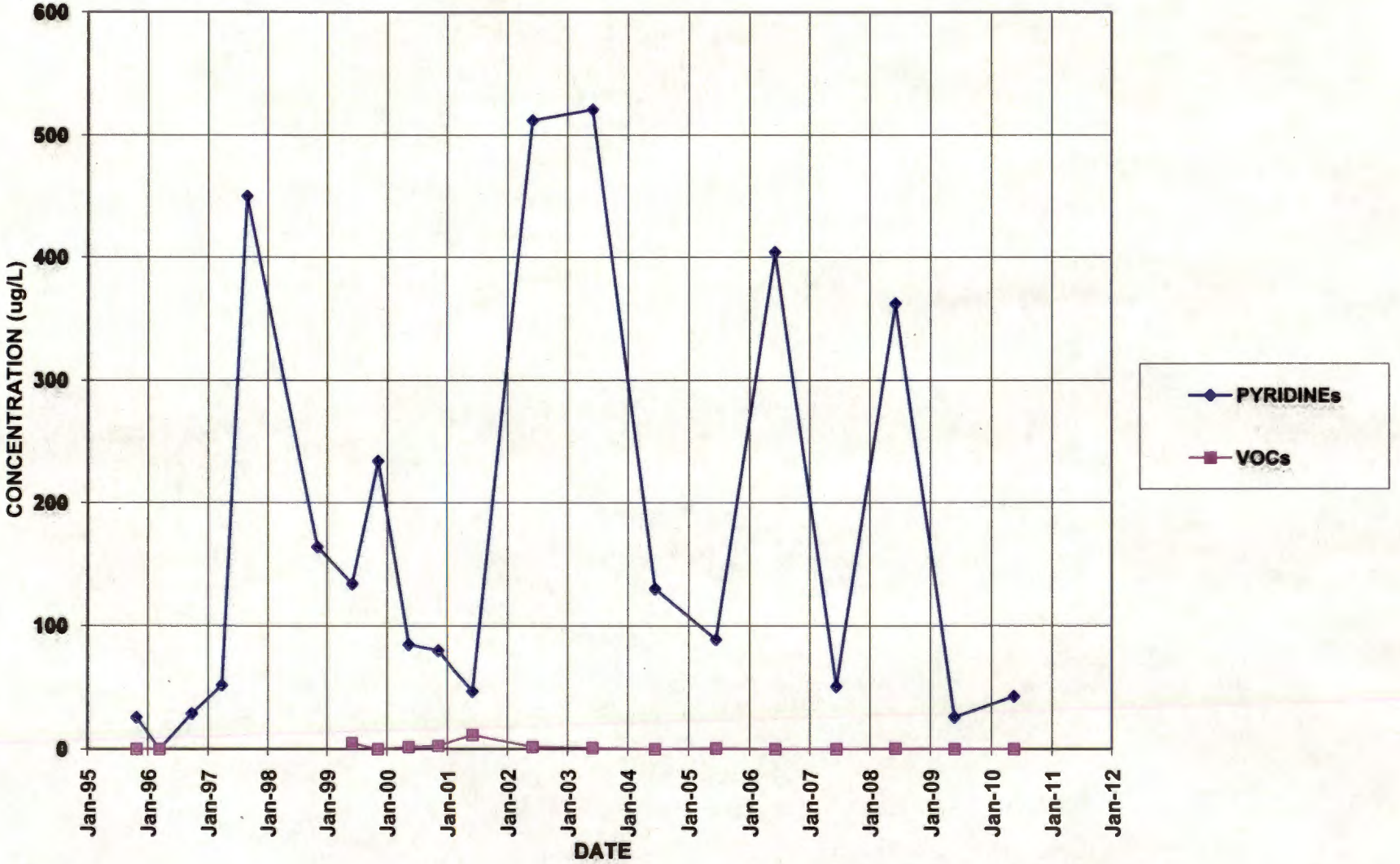
Prepared by: nmb
Reviewed by: jeb

BR-113D



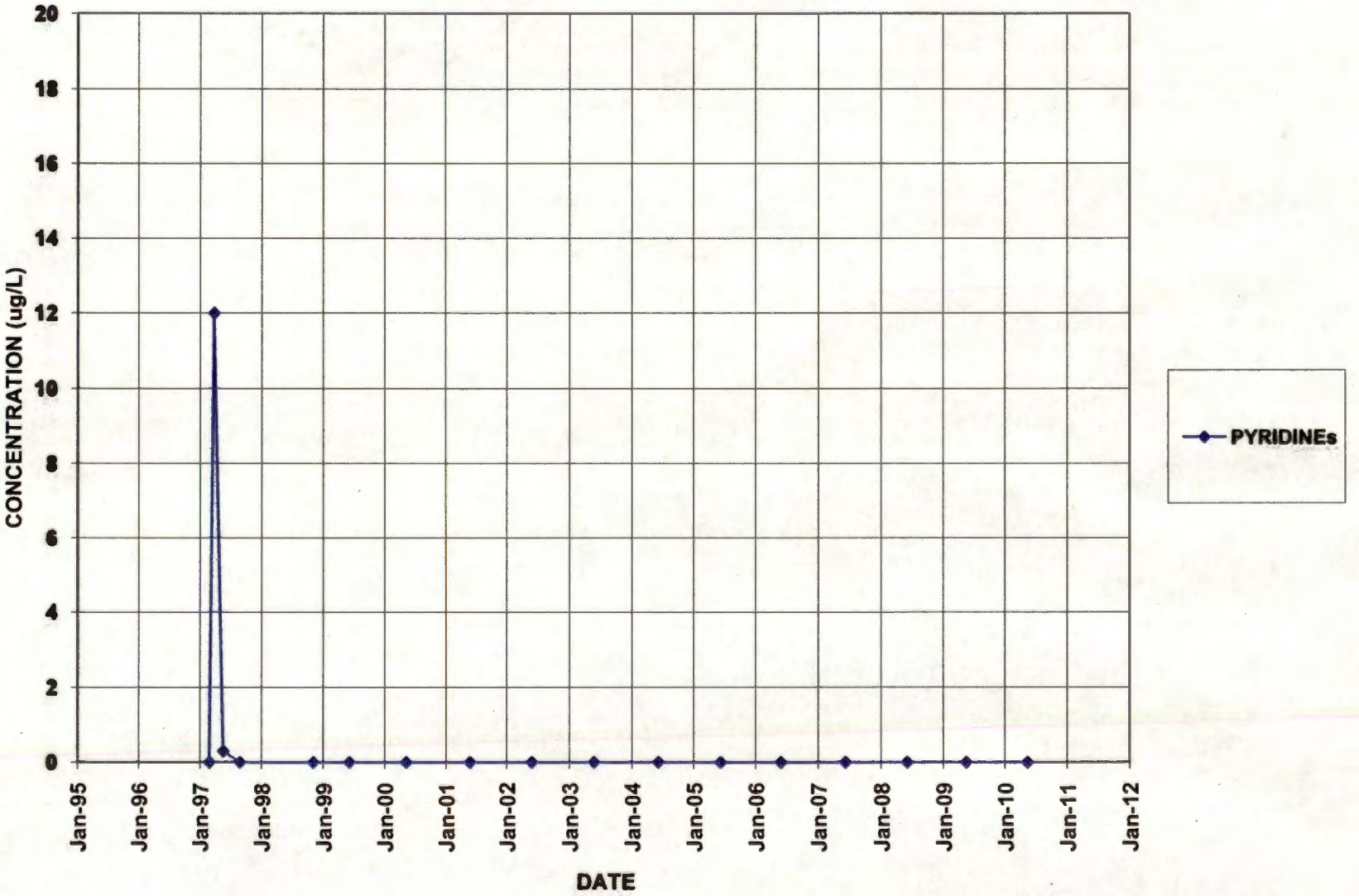
Prepared by: nmb
Reviewed by: jcb

BR-114



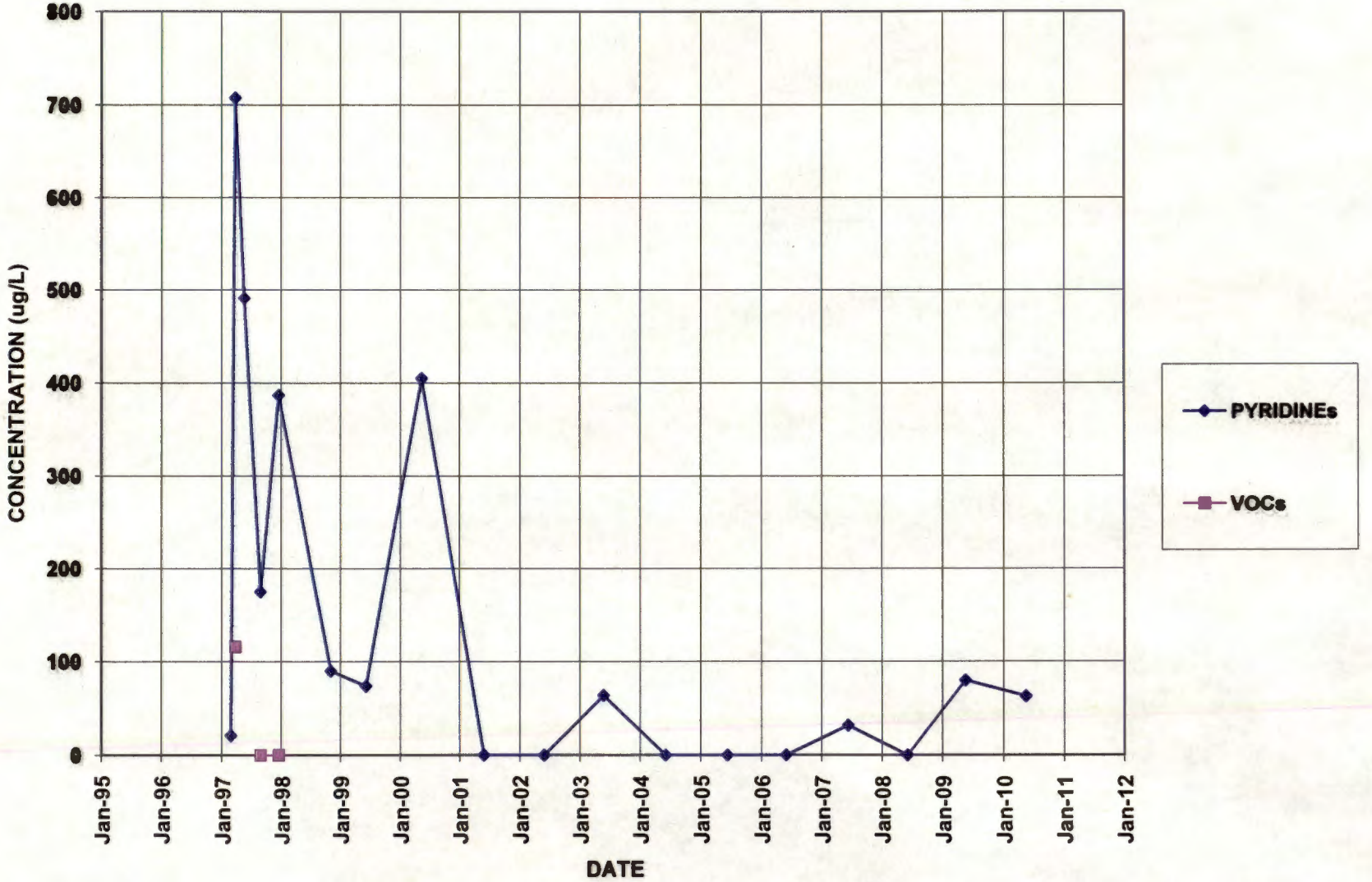
Prepared by: nmb
Reviewed by: jeb

BR-116



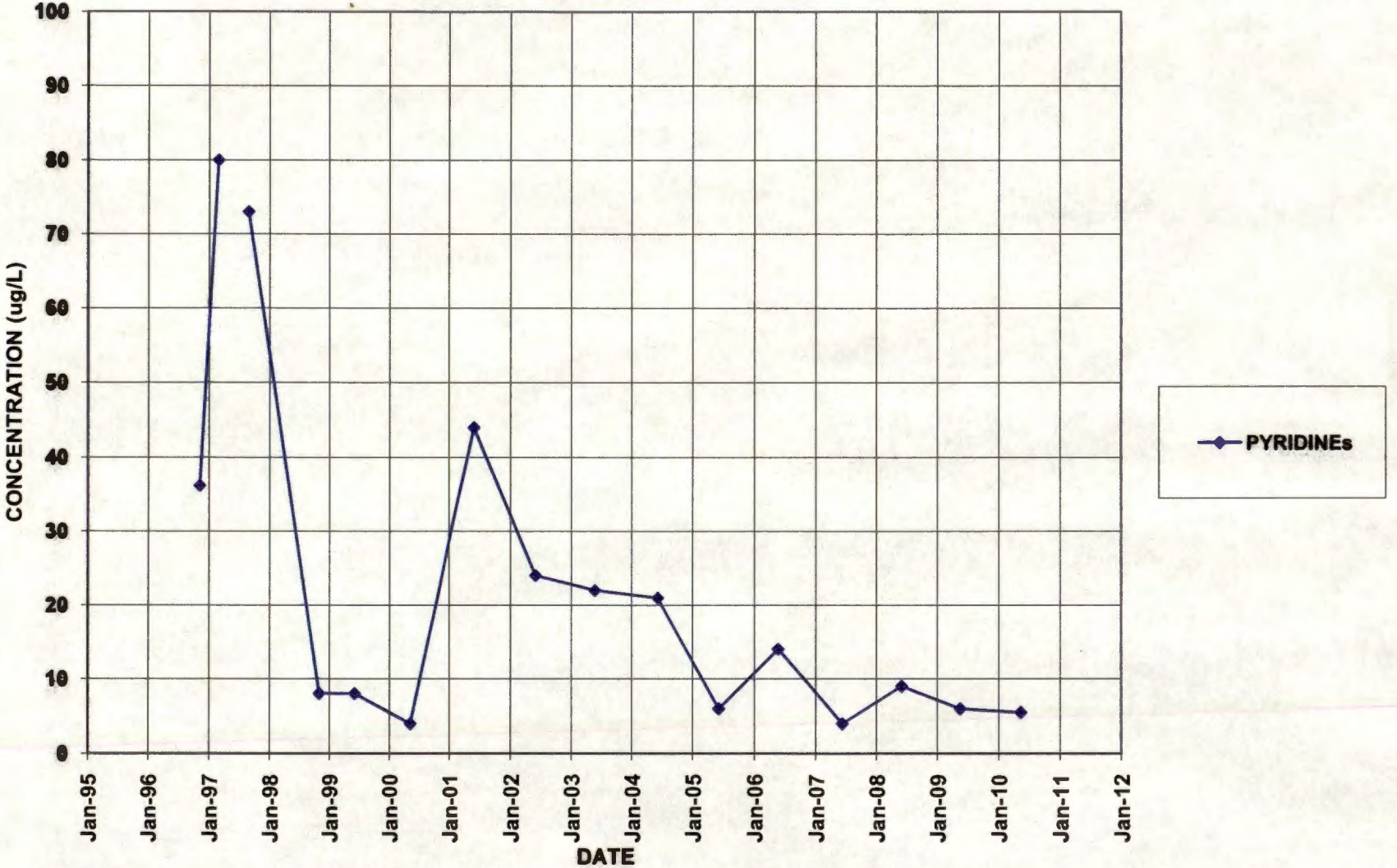
Prepared by: nmb
Reviewed by: jeb

BR-116D



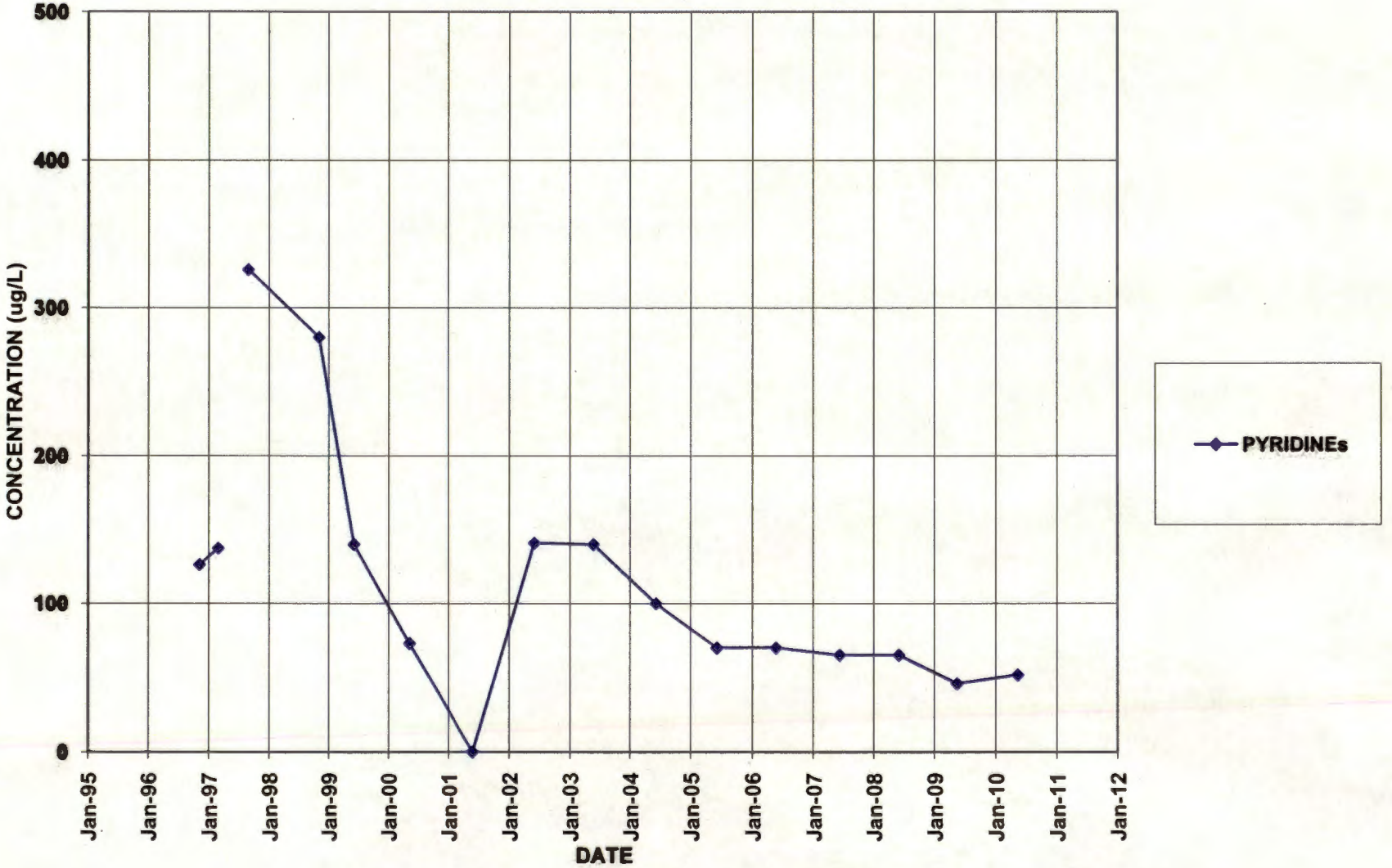
