SURFACE WATER AND GROUNDWATER MONITORING PROGRAM
FALL 2013 MONITORING REPORT

ARCH CHEMICALS
ROCHESTER PLANT SITE
ROCHESTER, NEW YORK

ARCH CHEMICALS, INC.
(A WHOLLY-OWNED SUBSIDIARY OF LONZA)

JANUARY 2014

SURFACE WATER AND GROUNDWATER MONITORING PROGRAM
FALL 2013 MONITORING REPORT

ARCH CHEMICALS
ROCHESTER PLANT SITE
ROCHESTER, NEW YORK

Prepared by

AMEC Environment & Infrastructure, Inc.
Portland, Maine

for

ARCH CHEMICALS, INC.
(A Wholly-Owned Subsidiary of Lonza)

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EXECUTIVE SUMMARY

This monitoring report presents the results of an on-going groundwater and surface water monitoring program being conducted by Arch Chemicals at its Rochester, New York, manufacturing facility. Arch Chemicals is a wholly-owned subsidiary of Lonza, a leading supplier to the global life sciences, healthcare and pharmaceutical industries headquartered in Basel, Switzerland.

During this monitoring event conducted in November 2013, samples from a total of 33 groundwater monitoring or pumping wells and four locations associated with the Dolomite Products Quarry seep and outfall were collected and analyzed by TestAmerica in Amherst, New York.

As in prior reports, monitoring results were compared with previous average concentrations at each sampling location. Fifteen of the 33 wells sampled for chloropyridines had contaminant concentrations that were at or below their respective 5-year prior averages. Twenty of the 32 wells sampled for volatile organic compounds had concentrations at or below their 5-year prior averages. The contaminant contour plot for chloropyridines is generally consistent with past observations. For the VOCs, the configuration of the contaminant plume has changed from prior year depictions due to the inclusion of chlorobenzene in the list of selected VOCs starting with this monitoring event. Overall VOC concentrations, however, show a downward or stable trend in most wells.

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). The total concentration of chloropyridines in quarry seep QS-4 was below its prior 5-year average. Chloropyridines were not detected in the sample from location QD-1, or in the canal water at sample location QO2-S1. Sample QO-2 contained total chloropyridines at a concentration exceeding its 5-year average.

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

During the period June 2013 through November 2013, the on-site groundwater extraction system pumped approximately 8.7 million gallons of groundwater to the on-site treatment system, containing an estimated 1,281 pounds of chloropyridines and 79 pounds of target volatile organic compounds. Improved mass removal was noted in extraction well PW-15 due to increased flow rates. The activation of new pumping well PW-17 also contributed to the system's overall increase in contaminant mass removal.

The next regular monitoring event will occur in May 2014 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 Fall 2013 sampling event included the collection and analysis of a total of 37 groundwater, surface water, and seep samples from off-site and on-site locations. Samples were collected November 8 through 15, 2013, for analysis of selected chloropyridines and volatile organic compounds (VOCs).

This report presents the results of the Fall 2013 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 November 8, 2013. Piezometric contour maps were constructed for each water-bearing zone (overburden, bedrock, and deep bedrock) and are presented in Figures 3, 4, and 5.

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

2.2 SURFACE WATER

Surface water and quarry seep samples were collected as part of the on-going monitoring program for the Arch Rochester site. The location of the quarry and its outfall in relation to the site is shown on Figure 6. Samples of the main quarry seep (QS-4), the quarry ditch where the quarry dewatering discharge enters the ditch (QD-1), the quarry ditch as it enters the Erie Barge Canal (QO-2), and the surface water in the canal approximately 100-feet

downstream of the quarry ditch (QO-2S1) were collected by TestAmerica on November 8, 2013. Due to possible sample labeling errors, locations QS-4, QD-1 and QO-2 were re-sampled on December 13, 2013. All quarry-related samples were analyzed for the Arch suite of selected chloropyridines. The quarry locations sampled during the Fall 2013 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 8270D and 8260C, 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

Laboratory analytical results were reviewed and qualified following U.S. Environmental Protection Agency Contract Laboratory Program (USEPA CLP), "National Functional Guidelines for Superfund Organic Methods 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.

Surrogate Recoveries. Percent recovery of the surrogate bromofluorobenzene (123) in sample PW-12 was above the laboratory control limits, indicating potential high biases for positive results. Positive detections for VOCs in PW-12 were qualified estimated (J) and may represent potential high biases.

Duplicates. The relative percent difference (RPD) between field duplicate results for 2,6-dichloropyridine (54) was above the control limit of 50 for sample BR-126 and the associated field duplicate. Positive detections of 2,6-dichloropyridine in BR-126 and the field duplicate were qualified estimated (J).

Laboratory Control Samples (LCS). RPDs between LCS and LCSD percent recoveries were above control limits for 4-chloropyridine (36) and p-fluoroaniline (27) in the LCS/LCSD associated with a subset of samples. Positive and non-detected results for 4-chloropyridine and p-fluoroaniline in samples PW-10, PZ-102, PZ-103, PZ-104, PW-17, PW-15, PW-16, PW-13, and BR-7A were qualified estimated (J/UJ).

Matrix Spike/Matrix Spike Duplicates (MS/MSD). Percent recoveries of chlorobenzene (68, 59) were below laboratory control limits in the MS/MSD associated with sample PZ-103. The detection of chlorobenzene in sample PZ-103 was qualified estimated (J).

Percent recoveries of chlorobenzene (53, 63) were below laboratory control limits in the MS/MSD associated with sample B-5. The detection of chlorobenzene in sample B-5 was qualified estimated (J).

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

3.0 ANALYTICAL RESULTS

3.1 GROUNDWATER

The validated results from the Fall 2013 groundwater monitoring event are provided in Tables 2 and 3. Table 4 provides a comparison of the Fall 2013 analytical results for selected chloropyridines and VOCs in representative wells to mean concentrations of the prior five years (Fall 2008 through Spring 2013). 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 Fall 2013 event. Concentrations of chloropyridines ranged from 24 micrograms per liter (µg/L) (sum of all chloropyridine and pyridine isomer concentrations) in monitoring well B-4 to 170,000 µg/L in monitoring well PW-10. Ten of the on-site wells exhibited total chloropyridine concentrations that were above their respective means from monitoring events over the previous five years (see Table 4).

Off-Site. Chloropyridines were detected above sample quantitation limits in all 12 off-site wells that were sampled. Concentrations of total selected chloropyridines ranged from 7.4 µg/L (in well MW-16 on the former General Circuits property) to 25,000 µg/L in well PZ-103 on the west side of McKee Road. Eight of the off-site wells contained total chloropyridine concentrations above their respective 5-year prior means (see Table 4).

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. In general, the distribution of chloropyridines in groundwater is consistent with past interpretations.

3.1.2 Selected VOCs.

On-Site. Selected VOCs were detected in all 21 on-site wells sampled in the Fall 2013 event. Total concentrations of selected VOCs ranged from 1.4 µg/L (in well PZ-105) to 64,000 µg/L (in both PZ-106 and PW-17) for the sum of the principal site-related contaminants. At the request of the NYSDEC, starting with the Spring 2013 monitoring report chlorobenzene has been included as a selected VOC, along with the VOCs carbon tetrachloride, chloroform, methylene chloride, tetrachloroethene, and trichloroethene, included in prior reporting. Six of the on-site wells contained concentrations of total VOCs above their 5-year prior means (see Table 4).

In addition to the selected VOCs, other notable constituents detected in multiple on-site wells include toluene (in 13 out of 21 wells), benzene (12 of 21), carbon disulfide (9 of 21), 1,2-dichloroethene (7 of 21), vinyl chloride (9 of 21), total xylenes (7 of 21), bromoform (7 of 21), ethyl benzene(4 of 21), acetone (4 of 21), chlorodibromomethane (3 of 21), 1,1-dichloroethane (3 of 21), 1,1,2,2-tetrachloroethane (3 of 21), and bromodichloro-methane (2 of 21).

Off-Site. Selected VOCs were detected in 10 of the 11 off-site wells sampled for VOCs in the Fall 2013 event. The total concentration of selected VOCs ranged from non-detect (in well BR-126) to 1,400 µg/L in PZ-103. Six of the off-site wells contained concentrations of total VOCs above their 5-year prior means (see Table 4).

In addition to the selected VOCs, other notable constituents detected in multiple off-site wells include benzene (in 9 out of 11 wells), carbon disulfide (3 of 11), and 1,2-dichloroethene (3 of 11).

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 historical data. The inclusion of chlorobenzene in the total concentration of selected VOCs starting in 2013 has altered the shape of the VOC groundwater plume somewhat, in comparison to prior year interpretations. VOC Concentration trends, however, are downward or stable in most wells.

3.2 SURFACE WATER

Results from the Fall 2013 canal and quarry monitoring event are presented in Table 5. As a result of a possible sample labeling error, the quarry seep and quarry ditch samples collected on November 8, 2013 were rejected and new samples were collected on December 13, 2013. The results are included in Table 5 and are discussed below.

3.2.1 Quarry

One quarry seep (QS-4) was sampled in the Fall 2013 monitoring event. The sample contained 100 µg/L total chloropyridines, which is below its prior 5-year mean.

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. Sample QD-1 contained no detectible chloropyridines, while sample QO-2 contained approximately 22 µg/L of chloropyridine-related compounds. The reported total concentration of chloropyridines at QO-2 is above the prior 5-year mean for that location.

3.2.3 Barge Canal

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

4.0 EXTRACTION SYSTEM PERFORMANCE AND MAINTENANCE

Table 6 is a summary of the system flow measurements for the on-site extraction wells from June 2013 through November 2013. The total volume pumped during the six-month period was approximately 8.7 million gallons.

During the reporting period, pumps were repaired or replaced in wells BR-7A, BR-9, and PW-15. Toward the end of the period, wells PW-14, PW-15, PW-17, and BR-127 were shut down to prevent interference with the in-situ chemical oxidation pilot test (results of the pilot test will be discussed in a separate report to be issued in the Spring of 2014).

Table 7 provides a calculation of mass removal rates since the previous groundwater monitoring event (i.e., from June 2013 through November 2013). Arch estimates that approximately 79 pounds of target VOCs and 1,281 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. Improved mass removal was noted in extraction well PW-15 due to its significantly higher pumping rate. The activation of new pumping well PW-17 on May 27, 2013 also contributed to an increased overall contaminant mass removal during the reporting period, particularly for VOCs.

5.0 NEXT MONITORING EVENT

The next regular monitoring event will occur in May 2014 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 JEB | Checked by NMB

ERIE BARGE CANAL

I-390

FIRTH RIXSON

BUFFALO RD. BUSINESS CENTER

ARCH

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

12-6

MW-114/BR-114

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

PFAUDLER

BR-122D

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

amec

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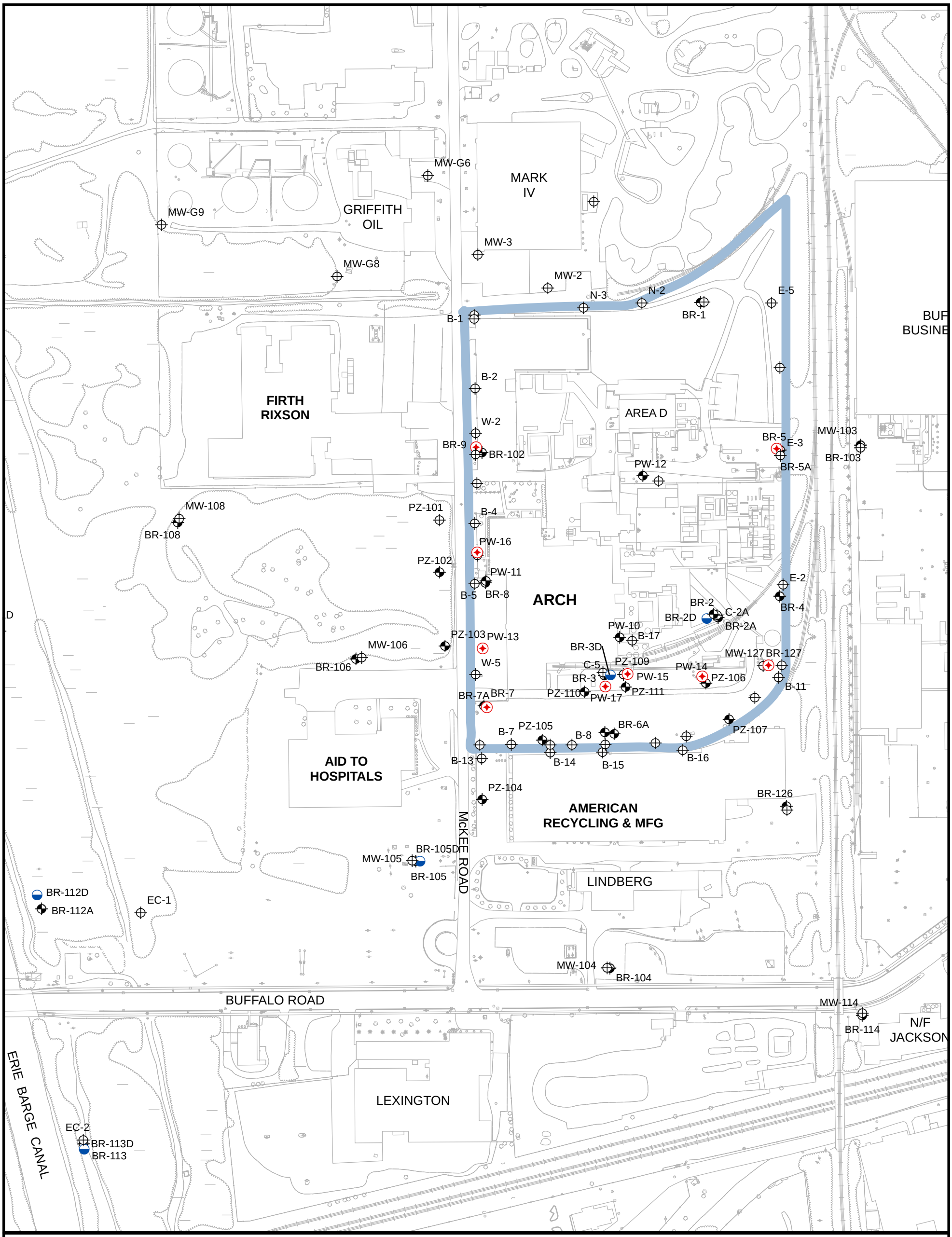

NOTES:

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

N

0 100 200 400 Feet

Legend

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

Figure 2
Onsite Monitoring Well Locations

Arch Chemicals Rochester, NY

Prepared/Date: MJW 01/31/13 | Checked/Date: JEB 01/31/13

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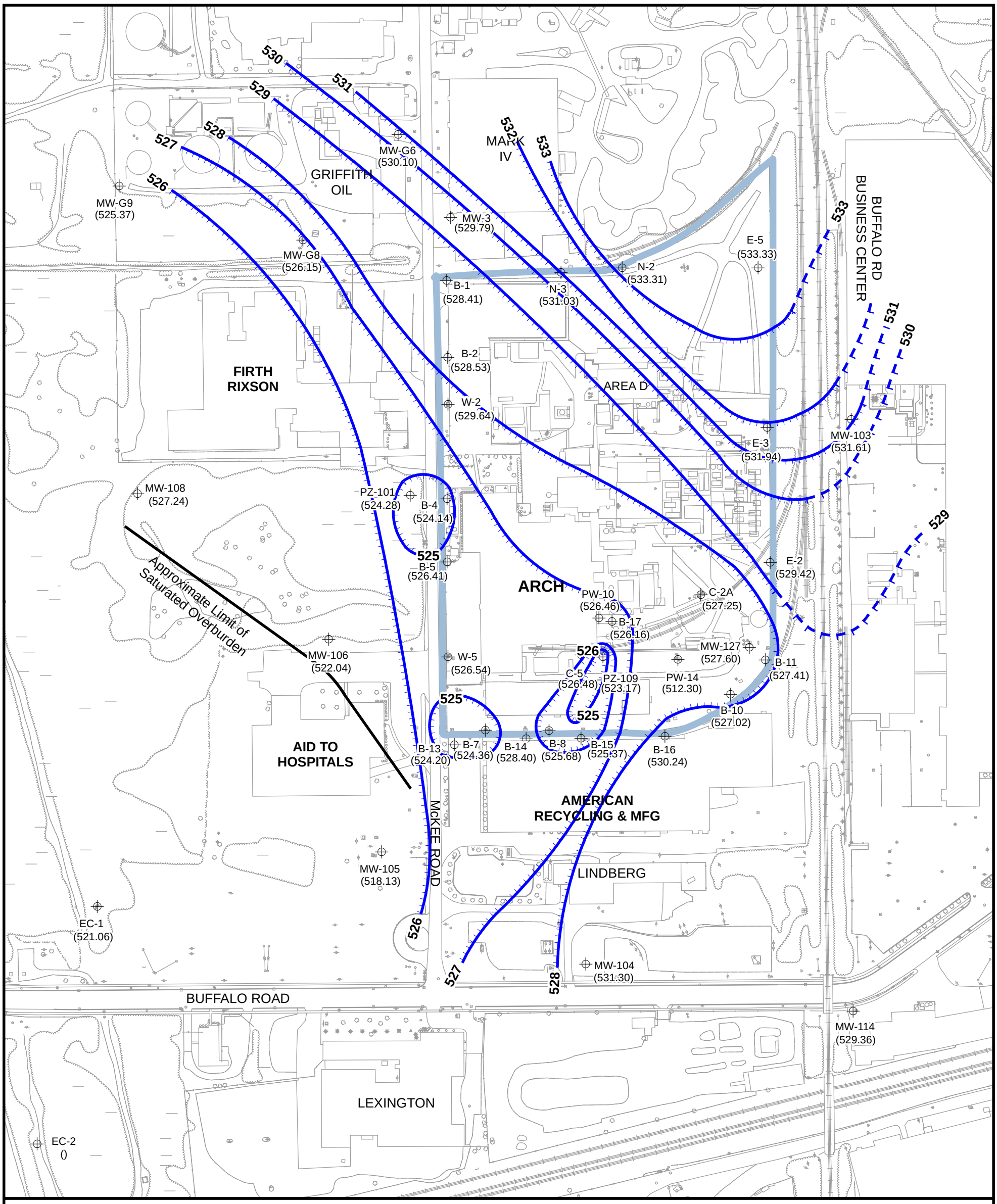

N

Legend

- Piezometric Elevation at Well or Piezometer
- Outline of Arch Property Boundary
- **528** Interpreted Groundwater Flow Direction
- MW-114 (529.36) Overburden Piezometric Elevation Contour (MSL)

NOTES:

1. Water Levels Measured on November 8, 2013
2. Measurements at wells W-2, B-14 and MW-108 are considered anomalous and were not used in contouring.

0 100 200 400 Feet

Prepared/Date: MJW 01/17/14 | Checked/Date: JEB 01/17/14

Figure 3
Fall 2013
Overburden Groundwater
Interpreted Piezometric Contours

Arch Chemicals
Rochester, NY

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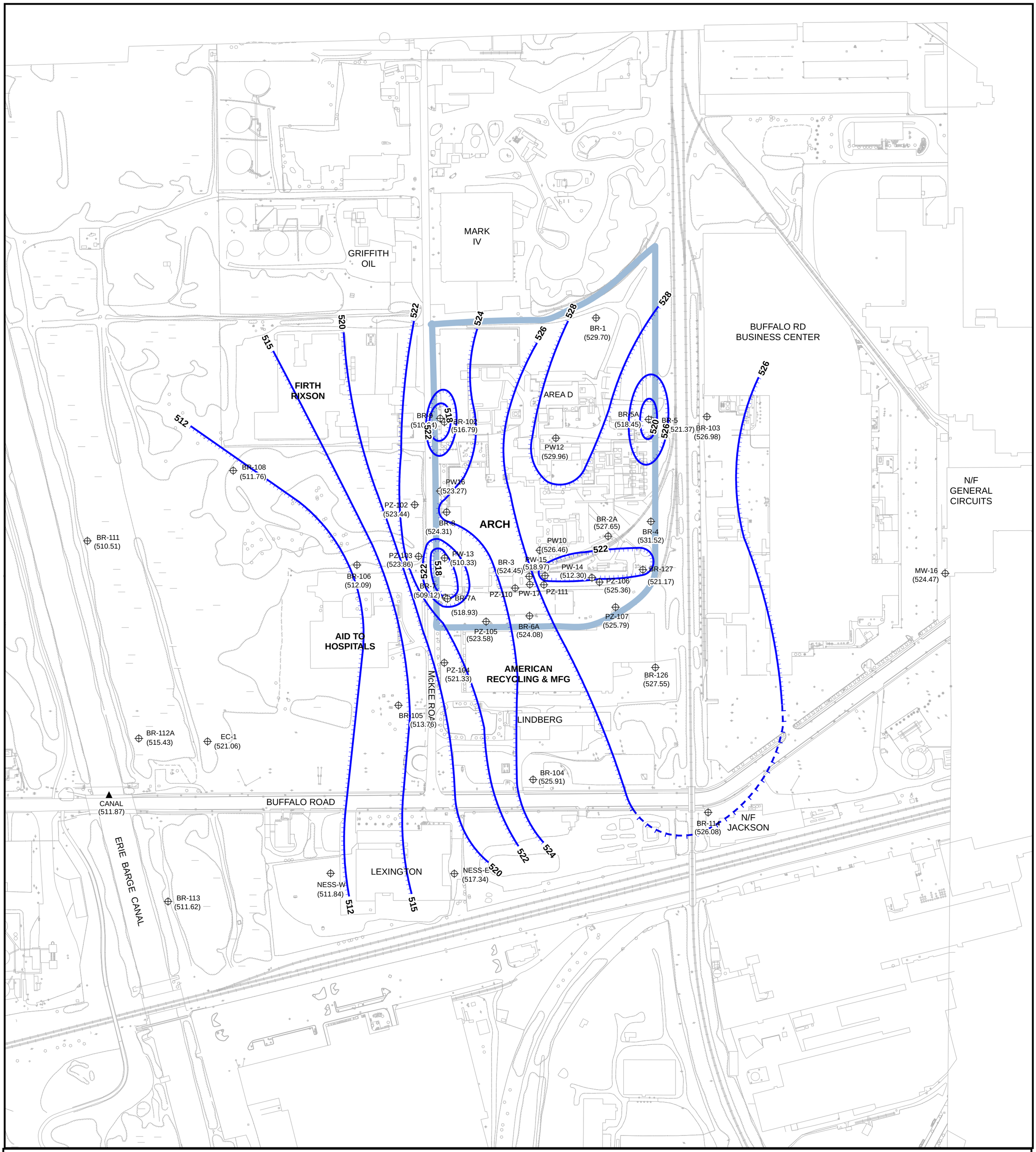

NOTES:

1. Water Levels Measured on November 8, 2013
2. Dashed Contours Reflect Uncertainty
3. Measurements in wells BR-112A and EC-1 are considered anomalous and were not used in contouring.

Legend

- BR-112A (515.43) — Piezometric Elevation at Well or Piezometer (Feet MSL)
- CANAL (511.87) — Piezometric Elevation at Surface Water Measuring Point
- Outline of Arch Property Boundary
- Interpreted Groundwater Flow Direction
- 524 — Bedrock Piezometric Elevation Contour (MSL)

N

0 100 200 400 Feet

Figure 4
Fall 2013
Bedrock Groundwater
Interpreted Piezometric Contours

Arch Chemicals
Rochester, NY

Prepared/Date: MJW 01/16/14 | Checked/Date: JEB 01/16/14

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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 (509.46) — Piezometric Elevation at Deep Bedrock Well

NOTES
1. Water Levels Measured on November 8, 2013
2. Dashed Contours Reflect Uncertainty

N

0 250 500 1,000 Feet

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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

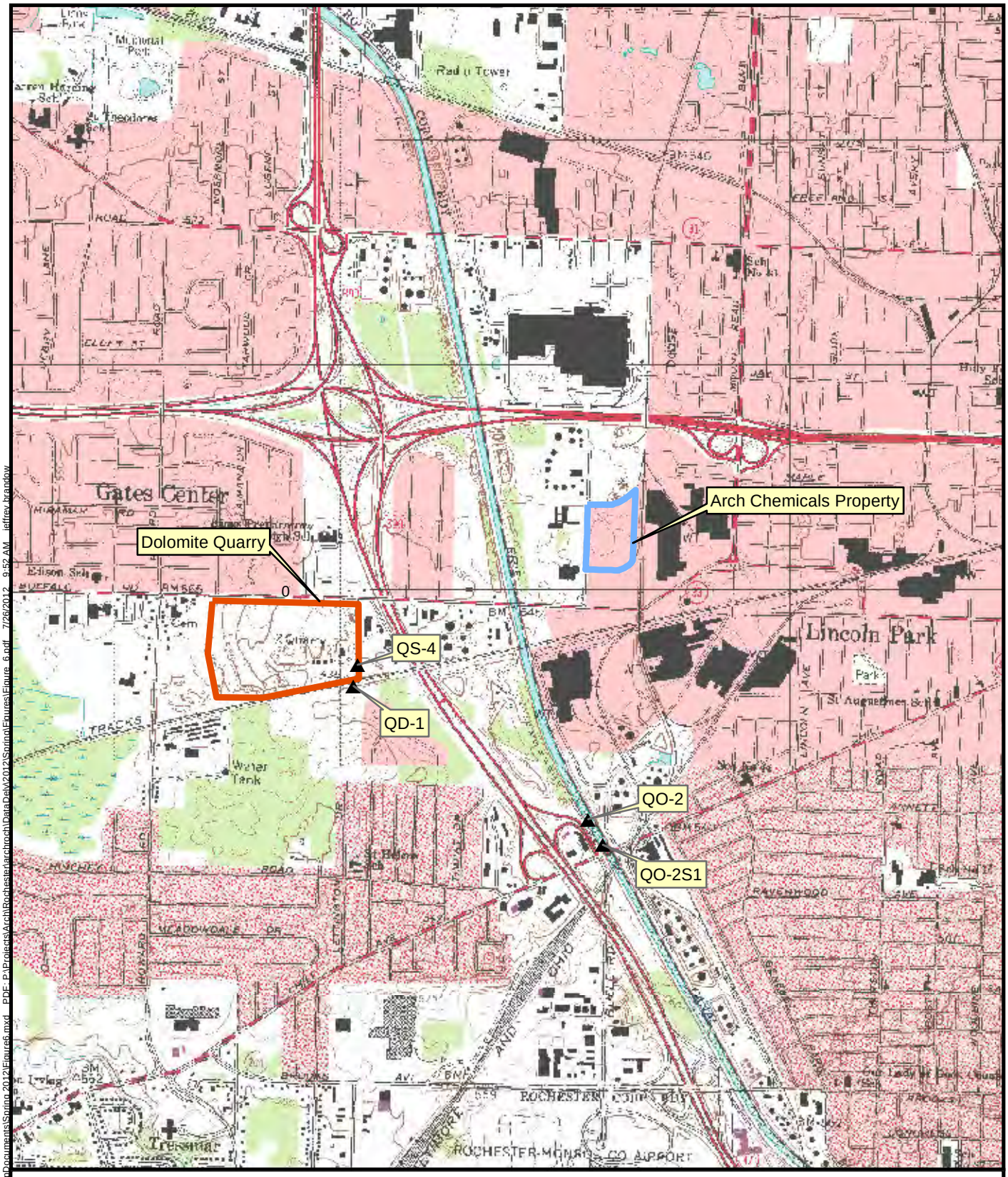
BR-9, BR-103, BR-108, BR-111D (510.57), BR-111, BR-106, BR-3D (483.22), BR-112D (511.58), BR-112, BR-105, BR-105D (510.57), BR-104, BR-114, BR-113, BR-113D (511.62), BR-122D (506.92), BR-117D (496.89), BR-117, BR-118, BR-118D (498.81), BR-123D (507.96), BR-116D (509.55), BR-116, BR-124D (505.61)

498 500 502 504 506 508 510

Figure 5
Fall 2013
Deep Bedrock Groundwater
Interpreted Piezometric Contours

Arch Chemicals
Rochester, NY

amec



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

Legend

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

N

0 1,000 2,000 Feet

Prepared by JEB | Checked by NMB

Figure 6
Sample Locations
Erie Barge Canal

Arch Chemicals
Rochester, New York

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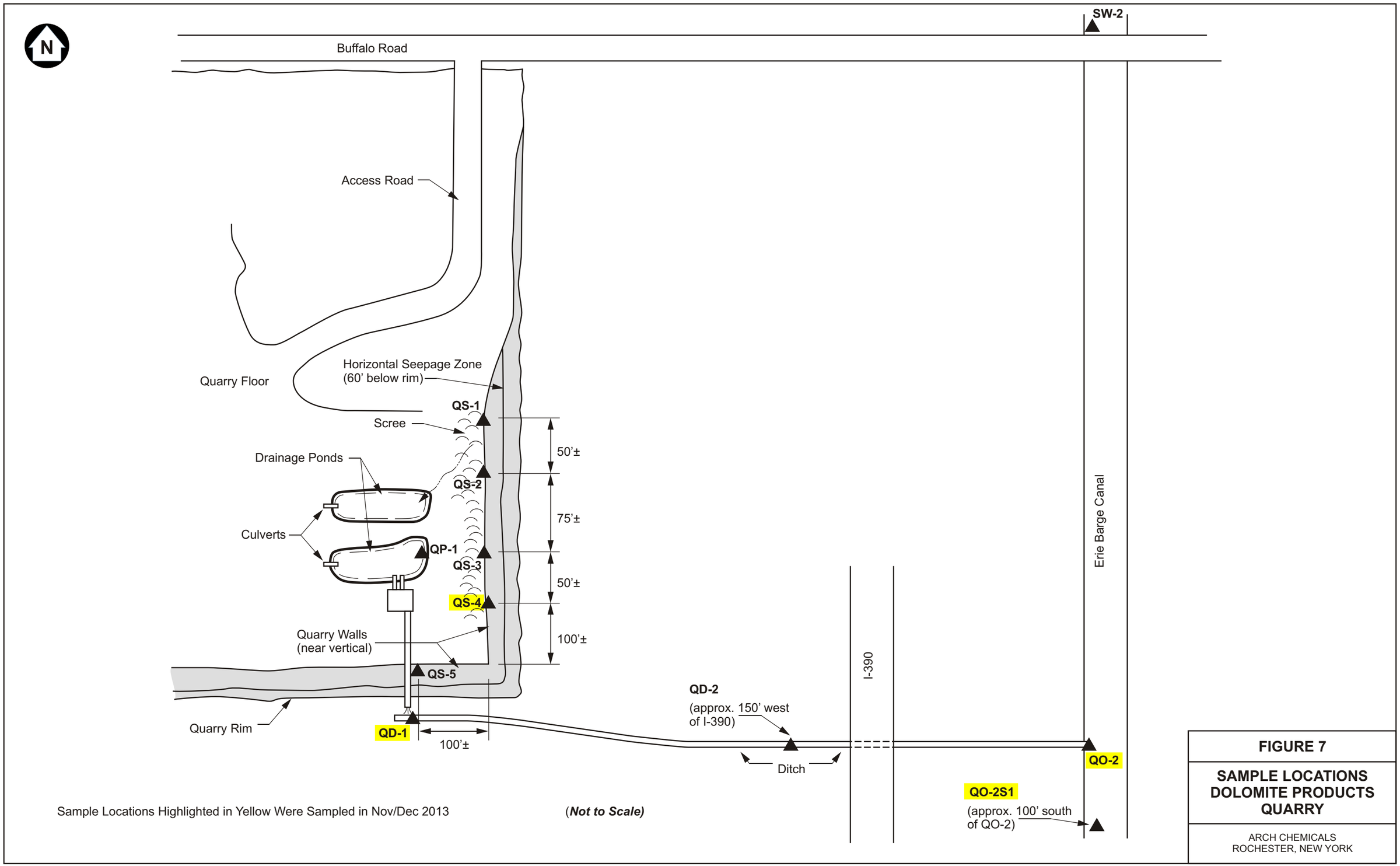


Sample Locations Highlighted in Yellow Were Sampled in Nov/Dec 2013

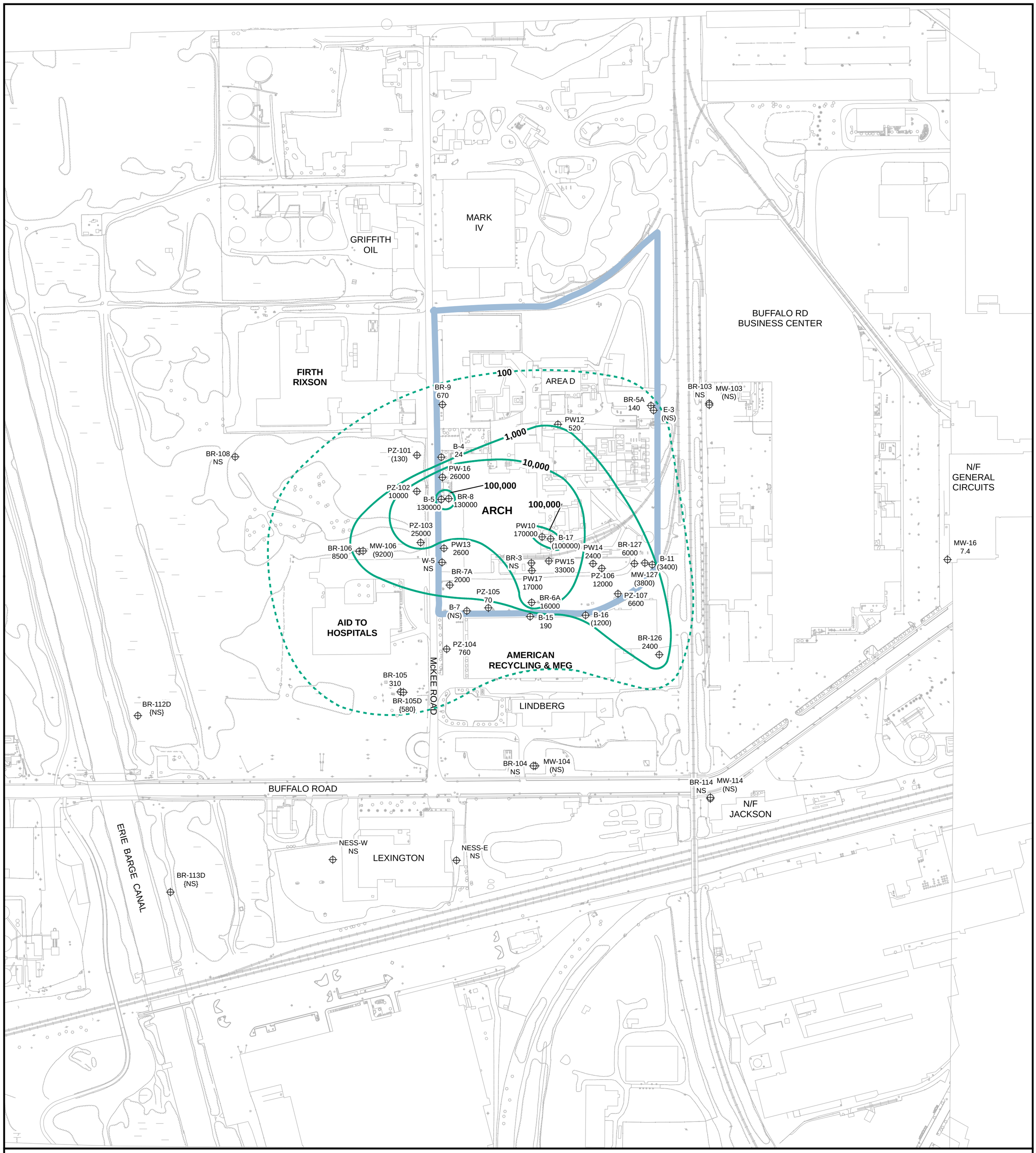
(***Not to Scale***)

FIGURE 7

SAMPLE LOCATIONS
DOLOMITE PRODUCTS QUARRY

ARCH CHEMICALS
ROCHESTER, NEW YORK

W2004030a.cdr



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

NOTES:

1. Samples Collected November 2013
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

Prepared/Date: MJW 01/20/14 | Checked/Date: JEB 01/20/14

Figure 8
Fall 2013
Selected Chloropyridine Concentration Contours

Arch Chemicals
Rochester, NY

amec

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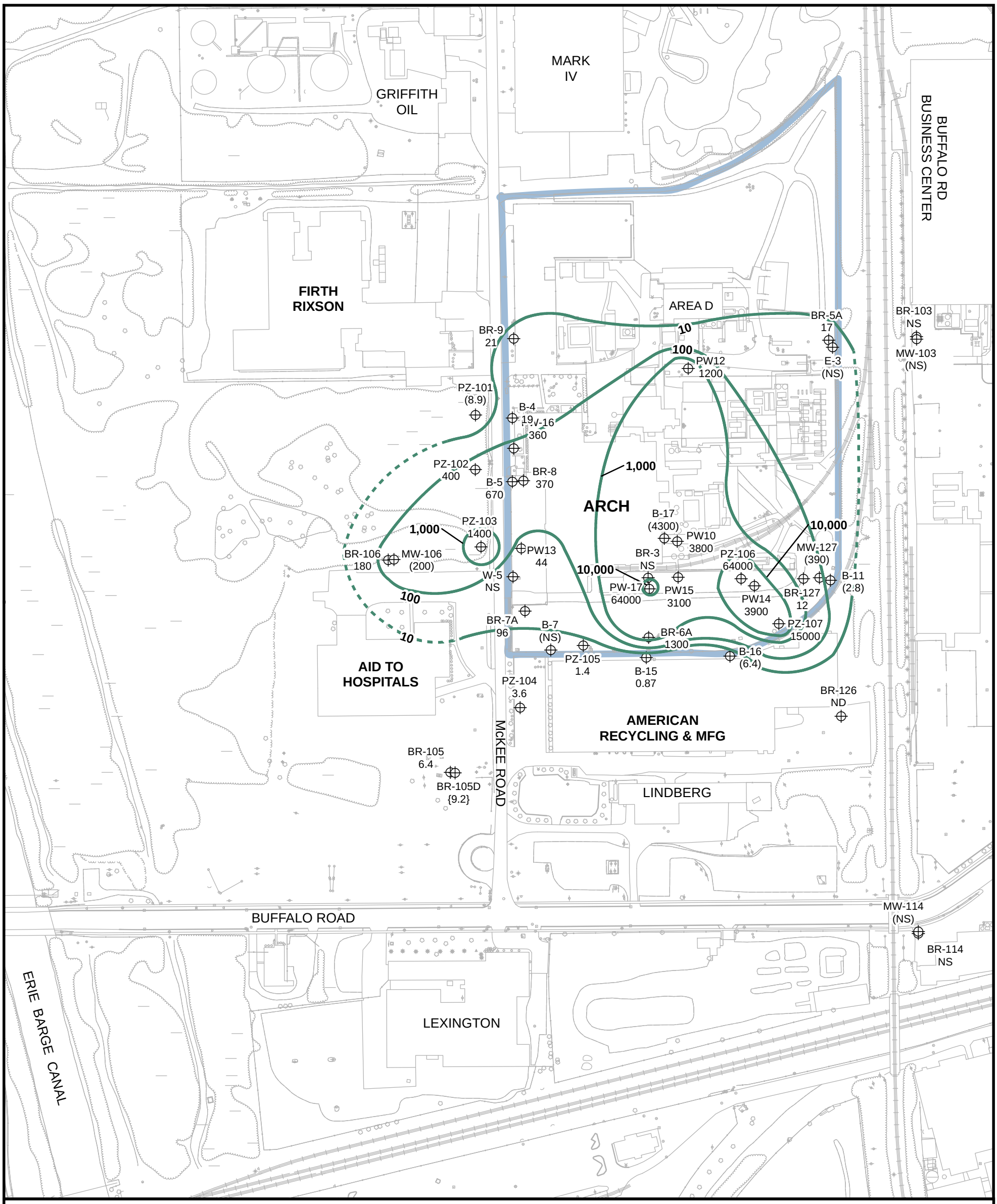

Legend

- 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/Date: MJW 01/20/14 | Checked/Date: JEB 01/20/14

NOTES:

1. Samples Collected in November 2013
2. Selected VOCs consist of Carbon tetrachloride, Methylene chloride Chloroform, Chlorobenzene, 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
Fall 2013
Selected Volatile Organic Compound Concentration Contours

Arch Chemicals
Rochester, NY

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Tables

TABLE 1
FALL 2013 GROUNDWATER SAMPLING AND ANALYTICAL PROGRAM

ARCH CHEMICALS, INC
ROCHESTER, NEW YORK

				ANALYSIS	
SITE / AREA	**WELL / POINT**	**DATE**	**QC TYPE**	**PYRIDINES**	**VOCs**
AID TO HOSPITALS	BR-106	11/15/2013	Sample	X	X
	MW-106	11/15/2013	Sample	X	X
	PZ-101	11/12/2013	Sample	X	X
	PZ-102	11/12/2013	Sample	X	X
	PZ-103	11/12/2013	Sample	X	X
AMERICAN RECYCLE MANUF. (58 MCKEE ROAD)	B-15	11/13/2013	Sample	X	X
	B-16	11/13/2013	Sample	X	X
	BR-126	11/13/2013	Duplicate	X	X
	BR-126	11/13/2013	Sample	X	X
	PZ-104	11/12/2013	Sample	X	X
ARCH ROCHESTER	B-11	11/12/2013	Sample	X	X
	B-17	11/11/2013	Sample	X	X
	B-4	11/13/2013	Sample	X	X
	B-5	11/13/2013	Sample	X	X
	BR-127	11/11/2013	Sample	X	X
	BR-5A	11/12/2013	Sample	X	X
	BR-6A	11/11/2013	Sample	X	X
	BR-7A	11/12/2013	Sample	X	X
	BR-8	11/13/2013	Sample	X	X
	BR-9	11/12/2013	Sample	X	X
	MW-127	11/11/2013	Sample	X	X
	PW10	11/11/2013	Sample	X	X
	PW12	11/13/2013	Sample	X	X
	PW13	11/12/2013	Sample	X	X
	PW14	11/11/2013	Sample	X	X
	PW15	11/12/2013	Sample	X	X
	PW16	11/12/2013	Sample	X	X
	PW17	11/12/2013	Sample	X	X
	PZ-105	11/13/2013	Sample	X	X
	PZ-106	11/11/2013	Sample	X	X
	PZ-107	11/11/2013	Sample	X	X
DOLOMITE PRODUCTS, INC.	QD-1	11/8/2013	Sample	X	
	QS-4	11/8/2013	Sample	X	
ERIE BARGE CANAL (Samples in canal or property along canal)	QO-2	11/8/2013	Sample	X	
	QO-2S1	11/8/2013	Sample	X	
FORMER GENERAL CIRCUTS	MW-16	11/8/2013	Sample	X	
RG & E RIGHT OF WAY	BR-105	11/15/2013	Sample	X	X
	BR-105D	11/15/2013	Sample	X	X

TABLE 2
FALL 2013 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	B-11	B-15	B-16	B-17	B-4	B-5	BR-105	BR-105D	BR-106	BR-126
SAMPLE DATE:	11/12/2013	11/13/2013	11/13/2013	11/11/2013	11/13/2013	11/13/2013	11/15/2013	11/15/2013	11/15/2013	11/13/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)										
2,6-Dichloropyridine	440	120	400	25,000 U	17	50,000 U	68	42 J	1100	490 J
2-Chloropyridine	2,900	66	770	100,000	7 J	130,000	240	510	7,300	1,900
3-Chloropyridine	42	47 U	240 U	25,000 U	9.4 U	50,000 U	47 U	10 J	500 U	100 U
4-Chloropyridine	18 U	47 U	240 U	25,000 UJ	9.4 U	50,000 U	47 U	47 U	500 U	100 U
p-Fluoroaniline	7.3 J	47 U	240 U	25,000 UJ	9.4 U	50,000 U	47 U	17 J	75 J	100 U
Pyridine	45 U	120 U	590 U	63,000 U	24 U	130,000 U	120 U	120 U	1300 U	250 U

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

TABLE 2
FALL 2013 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-126	BR-127	BR-5A	BR-6A	BR-7A	BR-8	BR-9	MW-106	MW-127	MW-16
SAMPLE DATE:	11/13/2013	11/11/2013	11/12/2013	11/11/2013	11/12/2013	11/13/2013	11/12/2013	11/15/2013	11/11/2013	11/8/2013
QC TYPE:	Duplicate	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)										
2,6-Dichloropyridine	280 J	710 J	23	2,100 J	280 J	100,000 U	41 J	1,100 J	250	3.5 J
2-Chloropyridine	1,200	4,600	110	14,000	1,700	130,000	630	8,100	2,800	4 J
3-Chloropyridine	4.8 J	650 J	9.5 U	5,000 U	500 U	100,000 U	95 U	2,500 U	690	9.7 U
4-Chloropyridine	9.4 U	2,000 UJ	9.5 U	5,000 UJ	500 UJ	100,000 U	95 U	2,500 U	49	9.7 U
p-Fluoroaniline	5.5 J	2,000 UJ	8.7 J	5,000 UJ	500 UJ	100,000 U	95 U	2,500 U	47 U	9.7 U
Pyridine	24 U	5,000 U	24 U	13,000 U	1300 U	250,000 U	240 U	6,300 U	120 U	24 U

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

TABLE 2
FALL 2013 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PW10	PW12	PW13	PW14	PW15	PW16	PW17	PZ-101	PZ-102	PZ-103
SAMPLE DATE:	11/11/2013	11/13/2013	11/12/2013	11/11/2013	11/12/2013	11/12/2013	11/12/2013	11/12/2013	11/12/2013	11/12/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)										
2,6-Dichloropyridine	13,000	100	210 J	310	1100 J	2,300 J	2,000	32	910 J	3,300
2-Chloropyridine	150,000	310	2,400	2,000	30,000	24,000	13,000	94	9,100	22,000
3-Chloropyridine	7,800 J	94 U	1,000 U	33 J	5,000 U	5,000 U	430 J	9.4 U	2,500 U	2,000 U
4-Chloropyridine	10,000 UJ	94 U	1,000 UJ	100 UJ	5,000 UJ	5,000 UJ	1,200 J	9.4 U	2,500 UJ	2,000 UJ
p-Fluoroaniline	10,000 UJ	110	1,000 UJ	27 J	5,000 UJ	5,000 UJ	1,000 UJ	4 J	2,500 UJ	2,000 UJ
Pyridine	25,000 U	240 U	2,500 U	32 J	1,500 J	13,000 U	630 J	24 U	6,300 U	5,000 U

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

TABLE 2
FALL 2013 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PZ-104	PZ-105	PZ-106	PZ-107
SAMPLE DATE:	11/12/2013	11/13/2013	11/11/2013	11/11/2013
QC TYPE:	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)				
2,6-Dichloropyridine	190	18 J	1,700 J	980
2-Chloropyridine	560	52 J	8,700	5,500
3-Chloropyridine	50 U	100 U	1,300 J	74 J
4-Chloropyridine	50 UJ	100 U	3,200 UJ	500 UJ
p-Fluoroaniline	5.9 J	100 U	3,200 UJ	500 UJ
Pyridine	130 U	250 U	8,000 U	1,300 U

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

TABLE 3
FALL 2013 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	B-11	B-15	B-16	B-17	B-4	B-5	BR-105	BR-105D	BR-106
SAMPLE DATE:	11/12/2013	11/13/2013	11/13/2013	11/11/2013	11/13/2013	11/13/2013	11/15/2013	11/15/2013	11/15/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)									
1,1,1-Trichloroethane	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	130 U	1.1 J	0.59 J	5 U	5 U	10 U
1,1,2-Trichloroethane	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
1,1-Dichloroethane	5 U	5 U	5 U	130 U	5 U	5 U	5 U	1.3 J	10 U
1,1-Dichloroethene	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
1,2,4-Trimethylbenzene	5 U	5 U	5 U	130 U	5 U	2.2 J	5 U	5 U	10 U
1,2-Dichloroethane	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	1.4 J	250 U	10 U	2.8 J	13	5.7 J	20 U
1,2-Dichloropropane	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
1,3,5-Trimethylbenzene	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
2-Butanone	25 U	25 U	25 U	630 U	25 U	25 U	25 U	25 U	50 U
2-Hexanone	25 U	25 U	25 U	630 U	25 U	25 U	25 U	25 U	50 U
4-Methyl-2-pentanone	25 U	25 U	25 U	630 U	25 U	2.3 J	25 U	25 U	50 U
Acetone	25 U	25 U	25 U	630 U	25 U	25 U	25 U	25 U	50 U
Benzene	0.5 J	5 U	1.7 J	98 J	5 U	26	1.2 J	4.1 J	13
Bromodichloromethane	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
Bromoform	5 U	5 U	5 U	47 J	5 U	5 U	5 U	5 U	10 U
Bromomethane	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
Carbon disulfide	5 U	5 U	5 U	29 J	5 U	5 U	5 U	0.79 J	0.88 J
Carbon tetrachloride	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
Chlorobenzene	1.2 J	0.87 J	6.4	230	16	670 J	6.4	8.8	180
Chlorodibromomethane	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
Chloroethane	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
Chloroform	1.2 J	5 U	5 U	2200	2.1 J	0.39 J	5 U	0.38 J	10 U
Chloromethane	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
Ethyl benzene	5 U	5 U	5 U	130 U	1.5 J	2 J	5 U	5 U	10 U
Methylene chloride	5 U	5 U	5 U	1300	5 U	5 U	5 U	5 U	10 U
Styrene	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
Tetrachloroethene	0.36 J	5 U	5 U	570	0.94 J	0.41 J	5 U	5 U	10 U
Toluene	5 U	5 U	5 U	160	14	63	5 U	5 U	10 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	130 U	5 U	5 U	5 U	5 U	10 U
Trichloroethene	5 U	5 U	5 U	24 J	5 U	0.54 J	5 U	5 U	10 U
Vinyl acetate	25 U	25 U	25 U	630 U	25 U	25 U	25 U	25 U	50 U
Vinyl chloride	5 U	5 U	5 U	130 U	5 U	5 U	12	5 U	10 U
Xylenes, Total	15 U	15 U	15 U	380 U	8.6 J	7.8 J	15 U	15 U	30 U

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

TABLE 3
FALL 2013 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-126	BR-126	BR-127	BR-5A	BR-6A	BR-7A	BR-8	BR-9	MW-106
SAMPLE DATE:	11/13/2013	11/13/2013	11/11/2013	11/12/2013	11/11/2013	11/12/2013	11/13/2013	11/12/2013	11/15/2013
QC TYPE:	Duplicate	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)									
1,1,1-Trichloroethane	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
1,1,2,2-Tetrachloroethane	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
1,1,2-Trichloroethane	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
1,1-Dichloroethane	5 U	5 U	25 U	5 U	100 U	3.7 J	50 U	5.9	10 U
1,1-Dichloroethene	5 U	5 U	25 U	5 U	100 U	5 U	50 U	0.75 J	10 U
1,2,4-Trimethylbenzene	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
1,2-Dichloroethane	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	50 U	8.4 J	200 U	12	100 U	66	20 U
1,2-Dichloropropane	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
1,3,5-Trimethylbenzene	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
2-Butanone	25 U	25 U	130 U	25 U	500 U	25 U	250 U	25 U	50 U
2-Hexanone	25 U	25 U	130 U	25 U	500 U	25 U	250 U	25 U	50 U
4-Methyl-2-pentanone	25 U	25 U	130 U	25 U	500 U	25 U	250 U	25 U	50 U
Acetone	25 U	25 U	130 U	25 U	500 U	25 U	250 U	25 U	50 U
Benzene	2.5 J	2.7 J	25 U	6.7	100 U	8.4	50 U	54	14
Bromodichloromethane	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
Bromoform	5 U	5 U	25 U	5 U	25 J	5 U	50 U	5 U	10 U
Bromomethane	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
Carbon disulfide	5 U	5 U	25 U	0.96 J	71 J	5 U	50 U	5 U	0.82 J
Carbon tetrachloride	5 U	5 U	25 U	5 U	990	11	50 U	5 U	10 U
Chlorobenzene	5 U	5 U	25 U	16	100 U	31	370	20	200
Chlorodibromomethane	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
Chloroethane	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
Chloroform	5 U	5 U	9.1 J	0.42 J	240	12	50 U	5 U	10 U
Chloromethane	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
cis-1,3-Dichloropropene	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
Ethyl benzene	5 U	5 U	25 U	5 U	100 U	5 U	50 U	0.92 J	10 U
Methylene chloride	5 U	5 U	3.2 J	5 U	15 J	36	50 U	5 U	10 U
Styrene	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
Tetrachloroethene	5 U	5 U	25 U	5 U	22 J	4 J	50 U	5 U	10 U
Toluene	5 U	5 U	25 U	2.2 J	35 J	0.83 J	8.1 J	1 J	10 U
trans-1,3-Dichloropropene	5 U	5 U	25 U	5 U	100 U	5 U	50 U	5 U	10 U
Trichloroethene	5 U	5 U	25 U	0.97 J	100 U	1.6 J	50 U	1 J	10 U
Vinyl acetate	25 U	25 U	130 U	25 U	500 U	25 U	250 U	25 U	50 U
Vinyl chloride	5 U	5 U	5.2 J	2.2 J	18 J	18	50 U	41	10 U
Xylenes, Total	15 U	15 U	75 U	0.87 J	300 U	15 U	150 U	0.68 J	30 U

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

TABLE 3
FALL 2013 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	MW-127	PW10	PW12	PW13	PW14	PW15	PW16	PW17	PZ-101
SAMPLE DATE:	11/11/2013	11/11/2013	11/13/2013	11/12/2013	11/11/2013	11/12/2013	11/12/2013	11/12/2013	11/12/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)									
1,1,1-Trichloroethane	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
1,1,2,2-Tetrachloroethane	25 U	25 U	99 J	5 U	250 U	5 U	40 U	4 U	5 U
1,1,2-Trichloroethane	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
1,1-Dichloroethane	25 U	25 U	100 U	3.7 J	250 U	5 U	40 U	4 U	5 U
1,1-Dichloroethene	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
1,2,4-Trimethylbenzene	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
1,2-Dichloroethane	25 U	25 U	22 J	5 U	250 U	5 U	40 U	4 U	5 U
1,2-Dichloroethene (total)	50 U	50 U	200 U	10	500 U	9.4 J	80 U	70	10 U
1,2-Dichloropropane	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
1,3,5-Trimethylbenzene	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
2-Butanone	130 U	130 U	500 U	25 U	1300 U	50 U	200 U	40 U	25 U
2-Hexanone	130 U	130 U	500 U	25 U	1300 U	25 U	200 U	20 U	25 U
4-Methyl-2-pentanone	130 U	130 U	500 U	25 U	1300 U	25 U	200 U	20 U	25 U
Acetone	130 U	130	350 J	25 U	1300 U	54	200 U	71	25 U
Benzene	25 U	81	9.9 J	13	250 U	26	6.2 J	19	5 U
Bromodichloromethane	25 U	13 J	100 U	5 U	250 U	5 U	40 U	3.1 J	5 U
Bromoform	5.7 J	1500	100 U	5 U	250 U	22	40 U	200 J	5 U
Bromomethane	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
Carbon disulfide	140	760	100 U	5 U	79 J	400	40 U	1000	5 U
Carbon tetrachloride	34	62	100 U	5 U	250 U	530	40 U	30000	5 U
Chlorobenzene	25 U	130	970 J	41	250 U	55	360	33	8.9
Chlorodibromomethane	25 U	89	100 U	5 U	250 U	2 J	40 U	48	5 U
Chloroethane	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
Chloroform	340	1900	120 J	0.9 J	3200 J	2100	40 U	29000	5 U
Chloromethane	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
cis-1,3-Dichloropropene	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
Ethyl benzene	25 U	25 U	140 J	5 U	250 U	5 U	40 U	4 U	5 U
Methylene chloride	4.5 J	420	100 U	5 U	610	140	40 U	3100	5 U
Styrene	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
Tetrachloroethene	6.8 J	1200	92 J	1.2 J	44 J	260	40 U	1500	5 U
Toluene	25 U	180	960 J	0.76 J	250 U	77	40 U	190	5 U
trans-1,3-Dichloropropene	25 U	25 U	100 U	5 U	250 U	5 U	40 U	4 U	5 U
Trichloroethene	25 U	36	100 U	0.93 J	250 U	23	40 U	52	5 U
Vinyl acetate	130 U	130 U	500 U	25 U	1300 U	25 U	200 U	20 U	25 U
Vinyl chloride	25 U	25 U	100 U	21	92 J	7.7	40 U	55	5 U
Xylenes, Total	75 U	22 J	850 J	15 U	750 U	5.6 J	120 U	8 U	15 U

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

TABLE 3
FALL 2013 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PZ-102	PZ-103	PZ-104	PZ-105	PZ-106	PZ-107
SAMPLE DATE:	11/12/2013	11/12/2013	11/12/2013	11/13/2013	11/11/2013	11/11/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)						
1,1,1-Trichloroethane	25 U	50 U	5 U	5 U	5000 U	1000 U
1,1,2,2-Tetrachloroethane	25 U	50 U	5 U	5 U	5000 U	1000 U
1,1,2-Trichloroethane	25 U	50 U	5 U	5 U	5000 U	1000 U
1,1-Dichloroethane	25 U	50 U	5 U	5 U	5000 U	1000 U
1,1-Dichloroethene	25 U	50 U	5 U	5 U	5000 U	1000 U
1,2,4-Trimethylbenzene	25 U	50 U	5 U	5 U	5000 U	1000 U
1,2-Dichloroethane	25 U	50 U	5 U	5 U	5000 U	1000 U
1,2-Dichloroethene (total)	50 U	100 U	10 U	10 U	10000 U	2000 U
1,2-Dichloropropane	25 U	50 U	5 U	5 U	5000 U	1000 U
1,3,5-Trimethylbenzene	25 U	50 U	5 U	5 U	5000 U	1000 U
2-Butanone	130 U	250 U	25 U	25 U	25000 U	5000 U
2-Hexanone	130 U	250 U	25 U	25 U	25000 U	5000 U
4-Methyl-2-pentanone	130 U	250 U	25 U	25 U	25000 U	5000 U
Acetone	130 U	250 U	25 U	25 U	25000 U	5000 U
Benzene	17 J	22 J	1.4 J	5 U	5000 U	1000 U
Bromodichloromethane	25 U	50 U	5 U	5 U	5000 U	1000 U
Bromoform	25 U	50 U	5 U	5 U	960 J	1000 U
Bromomethane	25 U	50 U	5 U	5 U	5000 U	1000 U
Carbon disulfide	25 U	50 U	5 U	5 U	17000	1000 U
Carbon tetrachloride	25 U	50 U	5 U	5 U	5000 U	1000 U
Chlorobenzene	400	1400 J	3.6 J	1.4 J	5000 U	1000 U
Chlorodibromomethane	25 U	50 U	5 U	5 U	5000 U	1000 U
Chloroethane	25 U	50 U	5 U	5 U	5000 U	1000 U
Chloroform	25 U	50 U	5 U	5 U	61000	11000
Chloromethane	25 U	50 U	5 U	5 U	5000 U	1000 U
cis-1,3-Dichloropropene	25 U	50 U	5 U	5 U	5000 U	1000 U
Ethyl benzene	25 U	50 U	5 U	5 U	5000 U	1000 U
Methylene chloride	25 U	50 U	5 U	5 U	1800 J	4000
Styrene	25 U	50 U	5 U	5 U	5000 U	1000 U
Tetrachloroethene	25 U	50 U	5 U	5 U	870 J	430 J
Toluene	25 U	50 U	5 U	5 U	5000 U	1000 U
trans-1,3-Dichloropropene	25 U	50 U	5 U	5 U	5000 U	1000 U
Trichloroethene	25 U	50 U	5 U	5 U	5000 U	1000 U
Vinyl acetate	130 U	250 U	25 U	25 U	25000 U	5000 U
Vinyl chloride	25 U	50 U	5 U	5 U	5000 U	1000 U
Xylenes, Total	75 U	150 U	15 U	15 U	15000 U	3000 U

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

TABLE 4
COMPARISON OF FALL 2013
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	NOV 2013 RESULT	# EVENTS IN PRIOR 5 YRS	HISTORIC MAXIMUM	5-YEAR MEAN	NOV 2013 RESULT
ON-SITE WELLS/LOCATIONS								
B-11	7	4,800	1,400	**3,400**	7	570	110	2.8
B-17	5	28,000,000	340,000	100,000	5	350,000	9,800	4,300
B-4	1	740	26	24	1	42	1	**19**
B-5	1	130,000	31,000	**130,000**	1	320	51	**670**
B-7	5	9,100	470		5	270	28	
BR-127	10	29,000	9,400	6,000	10	1,300	150	12
BR-3	5	6,500,000	64,000		5	930,000	100,000	
BR-5A	10	1,700	150	140	10	9,400	19	17
BR-6A	10	140,000	13,000	**16,000**	10	26,000	280	**1,300**
BR-7A	10	510,000	16,000	2,000	10	4,400	390	96
BR-8	5	160,000	82,000	**130,000**	5	7,800	570	370
BR-9	10	720	110	**670**	10	210	11	**21**
E-3	5	600	92		5	15,000	19	
MW-127	10	15,000	3,700	**3,800**	10	7,500	830	390
PW10	10	240,000	59,000	**170,000**	10	120,000	1,600	**3,800**
PW12	10	15,000	1,000	520	10	120,000	9,200	1,200
PW13	10	7,500	3,100	2,600	10	1,800	350	44
PW14	10	29,000	4,900	2,400	10	160,000	23,000	3,900
PW15	10	730,000	57,000	33,000	10	8,300	4,300	3,100
PW16	6	31,000	23,000	**26,000**	6	1,200	790	360
PW17	2	17,000	6,500	**17,000**	2	64,000	38	**64,000**
PZ-105	10	190,000	6,700	70	10	9,900	110	1.4
PZ-106	10	120,000	25,000	12,000	10	1,400,000	380,000	64,000
PZ-107	10	11,000	6,300	**6,600**	10	89,000	24,000	15,000
W-5	1	450,000	ND		1	2,500	17	
OFF-SITE WELLS/LOCATIONS								
B-15	1	13,000	140	**190**	1	1,600	ND	0.87
B-16	7	33,000	760	**1,200**	7	4,500	9.8	6.4
BR-103	5	400	2.1		5	46	ND	
BR-104	5	3,100	1.6			11		
BR-105	10	24,000	720	310	10	350	6.4	6.4
BR-105D	10	10,000	340	**580**	10	230	3.9	**9.2**
BR-106	10	25,000	2,700	**8,500**	10	12,000	100	**180**
BR-108	5	1,700	18			2		
BR-112D	5	310	46			4.3		
BR-113D	5	490	26			2.8		
BR-114	5	520	24		5	12	0.2	
BR-116	5	12	ND			86		
BR-116D	5	710	42			130		
BR-117D	5	80	4.4			1.9		
BR-118D	5	330	40			6.6		
BR-122D	5	650	100			ND		
BR-123D	5	860	50			7		
BR-126	10	12,000	2,800	2,400	10	240	3.7	ND

TABLE 4
COMPARISON OF FALL 2013
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	NOV 2013 RESULT	# EVENTS IN PRIOR 5 YRS	HISTORIC MAXIMUM	5-YEAR MEAN	NOV 2013 RESULT
MW-103	5	97	0.6		5	750	ND	
MW-104	5	180	1.2			5.8		
MW-106	10	130,000	7,400	**9,200**	10	4,000	290	200
MW-114	5	18	1		5	27	23	
MW-16	5	360	7.9	7.4		10		
NESS-E	5	5,000	43			710		
NESS-W	5	2,100	ND			94		
PZ-101	10	27,000	58	**130**	10	620	3.2	**8.9**
PZ-102	10	58,000	4,900	**10,000**	10	11,000	300	**400**
PZ-103	10	73,000	8,900	**25,000**	10	46,000	980	**1,400**
PZ-104	10	9,100	1,300	760	10	52	7	3.6
QD-1	10	170	4.5	ND		ND		
QO-2	10	380	6.9	**22.0**		ND		
QO-2S1	10	27	2.4	ND		ND		
QS-4	10	3,400	110	100.0		ND		

Note:
1) Number of samples and mean reflect 5-year sampling period from November 2008 through May 2013. Historic maximum based on all available results from March 1990 through May 2013.
2) Chloropyridines represented by: 2-Chloropyridine, 2,6-Dichloropyridine, 3-Chloropyridine, 4-Chloropyridine, p-Fluoroaniline, and Pyridine.
3) Selected VOCs represented by Carbon Tetrachloride, Chlorobenzene, Chloroform, Methylene Chloride, Tetrachloroethene, and Trichloroethene.
4) **Bold and shade** - November 2013 exceeds 5-year mean.
5) ND = Not detected
BLANK = Not sampled

TABLE 5
FALL 2013 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:	12/13/2013	12/13/2013	11/8/2013	12/13/2013
QC TYPE:	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)				
2,6-Dichloropyridine	26	3.3 J	10 U	9.6 U
2-Chloropyridine	74	15	10 U	9.6 U
3-Chloropyridine	9.5 U	3.4 J	10 U	9.6 U
4-Chloropyridine	9.5 U	9.5 U	10 U	9.6 U
p-Fluoroaniline	9.5 U	9.5 U	10 U	9.6 U
Pyridine	24 U	24 U	25 U	24 U

Notes:
U = Compound not detected; value represents sample quantitation limit.
J = Estimated value.
µg/L = micrograms per liter

TABLE 6
EXTRACTION WELL WEEKLY FLOW MEASUREMENTS - JUNE 2013 THROUGH NOVEMBER 2013

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.]	PW-17 [Gal./Wk.]	BR-127 [Gal./Wk.]	Total [Gal.]
Jun '13										
06/02/13	14,437	84,151	22,101	81,914	1,364	12,875	47,397	1,970	56,200	322,409
06/09/13	14,997	74,418	21,728	82,934	1,417	2,419 **	48,601	3,567	48,426	298,507
06/16/13	16,275	81,841	21,805	84,464	1,544	66,097	49,768	4,117	45,913	371,824
06/23/13	15,077	76,076	20,280	76,620	1,571	143,751	46,327	3,892	39,623	423,217
06/30/13	15,522	81,563	17,570	80,314	1,918	123,995	49,941	3,784	42,719	417,326
									Total [Gal.]	1,833,283
Jul '13										
07/07/13	14,885	77,758	12,602	74,258	1,929	101,267	45,667	3,355	38,445	370,166
07/14/13	14,939	83,005	16,008	72,449	2,221	98,178	47,070	3,478	38,906	376,254
07/21/13	13,976	88,464	25,028	61,417	2,445	88,560	45,248	3,392	37,185	365,715
07/28/13	13,453	86,027	24,890	58,658	2,672	81,547	42,173	3,301	34,921	347,642
									Total [Gal.]	1,459,777
Aug '13										
08/04/13	13,883	80,587	23,543	55,593	2,926	79,262	40,158	3,142	35,842	334,936
08/11/13	15,881	91,275	26,248	64,734	2,853	89,980	47,434	3,718	40,692	382,815
08/18/13	14,959	82,242	23,376	57,779	2,469	78,143	42,038	3,409	36,888	341,303
08/25/13	14,889	68,600 *	24,884	61,998	3,128	76,508	43,318	3,463	38,175	334,963
									Total [Gal.]	1,394,017
Sep '13										
09/01/13	14,999	97,637	20,362	59,193	3,152	74,506	40,947	3,394	38,249	352,439
09/08/13	14,294	94,747	20,950	58,995	2,853	70,973	37,371	3,282	23,258 *	326,723
09/15/13	14,394	96,184	24,783	62,285	2,591	65,653	37,439	3,264	257 *	306,850
09/22/13	14,547	96,304	23,435	63,573	2,583	48,007	36,847	3,285	34,209	322,790
09/29/13	14,868	96,103	22,548	64,841	2,668	48,428	36,597	3,215	37,131	326,399
									Total [Gal.]	1,635,201
Oct '13										
10/06/13	12,868	85,772	18,973	58,446	3,379	10 *	33,067	2,605	34,761	249,881
10/13/13	15,349	85,785	16,490	60,252	3,410	34,984 *	34,512	3,180	32,829	286,791
10/20/13	14,995	94,831	14,583	67,442	3,221	61,700	37,919	3,258	35,991	333,940
10/27/13	14,747	100,302	210 *	70,483	4,103	58,669	36,617	3,192	36,563	324,886
									Total [Gal.]	1,195,498
Nov '13										
11/03/13	14,687	94,086	21,807	69,492	4,084	56,244	35,722	3,132	33,265	332,519
11/10/13	15,542	93,218	29,427	68,968	4,147	53,788	34,563	3,199	33,723	336,575
11/17/13	15,298	94,997	29,398	51,980	1,606	24,289	33,691	1,482	15,136	267,877
11/24/13	15,391	96,107	29,423	45,362	0 **	0 **	33,567	0 **	0 **	219,850
									Total [Gal.]	1,156,821
Total 6 Mo. Removal (Gal.)	385,152	2,282,080	552,452	1,714,444	66,254	1,639,833	1,063,999	81,076	889,307	8,674,597

Notes:
1) * - Flow rate adversely affected by pump failure, pluggage in discharge line, or other maintenance activity
2) ** - Wells PW-14, PW-15, PW-17, and BR-127 shut down for ISCO Pilot Test

TABLE 7

MASS REMOVAL SUMMARY
PERIOD: JUNE 2013 THROUGH NOVEMBER 2013

ARCH ROCHESTER
FALL 2013 GROUNDWATER MONITORING REPORT

Well	Total Vol. Pumped (gallons)	Avg. VOC Conc. (ppm)	Avg. PYR. Conc. (ppm)	VOCs Removed (pounds)	PYR. Removed (pounds)
BR-5A	385,200	0.019	0.15	0.06	0.5
BR-7A	2,282,000	0.27	2.5	5	48
BR-9	552,500	0.015	0.41	0.07	1.9
PW-13	1,714,400	0.5	3.5	7.3	49
PW-14	66,300	11	3.9	5.8	2.2
PW-15	1,639,800	2.3	55	31.9	755
PW-16	1,064,000	0.7	39	5.8	347
PW-17	81,100	31.9	13	21.5	9
BR-127	889,300	0.25	9.3	1.8	69
Totals:	8,674,600			79	1,281

Notes: VOC and pyridine concentrations used in this table are an average of the analytical results from the Spring 2013 and Fall 2013 sampling events for each well;
Total select VOCs now includes chlorobenzene in addition to PCE, TCE, methylene chloride, carbon tetrachloride, and chloroform

TABLE 8
2014 SAMPLING SCHEDULE
ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

ARCH ROCHESTER						**2014**					
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	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1	2	2
	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
	B-5	OB	ON-SITE	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	B-15	OB	ON-SITE	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	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
	PW17	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						55	38	35	30	90	68

Revised: 01/24/14

Prepared by: JEB Checked by: NMB

Appendix A

Groundwater Field Sampling Data Sheets

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

FIELD REPORT

TestAmerica Laboratories, Inc.

REMEDIAL INVESTIGATION SAMPLING
LONZA CHEMICAL
ROCHESTER, NEW YORK

FALL 2013 Event

Prepared For:

AMEC, 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: 1-28-14

1.0 INTRODUCTION

This report describes the sampling of the following points:

- Fourty-one (41) groundwater samples (1st Event)
- One (1) barge canal sample
- Three (3) quarry outfall / seep samples
- Fifteen (15) groundwater samples (2nd Event)

These activities were in support of the Phase II Remediation Investigation being conducted at the Lonza Chemical facility in Rochester, New York. The samples were collected from November 08 – 15 & December 11-12, 2013 by TestAmerica Inc (TAL) Field personnel.

2.0 METHODOLOGIES

2.1 Water Level Measurements

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

2.2 Well Purging

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

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

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

conductance, temperature, ORP, dissolved oxygen and turbidity are monitored every 3-5 minutes until stabilization of parameters is realized. Once stabilization has occurred, sampling can be conducted. All purged water was collected into 55-gallon drums for disposal at the on-site wastewater treatment facility. Data pertaining to each evacuation are presented on the Sampling Summary Table and field Observation Forms.

2.3 Surface Water Samples

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

3.0 SAMPLING

3.1 Monitoring Wells

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

3.2 Canal Sampling

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

3.3 Seep Sampling

Groundwater samples were collected from seeps at the quarry (QS4) located on Buffalo Road. The samples were collected with the use of a laboratory cleaned stainless steel bucket

and was then poured directly into the appropriate containers. An additional container was collected to facilitate the measurement of field parameters. Data pertaining to this sampling is presented in the Sampling Summary Table and Field Observation Forms.

4.0 SAMPLE CONTAINERS

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

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

5.0 FIELD MEASUREMENTS

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

6.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

6.1 Trip Blanks

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

6.2 Equipment Rinse Blank

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

7.0 CHAIN OF CUSTODY

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

SEMI-ANNUAL GROUNDWATER ELEVATION REPORT
LONZA ROCHESTER, N.Y.

