Arch Chemicals, Inc.

Rochester, New York (Site #828018a)

Groundwater Monitoring Report 46
Spring 2011

September 2011

SURFACE WATER AND GROUNDWATER MONITORING PROGRAM
SPRING 2011 MONITORING REPORT

ARCH CHEMICALS
ROCHESTER PLANT SITE
ROCHESTER, NEW YORK

ARCH CHEMICALS, INC.
CHARLESTON, TENNESSEE

SEPTEMBER 2011

SURFACE WATER AND GROUNDWATER MONITORING PROGRAM
SPRING 2011 MONITORING REPORT

ARCH CHEMICALS
ROCHESTER PLANT SITE
ROCHESTER, NEW YORK

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September 2011

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

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 June 2011.

During this monitoring event, samples from a total of 48 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. In addition, a sample of Arch's wastewater effluent was collected at the request of the NYSDEC project manager.

As in prior reports, monitoring results were compared with previous average concentrations at each sampling location. Thirty-five of the 48 monitoring wells sampled for chloropyridines had contaminant concentrations that were at or below their respective 5-year prior averages. Twenty-seven of the 35 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 were well below the prior 5-year average for this location. Chloropyridines were not detected at QD-1; however, slightly elevated levels of chloropyridines were detected at QO-2 and QO2-S1 (24 µg/L and 17 µg/L, respectively). Given the results observed at QS-4 and QD-1, the results at QO-2 and QO2-S1 appear anomalous.

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.

The sample of the plant's wastewater effluent contained total chloropyridines at approximately 150,000 µg/L. VOCs were generally low or not detected.

During the period December 2010 through May 2011, the on-site groundwater extraction system pumped approximately 6.9 million gallons of groundwater to the on-site treatment system, containing an estimated 796 pounds of chloropyridines and 27 pounds of target volatile organic compounds. In general, system operation was quite stable throughout the monitoring period.

The next regular monitoring event will occur in November 2011 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 2011 sampling event included the collection and analysis of a total of 52 groundwater, surface water, and seep samples from off-site and on-site locations. Samples were collected June 6 through 15, 2011, for analysis of selected chloropyridines and volatile organic compounds (VOCs). In addition, at the request of the NYSDEC project manager, a sample of the facility's wastewater effluent (Pre-Treatment Plant Effluent) was collected and analyzed for chloropyridines and VOCs.

This report presents the results of the Spring 2011 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.

Groundwater piezometric elevations were measured on June 6, 2011. 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.

At the request of the NYSDEC, a sample of the effluent from the facility's Pre-Treatment Plant (PTP) was collected and analyzed for site-related contaminants of concern. This flow includes treated groundwater as well as process wastewater from various operational areas of the facility. The analytical results for the PTP effluent sample are included in this monitoring report.

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 2011 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.

Laboratory Control Samples. Due to a laboratory spiking error, the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) associated with chloropyridines samples MW-103, BR-103, MW-104, and BR-104 had no recoveries of any target analytes except pyridine. Percent recoveries for pyridine (52, 53) were within control limits. Based on professional judgment, positive and non-detected results for 2,6-dichloropyridine, 2-chloropyridine, 3-chloropyridine, 4-chloropyridine, and p-fluoroaniline were qualified as

estimated (J/UJ) and results for pyridine were reported unqualified in samples MW-103, BR-103, MW-104, and BR-104.

Matrix Spike/Matrix Spike Duplicate. Percent recovery for chlorobenzene (66) in the matrix spike/matrix spike duplicate (MS/MSD) associated with sample PZ-103 was below the laboratory control limits of 72-120, indicating a potential low bias for chlorobenzene. The positive detection of chlorobenzene in sample PZ-103 was qualified as estimated (J) and may represent a potential low bias.

Miscellaneous. Samples from 23 of the wells required dilution prior to analysis due to high concentrations of volatile organic or semivolatile organic target analytes. Non-detects are reported at elevated reporting limits in these samples.

3.0 ANALYTICAL RESULTS

3.1 GROUNDWATER

The validated results from the Spring 2011 groundwater monitoring event are provided in Tables 2 and 3. Table 4 provides a comparison of the Spring 2011 analytical results for selected chloropyridines and VOCs in representative wells to mean concentrations of the prior five years (Spring 2006 through Fall 2010). 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 21 on-site wells sampled in the Spring 2011 event. Concentrations of chloropyridines ranged from 150 micrograms per liter (µg/L) (sum of all chloropyridine and pyridine isomer concentrations) in pumping wells BR-5A and BR-9, to 610,000 µg/L in monitoring well B-17. Ten of the 21 on-site wells exhibited total chloropyridine concentrations that were above their respective means from monitoring events over the previous five years (B-17, BR-3, BR-6A, BR-8, BR-9, BR-127, E-3, PW-10, PW-13, and PW-16). In particular, uncharacteristically elevated levels of chloropyridines were observed in PW-13 and BR-8. This may be due to the influence of new pumping well PW-16, which is likely causing changes in groundwater flow patterns in that general area of the site.

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 12,000 µg/L in well BR-126 located on the American Recycling & Manufacturing property. Three of the 27 off-site wells contained total chloropyridine concentrations above their respective 5-year prior means (BR-126, MW-104, and PZ-102).

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 17 of the 21 on-site wells sampled in the Spring 2011 event. Total concentrations of selected VOCs ranged from not detected (in wells B-7, BR-8, PW-13, and PW-16) to 710,000 µg/L in PZ-106 for the sum of the principal site-related contaminants (carbon tetrachloride, chloroform, methylene chloride, tetrachloroethene, and trichloroethene). Six of the 21 on-site wells (B-17, BR-6A, PW-14, PZ-105, PZ-106, and PZ-107) contained concentrations of total VOCs above their 5-year prior means. At well PZ-107, the pronounced spike in VOC concentrations observed in late 2009 and early 2010 appears to be resolving, as concentrations have now declined significantly in the past two sampling events.

In addition to the selected VOCs, other notable constituents detected in on-site wells include chlorobenzene (in 18 out of 21 wells), toluene (17 of 21), benzene (14 of 21), carbon disulfide (12 of 21), vinyl chloride (8 of 21), total xylenes (7 of 21), ethylbenzene (6 of 21), 1,2-dichloroethene (6 of 21), bromoform (5 of 21), 1,1-dichloroethane (4 of 21), acetone (4 of 21), and 1,2-dichloroethane (2 of 21).

Off-Site. Selected VOCs were detected in five of the 14 off-site wells sampled for VOCs in the Spring 2011 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 27 µg/L (in MW-114). Two of the 14 off-site wells (MW-106 and MW-114) had selected VOC concentrations above their prior 5-year means. In addition to the selected VOCs, other notable constituents detected in off-site wells include benzene (in 9 out of 14 wells), chlorobenzene (6 of 14), 1,2-dichloroethene (5 of 14), vinyl chloride (3 of 14), toluene (2 of 14), and 1,1-dichloroethane (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 2011 canal and quarry monitoring event are presented in Table 5, and summarized below.

3.2.1 Quarry

One quarry seep (QS-4) was sampled in the Spring 2011 monitoring event. The sample contained 77 µg/L total chloropyridines, which is below the typical range of concentrations observed at this location in the recent past.

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. No chloropyridines were detected in the sample from QD-1. Chloropyridine-related compounds were detected in the sample at QO-2, at an uncharacteristically elevated total concentration of 24 µg/L.

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 also detected in this sample at an elevated total concentration, reported by the laboratory as 17 µg/L. Given the low concentration of chloropyridines in the quarry seep sample, and that the compounds were not detected in sample QD-1, the reported concentrations in samples QO-2 and QO-2S1 appear anomalous.

3.3 PRE-TREATMENT PLANT EFFLUENT

At the request of the NYSDEC project manager, Arch collected a sample of the plant's wastewater effluent. The sample was analyzed for chloropyridines and VOCs. The results are included in Tables 2 and 3, respectively. Total chloropyridines were measured at approximately 150,000 µg/L. VOCs were generally below detection limits, with the exception of chloroform at 33 µg/L and acetone at 150 µg/L.

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 2010 through May 2011. The total volume pumped during the six-month period was approximately 6.9 million gallons. In general, system operation was quite stable throughout the monitoring period.

Table 7 provides a calculation of mass removal rates since the previous groundwater monitoring event (i.e., from December 2010 through May 2011). Arch estimates that approximately 27 pounds of target VOCs and 796 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.

Maintenance activity during this reporting period included pump and/or meter repairs at wells PW-15 and PW-16. New well enclosures were installed at wells BR-5A, BR-7A, and BR-9.

5.0 NEXT MONITORING EVENT

The next regular monitoring event will occur in November 2011 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

ERIE BARGE CANAL

I-390

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.

DOLOMITE PRODUCTS QUARRY

9-6

10-6

RW-1

13-4

Morey

OW-102A

OW-103

BR-122D

PFAUDLER

BR-117/BR-117D

BR-121D (Abandoned)

BR-118/BR-118D

BR-123D

BR-116/BR-116D

BR-120D (Abandoned)

BR-119D (Abandoned)

LETTINGTON DRIVE

BR-124D

Figure 1
Off-Site Groundwater Monitoring Well Locations

Arch Chemicals
Rochester, NY
MACTEC, Inc.

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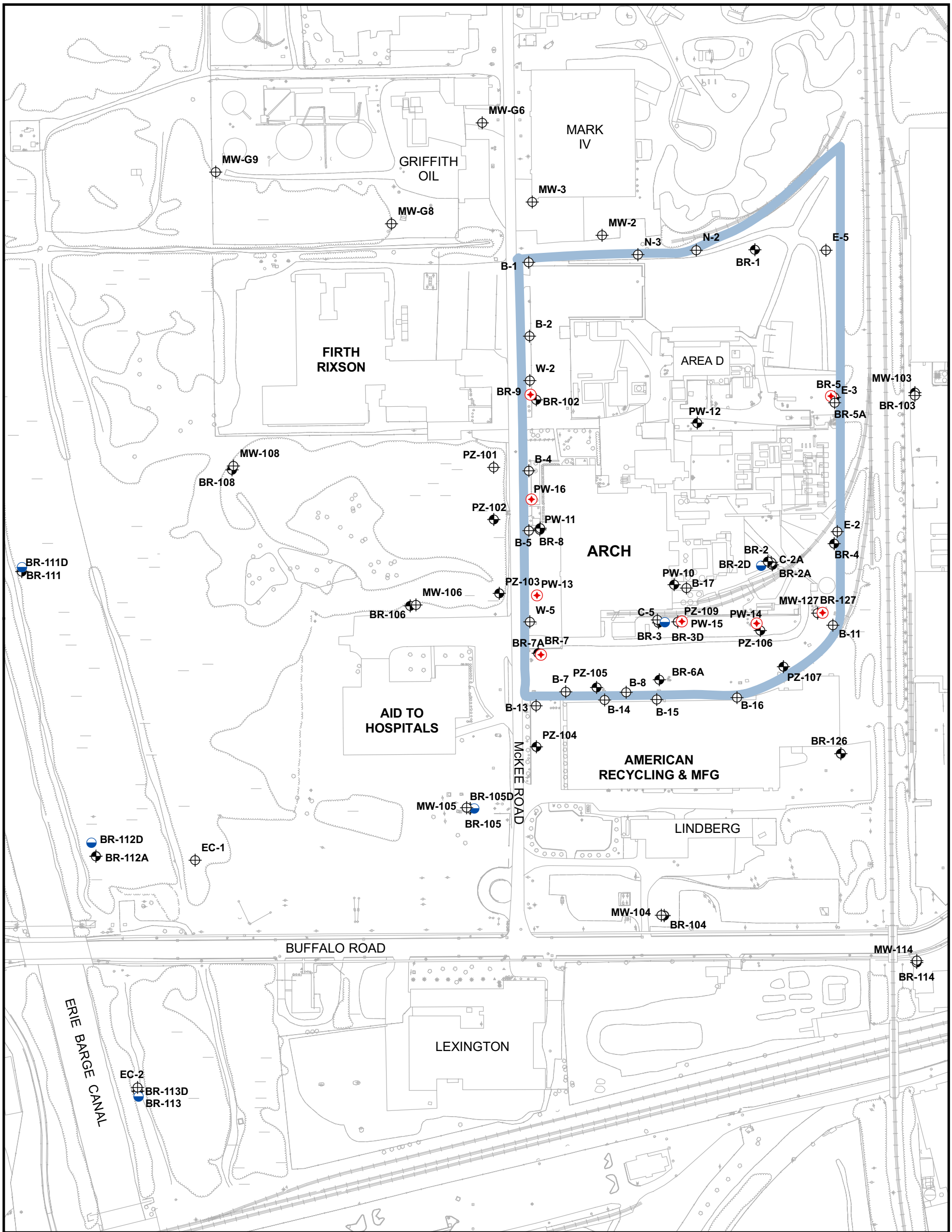

NOTES:

1. Off-Site Well Locations also Included on Figure 1

N

0 100 200 400 Feet

Legend

- Outline of Arch Property Boundary
- Active Pumping Well
- Overburden Monitoring Well
- Bedrock Monitoring Well
- Deep Bedrock Monitoring Well

Figure 2
Onsite Monitoring Well Locations

Arch Chemicals
Rochester, NY
MACTEC, Inc.

Prepared by JEB	Checked by NMB

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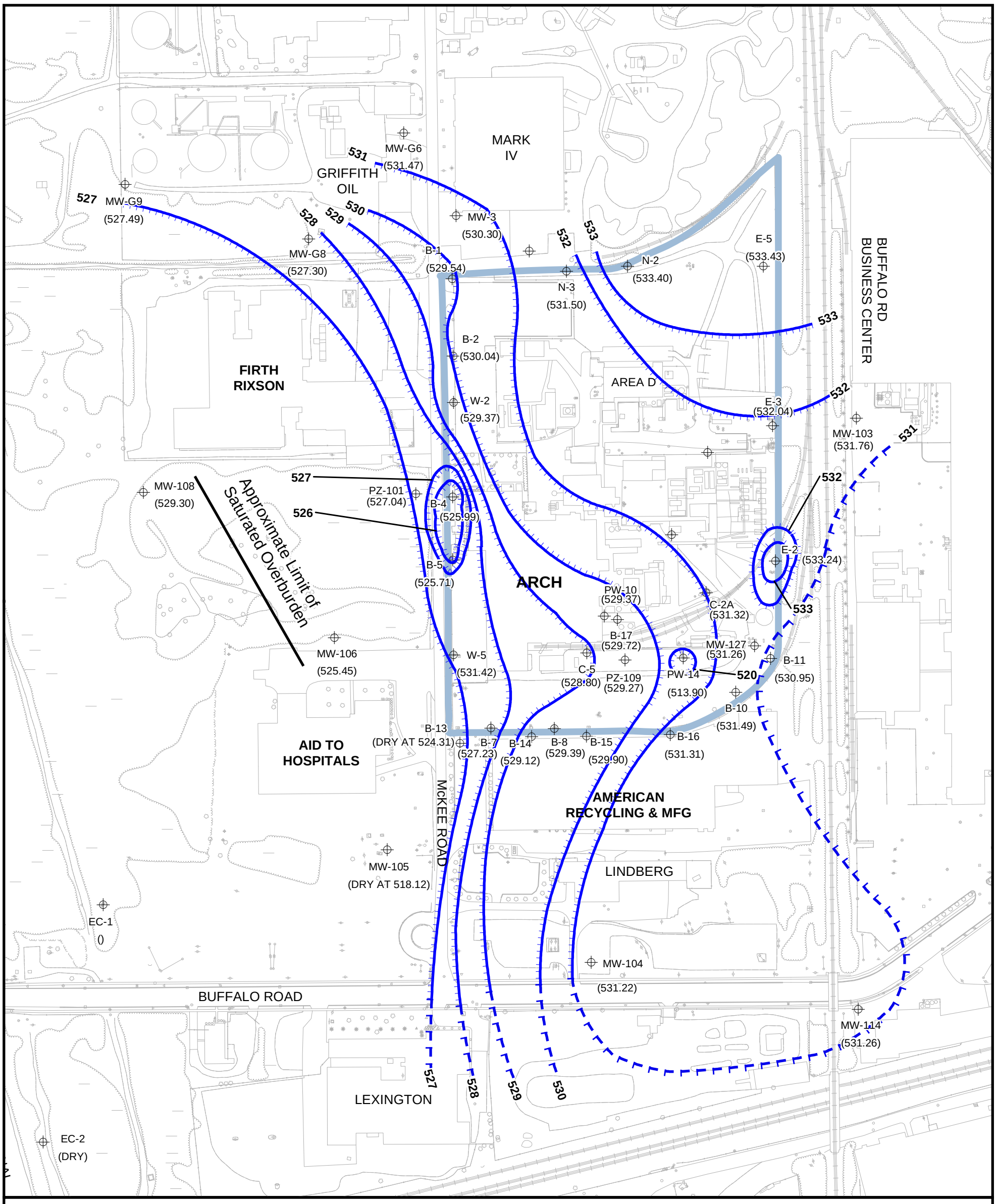

Legend

- Outline of Arch Property Boundary
- 528 — Overburden Piezometric Elevation Contour (MSL)
- Interpreted Groundwater Flow Direction
- MW-114 (531.26) — Piezometric Elevation at Well or Piezometer

N

Figure 3
Spring 2011
Overburden Groundwater
Interpreted Piezometric Contours

Arch Chemicals
Rochester, NY
MACTEC, Inc.

NOTES:

1. Water Levels Measured on June 6, 2011
2. NA = Not Available
3. Dashed Contours Reflect Uncertainty

0 100 200 400 Feet

Prepared by DBW | Checked by NMB

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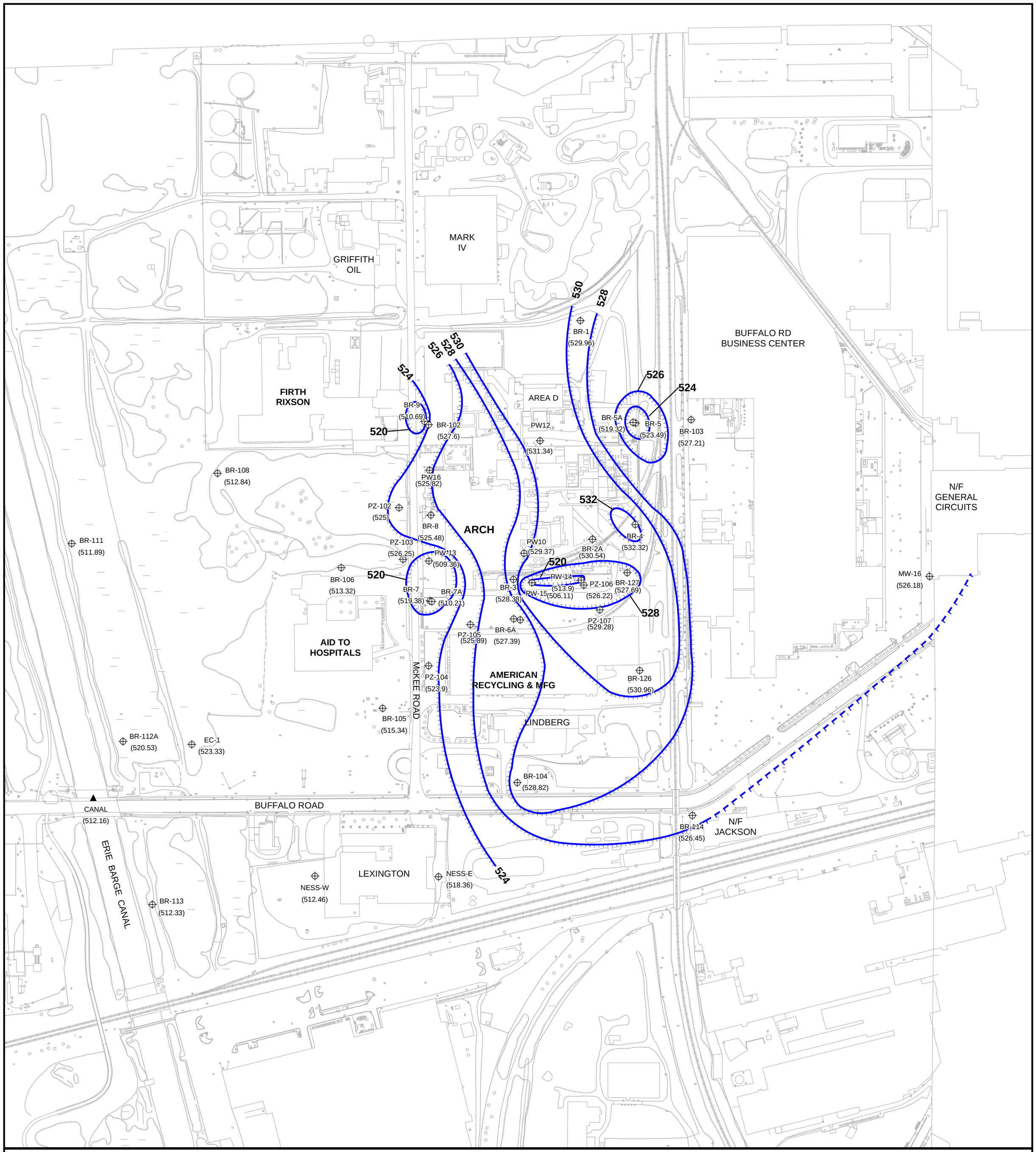

NOTES:

1. Water Levels Measured on June 6, 2011
2. Dashed Contours Reflect Uncertainty
3. NA = Not Available

Legend

- BR-112A (520.53) — Piezometric Elevation at Well or Piezometer (Feet MSL)
- CANAL (512.16) — Piezometric Elevation at Surface Water Measuring Point
- Interpreted Groundwater Flow Direction
- 530 — Bedrock Piezometric Elevation Contour (MSL)

Prepared by DBW | Checked by NMB

Figure 4
Spring 2011
Bedrock 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 June 6, 2011
2. Dashed Contours Reflect Uncertainty

N

0 250 500 1,000 Feet

Prepared by DBW | Checked by NMB

ERIE BARGE CANAL
I-390
BUFFALO ROAD
FIRTH RIXSON
BUFFALO RD. BUSINESS CENTER
ARCH
AID TO HOSPITALS
ARM
CUMBERLAND FARMS PETROLEUM TERMINAL
LEXINGTON
GENERAL RAIL SIGNAL CO.
PFAUDLER
DOLOMITE PRODUCTS QUARRY
LETTINGTON DRIVE

BR-9
BR-103
BR-108
BR-111D (511.66)
BR-111
BR-106
BR-3D (480.54)
BR-112D (511.92)
BR-112
BR-105
BR-105D (511.41)
BR-104
BR-114
BR-113
BR-113D (511.88)
BR-122D (507.55)
BR-117D (498.73)
BR-117
BR-118
BR-118D (500.6)
BR-116D (510.06)
BR-116
BR-123D (508.68)
BR-124D (506.67)

498 500 502 504 506 508 510

Figure 5
Spring 2011
Deep Bedrock Groundwater
Interpreted Piezometric Contours

Arch Chemicals
Rochester, NY
MACTEC, Inc.

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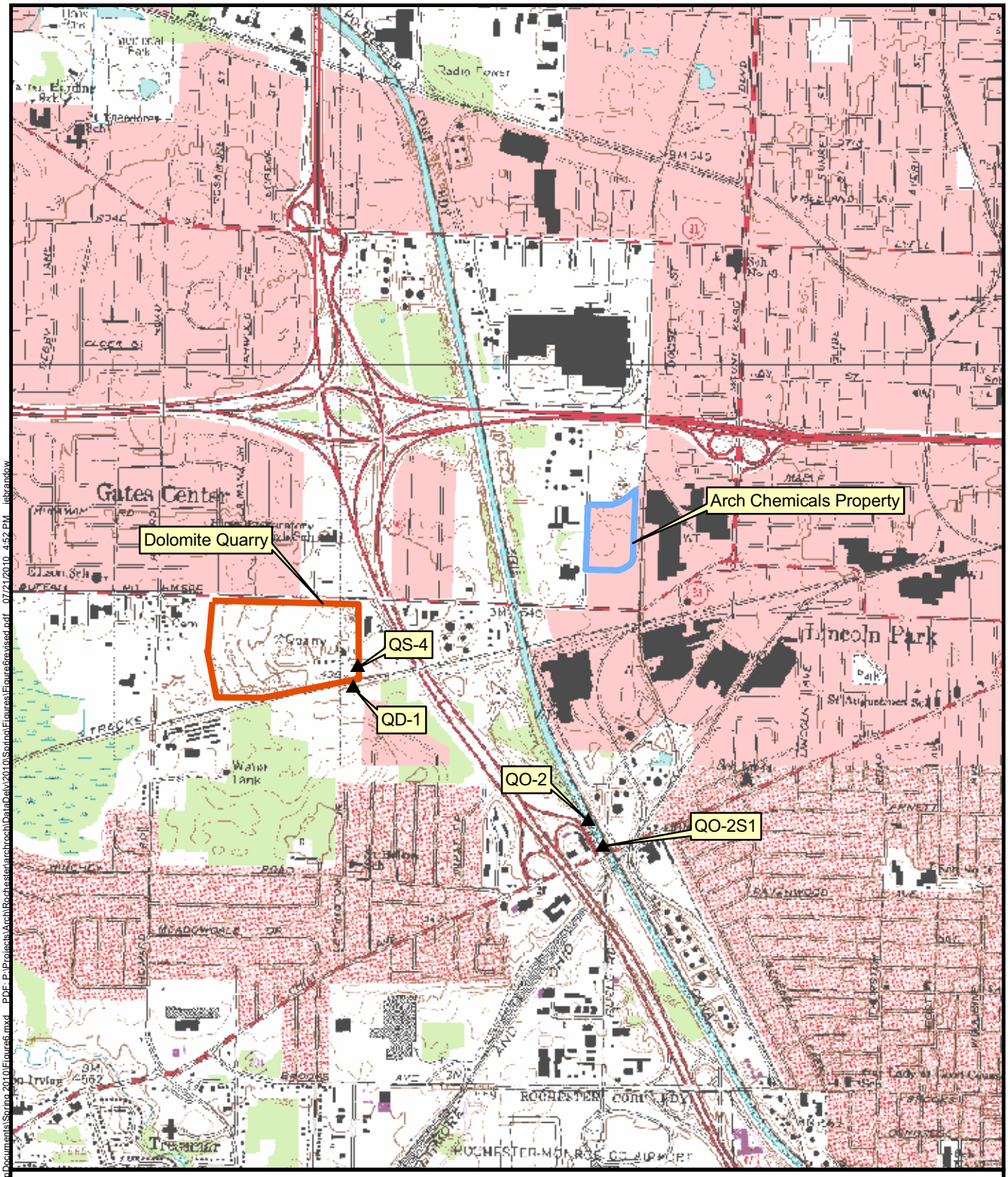

Source:
1:24,000 scale digital topographic map
obtained from New York State GIS
Clearinghouse at: www.nysgis.state.ny.us

N

0 1,000 2,000 Feet

Legend

- Arch Property Boundary
- Dolomite Quarry Boundary
- ▲ Surface Water Sample Location

Figure 6
Sample Locations
Erie Barge Canal

Arch Chemicals
Rochester, New York
MACTEC, Inc.

Prepared by JEB | Checked by NMB

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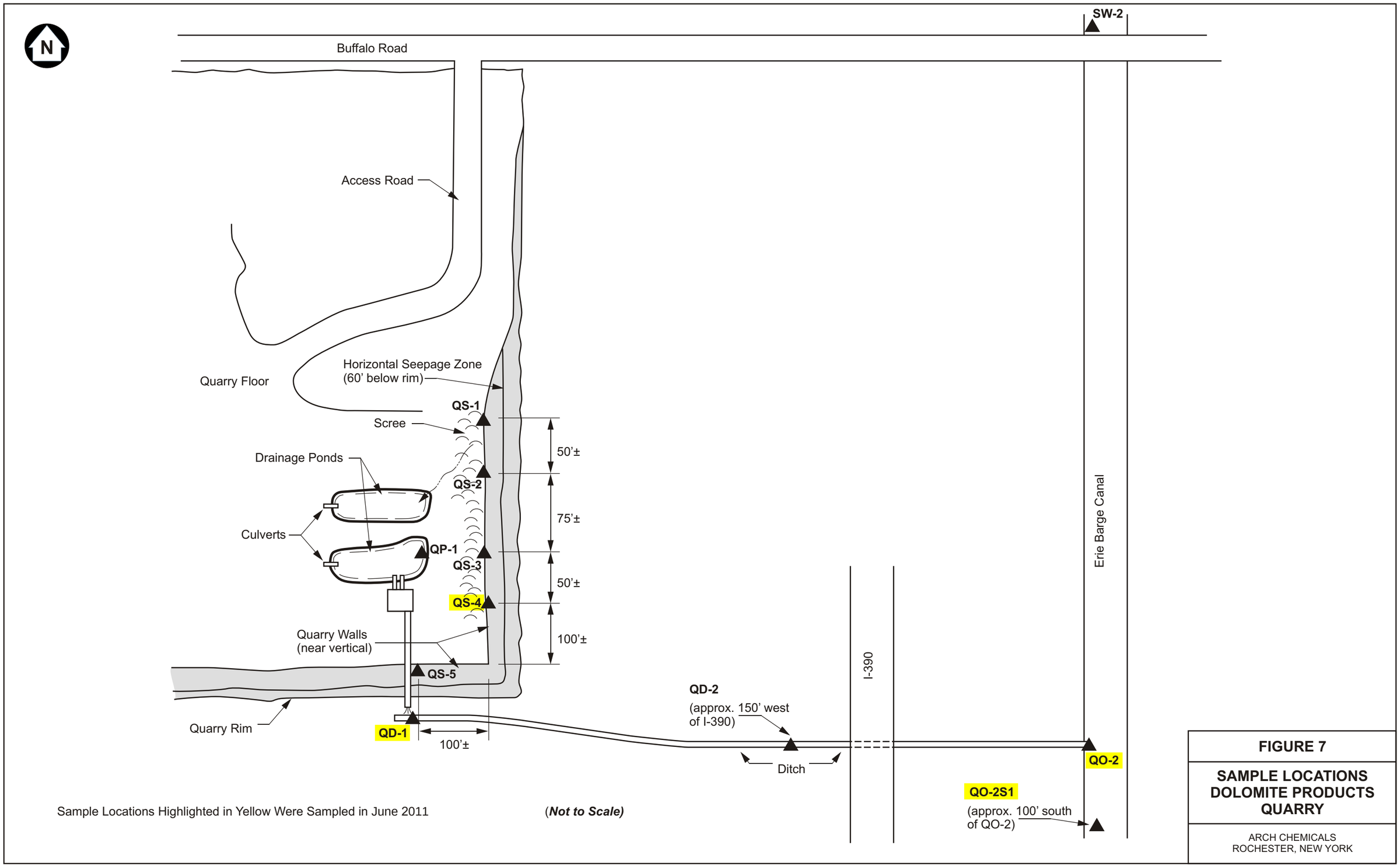

Sample Locations Highlighted in Yellow Were Sampled in June 2011

(***Not to Scale)***

FIGURE 7

SAMPLE LOCATIONS
DOLOMITE PRODUCTS QUARRY

ARCH CHEMICALS
ROCHESTER, NEW YORK

W2004030a.cdr

MARK IV

GRIFFITH OIL

BUFFALO RD BUSINESS CENTER

FIRTH RIXSON

AREA D

BR-9 150

BR-5A 150

BR-103 ND

MW-103 (1.1)

BR-102 NS

E-3 (260)

PW12 2300

MW-108 (NS)

BR-108 3.1

PZ-101 (12)

PW16 24000

100,000

N/F GENERAL CIRCUITS

PZ-102 2200

PW11 NS

BR-8 120000

ARCH

10,000

100,000

BR-111D {NS}

B-17 (61000)

PZ-103 1500

BR-106 3100

PW13 7200

PW10 89000

PW-14 4700

BR-127 12000

MW-127 (380)

MW-106 (1600)

MW-16 NS

BR-3 76000

PW-15 110000

PZ-106 48000

B-11 (650)

BR-7A 10000

PZ-107 7000

B-7 (450)

PZ-105 7900

BR-6A 12000

B-16 (300)

AID TO HOSPITALS

BR-126 12000

PZ-104 830

AMERICAN RECYCLING & MFG

MW-126 (NS)

McKEE ROAD

BR-105 380

BR-105D {250}

LINDBERG

BR-112D {37}

MW-104 (3.4)

BR-104 3.5

MW-114 (ND)

BUFFALO ROAD

BR-114 25

N/F JACKSON

ERIE BARGE CANAL

NESS-W ND

LEXINGTON

NESS-E 23

BR-113D {20}

Legend

- Outline of Arch Property Boundary
- 100 — Chloropyridine Concentration Contour
- BR-105 380 — Monitoring Location with Concentration

{1000}	Deep Bedrock Well
(1000)	Overburden Well
1000	Bedrock Well
NS	Not Sampled
ND	Not Detected

0 100 200 400 Feet

N

Prepared by DBW | Checked by NMB

NOTES:

1. Samples Collected June, 2011
2. Selected Chloropyridines consist of 2,6-Dichloropyridine, 2-Chloropyridine, 3-Chloropyridine, 4-Chloropyridine, and P-Fluoroaniline.
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 8
Spring 2011
Selected Chloropyridine Concentration Contours

Arch Chemicals
Rochester, NY
MACTEC, Inc.

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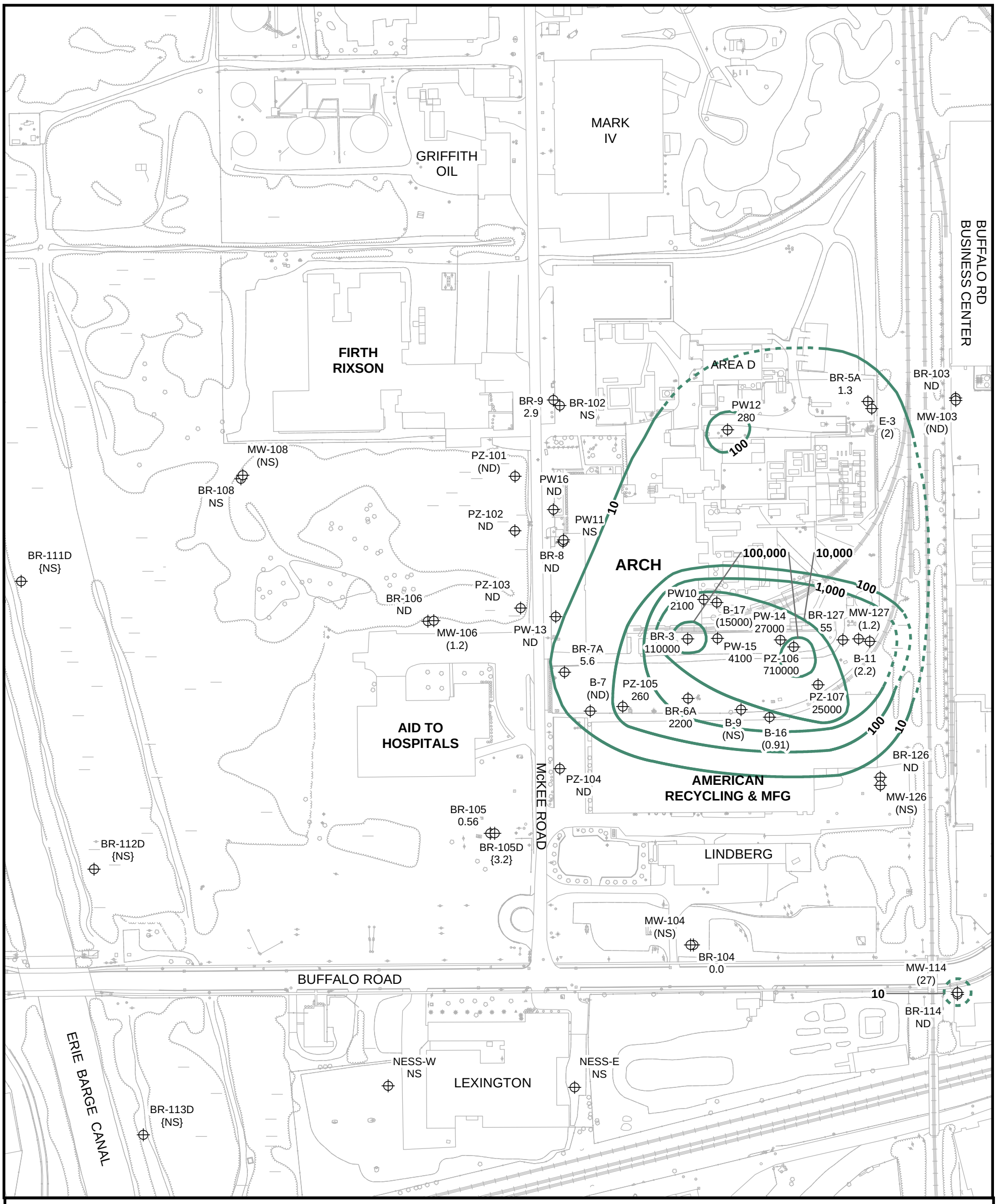

Legend

- Outline of Arch Property Boundary
- 100 — VOC Concentration Contour
- BR-105D {3.2} — Monitoring Location with Concentration

{1000}	Deep Bedrock Well
(1000)	Overburden Well
1000	Bedrock Well
NS	Not Sampled
ND	Not Detected

0 100 200 Feet

N

Prepared by DBW | Checked by NMB

NOTES:

1. Samples Collected in June, 2011
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 2011
Selected Volatile Organic Compound Concentration Contours

Arch Chemicals
Rochester, NY
MACTEC, Inc.