Prepared by: nmb
Reviewed by: jcb

BR-117D



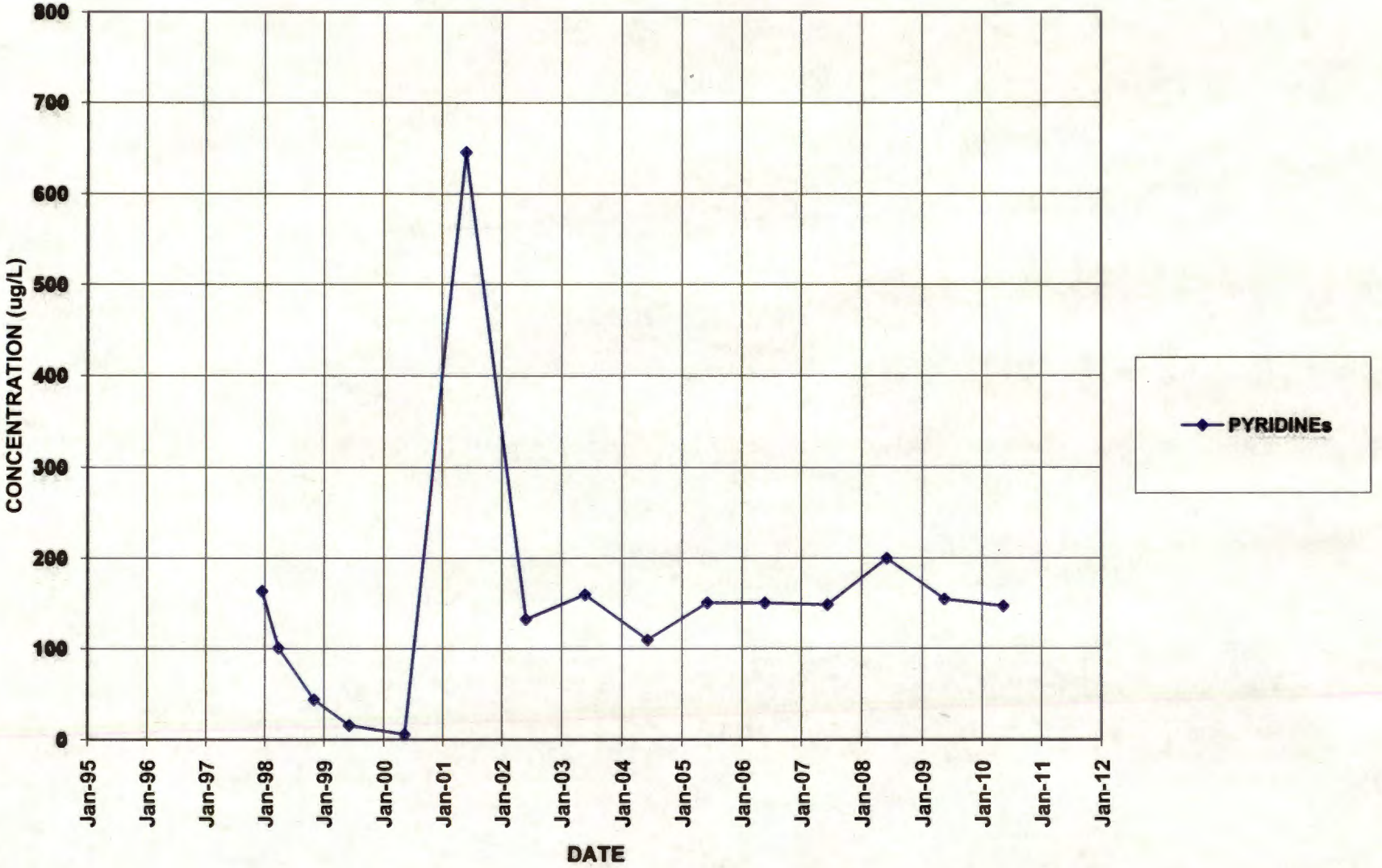
Prepared by: nmb
Reviewed by: jcb

BR-118D



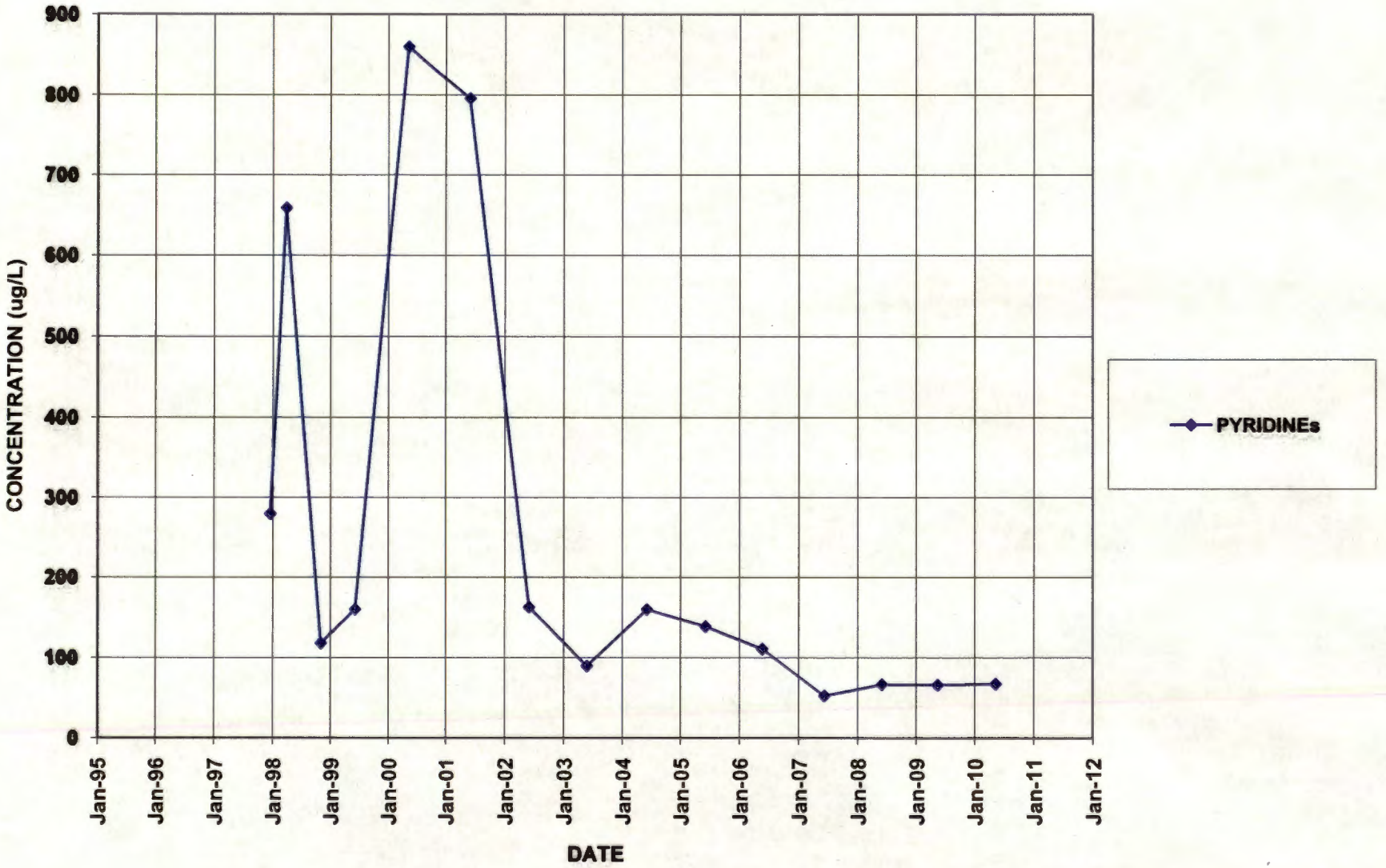
Prepared by: nmb
Reviewed by: jeb

BR-122D



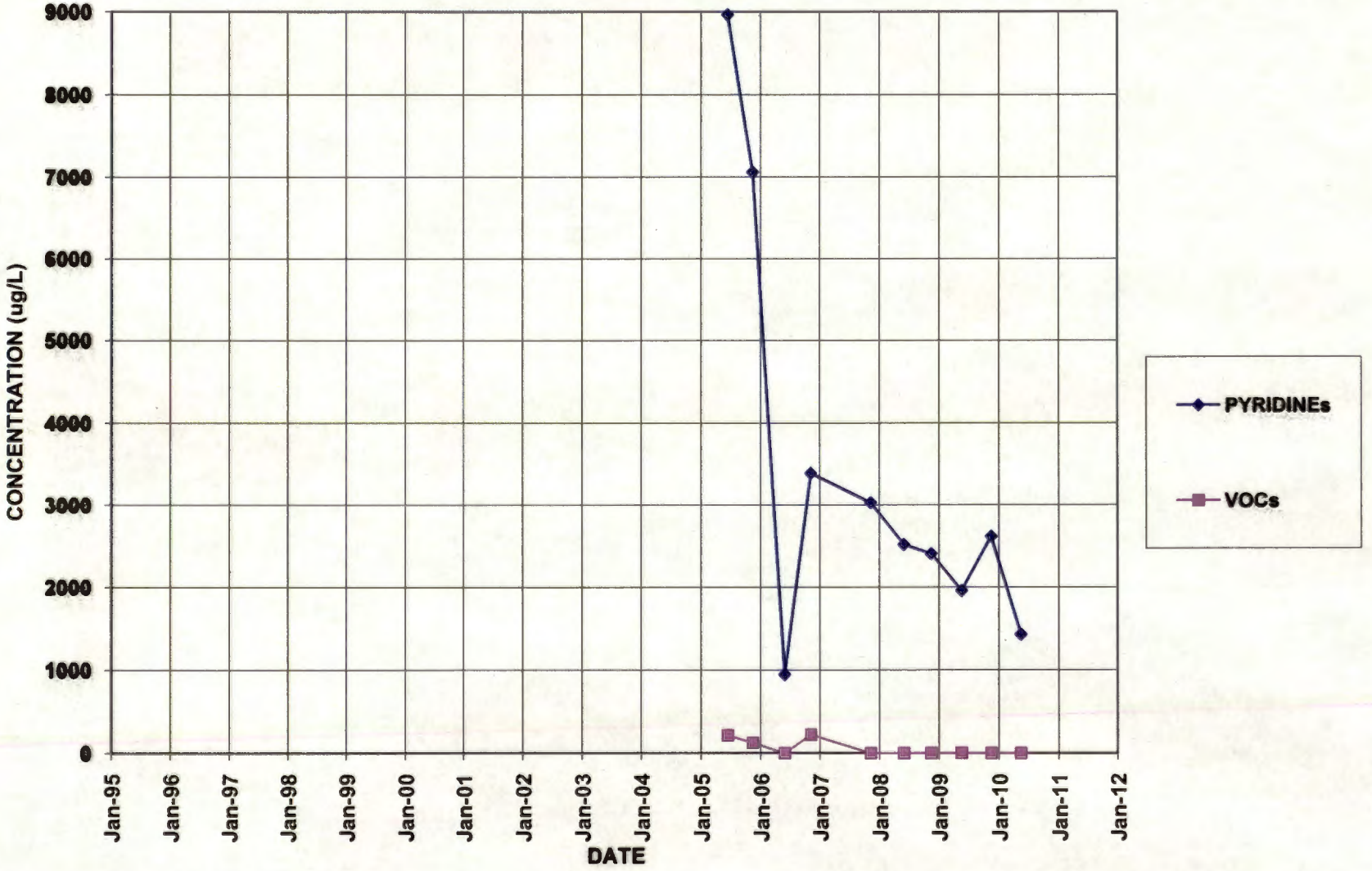
Prepared by: nmb
Reviewed by: jeb

BR-123D



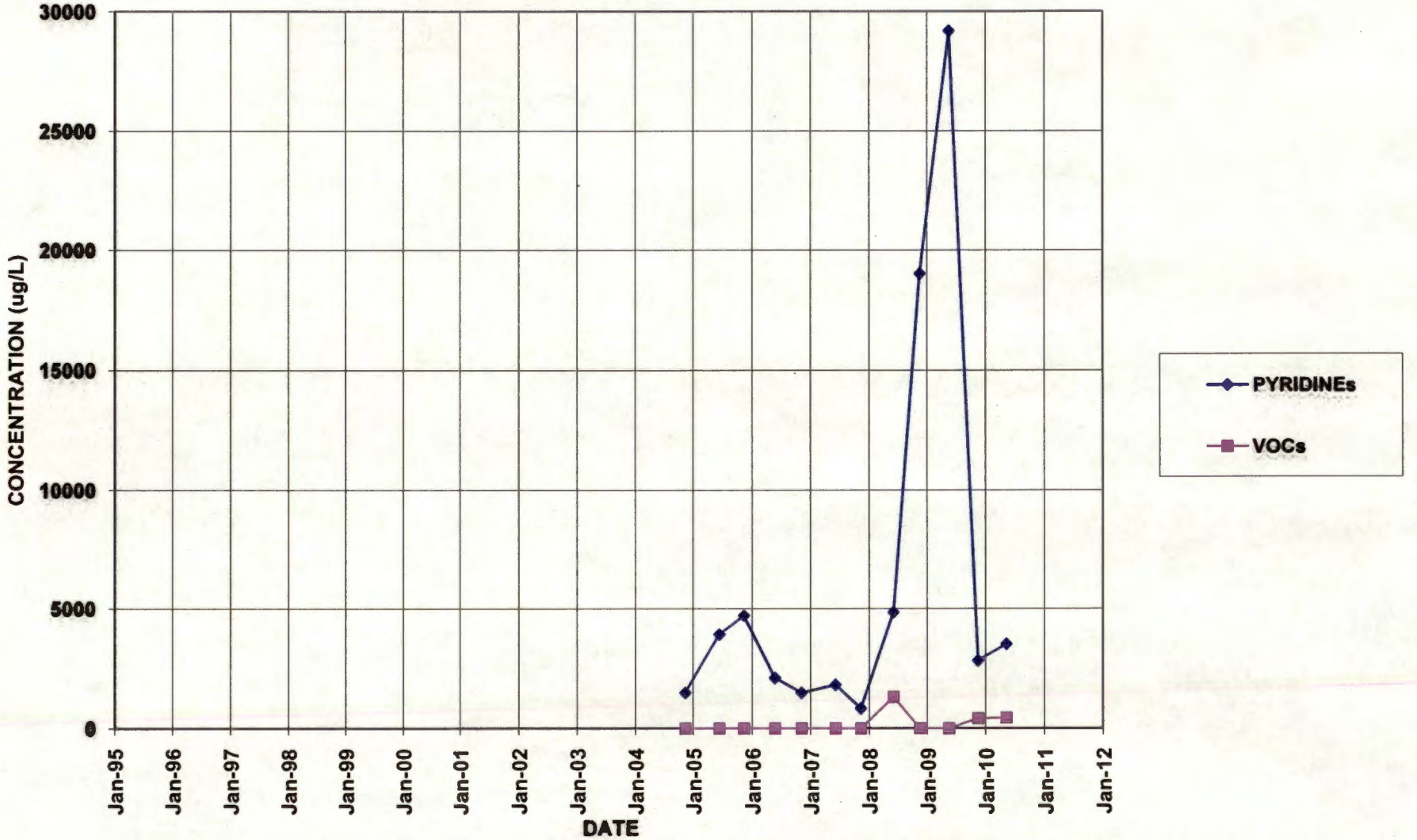
Prepared by: nmb