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
B-1	11/08/13	9.34		-9.34	1159	NO L-NAPL ; NO D-NAPL
B-10		11.78		-11.78	1147	NO L-NAPL ; NO D-NAPL
B-11		8.59		-8.59	1145	NO L-NAPL ;NO D-NAPL 11.55 BOT.
B-13		12.87		-12.87	1255	DRY @ 12.87
B-14		12.25		-12.25	1258	
B-15		9.92		-9.92	1300	
B-16		9.83		-9.83	1302	NO L-NAPL ;NO D-NAPL 13.20 BOT.
B-17		12.58		-12.58	1130	NO L-NAPL ; NO D-NAPL
B-2		10.49		-10.49	1201	NO L-NAPL ; NO D-NAPL
B-4		18.73		-18.73	1031	NO L-NAPL ; NO D-NAPL
B-5		15.80		-15.80	1028	NO L-NAPL ; NO D-NAPL
B-7		16.75		-16.75	1218	NO L-NAPL ; NO D-NAPL
B-8		13.20		-13.20	1107	NO L-NAPL ; NO D-NAPL
BR-1		7.58		-7.58	1042	NO L-NAPL ; NO D-NAPL
BR-102		22.64		-22.64	1206	
BR-103		6.21		-6.21	1205	
BVT-1		9.96			1036	
BVT-2		10.00			1130	
BVT-3		9.75			1220	
MW-103		1.64		-1.64	1206	
BR-104		11.65		-11.65	1215	
MW-104		6.24		-6.24	1216	
BR-105		23.14		-23.14	1314	
BR-105D		25.92		-25.92	1315	
MW-105		18.78		-18.78	1316	
BR-106		23.85		-23.85	1320	
MW-106		13.40		-13.40	1322	
BR-108		28.82		-28.82	1335	
MW-108		13.45		-13.45	1337	
BR-111		29.91		-29.91	1253	
BR-111D		29.77		-29.77	1252	

SEMI-ANNUAL GROUNDWATER ELEVATION REPORT
LONZA ROCHESTER, N.Y.

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
BR-112A		32.29		-32.29	1247	
BR-112D		36.33		-36.33	1246	
BR-113		31.40		-31.40	1230	
BR-113D		31.31		-31.31	1231	
BR-114	11/08/13	13.69		-13.69	1213	
MW-114		10.33		-10.33	1212	
BR-116		29.73		-29.73	1145	
BR-116D		35.67		-35.67	1150	
BR-117		24.00		-24.00	1050	CASCADING WELL
BR-117D		50.27		-50.27	1055	
BR-118		27.90		-27.90	1040	
BR-118D		49.12		-49.12	1045	
BR-122D		45.42		-45.42	1110	
BR-123D		45.66		-45.66	1105	
BR-124D		31.84		-31.84	1100	
BR-126		10.35		-10.35	1306	
BR-127		13.63			1142	NO L-NAPL
MW-127		9.27			1141	NO L-NAPL ; NO D-NAPL
BR-2		11.83		-11.83	1136	NO L-NAPL ; NO D-NAPL
BR-2A		12.71		-12.71	1134	NO L-NAPL ; NO D-NAPL
BR-2D		0.05		-0.05	1133	NO L-NAPL ; NO D-NAPL
BR-3		13.75		-13.75	1117	NO L-NAPL
BR-3D		54.45		-54.45	1118	NO L-NAPL ; NO D-NAPL
BR-4		7.51		-7.51	1138	NO L-NAPL
BR-5		14.93		-13.82	1052	NO L-NAPL ; NO D-NAPL
BR-5A		17.90		-17.90	1053	NO L-NAPL
BR-6A		16.82		-16.82	1109	NO L-NAPL
BR-7		29.98		-29.98	1214	NO L-NAPL
BR-7A		20.19		-20.19	1213	NO L-NAPL ; NO D-NAPL
BR-8		15.41		-15.41	1029	NO L-NAPL ; NO D-NAPL
BR-9		31.53		-31.53	1200	NO L-NAPL

SEMI-ANNUAL GROUNDWATER ELEVATION REPORT
LONZA ROCHESTER, N.Y.

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
C-2A		12.41		-12.41	1135	NO L-NAPL ; NO D-NAPL
C-3						BURIED
C-5		13.15		-13.15	1119	NO L-NAPL ; NO D-NAPL
E-2		8.90		-8.90	1139	NO L-NAPL ; NO D-NAPL
E-3		4.65		-4.65	1050	NO L-NAPL ; NO D-NAPL
E-5	11/08/13	5.98		-5.98	1046	NO L-NAPL ; NO D-NAPL
EC-1		18.93		-18.93	1233	
EC-2		DRY		#VALUE!	1238	DRY
ERIE CANAL		32.92		-32.92	1235	
MW-16		12.32		-12.32	1152	
MW-3		6.10		-6.10	1259	
MW-G6		4.55		-4.55	1303	
MW-G7						NOT LOCATED
MW-G8		8.10		-8.10	1305	
MW-G9		11.23		-11.23	1310	
N-2		4.02		-4.02	1044	NO L-NAPL ; NO D-NAPL
N-3		6.35		-6.35	1157	NO L-NAPL
NESS-E		22.97		-22.97	1220	
NESS-W		31.20		-31.20	1225	
OVT-1		10.08		-10.08	1034	
OVT-2		9.91		-9.91	1125	
OVT-3		9.51		-9.51	1224	
OVT-4		10.39		-10.39	1300	
PW-10		12.30		-12.30	1132	NO L-NAPL
PW-12		7.53		-7.53	1056	NO L-NAPL
PW-13		25.80		-25.80	1210	NO L-NAPL; NO D NAPL
PW-14		24.73		-24.73	1036	NO L-NAPL
PW-15		19.35		-19.35	1126	NO L-NAPL
PW-16		16.03			1034	NO L-NAPL
PW-17		31.02			1112	NO L-NAPL ; NO D-NAPL
PZ-101		18.67		-18.67	1230	

SEMI-ANNUAL GROUNDWATER ELEVATION REPORT
LONZA ROCHESTER, N.Y.

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
PZ-102		17.45		-17.45	1225	
PZ-103		16.34		-16.34	1221	
PZ-104		15.52		-15.52	1256	
PZ-105		13.35		-13.35	1106	NO L-NAPL ; NO D-NAPL
PZ-106		11.88		-11.88	1037	NO L-NAPL ; NO D-NAPL
PZ-107		12.60		-12.60	1149	NO L-NAPL ; NO D-NAPL
PZ-109	11/08/13	15.42		-15.42	1120	NO L-NAPL; NO D-NAPL
PZ-110		16.30			1115	NO L-NAPL ; NO D-NAPL
PZ-111		12.55			1123	NO L-NAPL ; NO D-NAPL
W-2		10.68		-10.68	1203	NO L-NAPL ; NO D-NAPL
W-5		11.99		-11.99	1108	NO L-NAPL ; NO D-NAPL

Sampling Summary Table
LONZA

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	11/12/2013	1045	18.8		6.81	4465	8.3	3.37	5	0.51
PZ-102	11/12/2013	1300	17.68		7.08	3824	11.7	3.28	-74	0.33
PZ-103	11/12/2013	1155	16.48		7.43	4041	10.6	4.29	-142	0.23
PZ-104	11/12/2013	1315	15.54		6.65	2627	15.2	5.81	-5	0.52
PZ-105	11/13/2013	1130	13.02		6.92	317	13.9	33.0	165	0.65
PZ-106	11/11/2013	1138	11.83		6.95	4692	12.7	16.1	-74	
PZ-107	11/11/2013	1340	12.55		6.74	2577	12.3	3.42	29	0.68
PZ-111	11/11/2013	1150	12.46		7.86	4523	14.1	43.8	174	0.80
BR-5A	11/12/2013	1105	17.61		7.00	1499	14.1	71.8	183	
BR-6A	11/11/2013	1240	16.71		7.44	4663	12.1	10.3	-50	0.28
BR-7A	11/12/2013	1215	30.01		7.40	1729	14.9	5.33	126	
BR-8	11/13/2013	1315	15.35		7.51	5689	12.3	1.07	60	0.18
BR-9	11/12/2013	1120	31.26		6.99	2353	14.3	99.7	132	
BR-105	11/15/2013	1330	22.32		7.55	2900	12.8	1.94	-199	0.47
BR-105D	11/15/2013	1225	25.85		7.24	21220	12.8	3.22	-170	0.45
BR-106	11/15/2013	1135	20.91		7.11	3350	11.8	3.84	8	0.31
BR-126	11/13/2013	1255	10.31		7.11	1009	12.6	4.99	-61	
BR-127	11/11/2013	1200	13.11		7.51	3082	12.0	2.65	-80	
MW-16	11/8/2013	1418	12.32		7.07	4487	12.9	39.7	-79	1.00
MW-106	11/15/2013	1050	13.29		6.75	2431	13.0	3.87	-35	0.67
MW-127	11/11/2013	1215	9.53		7.38	4649	12.5	4.6	-98	
PW-10	11/11/2013	1420	12.30		9.87	13870	14.7	5.18	-158	
PW-12	11/13/2013	1215	7.58		7.48	4449	12.3	2.48	176	0.21
PW-13	11/12/2013	1235	26.81		7.19	2573	14.0	21.6	-11	
PW-14	11/11/2013	1120	24.73		6.82	2526	18.3	34.1	-113	
PW-15	11/12/2013	1025	18.02		7.91	3953	12.9	1.00	-45	
PW-16	11/12/2013	1130	16.21		6.90	4888	13.7	5.4	132	
PW-17	11/12/2013	1015	30.81		6.90	3738	12.1	6.22	-76	
B-4	11/13/2013	1240	17.16		7.28	9107	13.9	54.5	79	
B-5	11/13/2013	1330	15.72		7.7	6380	13.1	38	38	
B-11	11/12/2013	1050	9.16		7.11	1944	10.9	146	183	
B-15	11/13/2013	1110	9.95		6.45	950	14.9	16.05	-99	
B-16	11/13/2013	1155	9.75		7.05	2169	13.1	3.32	-75	0.49
B-17	11/11/2013	1325	12.5		9.22	8308	15.2	23.1	-98	
BVT-1	11/8/2013	1115	9.96		7.03	1835	14.9	9.32	-59	
BVT-2	11/8/2013	1205	10.00		7.06	1173	14.4	19.2	-51	
BVT-3	11/8/2013	1250	9.75		8.09	10160	15.6	11.82	-183	

Sampling Summary Table
LONZA

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)
OVT-1	11/8/2013	1110	10.08		7.02	1786	15.4	4.85	-27	
OVT-2	11/8/2013	1208	9.91		7.01	1141	14.9	3.68	-48	
OVT-3	11/8/2013	1253	9.51		7.83	9692	15.8	16.25	-117	
OVT-4	11/8/2013	1331	10.39		7.12	2409	14.7	14.92	-89	
QD-1	11/8/2013	1410	NA		7.93	1477	10.6			
QO-2	11/8/2013	1130	NA		8.12	1460	9.0			
QO-2S1	11/8/2013	1140	NA		7.91	604	8.4			
QS-4	11/8/2013	1350	NA		8.07	1877	8.9			

Sampling Summary Table
LONZA

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)
BVT-1	12/11/2013	1130	7.19		9.21	11570	10.6	10.97	74	
BVT-2	12/11/2013	1225	7.09		12.44	24860	12.9	33.4	11	
BVT-3	12/11/2013	1305	7.00		8.96	9037	12.8	3.19	117	
OVT-1	12/11/2013	1135	7.20		8.96	1991	10.9	7.28	51	
OVT-2	12/11/2013	1220	7.32		8.42	8247	12.3	4.57	92	
OVT-3	12/11/2013	1310	6.82		7.85	8874	10.9	5.81	102	
OVT-4	12/11/2013	1415	7.72		10.43	16510	12.6	6.12	107	
BR-6A	12/12/2013	1052	16.30		7.69	4675	12.3	13.55	-171	
BR-127	12/12/2013	1034			11.8	3848	11.8	7.23	54	
PW-14	12/12/2013	1122			8.11	11030	16.6	5.00	-3	
MW-127	12/12/2013	1202	8.31		7.38	4731	7.0	4.18	-1	
PZ-106	12/12/2013	1150	12.41		7.59	9946	12.8	24.5	20	
PZ-107	12/12/2013	1300	12.41		7.32	997	7.7	14.52	38	
PZ-111	12/12/2013	1315	9.79		9.56	13780	12.1	12.82	-82	
B-17	12/12/2013	1417	10.72		9.27	8980	11.7	25.8	-153	
QO-2	12/13/2013	1100			7.14	1872	3.4			
QS-4	12/13/2013	1125			7.99	1424	5.7			
QD-1	12/13/2013	1135			7.99	1937	4.7			

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: P2-101

Field Personnel: PL, TW, PA

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-12-13 / 10:18

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 11-12-13 / 10:20

Date / Time Completed: 11-12-13 / 1045

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 18.80

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal: ____

Dedicated: (Y) / N

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: CO-FLO

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1035	W.L. 20.58	ml/min 100		8.9	6.77	4524	4.88	7	0.54
1040	"	"		8.6	6.79	4495	3.83	8	0.52
1045	"	"		8.3	6.81	4465	3.37	5	0.51

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID PZ101

Date/Time 11-12-13 1045 Water Level @ Sampling, Feet: 20.58

Method of Sampling: peristaltic pump Dedicated: (Y) / N

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

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other (D.O)
1047	8.3	6.81	4465	3.39	5	0.51

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: partly Sunny ~ 27°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: 11/12/13 By: [signature] Company: T4L

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: PZ-102

Field Personnel: PC, TW PA

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-12-13 / 1225

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 11-12-13/ ~~1125~~ 1225

Date / Time Completed: 11-12-13/ 1300

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 17.68

Elevation. G/W MSL: ____

Well Total Depth, Feet: 36.20

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal: ____

Dedicated: (Y) / N

Total Volume Purged, Gal: ____

Purged To Dryness Y / N

Purge Observations: CO-FCO

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1240	W.L. 17.71			11.8	7.23	3566	3.54	-67	0.39
1245	17.71			11.8	7.12	3646	2.89	-70	0.37
1250	17.73			11.8	7.09	3755	3.34	-73	0.37
1255	17.74			11.7	7.08	3819	3.30	-74	0.34
1300	17.74			11.7	7.08	3824	3.28	-74	0.33

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID MP2-102

Date/Time 11-12-13 / 1300 Water Level @ Sampling, Feet: 17.74

Method of Sampling: peristaltic pump Dedicated: (Y) / N

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

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (orp)	Other (DO)
1302	11.7	7.08 11.7 FW 11-12-13	3824	3.28	-74	0.33

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Partly Sunny

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

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

Date: 11/12/13 By: Thomas McGee Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: P2-103

Field Personnel: PL, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-12-13 / 11:23

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

Prot. Casing/riser height: —

Cond of prot. Casing/riser: (Y) 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: 11-12-13/ 1125

Date / Time Completed: 11-12-13/1155

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 16.48

Elevation. G/W MSL:

Well Total Depth, Feet: 32.52

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 (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1140	18.25			10.8	7.50	3999	3.28	-99	0.26
1145	18.40			10.8	7.46	3979	4.34	-117	0.24
1150	18.51			10.7	7.44	4005	4.57	-135	0.23
1155	18.68			10.6	7.43	4041	4.29	-142	0.23

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID P2-103

Date/Time 11-12-13 / 1155 Water Level @ Sampling, Feet: 18.68

Method of Sampling: Peristaltic Dedicated: (Y) / N

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

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (orp)	Other (D.O)
1157	10.6	7.43	4041	4.29	-142	0.23

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Partly Sunny ~28°

Sample Characteristics: Clear Sl. Odor

COMMENTS AND OBSERVATIONS:

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

Date: 11/12/13 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: PZ-104

Field Personnel: PL, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-12-13 / 1245

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: 11-12-13 / 1250

Date / Time Completed: 11-12-13 / 1315

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 15.54

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-FCO

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz) WL / MP		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1300	15.57	200		15.2	6.98	2756	6.01	28	.54
1305	15.62			15.4	6.59	2630	5.97	4	.54
1310	|			15.4	6.61	2629	5.89	-1	.52
1315	|			15.2	6.65	2627	5.81	-5	.52

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID MP2-104

Date/Time 11-12-13 / 1315 Water Level @ Sampling, Feet: 15.62

Method of Sampling: peristaltic Dedicated: (Y) / N

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

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (orp)	Other (D.O.)
1317	15.2	6.65	2627	5.81	-5	0.52

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: 11/12/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: P2-105

Field Personnel: PL, TW PA

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-13-13 / 1100

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: 11-13-13 / 1105

Date / Time Completed: 11-13-13 / 1130

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 13.02

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-FCO

Start Clear Tint Finish Clear Tint

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1115	WL 13.13	MW 75		14.5	7.00	319	54.0	162	0.70
1120	↓	↓		14.5	6.90	316	33.1	164	0.65
1125	↓	↓		14.1	6.91	316	34.5	165	0.66
1130	↓	↓		13.9	6.92	317	33.0	165	0.65

SAMPLED @ 1130 / 11-13-13

FIELD OBSERVATIONS

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: LONZA

Sample Point ID: P2-106

Field Personnel: PC, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-11-13 / ~~10:00~~ 11:07 (TW 11-11-13)

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

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

PURGE INFORMATION:

Date / Time Initiated: 11-11-13 / 11:07

Date / Time Completed: 11-11-13 / 1137

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 11.83

Elevation. G/W MSL:

Well Total Depth, Feet: 27.90

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 yellow Finish Clear yellow

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
	WL	mL/min							
11:22	12.61	100		12.9	6.80	4741	19.6	-98	
11:27	↓	↓		12.8	6.90	4745	16.9	-83	
11:32	12.63			12.8	6.92	4736	16.4	-75	
11:37	↓	↓		12.7	6.95	4692	16.1	-74	

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID PZ-106

Date/Time 11-11-13 1138 Water Level @ Sampling, Feet: 12.63

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (orp)	Other ( )
1139	12.7	6.95	4692	16.1	-74	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Cloudy 24°C

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

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

Date: 11/11/13 By: [signature] Company: TA

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: P2-107

Field Personnel: PL, TW PA

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-11-13 / 1313

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: 11-11-13/ 1315

Date / Time Completed: 11-11-13/ 1340

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 12.55

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: CO-FLO

Start clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1325	WL 12.11	ML/N 200		12.1	6.99	2637	5.40	31	0.72
1330	↓			12.4	6.79	2589	3.70	30	0.70
1335				12.3	6.75	2580	3.59	29	0.69
1340				12.3	6.74	2577	3.42	29	0.68

Sample @ 1340

JH2

FIELD OBSERVATIONS

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: LONZA

Sample Point ID: BR-5A

Field Personnel: PL, PN

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 11-12-13 / 1105

Water Level @ Sampling, Feet: 17.61

Method of Sampling: Sample Pump

Dedicated: (Y) / N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1107	14.1	7.00	1499	71.8	183	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: clear 70

Sample Characteristics: SLIGHT RUST TINT

COMMENTS AND OBSERVATIONS:

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

Date: 11/12/13 By: [signature] Company: TAC

FIELD OBSERVATIONS .

Facility: LONZA

Sample Point ID: BR-6A

Field Personnel: PL, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-11-13 / 1220

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: 11-11-13/ 1222

Date / Time Completed: 11-11-13/ 1240

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

Riser Diameter, Inches: ____

Initial Water Level, Feet: 16.71

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 (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1225	WL 16.75	200		12.6	7.47	4625	12.4	-46	0.31
1230	↓	↓		12.7	7.46	4656	12.0	-47	0.30
1235				12.5	7.45	4661	11.7	-48	0.29
1240	↓	↓		12.1	7.44	4663	10.5	-50	0.28

SAMPLE @ 1240 / 11-11-13

MW 2

FIELD OBSERVATIONS

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: LONZA

Sample Point ID: BR-7A

Field Personnel: PL, TN

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 11-12-13 / 1215

Water Level @ Sampling, Feet: 30.01

Method of Sampling: SAMPLE POINT

Dedicated: (Y) / N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1217	14.9	7.40	1729	5.33	126	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUN 30

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS:

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

Date: 11/12/13 By: [signature] Company: TRC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-8

Field Personnel: PL, TW, PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-13-13 / 1254

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: 11-13-13 / 1255

Date / Time Completed: 11-13-13 / 1315

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

Riser Diameter, Inches: 4"

Initial Water Level, Feet: 15.35

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: CO-FCO

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1300	LVL 15.40	MP/M 200		12.3	7.23	5767	1.20	64	0.22
1305	↓	↓		12.0	7.42	5679	3.11	63	0.20
1310				12.4	7.47	5683	1.11	60	0.19
1315	↓	↓		12.3	7.51	5689	1.07	60	0.18

Sample @ 1315 / 11-13-13

PN

FIELD OBSERVATIONS

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: LONZA

Sample Point ID: BR-9

Field Personnel: PL, PN

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 11-12-13 / 1120

Water Level @ Sampling, Feet: 31.26

Method of Sampling: SAMPLE PORT

Dedicated: (Y) / N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1122	14.3	6.99	2353	99.7	132	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: clear 20

Sample Characteristics: SL TURB and Tint

COMMENTS AND OBSERVATIONS:

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

Date: 11/12/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-101

Field Personnel: AL, TW, PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-15-13 / 1213

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: 11-15-13 / 1305

Date / Time Completed: 11-15-13 / 1330

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 22.32

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 (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
	WL	m/w							
1315	22.37	100		12.7	7.69	3078	2.94	-209	0.51
1320	↓	↓		12.5	7.60	2911	2.15	-201	0.50
1325	↓	↓		12.9	7.57	2902	2.01	-200	0.48
1330	↓	↓		12.8	7.55	2900	1.94	-199	0.47

Sample @ 1330 / 11-15-13

FIELD OBSERVATIONS

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: LONZA

Sample Point ID: BR-105D

Field Personnel: PL, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-15-13 / 1200

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: 11-15-13/ 1205

Date / Time Completed: 11-15-13/1225

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 25.85

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: Low Flow

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1210	WL 25.85	MIN 100		13.1	7.07	19720	3.82	-150	0.51
1215	↓	↓		13.0	7.19	20,770	3.79	-167	0.49
1220				12.7	7.21	21,010	3.56	-168	0.47
1225	↓	↓		12.8	7.24	21,220	3.22	-170	0.45

SAMPLE @ 1225 / 11-15-13

FIELD OBSERVATIONS

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: LONZA

Sample Point ID: BL-106

Field Personnel: RL, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-15-13 / 1052

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: 11-15-13 / 1110

Date / Time Completed: 11-15-13 / 1135

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 20.74

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 (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1120	mL 20.91	ML/min 200		12.2	7.06	3309	5.42	11	0.37
1125	↓			11.9	7.08	3350	4.01	10	0.35
1130				11.9	7.09	3350	3.96	8	0.33
1135	↓			11.8	7.11	3350	3.94	8	0.31

Sample @ 1135 / 11-15-13

FIELD OBSERVATIONS

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: LONZA

Sample Point ID: BR-126

Field Personnel: PL, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-13-13 / 1222

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: 11-13-13 / 1225

Date / Time Completed: 11-13-13 /

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

Riser Diameter, Inches: 4"

Initial Water Level, Feet: 10.31

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) mL/min	Purge Rate (gpm/htz) WL	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1240	200	10.42		12.8	7.09	983	6.08	-42	
1245	↓	↓		12.6	7.12	992	5.19	-56	
1250	↓	↓		12.5	7.14	1002	5.08	-60	
1255	↓	↓		12.6	7.11	1009	4.99	-61	

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID BR-126

Date/Time 11-13-13 1255 Water Level @ Sampling, Feet: 10.42

Method of Sampling: Peristaltic Dedicated: (Y) / N

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

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1255	12.6	7.11	1009	4.99	-61	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Sunny ~30°

Sample Characteristics: clear

COMMENTS AND OBSERVATIONS: DUP Series

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

Date: 11/13/13 By: [signature] Company: TAI

FIELD OBSERVATIONS

Facility: Lonza

Sample Point ID: TW1-HM3 BR-126 127

Field Personnel: TW, PM, RL

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 11-1-13 / 1200

Water Level @ Sampling, Feet: 13.11

Method of Sampling: Sample pump

Dedicated: (Y) / N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
12:01	12.0	7.51	3082	2.65	-80	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Cloudy ~44 °F

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

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

Date: 11/1/13 By: Thomas Myers Company: YAL

FIELD OBSERVATIONS

Facility: CONZA

Sample Point ID: MW-16

Field Personnel: RS

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 11-08-13 / 1418

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: 11-08-13/1420

Date / Time Completed: 11-08-13/1445

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 12.32

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 YELLOW TINT Finish YELLOW TINT

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1430	200 ml/min / 13.05		13.0	7.40	4008	YELLOW TINT	-86	1.13
1435	200 / 13.05		12.9	7.17	4319	SL. TURB	-82	0.99
1440	200 / 13.05		12.9	7.11	4475	SL. TURB	-79	1.03
1445	200 / 13.05		12.9	7.07	4487	39.7	-79	1.00

SAMPLED @ 1445/11-08-13

FIELD OBSERVATIONS

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: LONZA

Sample Point ID: MW-106

Field Personnel: PL, TW, PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-15-13 / 1020

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

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

PURGE INFORMATION:

Date / Time Initiated: 11-15-13 / 1025

Date / Time Completed: 11-15-13 / 1040

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 13.29

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: Low Flow

Start Clear Finish clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz) wl	Purge Rate (gpm/htz) ml/min	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1035	13.35	140		13.3	6.53	2357	8.72	-27	0.73
1040	↓	↓		13.2	6.71	2418	3.41	-33	0.71
1045	↓	↓		13.5	6.73	2429	3.95	-35	0.68
1050	↓	↓		13.0	6.75	2431	3.87	-35	0.67

SAMPLED @ 1050 / 11.15.13

FIELD OBSERVATIONS

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: LONZA

Sample Point ID: MW-127

Field Personnel: PC, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-11-13 / 1150

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

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

PURGE INFORMATION:

Date / Time Initiated: 11-11-13 / 1150

Date / Time Completed: 11-11-13 / 1215

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 9.53

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal: ____

Dedicated: (Y) / N

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: CO-FLOW

Start clear Finish clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1205	W.L 9.53	ML/min 75		12.5	7.38	4742	4.0	-102	
1210	10.09	↓		12.5	7.38	4696	4.5	-104	
1215	10.22	↓		12.5	7.38	4649	4.6	-98	

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID MW-127

Date/Time 11-11-13 / 1215 Water Level @ Sampling, Feet: 10.22

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (orp)	Other ( )
1217	12.5	7.38	4049	4.6	-98	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: cloudy ~44°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: 11/11/13 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: PW-10

Field Personnel: PL, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-11-13 / 1358

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

Prot. Casing/riser height: —

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

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: 11-11-13/ 1400

Date / Time Completed: 11-11-13/1420

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 12.30

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: CO-FCO

Start yellow tint Finish Amber tint

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1410	W.L. 12.58	mL/min 200		14.5	9.83	141060	5.28	-133	
1415	12.61	↓		14.5	9.86	13990	5.34	-149	
1420	12.63	↓		14.7	9.87	13870	5.18	-158	

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID MW-10

Date/Time 11-11-13 / 1420 Water Level @ Sampling, Feet: 12.63

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (orp)	Other ( )
1422	14.7	9.87	13870	5.18	-158	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: cloudy ~43°F

Sample Characteristics: Amber tint w/ odor

COMMENTS AND OBSERVATIONS:

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

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

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: PW-12

Field Personnel: PL, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-13-13 / 1153

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

Former pump will

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

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

PURGE INFORMATION:

Date / Time Initiated: 11-13-13 / 1155

Date / Time Completed: 11-13-13 / 1215

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

Riser Diameter, Inches: ____

Initial Water Level, Feet: 7.59

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: ____

Start clear Finish clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
	WL	ml/m							
1200	7.64	200		12.3	7.42	4240	4.99	180	0.25
1205	↓	↓		12.1	7.49	4244	3.16	177	0.24
1210				12.5	7.49	4447	2.59	176	0.22
1215	↓	↓		12.3	7.48	4449	2.48	176	0.21

SAMPLE @ 1215 / 11-13-13

FIELD OBSERVATIONS

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: LONZA

Sample Point ID: PW-13

Field Personnel: PL, TN

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 11-12-13 1235

Water Level @ Sampling, Feet: 26.81

Method of Sampling: SAMPLE PUMP

Dedicated: (Y) / N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1237	14.0	7.19	2573	21.6	-11	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUN 70

Sample Characteristics: clear

COMMENTS AND OBSERVATIONS:

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

Date: 11/12/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: PW-14

Field Personnel: PL, TW PA

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-11-13 / 11:12

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 11-13/

Date / Time Completed: 11-13/

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

Riser Diameter, Inches: ____

Initial Water Level, Feet: ____

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: ____

Start ____ Finish ____

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID PW-14

Date/Time 11-11-13 / 11:20 Water Level @ Sampling, Feet: 24.73

Method of Sampling: Sample pump Dedicated: (Y) / N

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

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
11:22	18.3	6.82	2526	34.1	-113	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: cloudy

Sample Characteristics: clear w/ debris

COMMENTS AND OBSERVATIONS:

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

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

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: PW-15

Field Personnel: PL, TM

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 11-12-13 / 1025

Water Level @ Sampling, Feet: 18.02

Method of Sampling: Stainless Bail

Dedicated: (Y) / N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1127	12.9	7.91	3953	1.00	-45	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Clear 30

Sample Characteristics: Clear - Yellow Tint

COMMENTS AND OBSERVATIONS:

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

Date: 11/12/13 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: GW 16

Field Personnel: PL, TN

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 11-12-13 / 1130

Water Level @ Sampling, Feet: 16.29

Method of Sampling: BAILER

Dedicated: (Y) N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1133	13.7	6.90	4988	5.40	132	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Cloudy, 30°F

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS:

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

Date: 11/12/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: PW-17

Field Personnel: PL, TM

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 11-12-13 / 1015

Water Level @ Sampling, Feet: 30.81

Method of Sampling: SUBM PUMP

Dedicated: (Y) / N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1617	12.1	6.90	3738	622	-76	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: cloud 30

Sample Characteristics: Clear Yellow Tint

COMMENTS AND OBSERVATIONS:

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

Date: 11/12/13 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: B-4

Field Personnel: PC, TW PA

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-12-13 / 1142

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: 11-12-13 / 1145

Date / Time Completed: 11-12-13 / 1150

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 18.72

Elevation. G/W MSL:

Well Total Depth, Feet: 22.95

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal: .69

Dedicated: (Y) / N

Total Volume Purged, Gal: 1.0 TO 1.1

Purged To Dryness (Y) / N

Purge Observations: LOW VOLUME

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID B-4

Date/Time 11-13-13 / 1240 Water Level @ Sampling, Feet: 17.16

Method of Sampling: PEristaltic Dedicated: Y / N

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

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1243	13.9	7.29	9107	54.5	79	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Sun 30

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

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

Date: 11/13/13 By: [signature] Company: TIC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: B-5

Field Personnel: PL, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-12-13 / 1153

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 11-12-13 / 1155

Date / Time Completed: 11-12-13 / 1158

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 15.92

Elevation. G/W MSL: ____

Well Total Depth, Feet: 18.00

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal: .36

Dedicated: Y / (N)

Total Volume Purged, Gal: .75 GAL TO DRY

Purged To Dryness (Y) / N

Purge Observations: LOW VOL.

Start CLR Finish SETTLED

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID B-5

Date/Time 11-13-13 / 1330 Water Level @ Sampling, Feet: 15.72

Method of Sampling: Peristaltic Dedicated: Y (N)

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

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1331	13.0	7.70	6390	38.0	38	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUN 30

Sample Characteristics: SL TURBID Grey

COMMENTS AND OBSERVATIONS:

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

Date: 11/13/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: B-11

Field Personnel: RL, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-11-13 / 1238

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 11-11-13/ 1240

Date / Time Completed: 11-11-13/1245

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 8.65

Elevation. G/W MSL:

Well Total Depth, Feet: 11.55

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal: 0.47

Dedicated: (Y) / N

Total Volume Purged, Gal: Dry @ ~1.0

Purged To Dryness (Y) / N

Purge Observations: LOW VOL.

Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID B-11

Date/Time 11-12-13 / 1050 Water Level @ Sampling, Feet: 9.16

Method of Sampling: Peristaltic Dedicated: Y / (N)

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

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1051	10.9	7.11	1944	146	133	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling:

Sample Characteristics:

COMMENTS AND OBSERVATIONS: Limited Volume only 3/4 Liter Sample

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

Date: / / By: Company:

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: B-15

Field Personnel: PL, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-12-13 / 1245

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: 11-12-13 / 1250

Date / Time Completed: 11-12-13 / 1255

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 10.00

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: 0.25 TO DRY

Purged To Dryness (Y) N

Purge Observations: LOW VOL.