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Tables

TABLE 1
SPRING 2011 GROUNDWATER SAMPLING AND ANALYTICAL PROGRAM

ARCH CHEMICALS, INC
ROCHESTER, NEW YORK

			ANALYSIS	PYRIDINES	VOCs
SITE / AREA	**WELL / POINT**	**DATE**	**QC TYPE**		
AID TO HOSPITALS	BR-106	6/13/2011	Sample	X	X
	BR-108	6/13/2011	Sample	X	
	MW-106	6/13/2011	Sample	X	X
	PZ-101	6/13/2011	Sample	X	X
	PZ-102	6/13/2011	Sample	X	X
	PZ-103	6/13/2011	Sample	X	X
AMERICAN RECYCLING & MANUF. (58 MCKEE ROAD)	B-16	6/14/2011	Sample	X	X
	BR-126	6/14/2011	Sample	X	X
	PZ-104	6/13/2011	Sample	X	X
ARCH ROCHESTER	B-11	6/7/2011	Sample	X	X
	B-17	6/9/2011	Sample	X	X
	B-7	6/10/2011	Sample	X	X
	BR-127	6/10/2011	Sample	X	X
	BR-3	6/9/2011	Sample	X	X
	BR-5A	6/10/2011	Sample	X	X
	BR-6A	6/9/2011	Sample	X	X
	BR-7A	6/10/2011	Sample	X	X
	BR-8	6/7/2011	Sample	X	X
	BR-9	6/10/2011	Sample	X	X
	E-3	6/7/2011	Sample	X	X
	MW-127	6/7/2011	Sample	X	X
	PTP-EFF	6/10/2011	Sample	X	X
	PW10	6/9/2011	Sample	X	X
	PW12	6/7/2011	Duplicate	X	X
	PW12	6/7/2011	Sample	X	X
	PW13	6/10/2011	Sample	X	X
	PW14	6/10/2011	Sample	X	X
	PW15	6/10/2011	Sample	X	X
	PW16	6/7/2011	Sample	X	X
	PZ-105	6/9/2011	Sample	X	X
	PZ-106	6/9/2011	Sample	X	X
	PZ-107	6/7/2011	Sample	X	X
DOLOMITE PRODUCTS, INC.	BR-117D	6/6/2011	Sample	X	
	BR-118D	6/6/2011	Sample	X	
	QD-1	6/6/2011	Sample	X	
	QS-4	6/6/2011	Sample	X	
EASTMAN KODAK (FORMERLY GERBER PROPERTY)	BR-103	6/15/2011	Sample	X	X
	MW-103	6/15/2011	Sample	X	X
ERIE BARGE CANAL (Samples in canal or property along canal)	BR-112D	6/14/2011	Sample	X	
	BR-113D	6/14/2011	Sample	X	
	BR-122D	6/7/2011	Sample	X	
	BR-123D	6/7/2011	Sample	X	
	QO-2	6/6/2011	Sample	X	
	QO-2S1	6/6/2011	Sample	X	
JACKSON WELDING	BR-114	6/14/2011	Sample	X	X
	MW-114	6/14/2011	Sample	X	X
LEXINGTON MACHINING (Formerly Ness Precision Products)	NESS-E	6/14/2011	Sample	X	
	NESS-W	6/14/2011	Sample	X	
PFAUDLER, INC.	BR-116	6/7/2011	Sample	X	
	BR-116D	6/7/2011	Sample	X	
RG & E RIGHT OF WAY	BR-104	6/15/2011	Sample	X	
	BR-105	6/13/2011	Sample	X	X
	BR-105D	6/13/2011	Sample	X	X
	MW-104	6/15/2011	Sample	X	

TABLE 2
SPRING 2011 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
SAMPLE DATE:	6/7/2011	6/14/2011	6/9/2011	6/10/2011	6/15/2011	6/15/2011	6/13/2011	6/13/2011
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)								
2,6-Dichloropyridine	330	290	30000	220	9.5 UJ	9.5 UJ	58 J	27 J
2-Chloropyridine	330	12	510000	230	9.5 UJ	3.5 J	320	220
3-Chloropyridine	48 U	9.4 U	5800 J	50 U	9.5 UJ	9.5 UJ	100 U	50 U
4-Chloropyridine	48 U	9.4 U	10000 U	50 U	9.5 UJ	9.5 UJ	100 U	50 U
p-Fluoroaniline	48 U	9.4 U	10000 U	50 U	9.5 UJ	9.5 UJ	100 U	50 U
Pyridine	120 U	24 U	66000	130 U	24 U	24 U	250 U	130 U

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

TABLE 2
SPRING 2011 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-106	BR-108	BR-112D	BR-113D	BR-114	BR-116	BR-116D	BR-117D
SAMPLE DATE:	6/13/2011	6/13/2011	6/14/2011	6/14/2011	6/14/2011	6/7/2011	6/7/2011	6/6/2011
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)								
2,6-Dichloropyridine	650	9.4 U	3.2 J	2.1 J	7.9 J	9.8 U	4.2 J	9.4 U
2-Chloropyridine	2400	3.1 J	34	18	17	9.8 U	28	2.2 J
3-Chloropyridine	200 U	9.4 U	9.4 U	9.4 U	9.4 U	9.8 U	9.4 U	9.4 U
4-Chloropyridine	200 U	9.4 U	9.4 U	9.4 U	9.4 U	9.8 U	9.4 U	9.4 U
p-Fluoroaniline	58 J	9.4 U	9.4 U	9.4 U	9.4 U	9.8 U	9.4 U	9.4 U
Pyridine	500 U	24 U	24 U	24 U	24 U	25 U	24 U	24 U

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

TABLE 2
SPRING 2011 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-118D	BR-122D	BR-123D	BR-126	BR-127	BR-3	BR-5A	BR-6A
SAMPLE DATE:	6/6/2011	6/7/2011	6/7/2011	6/14/2011	6/10/2011	6/9/2011	6/10/2011	6/9/2011
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)								
2,6-Dichloropyridine	2.8 J	12 J	4.5 J	3200	930 J	6700	20	1700
2-Chloropyridine	38	74	32	8300	11000	60000	110	10000
3-Chloropyridine	9.4 U	48 U	9.5 U	500 U	260 J	3500	9.5 U	290 J
4-Chloropyridine	9.4 U	48 U	9.5 U	500 U	1300 U	1000 U	9.5 U	1000 U
p-Fluoroaniline	9.4 U	48 U	9.5 U	500 U	1300 U	140 J	14	1000 U
Pyridine	1.8 J	120 U	24 U	1300 U	3100 U	5200	1.5 J	2500 U

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

TABLE 2
SPRING 2011 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-7A	BR-8	BR-9	E-3	MW-103	MW-104	MW-106	MW-114
SAMPLE DATE:	6/10/2011	6/7/2011	6/10/2011	6/7/2011	6/15/2011	6/15/2011	6/13/2011	6/14/2011
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)								
2,6-Dichloropyridine	1200	14000	18	45 J	9.4 UJ	9.5 UJ	440	9.4 U
2-Chloropyridine	9100	110000	130	210	9.4 UJ	3.4 J	1100	9.4 U
3-Chloropyridine	1000 U	2400 U	9.4 U	47 U	9.4 UJ	9.5 UJ	100 U	9.4 U
4-Chloropyridine	1000 U	2400 U	9.4 U	47 U	9.4 UJ	9.5 UJ	100 U	9.4 U
p-Fluoroaniline	1000 U	2400 U	1.4 J	47 U	1.1 J	9.5 UJ	35 J	9.4 U
Pyridine	2500 U	5900 U	24 U	120 U	24 U	24 U	250 U	24 U

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

TABLE 2
SPRING 2011 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	MW-127	NESS-E	NESS-W	PTP-EFF	PW10	PW12	PW12	PW13
SAMPLE DATE:	6/7/2011	6/14/2011	6/14/2011	6/10/2011	6/9/2011	6/7/2011	6/7/2011	6/10/2011
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Duplicate	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)								
2,6-Dichloropyridine	190 J	3.5 J	9.4 U	13000	28000	360	380	670 J
2-Chloropyridine	190 J	18	9.4 U	110000	57000	710	660	6500
3-Chloropyridine	250 U	9.4 U	9.4 U	30000	2100 J	100 U	100 U	1000 U
4-Chloropyridine	250 U	9.4 U	9.4 U	9500 U	10000 U	100 U	100 U	1000 U
p-Fluoroaniline	250 U	9.4 U	9.4 U	9500 U	10000 U	79 J	70 J	1000 U
Pyridine	630 U	1.1 J	24 U	24000 U	1900 J	250 U	250 U	2500 U

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

TABLE 2
SPRING 2011 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PW14	PW15	PW16	PZ-101	PZ-102	PZ-103	PZ-104	PZ-105
SAMPLE DATE:	6/10/2011	6/10/2011	6/7/2011	6/13/2011	6/13/2011	6/13/2011	6/13/2011	6/9/2011
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)								
2,6-Dichloropyridine	820	5900	2500	8.2 J	490	440	150	940
2-Chloropyridine	3600	100000	21000	3.3 J	1700	990	630	6900
3-Chloropyridine	230 J	1800 J	100	9.4 U	250 U	50 J	28 J	500 U
4-Chloropyridine	250 U	5000 U	9.6 U	9.4 U	250 U	100 U	100 U	500 U
p-Fluoroaniline	250 U	5000 U	63	9.4 U	45 J	62 J	26 J	44 J
Pyridine	52 J	6700 J	1.4 J	24 U	630 U	250 U	250 U	1300 U

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

TABLE 2
SPRING 2011 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PZ-106	PZ-107
SAMPLE DATE:	6/9/2011	6/7/2011
QC TYPE:	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)		
2,6-Dichloropyridine	9500	840 J
2-Chloropyridine	38000	6000
3-Chloropyridine	5000 U	1000 U
4-Chloropyridine	5000 U	1000 U
p-Fluoroaniline	5000 U	1000 U
Pyridine	13000 U	110 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
SAMPLE DATE:	6/7/2011	6/14/2011	6/9/2011	6/10/2011	6/15/2011	6/13/2011	6/13/2011
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)							
1,1,1-Trichloroethane	5 U	5 U	100 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U	100 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5 U	5 U	100 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	100 U	5 U	5 U	0.64 J	2.5 J
1,1-Dichloroethene	5 U	5 U	100 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	5 U	5 U	100 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5 U	5 U	100 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	10 U	10 U	200 U	10 U	1.4 J	56	8.6 J
1,2-Dichloropropane	5 U	5 U	100 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	5 U	5 U	100 U	5 U	5 U	5 U	5 U
2-Butanone	25 U	25 U	1000 U	25 U	25 U	25 U	25 U
2-Hexanone	25 U	25 U	500 U	25 U	25 U	25 U	25 U
4-Methyl-2-pentanone	25 U	25 U	500 U	25 U	25 U	25 U	25 U
Acetone	25 U	25 U	1000 U	25 U	25 U	25 U	25 U
Benzene	5 U	5 U	130	0.62 J	5 U	1.6 J	5.3
Bromodichloromethane	5 U	5 U	100 U	5 U	5 U	5 U	5 U
Bromoform	5 U	5 U	100 U	5 U	5 U	5 U	5 U
Bromomethane	5 U	5 U	100 U	5 U	5 U	5 U	5 U
Carbon disulfide	5 U	5 U	320	5 U	5 U	5 U	5 U
Carbon tetrachloride	5 U	5 U	6600	5 U	5 U	5 U	5 U
Chlorobenzene	10	5 U	390	8.1	5 U	5.2	5 U
Chlorodibromomethane	5 U	5 U	100 U	5 U	5 U	5 U	5 U
Chloroethane	5 U	5 U	100 U	5 U	5 U	5 U	5 U
Chloroform	1.4 J	0.91 J	4600	5 U	5 U	5 U	2.2 J
Chloromethane	5 U	5 U	100 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	5 U	5 U	100 U	5 U	5 U	5 U	5 U
Ethyl benzene	0.78 J	5 U	100 U	5 U	5 U	5 U	5 U
Methylene chloride	5 U	5 U	49 J	5 U	5 U	5 U	1 J
Styrene	5 U	5 U	100 U	5 U	5 U	5 U	5 U
Tetrachloroethene	0.77 J	5 U	3600	5 U	5 U	5 U	5 U
Toluene	11	5 U	100	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	5 U	5 U	100 U	5 U	5 U	5 U	5 U
Trichloroethene	5 U	5 U	100 U	5 U	5 U	0.56 J	5 U
Vinyl acetate	25 U	25 U	500 U	25 U	25 U	25 U	25 U
Vinyl chloride	5 U	5 U	100 U	5 U	8	18	1.7 J
Xylenes, Total	4.7 J	15 U	200 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:	BR-106	BR-114	BR-126	BR-127	BR-3	BR-5A	BR-6A
SAMPLE DATE:	6/13/2011	6/14/2011	6/14/2011	6/10/2011	6/9/2011	6/10/2011	6/9/2011
QC TYPE:	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	5 U	100 U	5 U	20 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	5 U	100 U	5 U	20 U
1,1,2-Trichloroethane	5 U	5 U	5 U	5 U	100 U	5 U	20 U
1,1-Dichloroethane	5 U	5 U	5 U	5 U	100 U	5 U	20 U
1,1-Dichloroethene	5 U	5 U	5 U	5 U	100 U	5 U	20 U
1,2,4-Trimethylbenzene	5 U	5 U	5 U	5 U	100 U	5 U	20 U
1,2-Dichloroethane	5 U	5 U	5 U	5 U	100 U	5 U	20 U
1,2-Dichloroethene (total)	10 U	0.81 J	10 U	9 J	200 U	8 J	40 U
1,2-Dichloropropane	5 U	5 U	5 U	5 U	100 U	5 U	20 U
1,3,5-Trimethylbenzene	5 U	5 U	5 U	5 U	100 U	5 U	20 U
2-Butanone	25 U	25 U	25 U	25 U	1000 U	25 U	200 U
2-Hexanone	25 U	25 U	25 U	25 U	500 U	25 U	100 U
4-Methyl-2-pentanone	25 U	25 U	25 U	25 U	500 U	25 U	100 U
Acetone	25 U	25 U	25 U	25 U	1000 U	25 U	200 U
Benzene	16	12	2.2 J	2.2 J	70 J	8.2	20 U
Bromodichloromethane	5 U	5 U	5 U	5 U	100 U	5 U	20 U
Bromoform	5 U	5 U	5 U	5 U	180	5 U	20 U
Bromomethane	5 U	5 U	5 U	5 U	100 U	5 U	20 U
Carbon disulfide	5 U	5 U	5 U	4.5 J	78 J	1.4 J	20 U
Carbon tetrachloride	5 U	5 U	5 U	17	2400	5 U	60
Chlorobenzene	130	5 U	5 U	2.9 J	79 J	18	20 U
Chlorodibromomethane	5 U	5 U	5 U	5 U	100 U	5 U	20 U
Chloroethane	5 U	5 U	5 U	5 U	100 U	5 U	20 U
Chloroform	5 U	5 U	5 U	21	93000	0.55 J	1900
Chloromethane	5 U	5 U	5 U	5 U	900	5 U	20 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U	100 U	5 U	20 U
Ethyl benzene	5 U	5 U	5 U	1.2 J	100 U	5 U	20 U
Methylene chloride	5 U	5 U	5 U	8.3	15000	5 U	140
Styrene	5 U	5 U	5 U	5 U	100 U	5 U	20 U
Tetrachloroethene	5 U	5 U	5 U	3.8 J	2300	5 U	36
Toluene	0.65 J	5 U	5 U	2.2 J	3600	3.4 J	43
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	100 U	5 U	20 U
Trichloroethene	5 U	5 U	5 U	4.5 J	62 J	0.78 J	56
Vinyl acetate	25 U	25 U	25 U	25 U	500 U	25 U	100 U
Vinyl chloride	5 U	5 U	5 U	3.7 J	140	3.4 J	21
Xylenes, Total	15 U	15 U	15 U	1.5 J	200 U	1.1 J	40 U

Notes: U = Compound not detecte
represents sample quantitat
J = Estimated value.

TABLE 3
SPRING 2010 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-7A	BR-8	BR-9	E-3	MW-103	MW-106	MW-114
SAMPLE DATE:	6/10/2011	6/7/2011	6/10/2011	6/7/2011	6/15/2011	6/13/2011	6/14/2011
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)							
1,1,1-Trichloroethane	5 U	25 U	10 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 U	25 U	10 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5 U	25 U	10 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	1.2 J	25 U	13	5 U	5 U	5 U	5 U
1,1-Dichloroethene	5 U	25 U	10 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	5 U	5.4 J	10 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5 U	9.9 J	10 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	1.8 J	50 U	320	10 U	10 U	10 U	10 U
1,2-Dichloropropane	5 U	25 U	10 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	5 U	25 U	10 U	5 U	5 U	5 U	5 U
2-Butanone	25 U	130 U	50 U	25 U	25 U	25 U	25 U
2-Hexanone	25 U	130 U	50 U	25 U	25 U	25 U	25 U
4-Methyl-2-pentanone	25 U	130 U	50 U	25 U	25 U	25 U	25 U
Acetone	25 U	130 U	46 J	25 U	25 U	25 U	25 U
Benzene	4.5 J	28	49	5 U	5 U	5.8	5 U
Bromodichloromethane	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Bromoform	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Bromomethane	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Carbon disulfide	2.9 J	25 U	1.6 J	5 U	5 U	5 U	5 U
Carbon tetrachloride	3 J	25 U	10 U	5 U	5 U	5 U	5 U
Chlorobenzene	190	1800	16	20	5 U	58	5 U
Chlorodibromomethane	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Chloroethane	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Chloroform	1.6 J	25 U	10 U	2 J	5 U	5 U	20
Chloromethane	5 U	25 U	10 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Ethyl benzene	5 U	4.9 J	2.2 J	5 U	5 U	5 U	5 U
Methylene chloride	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Styrene	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Tetrachloroethene	0.41 J	25 U	10 U	5 U	5 U	5 U	2.4 J
Toluene	1 J	9.3 J	1.7 J	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Trichloroethene	0.62 J	25 U	2.9 J	5 U	5 U	1.2 J	4.9 J
Vinyl acetate	25 U	130 U	50 U	25 U	25 U	25 U	25 U
Vinyl chloride	3.3 J	25 U	180	5 U	5 U	5 U	5 U
Xylenes, Total	15 U	6.2 J	30 U	15 U	15 U	15 U	15 U

Notes: U = Compound not detecte
represents sample quantitat
J = Estimated value.

TABLE 3
SPRING 2010 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	MW-127	PTP-EFF	PW10	PW12	PW12	PW13	PW14
SAMPLE DATE:	6/7/2011	6/10/2011	6/9/2011	6/7/2011	6/7/2011	6/10/2011	6/10/2011
QC TYPE:	Sample	Sample	Sample	Duplicate	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)							
1,1,1-Trichloroethane	5 U	100 U	20 U	250 U	250 U	2 U	2.1
1,1,2,2-Tetrachloroethane	5 U	100 U	20 U	250 U	250 U	2 U	2 U
1,1,2-Trichloroethane	5 U	100 U	20 U	250 U	250 U	2 U	2 U
1,1-Dichloroethane	5 U	100 U	20 U	250 U	250 U	1.5 J	3.3
1,1-Dichloroethene	5 U	100 U	20 U	250 U	250 U	2 U	2 U
1,2,4-Trimethylbenzene	5 U	100 U	20 U	250 U	250 U	2 U	2 U
1,2-Dichloroethane	5 U	100 U	20 U	250 U	24 J	2 U	2 U
1,2-Dichloroethene (total)	10 U	200 U	40 U	500 U	500 U	2.1 J	15
1,2-Dichloropropane	5 U	100 U	20 U	250 U	250 U	2 U	2 U
1,3,5-Trimethylbenzene	5 U	100 U	20 U	250 U	250 U	2 U	2 U
2-Butanone	25 U	500 U	200 U	1300 U	1300 U	20 U	20 U
2-Hexanone	25 U	500 U	100 U	1300 U	1300 U	10 U	10 U
4-Methyl-2-pentanone	25 U	500 U	100 U	1300 U	1300 U	10 U	6.6 J
Acetone	25 U	150 J	520	1300 U	1300 U	20 U	16 J
Benzene	5 U	100 U	20 U	35 J	36 J	8.4	7.5
Bromodichloromethane	5 U	100 U	20 U	250 U	250 U	2 U	2 U
Bromoform	5 U	100 U	48	250 U	250 U	2 U	13
Bromomethane	5 U	100 U	20 U	250 U	250 U	2 U	2 U
Carbon disulfide	5 U	100 U	250	250 U	250 U	2 U	590
Carbon tetrachloride	5 U	100 U	250	250 U	250 U	2 U	1300
Chlorobenzene	24	100 U	23	2100	2100	210	3.2
Chlorodibromomethane	5 U	100 U	20 U	250 U	250 U	2 U	2.6
Chloroethane	5 U	100 U	20 U	250 U	250 U	2 U	2 U
Chloroform	1.2 J	33 J	1400	83 J	83 J	2 U	23000
Chloromethane	5 U	100 U	20 U	250 U	250 U	2 U	2 U
cis-1,3-Dichloropropene	5 U	100 U	20 U	250 U	250 U	2 U	2 U
Ethyl benzene	1.8 J	100 U	20 U	250	250	2 U	2 U
Methylene chloride	5 U	100 U	300	250 U	32 J	2 U	2500
Styrene	5 U	100 U	20 U	250 U	250 U	2 U	2 U
Tetrachloroethene	5 U	100 U	150	38 J	41 J	2 U	170
Toluene	25	100 U	35	2900	2900	1.2 J	15
trans-1,3-Dichloropropene	5 U	100 U	20 U	250 U	250 U	2 U	2 U
Trichloroethene	5 U	100 U	9.2 J	250 U	250 U	2 U	33
Vinyl acetate	25 U	500 U	100 U	1300 U	1300 U	10 U	10 U
Vinyl chloride	5 U	100 U	20 U	250 U	250 U	3.7	17
Xylenes, Total	11 J	300 U	16 J	1600	1600	4 U	4 U

Notes: U = Compound not detecte
represents sample quantitat
J = Estimated value.

TABLE 3
SPRING 2010 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PW15	PW16	PZ-101	PZ-102	PZ-103	PZ-104	PZ-105
SAMPLE DATE:	6/10/2011	6/7/2011	6/13/2011	6/13/2011	6/13/2011	6/13/2011	6/9/2011
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)							
1,1,1-Trichloroethane	20 U	50 U	5 U	5 U	5 U	5 U	20 U
1,1,2,2-Tetrachloroethane	20 U	50 U	5 U	5 U	5 U	5 U	20 U
1,1,2-Trichloroethane	20 U	50 U	5 U	5 U	5 U	5 U	20 U
1,1-Dichloroethane	20 U	50 U	5 U	5 U	5 U	5 U	20 U
1,1-Dichloroethene	20 U	50 U	5 U	5 U	5 U	5 U	20 U
1,2,4-Trimethylbenzene	20 U	50 U	5 U	5 U	5 U	5 U	20 U
1,2-Dichloroethane	20 U	50 U	5 U	5 U	5 U	5 U	20 U
1,2-Dichloroethene (total)	40 U	100 U	10 U	10 U	1.6 J	10 U	40 U
1,2-Dichloropropane	20 U	50 U	5 U	5 U	5 U	5 U	20 U
1,3,5-Trimethylbenzene	20 U	50 U	5 U	5 U	5 U	5 U	20 U
2-Butanone	200 U	250 U	25 U	25 U	25 U	25 U	100 U
2-Hexanone	100 U	250 U	25 U	25 U	25 U	25 U	100 U
4-Methyl-2-pentanone	100 U	250 U	25 U	25 U	25 U	25 U	100 U
Acetone	110 J	250 U	25 U	3.3 J	25 U	25 U	100 U
Benzene	36	17 J	5 U	22	27	1.6 J	7.2 J
Bromodichloromethane	20 U	50 U	5 U	5 U	5 U	5 U	20 U
Bromoform	39	50 U	5 U	5 U	5 U	5 U	2.1 J
Bromomethane	20 U	50 U	5 U	5 U	5 U	5 U	20 U
Carbon disulfide	170	50 U	5 U	5 U	5 U	5 U	10 J
Carbon tetrachloride	660	50 U	5 U	5 U	5 U	5 U	32
Chlorobenzene	73	830	5 U	290	370 J	7.6	18 J
Chlorodibromomethane	20 U	50 U	5 U	5 U	5 U	5 U	20 U
Chloroethane	20 U	50 U	5 U	5 U	5 U	5 U	20 U
Chloroform	2800	50 U	5 U	5 U	5 U	5 U	210
Chloromethane	20 U	50 U	5 U	5 U	5 U	5 U	20 U
cis-1,3-Dichloropropene	20 U	50 U	5 U	5 U	5 U	5 U	20 U
Ethyl benzene	20 U	50 U	5 U	5 U	5 U	5 U	20 U
Methylene chloride	140	50 U	5 U	5 U	5 U	5 U	8.4 J
Styrene	20 U	50 U	5 U	5 U	5 U	5 U	20 U
Tetrachloroethene	490	50 U	5 U	5 U	5 U	5 U	13 J
Toluene	150	5.6 J	5 U	5 U	0.78 J	5 U	11 J
trans-1,3-Dichloropropene	20 U	50 U	5 U	5 U	5 U	5 U	20 U
Trichloroethene	54	50 U	5 U	5 U	5 U	5 U	20 U
Vinyl acetate	100 U	250 U	25 U	25 U	25 U	25 U	100 U
Vinyl chloride	20 U	50 U	5 U	5 U	5 U	5 U	20 U
Xylenes, Total	40 U	150 U	15 U	15 U	15 U	15 U	60 U

Notes: U = Compound not detecte
represents sample quantitat
J = Estimated value.

TABLE 3
SPRING 2010 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PZ-106	PZ-107
SAMPLE DATE:	6/9/2011	6/7/2011
QC TYPE:	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)		
1,1,1-Trichloroethane	10000 U	2000 U
1,1,2,2-Tetrachloroethane	10000 U	2000 U
1,1,2-Trichloroethane	10000 U	2000 U
1,1-Dichloroethane	10000 U	2000 U
1,1-Dichloroethene	10000 U	2000 U
1,2,4-Trimethylbenzene	10000 U	2000 U
1,2-Dichloroethane	10000 U	2000 U
1,2-Dichloroethene (total)	20000 U	4000 U
1,2-Dichloropropane	10000 U	2000 U
1,3,5-Trimethylbenzene	10000 U	2000 U
2-Butanone	100000 U	10000 U
2-Hexanone	50000 U	10000 U
4-Methyl-2-pentanone	50000 U	10000 U
Acetone	100000 U	10000 U
Benzene	10000 U	2000 U
Bromodichloromethane	10000 U	2000 U
Bromoform	10000 U	2000 U
Bromomethane	10000 U	2000 U
Carbon disulfide	100000	160 J
Carbon tetrachloride	39000	4700
Chlorobenzene	10000 U	2000 U
Chlorodibromomethane	10000 U	2000 U
Chloroethane	10000 U	2000 U
Chloroform	650000	17000
Chloromethane	10000 U	2000 U
cis-1,3-Dichloropropene	10000 U	2000 U
Ethyl benzene	10000 U	2000 U
Methylene chloride	22000	2800
Styrene	10000 U	2000 U
Tetrachloroethene	10000 U	810 J
Toluene	10000 U	2000 U
trans-1,3-Dichloropropene	10000 U	2000 U
Trichloroethene	10000 U	2000 U
Vinyl acetate	50000 U	10000 U
Vinyl chloride	10000 U	2000 U
Xylenes, Total	20000 U	6000 U

Notes: U = Compound not detecte
represents sample quantitat
J = Estimated value.

TABLE 4
COMPARISON OF SPRING 2011
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	JUNE-2011 RESULT	# EVENTS IN PRIOR 5 YRS	HISTORIC MAXIMUM	5-YEAR MEAN	JUNE-2011 RESULT
ON-SITE WELLS/LOCATIONS								
B-11	2	4,800	2,600	660	2	570	310	2.2
B-17	5	28,000,000	440,000	**610,000**	5	350,000	14,000	**15,000**
B-7	5	9,100	950	450	5	260	36	ND
BR-127	10	29,000	7,400	**12,000**	10	1,300	220	55
BR-3	5	6,500,000	75,000	**76,000**	5	920,000	130,000	110,000
BR-5A	10	1,700	260	150	10	9,400	14	1.3
BR-6A	10	140,000	6,900	**12,000**	10	26,000	29	**2,200**
BR-7A	10	510,000	28,000	10,000	10	3,000	130	5.6
BR-8	5	57,000	210	**120,000**	5	6,900	11	ND
BR-9	10	720	120	**150**	10	160	4.3	2.9
E-3	5	600	130	**260**	5	12,000	41	2.0
MW-127	10	15,000	6,400	380	10	7,500	1,300	1.2
PW10	10	240,000	63,000	**89,000**	10	120,000	5,300	2,100
PW12	10	15,000	2,200	1,100	10	120,000	520	160
PW13	10	7,500	1,800	**7,200**	10	920	110	ND
PW14	10	29,000	17,000	4,700	10	160,000	20,000	**27,000**
PW15	8	730,000	200,000	110,000	8	8,200	6,200	4,100
PW16	1	24,000	3,000	**24,000**	1	ND	ND	ND
PZ-105	10	190,000	12,000	7,900	10	9,700	41	**260**
PZ-106	10	120,000	62,000	48,000	10	1,400,000	340,000	**710,000**
PZ-107	10	11,000	8,800	7,000	10	89,000	17,000	**25,000**
OFF-SITE WELLS/LOCATIONS								
B-16	2	33,000	1100	300	2	4,500	4	0.91
BR-103	5	400	11	ND	5	38	7.6	ND
BR-104	5	3,100	5.7	3.5		9		
BR-105	10	24,000	860	380	10	310	3.1	0.56
BR-105D	10	10,000	500	250	10	230	3.8	3.2
BR-106	10	25,000	3,800	3100	10	6,300	0.062	ND
BR-108	5	1,700	33	3.1		ND		
BR-112D	5	310	48	37		4.3		
BR-113D	5	490	28	20		2.8		
BR-114	5	520	180	25	5	12	0.1	ND
BR-116	5	12	ND	ND		84		
BR-116D	5	710	35	32		120		
BR-117D	5	80	7.7	2.2		1.9		
BR-118D	5	330	59	43		6.6		
BR-122D	5	650	160	86		ND		
BR-123D	5	860	73	37		4		
BR-126	9	12,000	2,200	**12,000**	9	230	25	ND
MW-103	5	97	20	1.1	5	750	17	ND
MW-104	5	180	3.3	**3.4**		1		

TABLE 4
COMPARISON OF SPRING 2011
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	JUNE-2011 RESULT	# EVENTS IN PRIOR 5 YRS	HISTORIC MAXIMUM	5-YEAR MEAN	JUNE-2011 RESULT
MW-106	10	130,000	6,300	1,600	10	450	0.25	**1.2**
MW-114	5	18	ND	ND	5	27	20	**27**
MW-16	5	360	7.6			8		
NESS-E	5	5,000	100	23		700		
NESS-W	5	2,100	ND	ND		89		
PZ-101	10	27,000	160	12	10	6.1	0.32	ND
PZ-102	10	58,000	1,400	**2,200**	10	10,000	2.4	ND
PZ-103	10	73,000	7,600	1,500	10	44,000	4.8	ND
PZ-104	10	9,100	2,200	830	10	40	0.14	ND
QD-1	7	11	5.3	ND		ND		
QO-2	11	380	5.4	**24**		ND		
QO-2S1	11	27	0.85	**17**		ND		
QS-4	11	3,400	190	77		ND		

Note:
1) Number of samples and mean reflect 5-year sampling period from May 2006 through November 2010. Historic maximum based on all available results from March 1990 through June 2011.
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** - June 2011 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:	6/6/2011	6/6/2011	6/6/2011	6/6/2011
QC TYPE:	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)				
2,6-Dichloropyridine	24	2.4 J	9.4 U	9.4 U
2-Chloropyridine	53	22	17	9.4 U
3-Chloropyridine	9.5 U	9.8 U	9.4 U	9.4 U
4-Chloropyridine	9.5 U	9.8 U	9.4 U	9.4 U
p-Fluoroaniline	9.5 U	9.8 U	9.4 U	9.4 U
Pyridine	24 U	25 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 2010 THROUGH MAY 2011

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

Week Ending	BR-5A [Gal./Wk.]	BR-7A [Gal./Wk.]	BR-9 [Gal./Wk.]	PW-13 [Gal./Wk.]	PW-14 *** [Gal./Wk.]	PW-15 [Gal./Wk.]	PW-16 [Gal./Wk.]	BR-127 [Gal./Wk.]	Total [Gal.]
Dec '10									
12/05/10	21,588	68,472	64,136	22,700	1,164	26,170	49,674	26,044	279,948
12/12/10	21,421	62,843	67,582	28,428	1,210	25,961	49,012	25,913	282,370
12/19/10	21,289	60,404	64,790	22,410	867	25,584	48,290	25,242	268,876
12/26/10	17,194	43,399	67,222	25,169	1,248	24,799	49,981	25,485	254,497
								Total [Gal.]	1,085,691
Jan '11									
01/02/11	20,136	60,777	47,742 **	20,287	1,100	22,877	45,011	24,452	242,382
01/09/11	20,008	50,498	58,789	24,017	1,002	22,493	47,133	24,241	248,181
01/16/11	20,154	46,446	56,564	22,661	1,035	21,843	47,110	24,237	240,050
01/23/11	19,037	46,922	51,324	20,232	990	21,693	46,480	23,661	230,339
01/30/11	18,926	45,962	47,243	18,413	986	21,874	46,487	23,912	223,803
								Total [Gal.]	1,184,755
Feb '11									
02/06/11	18,536	50,497	42,573	15,240	939	21,548	46,919	23,824	220,076
02/13/11	17,595	55,977	36,750	12,343	858	21,153	46,428	22,891	213,995
02/20/11	18,671	66,019	34,051	12,048	932	21,947	47,653	24,166	225,487
02/27/11	20,507	68,476	45,667	17,636	958	22,662	43,934 **	25,783	245,623
								Total [Gal.]	905,181
Mar '11									
03/06/11	20,428	64,340	46,788	17,835	905	21,351	47,820	24,182	243,649
03/13/11	21,927	60,634	60,353	31,707	977	22,811	48,899	24,880	272,188
03/20/11	20,862	58,137	65,964	29,120	954	23,067	47,646	24,002	269,752
03/27/11	20,696	53,420	66,746	27,714	939	23,043	47,494	23,771	263,823
								Total [Gal.]	1,049,412
Apr '11									
04/03/11	20,739	52,670	68,314	21,911	910	22,336	47,751	23,810	258,441
04/10/11	20,280	47,185	60,384	25,256	871	20,763	46,293	23,352	244,384
04/17/11	20,029	48,408	64,190	26,155	842	12,358 **	45,349	23,250	240,581
04/24/11	21,968	39,047	71,513	38,621	916	9,318 **	44,348	23,036	248,767
								Total [Gal.]	992,173
May '11									
05/01/11	22,185	19,186 **	144,532	57,766	1,097	7,759 **	42,157	21,326	316,008
05/08/11	21,651	19,963 **	171,596	55,544	1,105	15,013 **	40,069	22,317	347,258
05/15/11	21,526	34,974	128,894	57,559	1,095	25,187	42,543	19,576 **	331,354
05/22/11	21,918	46,791	98,903	59,419	1,117	24,805	44,453	25,094	322,500
05/29/11	21,308	50,433	100,170	59,349	1,079	24,599	45,112	24,785	326,835
								Total [Gal.]	1,643,955
Total 6 Mo. Removal (Gal.)	530,579	1,321,880	1,832,780	769,540	26,096	553,014	1,204,046	623,232	6,861,167

Notes:
1) * - Flow rate is estimated due to a meter failure or reading error
2) ** - Flow rate adversely affected by pump failure, pluggage in discharge line, or other maintenance activity
3) *** - Well yield at PW-14 has been minimal through 2010 - 2011. An attempt to rehab the well by physical and chemical cleaning in October 2010 failed to increase yield.

TABLE 7

MASS REMOVAL SUMMARY
PERIOD: DECEMBER 2010 - MAY 2011

ARCH ROCHESTER
SPRING 2011 GROUNDWATER MONITORING REPORT

Well	Total Vol. Pumped (gallons)	Avg. VOC Conc. (ppm)	Avg. PYR. Conc. (ppm)	VOCs Removed (pounds)	PYR. Removed (pounds)
BR-5A	531,000	0.002	0.16	0.01	0.7
BR-7A	1,322,000	0.003	9.6	0.03	106
BR-9	1,833,000	0.003	0.19	0.04	2.8
PW-13	769,000	0	4.4	0	28
PW-14	26,000	23	4.3	5.1	0.9
PW-15	553,000	4.7	102	22	471
PW-16	1,204,000	0	13.3	0	134
BR-127	623,000	0.054	10.2	0.3	53
Totals:	6,861,000			27	796

Note: VOC and pyridine concentrations used in this table are an average of the analytical results from the Fall 2010 and Spring 2011 sampling events for each well

TABLE 8
2011 SAMPLING SCHEDULE
ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

ARCH ROCHESTER						**2011**					
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	1	1	1	1	2	2
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						52	35	31	26	83	61

Revised: 01/10/11

Prepared by: JEB Checked by: NMB

Appendix A

Groundwater Field Sampling Data Sheets

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Recieved 7/26/2011 by N. Breton

FIELD REPORT

TestAmerica Laboratories, Inc.

REMEDIAL INVESTIGATION SAMPLING
ARCH CHEMICAL
ROCHESTER, NEW YORK

SPRING 2011 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:

Date: 7-15-11

1.0 INTRODUCTION

This report describes the sampling of the following points:

- Fourty-seven (48) 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 June 06 - 15, 2011 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.