Reviewed by: jeb

BR-126

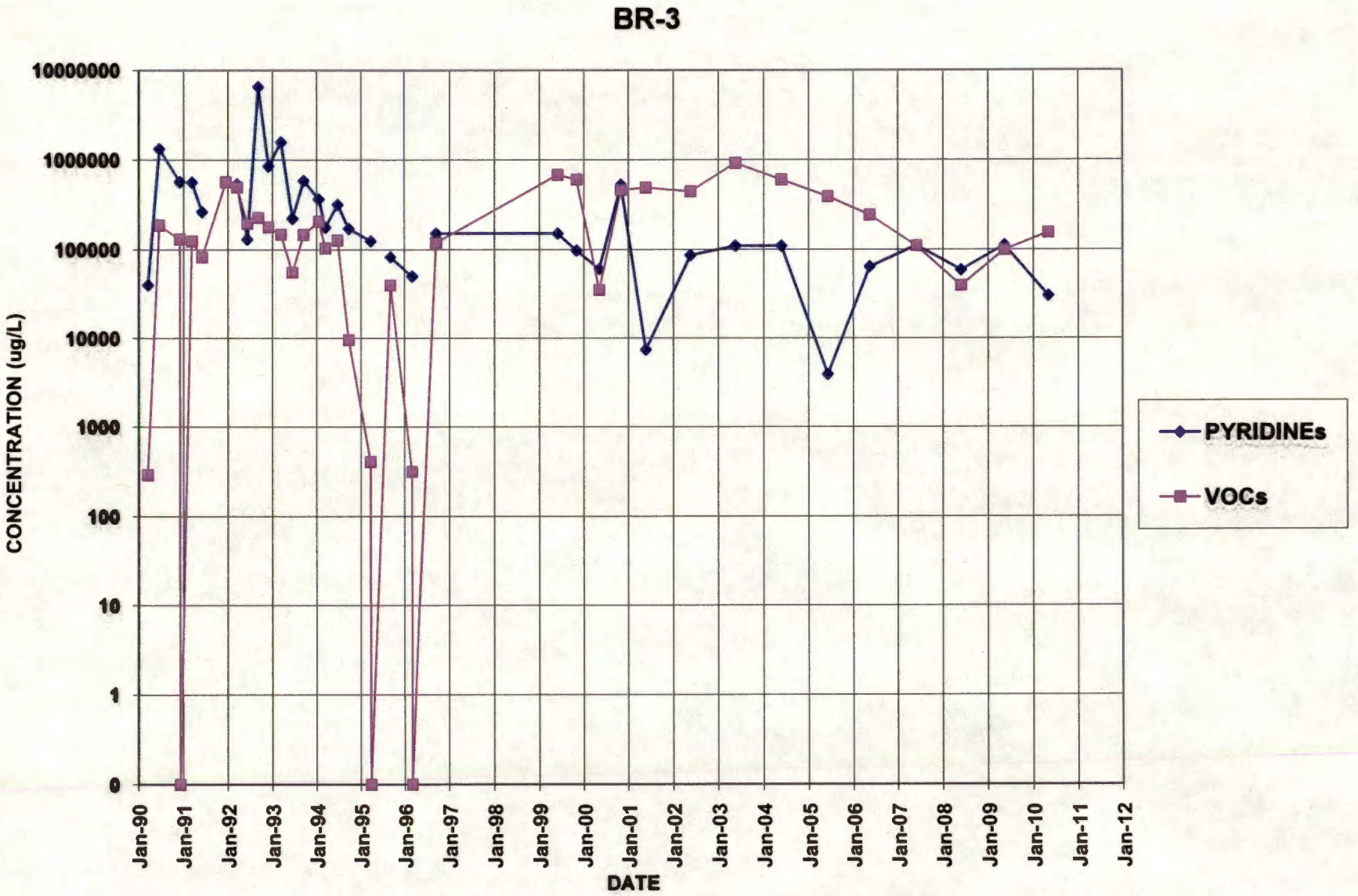


Prepared by: nmb
Reviewed by: jeb

BR-127

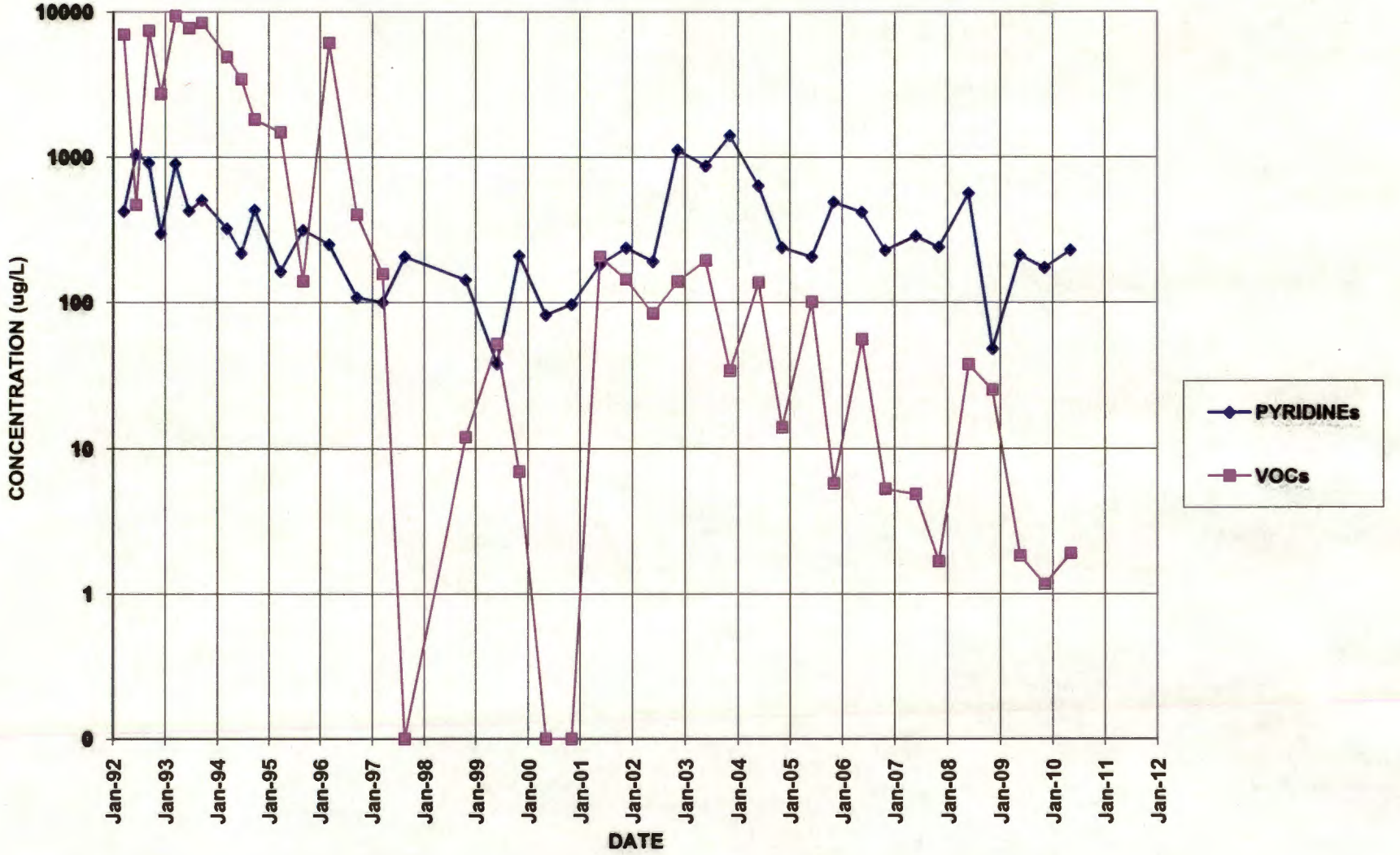


Prepared by: nmb
Reviewed by: jeb



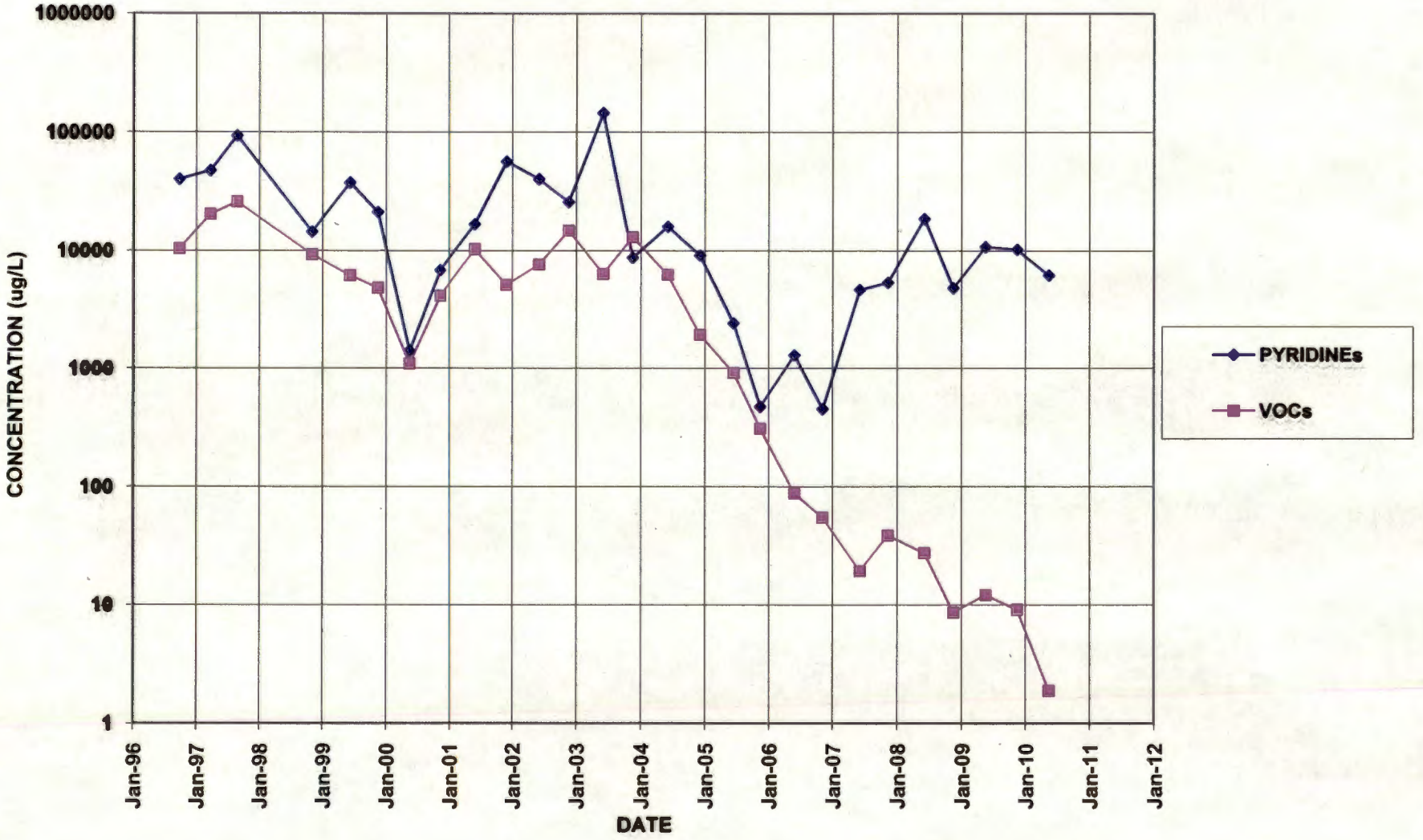
Prepared by: nmb
Reviewed by: jeb

BR-5A



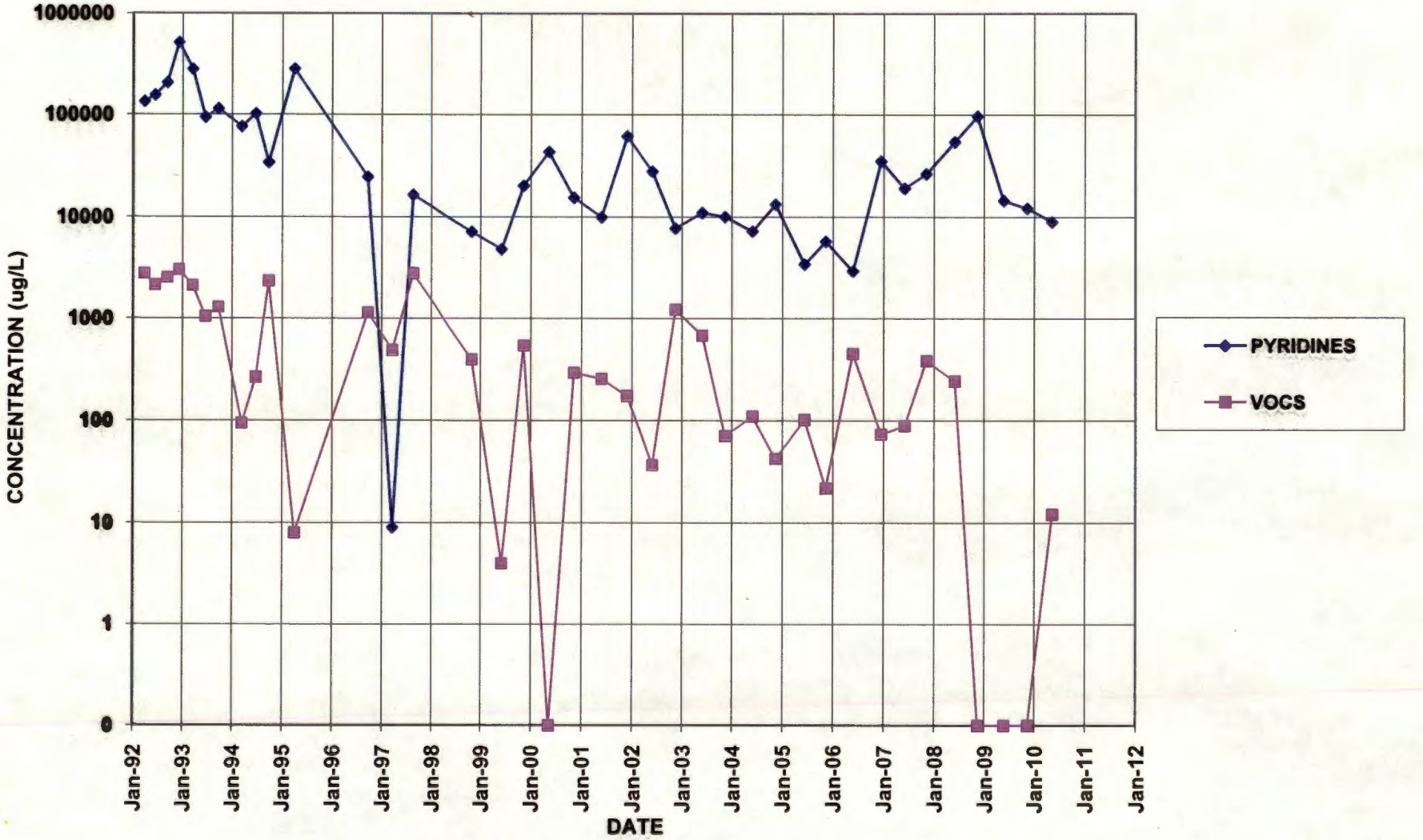
Prepared by: nmb
Reviewed by: jcb

BR-6A