Start CLR Finish CLR

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID B-15

Date/Time 11-13-13 1110 Water Level @ Sampling, Feet: 9.95

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1112	14.9	6.45	950	16.05	-99	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Sunny ~ 30°

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

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

Date: 11/13/13 By: [signature] Company: JAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: B-16

Field Personnel: PC, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-13-13 / 1124

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: 11-13-13 / 1130

Date / Time Completed: 11-13-13 / 1155

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

Riser Diameter, Inches: 2"

Initial Water Level, Feet: 9.75

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) ml/min	Purge Rate (gpm/htz) oz	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1145	150	9.98		13.2	7.06	2153	3.43	-68	0.47
1150	↓	↓		13.1	7.04	2166	3.37	-72	0.49
1155	↓	↓		13.1	7.05	2169	3.32	-75	0.49

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID B-16

Date/Time 11-13-13 / 1155 Water Level @ Sampling, Feet: 9.98

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other (DO)
1155	13.1	7.05	2169	3.32	-75	0.49

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: cloudy ~30°

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

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

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

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: B-17

Field Personnel: AC, TW PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-11-13 / 12:46

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: 11-11-13 / 1300

Date / Time Completed: 11-11-13 / 1325

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 12.50

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: COW-FCO

Start Clear Finish TW ~~Clear~~ Sl. tint 11-11-13

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
	mL/min	mL/min					24-Cent 11-11-13		
1315	12.52	120		15.0	9.12	8402	~~28.0~~	-42	
1320	↓	↓		15.1	9.19	8324	23.9	-74	
1325	↓	↓		15.2	9.22	8308	23.1	-98	

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID B-17

Date/Time 11-11-13 / 1325 Water Level @ Sampling, Feet: 12.52

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1327	15.2	9.22	8308	23.1	-98	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: cloudy ~43°

Sample Characteristics: sl. turb

COMMENTS AND OBSERVATIONS:

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

Date: 11/11/13 By: Thomas M Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: W-5

Field Personnel: PL, TW PA

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 11-13-13 / 1357

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

Prot. Casing/riser height: ____

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

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: 11- -13/

Date / Time Completed: 11- -13/

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

Riser Diameter, Inches: ____

Initial Water Level, Feet: 12.30 MUD

Elevation. G/W MSL: ____

Well Total Depth, Feet: 12.35

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal: ____

Dedicated: Y / N

Total Volume Purged, Gal: ____

Purged To Dryness Y / N

Purge Observations: DRY - NOT SAMPLED

Start ____ Finish ____

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO

FIELD OBSERVATIONS

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)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

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: _____

PTP

FIELD OBSERVATIONS

Facility: LOW 2A

Sample Point ID: QD - 1

Field Personnel: R. PN

Sample Matrix: SW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 12-13-13 / 1135

Water Level @ Sampling, Feet: _____

Method of Sampling: MANUAL GRAB

Dedicated: Y / N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )
1137	4.7	7.99	1937			

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: SNOW 25

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS:

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

Date: 12/13/13 By: _____ Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: QO-2

Field Personnel: A, AR

Sample Matrix: SW

~~(A)~~ Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 12-13-13 / 1100

Water Level @ Sampling, Feet:

Method of Sampling: MANUAL GRAB

Dedicated: Y / N

Multi-phased/ layered: ( ) Yes ~~(A)~~ No

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )
1102	3.4	7.14	1872			

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std ~~4,443~~ 1800 µmhos/cm	Check.Std ~~4,443~~ 1002 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
C	7.00	4.00		6.97	1000	1001		
Solution ID#	1137269	1294292		912236	1395034	1820284		

GENERAL INFORMATION:

Weather conditions @ time of sampling: SNOW 27

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS:

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

Date: 12 13 13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: GO-291

Field Personnel: R. SENT

Sample Matrix: S/W

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 11-08-13 1140

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 (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )
1145	8.4	7.91	604			

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Cloudy, 40°F

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS:

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

Date: 11/08/13 By: [signature] Company: TAC

LOVAT

FIELD OBSERVATIONS

Facility: LOVAT

Sample Point ID: QS-4

Field Personnel: AL, PN

Sample Matrix: SW SEEP

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 12-12-13 / 1125

Water Level @ Sampling, Feet: _____

Method of Sampling: MANUAL GRAB

Dedicated: Y / N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ( )	Other ( )
1126	5.7	7.99	1424			

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: SNOW 25

Sample Characteristics: clear

COMMENTS AND OBSERVATIONS:

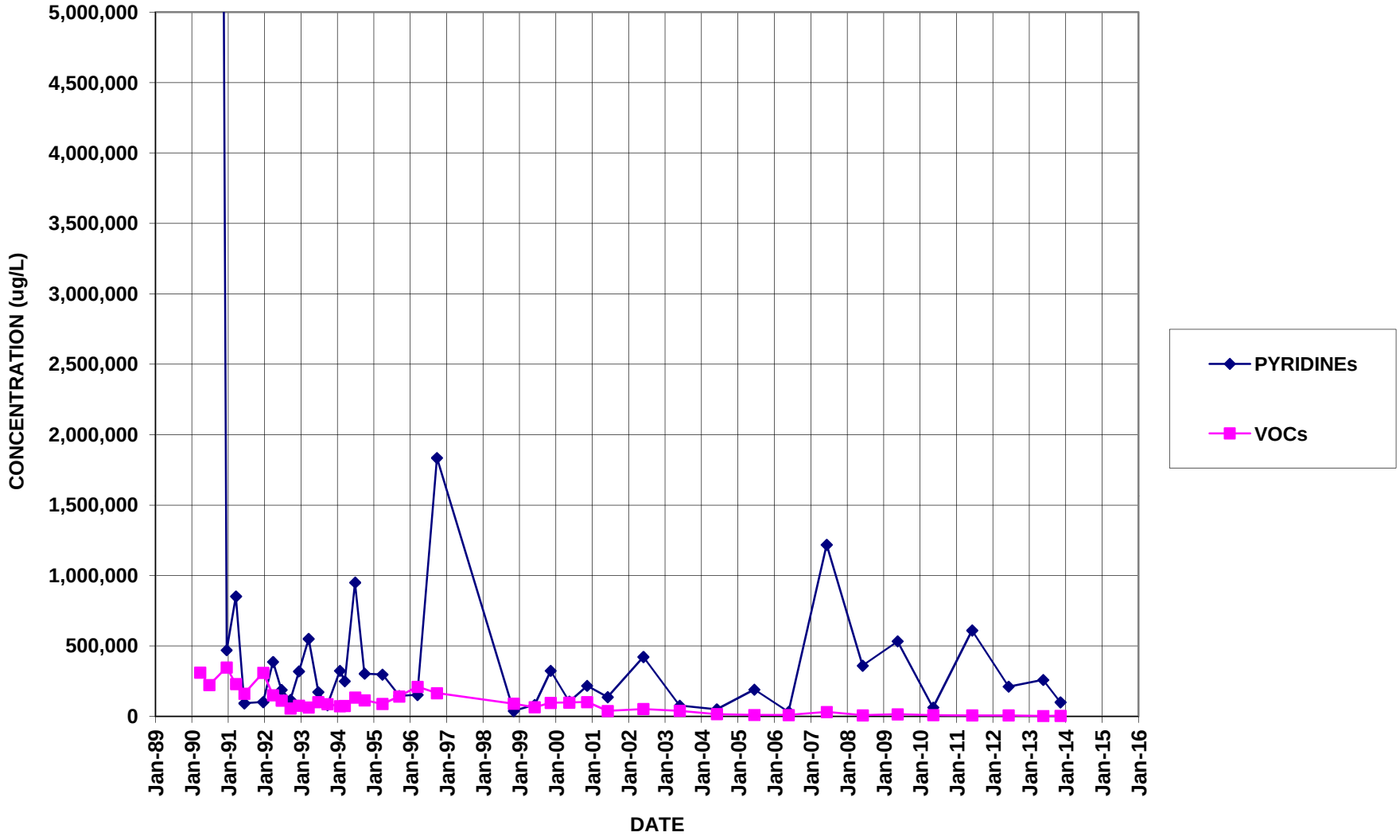
I certify that sampling procedures were in accordance with all applicable USEPA, State and Site-Specific protocals.