Sampling Summary Table
ARCH CHEMICAL

Sample Point	Sample Date	Sample Time	Water Level (ft)	Bottom of Well (ft)	pH STD Units	Spec. Cond. (umhos)	Temp (c)	Turb (NTU)	ORP (mv)	DO (ppm)
PZ-101	6/13/2011	1115	16.67	21.69	6.88	2059	15.7	3.96	85	0.72
PZ-102	6/13/2011	1200	16.64	32.60	6.98	3436	13.0	1.48	-81	0.56
PZ-103	6/13/2011	1250	14.56	32.52	6.90	3611	15.0	1.18	-99	0.69
PZ-104	6/13/2011	1335	13.30	23.93	7.11	2390	17.1	3.75	-127	0.62
PZ-105	6/9/2011	1400	11.04	32.86	7.50	1098	16.3	247	-31	0.67
PZ-106	6/9/2011	1045	11.27	32.15	6.20	12830	16.5	9	-97	0.77
PZ-107	6/7/2011	1345	9.17	27.90	6.77	4777	16.7	1.82	-178	0.80
BR-3	6/9/2011	1245	9.35	23.25	6.77	10690	17.0	7.1	-218	0.65
BR-5A	6/10/2011	1125	13.92	NA	7.10	1848	14.5	6.93	-49	
BR-6A	6/9/2011	1320	13.41	NA	7.70	4284	17.7	20.6	-227	0.57
BR-7A	6/10/2011	1210	29.15	NA	7.33	2219	15.2	8.94	-113	
BR-8	6/7/2011	1105	14.24	31.74	7.57	4833	14.5	56.9	-258	0.70
BR-9	6/10/2011	1155	34.62	NA	7.18	2247	15.6	410	-55	
BR-103	6/15/2011	1215	6.55	43.45	7.26	824	16.4	3.27	-106	
BR-104	6/15/2011	1400	10.01	19.12	7.86	378	12.6	7.65	-183	0.72
BR-105	6/13/2011	1155	22.08	44.60	7.04	2147	14.6	1.89	-212	0.66
BR-105D	6/13/2011	1045	25.67	79.50	6.86	28020	17.6	2.5	-323	0.82
BR-106	6/13/2001	1245	22.50	43.22	6.82	2910	12.7	7.74	-198	0.68
BR-108	6/13/2011	1400	28.00	29.75	7.05	1206	12.7	264	-101	
BR-112D	6/14/2011	1306	36.15	72.26	7.26	2773	10.6	3.81	-266	
BR-113D	6/14/2011	1350	31.20	79.25	7.22	2357	11.5	5.58	-297	0.26
BR-114	6/14/2011	1225	13.31	36.93	7.15	1810	15.2	3.9	-142	0.50
BR-116	6/7/2011	1440	30.15	62.20	7.21	1962	16.8	27.7	-176	0.62
BR-116D	6/7/2011	1400	35.20	98.10	10.11	1229	16.9	10.5	-277	0.27
BR-117D	6/6/2011	1210	48.75	82.24	7.62	1992	12.3	44.8	-96	0.35
BR-118D	6/6/2011	1130	47.90	87.27	8.13	1440	11.3	29.8	-49	0.25
BR-122D	6/7/2011	1220	45.10	82.57	7.07	2307	12.6	19.5	-229	0.39
BR-123D	6/7/2011	1310	45.15	97.56	7.82	2109	11.9	12.2	-242	0.41
BR-126	6/14/2011	1050	7.57	45.45	7.00	940	14.1	8.92	-196	0.63
BR-127	6/10/2011	1105	7.44	50.63	7.89	3412	14.7	1.3	-144	
MW-103	6/15/2011	1250	2.70	8.05	7.15	727	20.5	2.59	-61	0.89
MW-104	6/15/2011	1325	7.55	18.10	7.39	630	13.2	91.7	-119	0.66
MW-106	6/13/2011	1335	10.36	19.35	6.88	1702	12.4	11.39	-157	1.14
MW-114	6/14/2011	1305	9.98	15.76	7.37	1830	15.8	9.9	-67	0.92
MW-127	6/7/2011	1250	5.69	11.25	7.97	1065	15.6	6.21	-161	0.86
PW-10	6/9/2011	1210	9.46	NA	8.90	9418	16.7	3.99	-177	0.72

Sampling Summary Table
ARCH CHEMICAL

Sample Point	Sample Date	Sample Time	Water Level (ft)	Bottom of Well (ft)	pH STD Units	Spec. Cond. (umhos)	Temp (c)	Turb (NTU)	ORP (mv)	DO (ppm)
PW-12	6/7/2011	1200	6.29	NA	7.25	3851	17.1	2.97	-169	0.66
PW-13	6/10/2011	1225	27.18	NA	6.83	2845	16.7	5.27	-125	
PW-14	6/10/2011	1055	35.60	NA	7.90	4016	14.1	170	-181	
PW-15	6/10/2011	1040	30.92	NA	8.96	5112	14.4	19	-169	
PW-16	6/7/2011	1110	NA	NA	7.21	4328	14.7	45.8	-198	
B-7	6/10/2011	1235	14.33	20.90	7.08	1215	16.8	11.91	-88	0.81
B-11	6/7/2011	1305	5.05	11.55	7.79	596	15.1	42.5	-108	
B-16	6/14/2011	1130	5.50	NA	7.46	531	13.8	2.5	-168	0.83
B-17	6/9/2011	1135	9.17	16.23	8.95	10100	15.6	11.8	-138	0.63
QD-1	6/6/2011	1155	NA	NA	7.99	1535	17.2			
QO-2	6/6/2011	1310	NA	NA	7.92	1476	15.9			
QO-2S1	6/6/2011	1320	NA	NA	7.39	583	21.7			
QS-4	6/6/2011	1445	NA	NA	7.95	1712	11.9			
NESS-EAST	6/14/2011	1200	23.05	74.52	6.83	1339	20.1	16.06	-110	0.59
NESS-WEST	6/14/2011	1105	30.96	77.23	7.10	1663	13.3	5.04	-199	0.56
E-3	6/7/2011	1130		12.05	7.61	3558	15.1	34.9	-184	
PTP EFFLUENT	6/10/2011	1115	NA	NA	8.99	40800	29.1	44.2	-113	

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

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
B-1	06/06/11	8.21		-8.21	1052	NO L-NAPL ; NO D-NAPL
B-10		7.31		-7.31	1416	NO L-NAPL ; NO D-NAPL
B-11		5.05		-5.05	1337	NO L-NAPL ;NO D-NAPL 11.55 BOT.
B-13		12.06		-12.06	1145	
B-14		8.83		-8.83	1140	
B-15		5.39		-5.39	1135	
B-16		4.90		-4.90	1130	NO L-NAPL ;NO D-NAPL 13.20 BOT.
B-17		9.02		-9.02	1358	NO L-NAPL ; NO D-NAPL
B-2		8.98		-8.98	1053	NO L-NAPL ; NO D-NAPL
B-4		16.88		-16.88	1302	NO L-NAPL ; NO D-NAPL
B-5		14.50		-14.50	1258	NO L-NAPL ; NO D-NAPL
B-7		13.88		-13.88	1428	NO L-NAPL ; NO D-NAPL
B-8		9.49		-9.49	1411	NO L-NAPL ; NO D-NAPL
BR-1		7.32		-7.32	1310	NO L-NAPL ; NO D-NAPL
BR-102		11.83		-11.83	1059	
BR-103		5.98		-5.98	1353	
MW-103		1.49		-1.49	1352	
BR-104		8.74		-8.74	1406	
MW-104		6.32		-6.32	1405	
BR-105		21.56		-21.56	1120	
BR-105D		25.08		-25.08	1121	
MW-105		18.73		-18.73	1122	
BR-106		22.42		-22.42	1115	
MW-106		9.99		-9.99	1114	
BR-108		27.74		-27.74	1500	
MW-108		11.39		-11.39	1501	
BR-111		28.53		-28.53	1424	
BR-111D		28.68		-28.68	1425	
BR-112A		27.19		-27.19	1415	
BR-112D		35.99		-35.99	1410	
BR-113		30.69		-30.69	1411	
BR-113D		31.05		-31.05	1412	

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

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
BR-114	06/06/11	13.32		-13.32	1359	
MW-114		8.43		-8.43	1358	
BR-116		30.02		-30.02	1335	
BR-116D		35.16		-35.16	1337	
BR-117		24.00		-24.00	1140	CASCADING WELL
BR-117D		48.43		-48.43	1139	
BR-118		27.59		-27.59	1104	CASING/SEAL DAMAGED
BR-118D		47.33		-47.33	1105	
BR-122D		44.79		-44.79	1255	
BR-123D		44.94		-44.94	1250	
BR-124D		30.78		-30.78	1245	
BR-126		6.94		-6.94	1127	
BR-127		7.11			1335	NO L-NAPL
MW-127		5.61			1334	NO L-NAPL ; NO D-NAPL
BR-2		8.48		-8.48	1355	NO L-NAPL ; NO D-NAPL
BR-2A		9.82		-9.82	1354	NO L-NAPL ; NO D-NAPL
BR-2D		0.05		-0.05	1356	NO L-NAPL ; NO D-NAPL
BR-3		9.82		-9.82	1406	NO L-NAPL
BR-3D		57.13		-57.13	1405	NO L-NAPL ; NO D-NAPL
BR-4		6.71		-6.71	1351	NO L-NAPL
BR-5		12.81		-13.82	1317	NO L-NAPL ; NO D-NAPL
BR-5A		17.03		-17.03	1318	
BR-6A		13.51		-13.51	1410	
BR-7		19.72		-19.72	1426	
BR-7A		28.91		-28.91	1425	NO L-NAPL ; NO D-NAPL
BR-8		14.24		-14.24	1257	NO L-NAPL ; NO D-NAPL
BR-9		31.48		-31.48	1442	NO L-NAPL
C-2A		8.34		-8.34	1357	NO L-NAPL ; NO D-NAPL
C-3						BURIED
C-5		10.83		-10.83	1407	NO L-NAPL ; NO D-NAPL
E-2		5.08		-5.08	1352	NO L-NAPL ; NO D-NAPL
E-3		4.55		-4.55	1316	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	06/06/11	5.88		-5.88	1314	NO L-NAPL ; NO D-NAPL
EC-1		16.66		-16.66	1435	
EC-2		DRY		#VALUE!		DRY
ERIE CANAL		32.63		-32.63	1430	
MW-16		10.61		-10.61	1350	
MW-3		5.59		-5.59	1503	
MW-G6		3.18		-3.18	1507	
MW-G7					1510	NOT LOCATED
MW-G8		6.95		-6.95	1515	
MW-G9		9.11		-9.11	1520	
N-2		3.93		-3.93	1312	NO L-NAPL ; NO D-NAPL
N-3		5.88		-5.88	1050	NO L-NAPL
NESS-E		21.95		-21.95	1150	
NESS-W		30.58		-30.58	1155	
PW-10		9.39		-9.39	1400	NO L-NAPL
PW-16		15.18		-15.18	1300	NO L-NAPL
PW-12		6.15		-6.15	1330	NO L-NAPL
PW-13		26.77		-26.77	1429	NO L-NAPL; NO D NAPL
PW-14		23.13		-23.13	1418	NO L-NAPL
PW-15		32.21		-32.21	1401	NO L-NAPL
PZ-101		15.91		-15.91	1105	
PZ-102		15.89		-15.89	1106	
PZ-103		13.95		-13.95	1108	
PZ-104		12.95		-12.95	1146	
PZ-105		23.34		-23.34	1413	NO L-NAPL ; NO D-NAPL
PZ-106		11.02		-11.02	1417	NO L-NAPL ; NO D-NAPL
PZ-107		9.11		-9.11	1415	NO L-NAPL ; NO D-NAPL
PZ-109		9.32		-9.32	1359	NO L-NAPL; NO D-NAPL
W-2		10.95		-10.95	1056	NO L-NAPL ; NO D-NAPL
W-5		7.11		-7.11	1424	NO L-NAPL ; NO D-NAPL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PZ-101

Field Personnel: AL, JI, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-13-11 / 1040

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: 6-13-11 1045

Date / Time Completed: 6-13-11 1115

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 16.59

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 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
1100	ml/m 150	WL 16.63		16.3	6.84	2061	5.75	88	0.76
1105	↓	16.67		16.0	6.87	2049	4.70	86	0.74
1110	↓	↓		15.8	6.87	2052	4.15	86	0.73
1115	↓	↓		15.7	6.88	2059	3.96	85	0.72

SAMPLED @ 1115 / 6-13-11

RL2

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PZ-102

Field Personnel: AL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-13-11 ; 1118

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: 6-13-11 1135

Date / Time Completed: 6-13-11 1200

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 16.33

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 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
	M/m	WL							
1140	100	16.39		13.8	6.87	3343	2.27	-75	0.61
1145		16.44		13.0	6.90	3429	1.73	-79	0.60
1150		16.51		13.0	6.94	3433	1.62	-80	0.59
1155		16.59		13.1	6.96	3436	1.50	-80	0.57
1200		16.64		13.0	6.98	3436	1.48	-81	0.56

SAMPLED @ 1200 / 6-13-11

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. = 10.01 NTU

Solutions: RT00928

pH Serial #: 6225177 4.0 std.= 3.98 7.0 std.= 7.04 10.0 std. = _____

Solutions: 4 = RT14752 7 = RT10574

Conductivity Serial #: 6225177 1000 umhos/cm= 1000 _____ umhos/cm= _____

Solutions: RT11746

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: P2-103

Field Personnel: PL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-13-11 / 1208

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

Prot. Casing/riser height: _____

Cond of prot. Casing/riser: ( ) Unlocked ( ) Good
( ) Loose ( ) Flush Mount
(X) 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: 6-13-11 1231

Date / Time Completed: 6-13-11 1250

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 14.35

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 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
1235	~~w/w~~ 150	~~WL~~ 14.55		14.2	6.93	3582	2.15	-96	0.73
1240		14.56		14.7	6.90	3600	1.43	-98	0.71
1245		14.56		14.8	6.90	3609	1.29	-98	0.70
1250		↓		15.0	6.90	3611	1.18	-99	0.69

SAMPLED @ 1250 / 6-13-11

PL JJ

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PZ-104

Field Personnel: PL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-13-11 / 1312

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: 6-13-11 1315

Date / Time Completed: 6-13-11 1330

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 13.22

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 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	pump 150	WL 13.25		17.0	7.19	2409	8.19	-126	0.66
1325		13.30		17.4	7.11	2406	5.40	-127	0.65
1330				17.1	7.11	2400	4.72	-127	0.63
1335				17.1	7.11	2390	3.75	-127	0.62

SAMPLED @ 1335 / 6-13-11

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: P2-105

Field Personnel: PL, JS, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-9-11 / 1333

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: 6-9-11 1335

Date / Time Completed: 6-9-11 1400

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 11.04

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: Low Flow

Purged To Dryness Y / (N)

Purge Observations: ____

Start 6my (TURBID) Finish 6my (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
1340	pump 150	GW 11.79		16.7	7.68	1189	260	-29	0.77
1345		11.80		16.5	7.60	1100	252	-30	0.73
1350		11.80		16.4	7.57	1100	251	-30	0.70
1355		11.80		16.3	7.55	1100	249	-31	0.68
1400	↓	11.80		16.3	7.50	1098	247	-31	0.67

SAMPLED @ 1400 / 6-9-11

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: PZ-106

Field Personnel: PL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-9-11 / 1020

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: 6-9-11 1023

Date / Time Completed: 6-9-11 1045

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 11.12

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: Low Flow

Purged To Dryness Y / (N) SL Turgs

Purge Observations:

Start Yellow 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
1025	mL/m 80	wc 11.15		16.1	6.20	12670	32.2	-91	.82
1030		11.18		16.8	6.21	12,700	11.51	-93	.80
1035		11.21		16.5	6.21	12,800	10.86	-95	.80
1040		11.25		16.4	6.21	12,830	9.64	-96	0.79
1045		11.27		16.5	6.20	12830	9.00	-97	0.77

SAMPLE @ 1045 / 6.9.11

RL 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: _____

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: PZ-107

Field Personnel: AC, JS, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-7-11 / 1318

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: 6-7-11 1320

Date / Time Completed: 6-7-11 1345

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 9.12

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
1325	MP 200	WP 9.17		16.9	6.59	4863	5.26	-174	0.90
1330				16.8	6.61	4799	3.36	-176	0.85
1335				16.6	6.67	4782	2.16	-177	0.84
1340				16.8	6.71	4780	1.99	-177	0.83
1345				16.7	6.77	4777	1.82	-178	0.80

SAMPLED @ 1345 / 6-7-11

PZ

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BP-3

Field Personnel: AL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-9-11 / 1223

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: 6-9-11 1225

Date / Time Completed: 6-9-11 1245

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 9.18

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 Yellow (SL Turbid) Finish Yellow (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
1230	ml/m 100	WL 9.21		17.1	6.67	10,600	8.57	-227	0.70
1235	↓	9.27		17.8	6.70	10,670	9.00	-220	0.67
1240	↓	9.31		17.5	6.75	10,690	6.79	-218	0.66
1245	↓	9.35		17.0	6.77	10,680	7.10	-218	0.65

SAMPLED @ 1245 / 6-9-11

RL 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: _____

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 Chemical

Sample Point ID: BR-5A

Field Personnel: AL JS

Sample Matrix: GW

~~(X)~~ Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-10-11 / 1125

Water Level @ Sampling, Feet: 13.92

Method of Sampling: SAMPLE PUMP

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 ( )
1128	14.5	7.10	1848	6.93	-49	

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 71

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS: _____

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

Date: 6/10/11 By: _____ Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-6A

Field Personnel: AL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-9-11 / 1300

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: 6-9-11 1302

Date / Time Completed: 6-9-11 1320

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 13.35

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)
SLOWED

Purge Observations: Low Flow

Start TAN Finish TAN
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							
1305	200	13.41		17.6	7.82	4295	38.6	-231	0.62
1310				17.9	7.77	4280	24.4	-229	0.60
1315				17.6	7.74	4284	21.9	-227	0.58
1320				17.7	7.70	4284	20.6	-227	0.57

SAMPLED @ 1320 / 6-9-11

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 #: _____ 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 Chemical

Sample Point ID: BR-7A

Field Personnel: AL JS

Sample Matrix: GW

(~~X~~ Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-10-11 / 1210

Water Level @ Sampling, Feet: 29.15

Method of Sampling: Sample Pump

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 ( )
1210	15.2	7.33	2219	8.94	-113	

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 71

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS: _____

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

Date: 6/10/11 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BA-8

Field Personnel: PL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-7-11 / 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: 6-7-11 1039

Date / Time Completed: 6-7-11 1105

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 14.19

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 SL TURBID

Start Yellow TINT 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
1045	MP 200	WL 14.24		15.1	7.31	4799	67.3	-267	0.77
1050	↓	↓		14.9	7.47	4820	62.5	-260	0.75
1055				14.7	7.50	4825	60.1	-259	0.74
1100				14.5	7.55	4830	57.6	-259	0.73
1105				14.5	7.57	4833	56.9	-259	0.70

SAMPLED @ 1105 / 6-7-11

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. = 10 NTU _____NTU std. = _____NTU

Solutions: RT 00928

pH Serial #: 5177 4.0 std.= 4.0 7.0 std.= 7.0 10.0 std. = _____

Solutions: _____

Conductivity Serial #: 5177 1000 umhos/cm= 1000 _____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 Chemical Sample Point ID: BR-9

Field Personnel: AL JS Sample Matrix: Gw

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-10-11 / 1155 Water Level @ Sampling, Feet: 34.62

Method of Sampling: SAMPLE PUMP 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 ( )
1157	15.6	7.18	2247	410	-55	

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 71

Sample Characteristics: TURBID RED

COMMENTS AND OBSERVATIONS: _____

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

Date: 6/10/11 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-103

Field Personnel: R. SENF

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 6-15-11 / 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: 6-15-11 / 1150

Date / Time Completed: 6-15-11 1215

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

Riser Diameter, Inches: 4.0

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: 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
1200	ml/min 150	WL 6.55	16.9	7.15	814	4.17	-119	0.72
1205	150	6.55	16.5	7.21	823	3.13	-108	0.68
1210	150	6.55	16.5	7.23	825	3.19	-107	0.67
1215	150	6.55	16.4	7.26	824	3.27	-106	0.69

Sampled @ 1215/6-15-11

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-104

Field Personnel: R. SAUR

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 6-15-11 / 1324

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: 6-15-11 / 1335

Date / Time Completed: 6-15-11 / 1400

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 9.29

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/hr)	WL / mL/min	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1345	10.05	120		12.4	7.93	381	6.97	-181	0.81
1350	10.03	100		12.5	7.82	385	7.04	-182	0.73
1355	10.01	100		12.5	7.84	382	7.62	-185	0.72
1400	10.01	100		12.6	7.86	378	7.65	-183	0.72

6-15-11 Sampled @ 1400

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: _____

_____

_____

_____

_____

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: BR-105

Field Personnel: AL, JJ, RJ

Sample Matrix: Gw

MONITORTING WELL INSPECTION:

Date/Time 6-13-11 / 1025

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: 6-13-11 1130

Date / Time Completed: 6-13-11 1155

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 22.07

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
	WL	mL/min							
1135	22.08	150		14.5	7.41	2155	2.51	-222	0.69
1140				14.6	7.19	2152	2.52	-223	0.69
1145				14.5	7.11	2145	1.92	-214	0.67
1150				14.6	7.07	2146	1.75	-213	0.65
1155				14.6	7.04	2147	1.89	-212	0.66

SAMPLED @ 1155 / 6-13-11

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: _____

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: BR-105D

Field Personnel: AL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-13-11 / 1025

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: 6-13-11 1028

Date / Time Completed: 6-13-11 1045

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 25.15

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
1035	mL/min 80	WL 25.45		17.6	6.80	28,080	2.65	-316	0.89
1040	"	25.60		17.6	6.83	27,990	2.78	-320	0.85
1045	"	25.67		17.6	6.86	28,020	2.50	-323	0.82

SAMPLED @ 1045 / 6-13-11

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 #: 316733 NTU std. = _____ NTU 10 NTU std. = 10.03 NTU

Solutions: RT00928

pH Serial #: 6Z04061 4.0 std.= 4.08 7.0 std.= 6.99 10.0 std. = _____

Solutions: 4 = RT14752 7 = RT10574

Conductivity Serial #: 6Z04061 1000 umhos/cm= 1000 _____ umhos/cm= _____

Solutions: RT 11746

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: BR-106

Field Personnel: PL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-13-11 / 1226

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: 6-13-11 ~~1225~~ 12:25

Date / Time Completed: 6-13-11 1245

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 22.45

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 ~~Lt Turbid~~ ~~Light Brown~~ Clear w/ Black Specs 6-13-11 Finish Clear w/ Black Specs

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz) WL / mL/min	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1230	22.50 / 150		13.0	6.84	2880	17.25	-189	0.93
1235	↓ / ↓		12.9	6.80	2907	7.60	-192	0.77
1240	↓ / ↓		12.8	6.82	2875	7.61	-195	0.72
1245	↓ / ↓		12.7	6.82	2910	7.74	-198	0.68

SAMPLE @ 1245 / 6-13-11

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: _____

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: BR-108

Field Personnel: PL, JT, RJ

Sample Matrix: Gw

MONITORTING WELL INSPECTION:

Date/Time 6-13-11 / 1014

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

Prot. Casing/riser height: —

Cond of prot. Casing/riser: (X) 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: 6-13-11 1015

Date / Time Completed: 6-13-11 1018

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 27.77

Elevation. G/W MSL: ____

Well Total Depth, Feet: 29.75

Method of Well Purge: SS Bailer

One (1) Riser Volume, Gal: ~1.29

Dedicated: (Y) / N

Total Volume Purged, Gal: ~1.50 to Dry

Purged To Dryness (Y) / N

Purge Observations: ____

Start Turbid / Dark Brown Finish Turbid / Dark 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

SAMPLE @ /

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID BR-108

Date/Time 6-13-11 / 1400 Water Level @ Sampling, Feet: 28.00

Method of Sampling: SS 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 ( )
1400	12.7	7.05	1206	264	-101	

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 72°

Sample Characteristics: Turbid / Dark Brown

COMMENTS AND OBSERVATIONS: _____

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

Date: 6/13/11 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-112D

Field Personnel: PL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-14-11 / 1230

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

Prot. Casing/riser height: —

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

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: 6-14-11 1232

Date / Time Completed: 6-14-11 1306

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 36.15

Elevation. G/W MSL: ____

Well Total Depth, Feet: 72.15

Method of Well Purge: Bailer

One (1) Riser Volume, Gal: 5.88

Dedicated: (Y) / N

Total Volume Purged, Gal: ~17.75

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
1243		6.0	10.6	7.04	3956	11.47	-267	
1251		12.0	10.6	7.14	2972	4.20	-276	
1306		17.75	10.6	7.26	2773	3.81	-266	

SAMPLED @ 1306 / 6-14-11

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: _____

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: ISR-113D

Field Personnel: AL, JS, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-14-11 / 1316

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: 6-14-11 1328

Date / Time Completed: 6-14-11 1350

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 31.18

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
1335	ml/min 120	WL 31.20		12.0	7.27	2341	9.32	-294	0.53
1340				11.5	7.24	2346	7.07	-297	0.31
1345				11.6	7.24	2374	6.02	-302	0.27
1350				11.5	7.22	2357	5.58	-297	0.26

SAMPLED @ 1350 / 6-14-11

John Scott

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-116

Field Personnel: R. SENF

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 6-07-11 / 1405

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: 6-07-11 / 1410

Date / Time Completed: 6-07-11 / 1440

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 30.10

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: BLADDER PUMP

One (1) Riser Volume, Gal:

Dedicated: Y (N)

Total Volume Purged, Gal:

Purged To Dryness Y (N)

Purge Observations: LO-FLO

Start ORANGE TINT Finish ORANGE TINT

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other DO
1420	ML/MIN 150	WL 30.05		16.9	7.29	2015	30.5	-187	0.72
1430	150	30.18		17.0	7.24	2011	29.8	-182	0.60
1435	150	30.15		16.8	7.25	1985	28.3	-179	0.59
1440	150	30.15		16.8	7.21	1962	27.7	-176	0.62

SAMPLED @ 1440/6-07-11

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-114

Field Personnel: AL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-14-11 / 1158

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: 6-14-11 1200

Date / Time Completed: 6-14-11 1225

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 13.27

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 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	w.l.							
1205	200	13.31		15.6	7.01	1790	10.72	-147	0.55
1210	↓	↓		15.3	7.13	1800	6.80	-145	0.53
1215				15.3	7.15	1805	5.17	-143	0.52
1220				15.1	7.15	1809	4.60	-142	0.51
1225	↓	↓		15.2	7.15	1810	3.90	-142	0.50

SAMPLED @ 1225 / 6-14-11

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 #: 6225177 4.0 std.= 4.0 7.0 std.= 7.02 10.0 std. = _____

Solutions: 4 = RT14752 7 = RT10574

Conductivity Serial #: 6225177 1060 umhos/cm= 1000 _____ umhos/cm= _____

Solutions: RT 11746

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: BR-116D

Field Personnel: R. SENF

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 6-07-11 / 1325

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: 6-07-11 / 1330

Date / Time Completed: 6-07-11 / 1400

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 35.12

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: 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/Hz)~~		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other DO
1340	ml/min 35.19	WL 150		17.1	10.04	1237	13.9	-307	0.32
1350	35.19	150		16.9	10.07	1233	10.7	-290	0.28
1355	35.20	150		16.9	10.09	1230	11.0	-285	0.28
1400	35.20	150		16.9	10.11	1229	10.5	-277	0.27

Sampled @ 1400/6-07-11

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: _____

_____

_____

_____

_____

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

Date: / / By: _____ Company: _____

FIELD OBSERVATIONS

Facility: ARCO

Sample Point ID: BR-117D

Field Personnel: R. STANF

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 6-06-11 / 1142

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: 6-06-11 / 1145

Date / Time Completed: 6-06-11 / 1210

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 48.43

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: BLADDER PUMP

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
	ml/min	WL				~~2179 TDS~~			
1150	150	48.77		11.9	7.53	2179	50.7	-133	0.53
1155	150	48.75		12.0	7.62	2026	45.8	-103	0.38
1200	150	48.75		12.1	7.60	2010	45.3	-100	0.36
1210	150	48.75		12.3	7.62	1992	44.8	-96	0.35

SAMPLED @ 1210/6-06-11

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 #: 364075 NTU std. = 10 NTU _____NTU std. = _____NTU

Solutions: RT00528

pH Serial #: 1534 4.0 std.= 4.0 7.0 std.= 7.0 10.0 std. = _____

Solutions: _____

Conductivity Serial #: 1534 1000 umhos/cm= 1000 _____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: 6/06/11 By: _____ Company: JAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR - 118 D

Field Personnel: R. STRUP

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 6-06-11 / 1105

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: 6-06-11 / 1110

Date / Time Completed: 6-06-11 / 1130

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 47.33

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: BLADDER PUMP

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/Intz)~~ mL/MIN	WL	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1115	150	47.82		11.9	7.94	1489	28.9	-61	0.30
1120	150	47.89		11.4	8.05	1455	31.7	-53	0.27
1125	150	47.90		11.4	8.12	1451	30.3	-50	0.27
1130	150	47.90		11.3	8.13	1440	29.8	-49	0.25

BS 06/06/11/1130

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-122 D

Field Personnel: RS

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 6-07-11 / 1145

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: 6-07-11 / 1150

Date / Time Completed: 6-07-11 / 1220

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 44.79

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: BLADDER PUMP

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)~~	WL	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1200	150 ml/min	45.10		12.5	7.10	2295	19.2	-229	0.55
1210		45.10		12.4	7.12	2293	19.5	-236	0.41
1215		45.10		12.5	7.09	2292	19.8	-227	0.39
1220	↓	45.10		12.6	7.07	2307	19.5	-229	0.39

SAMPLED @ 1220/6-07-11

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: _____

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: BR-123D

Field Personnel: R. SENF

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 6-07-11 / 1235

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: 6-07-11 / 1240

Date / Time Completed: 6-07-11 / 1310

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 44.98

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: BLADDER PUMP

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/hr)~~		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1250	ML/MIN 150	WL 45.12		12.2	7.69	2095	17.3	-250	0.45
1300	150	45.15		12.0	7.78	2107	11.6	-241	0.39
1305	150	45.15		12.0	7.80	2109	11.9	-244	0.41
1310	150	45.15		11.9	7.82	2109	12.2	-242	0.41

SAMPLED @ 1310/6-07-11

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: BR-126

Field Personnel: AL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-14-11 / 1017

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: 6-14-11 1020

Date / Time Completed: 6-14-11 1050

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 7.53

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: Low flow

Start SEE TURB 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	cc							
1025	200	7.57		14.9	7.07	931	15.78	-200	0.70
1030				14.5	7.03	935	10.79	-197	0.68
1035				14.4	7.00	939	13.91	-197	0.66
1040				14.1	7.00	940	9.17	-196	0.65
1045				14.3	7.01	940	10.11	-196	0.64
1050				14.1	7.00	940	8.92	-196	0.63

SAMPLED @ 1050 / 6-14-11

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 Chemical Sample Point ID: BR-127

Field Personnel: AL JS Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-10-11 / 1105 Water Level @ Sampling, Feet: 7.44

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 ( )
1107	14.7	7.89	3412	1.30	-144	

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 70

Sample Characteristics: Clear yellow Tint

COMMENTS AND OBSERVATIONS: _____

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

Date: 6/10/11 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: MW-103

Field Personnel: R. SENF

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 6-15-11 1210

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: 6-15-11 / 1225

Date / Time Completed: 6-15-11 / 1250

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 1.78

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 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
1235	2.70	ml/min 120		21.2	7.25	705	2.82	-73	1.01
1240	2.70	120		20.9	7.19	719	2.71	-65	0.90
1245	2.70	120		20.6	7.17	726	2.53	-63	0.91
1250	2.70	120		20.5	7.15	727	2.59	-61	0.89

SAMPLED @ 1250/6-15-11

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: _____

_____

_____

_____

_____

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: MW-104

Field Personnel: R. SENF

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 6-15-11 / 1300

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: 6-15-11 / 1303

Date / Time Completed: 6-15-11 / 1325

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 6.93

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. TURBID Finish TAN TINT

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	ml/min 100 WL 8.03		~~13.3~~ ~~7.34~~	7.34	661	139	-115	1.13
1315	60 7.51		13.2	7.36	648	103	-117	0.66
1320	60 7.55		13.3	7.37	643	90.3	-117	0.65
1325	60 7.55		13.2	7.39	630	91.7	-115	0.66

SAMPLED @ 1325/6-15-11

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: MW-106

Field Personnel: AL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-13-11 / 1220

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: 6-13-11 1315

Date / Time Completed: 6-13-11 1335

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 10.38

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 Slightly Turbid Light Brown Finish Clear w/ Floaties

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz) WL	Purge Rate (gpm/htz) mL/min	Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other DO
1320	10.36	150		12.4	7.00	1676	11.76	-159	1.21
1325				12.3	6.90	1672	13.25	-157	1.19
1330				12.3	6.91	1748	12.66	-158	1.13
1335				12.4	6.88	1702	11.39	-157	1.14

SAMPLED @ 1335 / 6-13-11

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: MW-114

Field Personnel: PL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-14-11 / 1233

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: 6-14-11 1242

Date / Time Completed: 6-14-11 1305

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 9.30

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: Low 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
1250	mL/M Bo	wL 9.98		15.9	7.41	1832	14.6	-73	.96
1255	↓	↓		16.0	7.40	1829	11.2	-69	.94
1300				15.9	7.37	1830	10.83	-67	0.93
1305				15.8	7.37	1830	9.90	-67	0.92

SAMPLED @ 1305 / 6-14-11

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: MW-127

Field Personnel: AL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-7-11 / 1233

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: 6-7-11 1235

Date / Time Completed: 6-7-11 1250

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 5.69

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
	MP/n	WL							
1240	60	5.72		15.7	8.10	1070	6.90	-159	0.88
1245	↓	↓		15.8	8.05	1069	6.32	-161	0.87
1250	↓	↓		15.6	7.97	1065	6.21	-161	0.86

SAMPLED @ 1250 / 6-7-11

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: _____

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: PW-10

Field Personnel: PL, JS, RS

Sample Matrix: GW

Former pump out well

MONITORTING WELL INSPECTION:

Date/Time 6-9-11 / 1136

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: 6-9-11 1150

Date / Time Completed: 6-9-11 1210

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

Riser Diameter, Inches: P/W

Initial Water Level, Feet: 9.45

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: Low flow

Purged To Dryness Y / (N)

Purge Observations: ____

Start Clear 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
	one/n	wl							
1155	200	9.46		15.7	8.92	9440	4.40	-182	0.77
1200	↓	↓		16.5	8.95	9429	4.23	-179	0.75
1205				16.9	8.95	9420	4.20	-177	0.74
1210				16.7	8.90	9418	3.99	-177	0.72

SAMPLED @ 1210 / 6-9-11

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: _____

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: PW-12

Field Personnel: PL, JJ, RJ

Sample Matrix: GW
ROTOR SUBMERSIBLE WELL

MONITORTING WELL INSPECTION:

Date/Time 6-7-11 / @ 1139

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: 6-7-11 1141

Date / Time Completed: 6-7-11 1200

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

Riser Diameter, Inches: ____

Initial Water Level, Feet: 6.22

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
	ml/m	tbl							
1145	200	6.29		16.7	7.20	3839	7.92	-176	0.70
1150	↓	↓		16.7	7.23	3840	3.54	-170	0.68
1155				16.9	7.23	3845	3.09	-169	0.67
1200				17.1	7.25	3851	2.97	-169	0.66

SAMPLED @ 1200 / 6-7-11 DUP SAMPLED

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 Chemical

Sample Point ID: PW-13

Field Personnel: M. JS

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-10-11 / 1225

Water Level @ Sampling, Feet: 27.10

Method of Sampling: SAMPLE PUMP

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 ( )
1221	16.7	6.80	2845	5.27	-125	

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 71

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS: _____

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

Date: 6/10/11 By: [signature] Company: TAL

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH Chemical

Sample Point ID: PW-14

Field Personnel: AL JS

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-10-11 / 1055

Water Level @ Sampling, Feet: 35.60

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 ( )
1057	14.1	7.90	4016	170.0	-181	

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 70°

Sample Characteristics: TURBID Gray

COMMENTS AND OBSERVATIONS:

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

Date: 6/10/11 By: _____ Company: TAL

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH Chemical

Sample Point ID: PW-15

Field Personnel: AL JS

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-10-11 / 1040

Water Level @ Sampling, Feet: 30.92

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 ( )
1043	14.4	~~9.66~~	5112	19.0	-169	
		8.96				

INSTRUMENT CHECK DATA:

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

Solutions: ____

pH Serial #: 5177 4.0 std.= 4.0 7.0 std.= 7.0 10.0 std. = ____

Solutions: ____

Conductivity Serial #: 5177 1000 umhos/cm= 1000 ____umhos/cm= ____

Solutions: ____

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUN 69°

Sample Characteristics: clear AMber

COMMENTS AND OBSERVATIONS: ____

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

Date: 6/10/11 By: [signature] Company: TAL

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH Chemical Sample Point ID: MW-16

Field Personnel: PL, JS Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-7-11 / 1110 Water Level @ Sampling, Feet: _____

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 ( )
1113	14.7	7.21	4328	45.9	-198	

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 79

Sample Characteristics: Clear Red/orange Tint

COMMENTS AND OBSERVATIONS:

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

Date: 6/7/11 By: _____ Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: B-7

Field Personnel: AL, JJ, RS

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-10-11 / 1201

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: 6-10-11 1205

Date / Time Completed: 6-10-11 1235

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 14.20

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 TURBO OFF 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	mL							
1215	100	14.25		15.1	7.25	1234	26.0	-90	0.86
1220		14.30		16.3	7.10	1215	22.7	-89	0.85
1225		14.33		16.5	7.09	1215	13.02	-87	0.83
1230				16.7	7.09	1217	12.06	-88	0.82
1235	↓	↓		16.8	7.08	1215	11.91	-88	0.81

SAMPLED @ 1235 / 6-10-11

RJ

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: B-11

Field Personnel: PL, JT, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-6-11 / 1337

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

KNOCK ON RISER 5 PT DOWN

PURGE INFORMATION:

Date / Time Initiated: 6-6-11 1340

Date / Time Completed: 6-6-11 1349

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 5.05

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: ____

Start SETTING Finish SETTING

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

SAMPLED @ /

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID B-11

Date/Time 6-7-11 / 1305 Water Level @ Sampling, Feet: 5.09

Method of Sampling: Peristaltic Pump 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 ( )
1305	15.1	7.79	596	425	-108	

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: 83° Sun

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

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

Date: 6/7/11 By: [signature] Company: TH

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: B-16

Field Personnel: AL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-14-11 / 1109

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: 6-14-11 1112

Date / Time Completed: 6-14-11 1130

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 5.42

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 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	mL							
1115	200	5.50		14.2	7.63	526	3.19	-171	0.87
1120	↓	↓		13.9	7.50	526	2.96	-169	0.86
1125				13.8	7.47	529	2.54	-169	0.94
1130	↓	↓		13.8	7.46	531	2.50	-168	0.93

SAMPLED @ 1130 / 6-14-11

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: _____

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: B-17

Field Personnel: PL, JT, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-9-11 / 1109