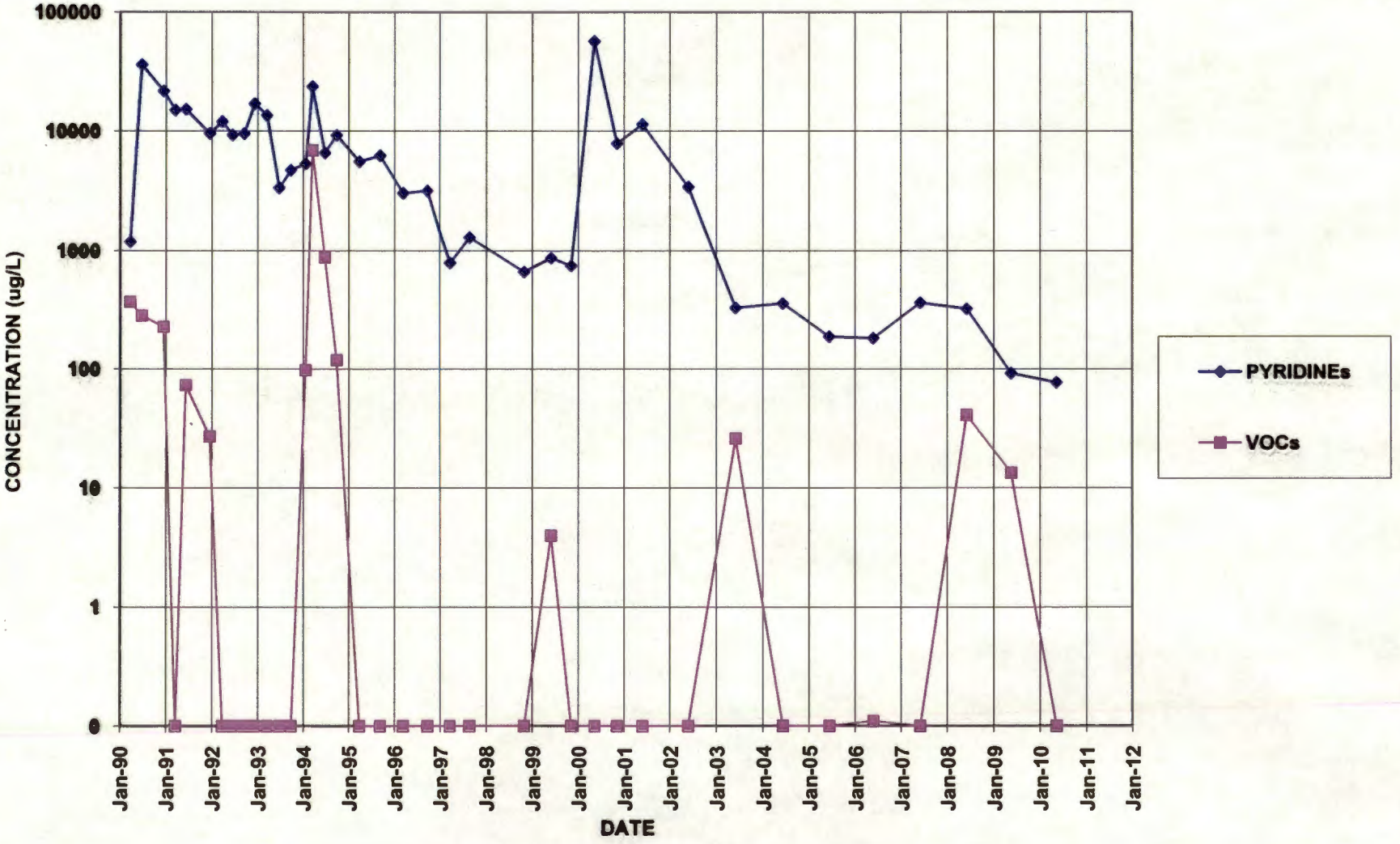
Prepared by: nmb
Reviewed by: jeb

BR-7A



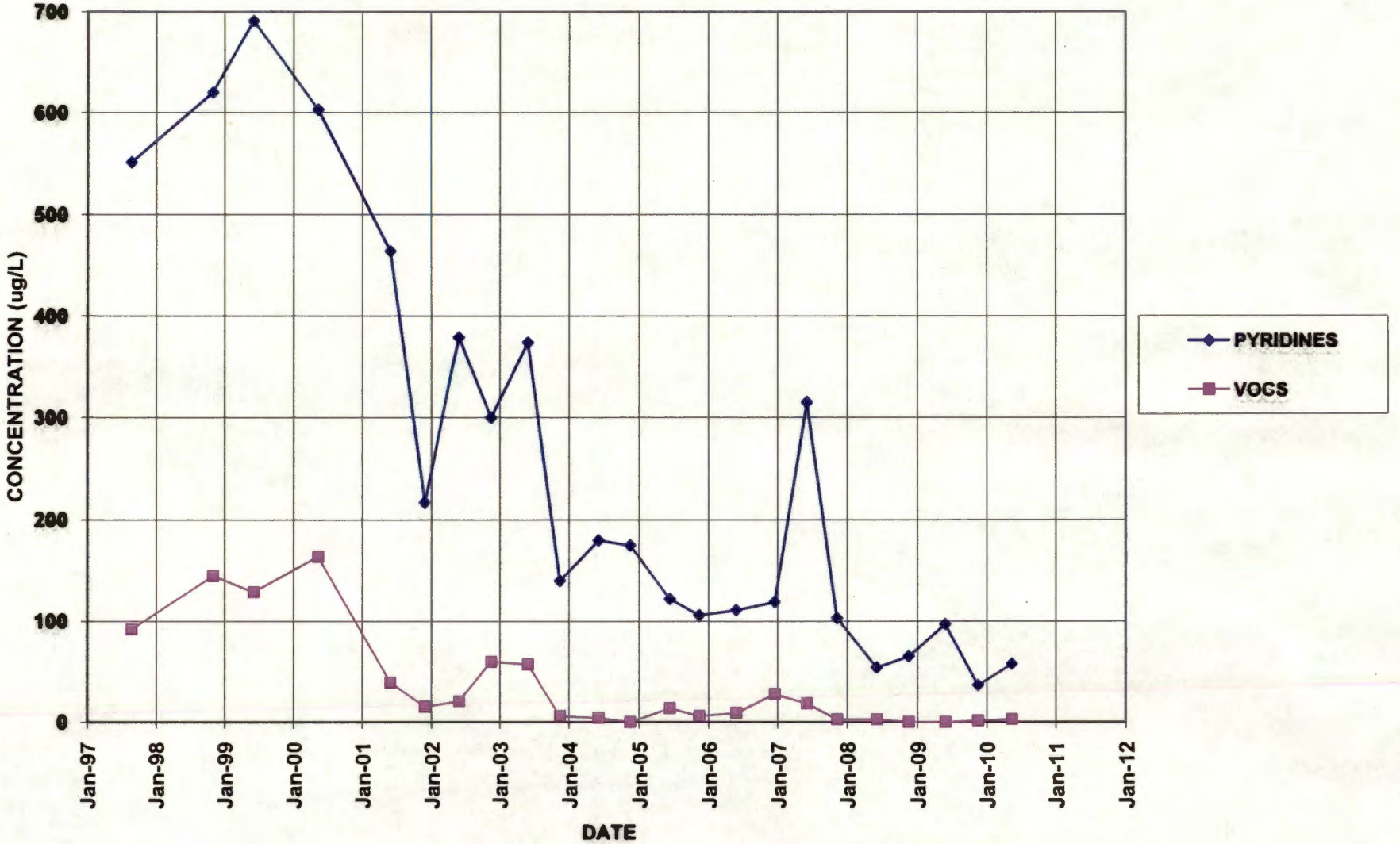
Prepared by: nmb
Reviewed by: jeb

BR-8



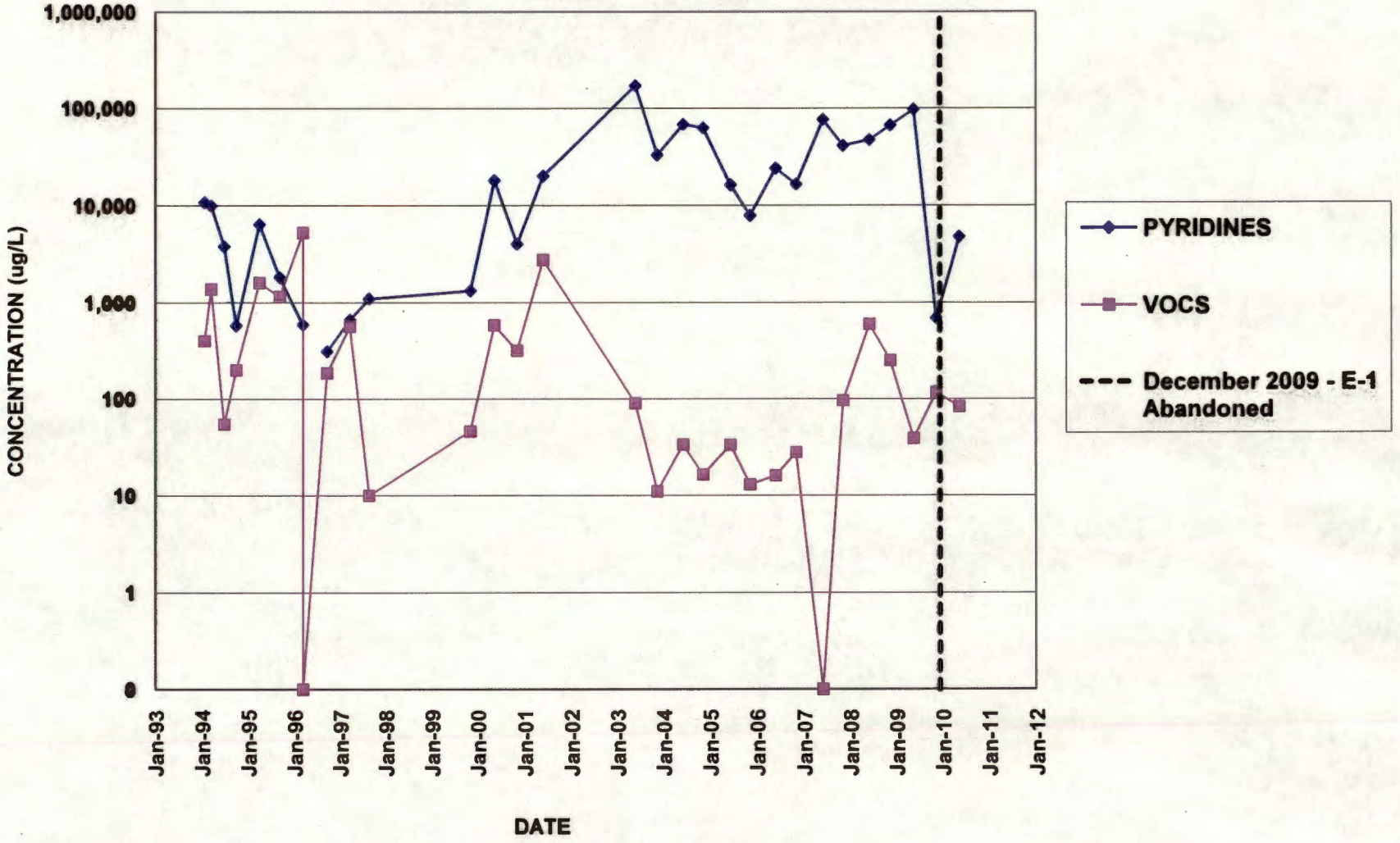
Prepared by: nmb
Reviewed by: jeb

BR-9



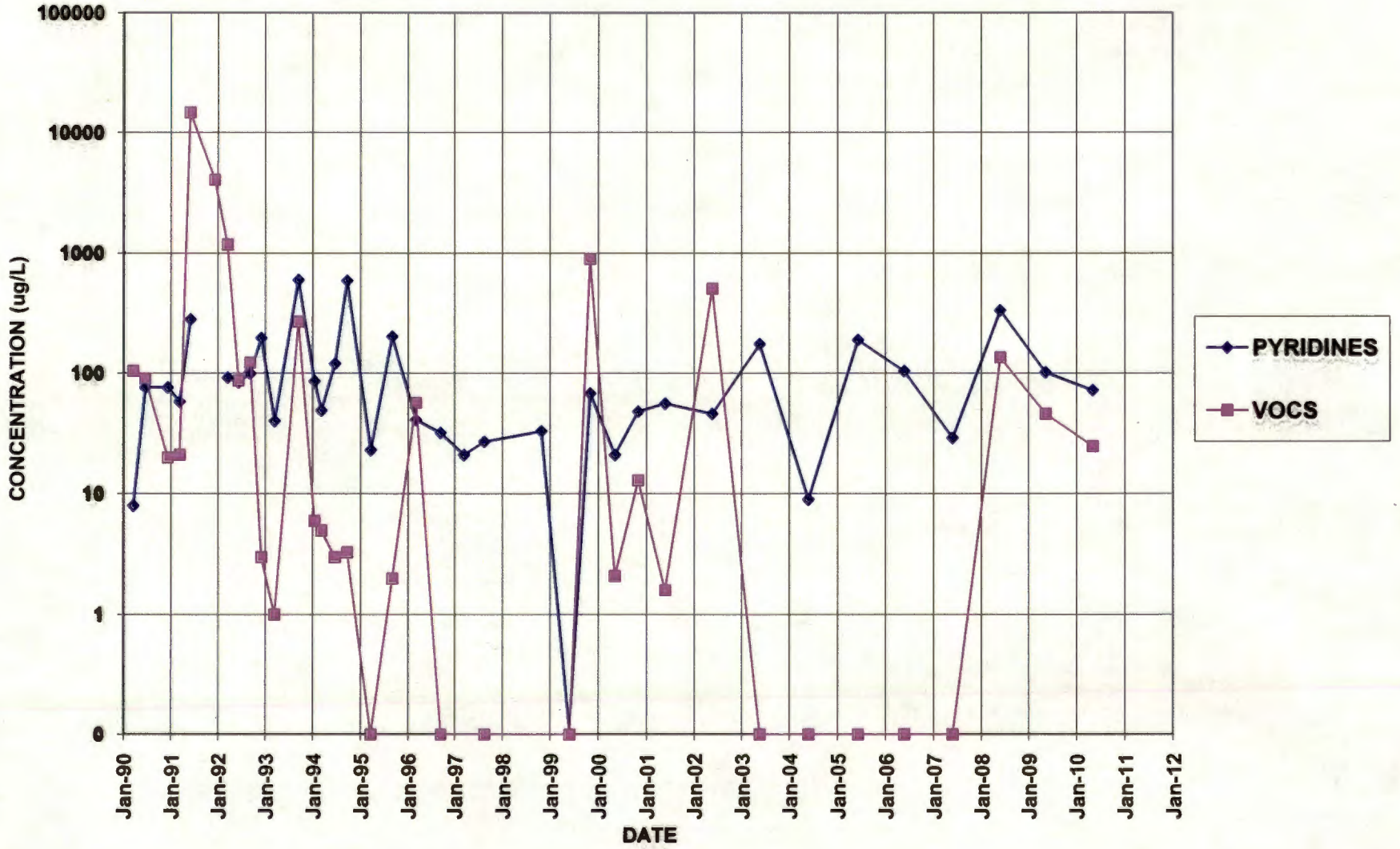
Prepared by: amb
Reviewed by: jeb

E-1 / B-11
(B-11 replaced E-1 beginning May 2010)