Date: 12/13/13 By: _____ Company: TAL

Appendix B

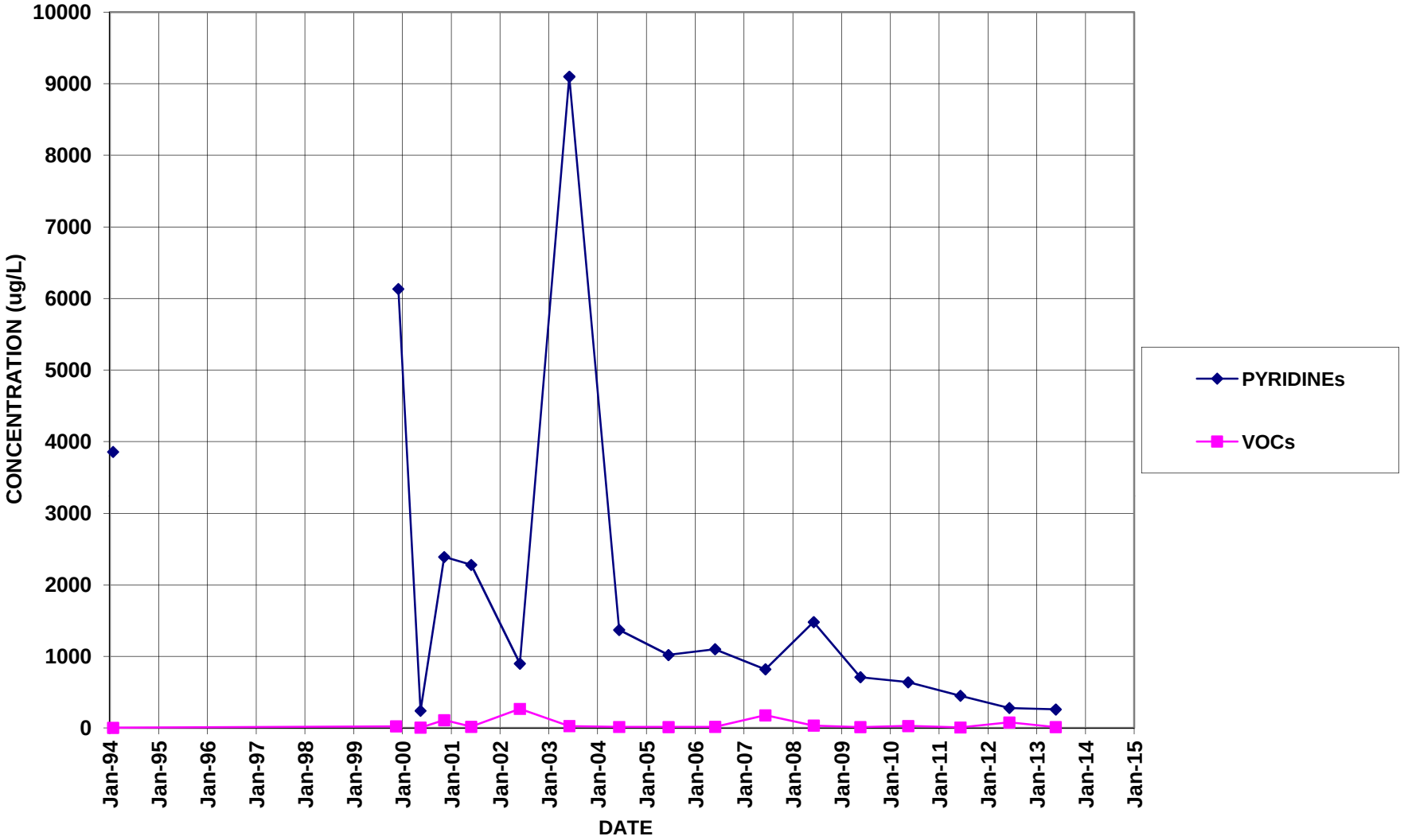
Well Trend Data

B-17



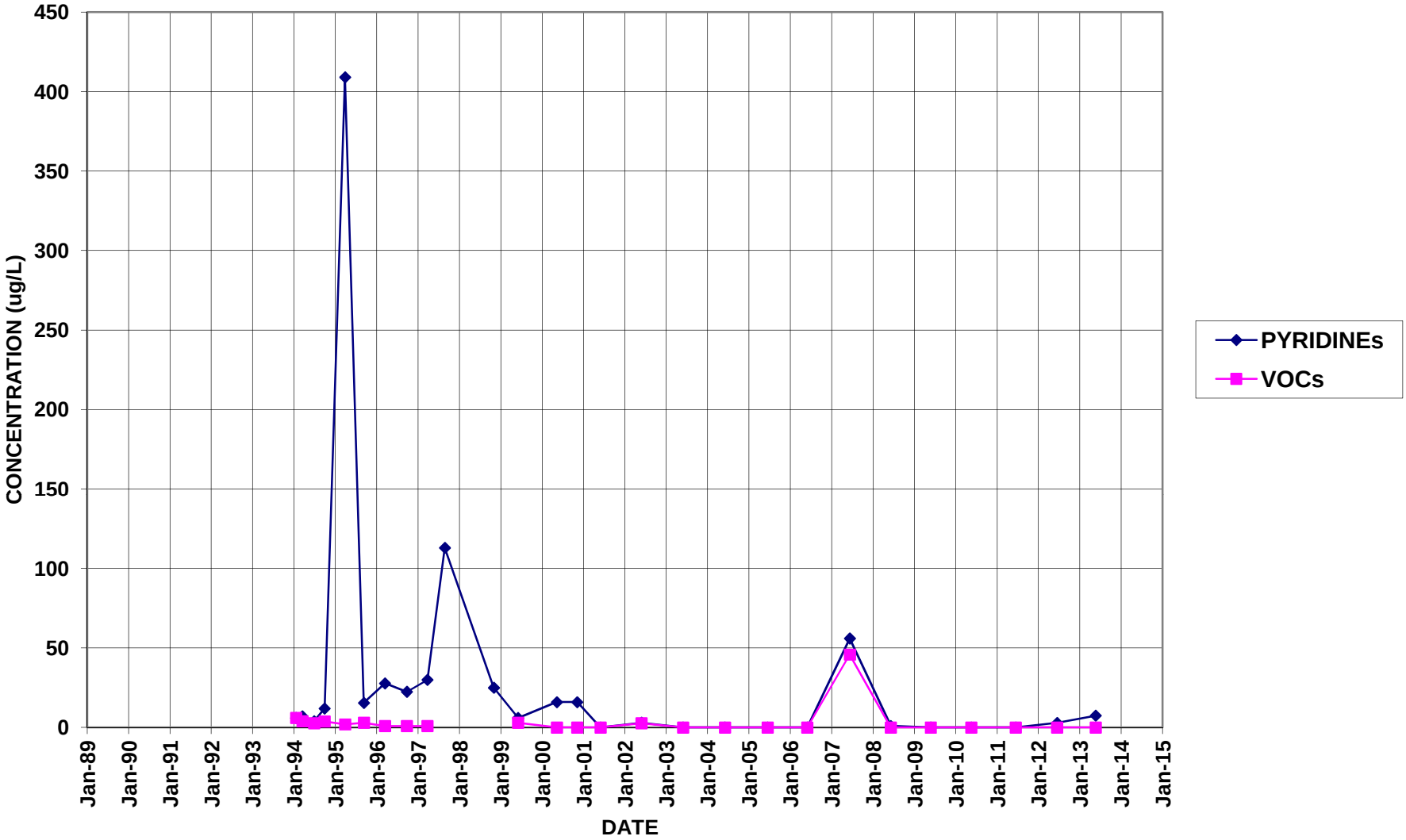
Prepared by: nmb
Reviewed by: jeb

B-7



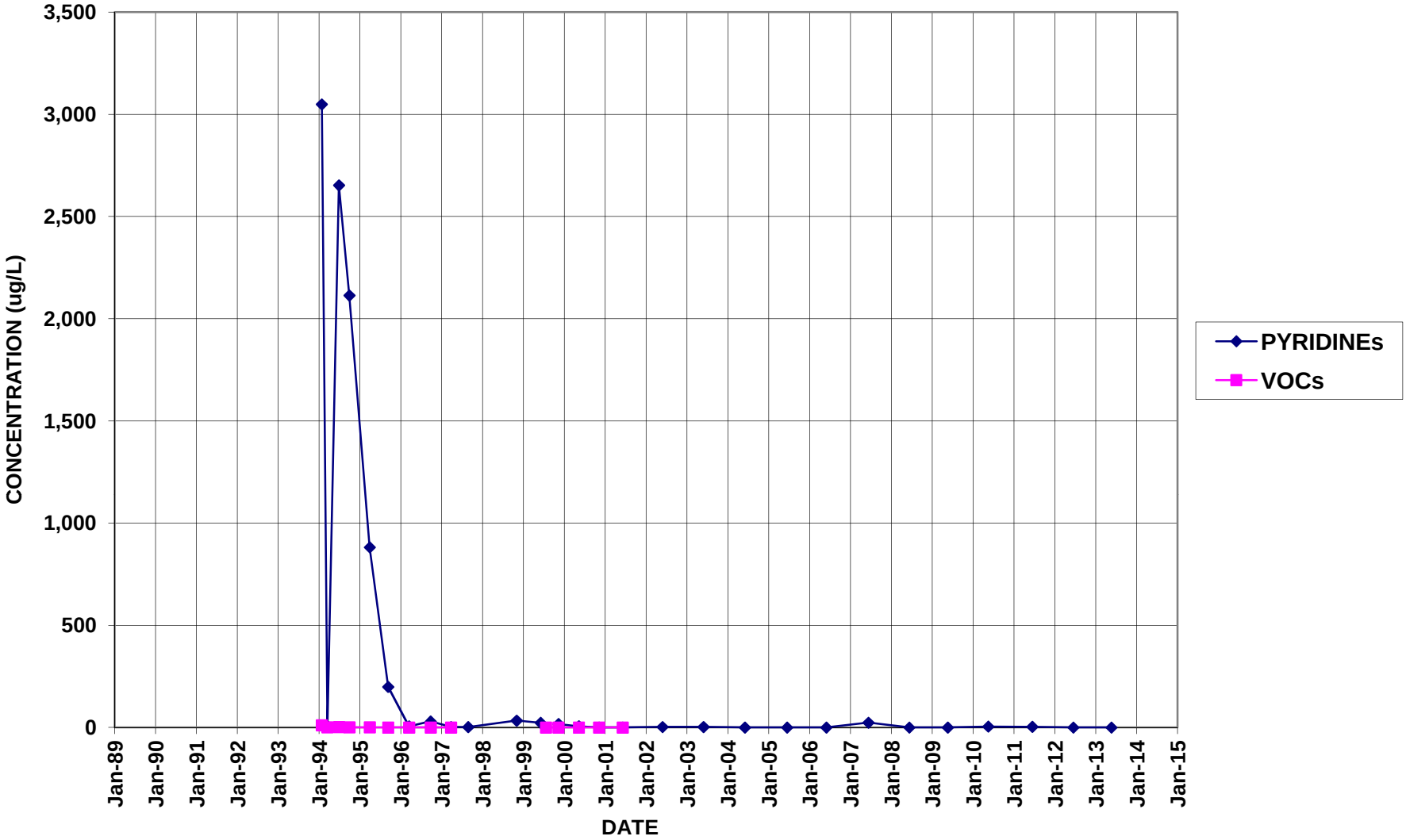
Prepared by: nmb
Reviewed by: jeb

BR-103

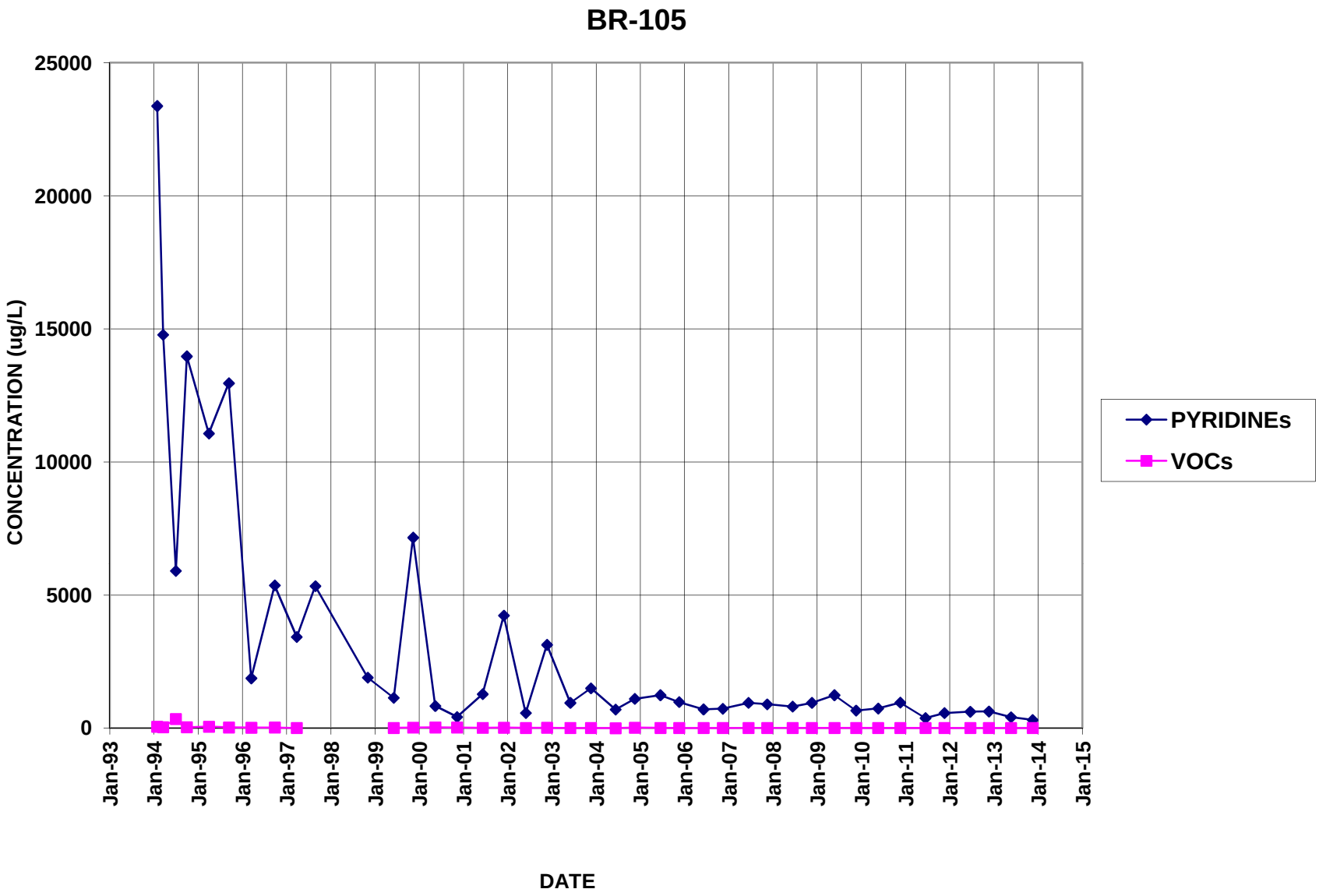


Prepared by: nmb
Reviewed by: jeb

BR-104

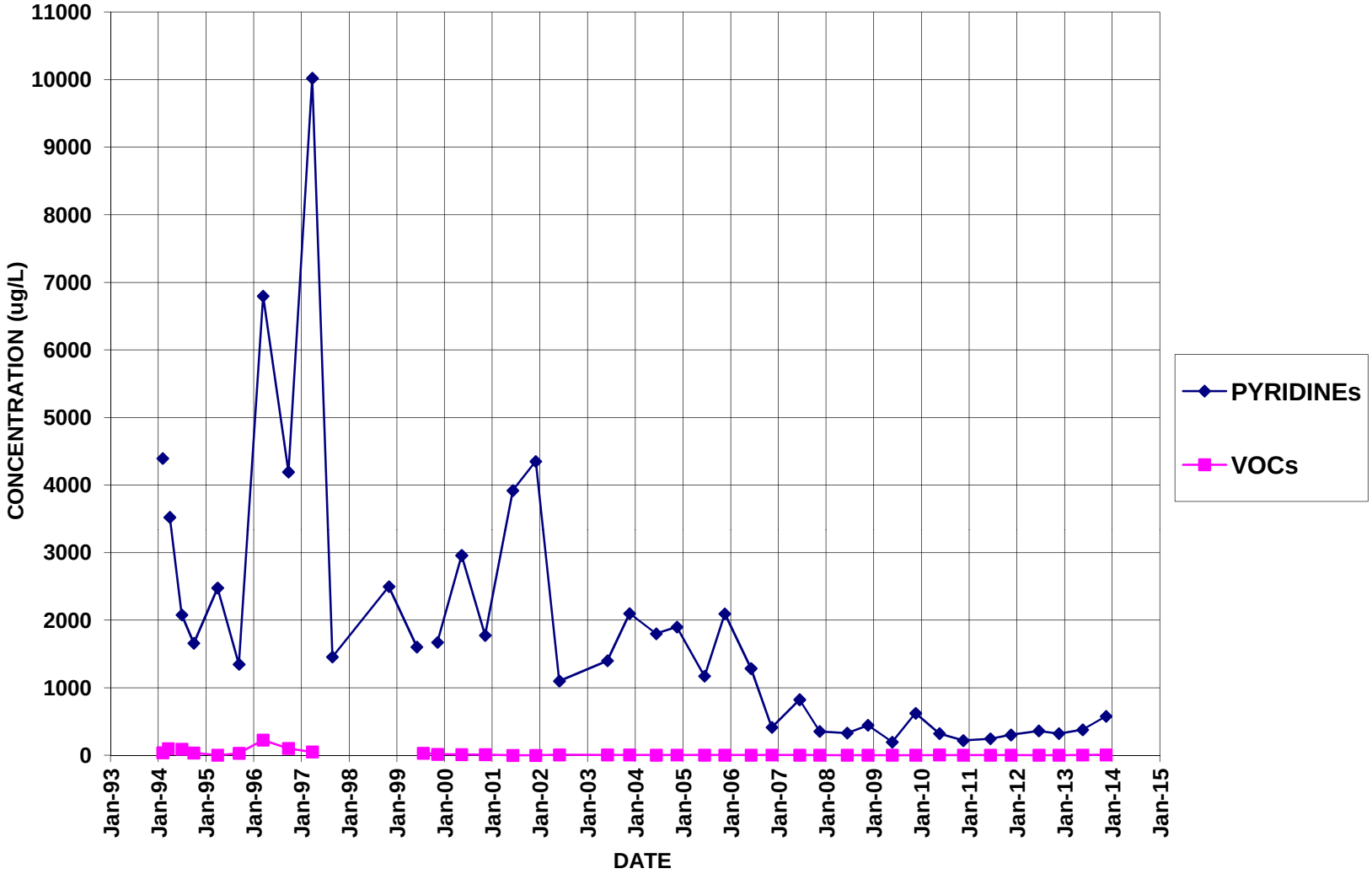


Prepared by: nmb
Reviewed by: jeb



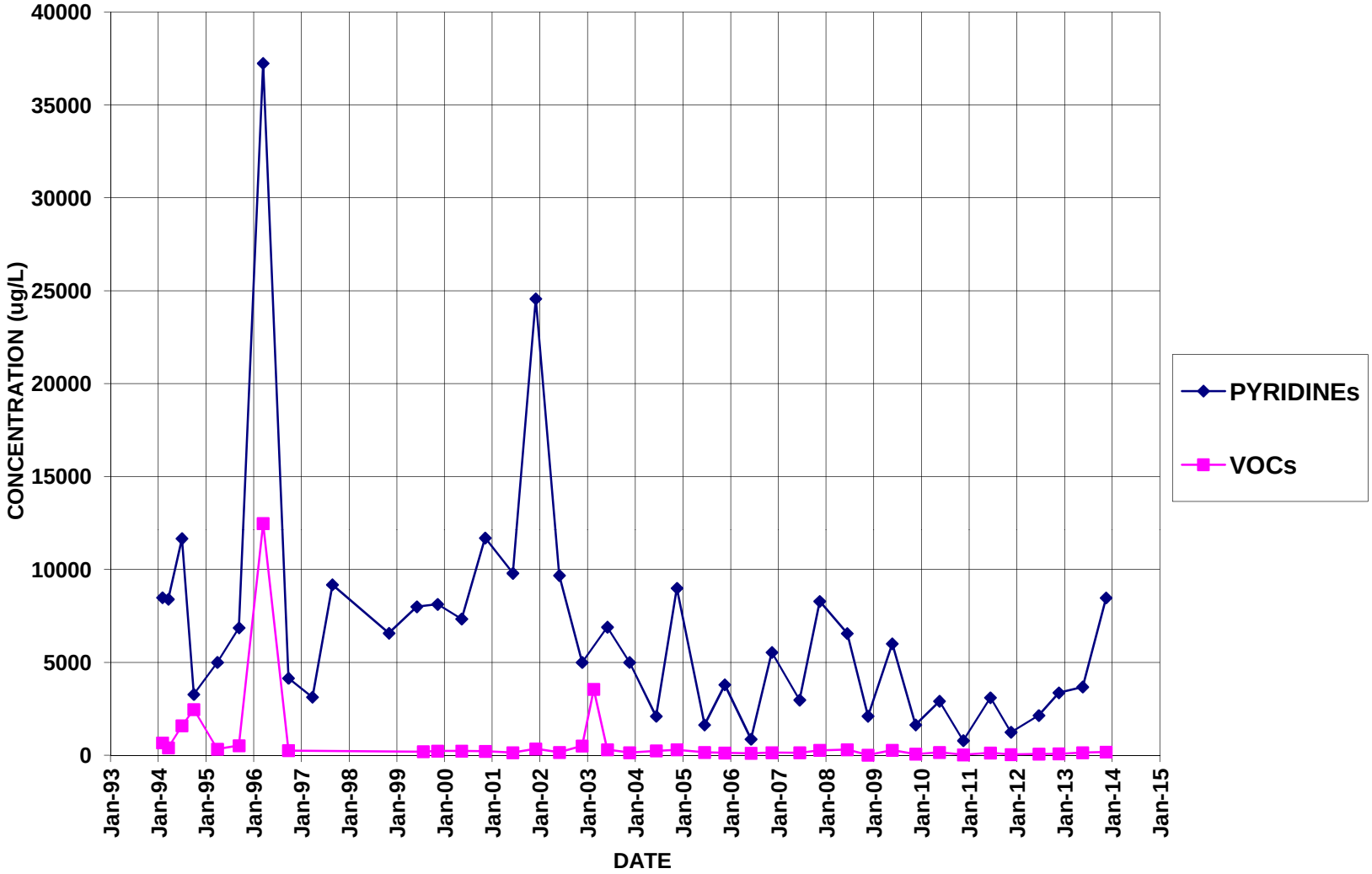
Prepared by: nmb
Reviewed by: jeb

BR-105D

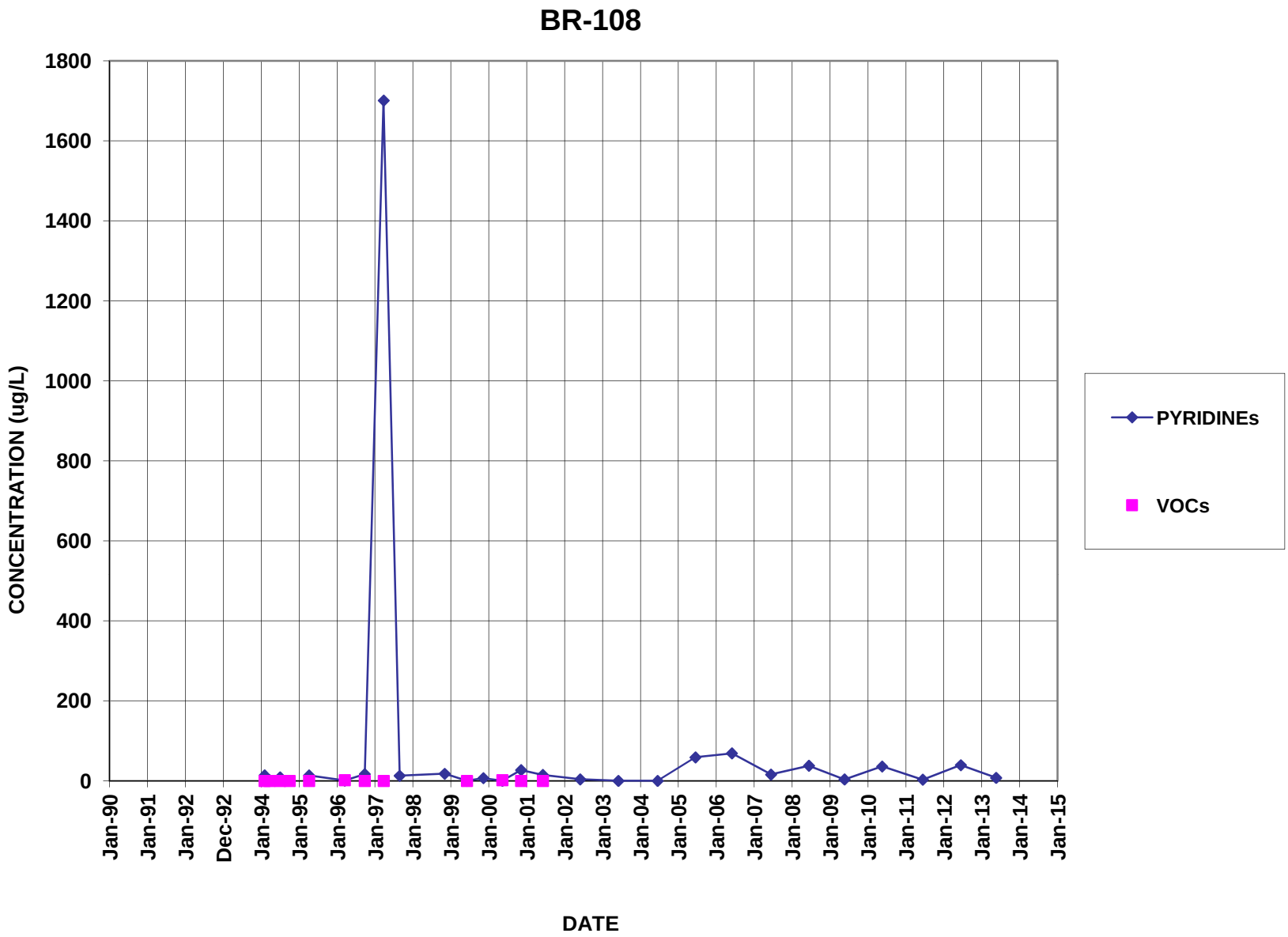


Prepared by: nmb
Reviewed by: jeb

BR-106

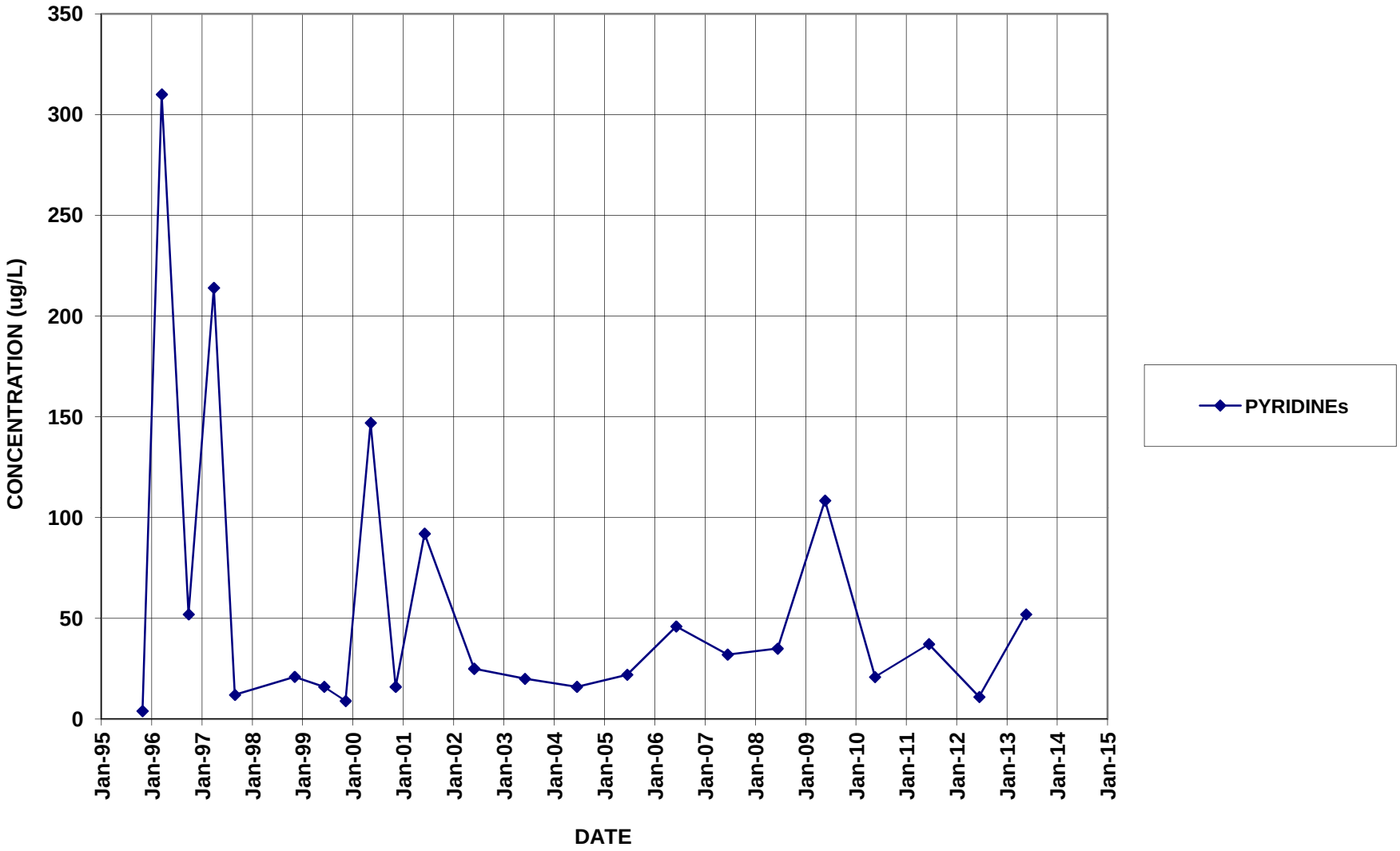


Prepared by: nmb
Reviewed by: jeb



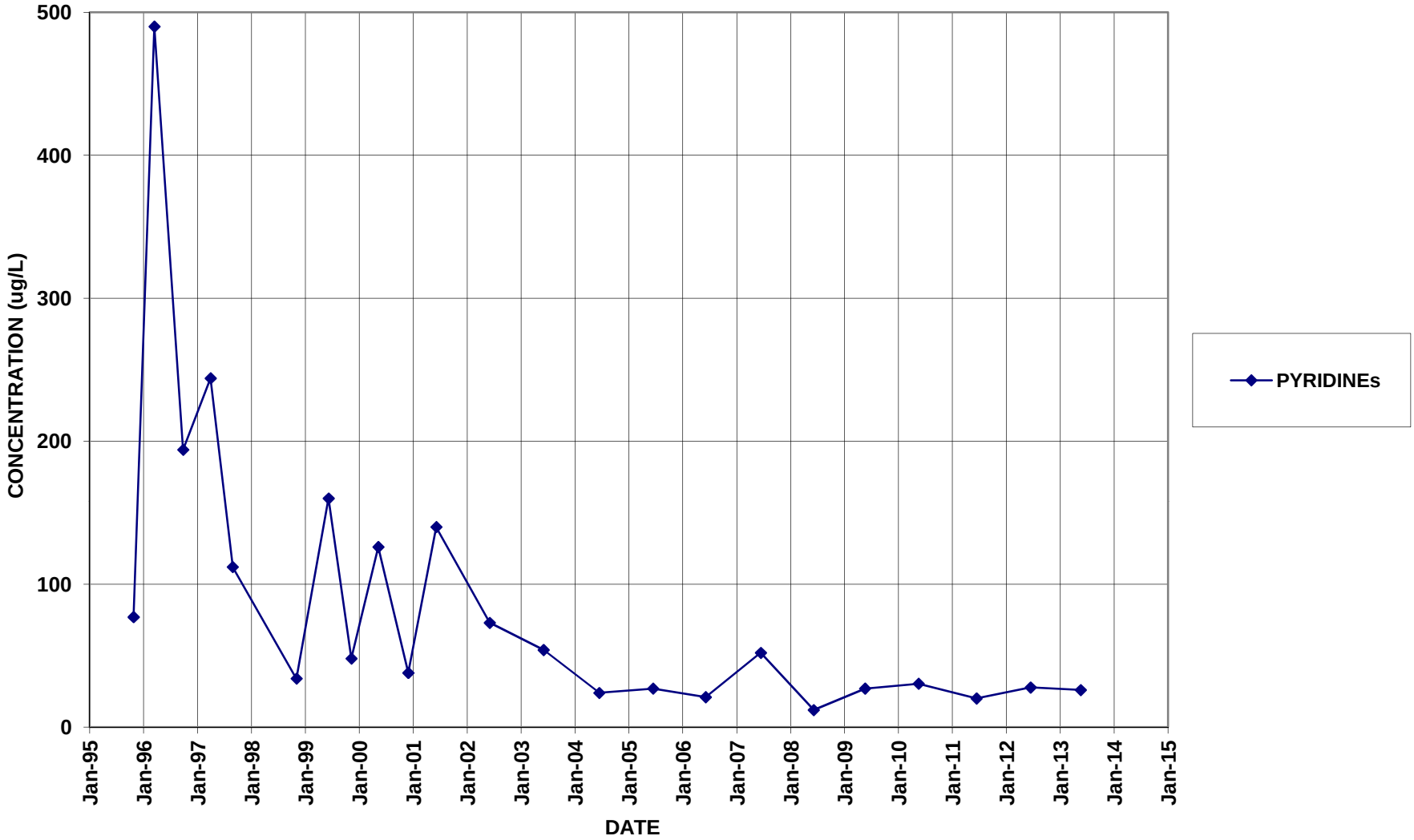
Prepared by: nmb
Reviewed by: jeb

BR-112D



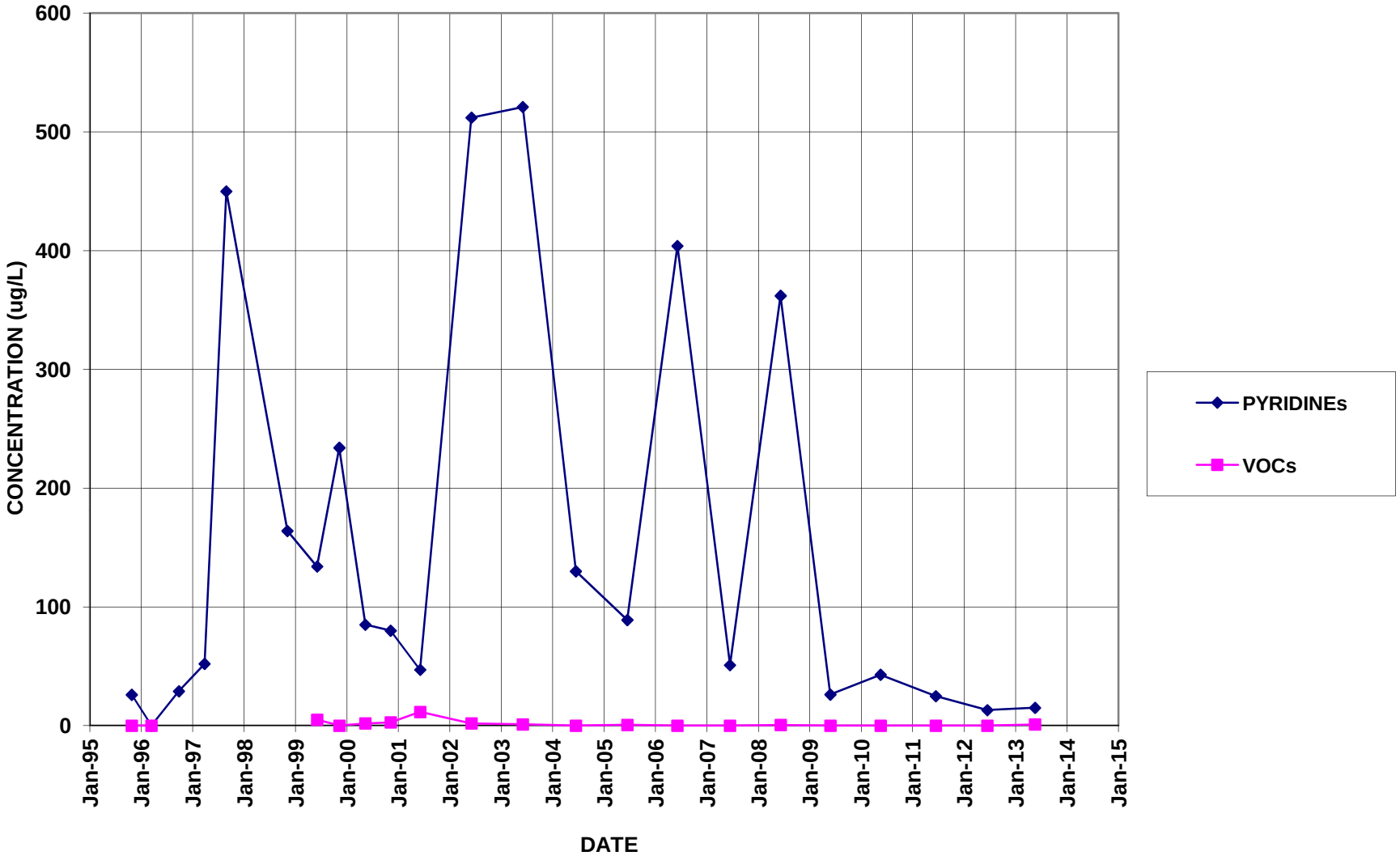
Prepared by: nmb
Reviewed by: jeb

BR-113D