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: 6-9-11 1115

Date / Time Completed: 6-9-11 1135

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 9.15

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: Low Flow

Purged To Dryness Y / (N)

Purge Observations: ____

Start Clear Amber Finish Clear 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
1120	Arch 120	WC 9.17		15.2	8.80	9989	18.6	-145	0.67
1125	↓	↓		15.5	8.85	10,000	13.46	-140	0.65
1130				15.7	8.90	10,100	12.22	-139	0.64
1135	↓	↓		15.6	8.95	10,100	11.80	-138	0.63

SAMPLED @ 1135 / 6-9-11

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: ARCA

Sample Point ID: GD-1

Field Personnel: R. SENF

Sample Matrix: S/W

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-06-11 1155

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 ( )	Other ( )
1200	17.2	7.99	1535			

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, 75°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: 6/06/11 By: [signature] Company: TAC

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: QO-2

Field Personnel: R. STAUF

Sample Matrix: S/W

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-06-11 1310

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 ( )	Other ( )
1305	15.9	7.92	1476			

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, 75°

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS: _____

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

Date: 6/06/11 By: [signature] Company: TAC

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: GO-251

Field Personnel: R. SENF

Sample Matrix: S/W

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-06-11 / 1320

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 ( )	Other ( )
1330	21.7	7.39	583			

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, 77°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: 6 Dec 11 By: BJ Company: IAL

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: QS-4

Field Personnel: R. SENF

Sample Matrix: SEEP

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 6-06-11 1445

Water Level @ Sampling, Feet: N/A

Method of Sampling: S/S PAIL

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 ( )	Other ( )
1455	11.9	2.95	1712			

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, 80°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: 6/06/11 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: ARCH

Sample Point ID: NESS - East

Field Personnel: AL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-14-11 / 1128

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

Prot. Casing/riser height: —

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

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: 6-14-11 1134

Date / Time Completed: 6-14-11 1200

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 21.84

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 w/ Orange Specs Finish Clear w/ Orange Specs

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						
1140	80	22.08	20.0	6.60	1356	22.0	-99	0.83
1145	↓	22.43	20.4	6.64	1369	17.21	-107	0.61
1150		22.70	20.1	~~6.73~~	1355	14.01	-112	0.58
1155		22.91	20.2	6.78	1342	17.23	-113	0.59
1200	↓	23.05	20.1	6.83	1339	16.06	-110	0.59

SAMPLED @ 1200 / 6-14-11

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: _____

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: NESS-W

Field Personnel: AL, JS, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-14-11 / 1025

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

Prot. Casing/riser height: —

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

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: 6-14-11 1042

Date / Time Completed: 6-14-11 1105

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 30.90

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: 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
	ml/min / WL							
1050	150 / 30.96		13.6	6.84	1662	5.43	-157	0.71
1055			13.5	7.04	1662	4.87	-197	0.58
1100			13.4	7.09	1662	5.08	-199	0.53
1105			13.3	7.10	1663	5.04	-199	0.56

SAMPLED @ 1105 / 6-14-11

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 #: 6204061 4.0 std.= 4.03 7.0 std.= 7.01 10.0 std. = _____

Solutions: 4 = RT14752 7 = RT10574

Conductivity Serial #: 6204061 1000 umhos/cm= 1000 _____ umhos/cm= _____

Solutions: RT 11746

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: E-3

Field Personnel: AL, JJ, RJ

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 6-6-11 / 1316

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

Prot. Casing/riser height: —

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

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: 6-6-11 1321

Date / Time Completed: 6-6-11 1328

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 4.55

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 Dry

Purged To Dryness (Y) / N

Purge Observations:

Start SEE TOPO Finish SEE TOPO

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

SAMPLED @ /

FIELD OBSERVATIONS (continued)

SAMPLING INFORMATION: POINT ID E-3

Date/Time 6-7-11 / 1130 Water Level @ Sampling, Feet: 4.60

Method of Sampling: Peristaltic Pump 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 ( )
1131	15.1	7.61	3558	34.9	-184	

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 78

Sample Characteristics: clear

COMMENTS AND OBSERVATIONS:

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

Date: 6/7/11 By: [signature] Company: TAC

LeachField Form
Revision 0
March, 15 2002

FIELD OBSERVATIONS

Facility: ARCH Chemical

Sample Point ID: TP-Effluent

Field Personnel: AL JS

Sample Matrix: GW

~~X~~ Grab ( ) Composite

SAMPLING INFORMATION: 1115

Date/Time 6-10-11 / ~~1116~~ 1115

Water Level @ Sampling, Feet: —

Method of Sampling: MANUAL GRAB / SAMPLE POT

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 ( )
1116	29.1	8.99	40,800	44.2	-113	

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 71

Sample Characteristics: TURBID Yellow

COMMENTS AND OBSERVATIONS:

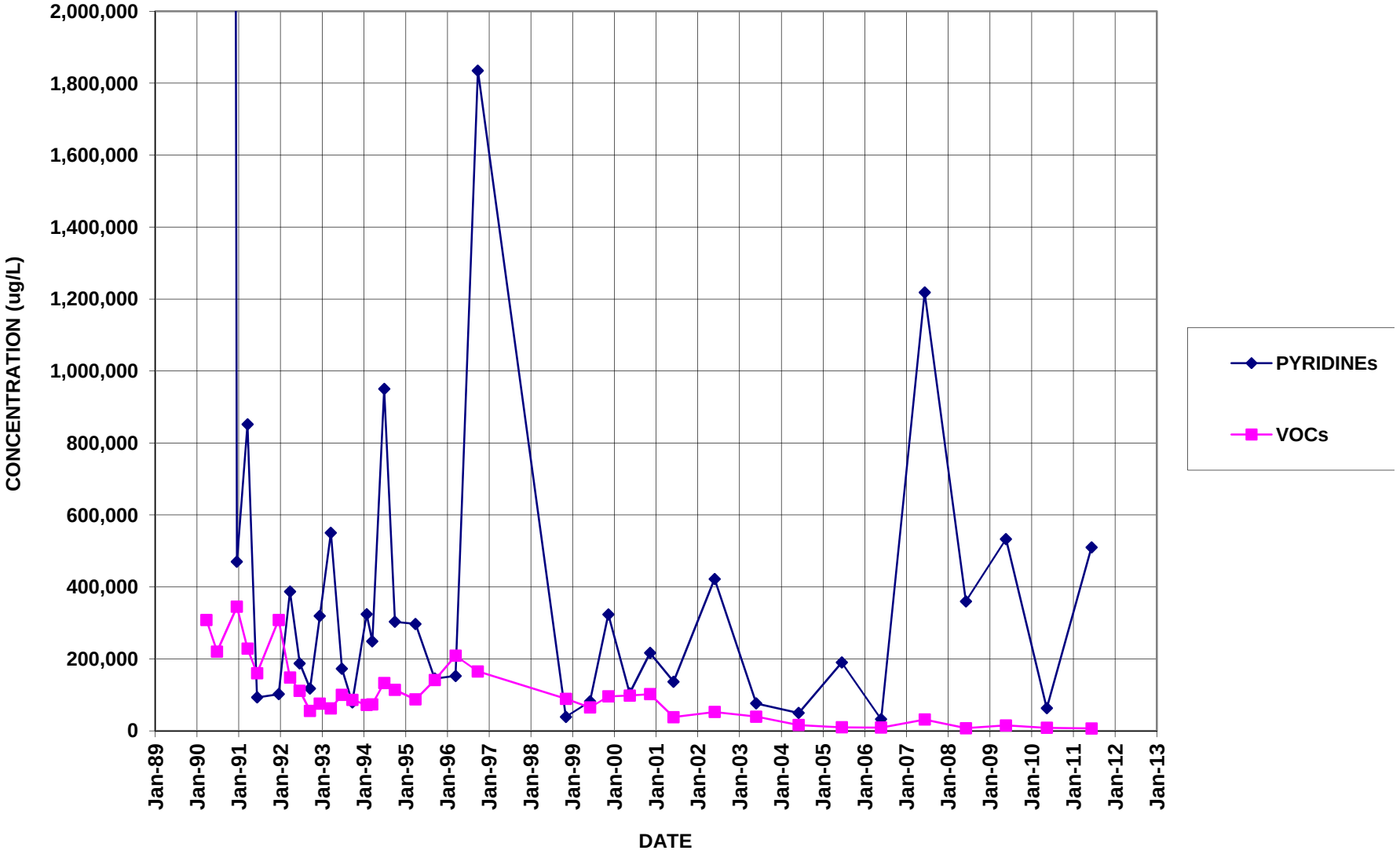
I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 6/10/11 By: [signature] Company: TAL