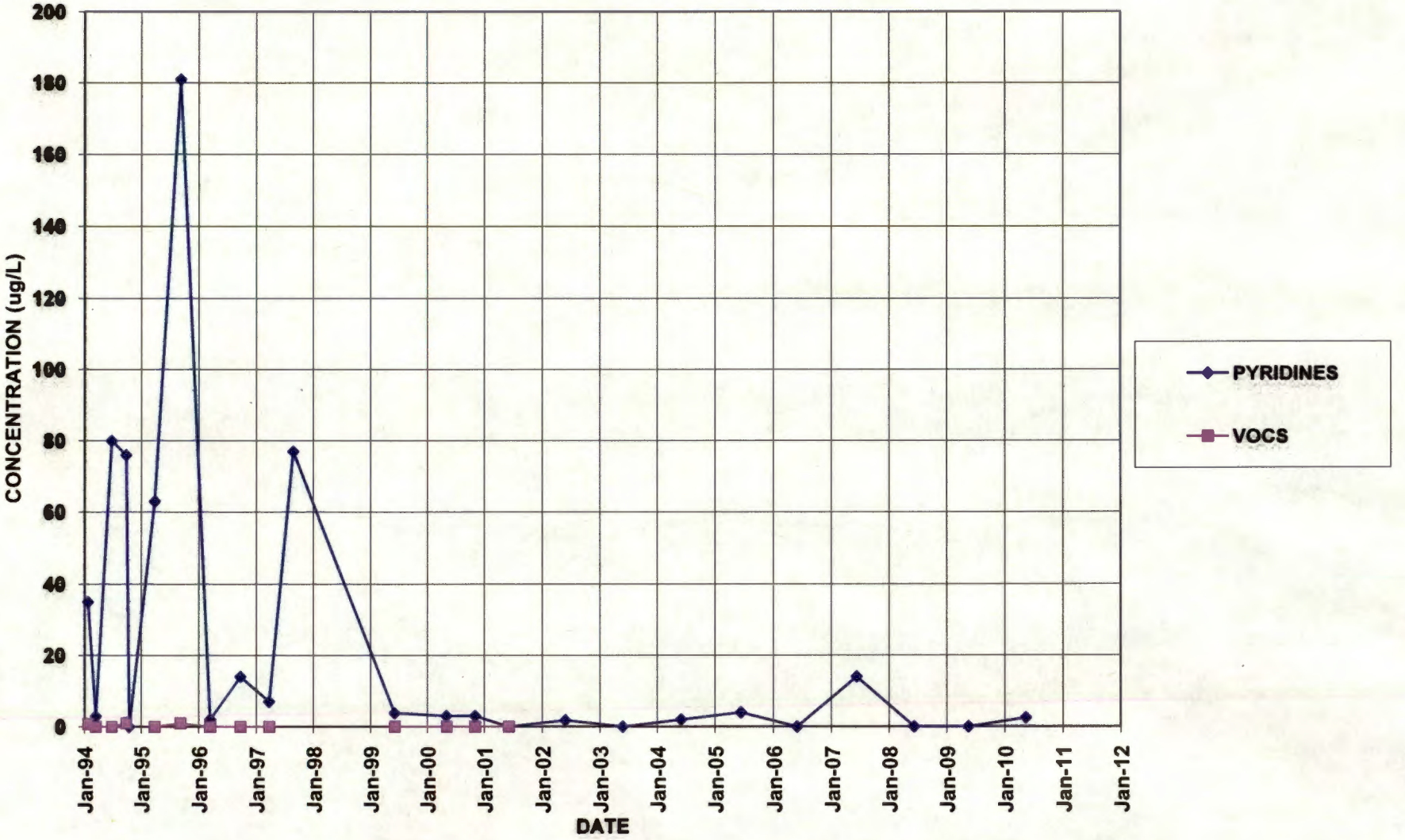
Prepared by: nmb
Reviewed by: jeb

E-3



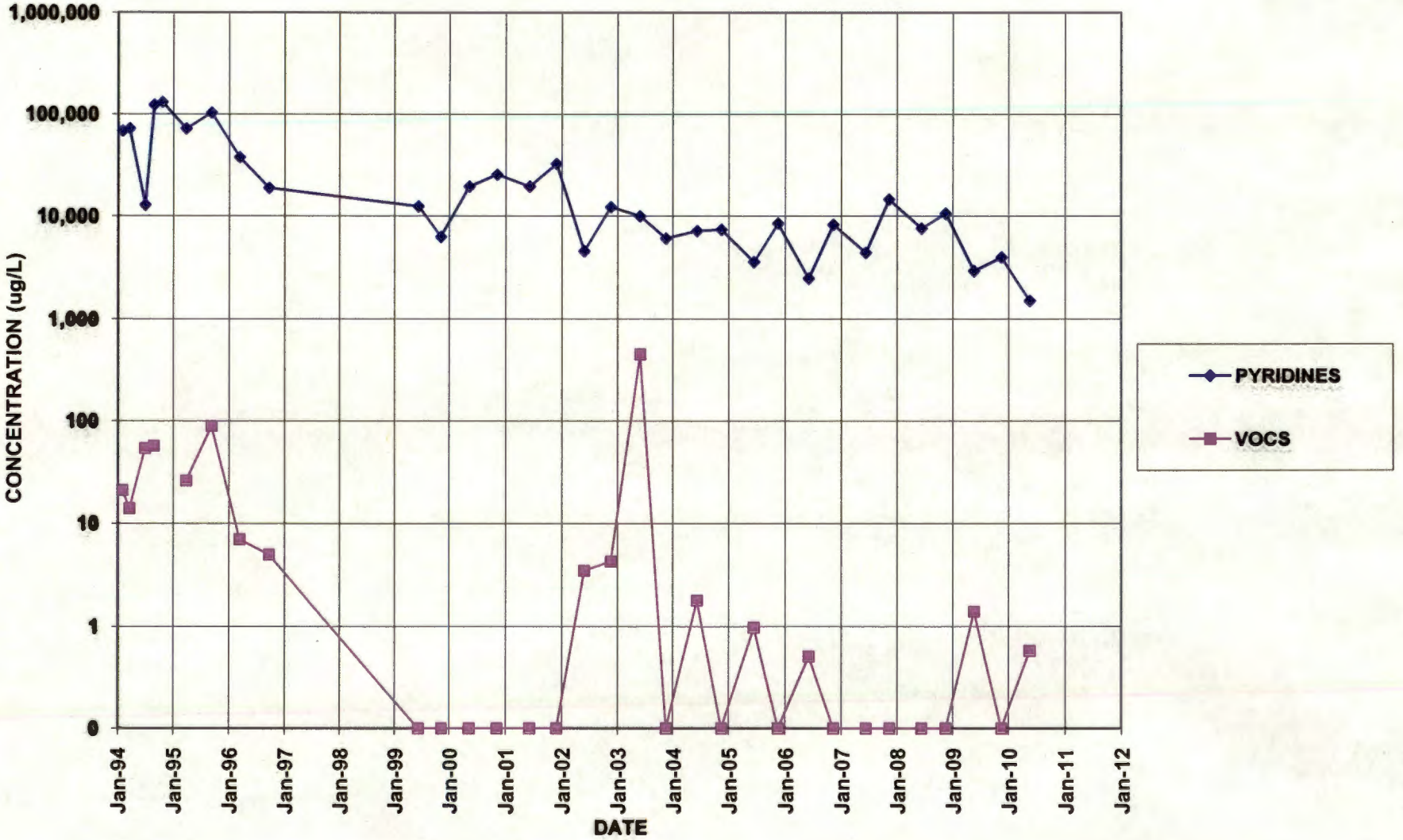
Prepared by: nmb
Reviewed by: jcb

MW-104



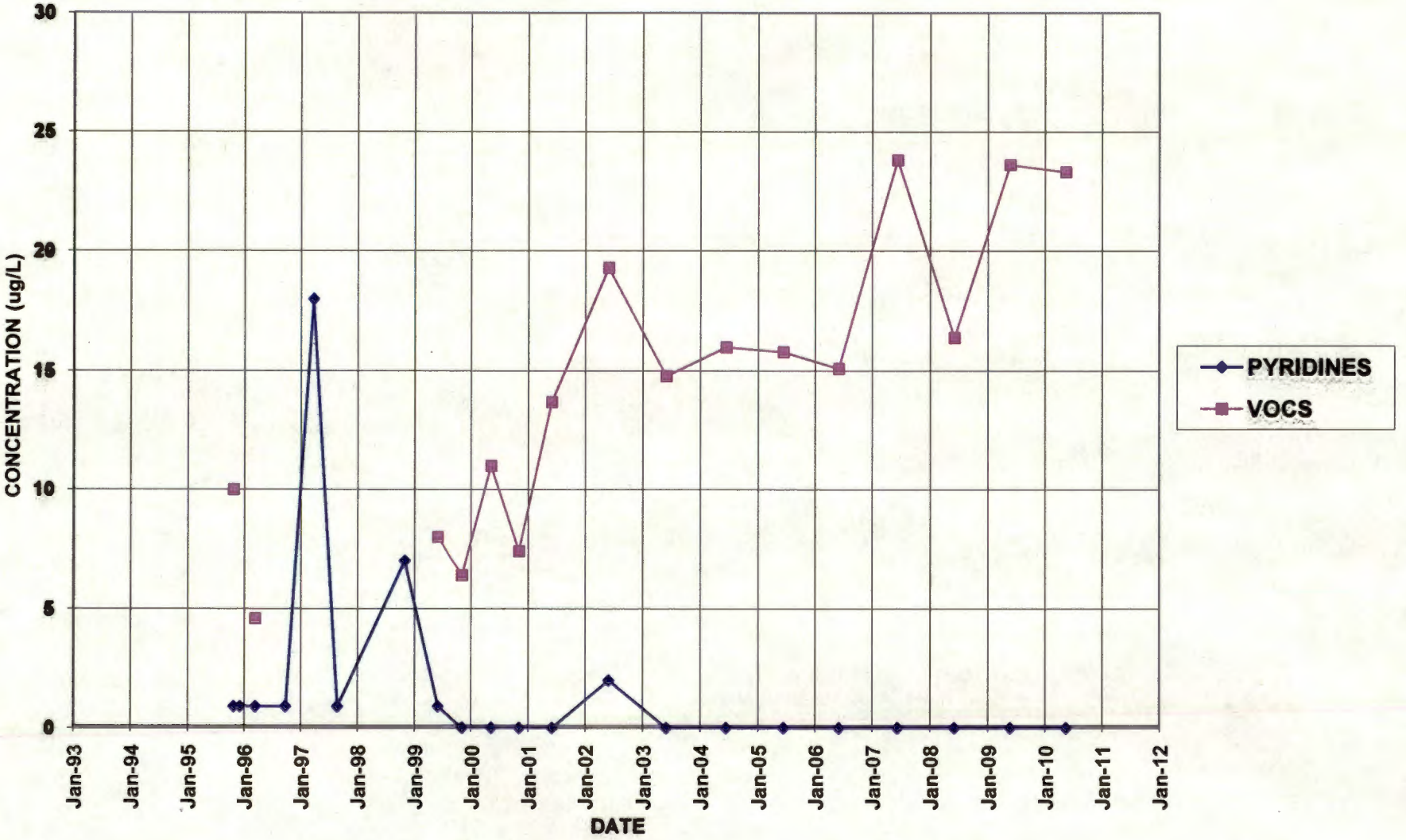
Prepared by: nmb
Reviewed by: jeb

MW-106



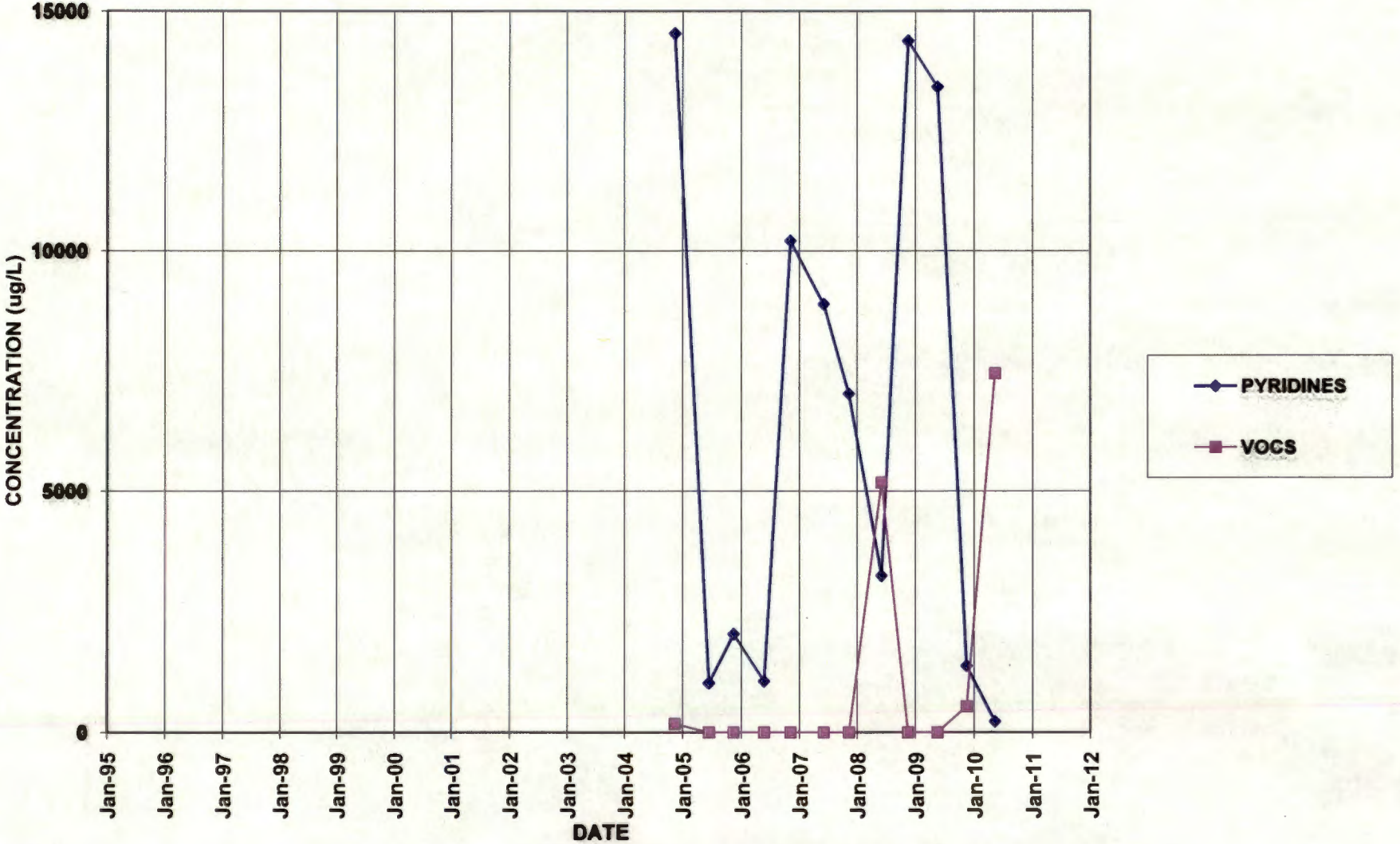
Prepared by: amb
Reviewed by: jeb

MW-114



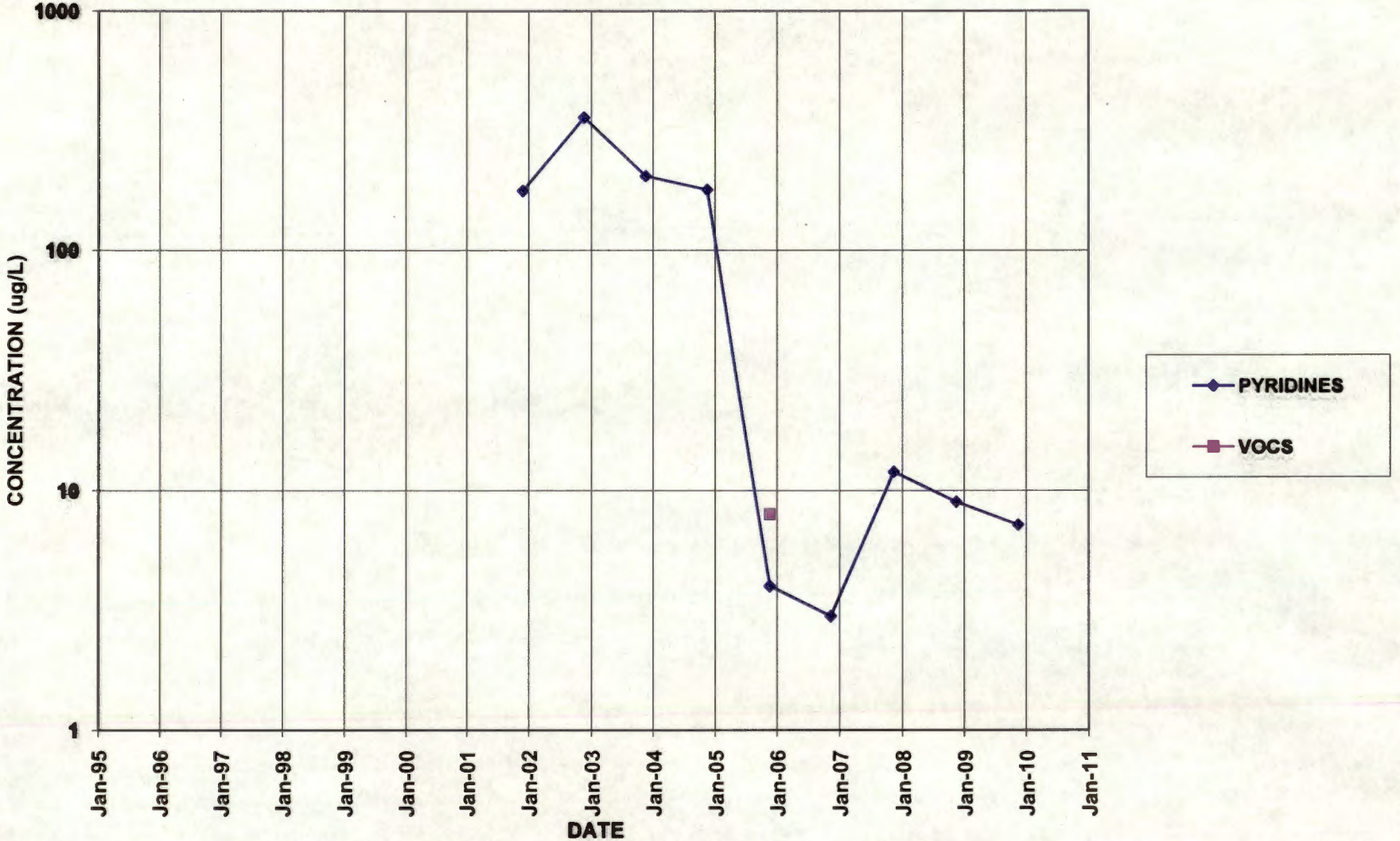
Prepared by: nmb
Reviewed by: jeb

MW-127



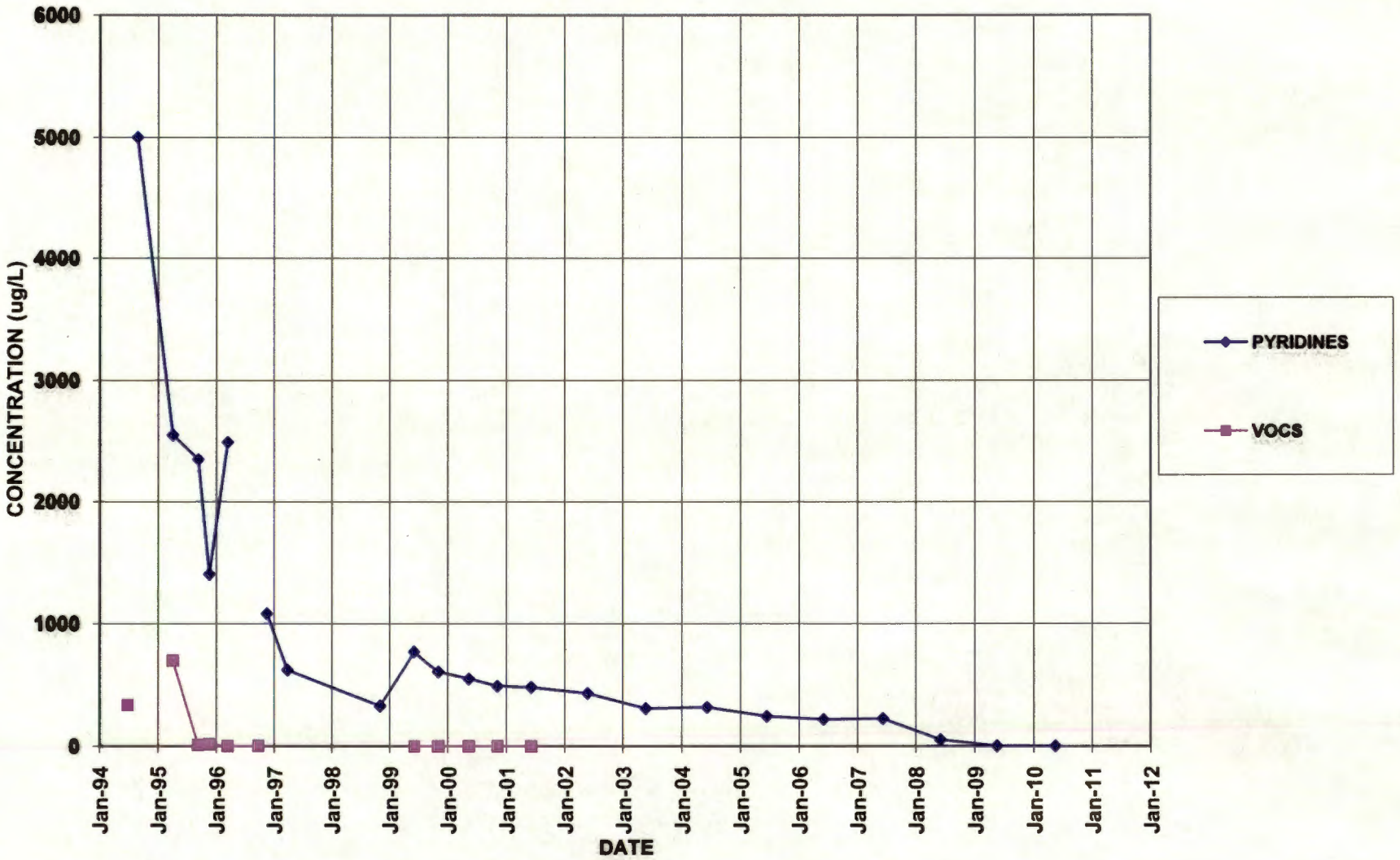
Prepared by: nmb