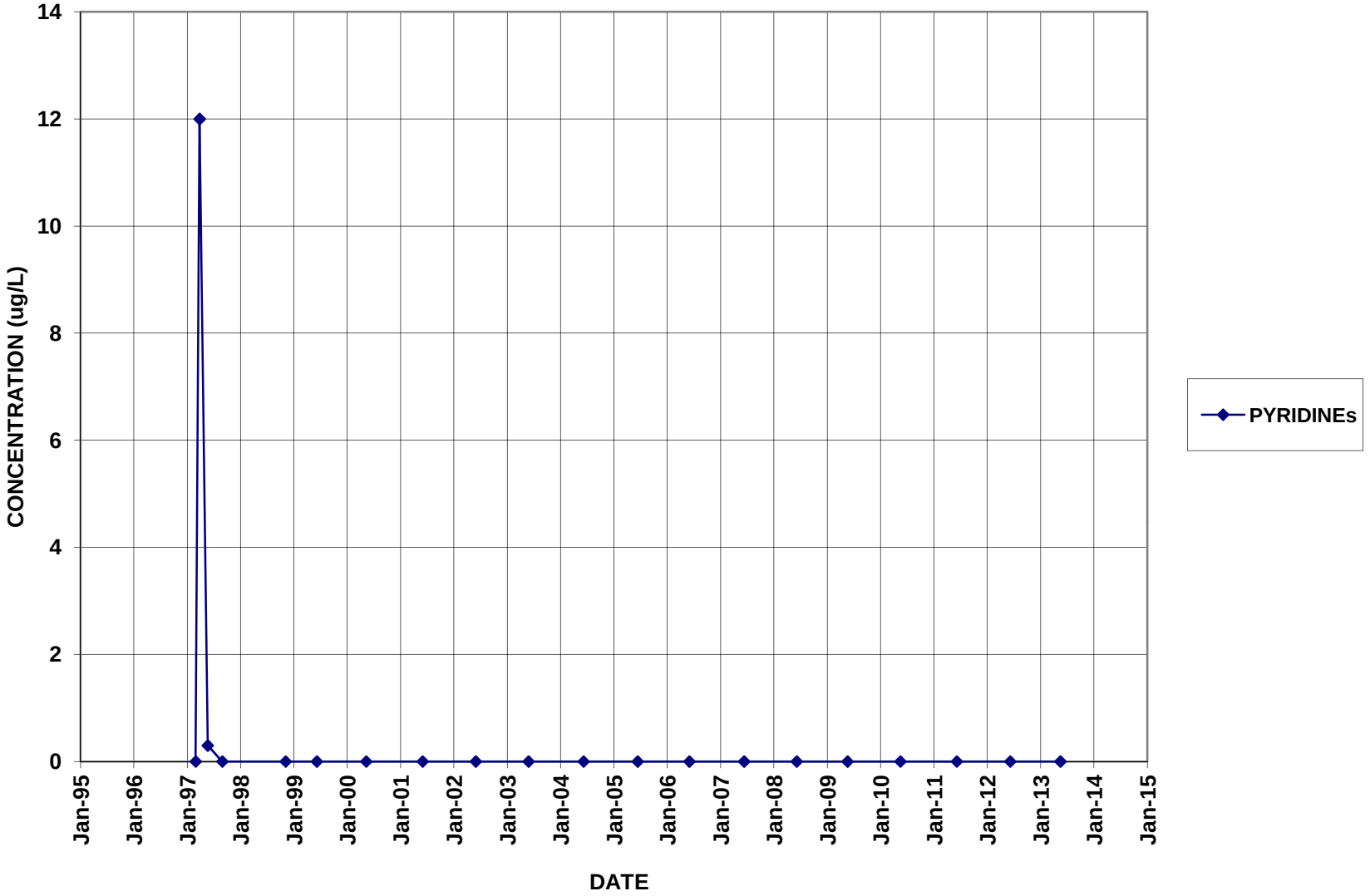
Prepared by: nmb
Reviewed by: jeb

BR-114



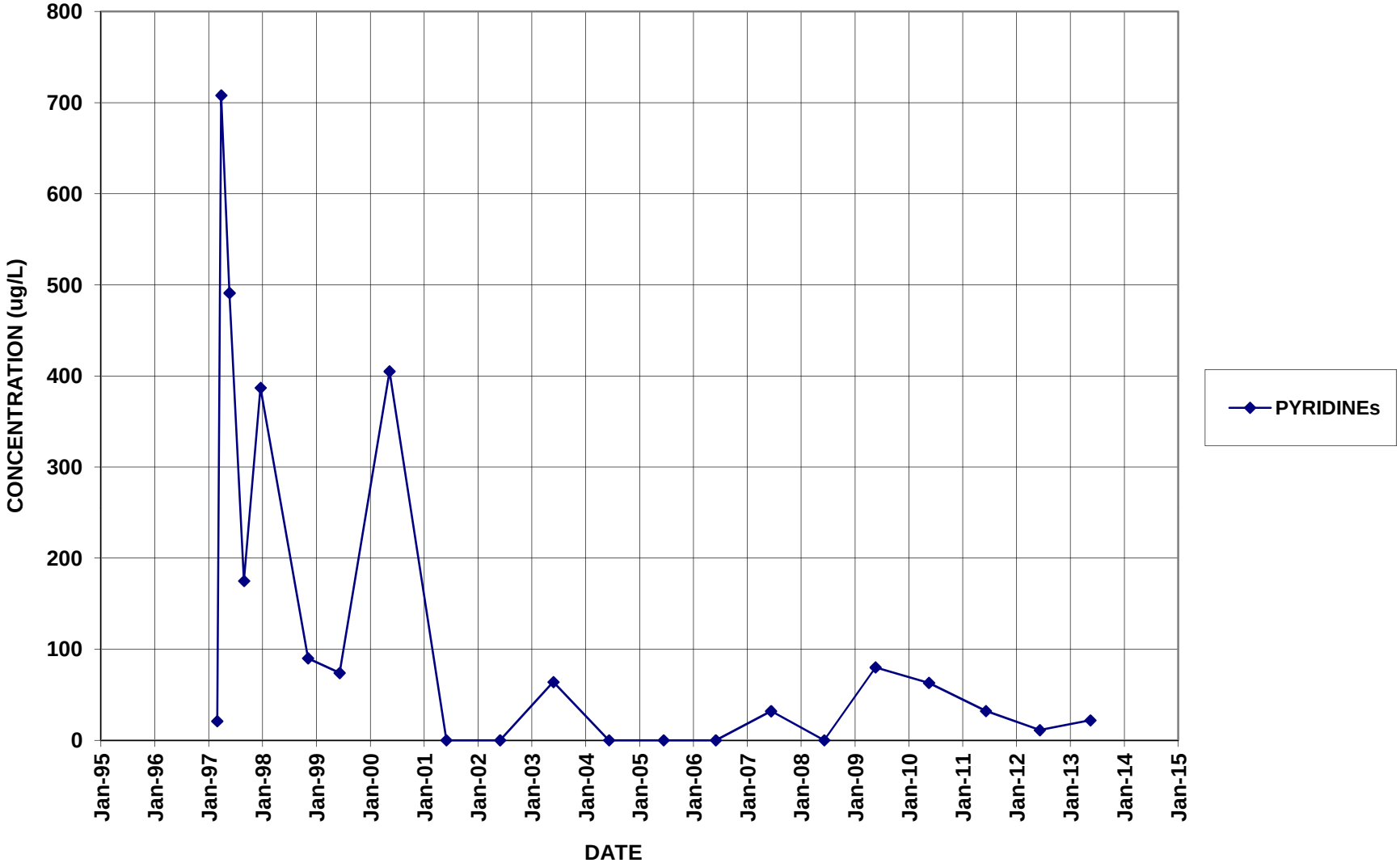
Prepared by: nmb
Reviewed by: jeb

BR-116



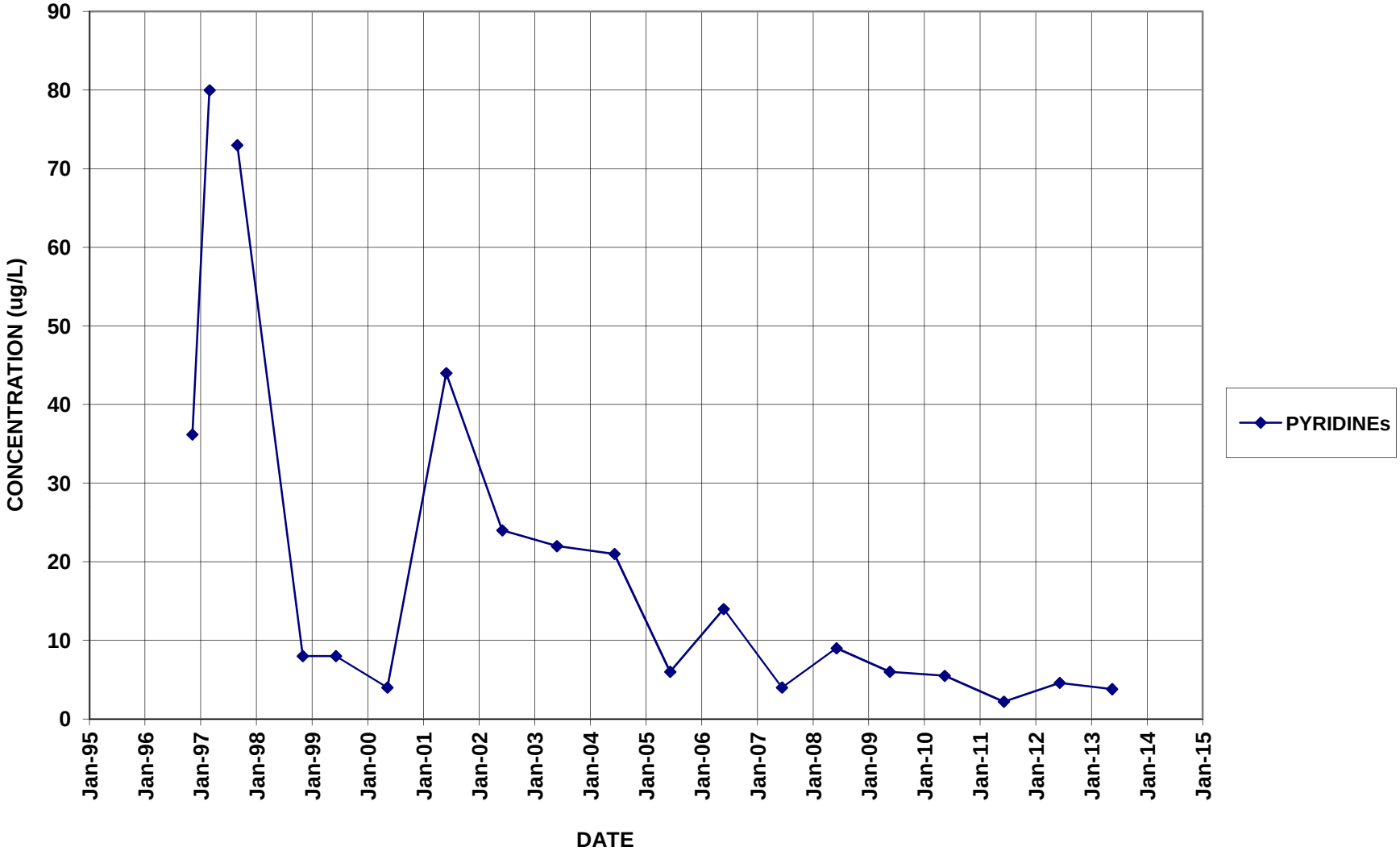
Prepared by: nmb
Reviewed by: jeb

BR-116D



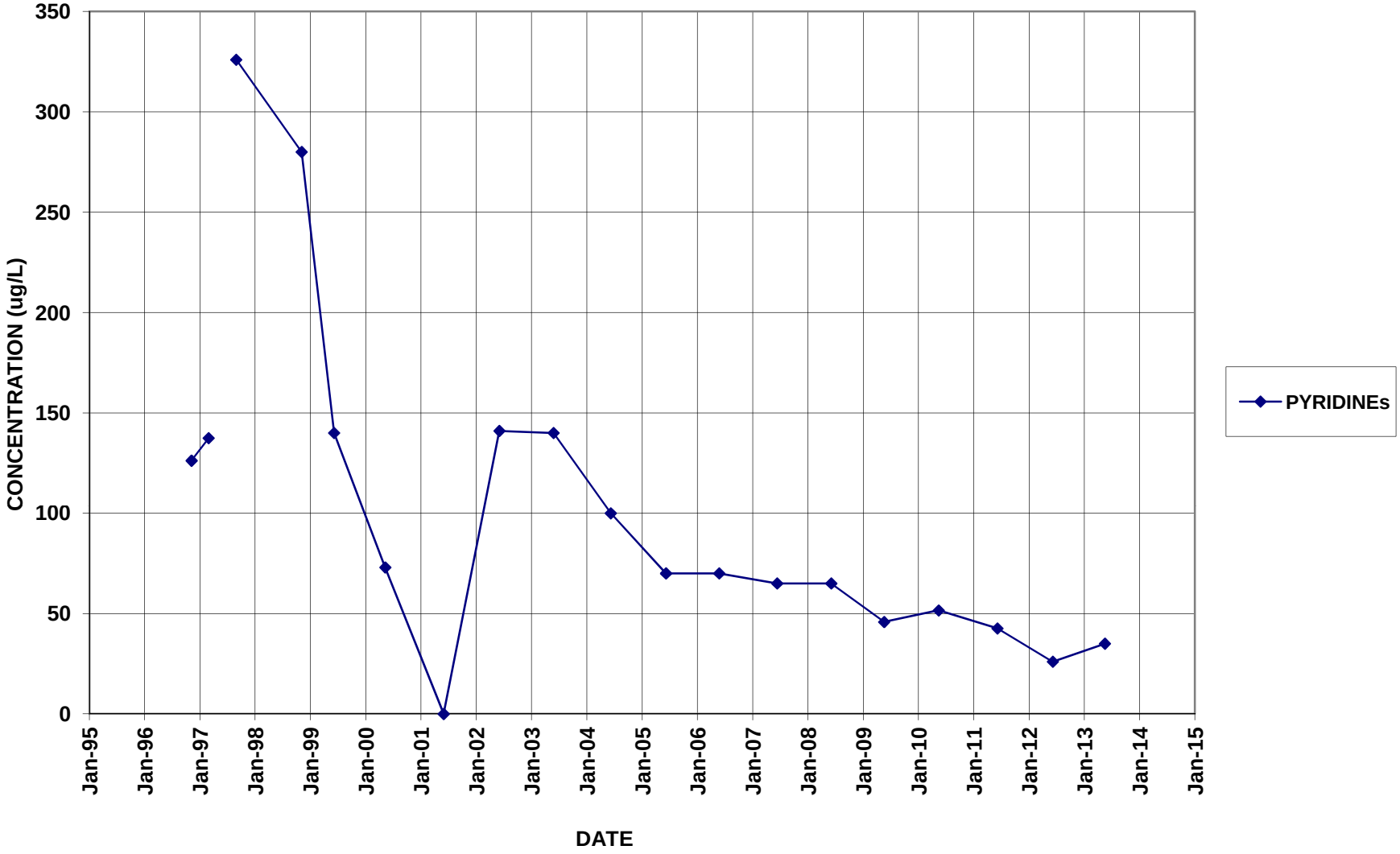
Prepared by: nmb
Reviewed by: jeb

BR-117D



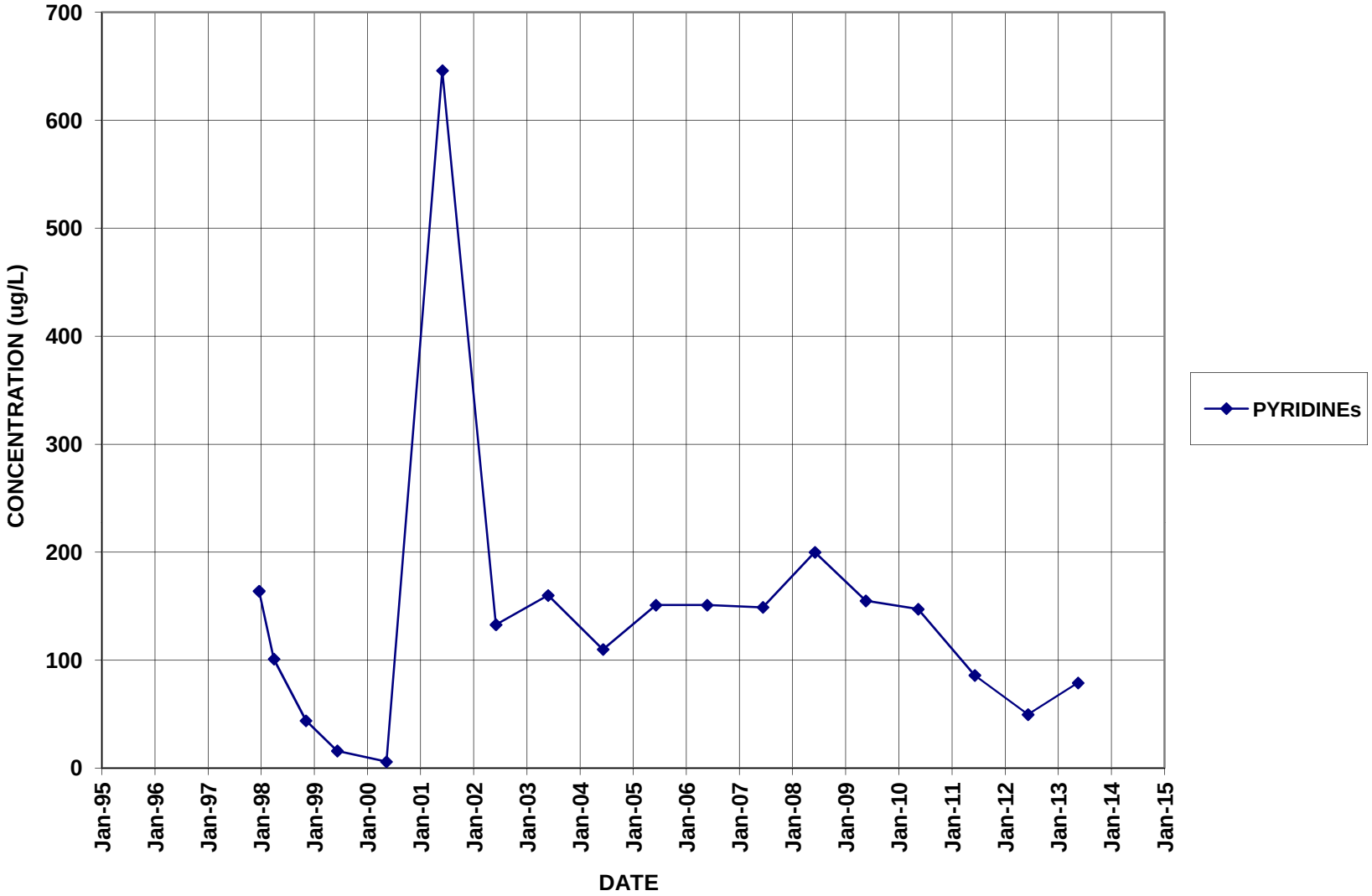
Prepared by: nmb
Reviewed by: jeb

BR-118D



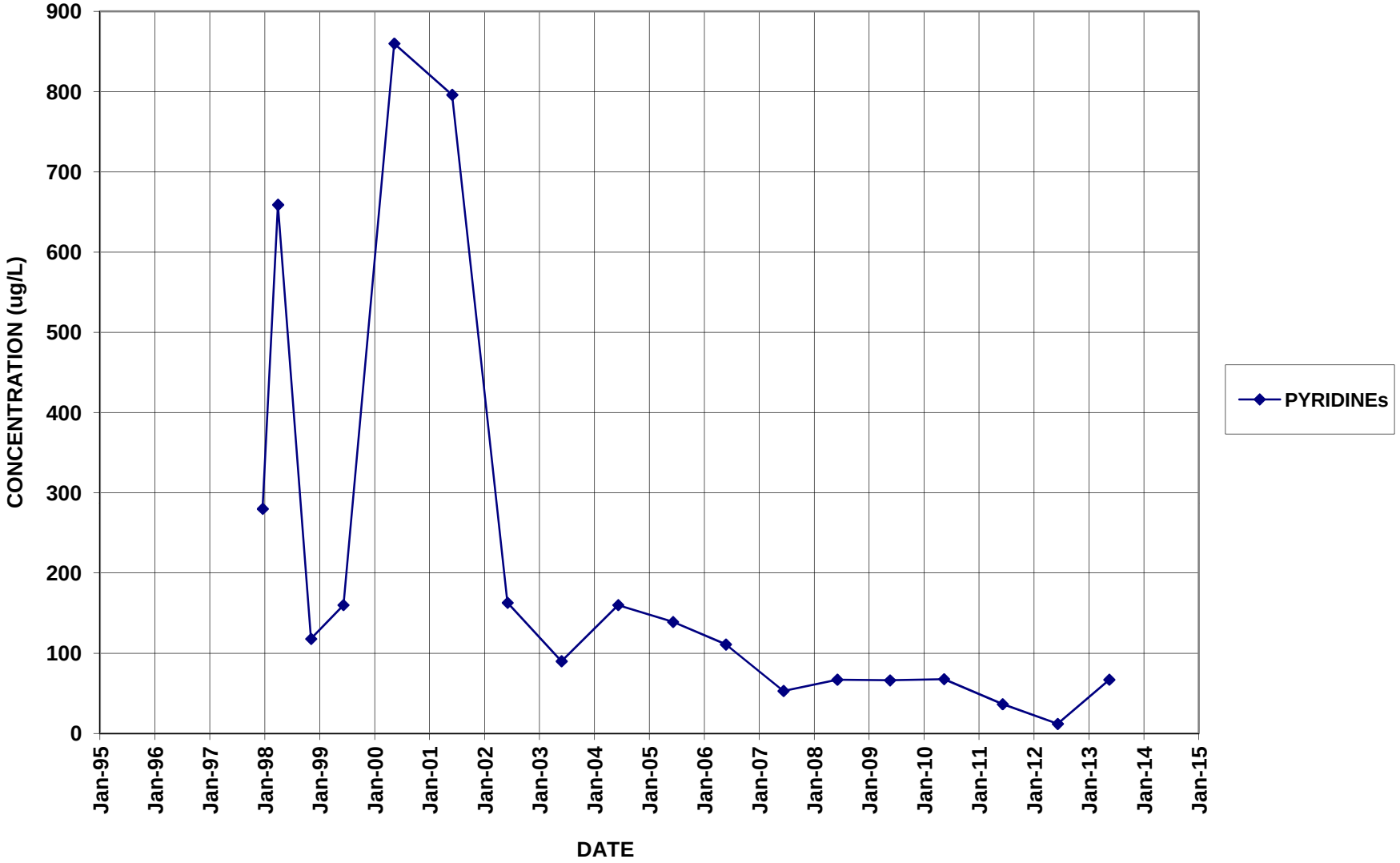
Prepared by: nmb
Reviewed by: jeb

BR-122D



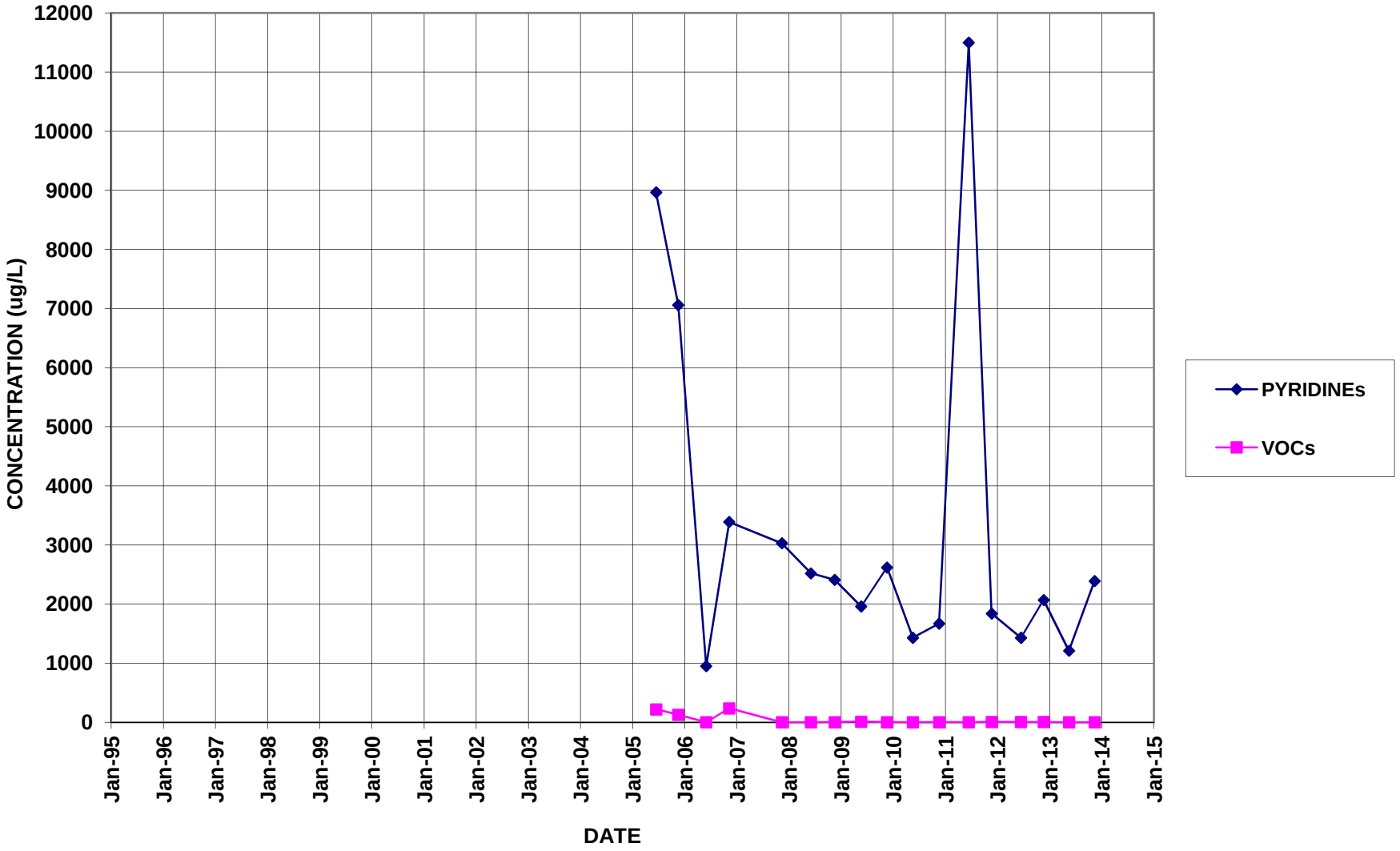
Prepared by: nmb
Reviewed by: jeb

BR-123D



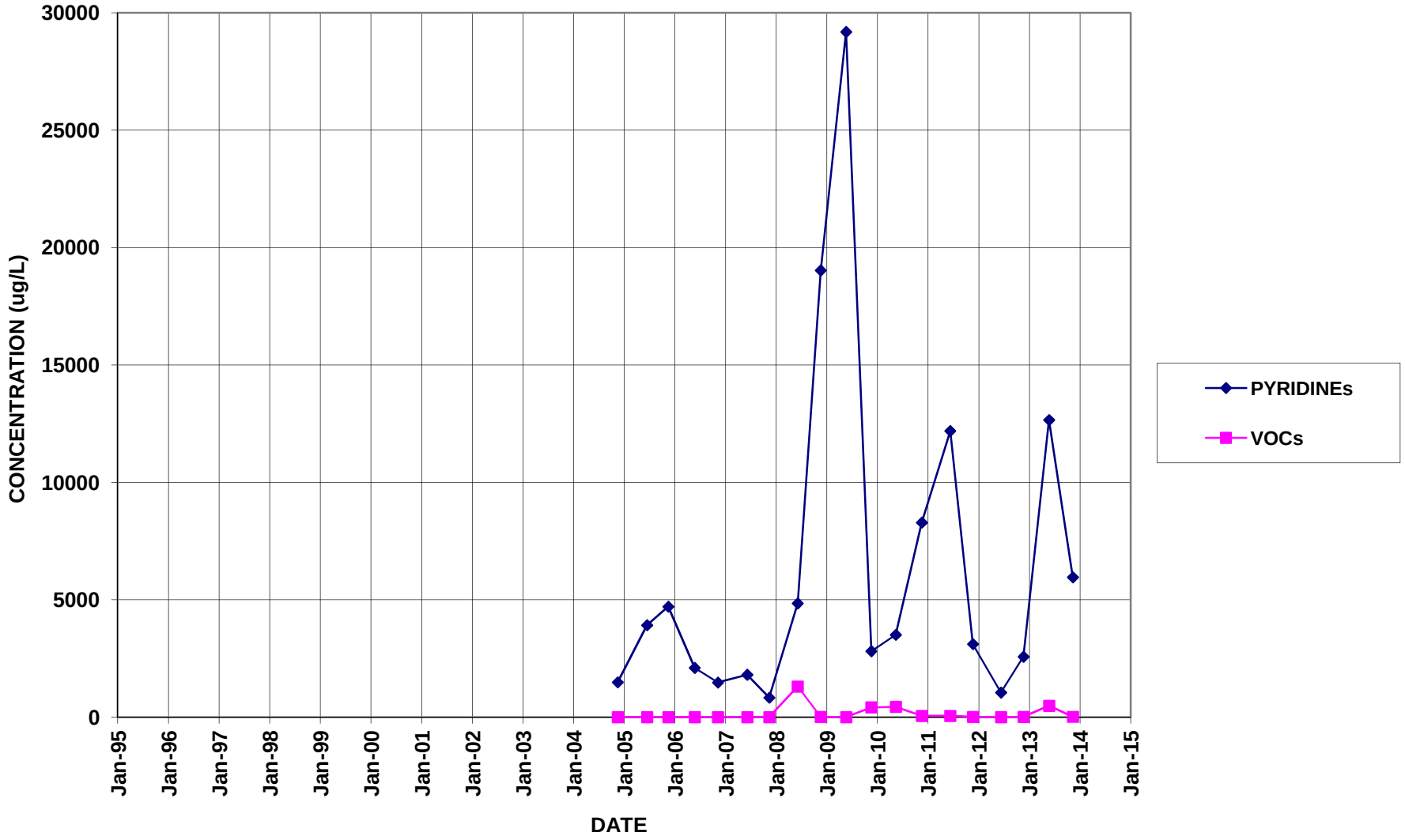
Prepared by: nmb
Reviewed by: jeb

BR-126



Prepared by: nmb
Reviewed by: jeb

BR-127



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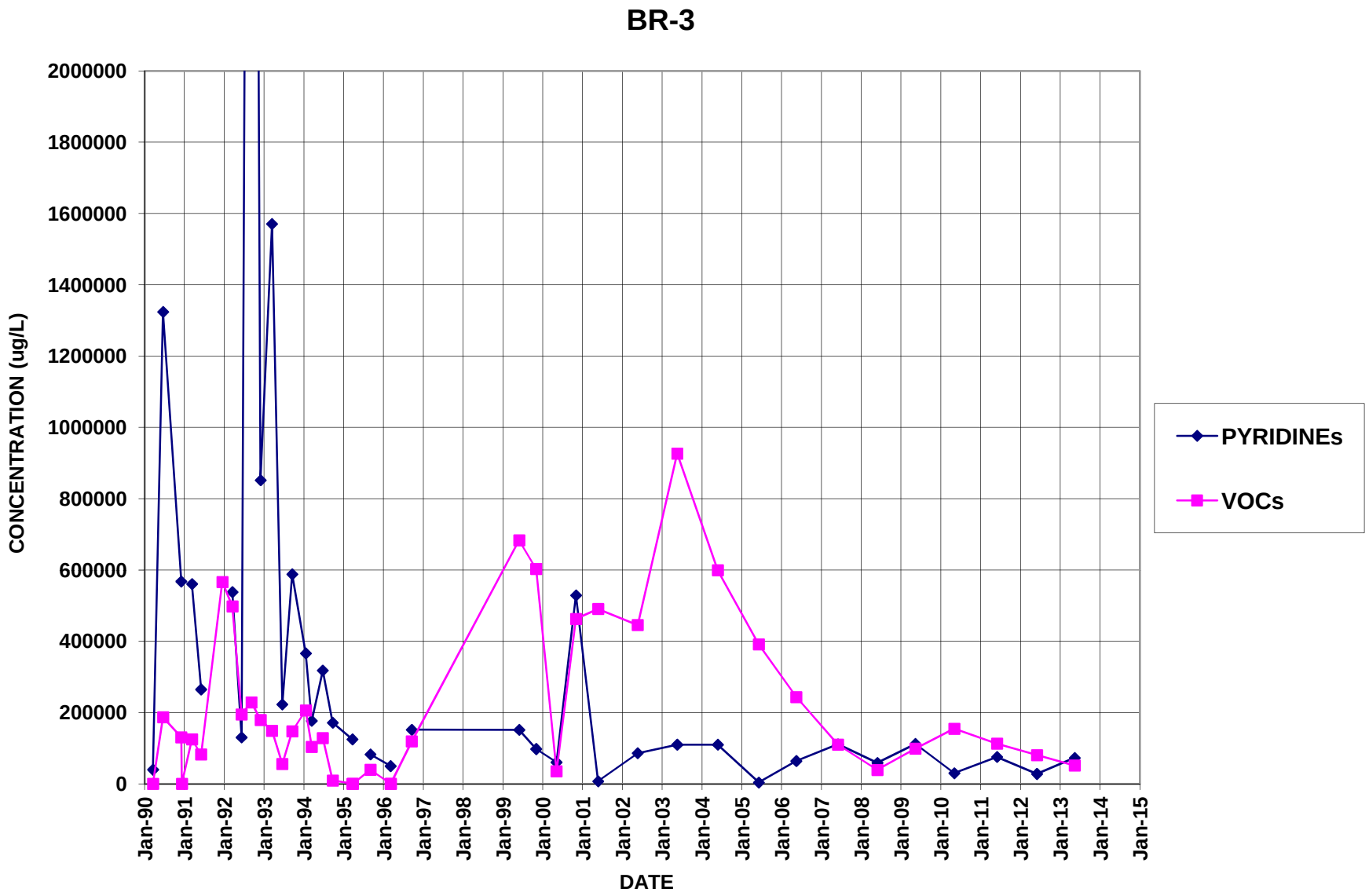
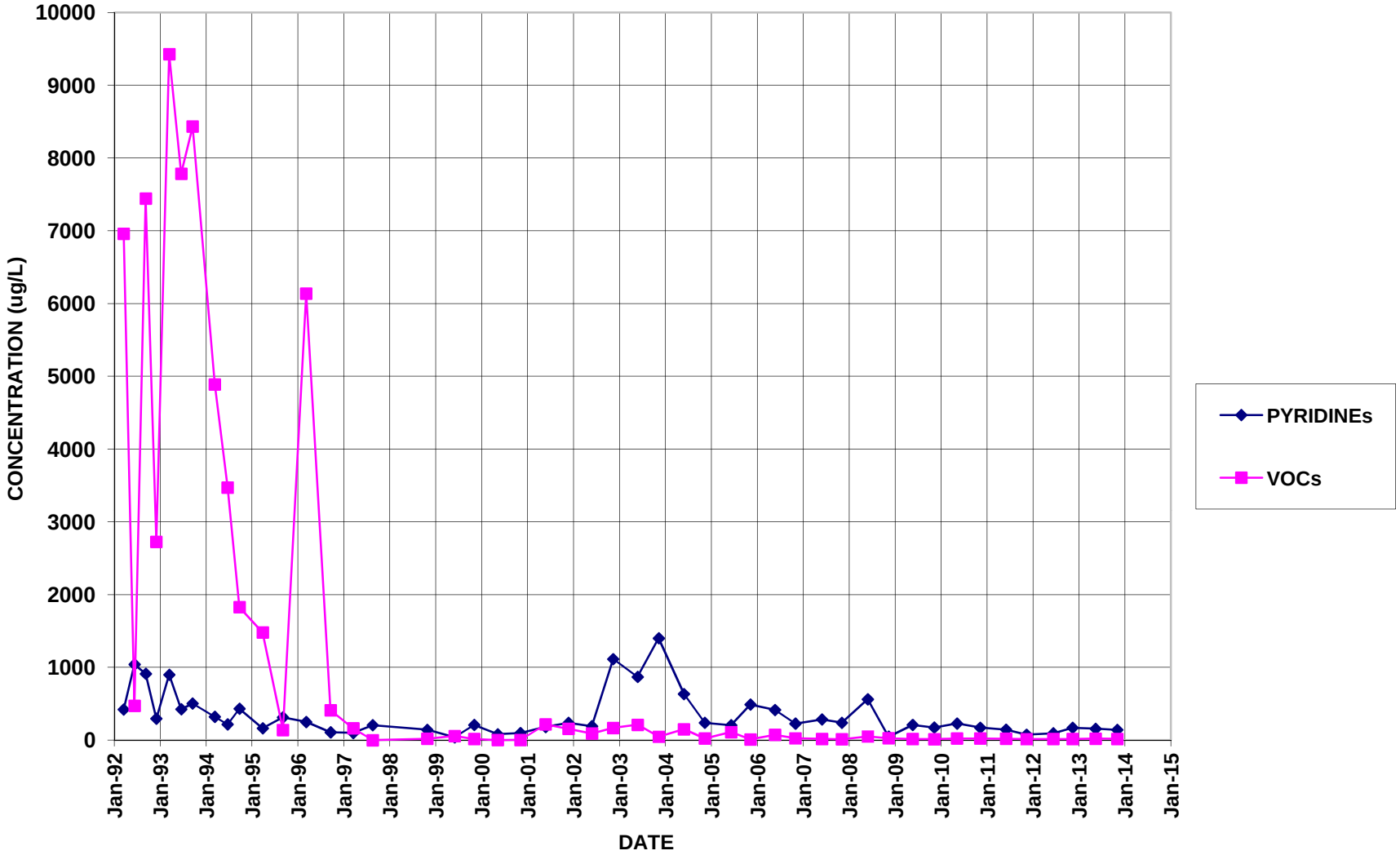
Reviewed by: jeb