Appendix B

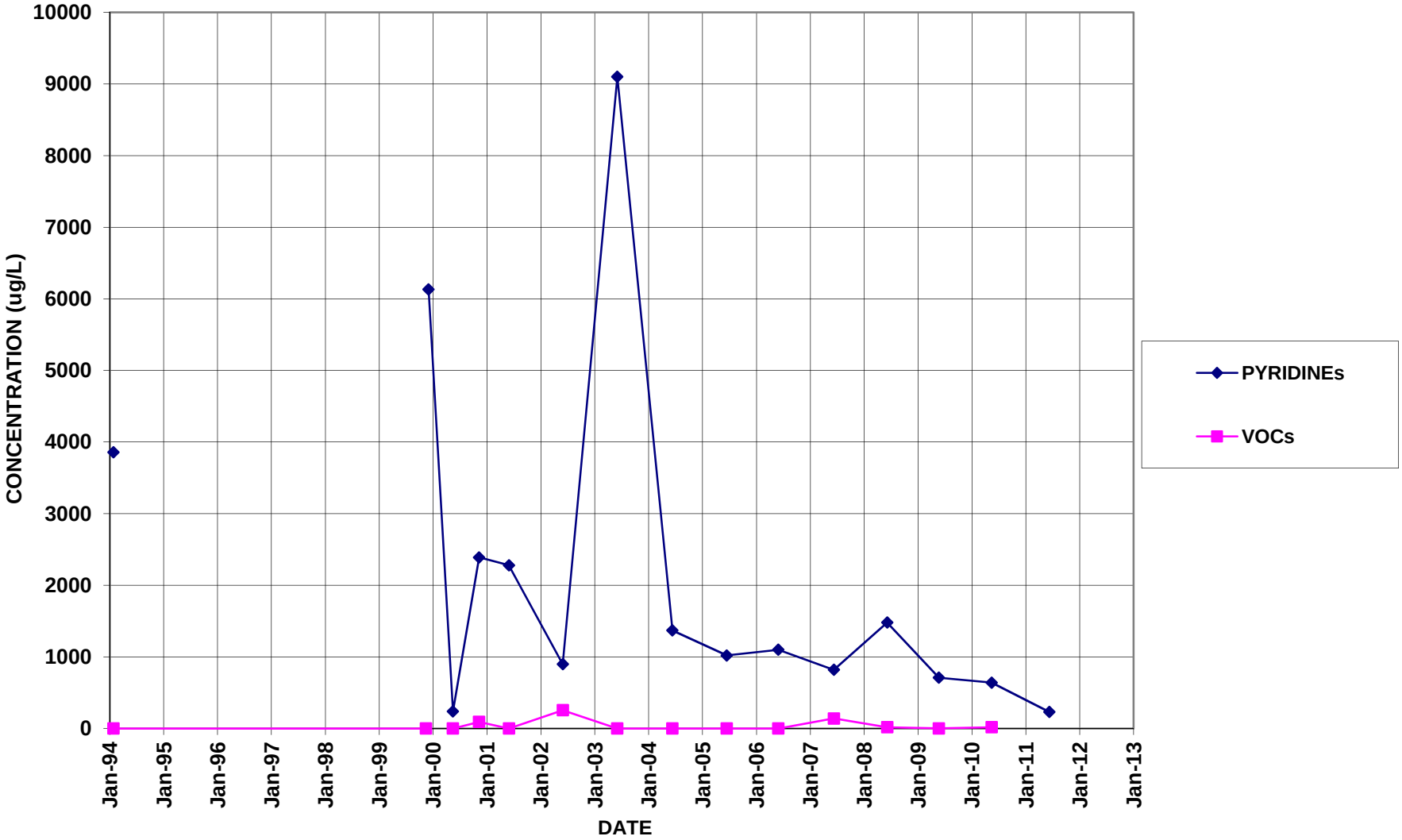
Well Trend Data

B-17



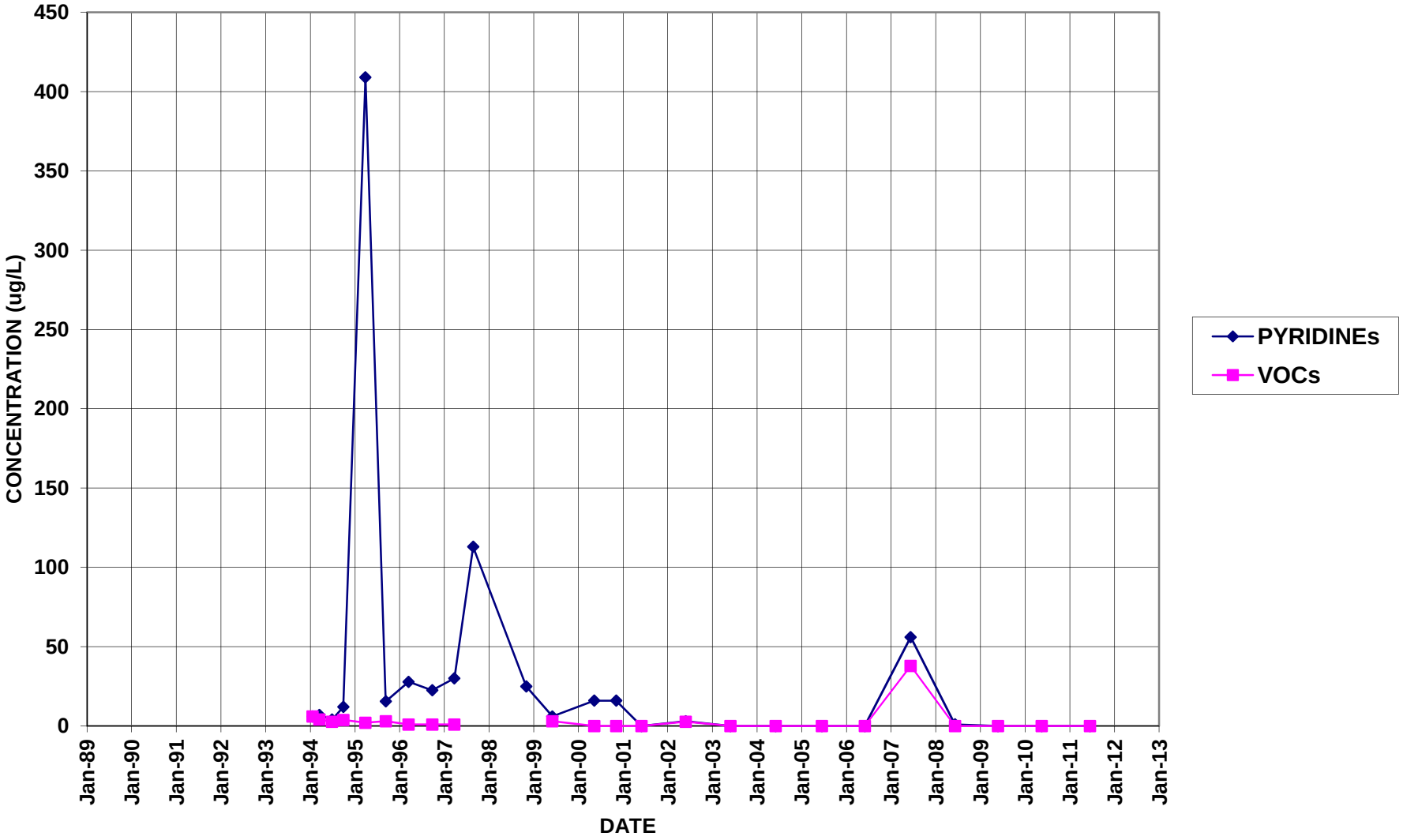
Prepared by: nmb
Reviewed by: jeb

B-7



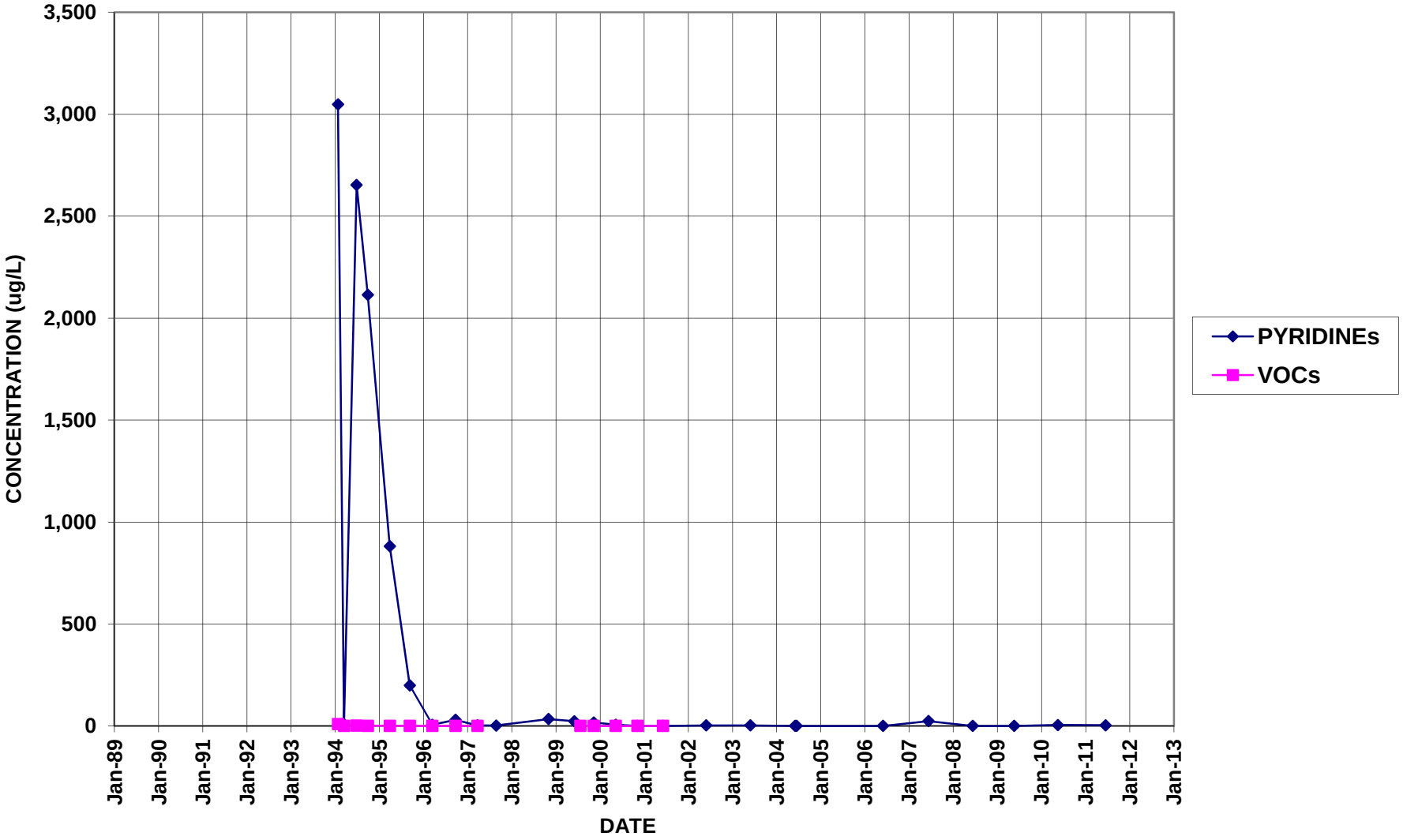
Prepared by: nmb
Reviewed by: jeb

BR-103

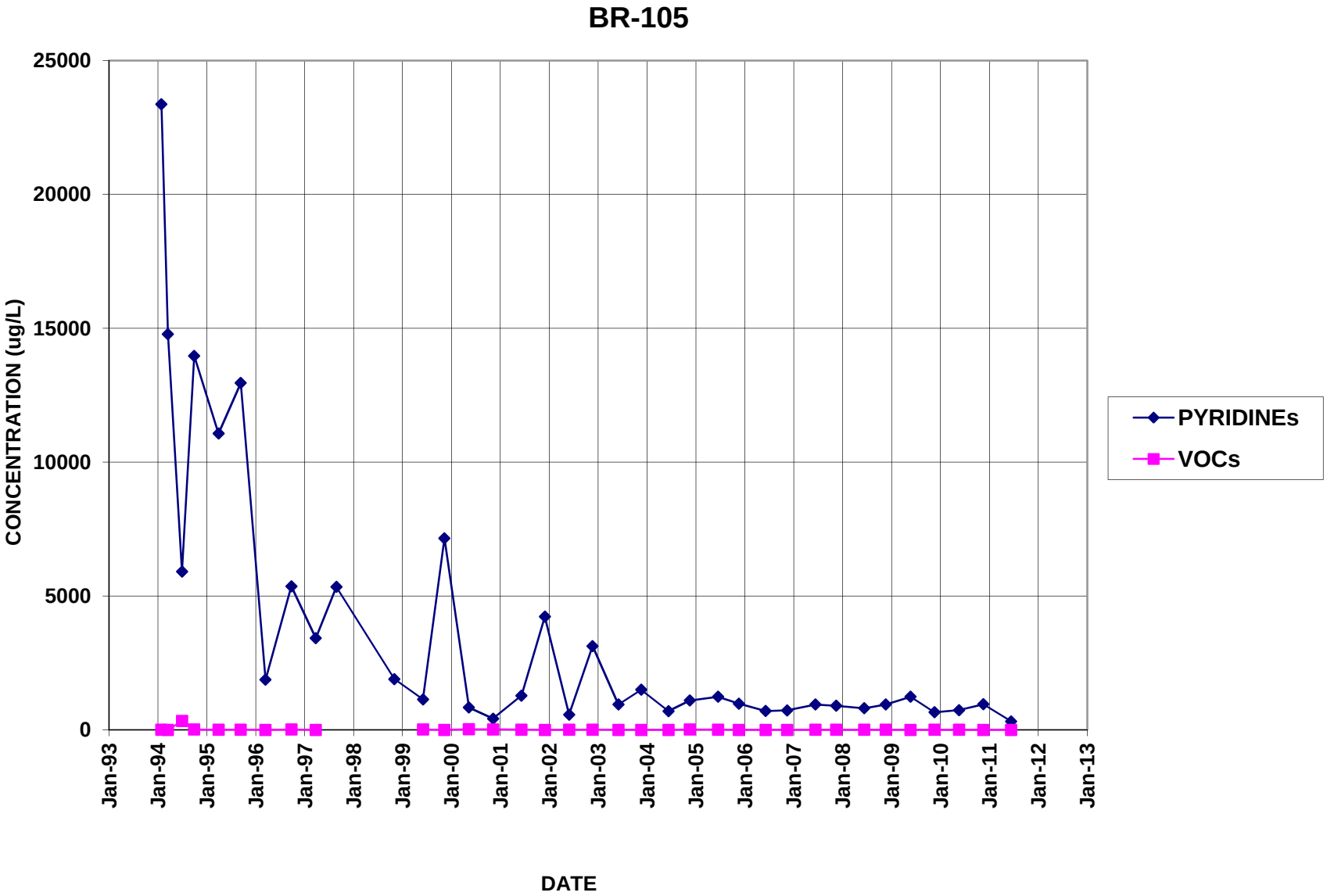


Prepared by: nmb
Reviewed by: jeb

BR-104

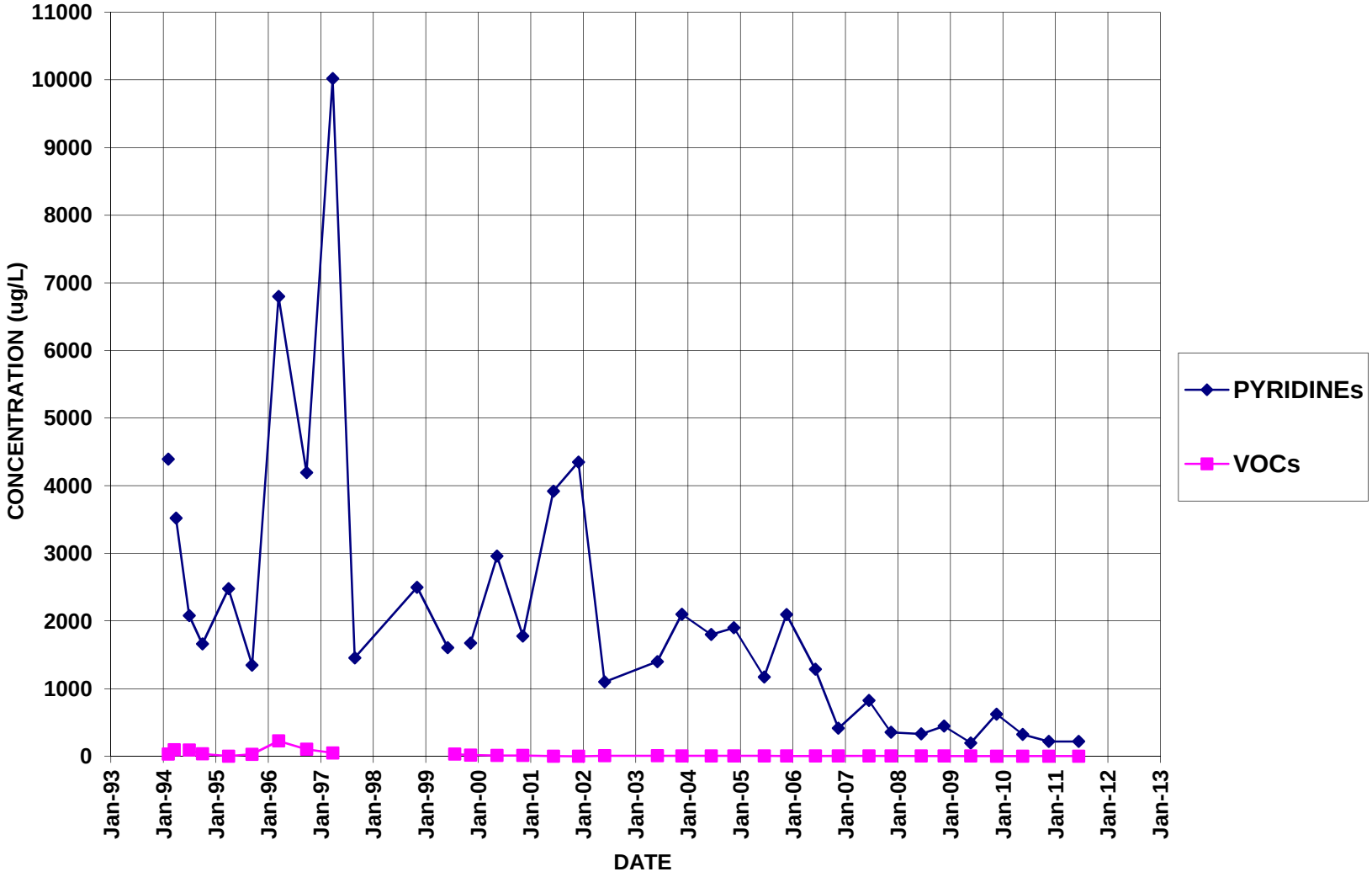


Prepared by: nmb
Reviewed by: jeb



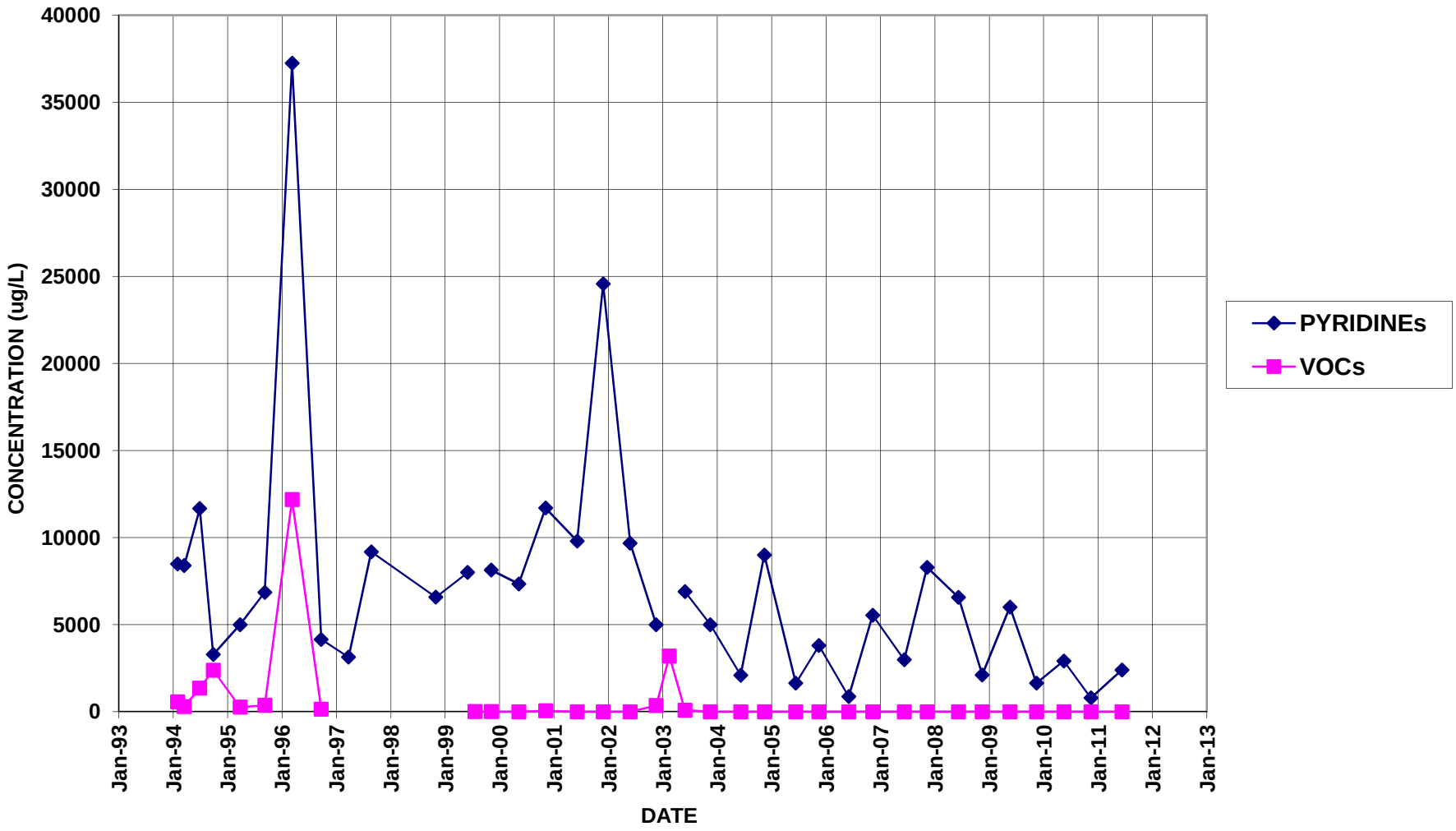
Prepared by: nmb
Reviewed by: jeb

BR-105D

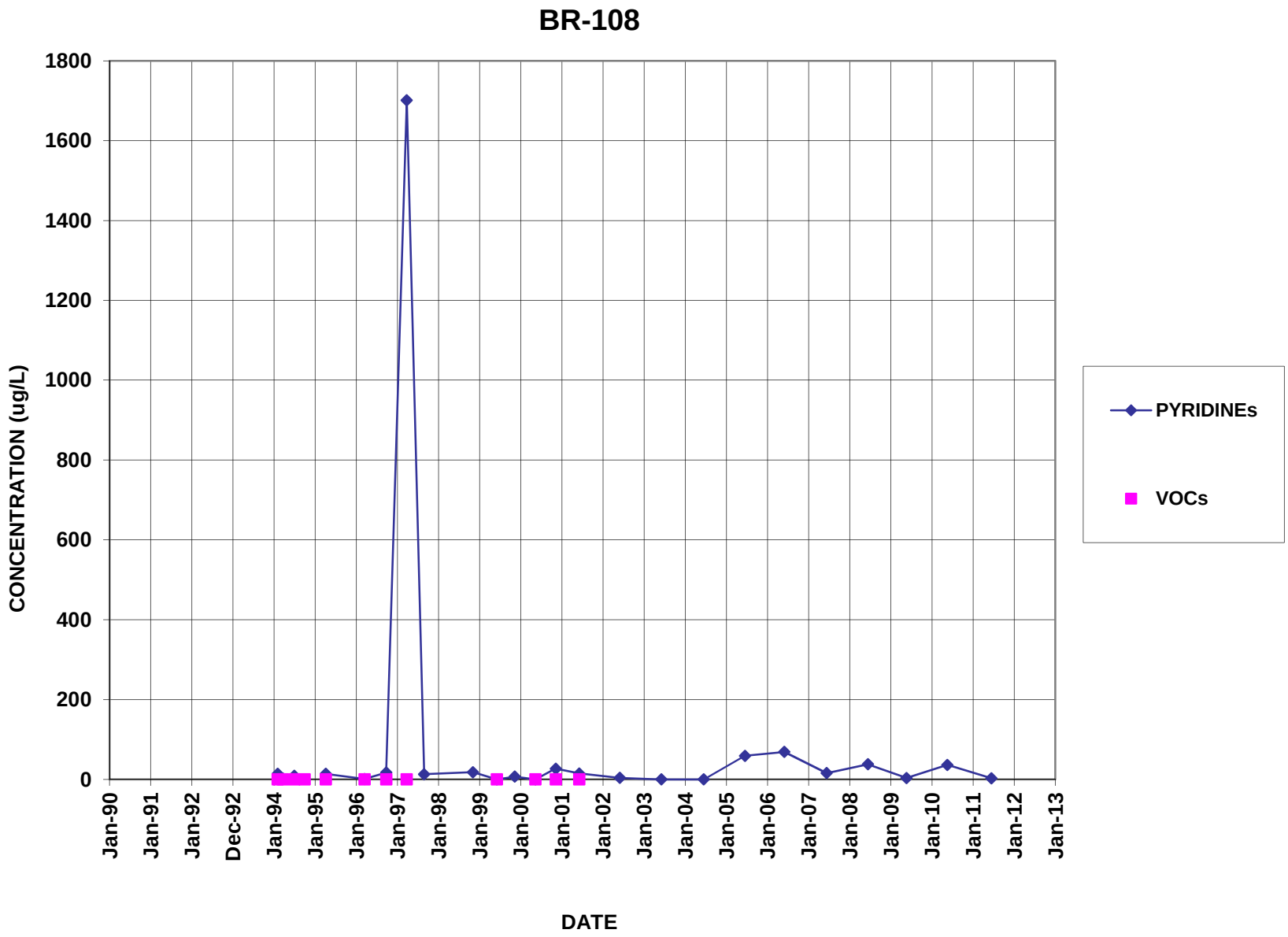


Prepared by: nmb
Reviewed by: jeb

BR-106

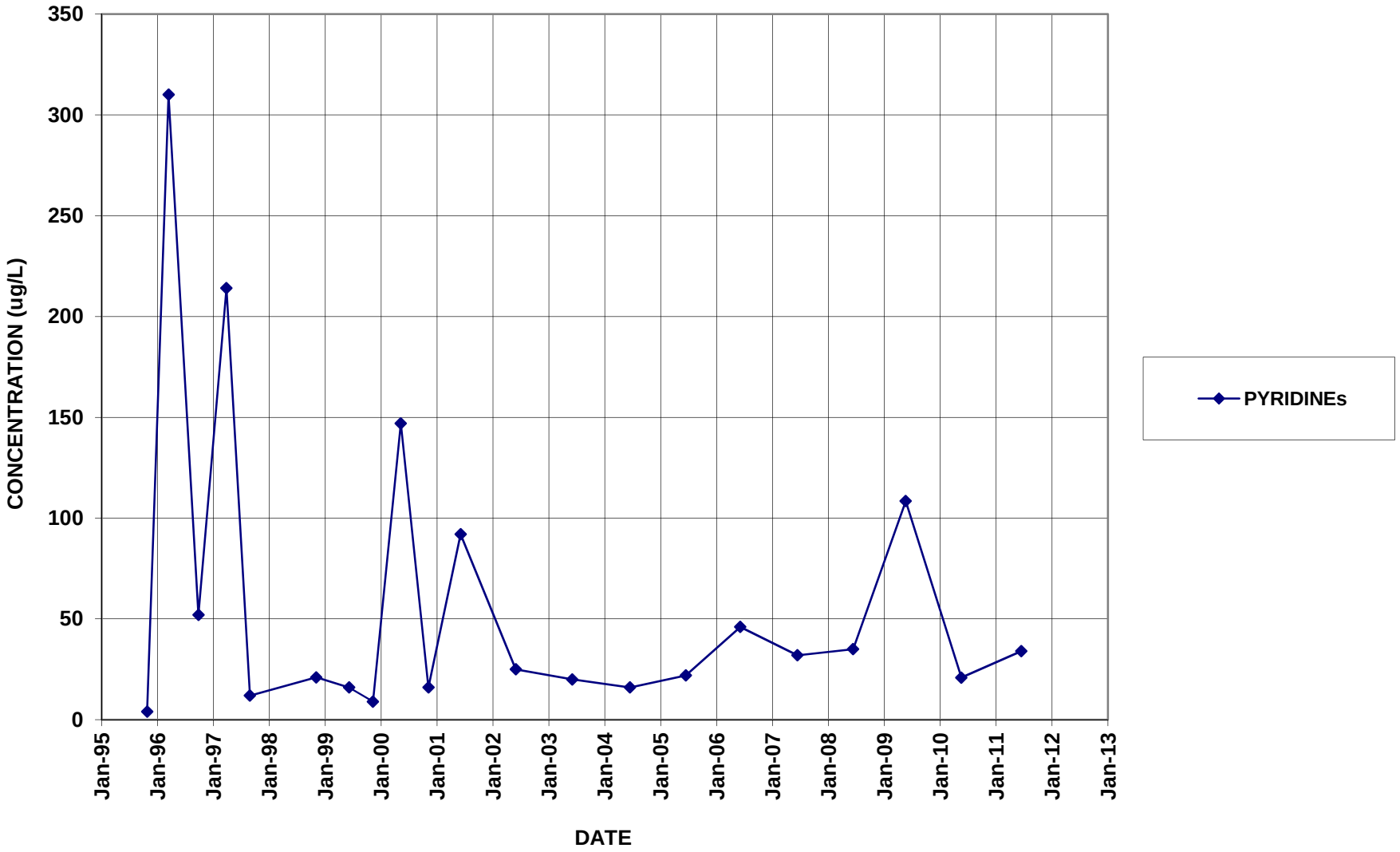


Prepared by: nmb
Reviewed by: jeb



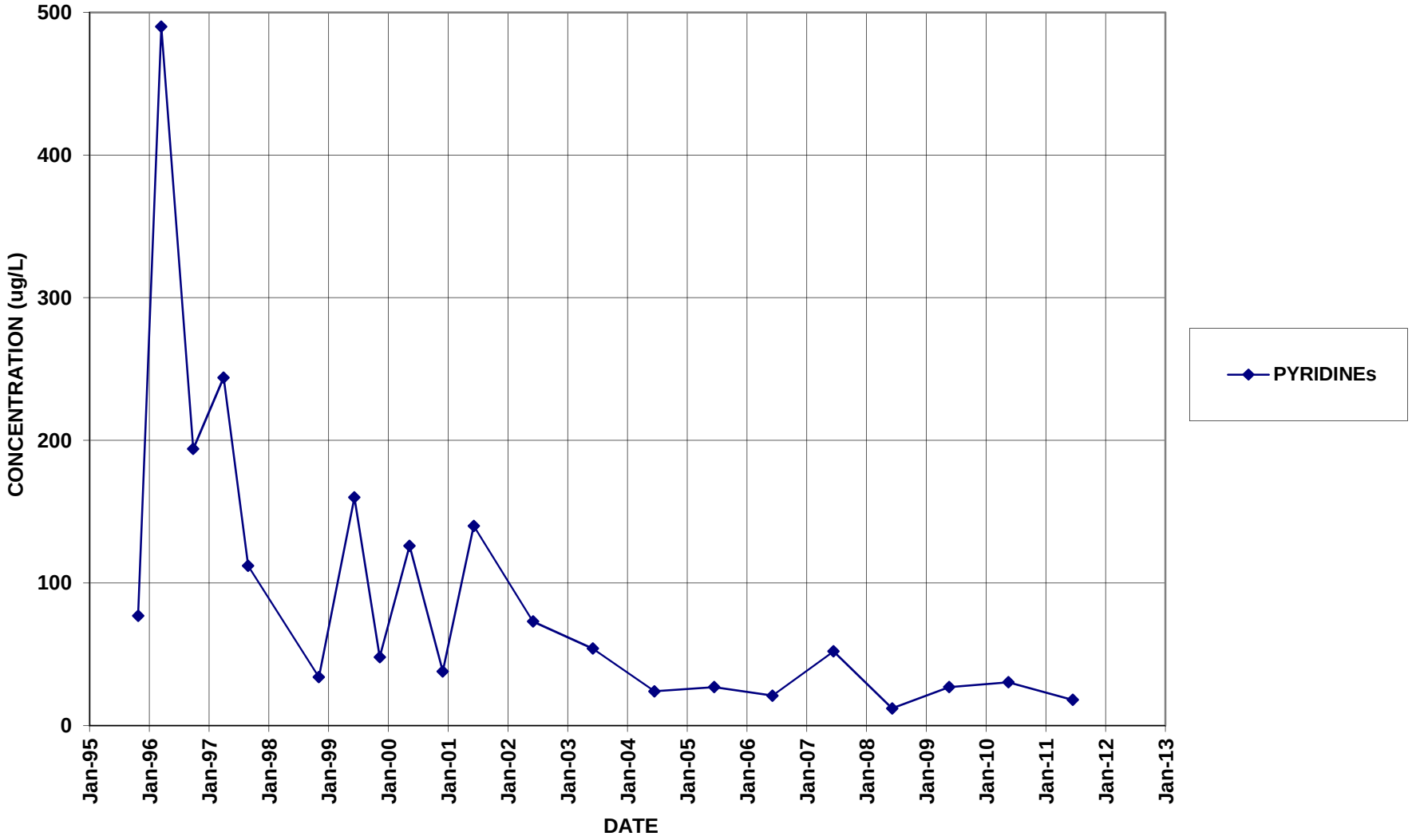
Prepared by: nmb
Reviewed by: jeb

BR-112D



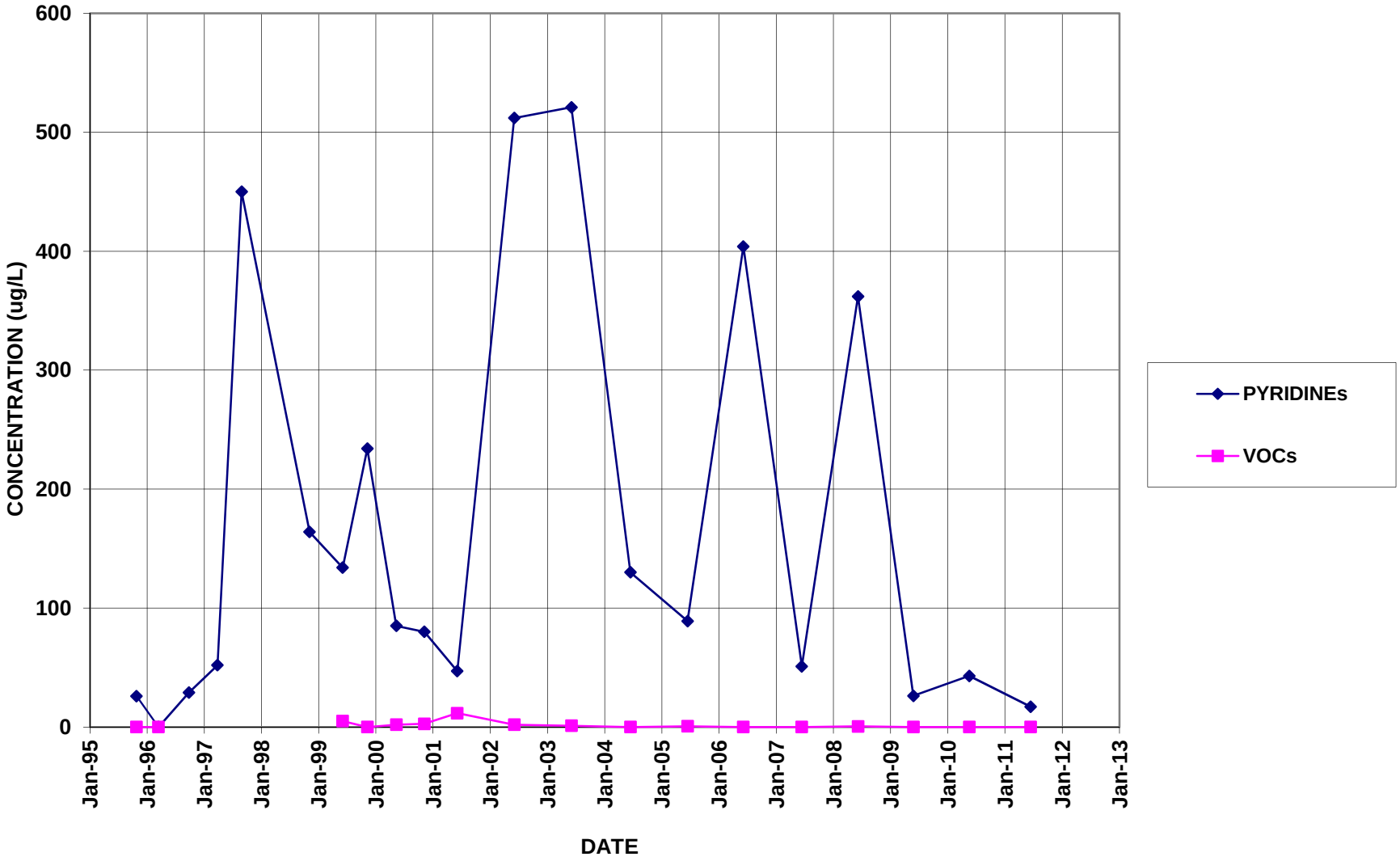
Prepared by: nmb
Reviewed by: jeb

BR-113D



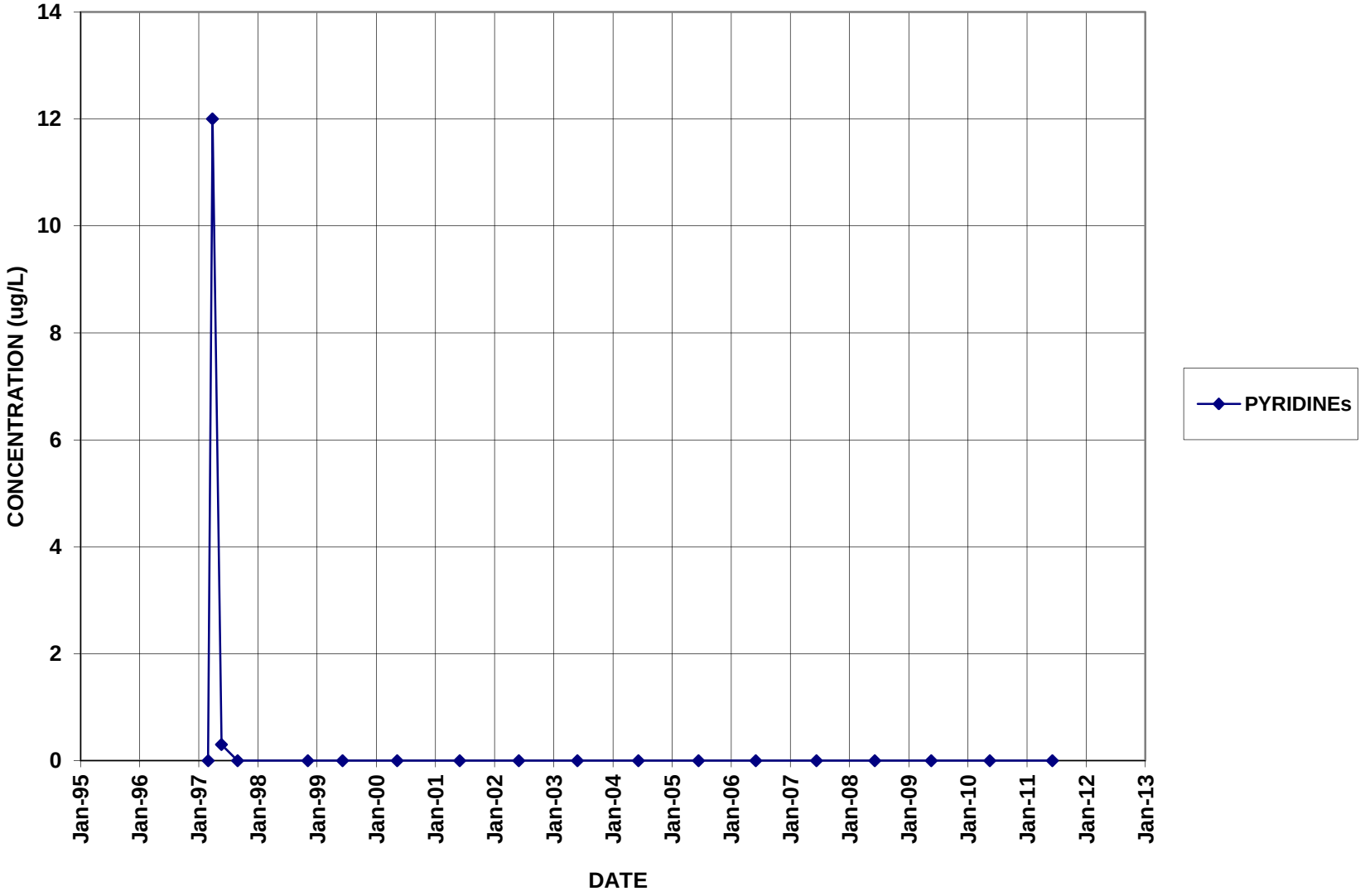
Prepared by: nmb
Reviewed by: jeb

BR-114



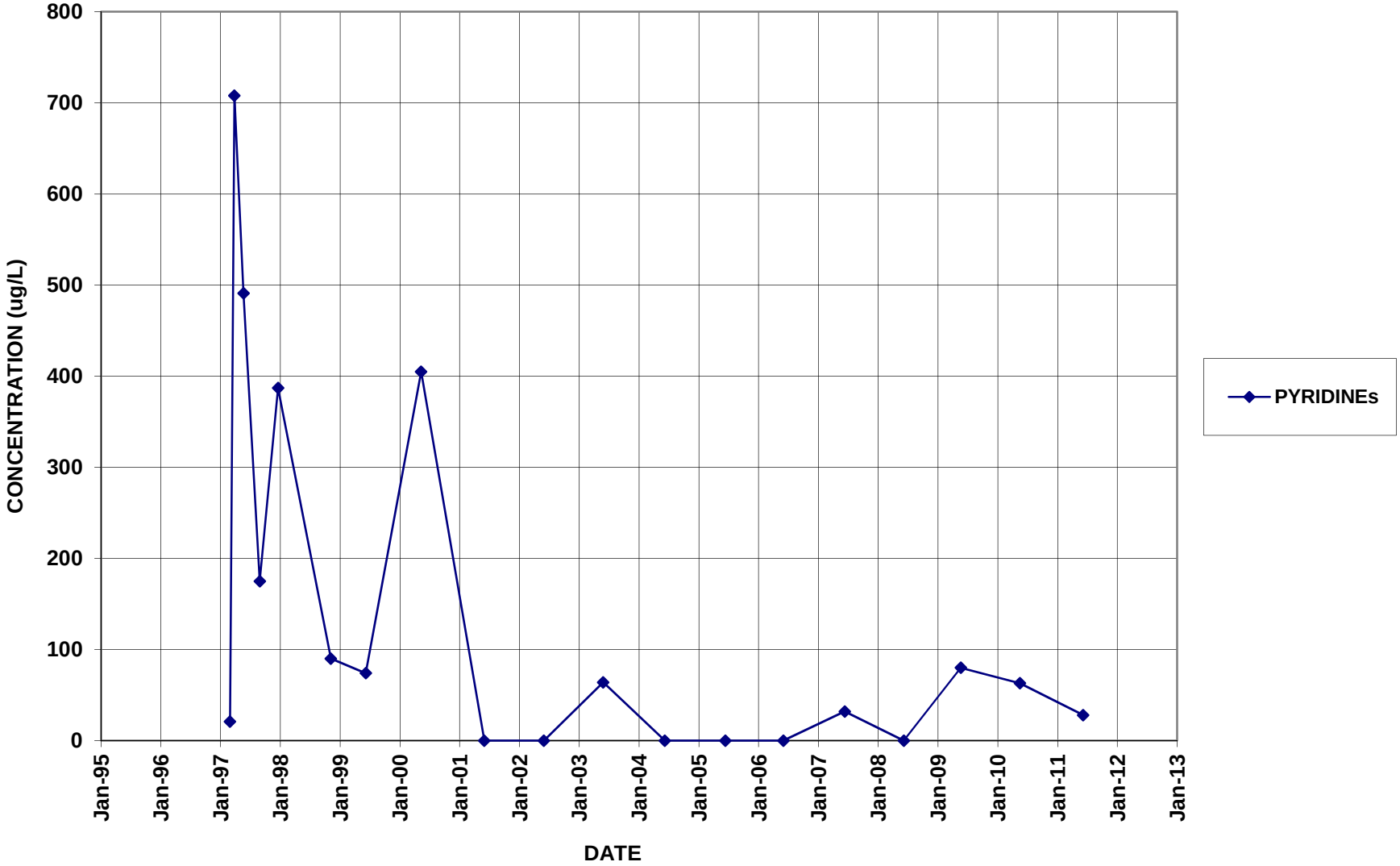
Prepared by: nmb
Reviewed by: jeb

BR-116



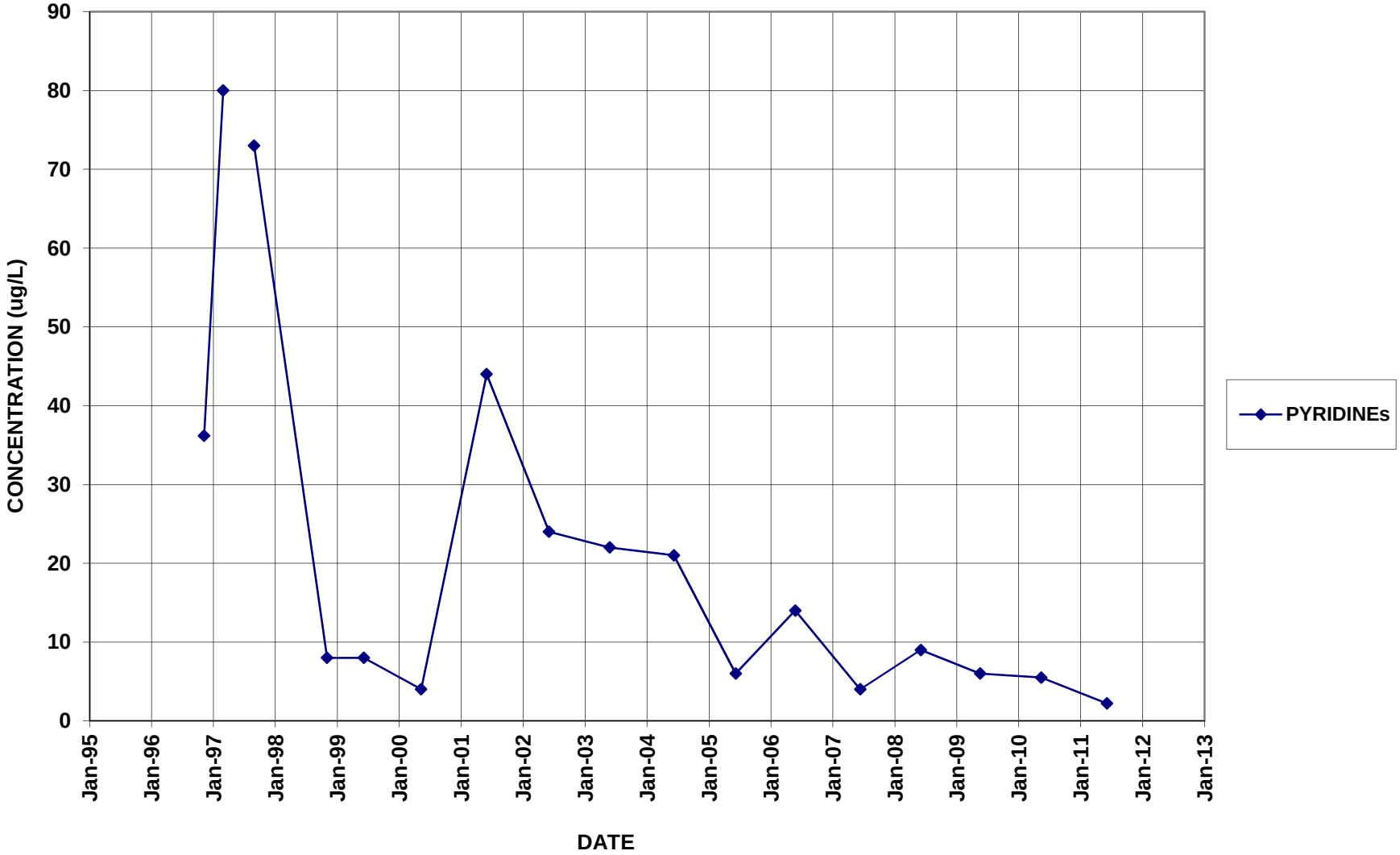
Prepared by: nmb
Reviewed by: jeb

BR-116D



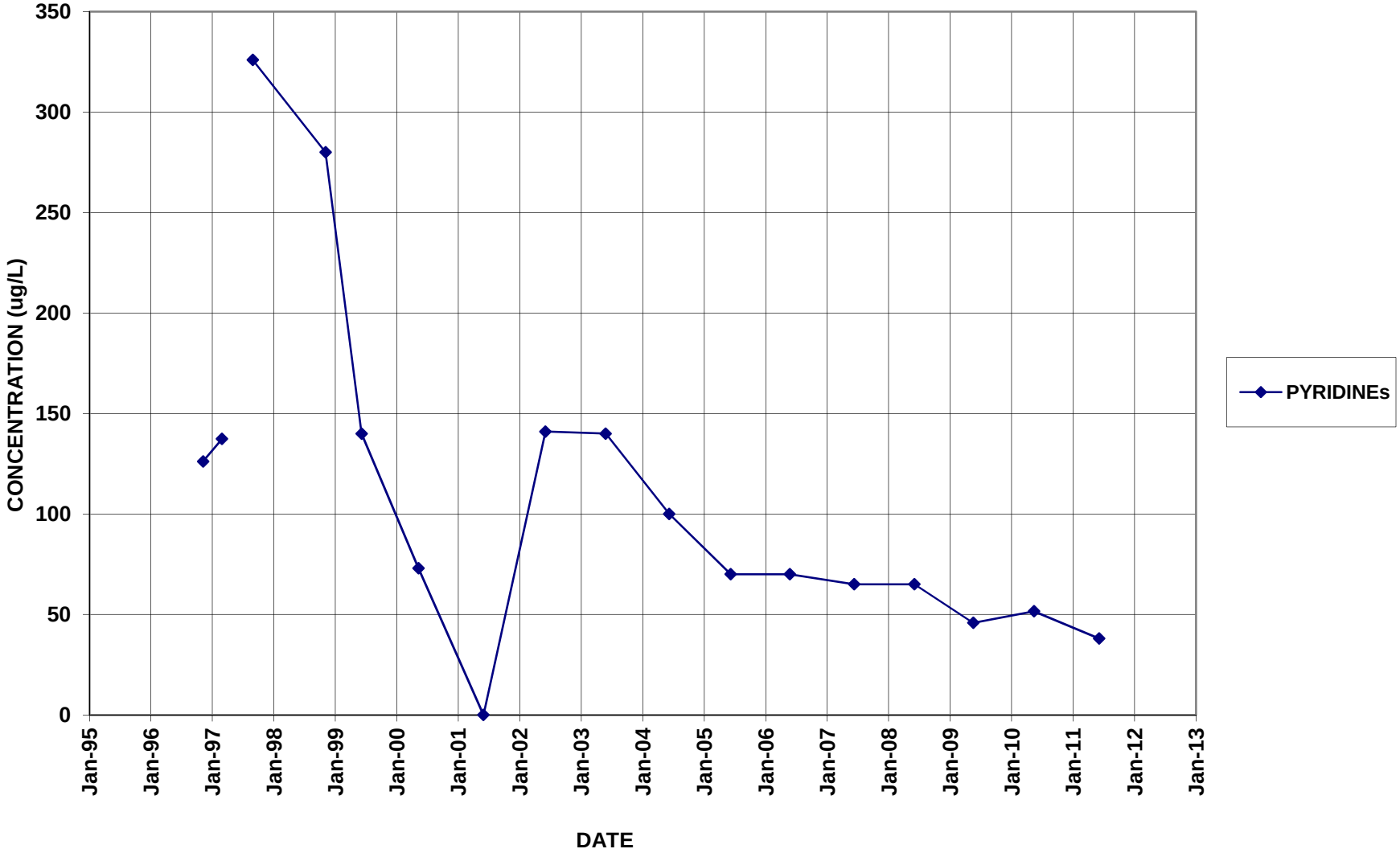