Reviewed by: jeb

MW-16



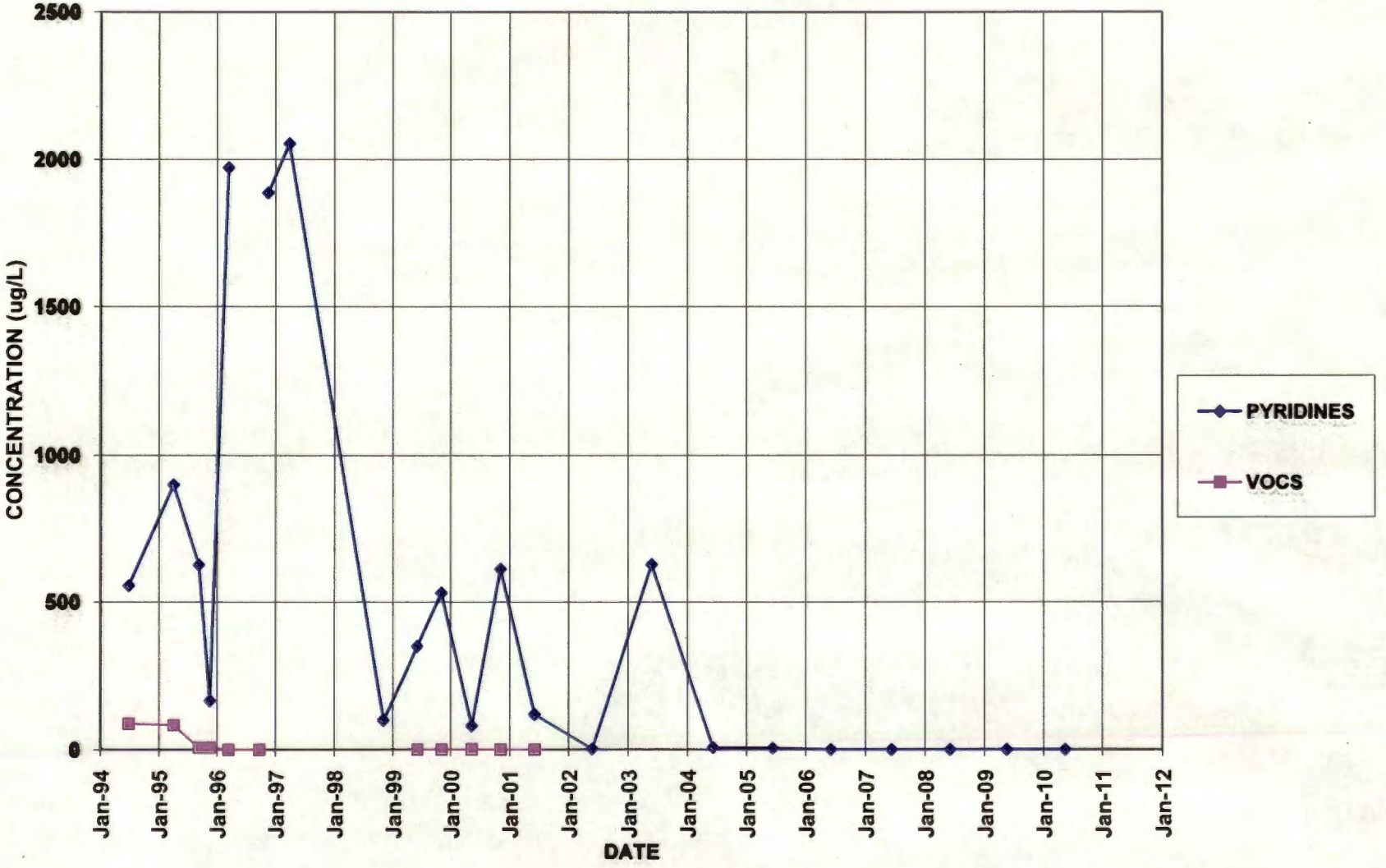
Prepared by: nmb
Reviewed by: jcb

NESS-E



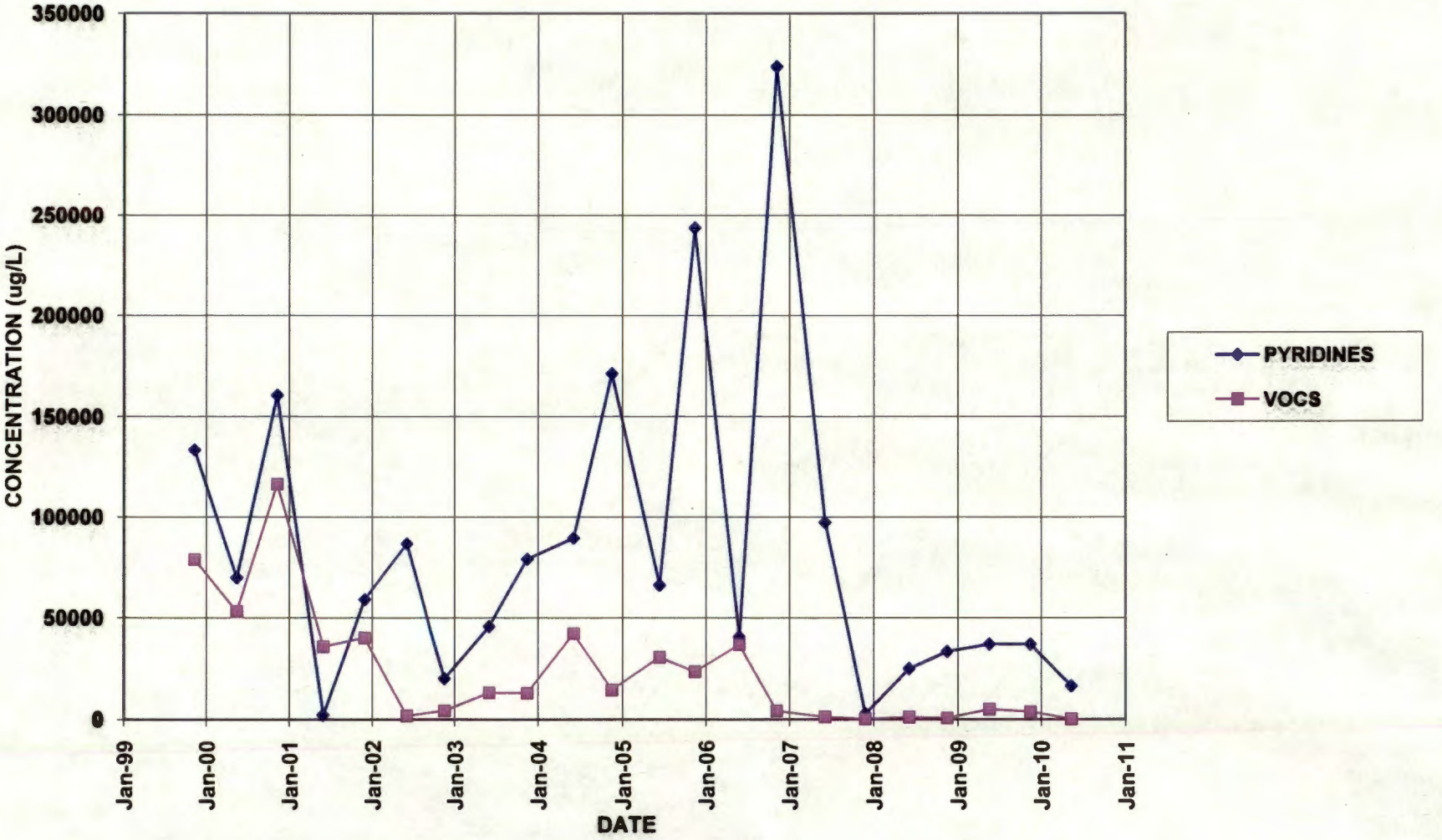
Prepared by: nmb
Reviewed by: jcb

NESS-W



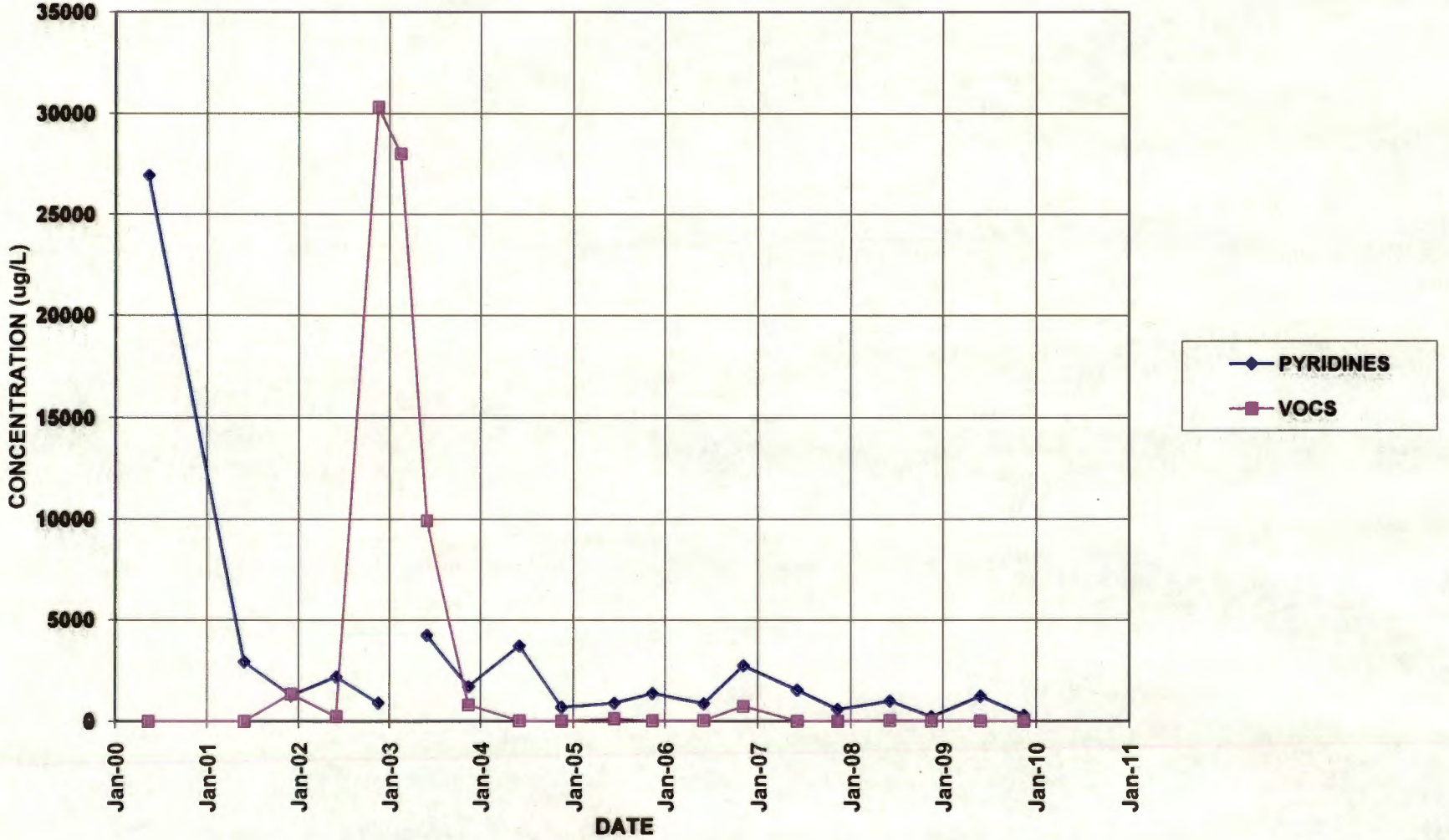
Prepared by: nmb
Reviewed by: jcb

PW10



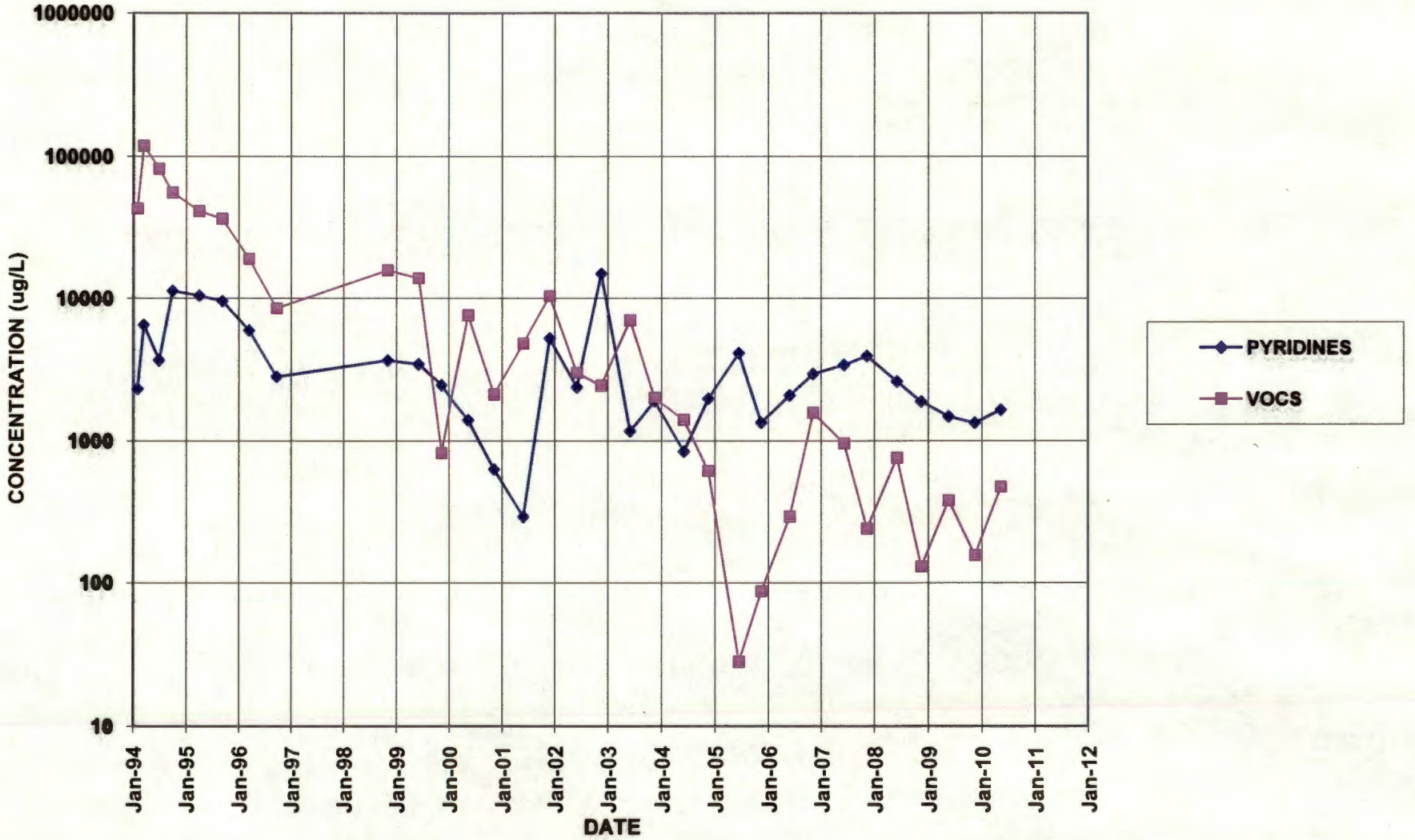
Prepared by: nmb
Reviewed by: jeb

PW11



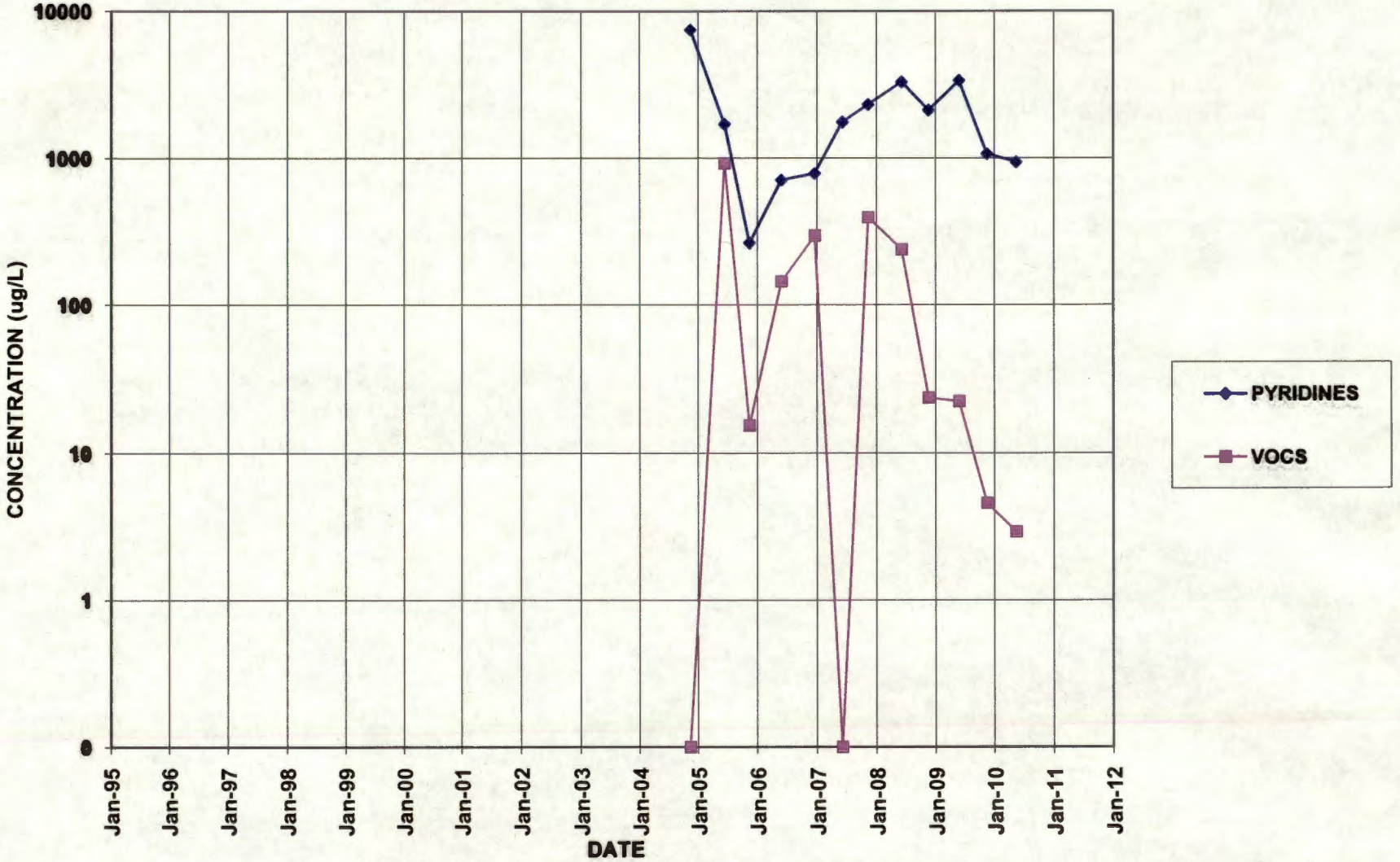
Prepared by: nmb
Reviewed by: jcb

PW12 (Formerly BR-101)