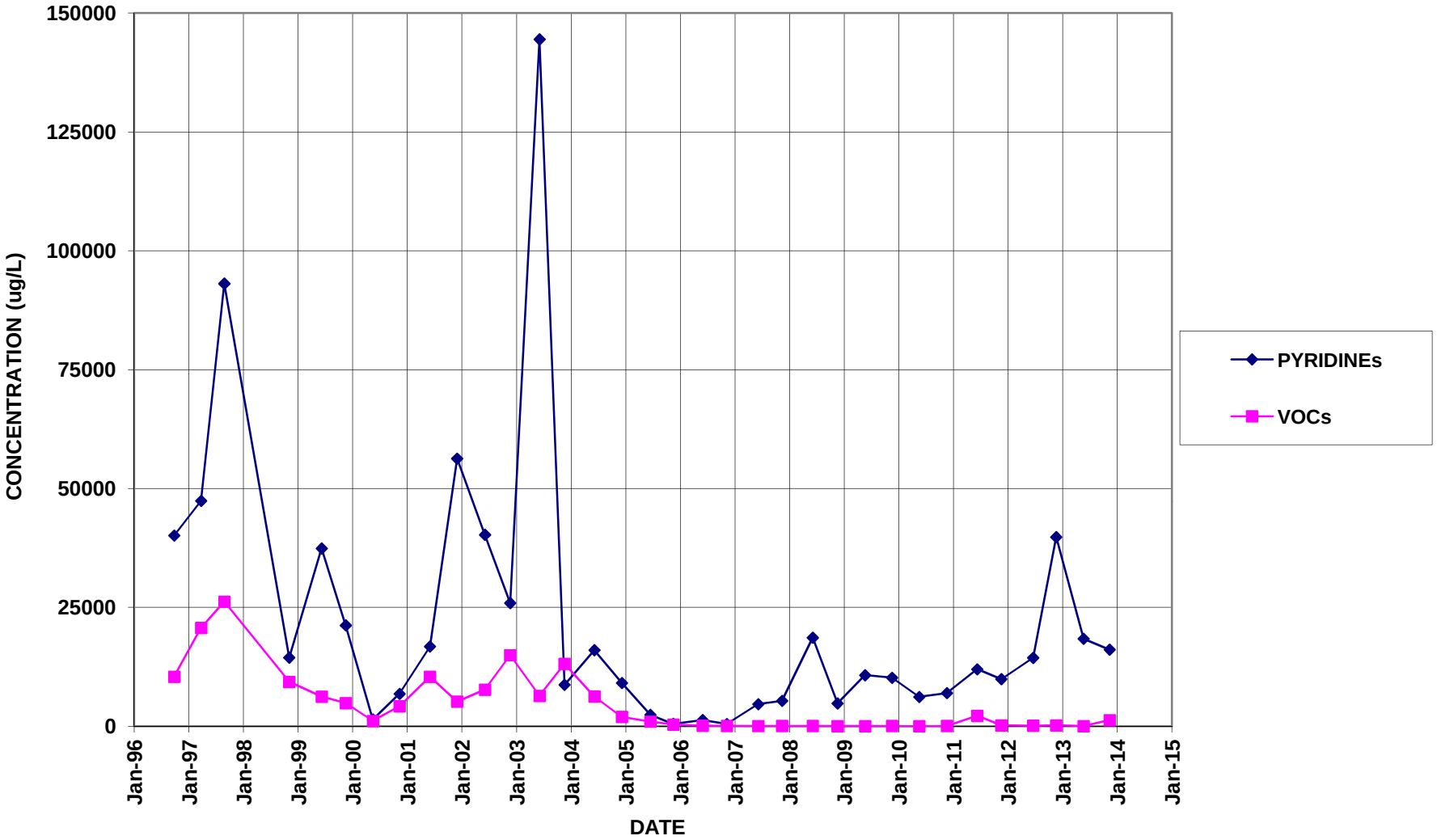
Prepared by: nmb
Reviewed by: jeb

BR-5A



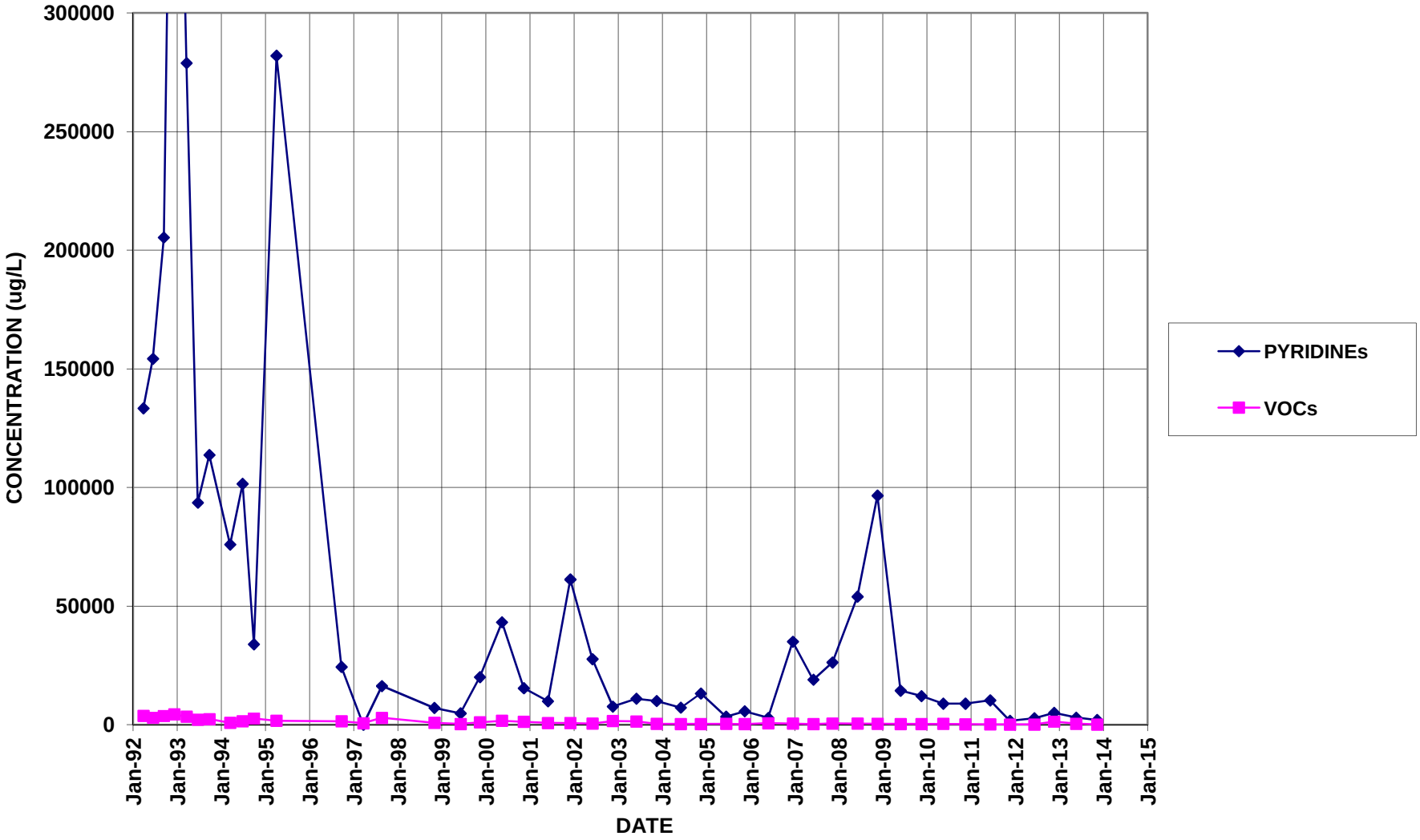
Prepared by: nmb
Reviewed by: jeb

BR-6A



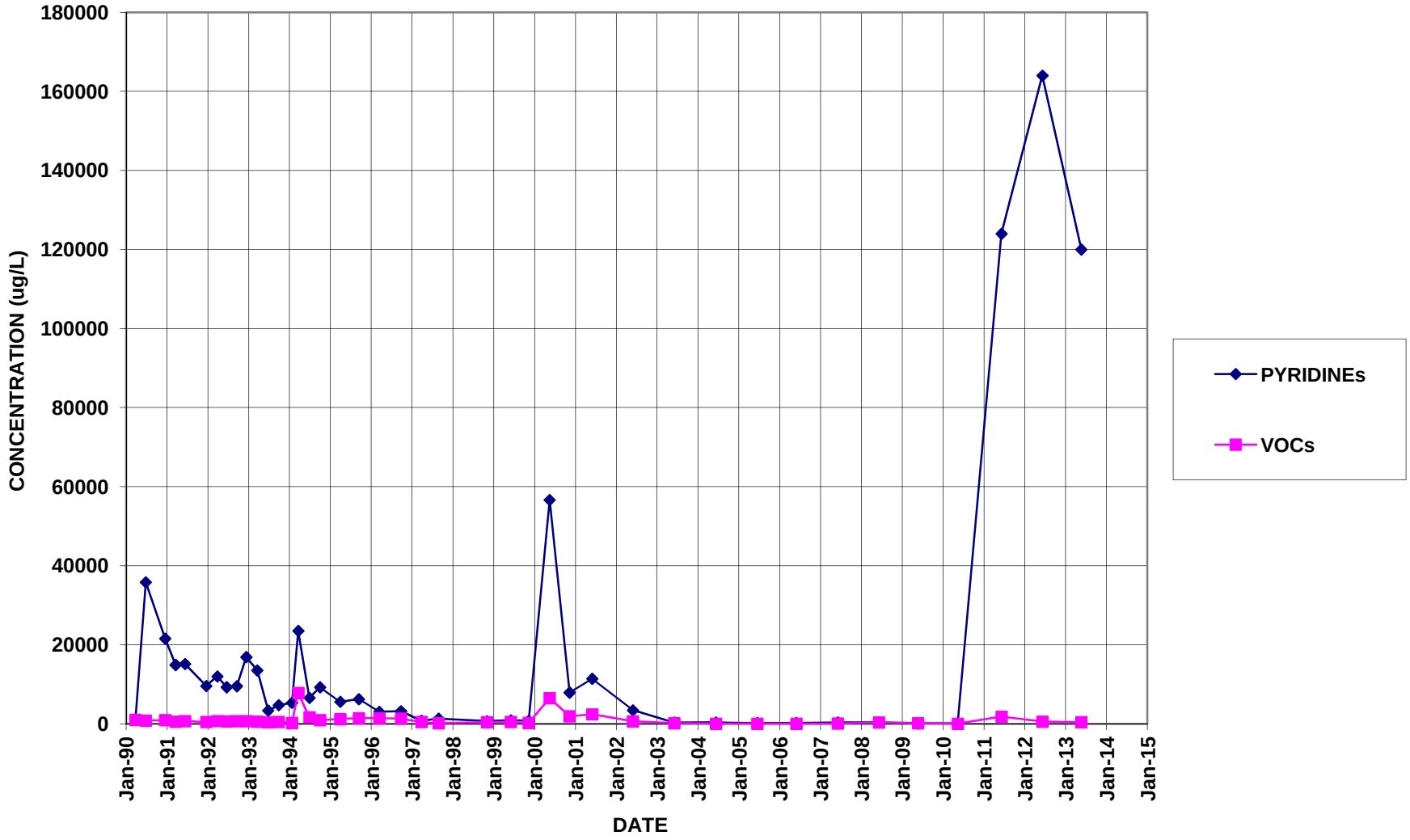
Prepared by: nmb
Reviewed by: jeb

BR-7A



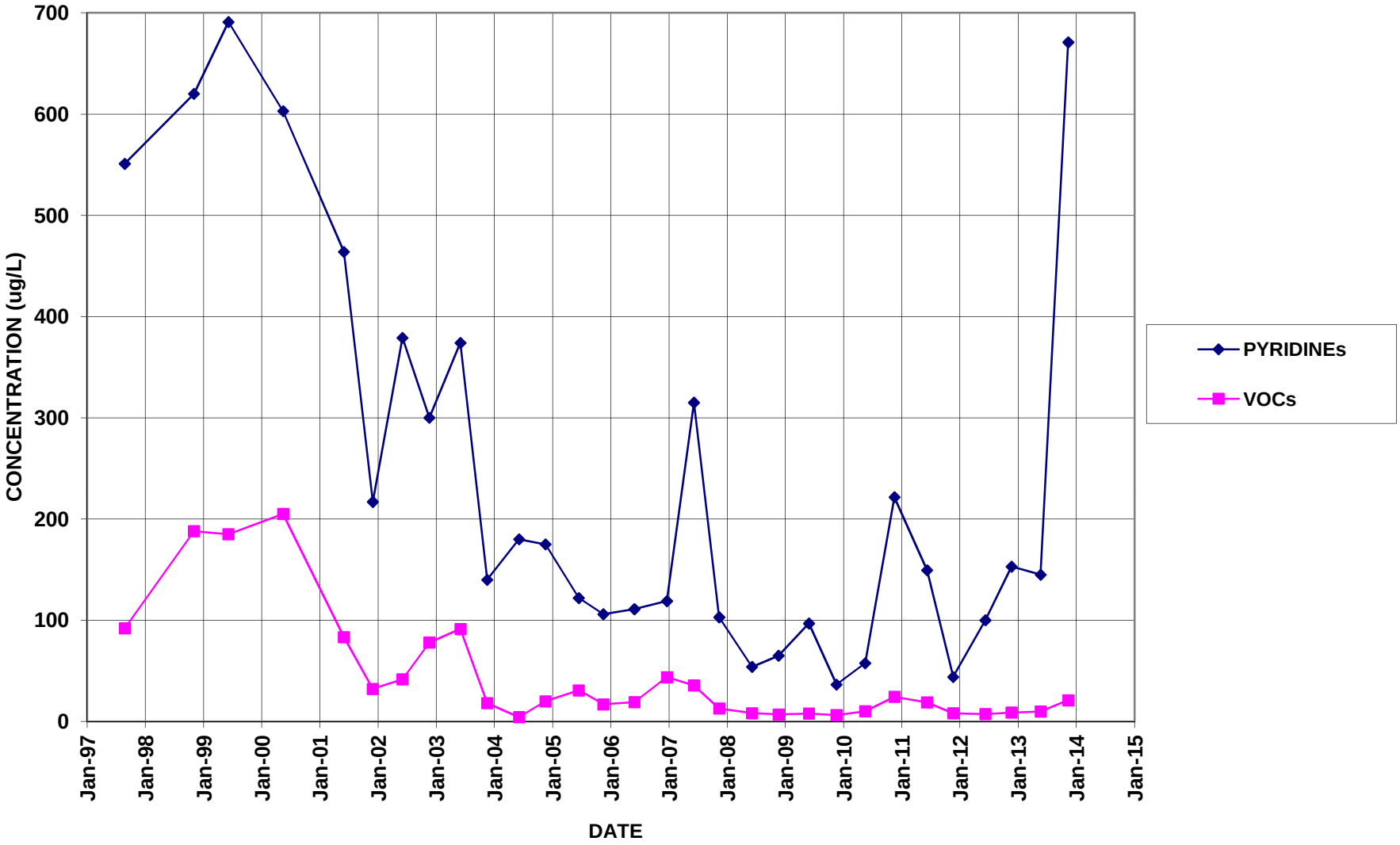
Prepared by: nmb
Reviewed by: jeb

BR-8

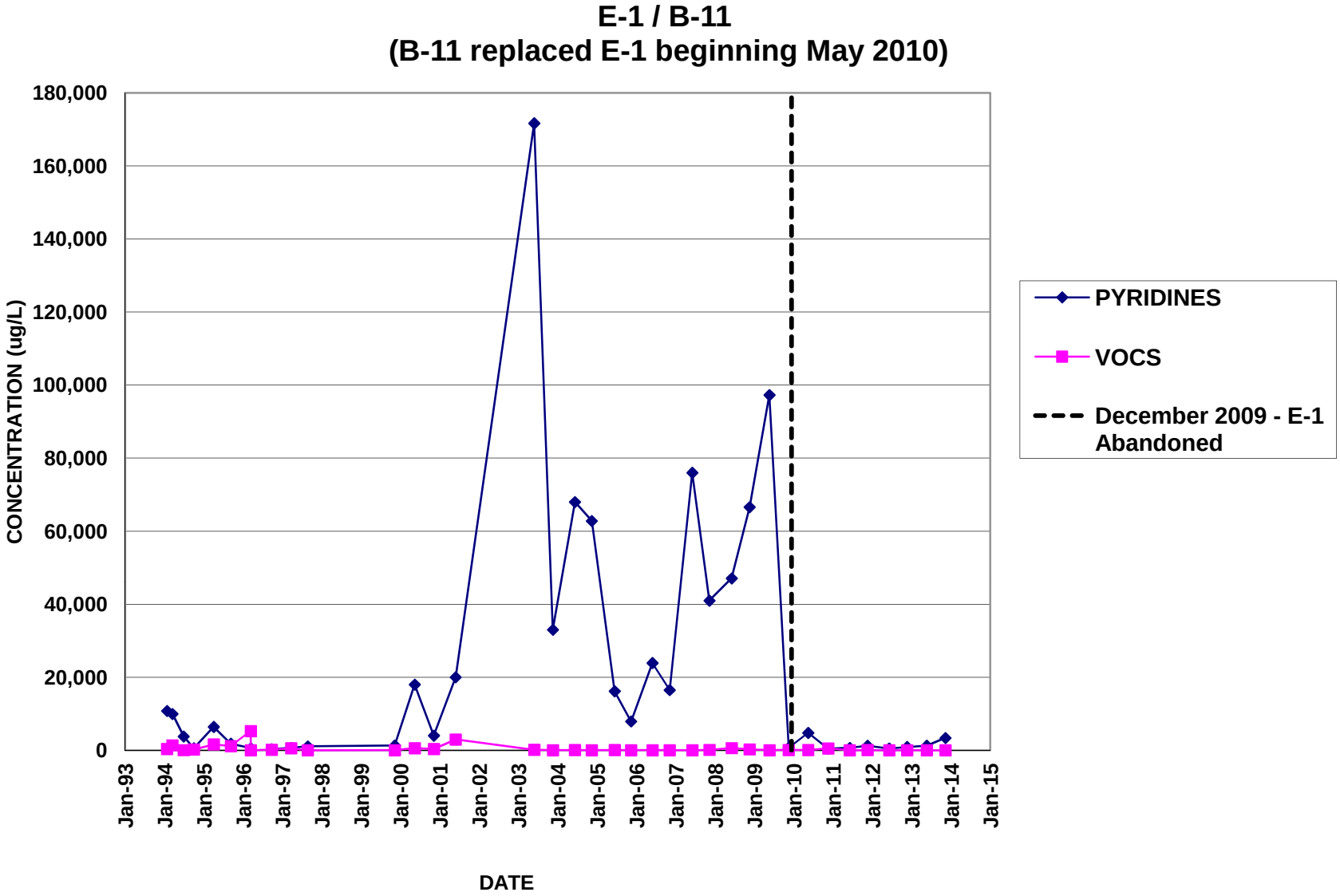


Prepared by: nmb
Reviewed by: jeb

BR-9

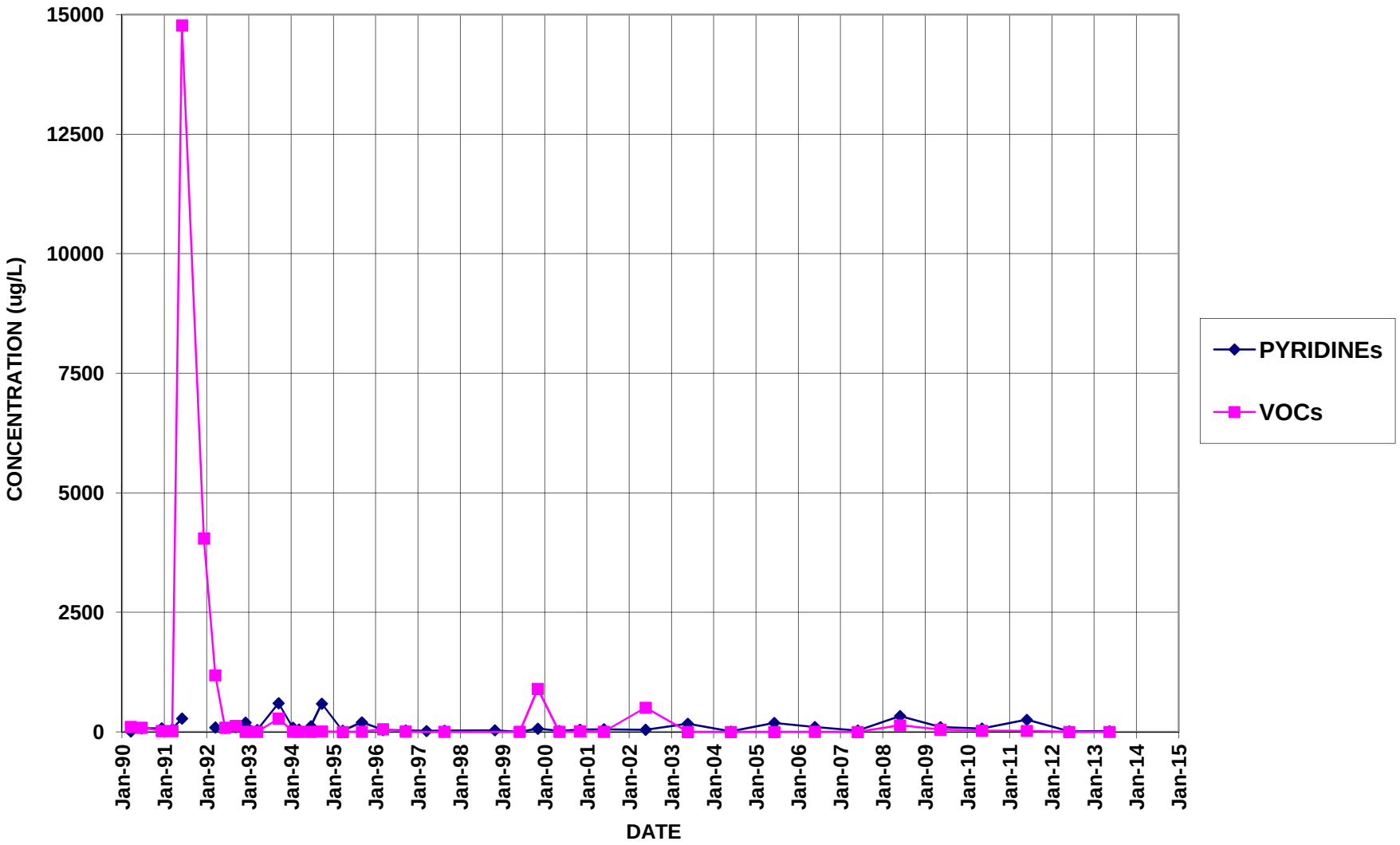


Prepared by: nmb
Reviewed by: jeb



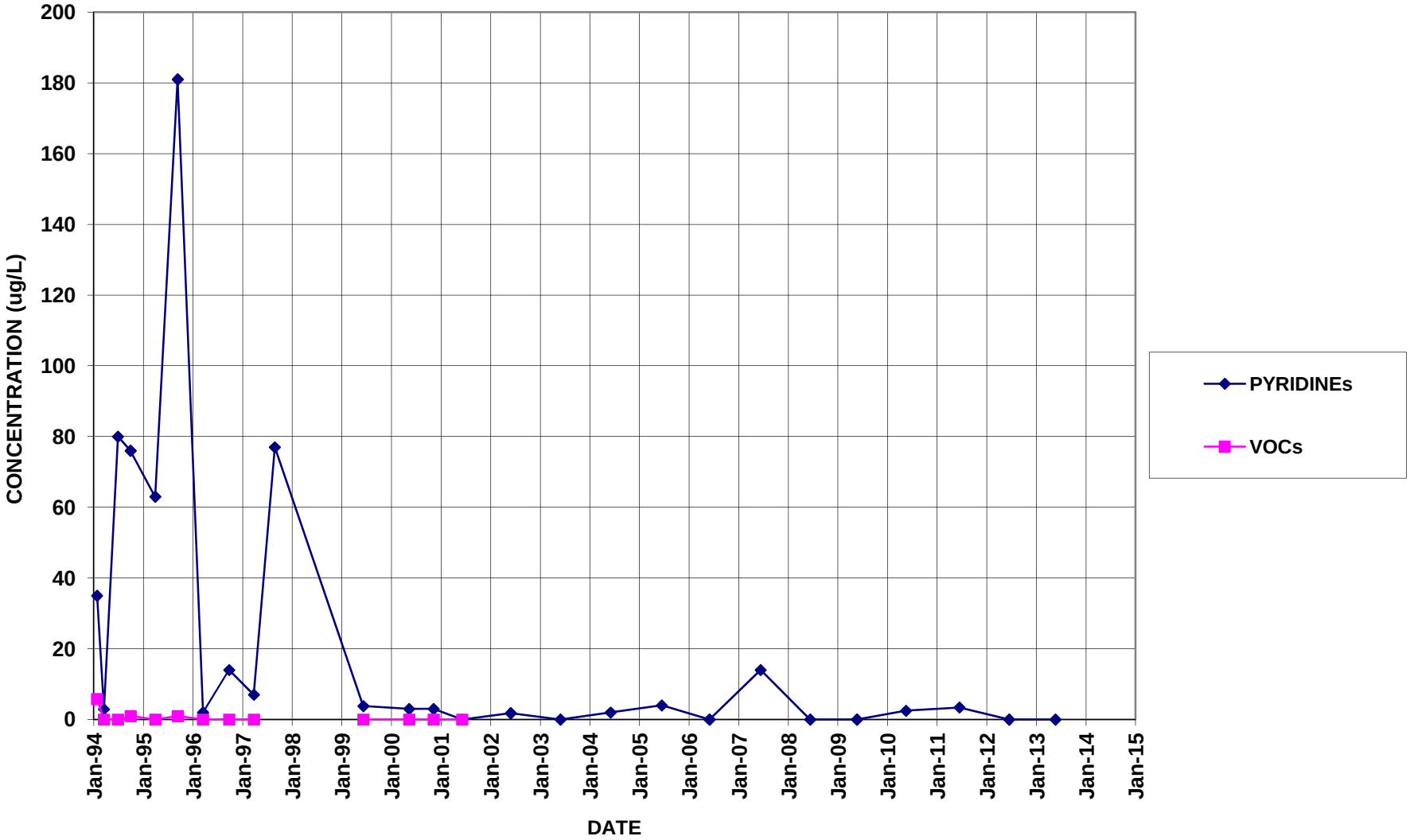
Prepared by: nmb
Reviewed by: jeb

E-3



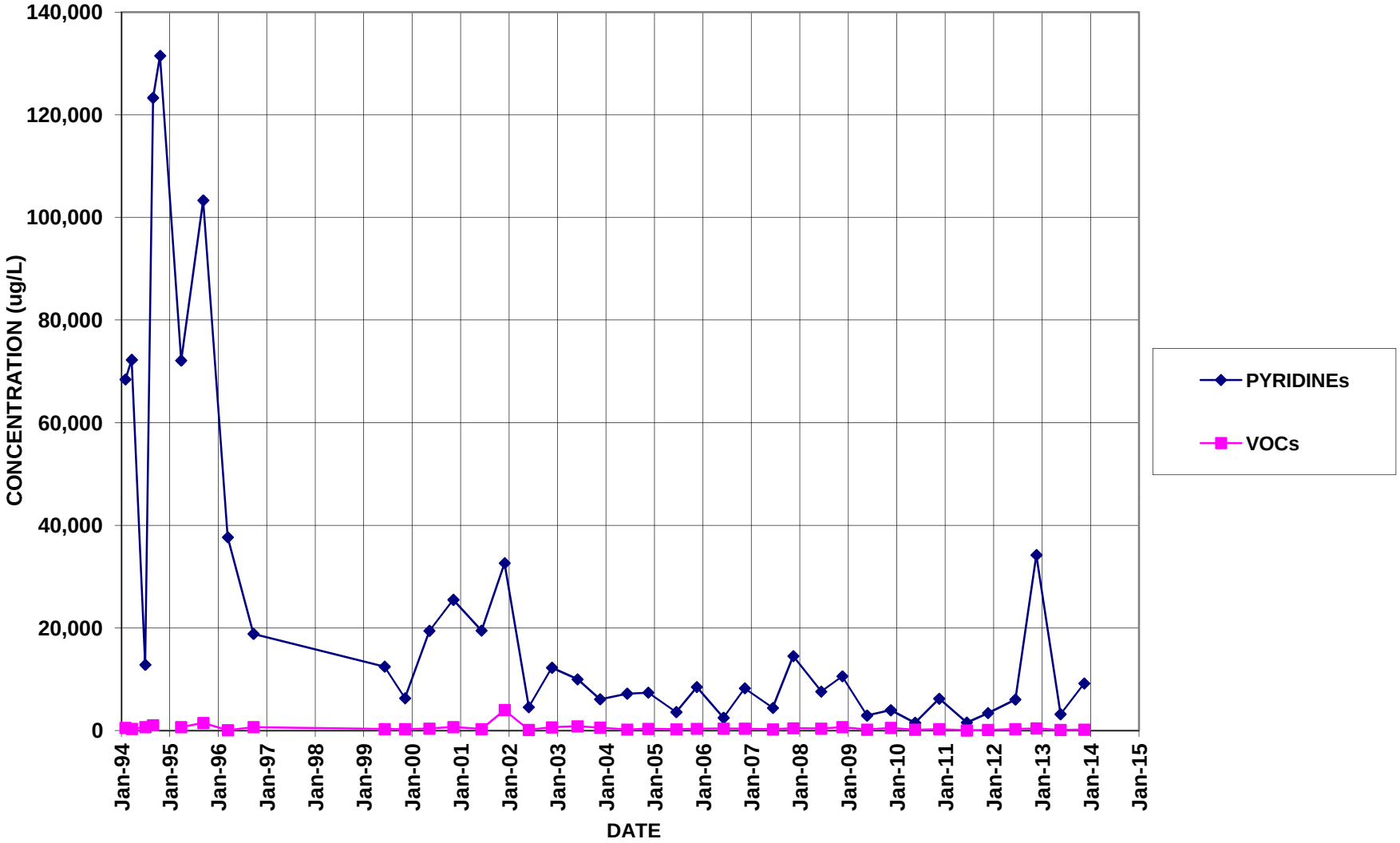
Prepared by: nmb
Reviewed by: jeb

MW-104



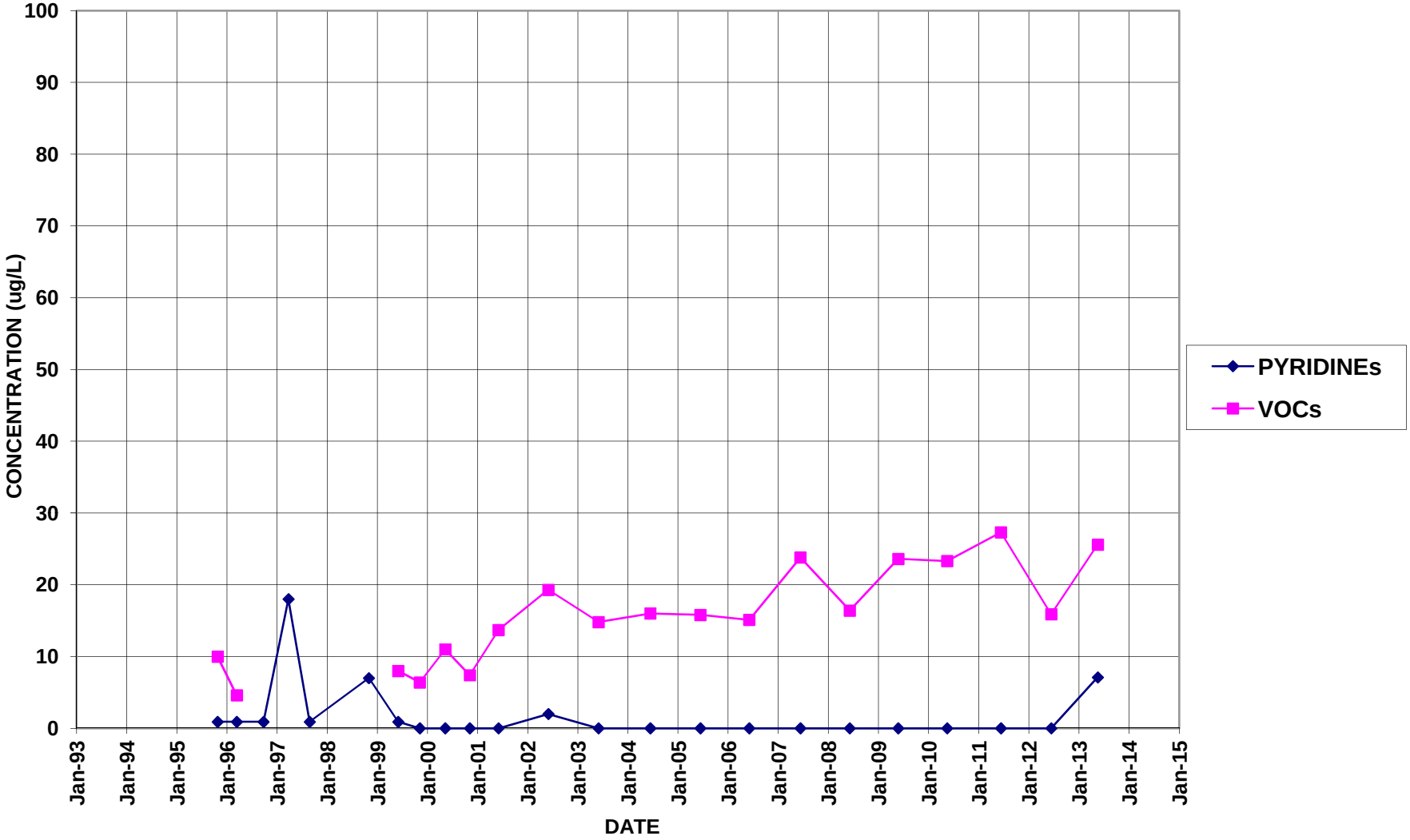
Prepared by: nmb
Reviewed by: jeb

MW-106



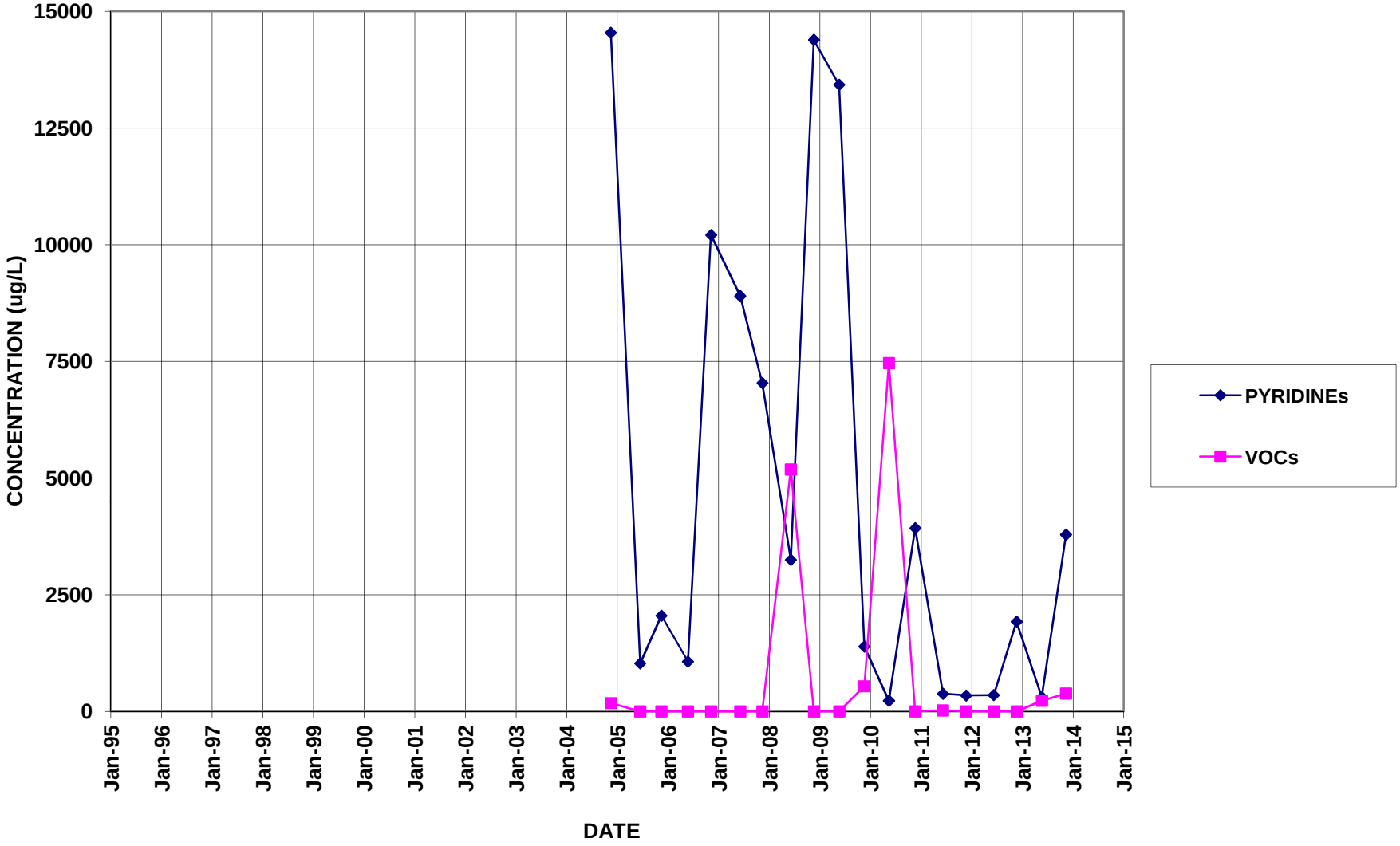
Prepared by: nmb
Reviewed by: jeb

MW-114



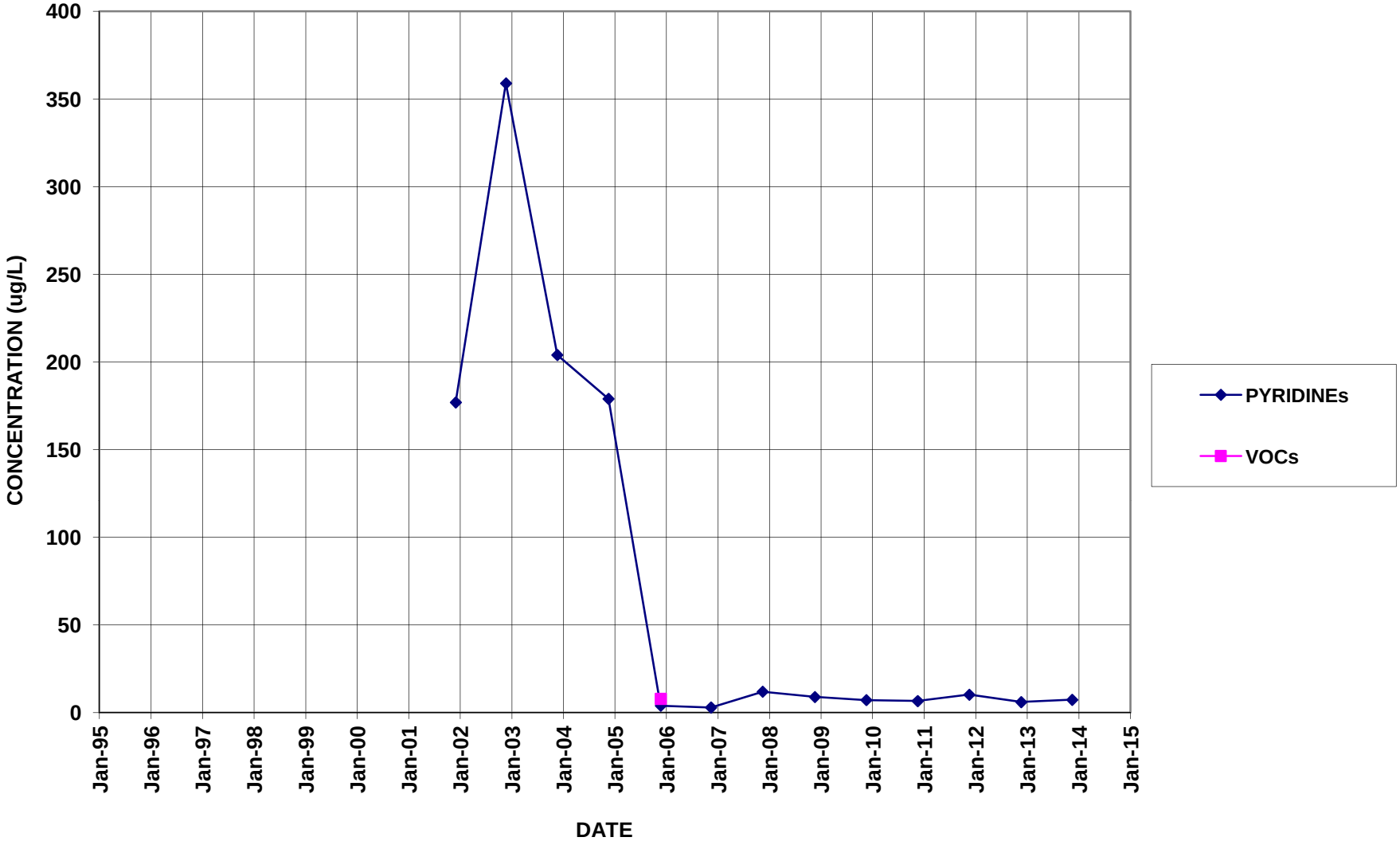
Prepared by: nmb
Reviewed by: jeb

MW-127



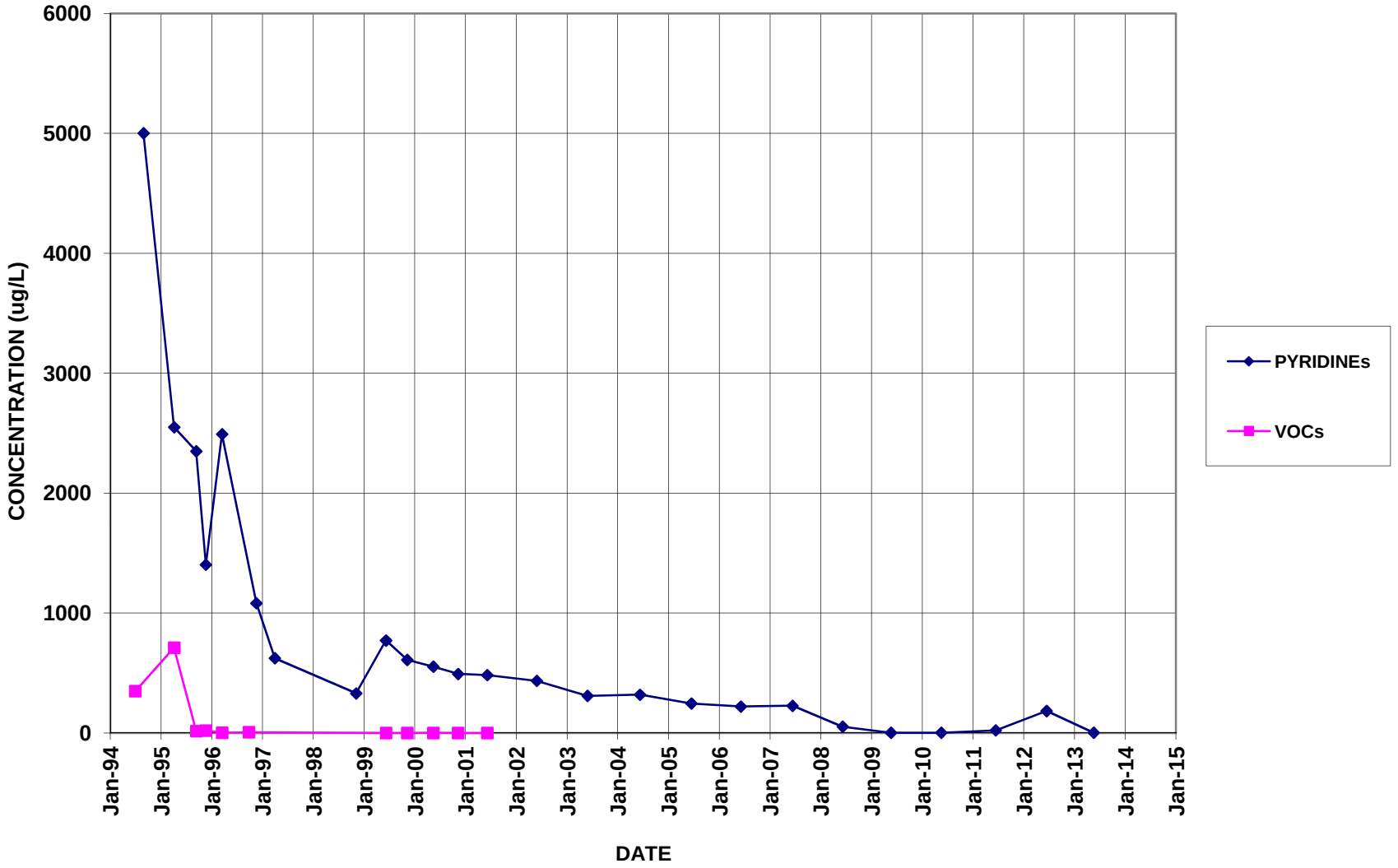
Prepared by: nmb
Reviewed by: jeb

MW-16



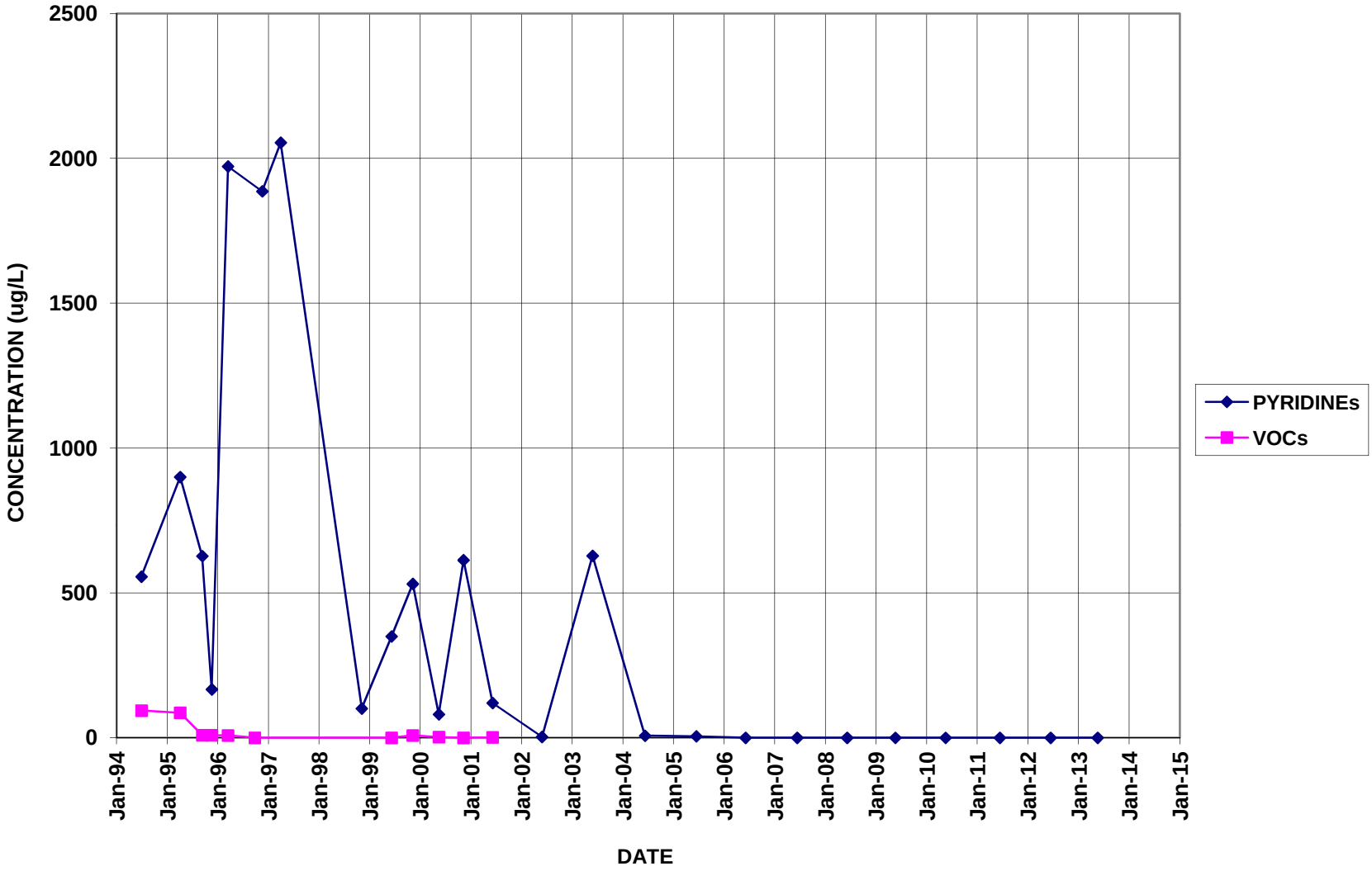
Prepared by: nmb
Reviewed by: jeb

NESS-E



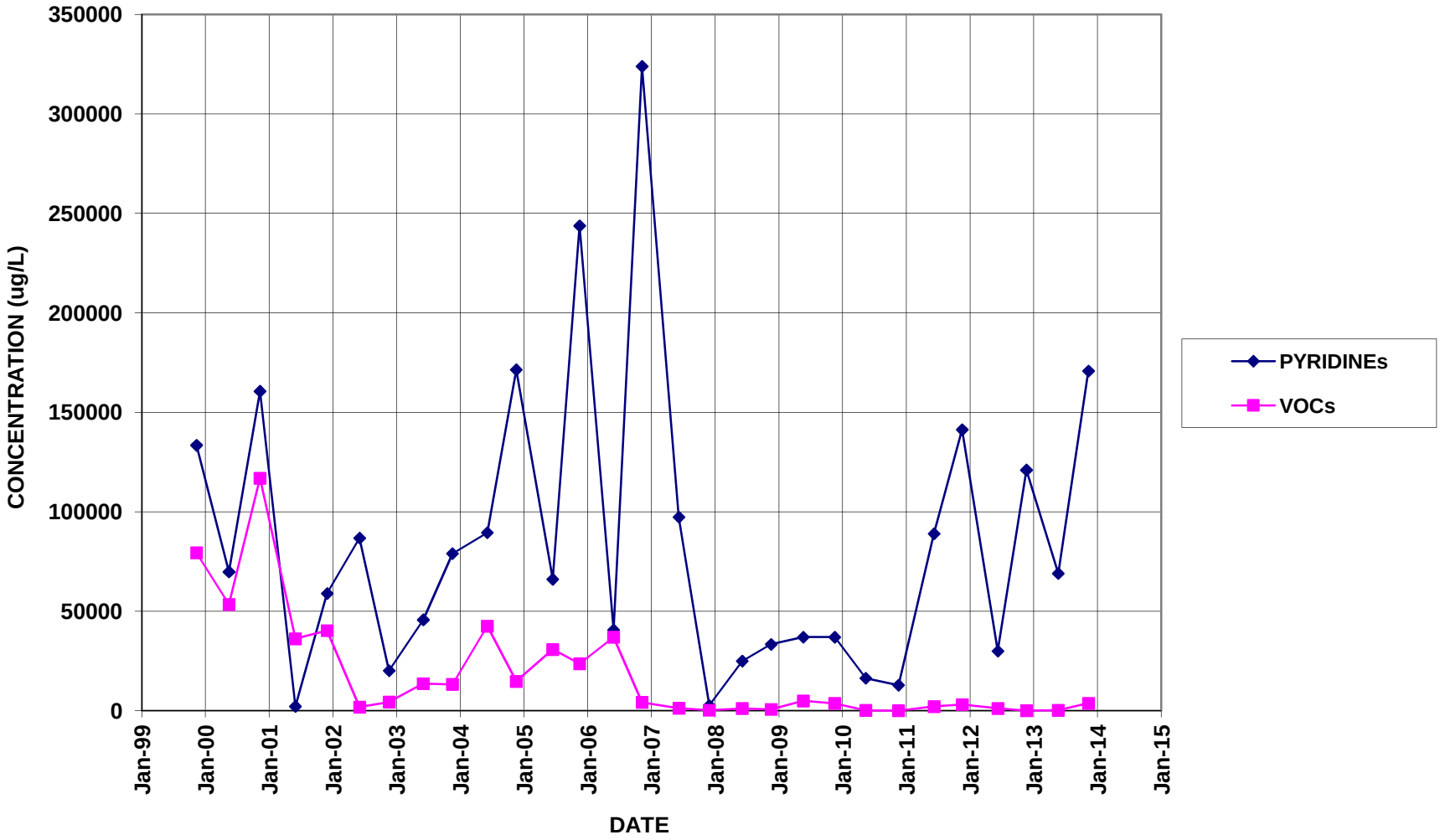
Prepared by: nmb
Reviewed by: jeb

NESS-W



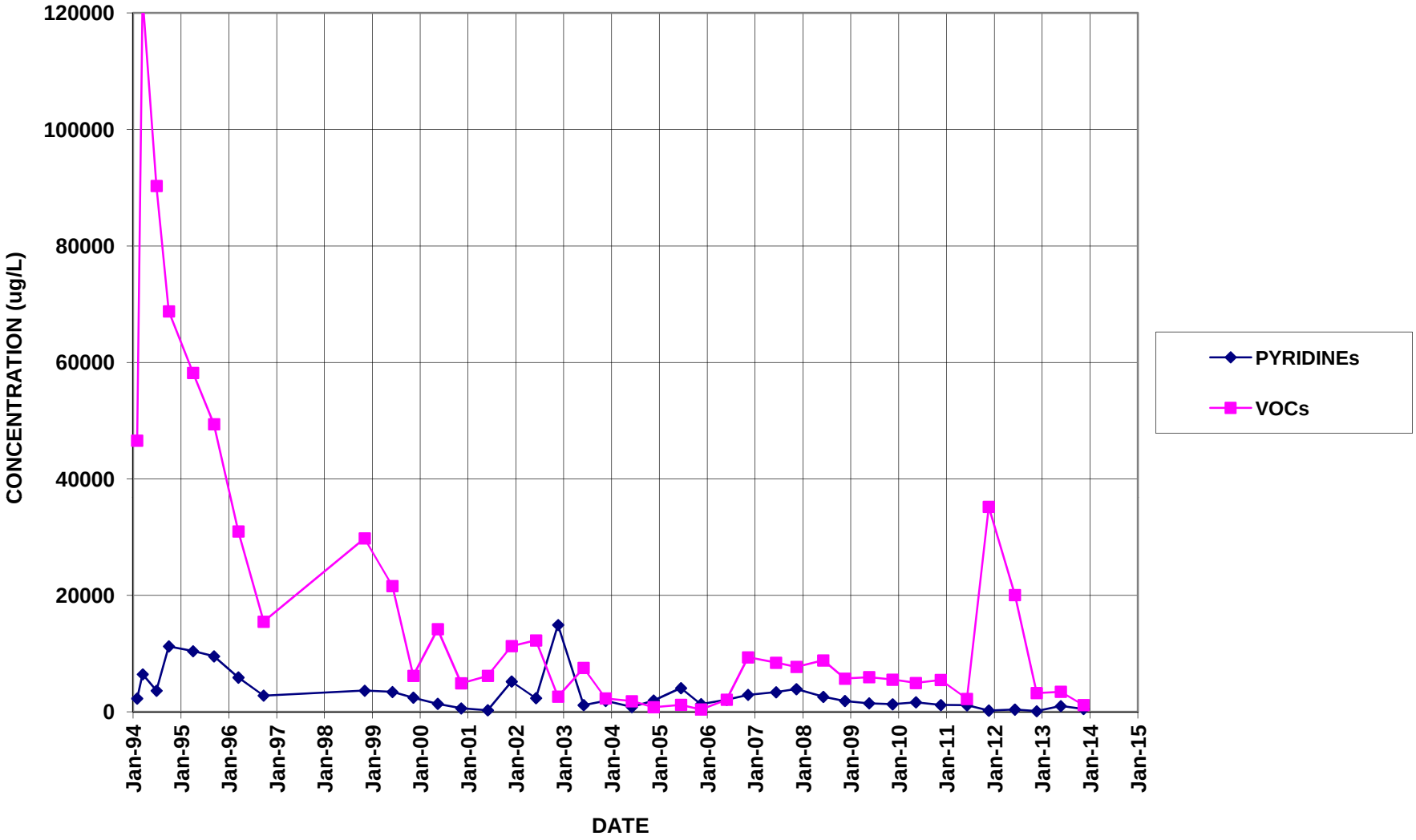
Prepared by: nmb
Reviewed by: jeb

PW10



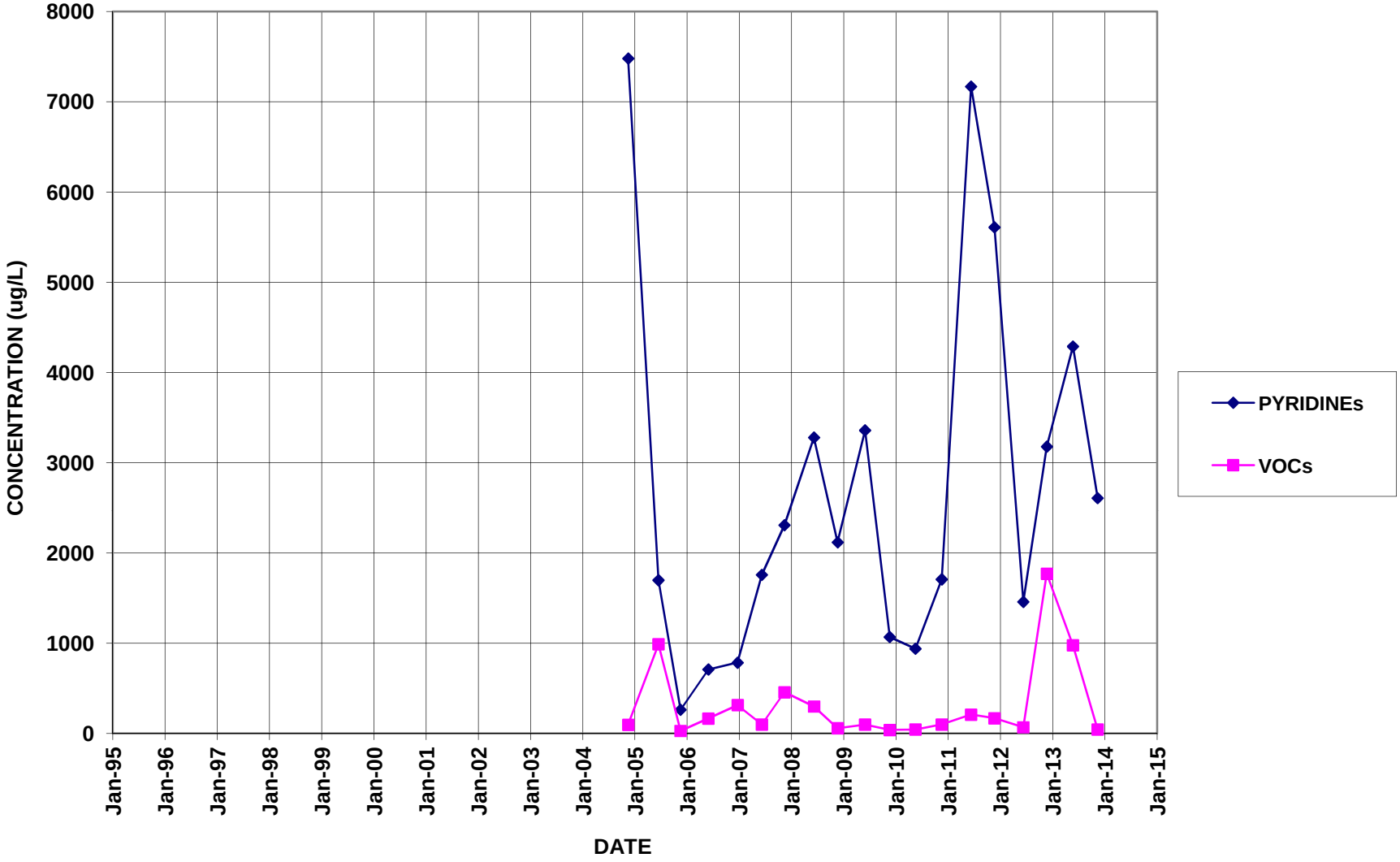
Prepared by: nmb
Reviewed by: jeb

PW12 (Formerly BR-101)