Prepared by: nmb
Reviewed by: jeb

BR-117D



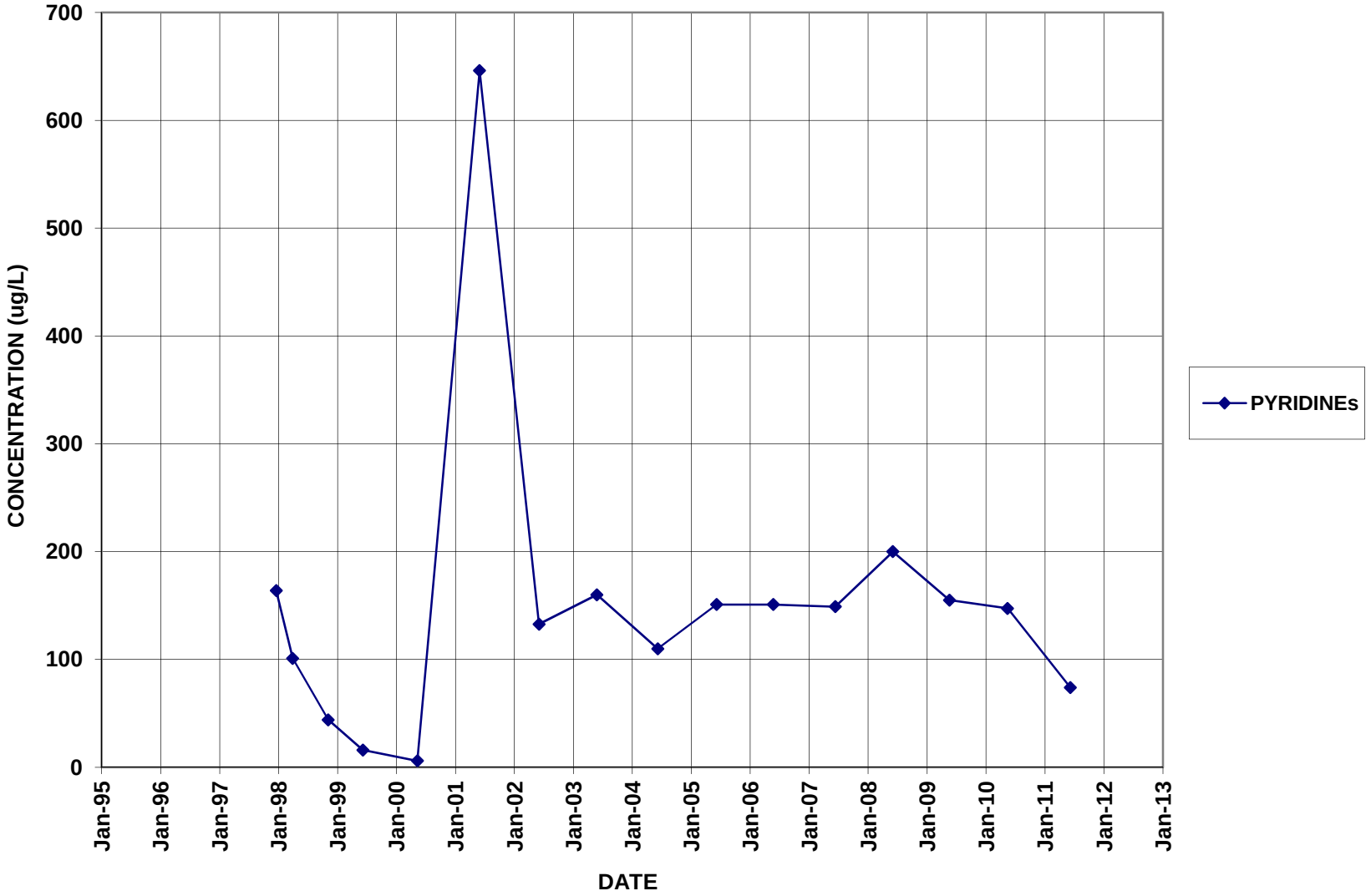
Prepared by: nmb
Reviewed by: jeb

BR-118D



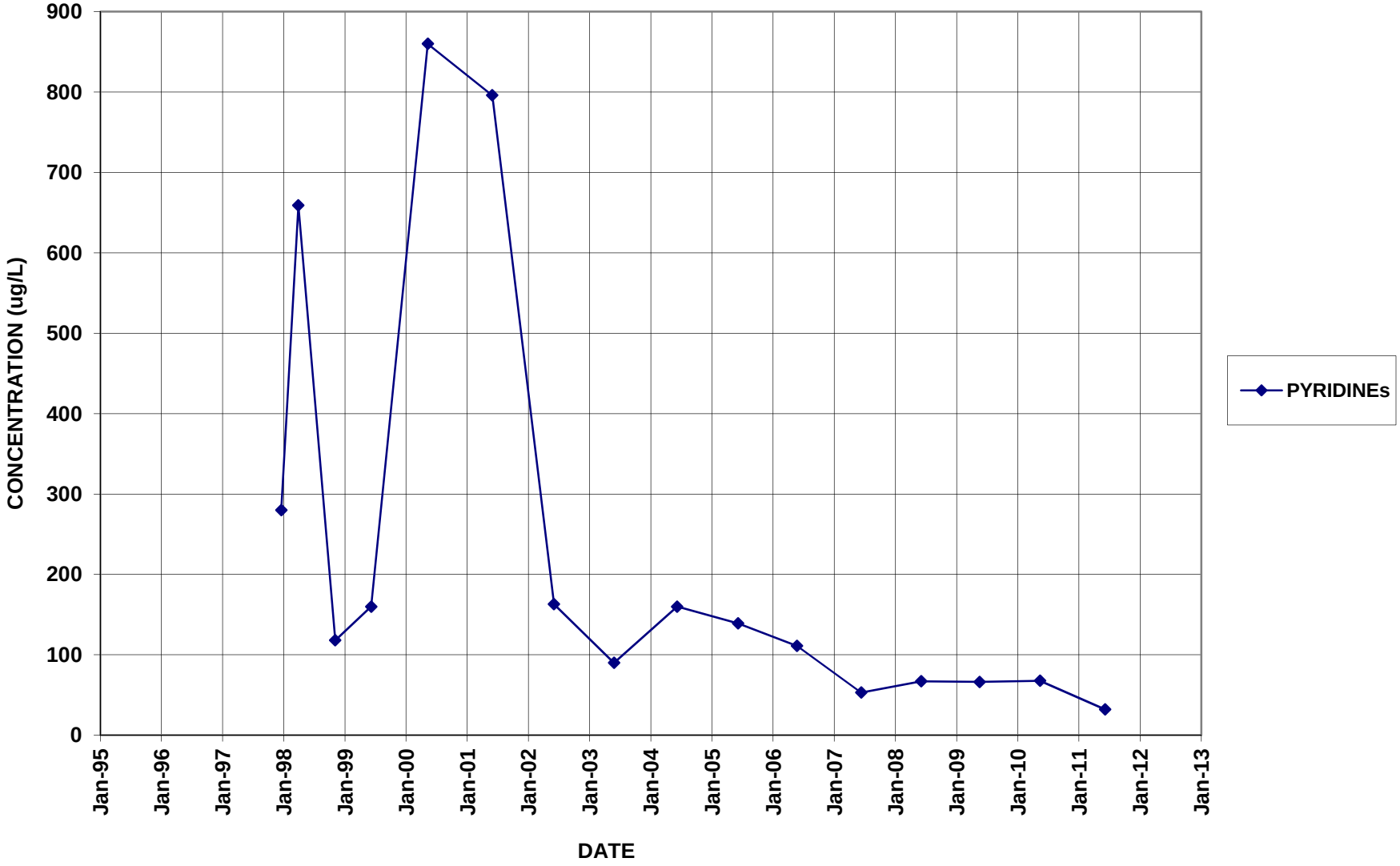
Prepared by: nmb
Reviewed by: jeb

BR-122D



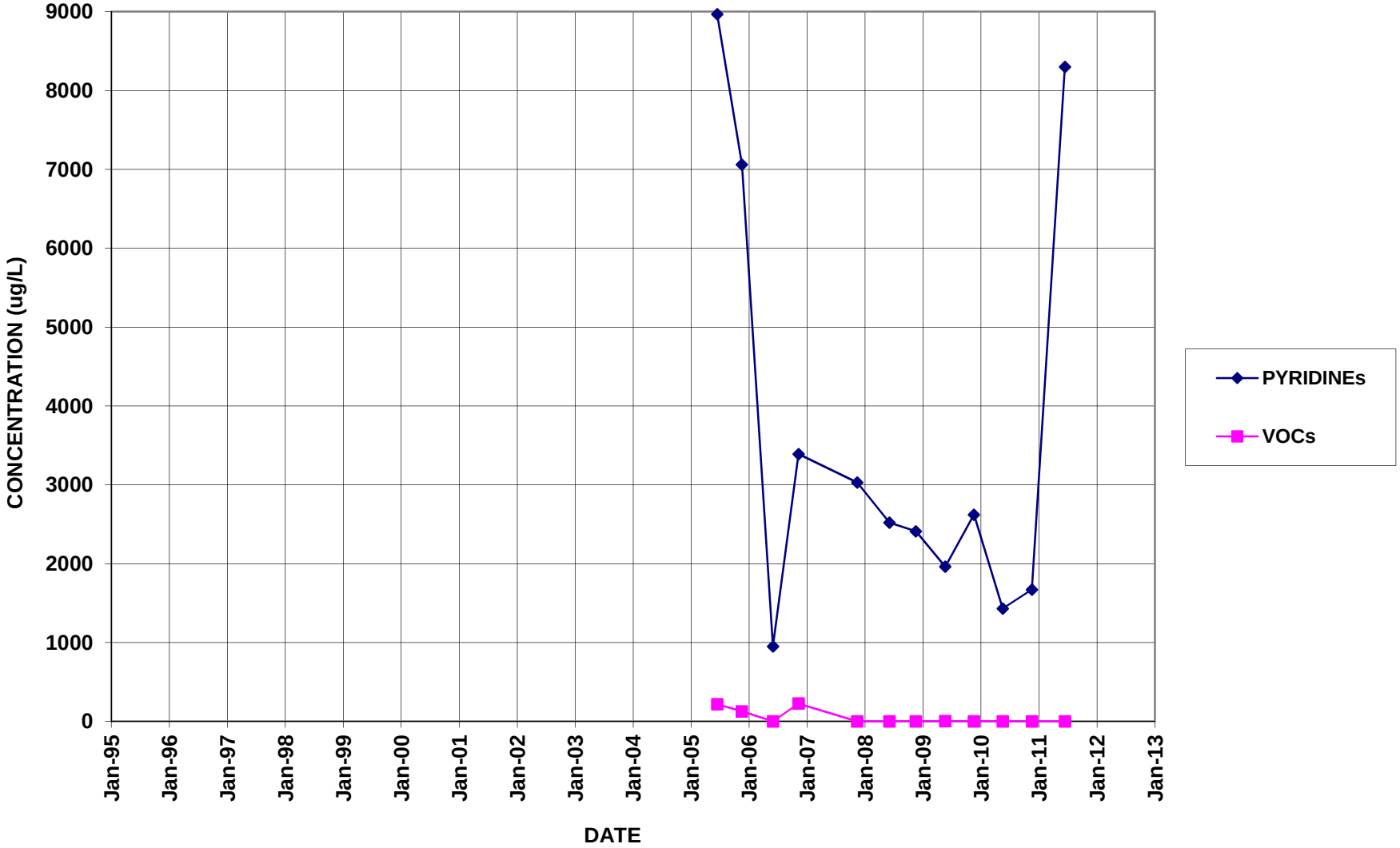
Prepared by: nmb
Reviewed by: jeb

BR-123D



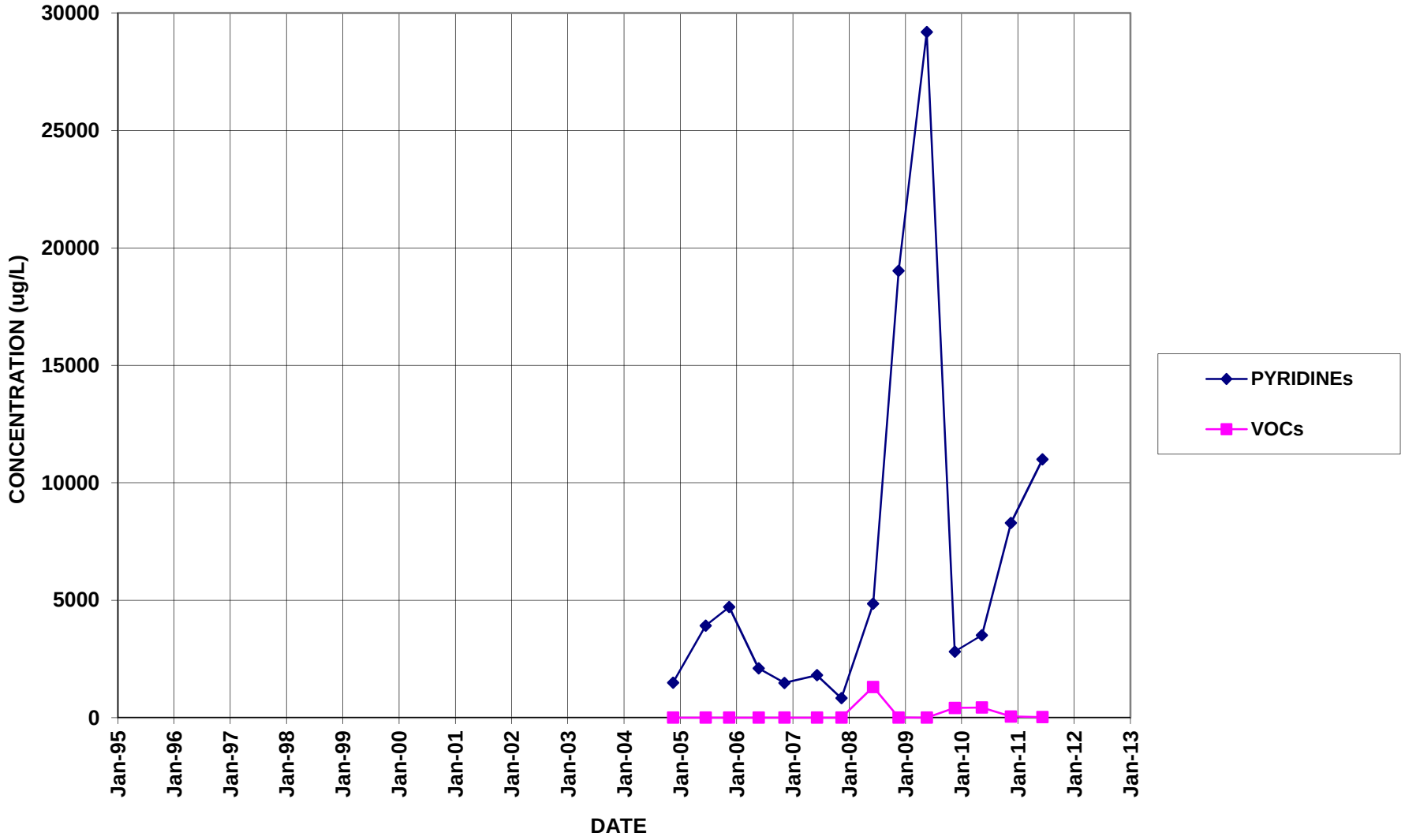
Prepared by: nmb
Reviewed by: jeb

BR-126



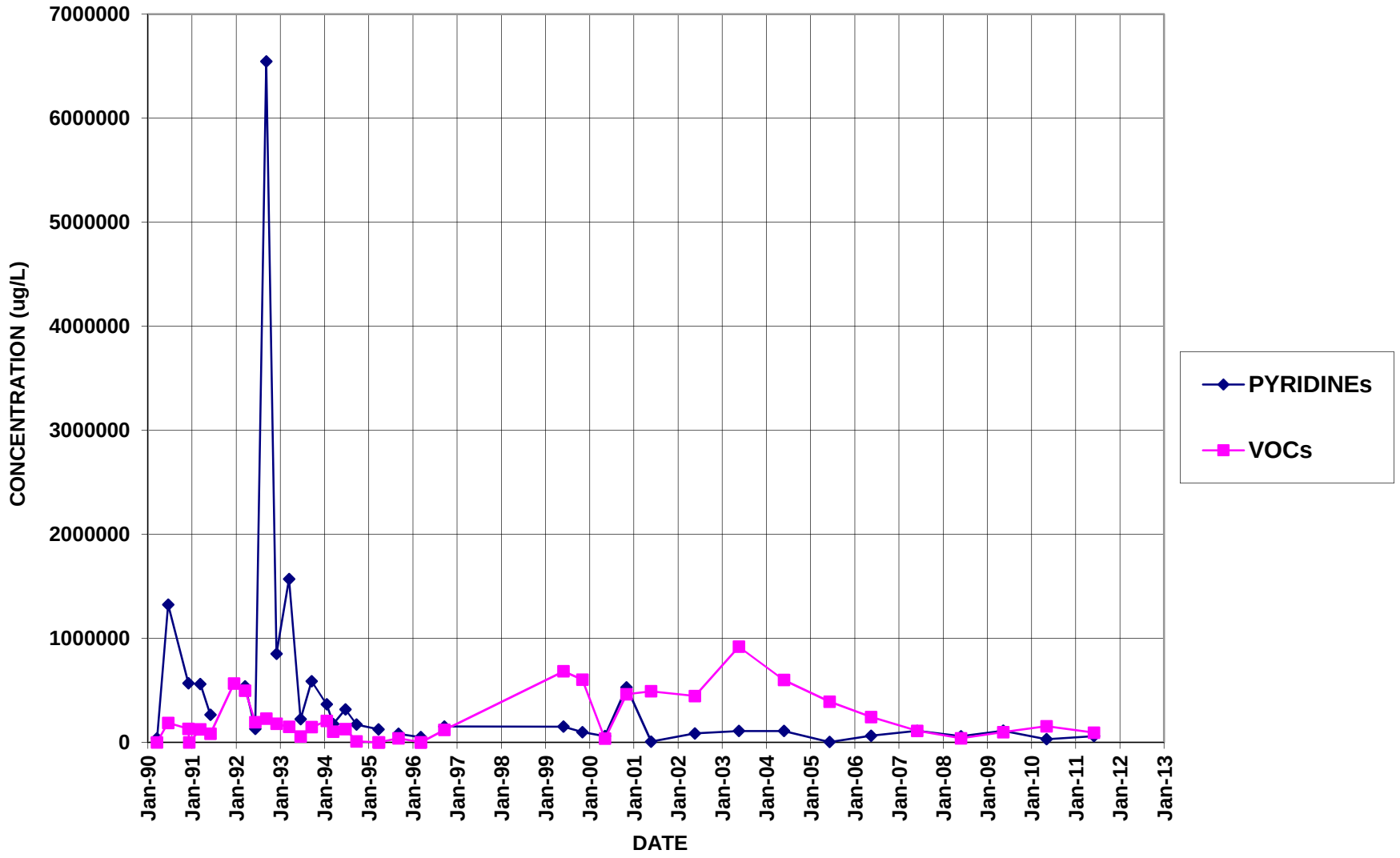
Prepared by: nmb
Reviewed by: jeb

BR-127



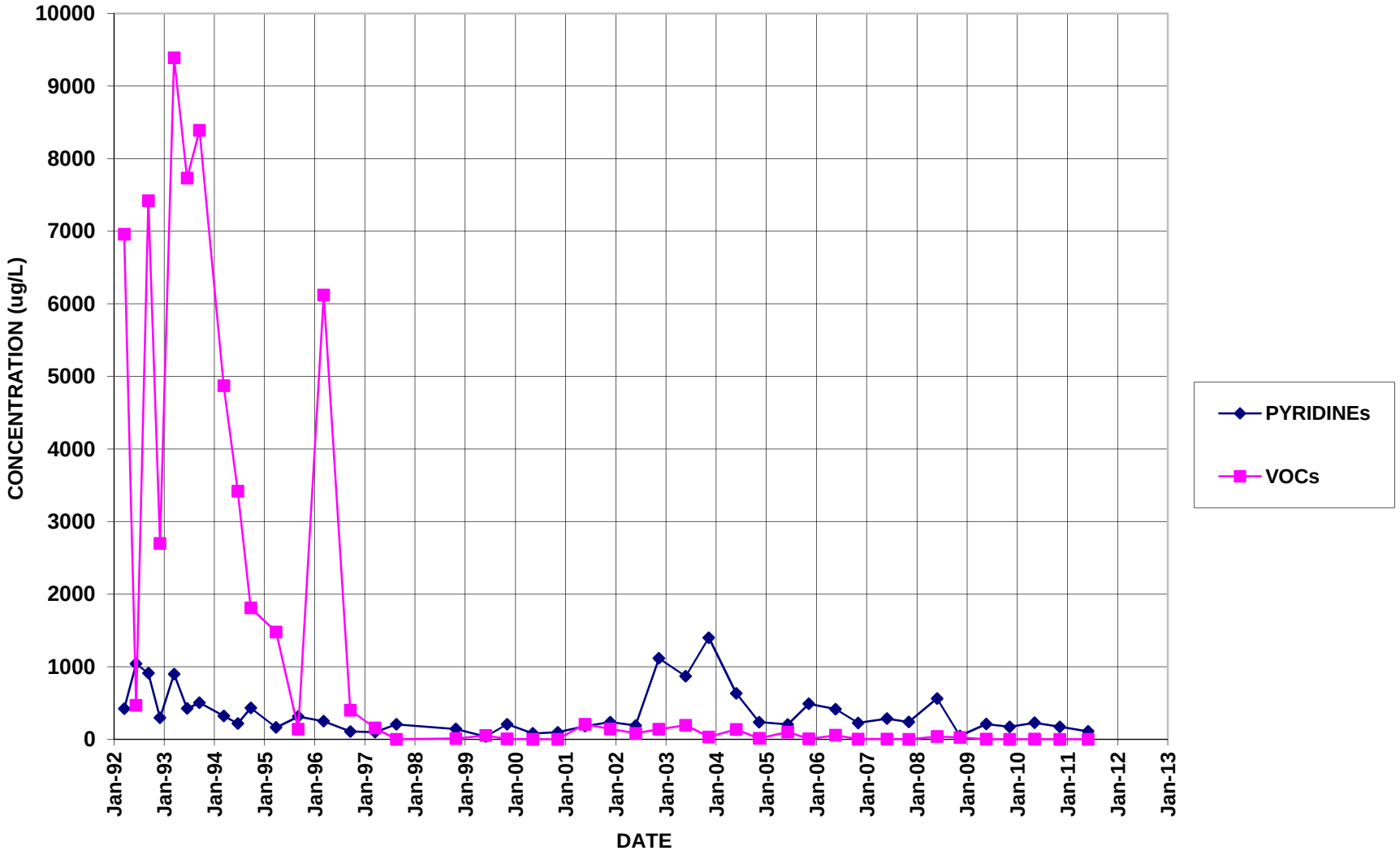
Prepared by: nmb
Reviewed by: jeb

BR-3



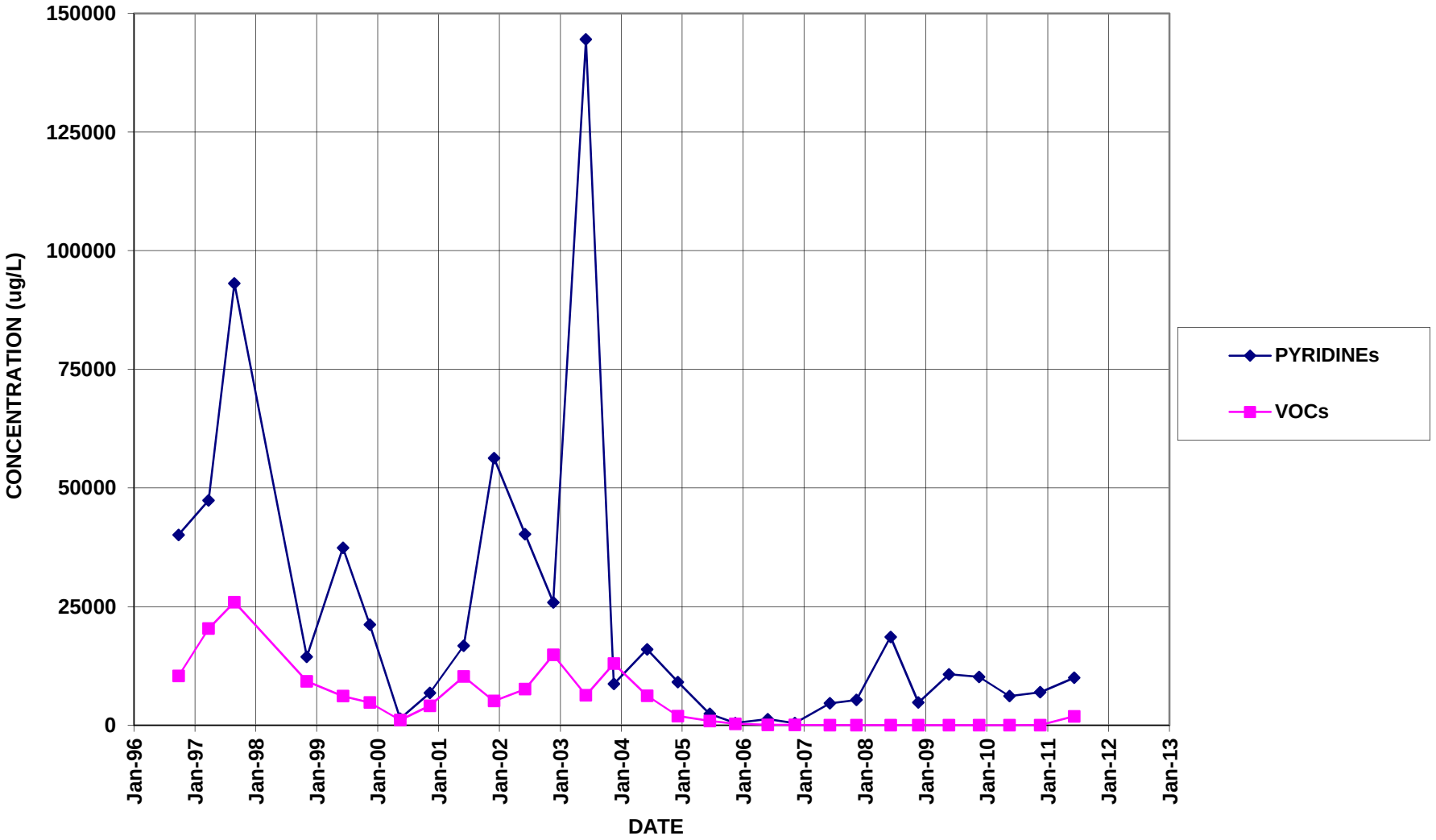
Prepared by: nmb
Reviewed by: jeb

BR-5A



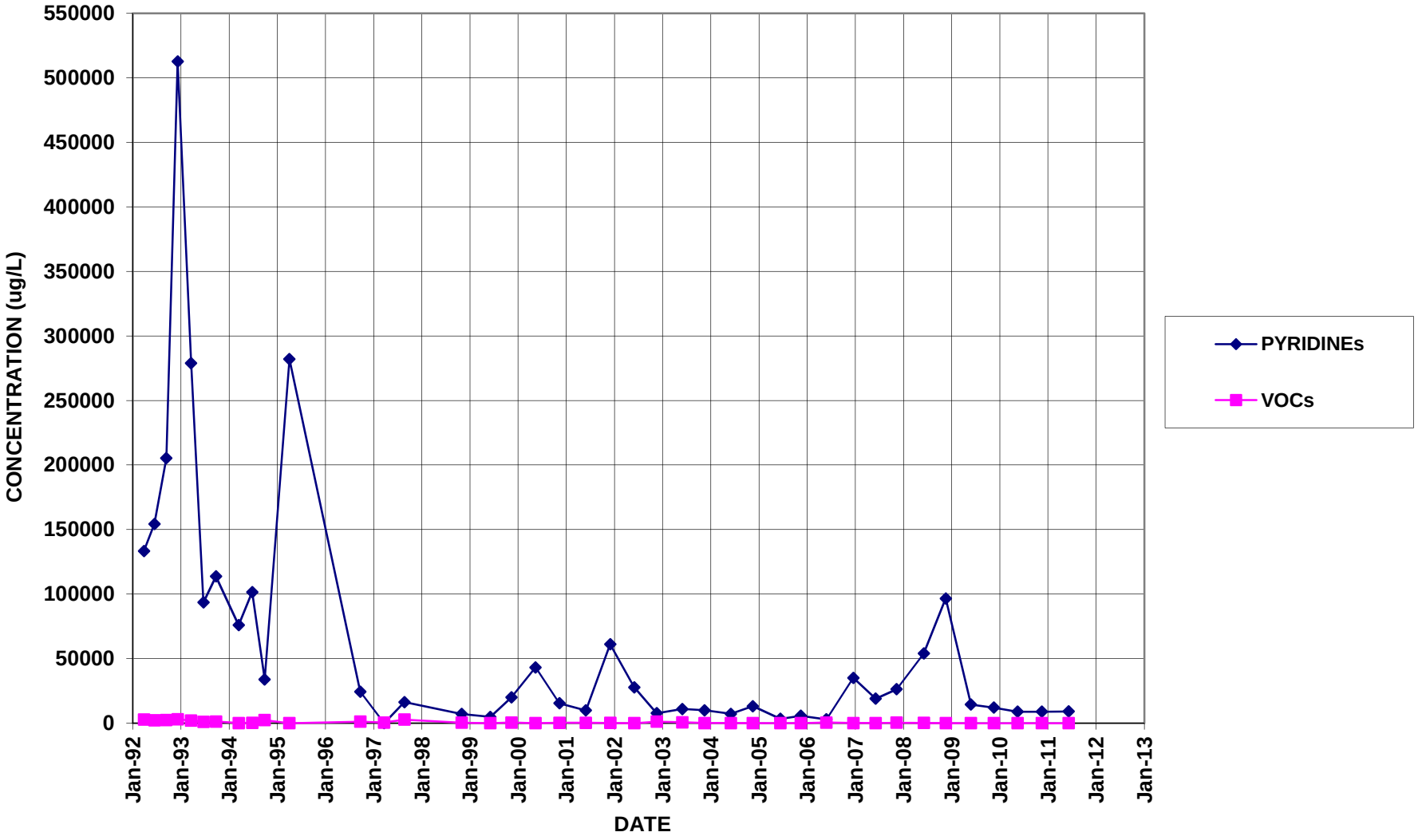
Prepared by: nmb
Reviewed by: jeb

BR-6A



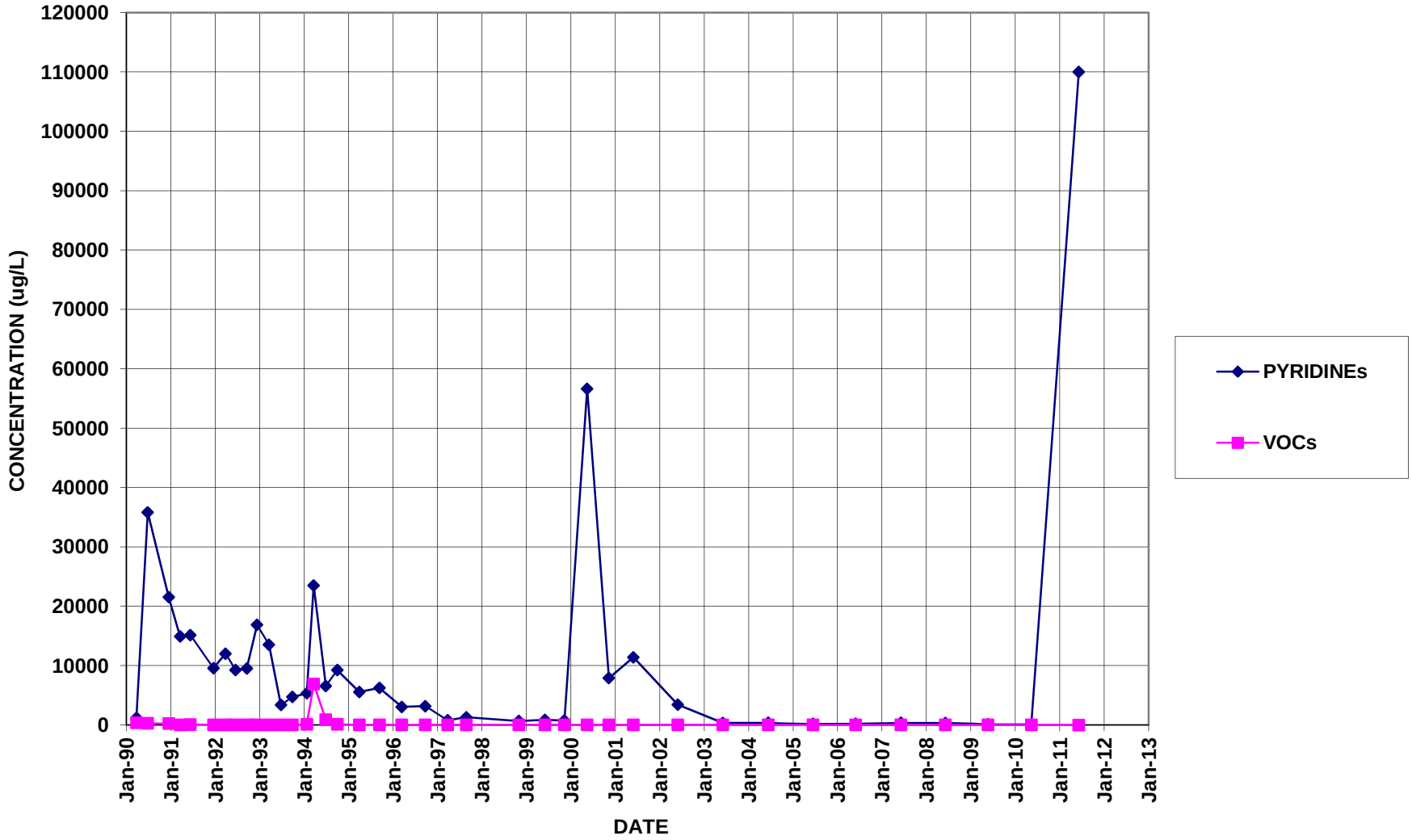
Prepared by: nmb
Reviewed by: jeb

BR-7A



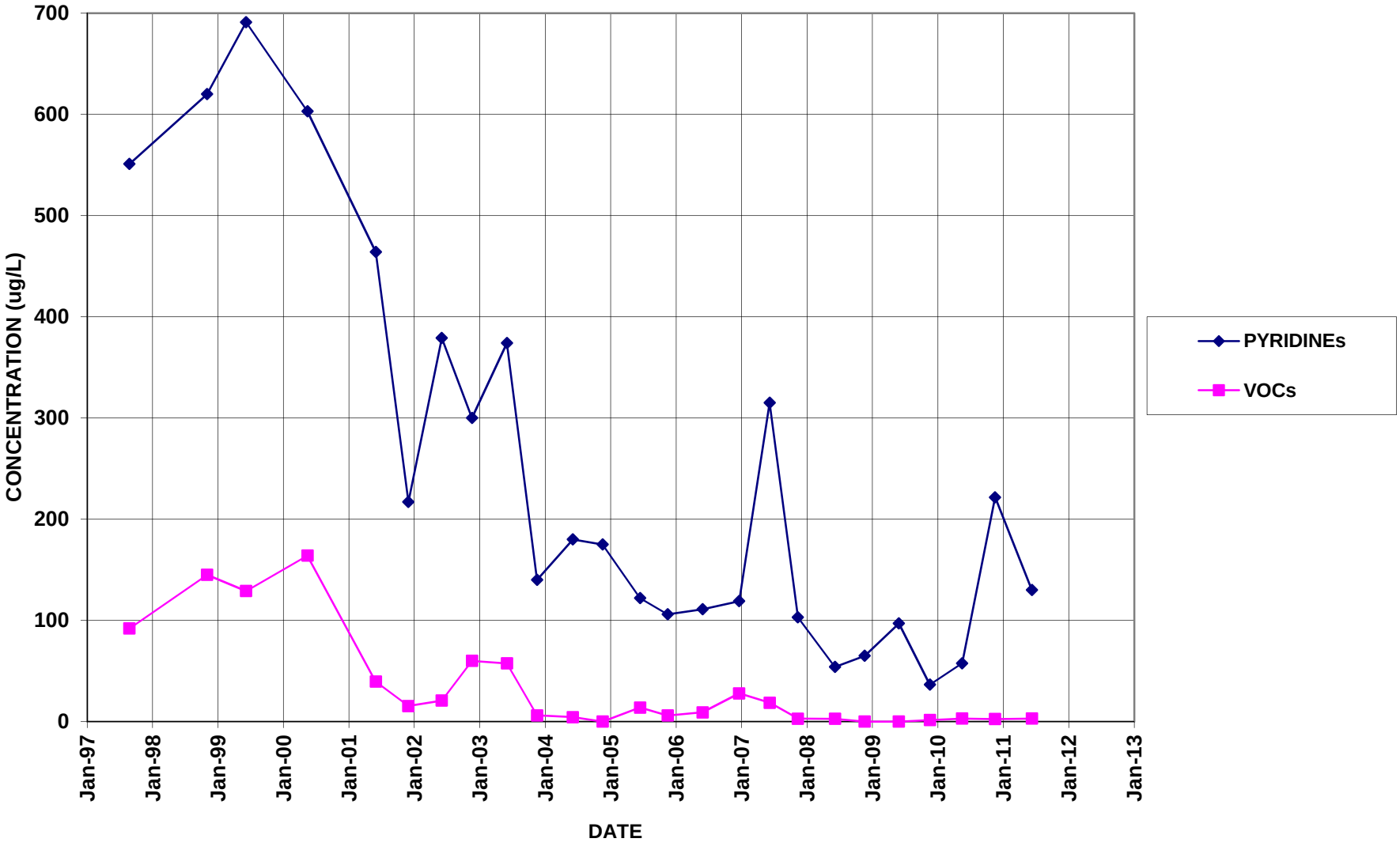
Prepared by: nmb
Reviewed by: jeb

BR-8



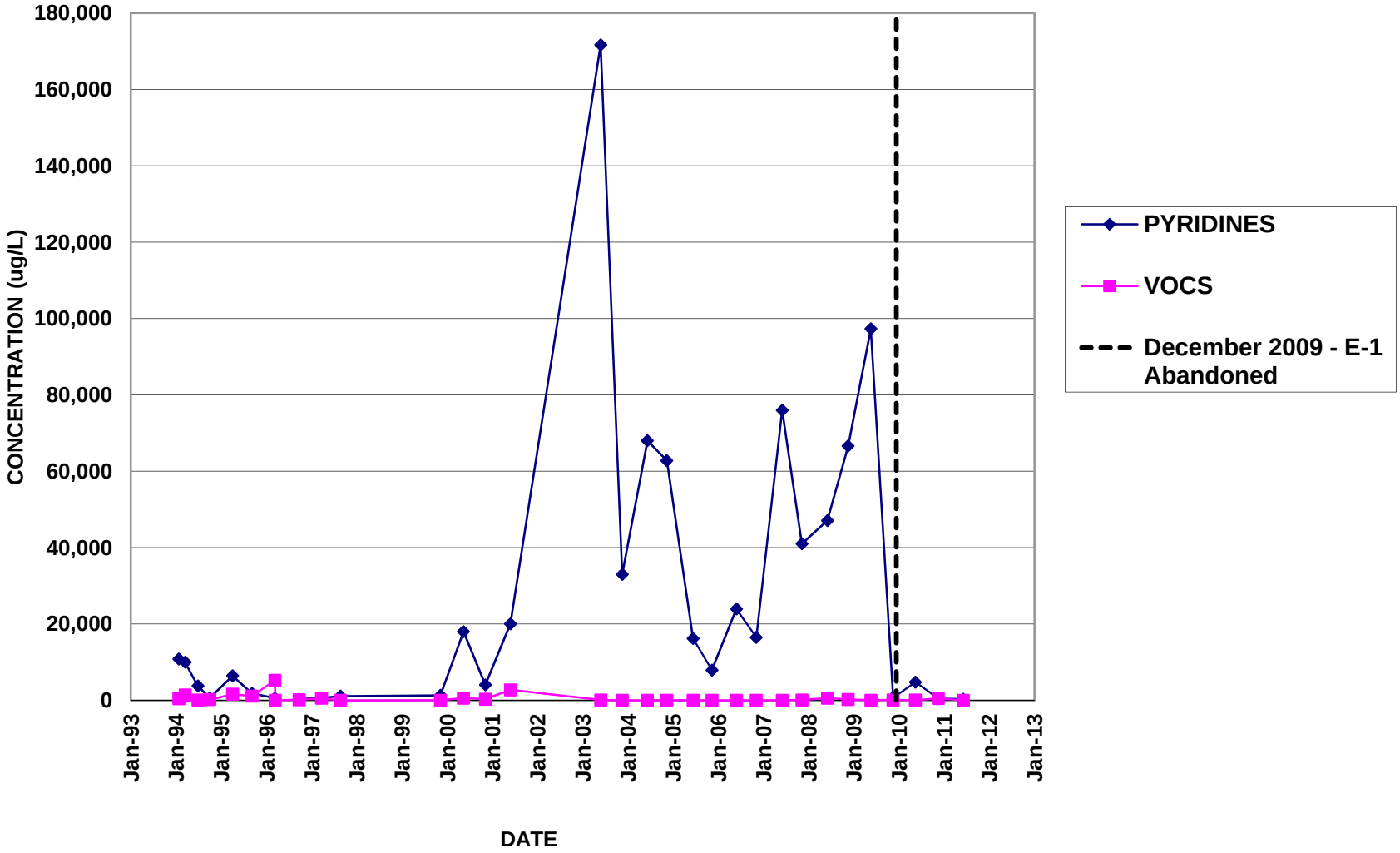
Prepared by: nmb
Reviewed by: jeb

BR-9



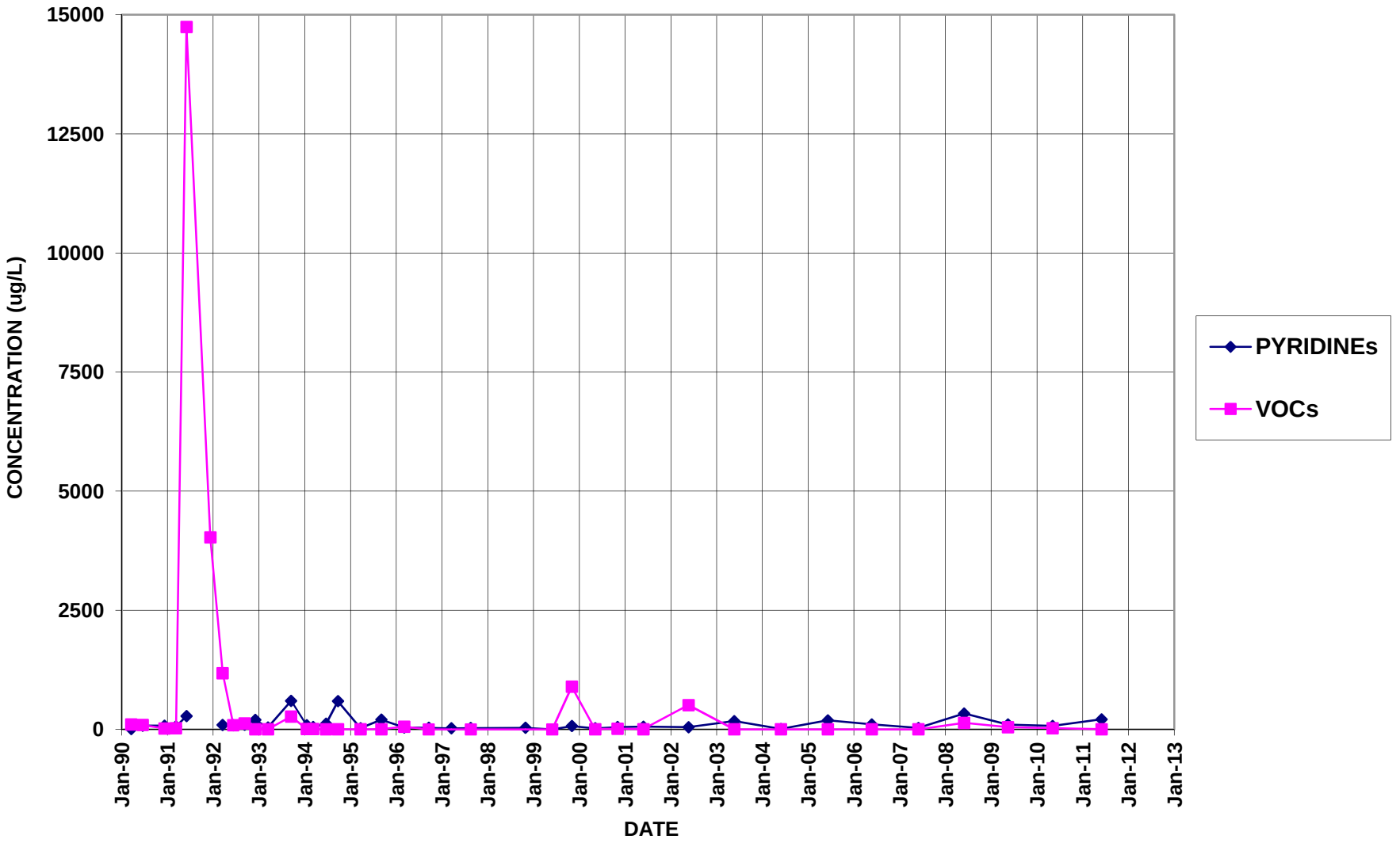
Prepared by: nmb
Reviewed by: jeb

E-1 / B-11
(B-11 replaced E-1 beginning May 2010)