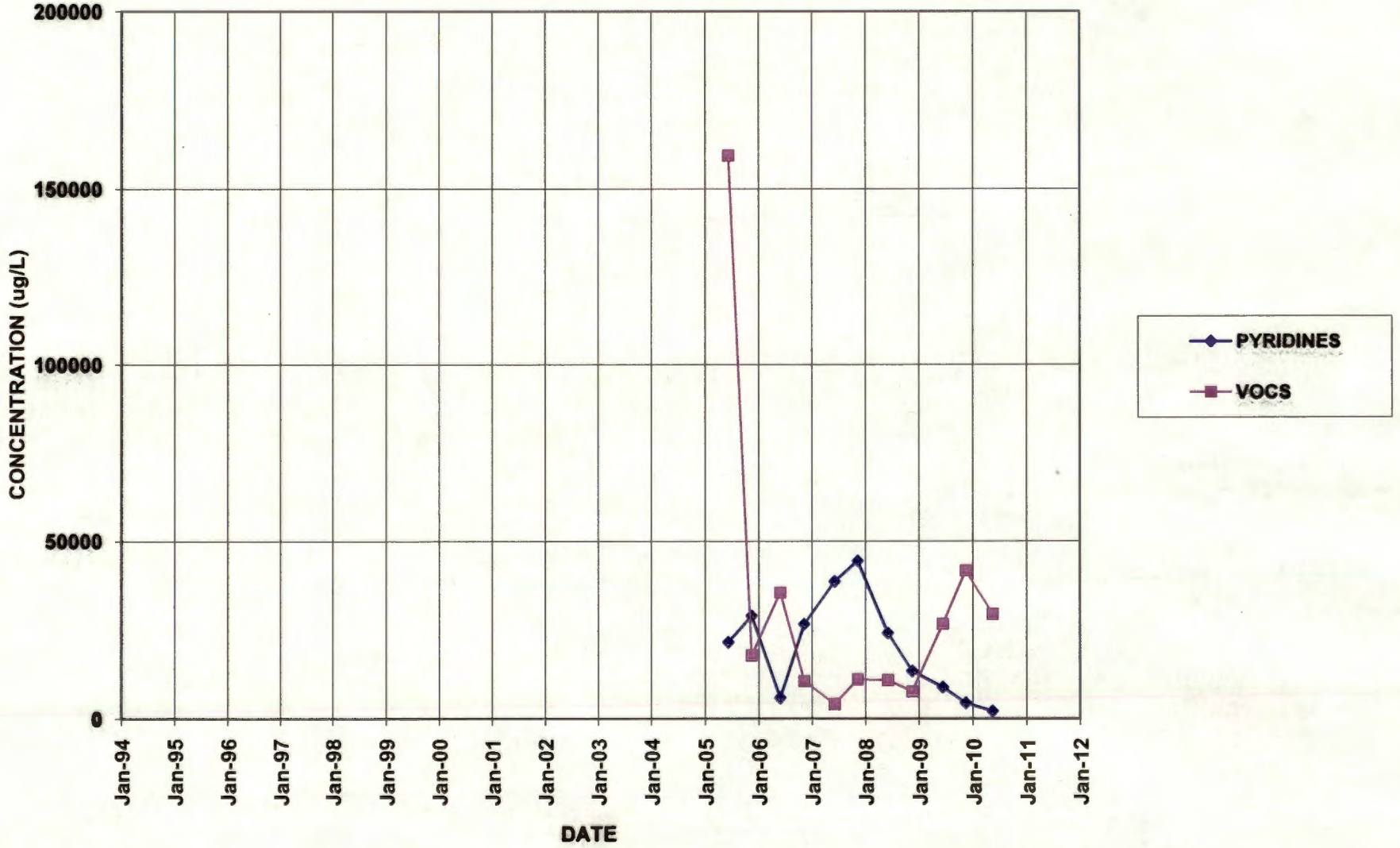
Prepared by: nmb
Reviewed by: jcb

PW13



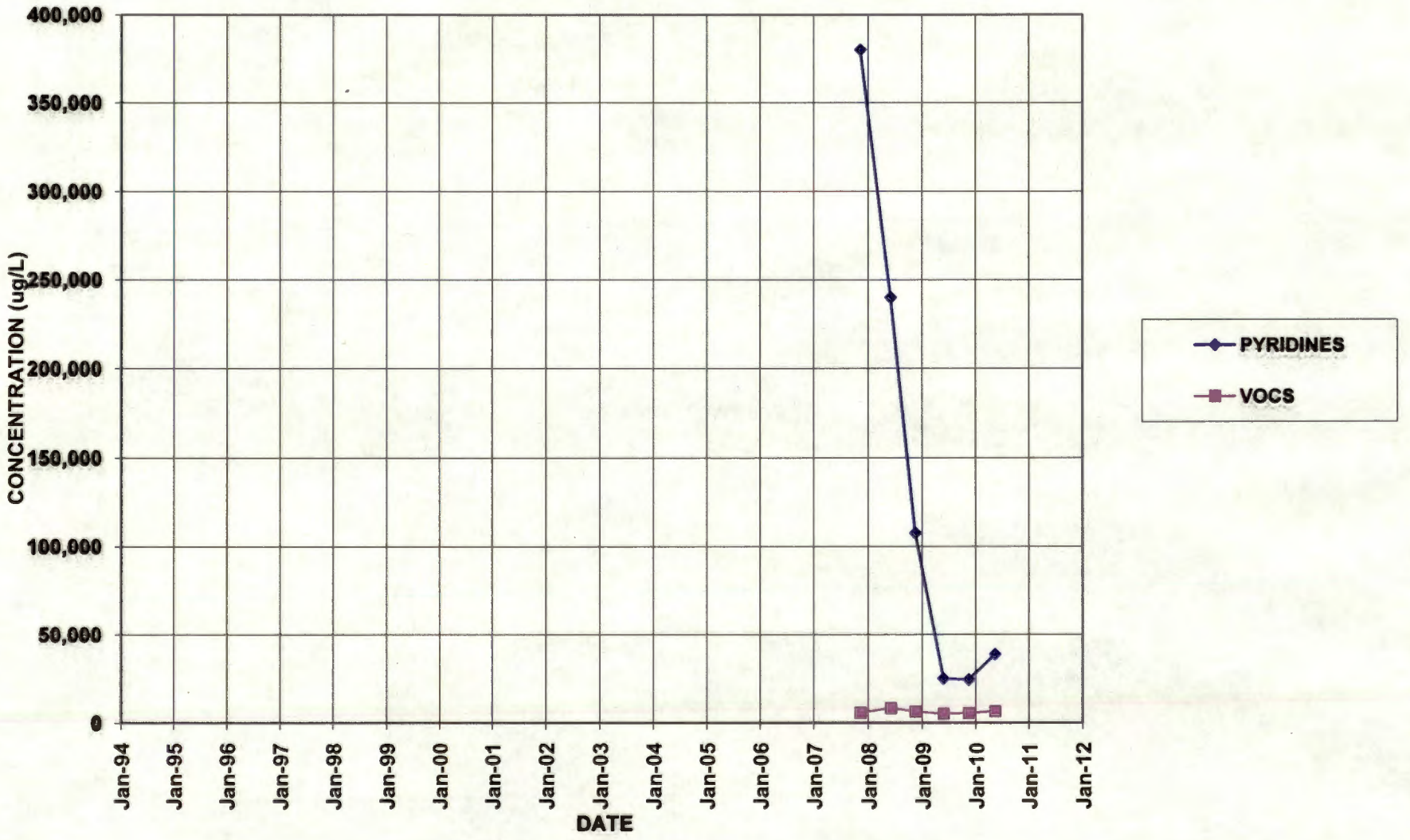
Prepared by: nmb
Reviewed by: jcb

PW14



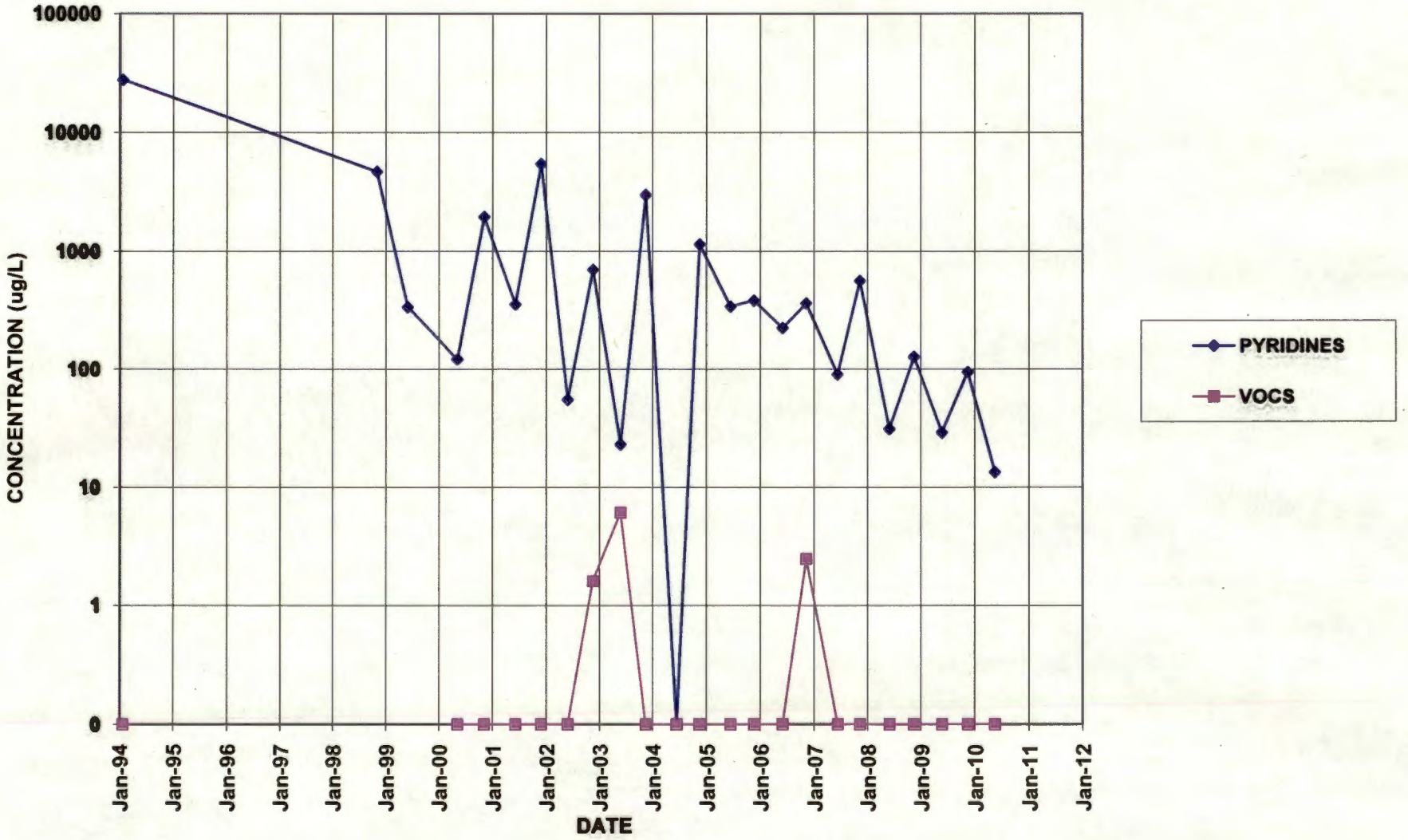
Prepared by: nmb
Reviewed by: jeb

PW15



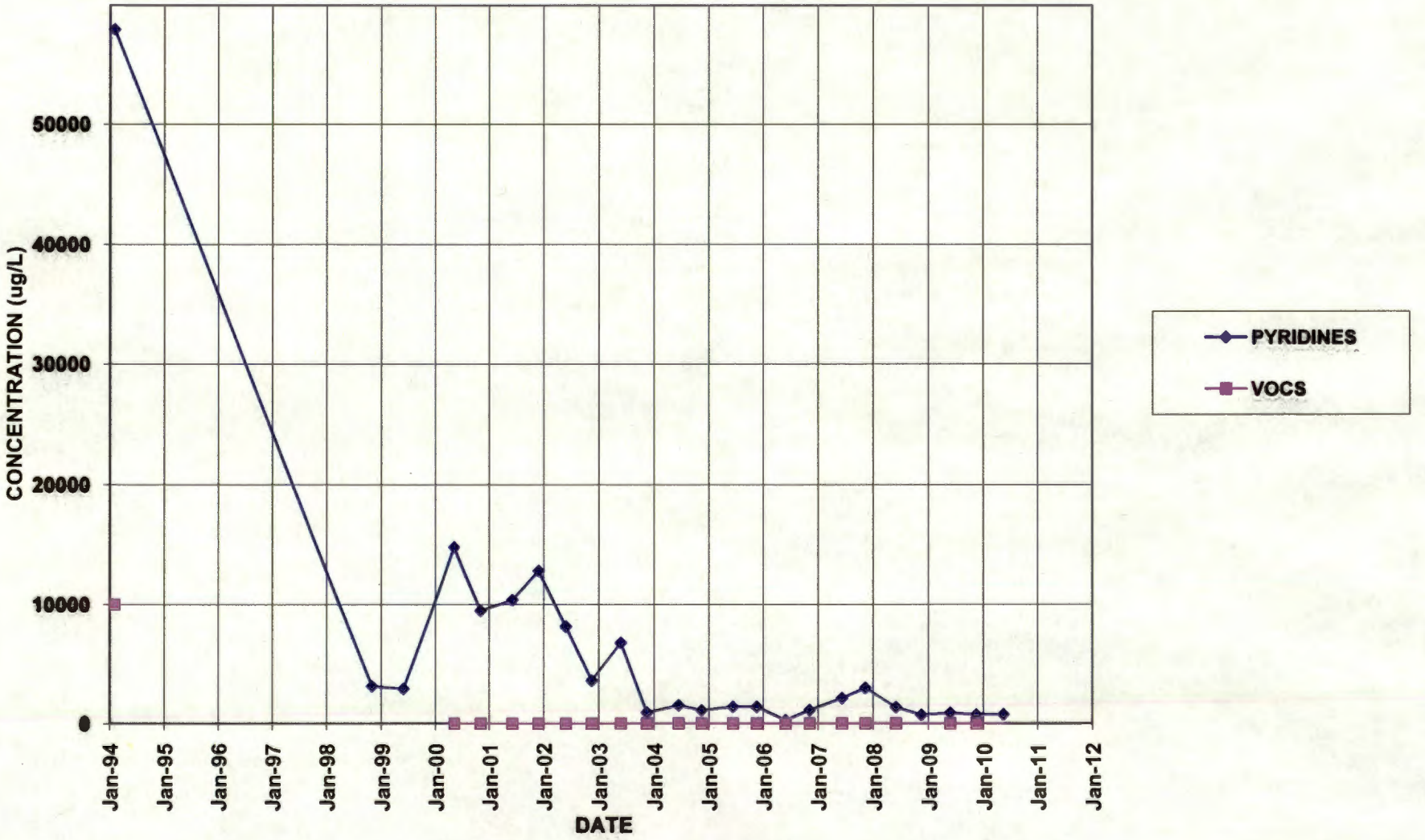
Prepared by: nmb
Reviewed by: jeb

PZ-101



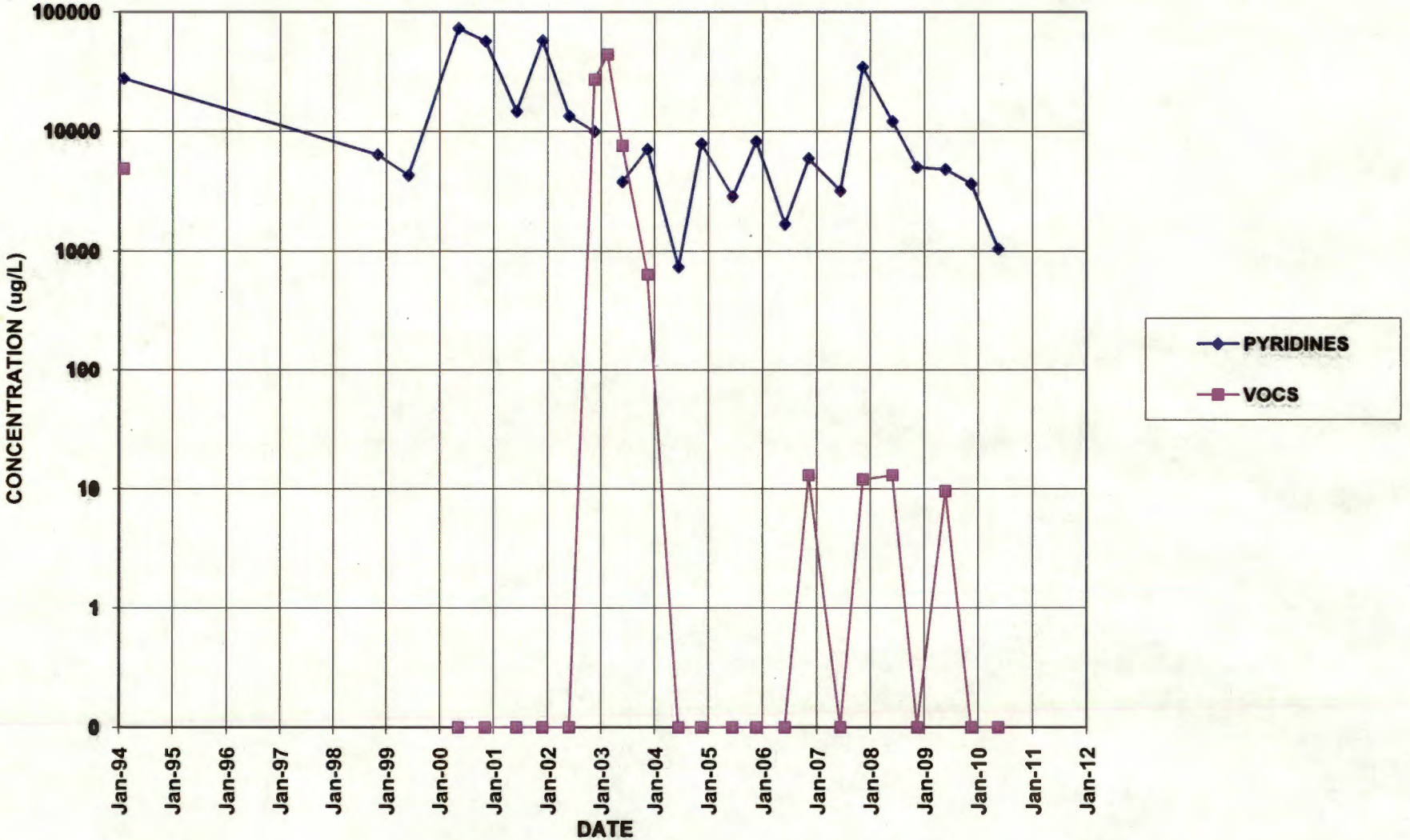
Prepared by: nmb
Reviewed by: jeb

PZ-102



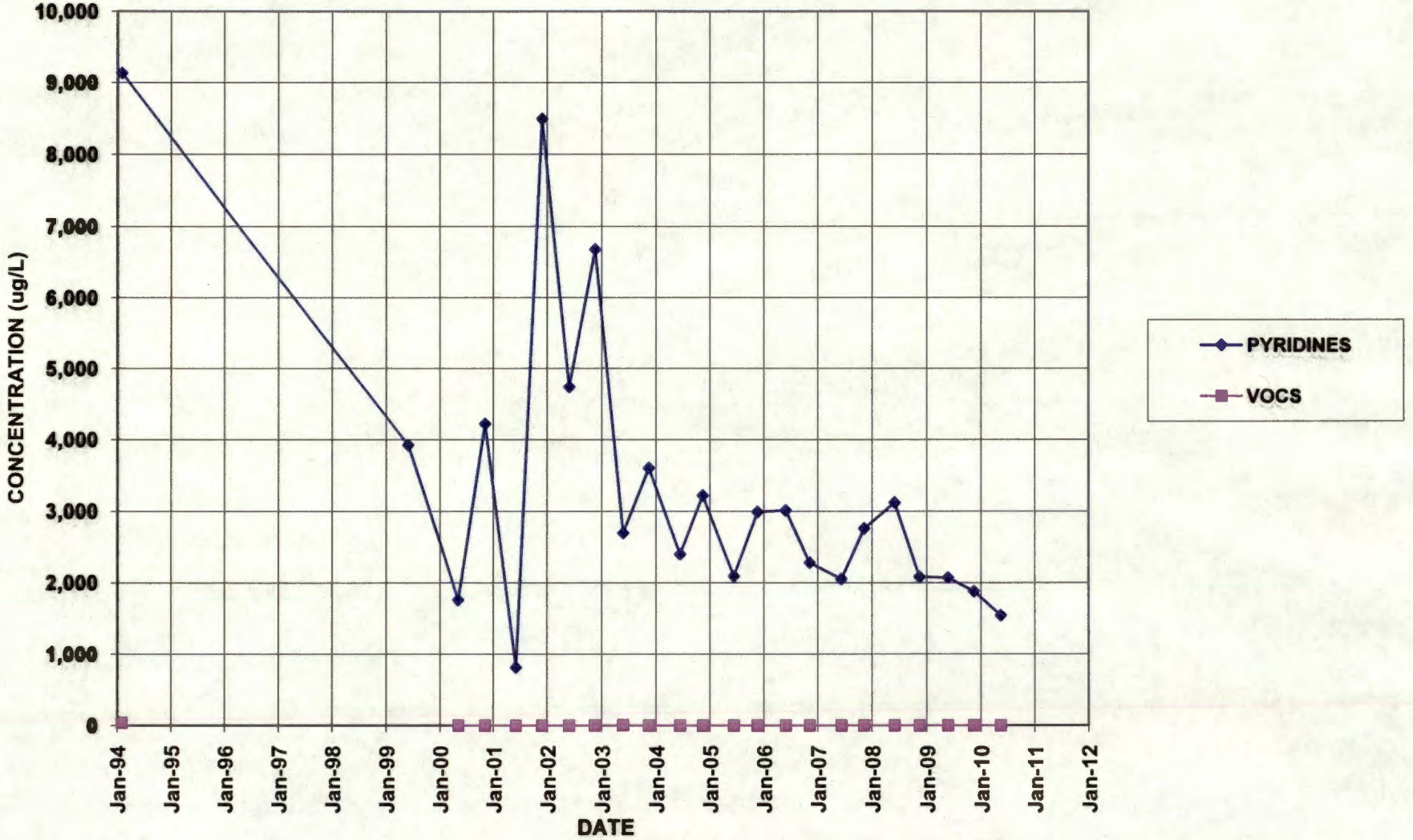
Prepared by: nmb
Reviewed by: jeb

PZ-103



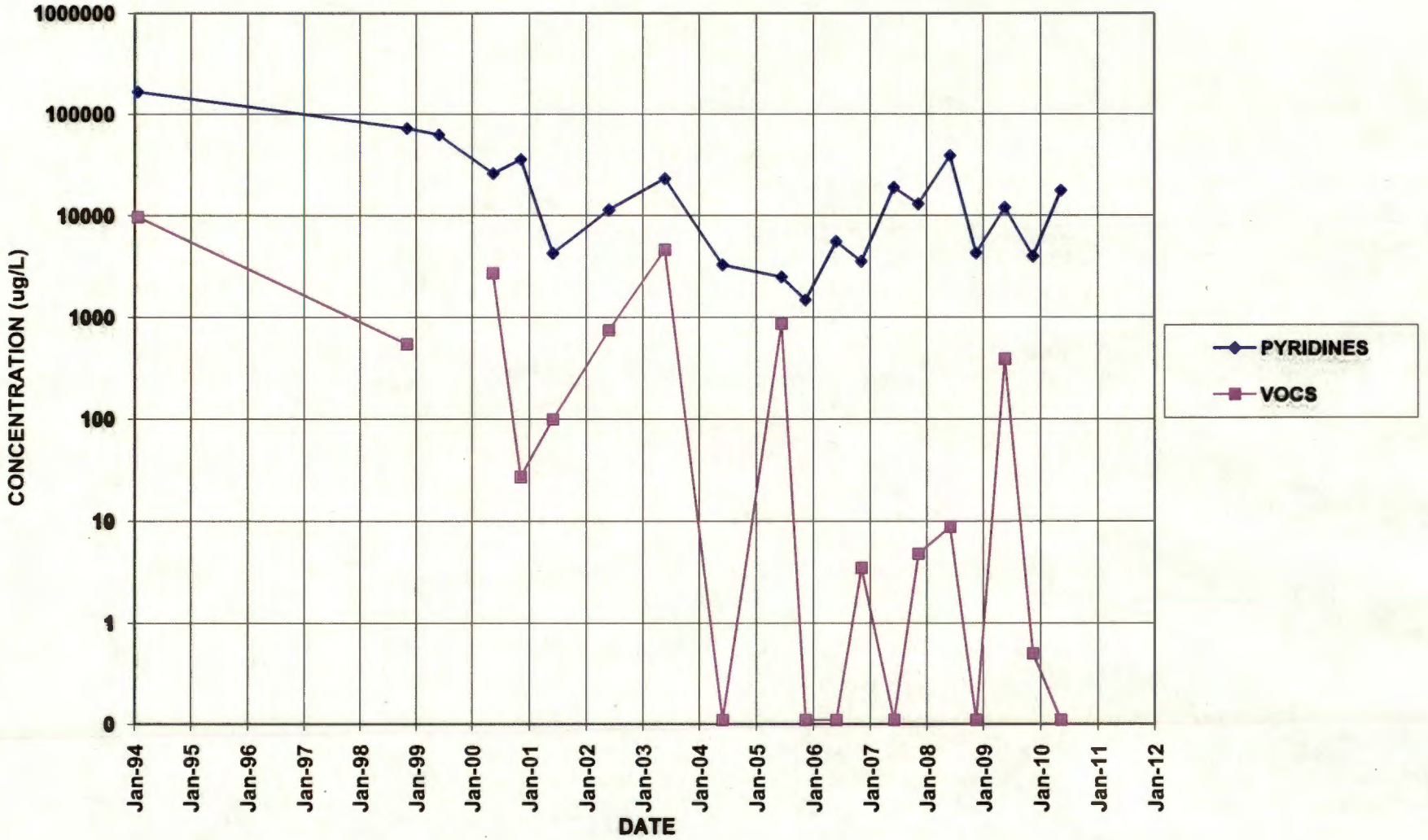
Prepared by: nmb
Reviewed by: jeb