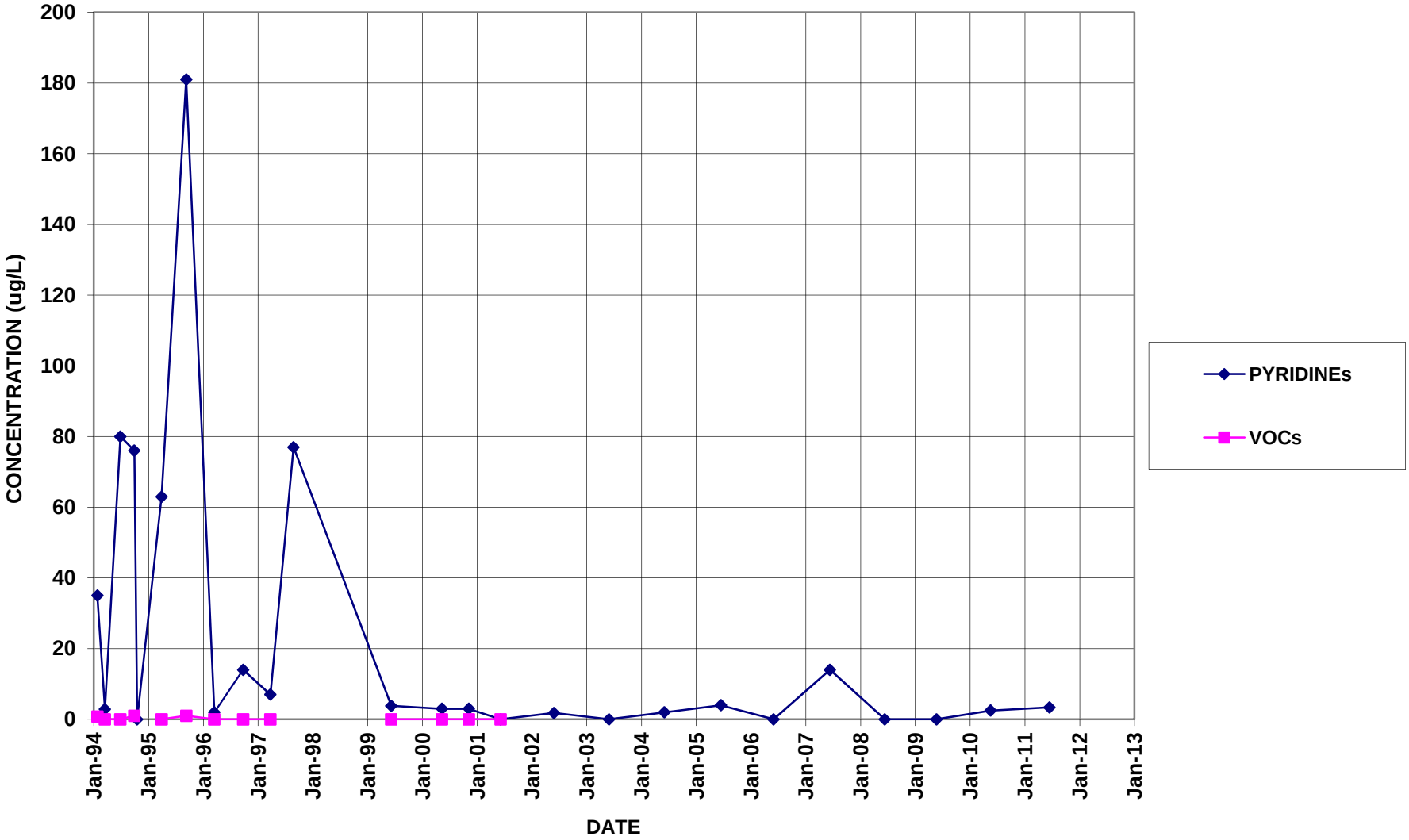
Prepared by: nmb
Reviewed by: jeb

E-3



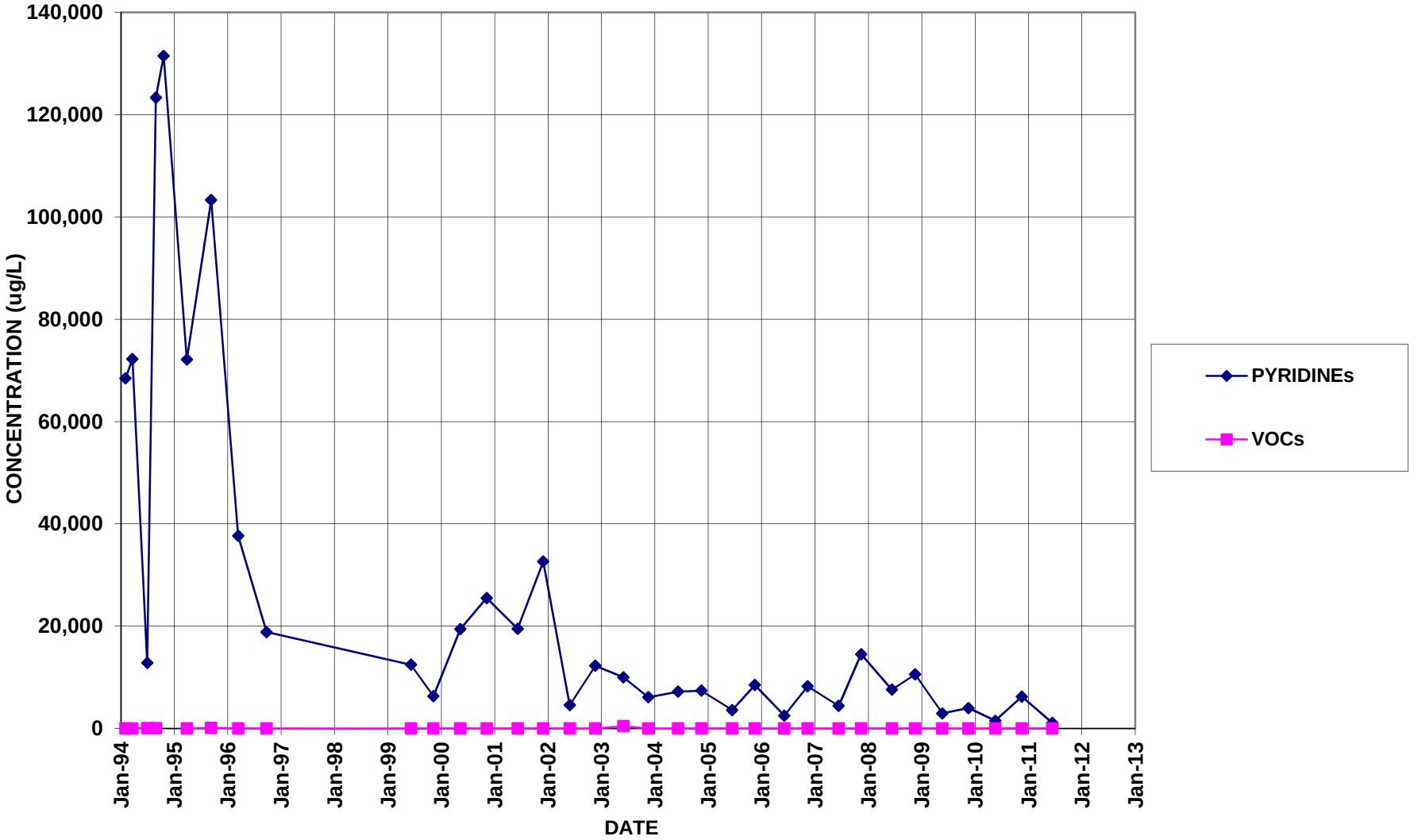
Prepared by: nmb
Reviewed by: jeb

MW-104



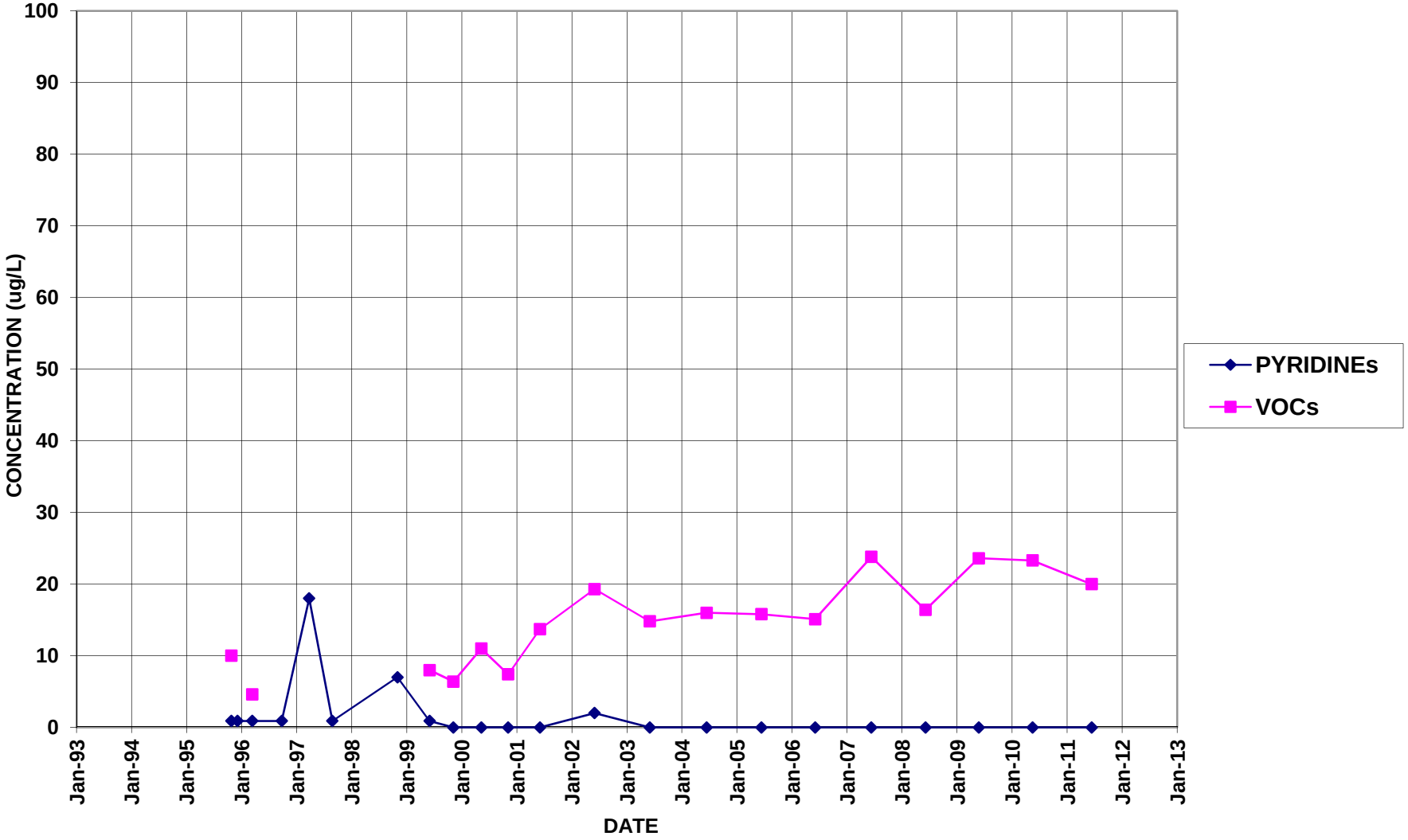
Prepared by: nmb
Reviewed by: jeb

MW-106



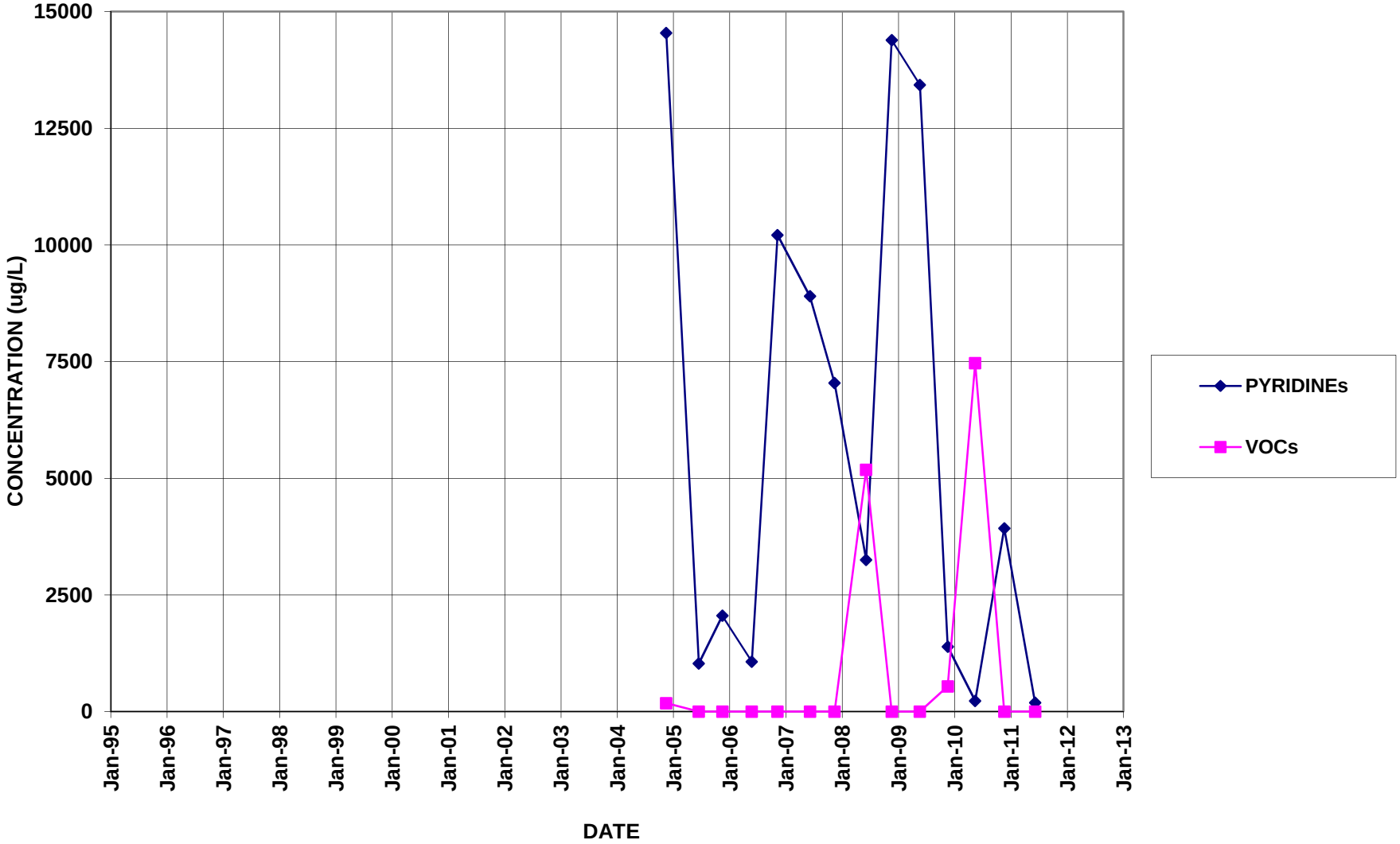
Prepared by: nmb
Reviewed by: jeb

MW-114



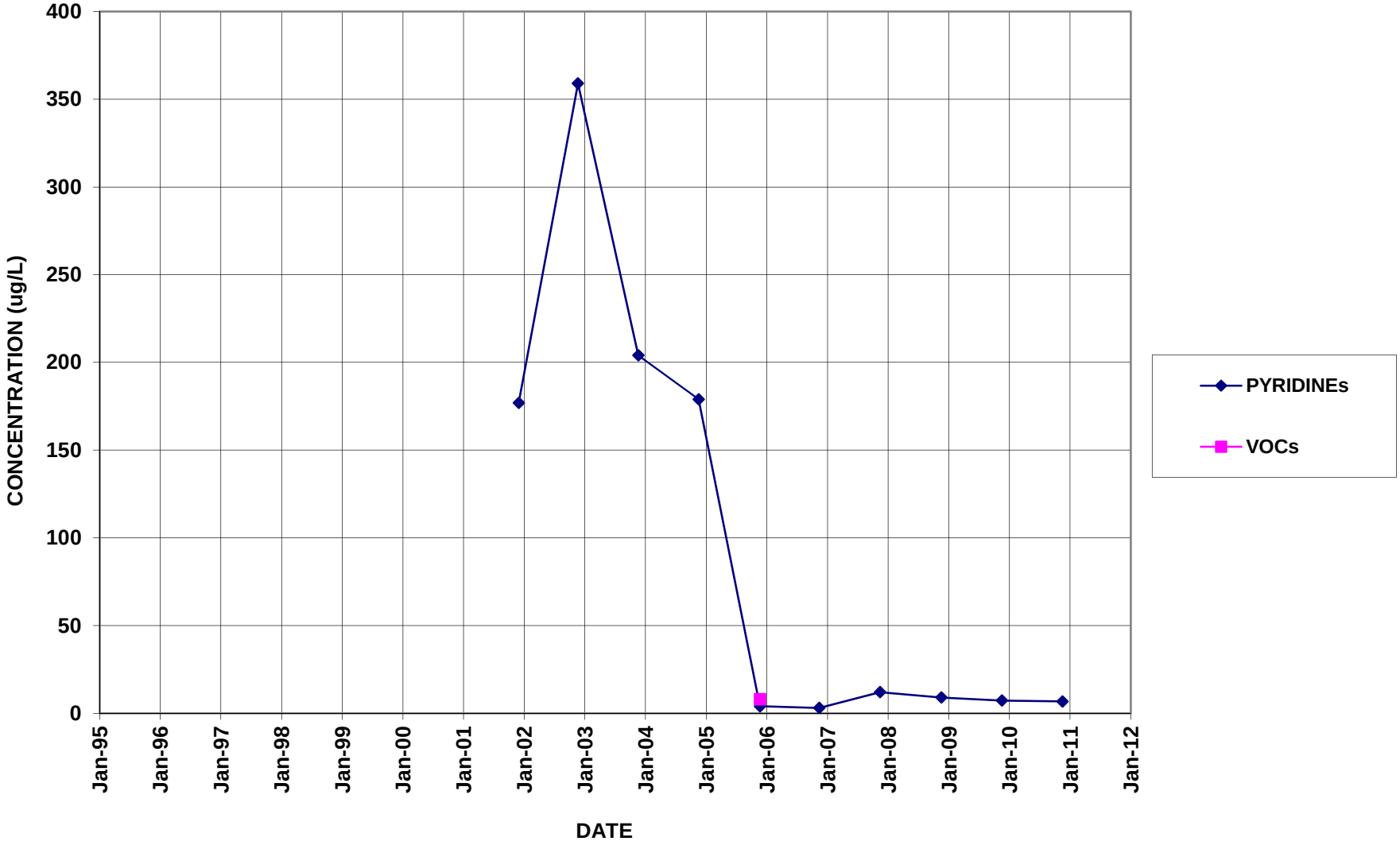
Prepared by: nmb
Reviewed by: jeb

MW-127



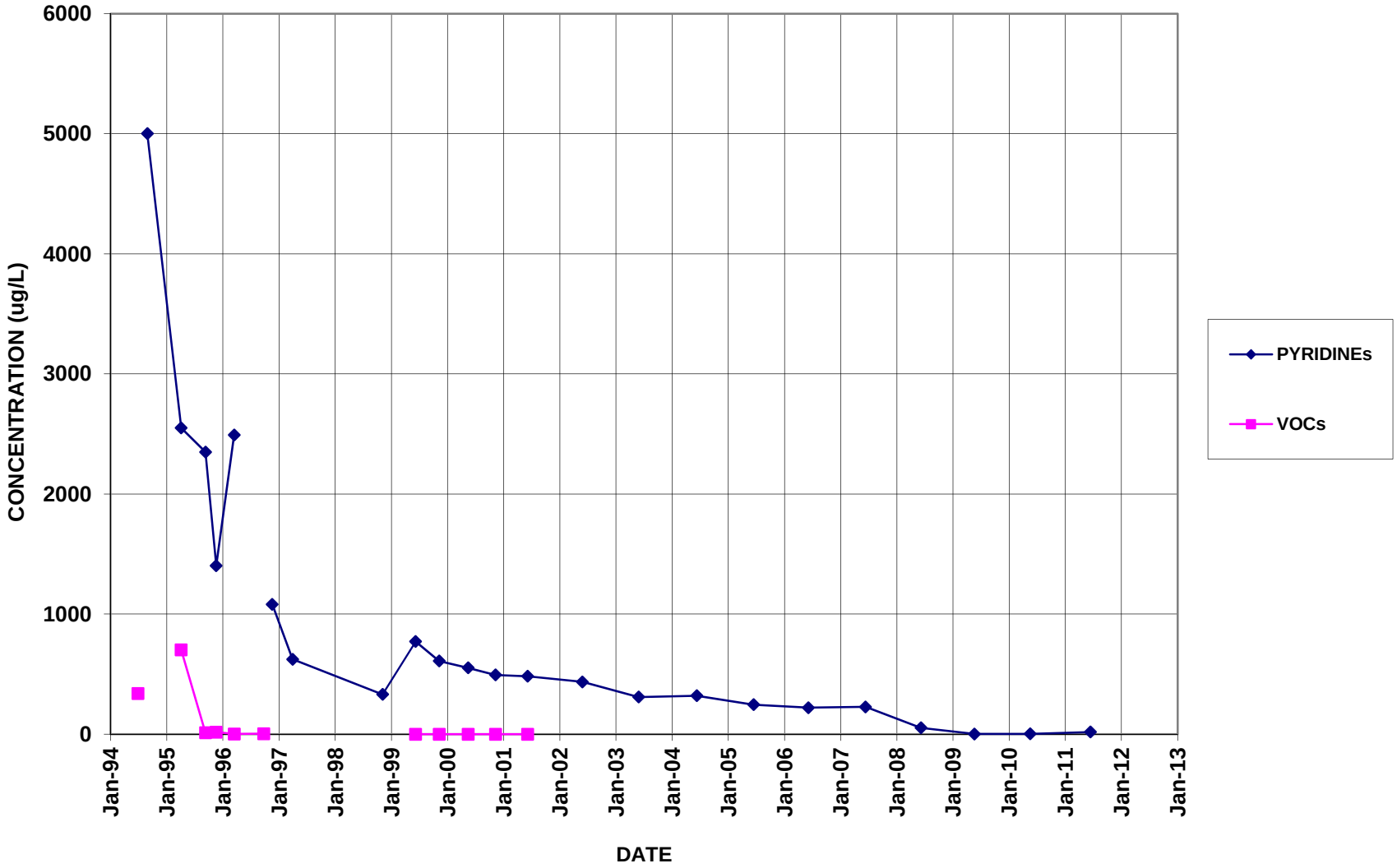
Prepared by: nmb
Reviewed by: jeb

MW-16



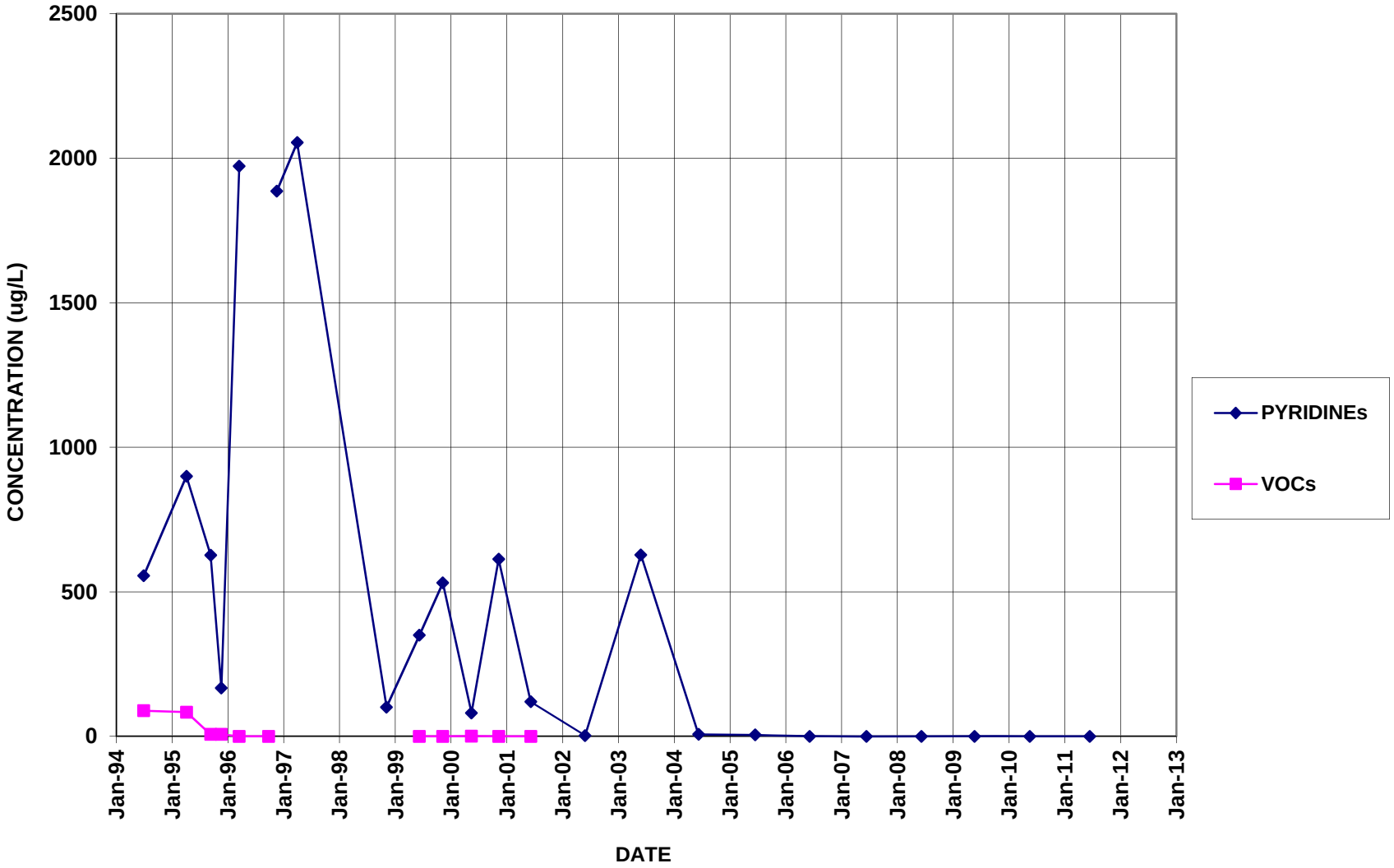
Prepared by: nmb
Reviewed by: jeb

NESS-E



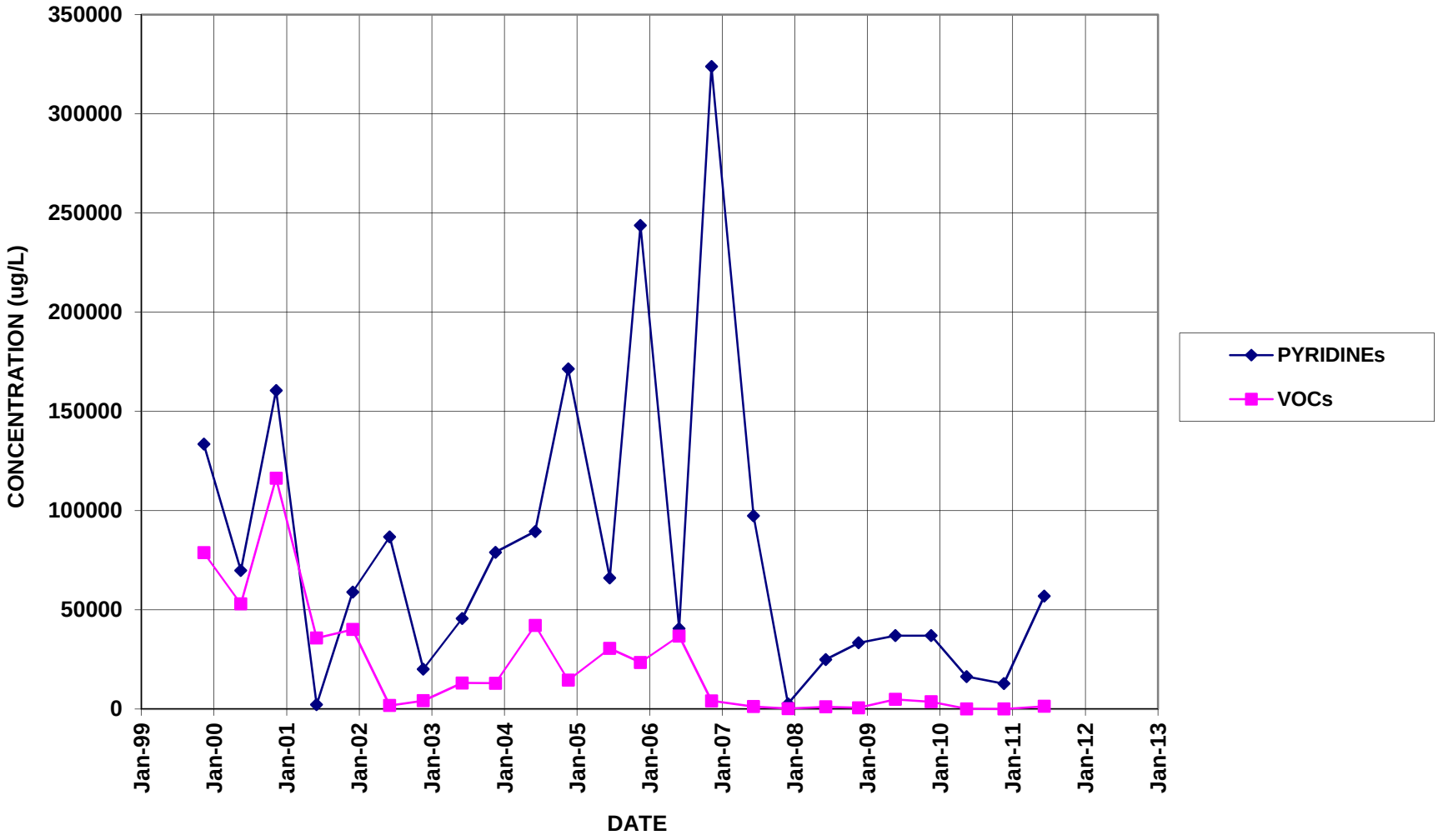
Prepared by: nmb
Reviewed by: jeb

NESS-W



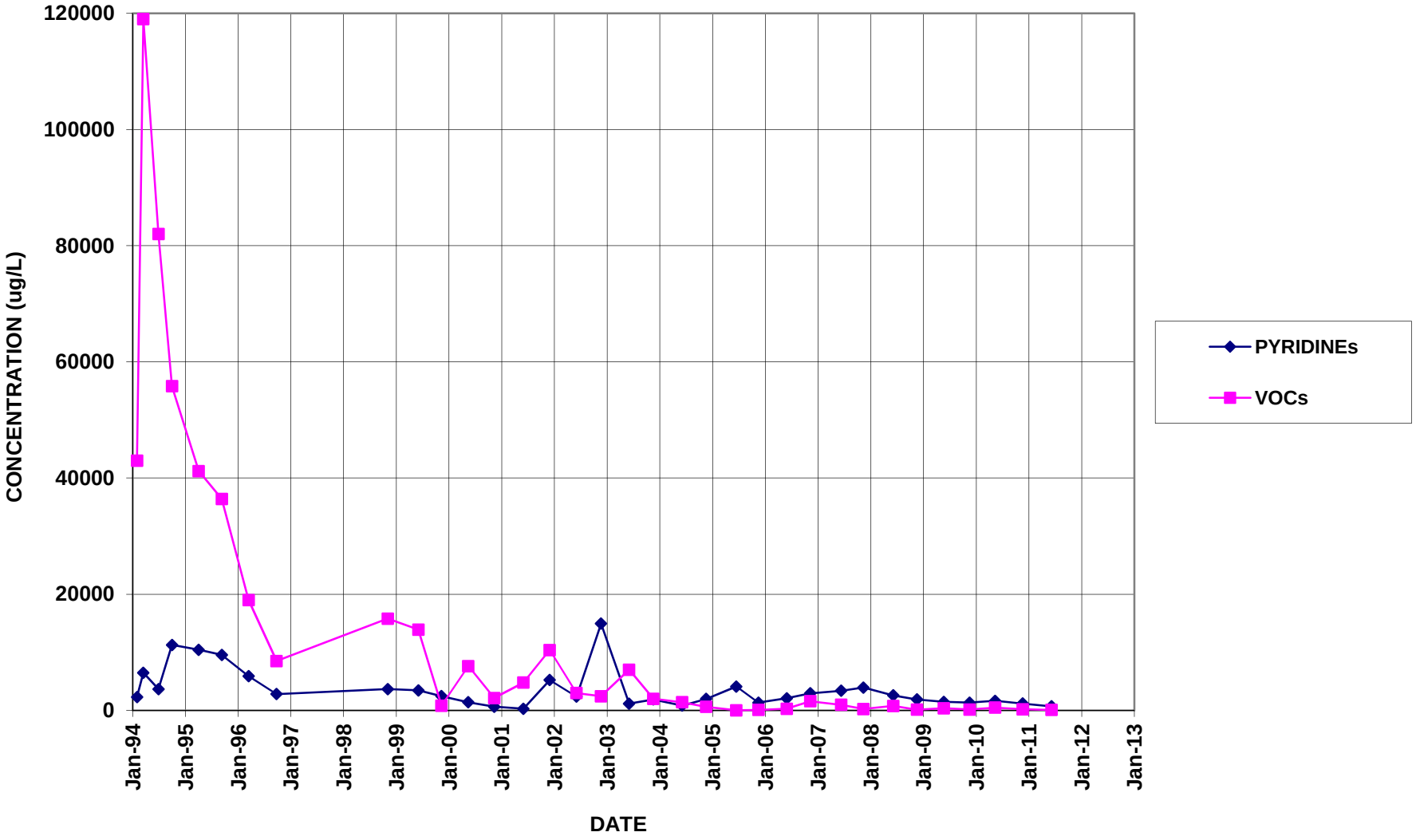
Prepared by: nmb
Reviewed by: jeb

PW10



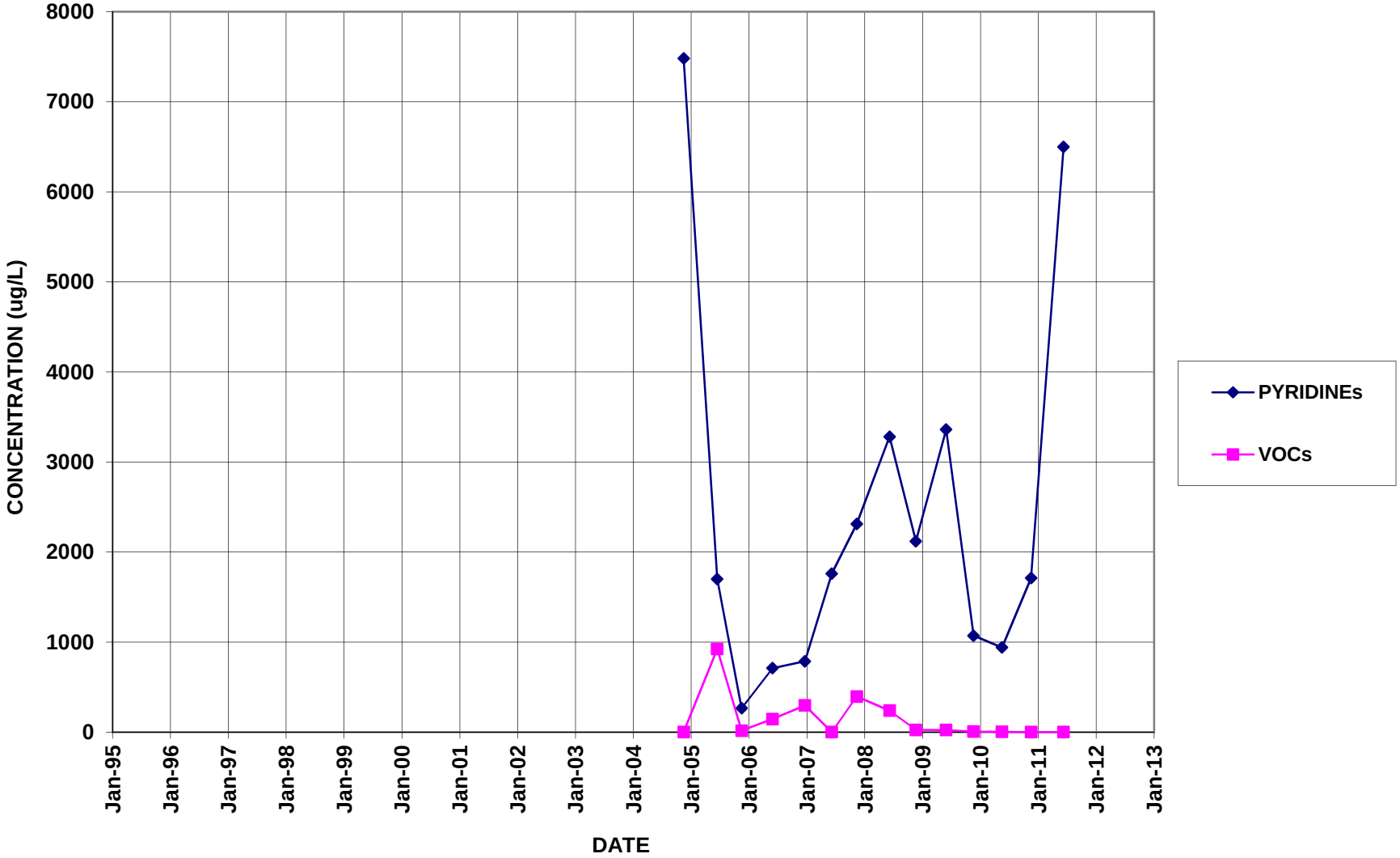
Prepared by: nmb
Reviewed by: jeb

PW12 (Formerly BR-101)



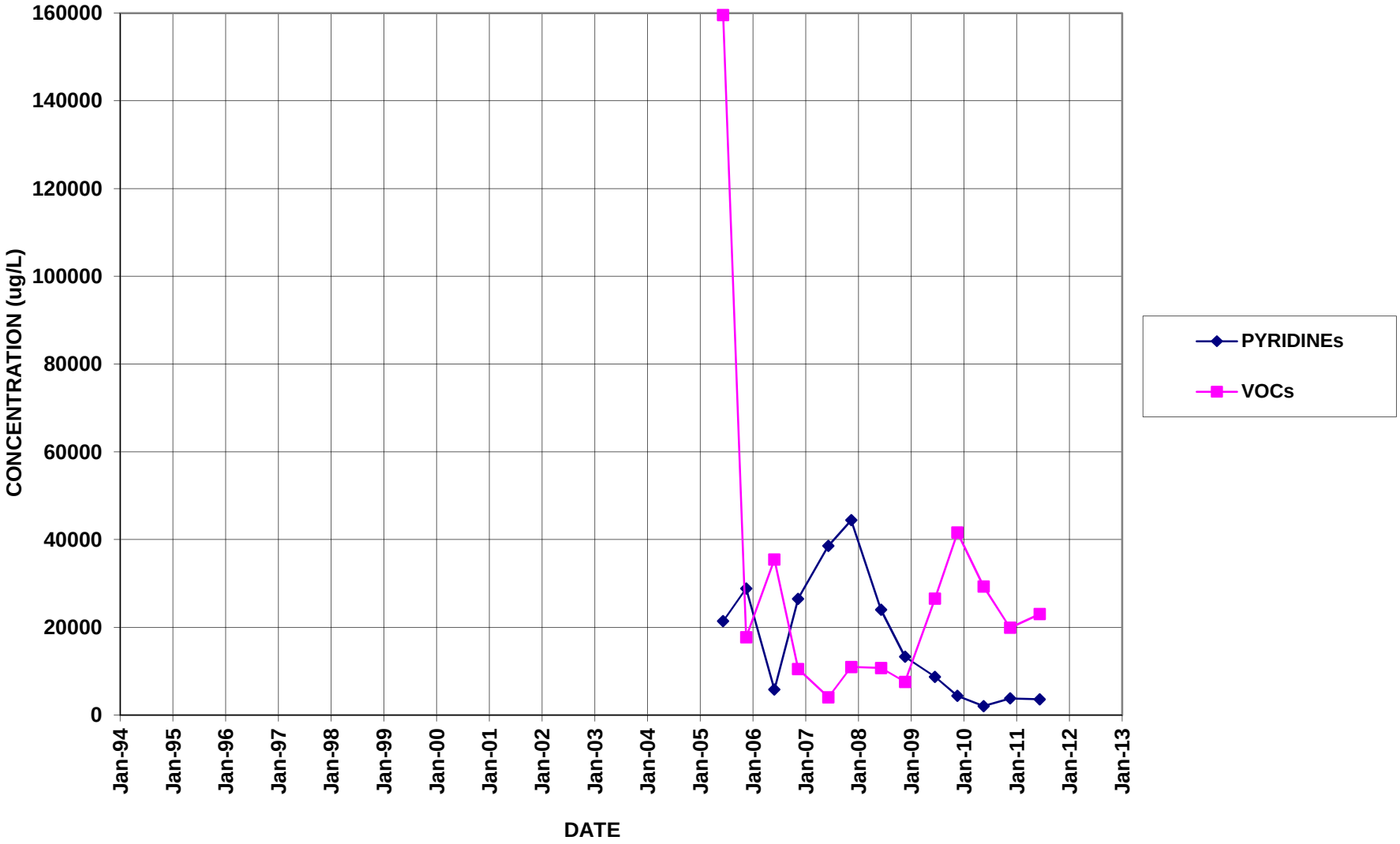
Prepared by: nmb
Reviewed by: jeb

PW13



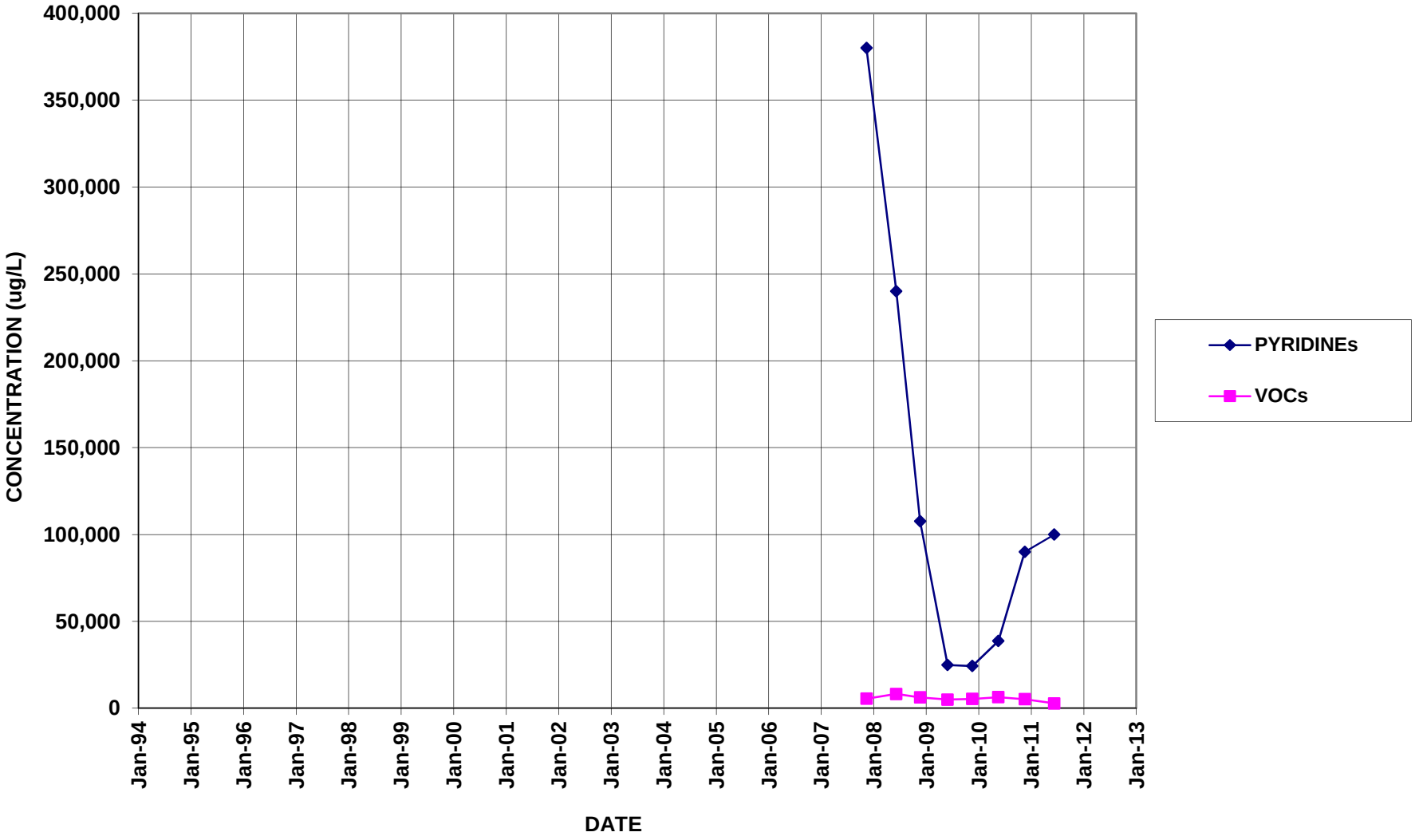
Prepared by: nmb
Reviewed by: jeb

PW14



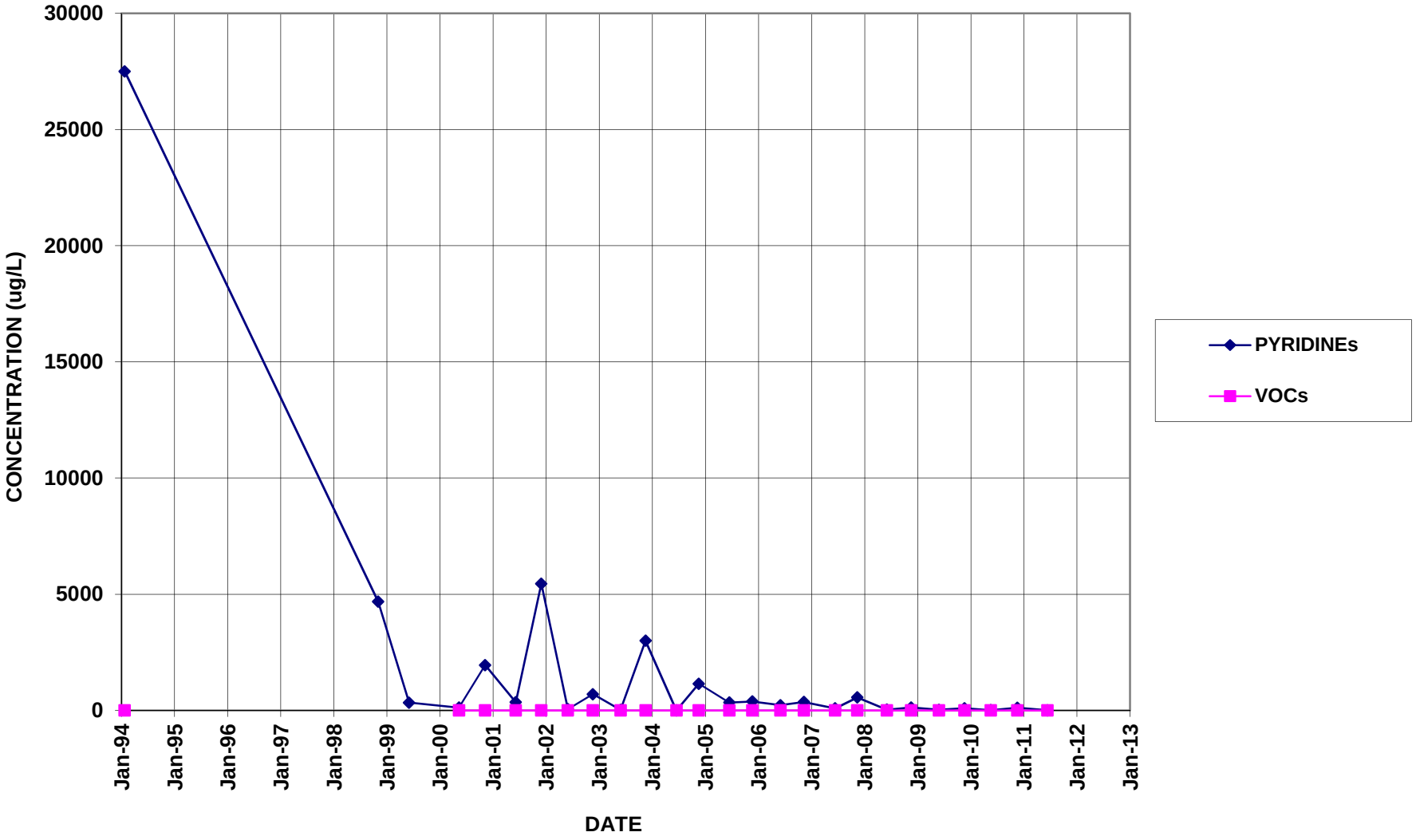
Prepared by: nmb
Reviewed by: jeb

PW15



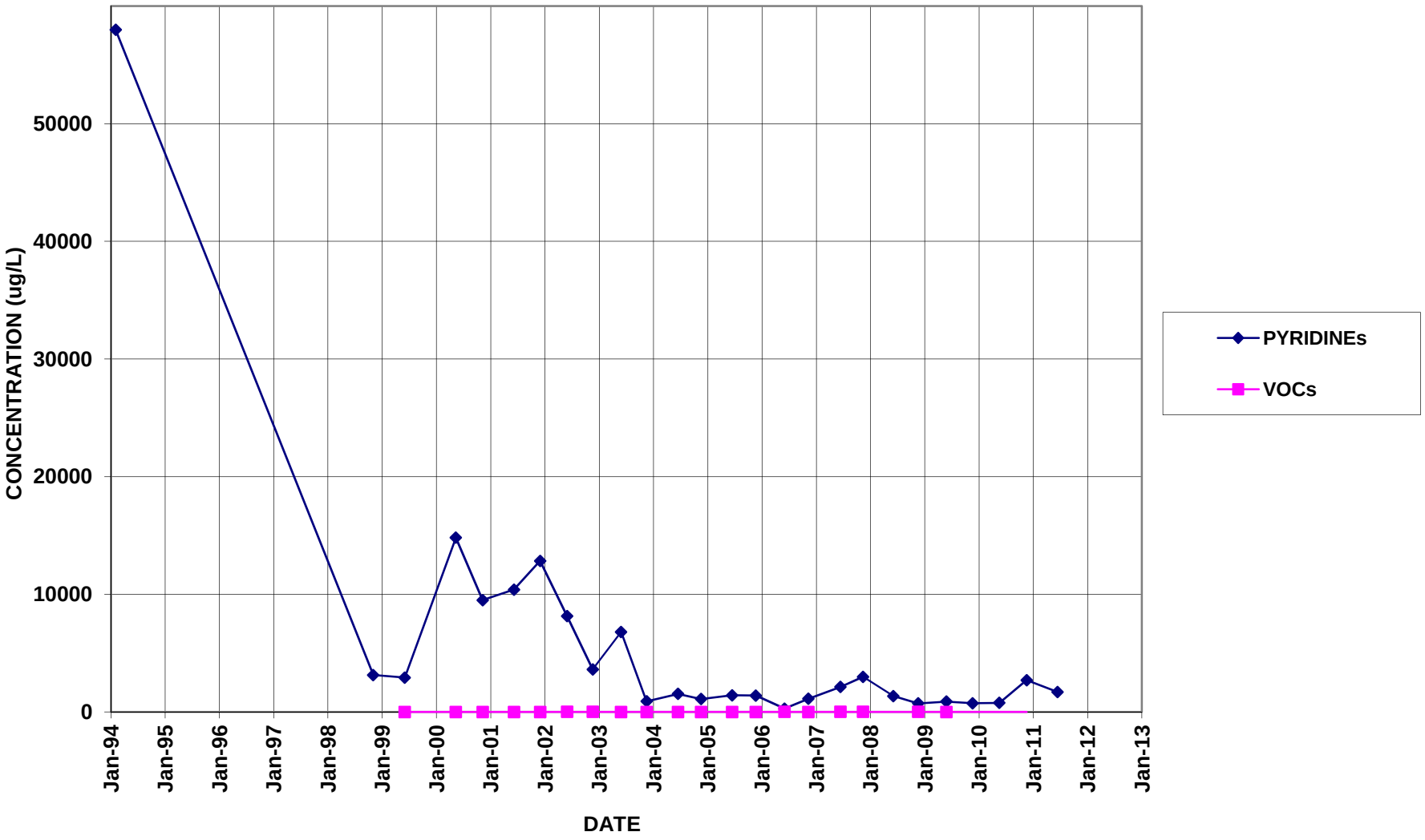
Prepared by: nmb
Reviewed by: jeb

PZ-101



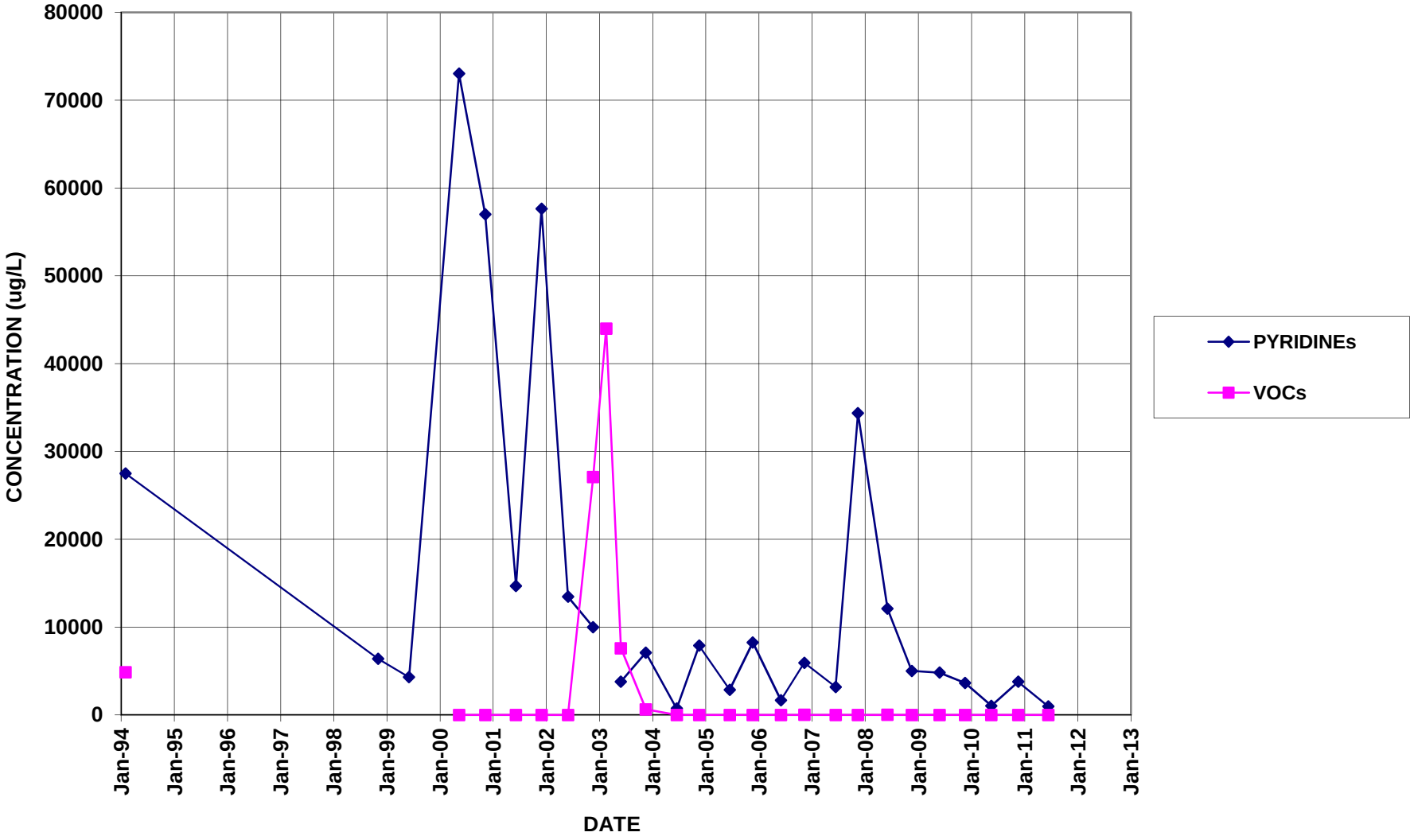
Prepared by: nmb
Reviewed by: jeb

PZ-102



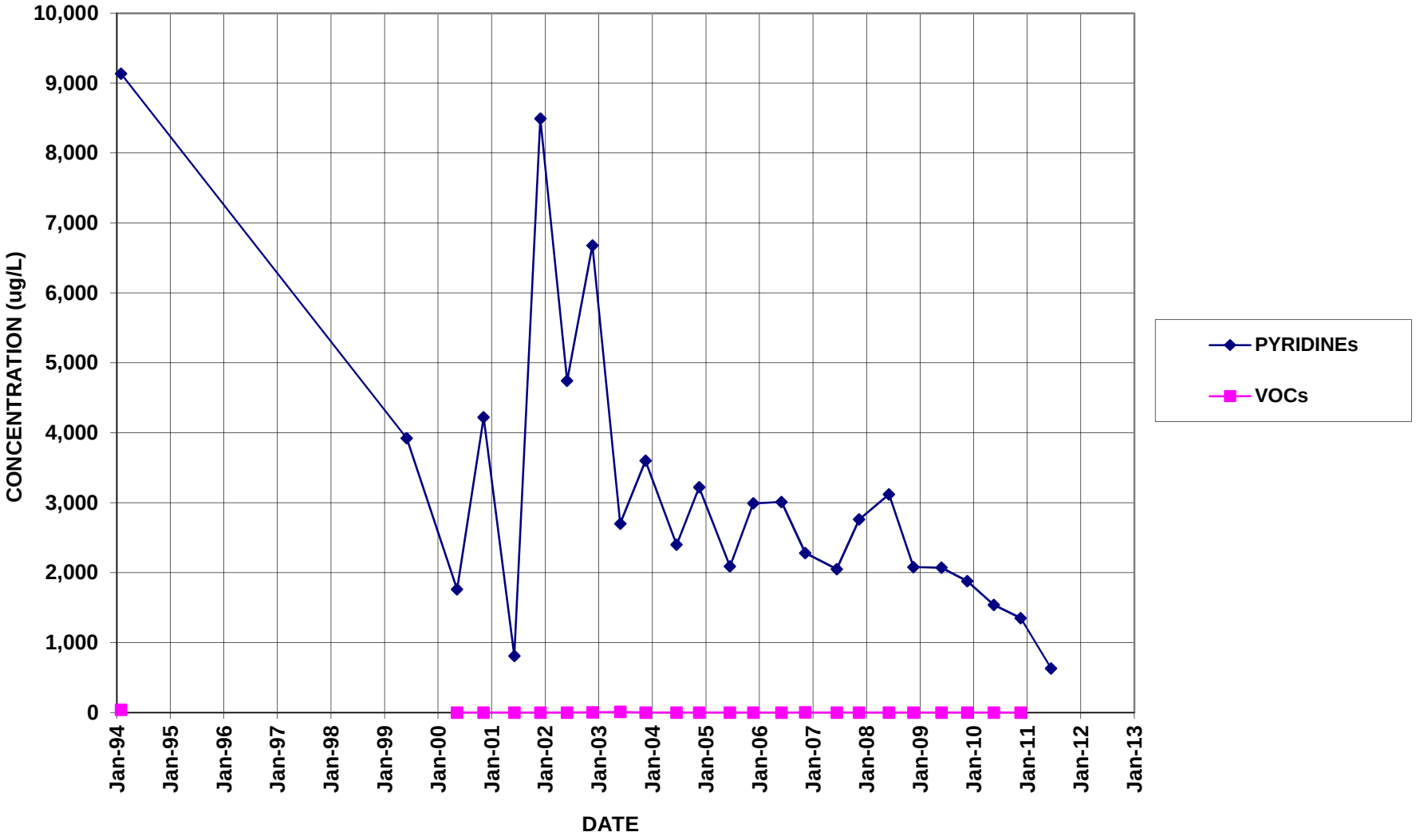
Prepared by: nmb
Reviewed by: jeb

PZ-103



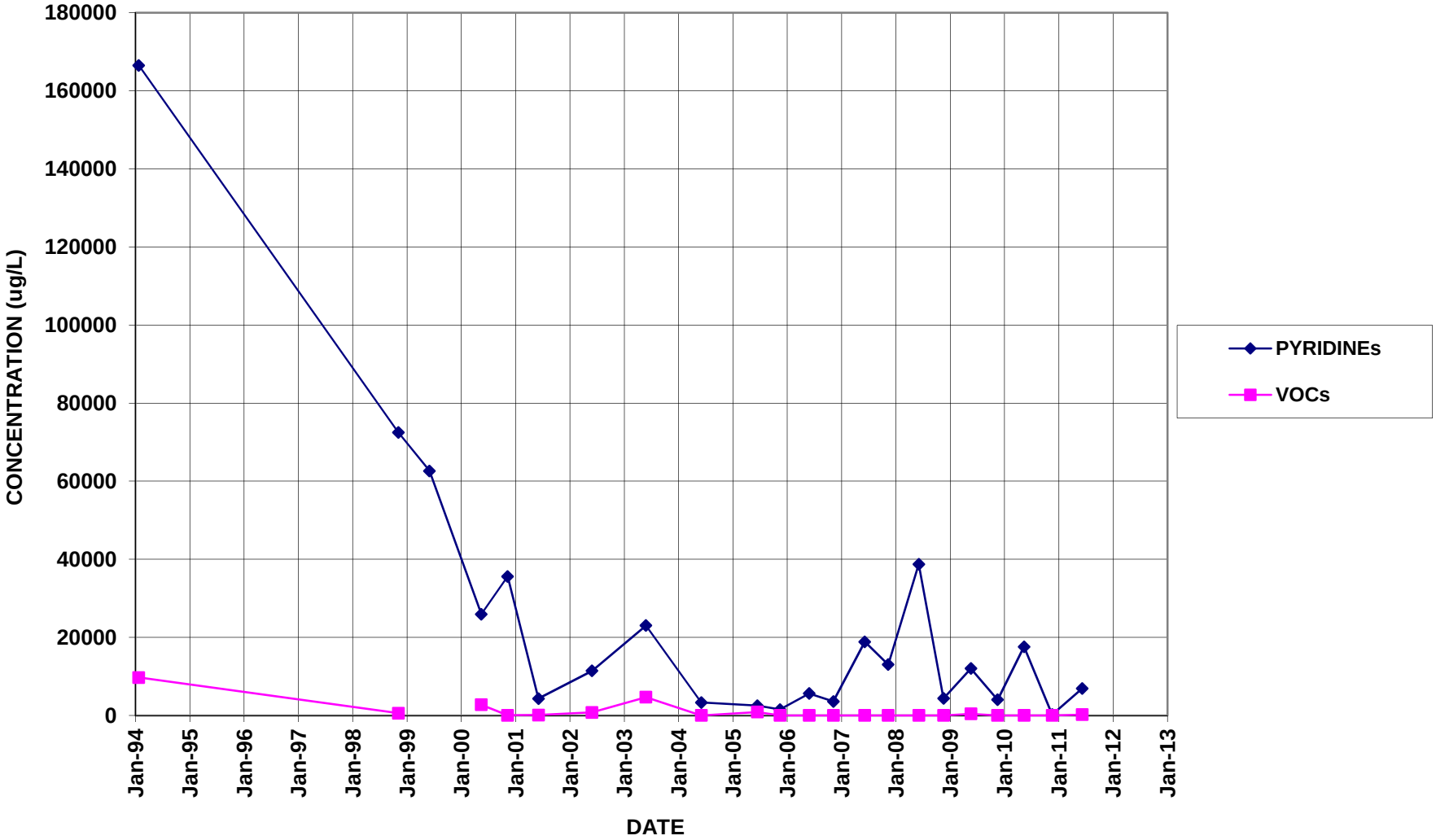
Prepared by: nmb
Reviewed by: jeb

PZ-104



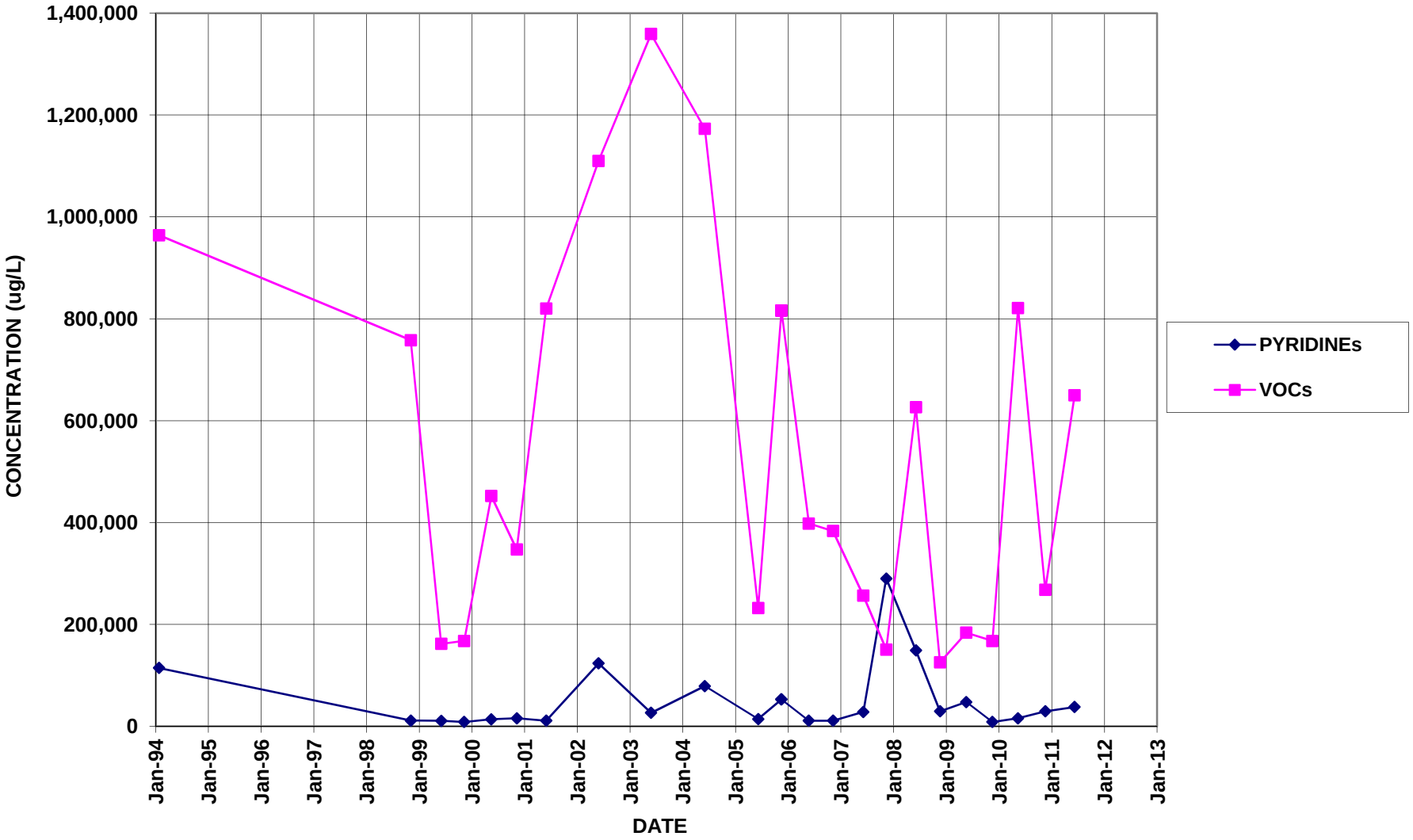
Prepared by: nmb
Reviewed by: jeb

PZ-105



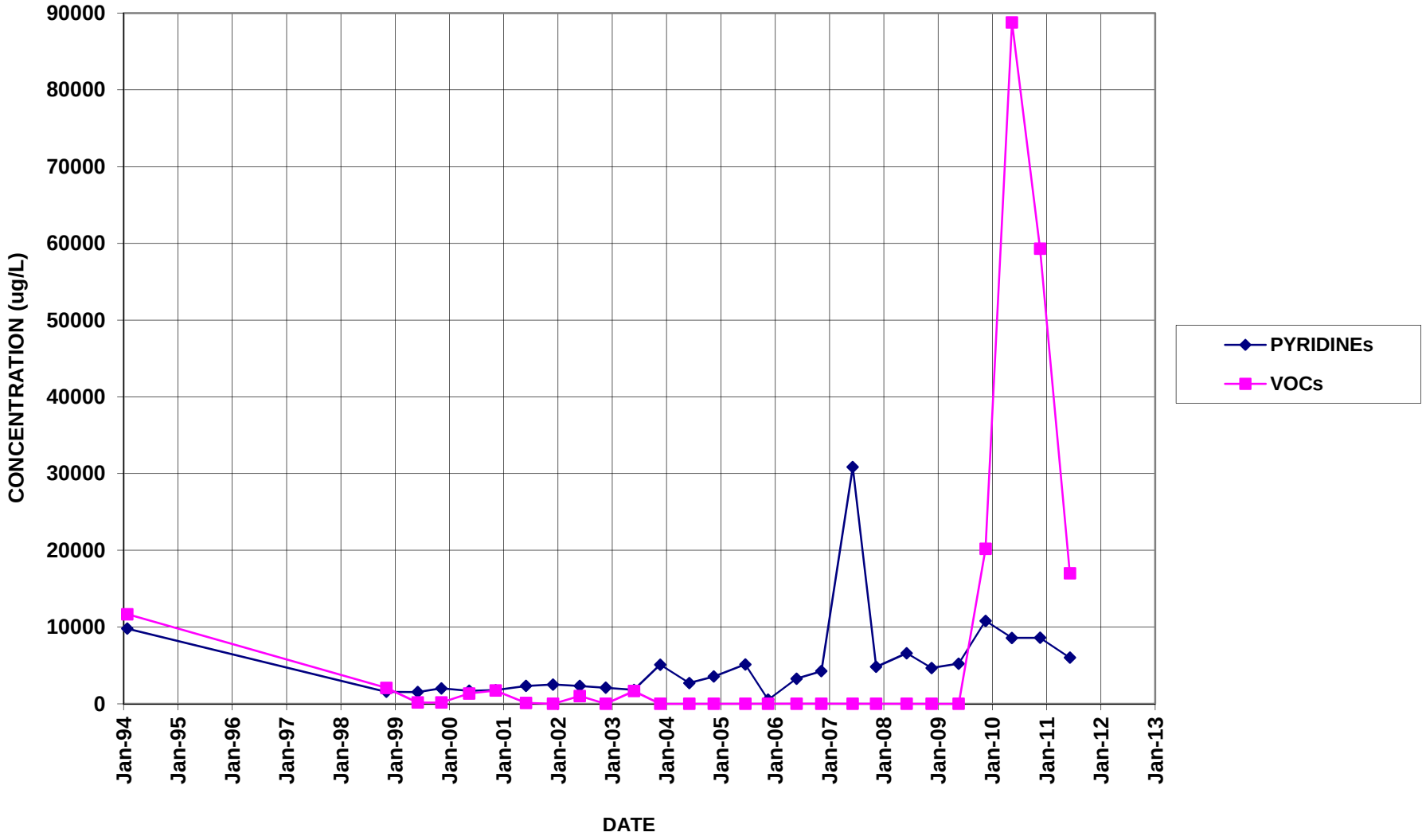
Prepared by: nmb
Reviewed by: jeb

PZ-106

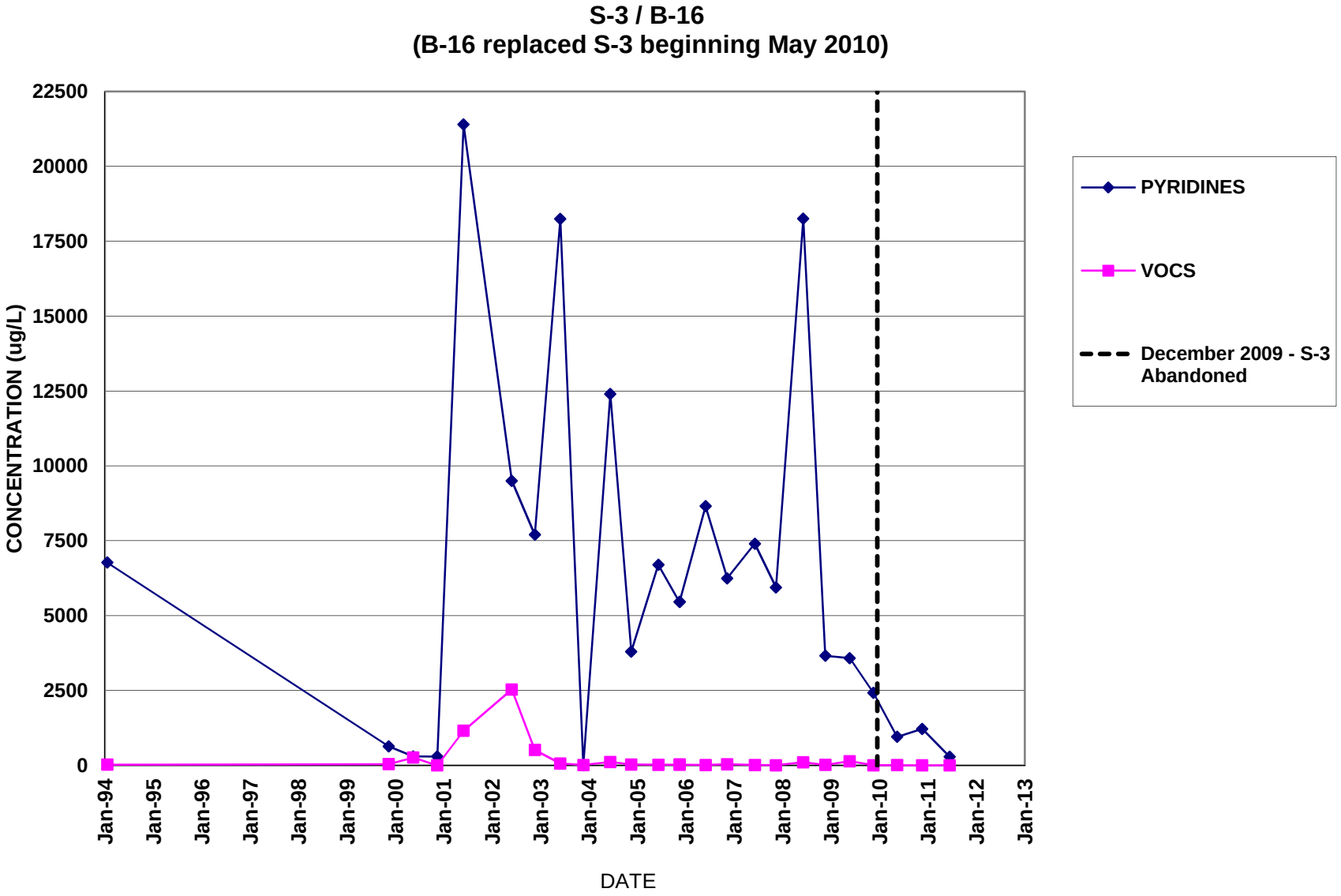


Prepared by: nmb
Reviewed by: jeb

PZ-107

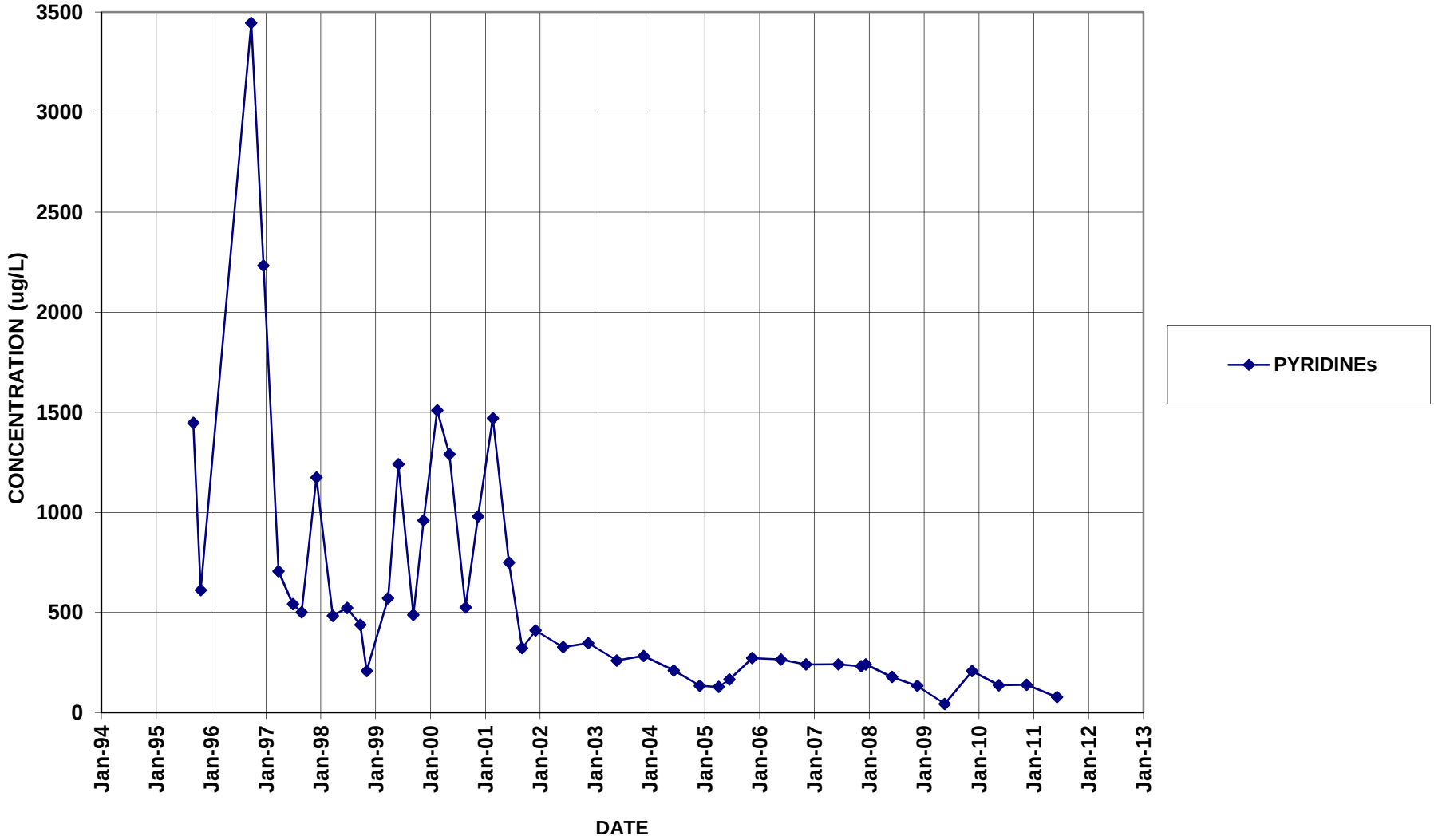


Prepared by: nmb
Reviewed by: jeb



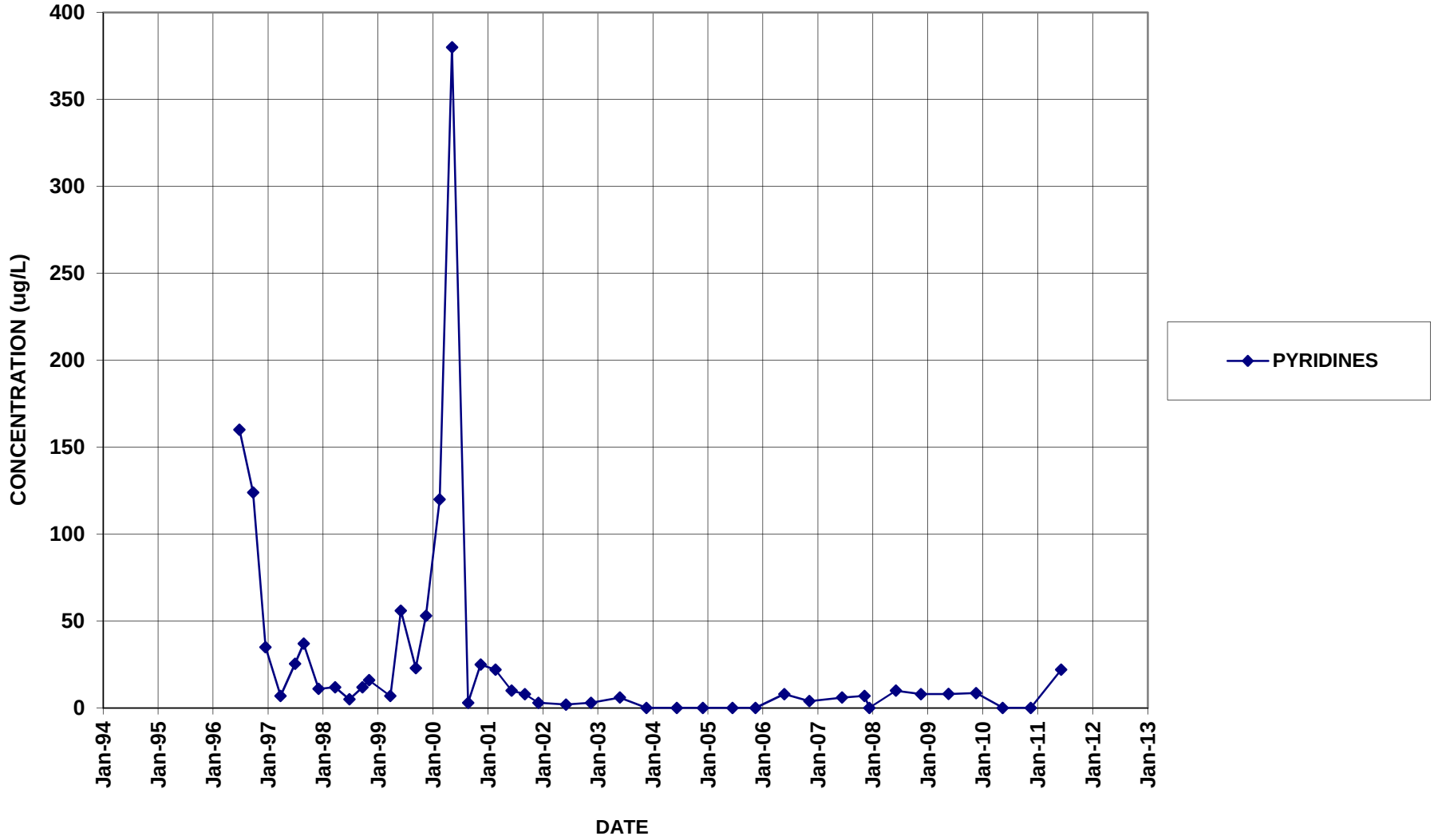
Prepared by: nmb
Reviewed by: jeb

QS-4 (QUARRY SEEP)



Prepared by: nmb
Reviewed by: jeb

QO-2 (QUARRY OUTFALL)



Prepared by: nmb
Reviewed by: jeb