PZ-104



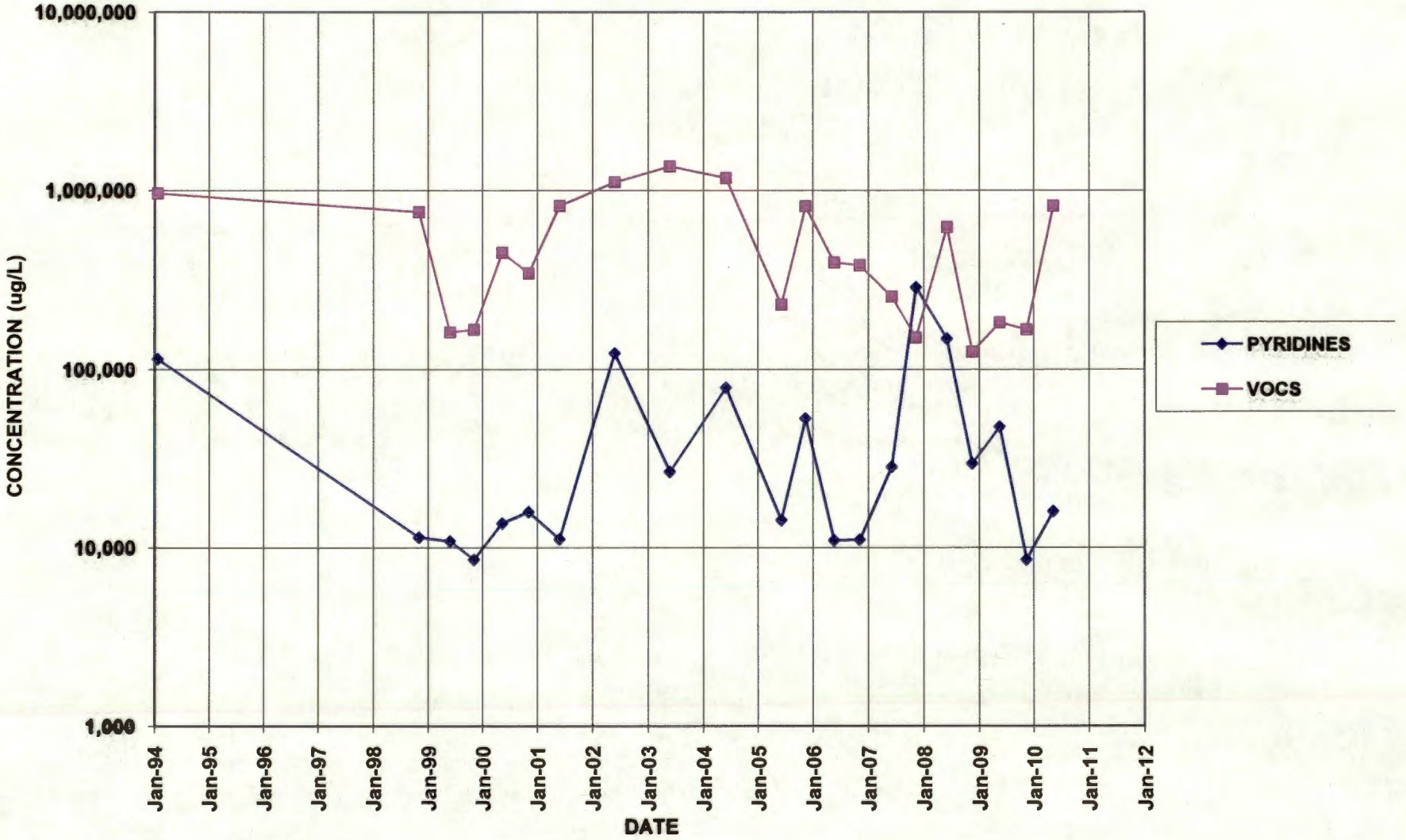
Prepared by: nmb
Reviewed by: jeb

PZ-105



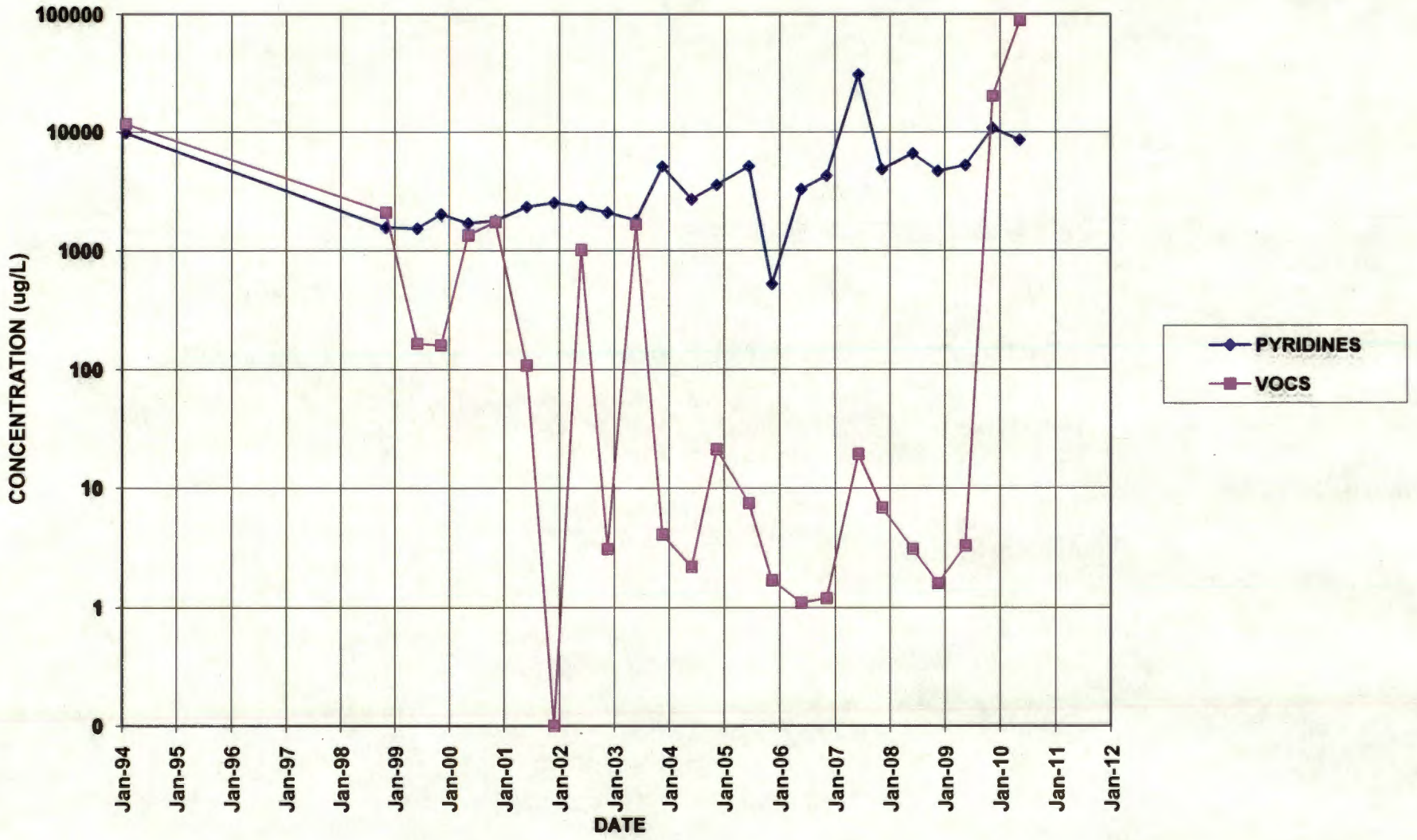
Prepared by: nmb
Reviewed by: jeb

PZ-106



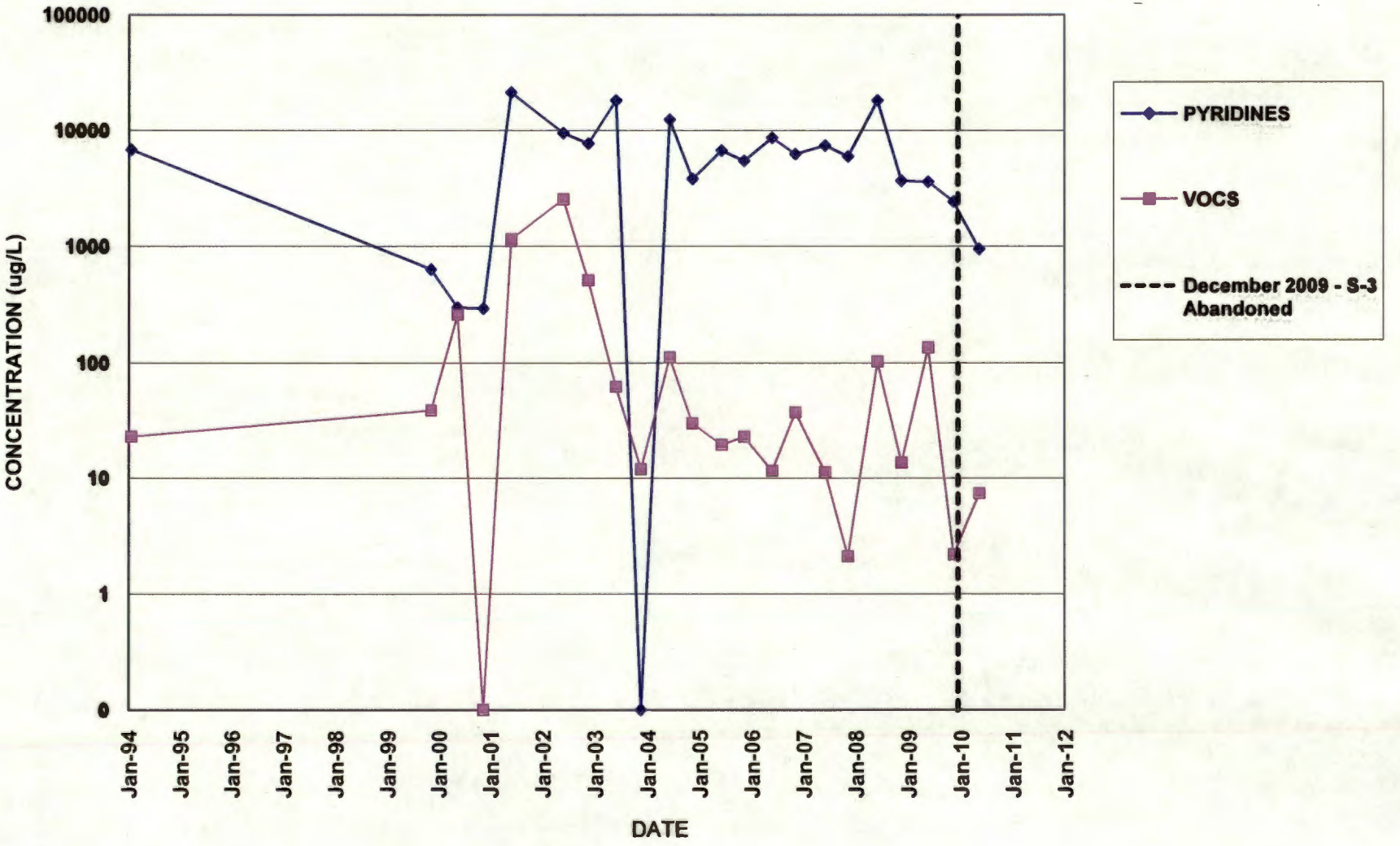
Prepared by: nmb
Reviewed by: jeb

PZ-107



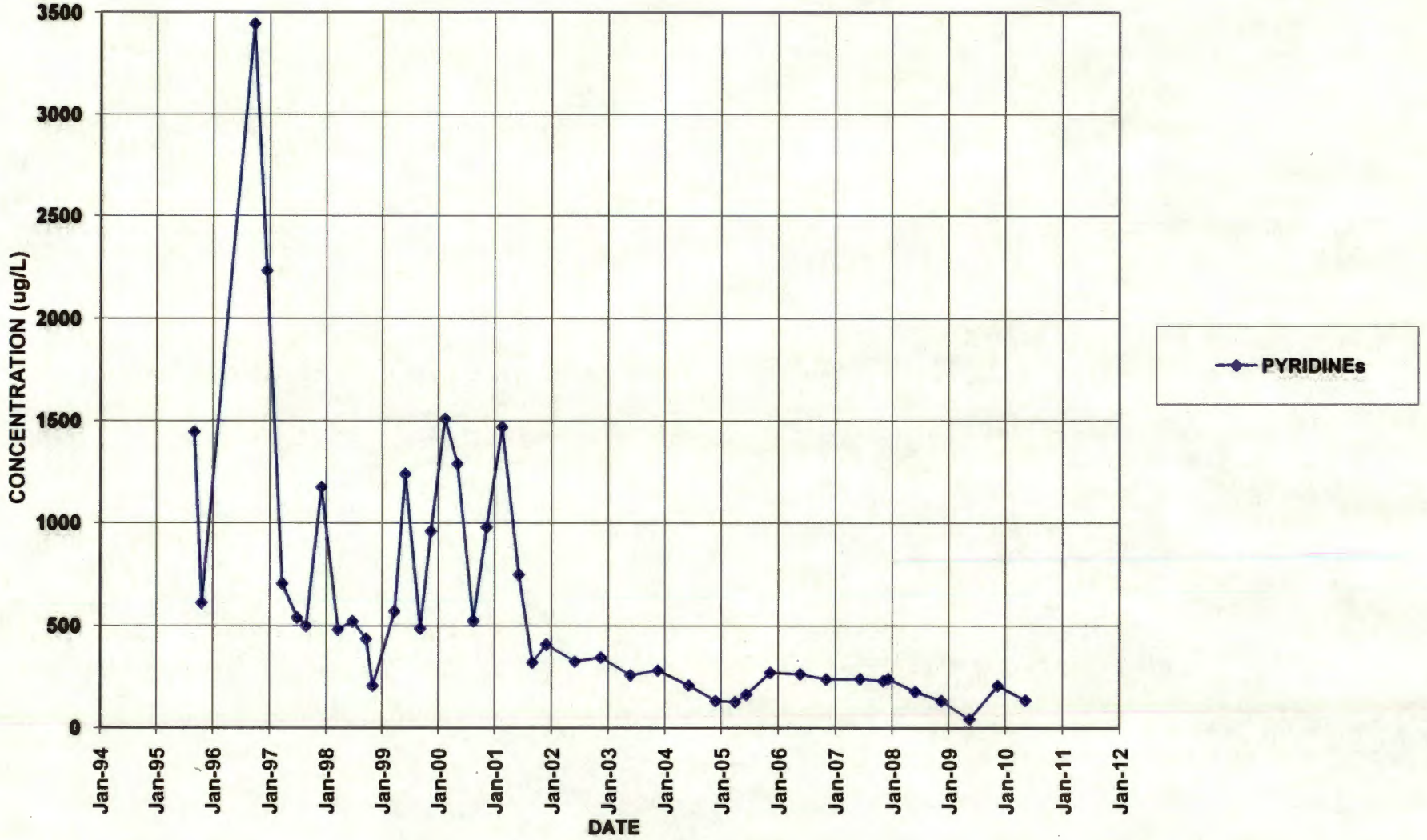
Prepared by: nmb
Reviewed by: jcb

S-3 / B-16
(B-16 replaced S-3 beginning May 2010)



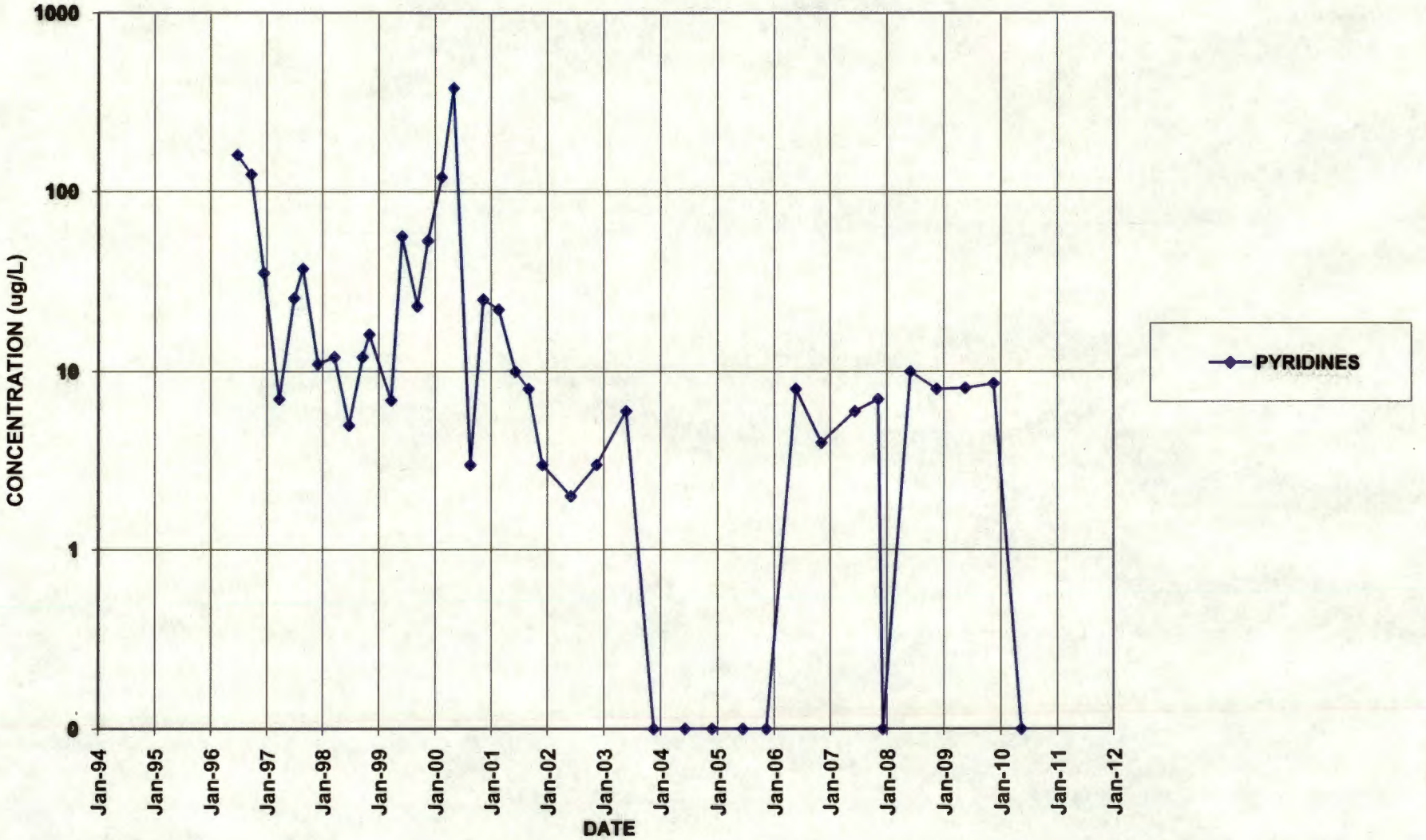
Prepared by: nmb
Reviewed by: jcb

QS-4 (QUARRY SEEP)



Prepared by: amb
Reviewed by: jcb

QO-2 (QUARRY OUTFALL)



Prepared by: nmb
Reviewed by: jeb