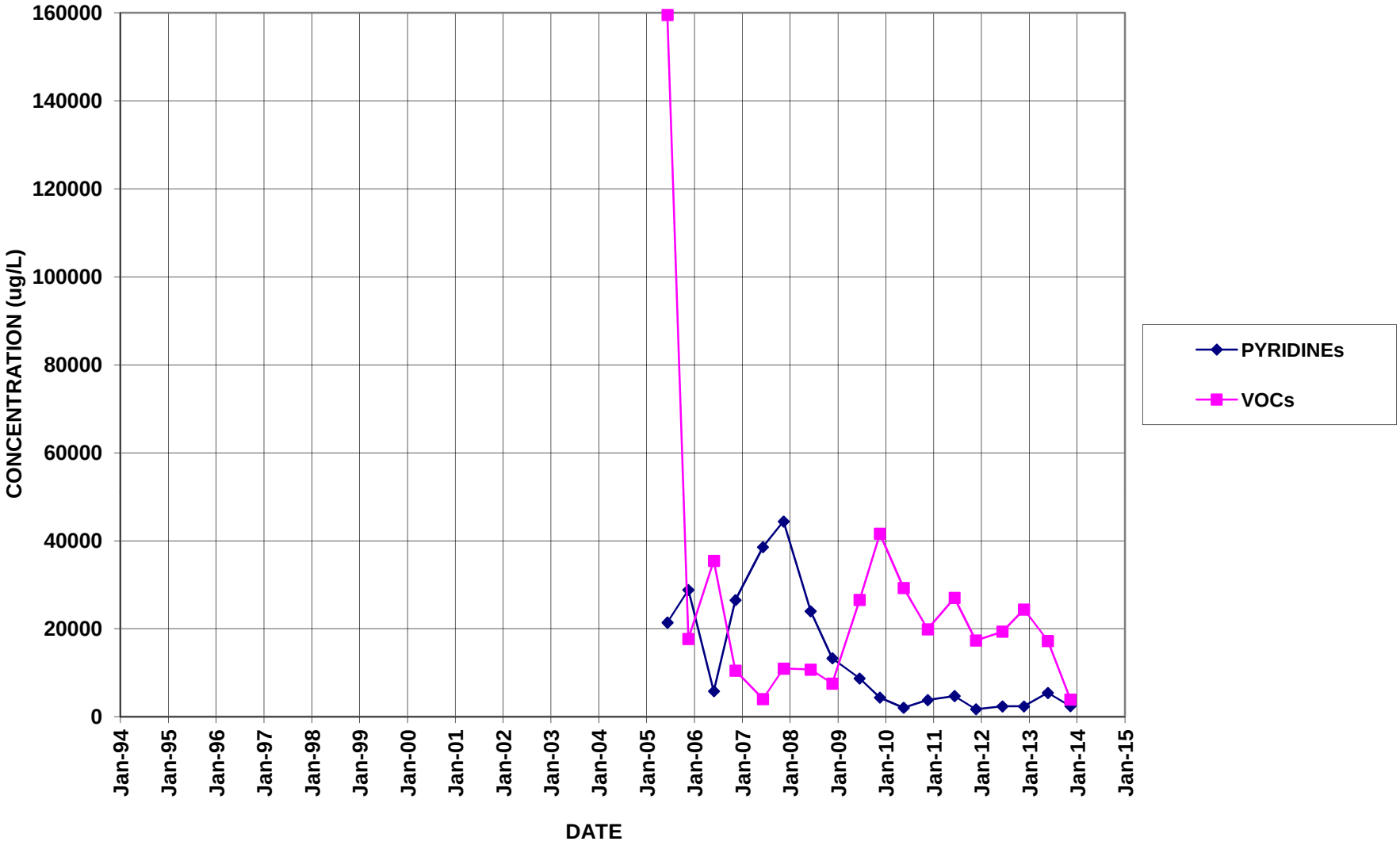
Prepared by: nmb
Reviewed by: jeb

PW13



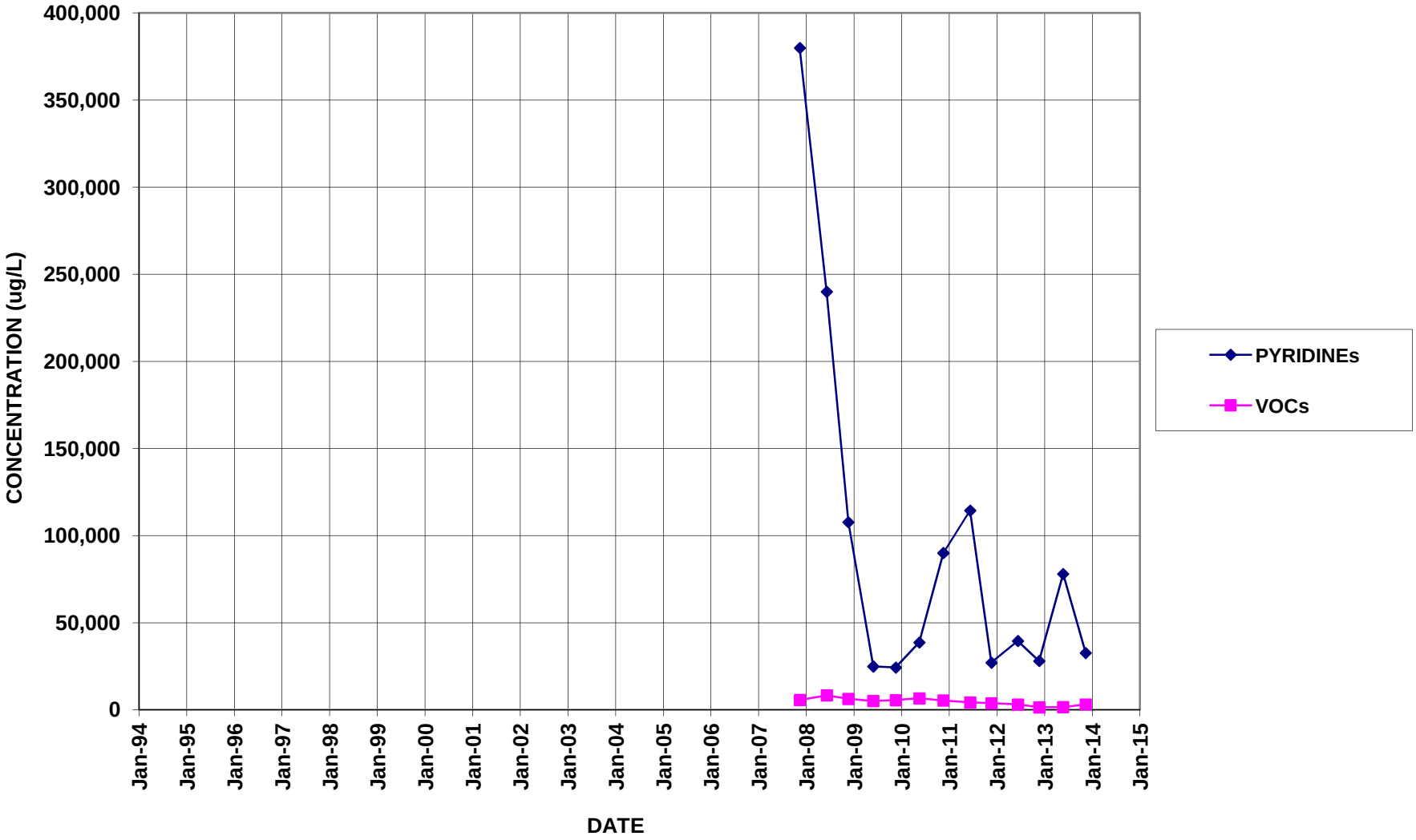
Prepared by: nmb
Reviewed by: jeb

PW14



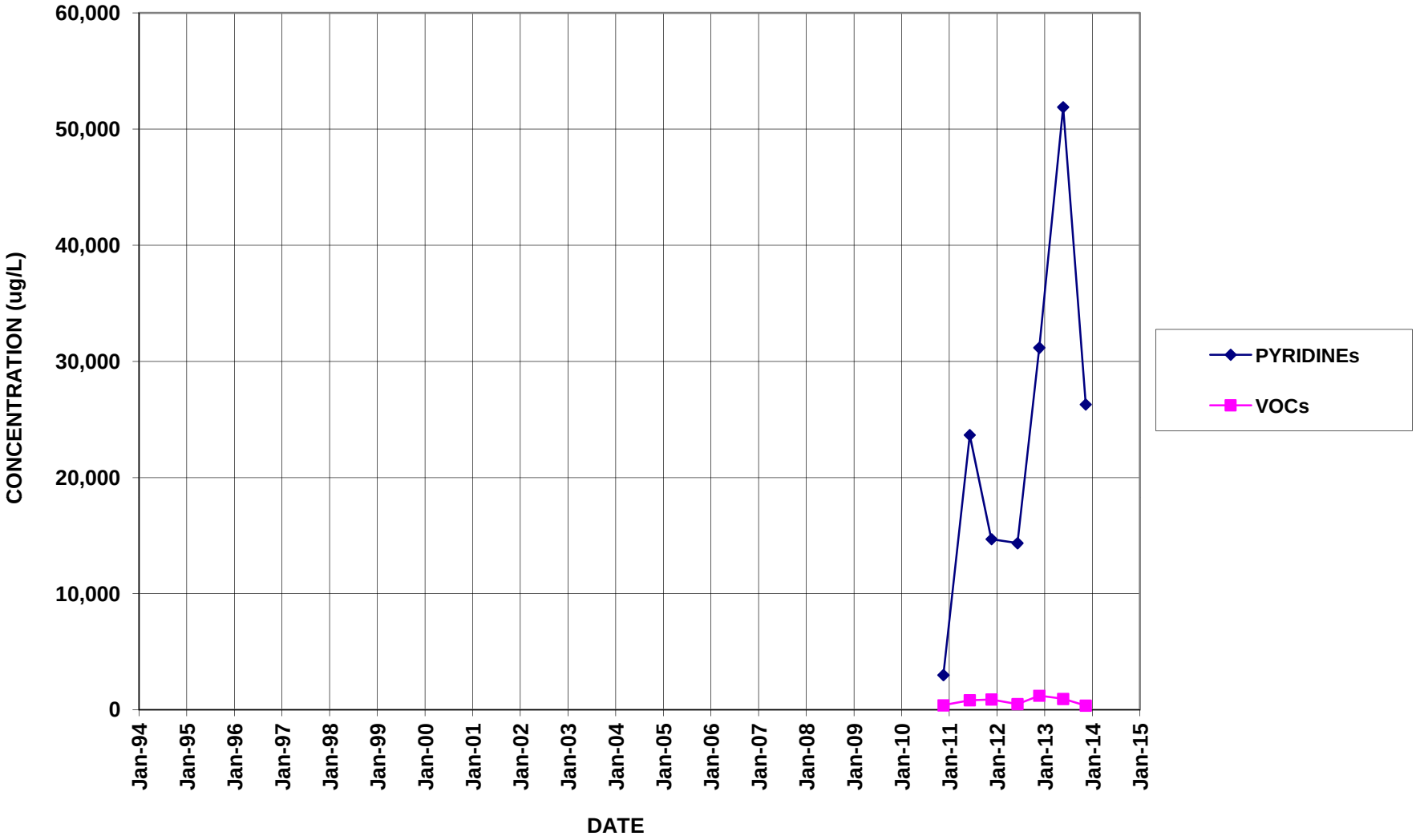
Prepared by: nmb
Reviewed by: jeb

PW15



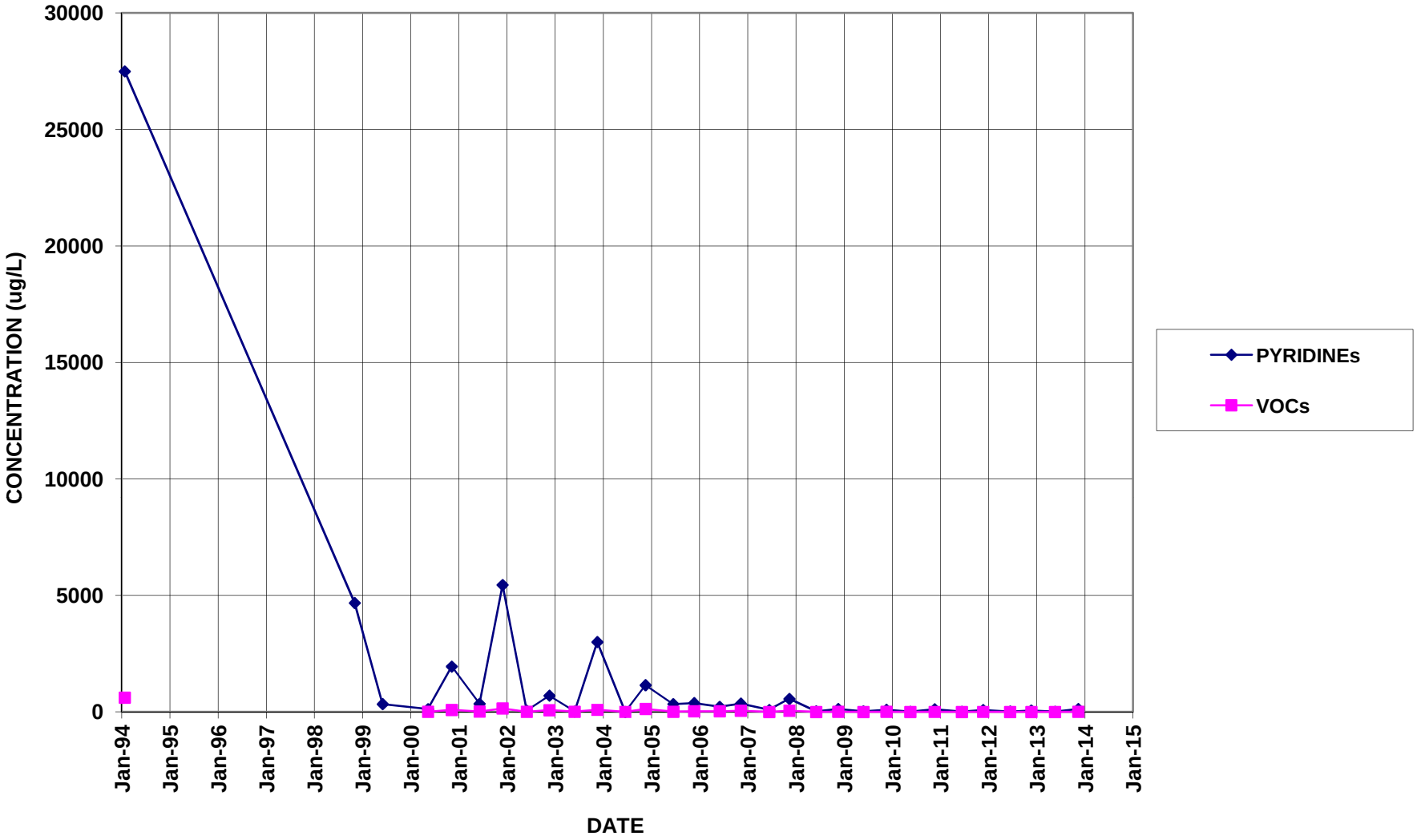
Prepared by: nmb
Reviewed by: jeb

PW16



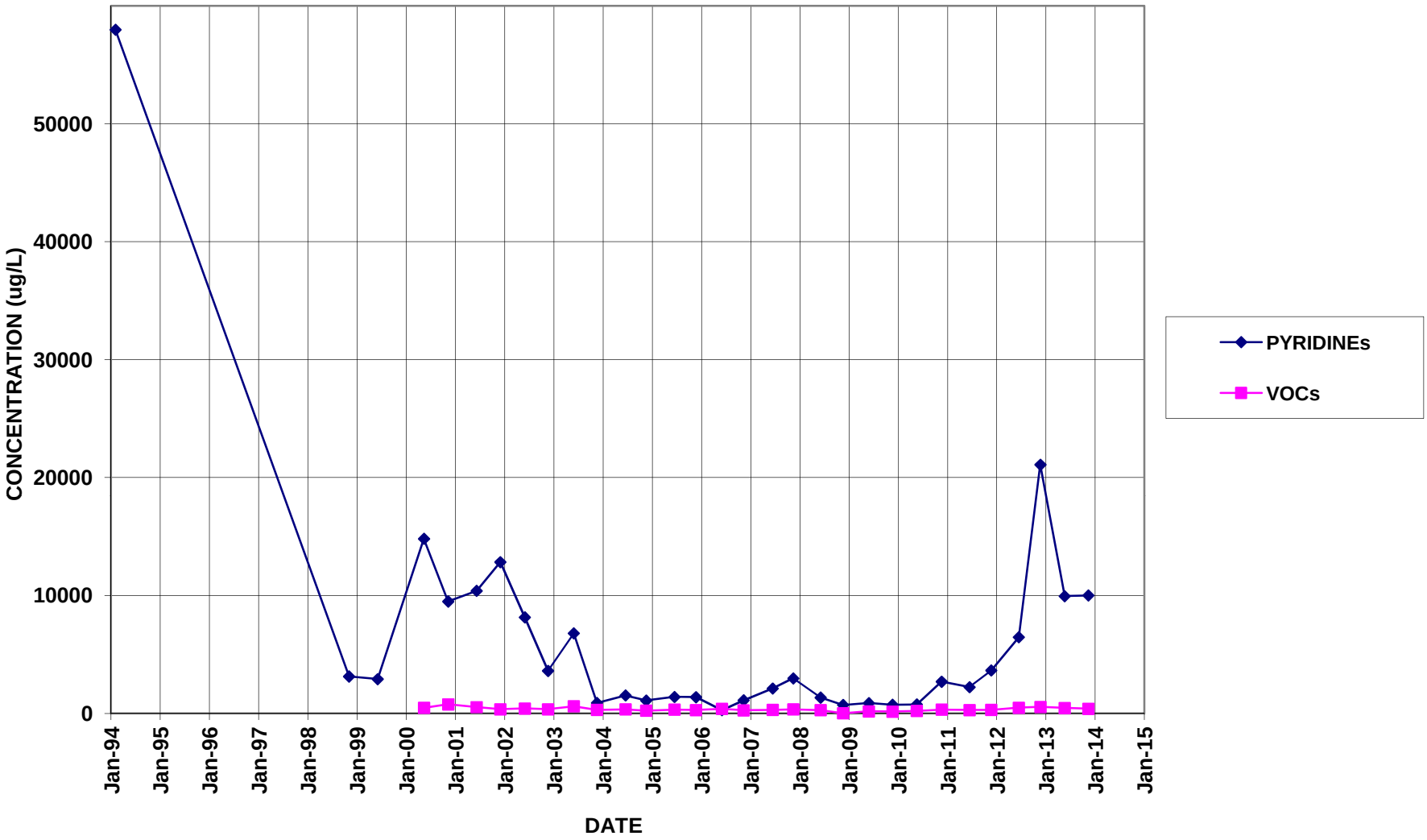
Prepared by: nmb
Reviewed by: jeb

PZ-101



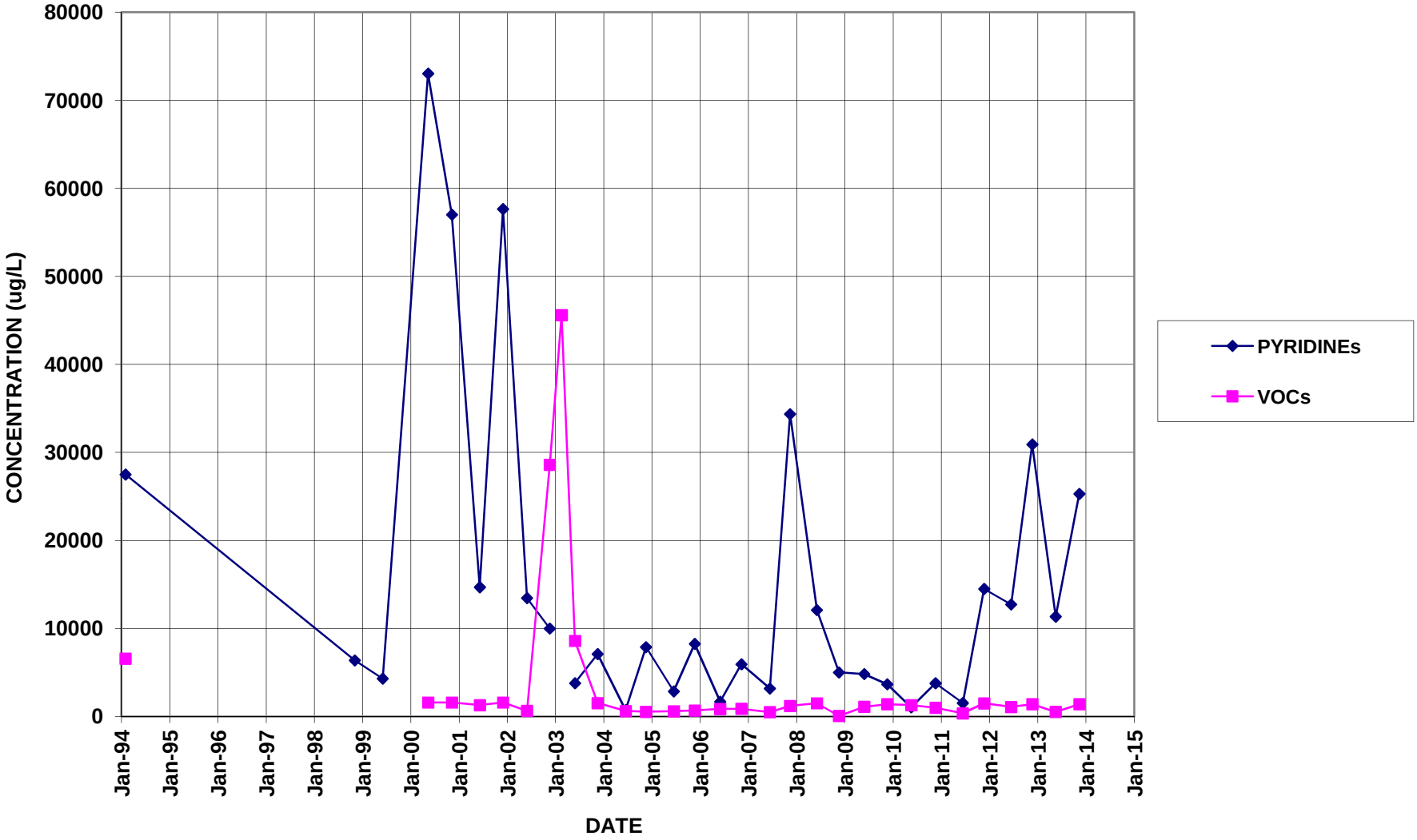
Prepared by: nmb
Reviewed by: jeb

PZ-102



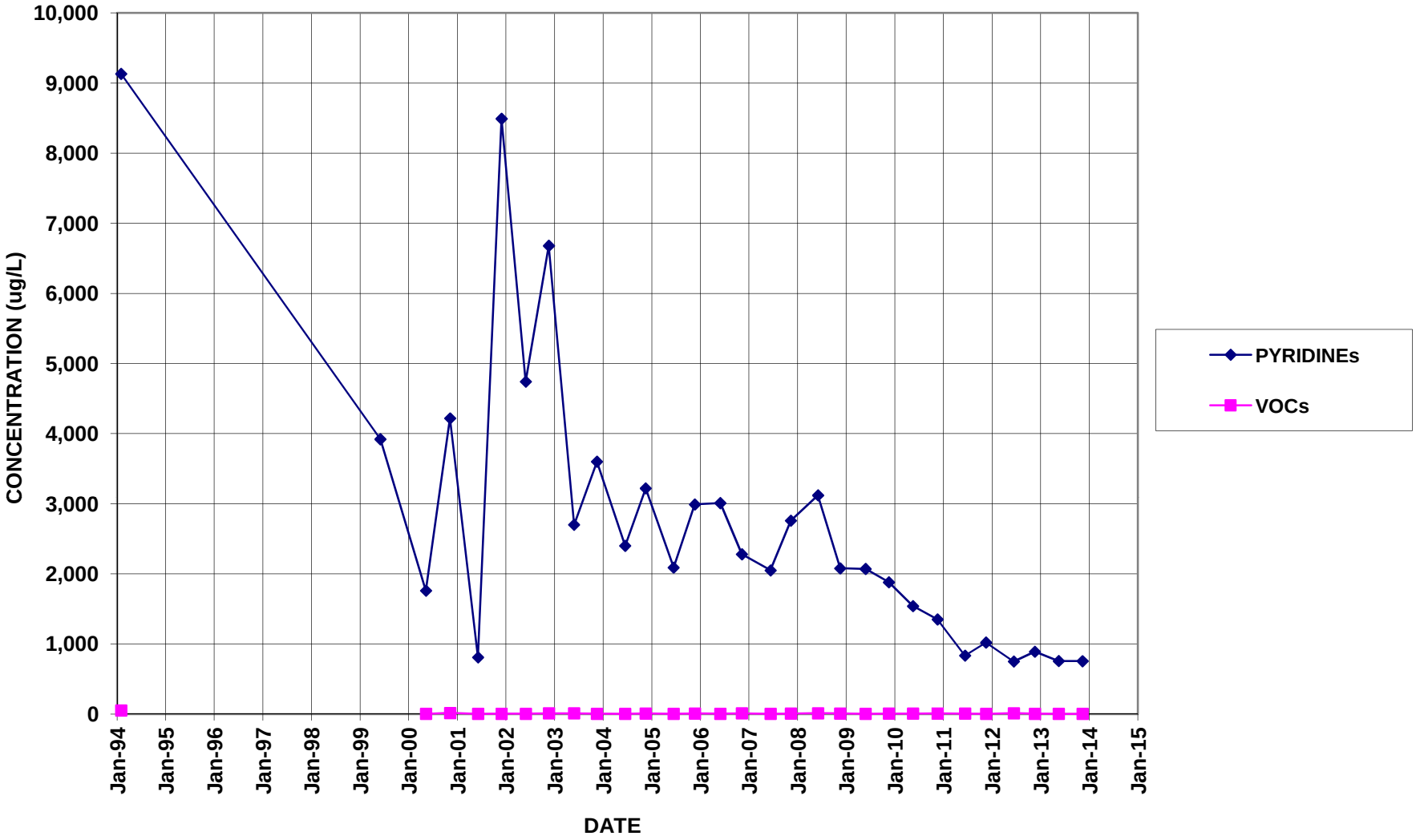
Prepared by: nmb
Reviewed by: jeb

PZ-103



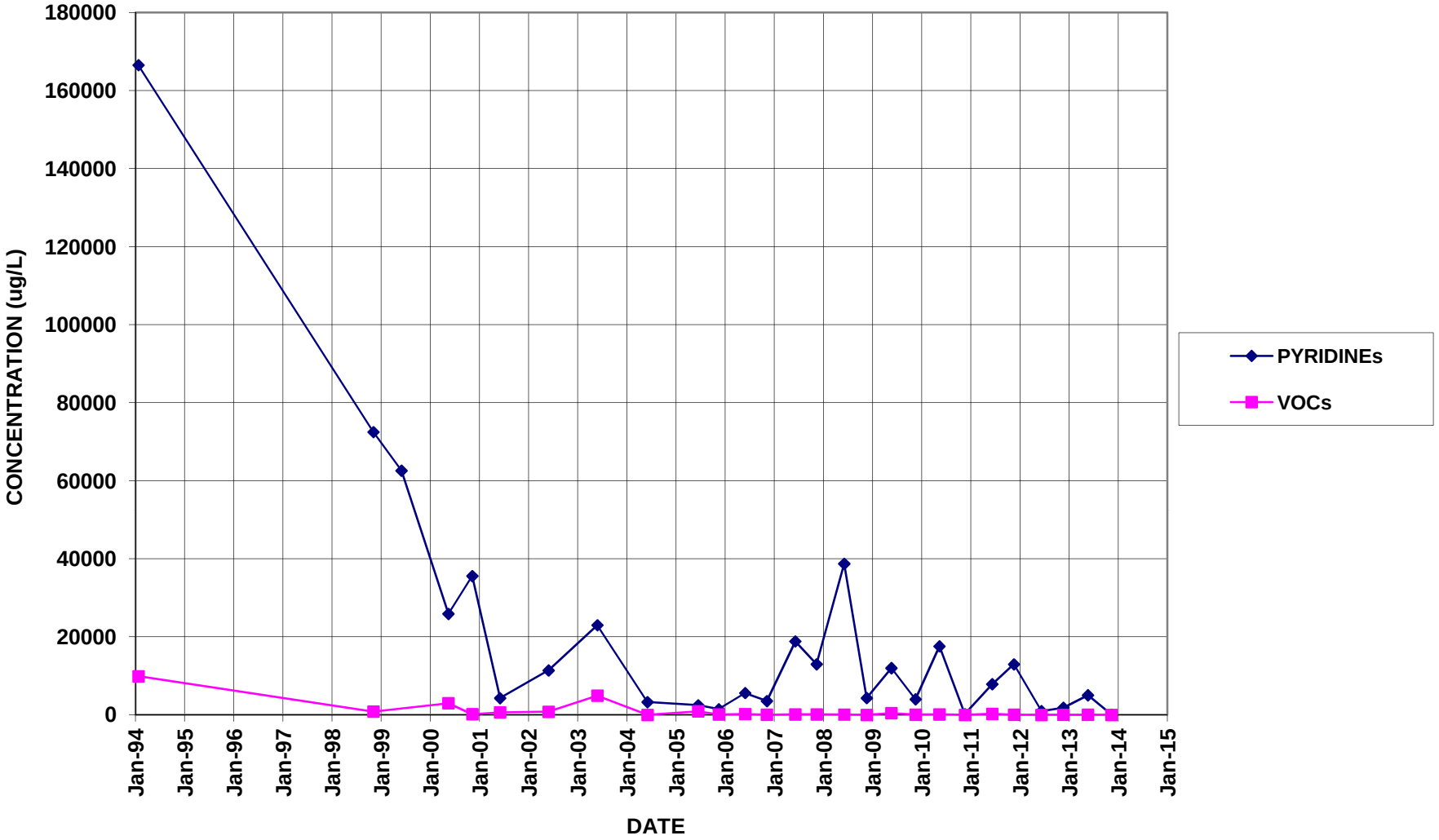
Prepared by: nmb
Reviewed by: jeb

PZ-104



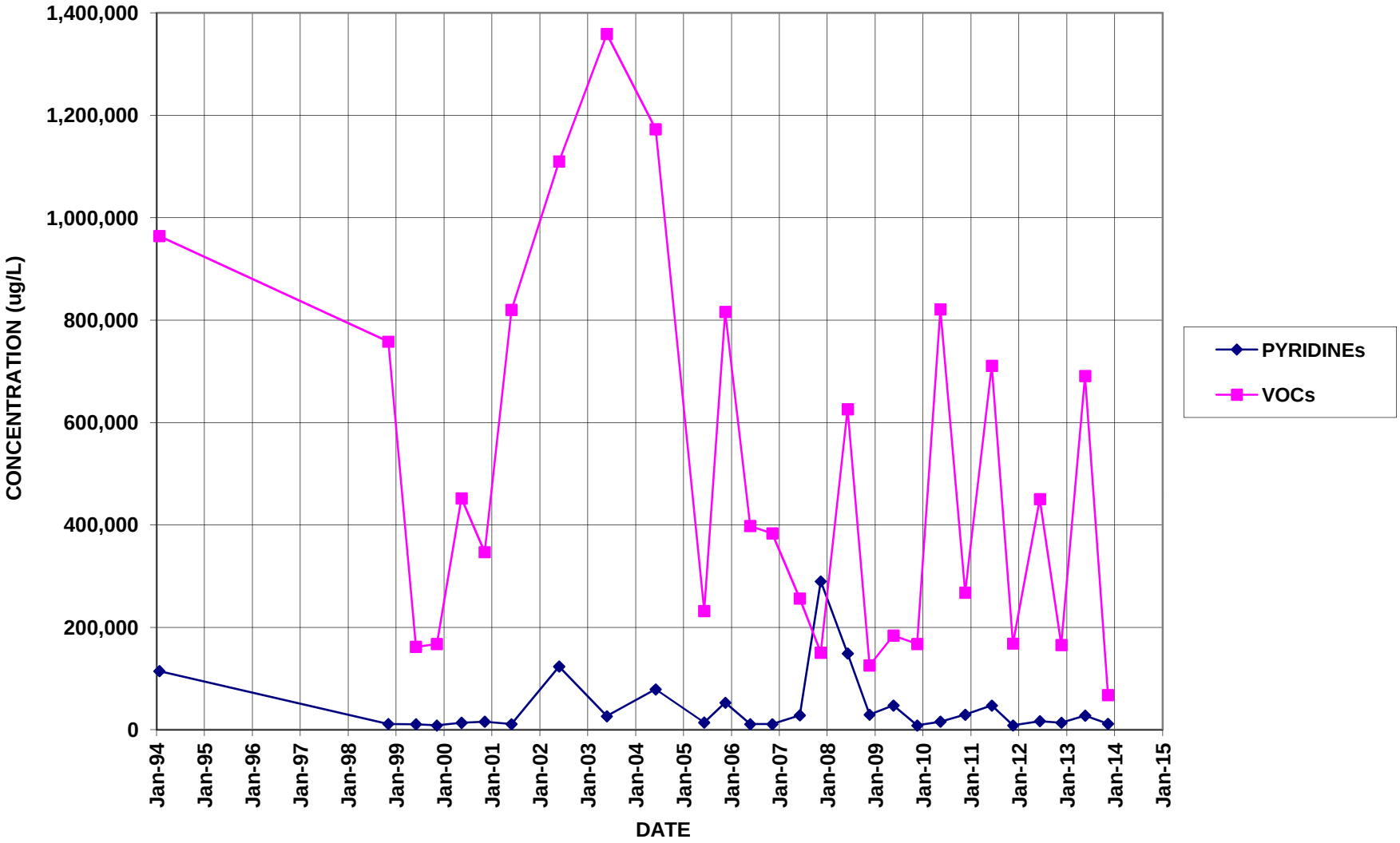
Prepared by: nmb
Reviewed by: jeb

PZ-105



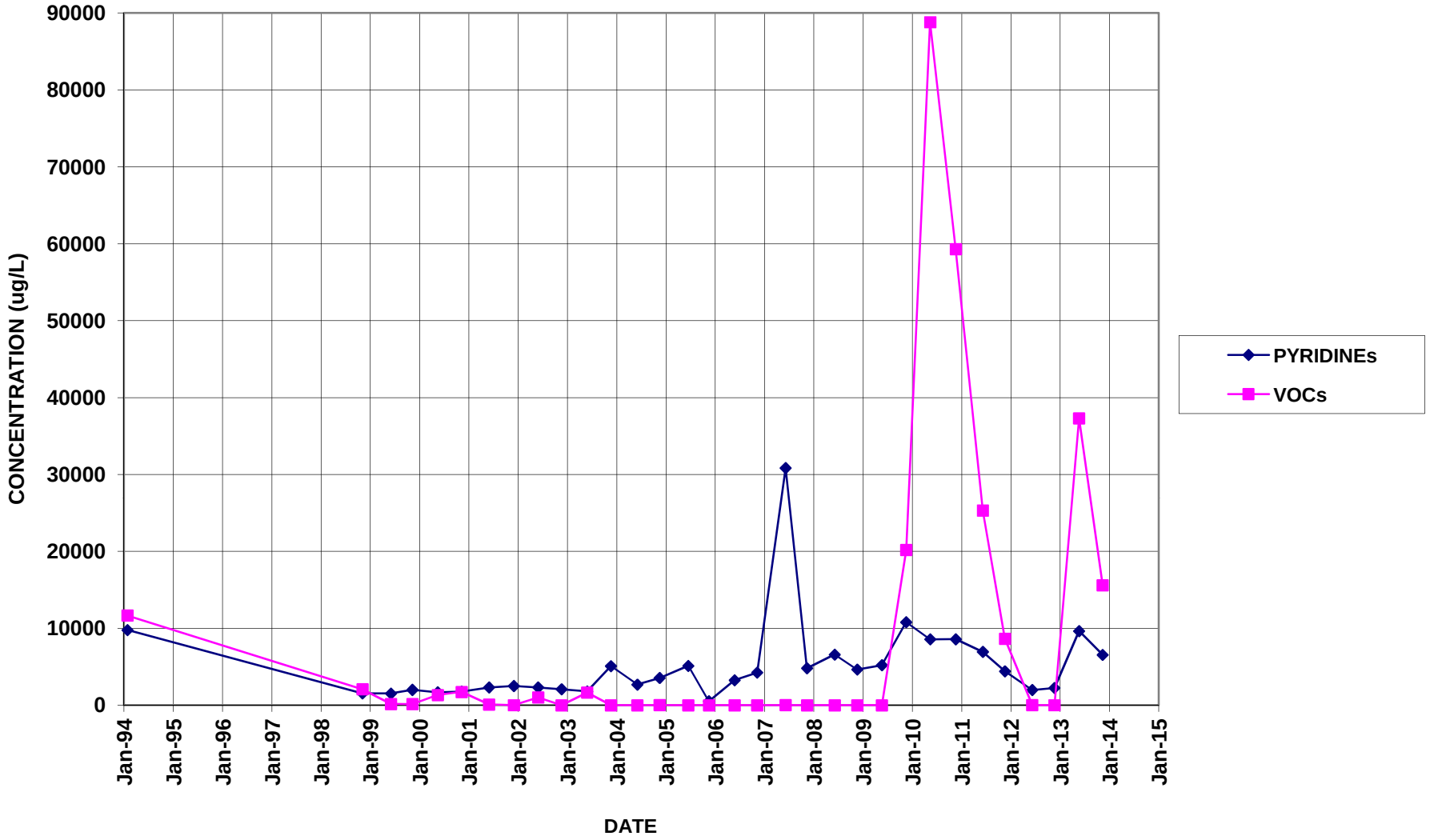
Prepared by: nmb
Reviewed by: jeb

PZ-106

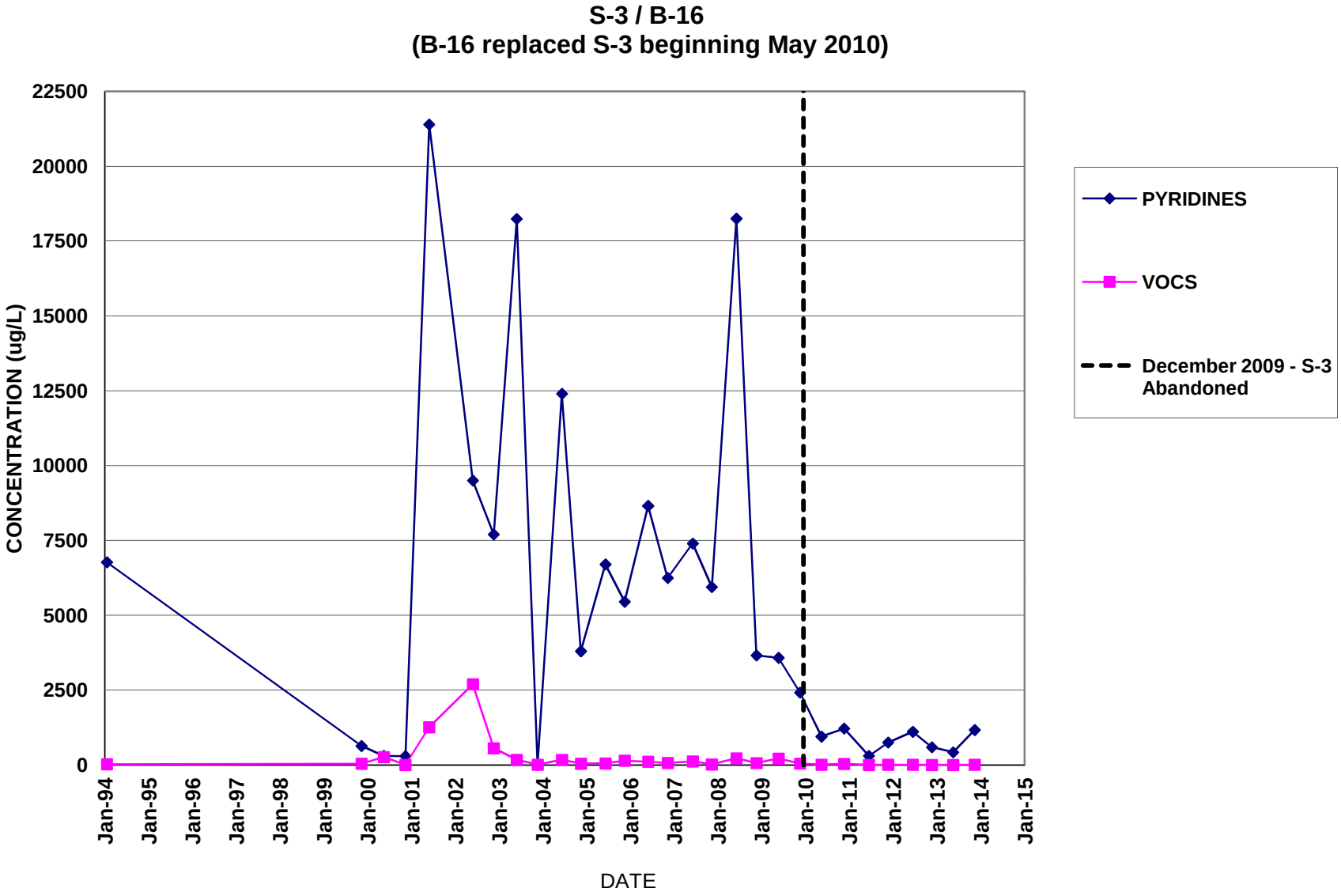


Prepared by: nmb
Reviewed by: jeb

PZ-107

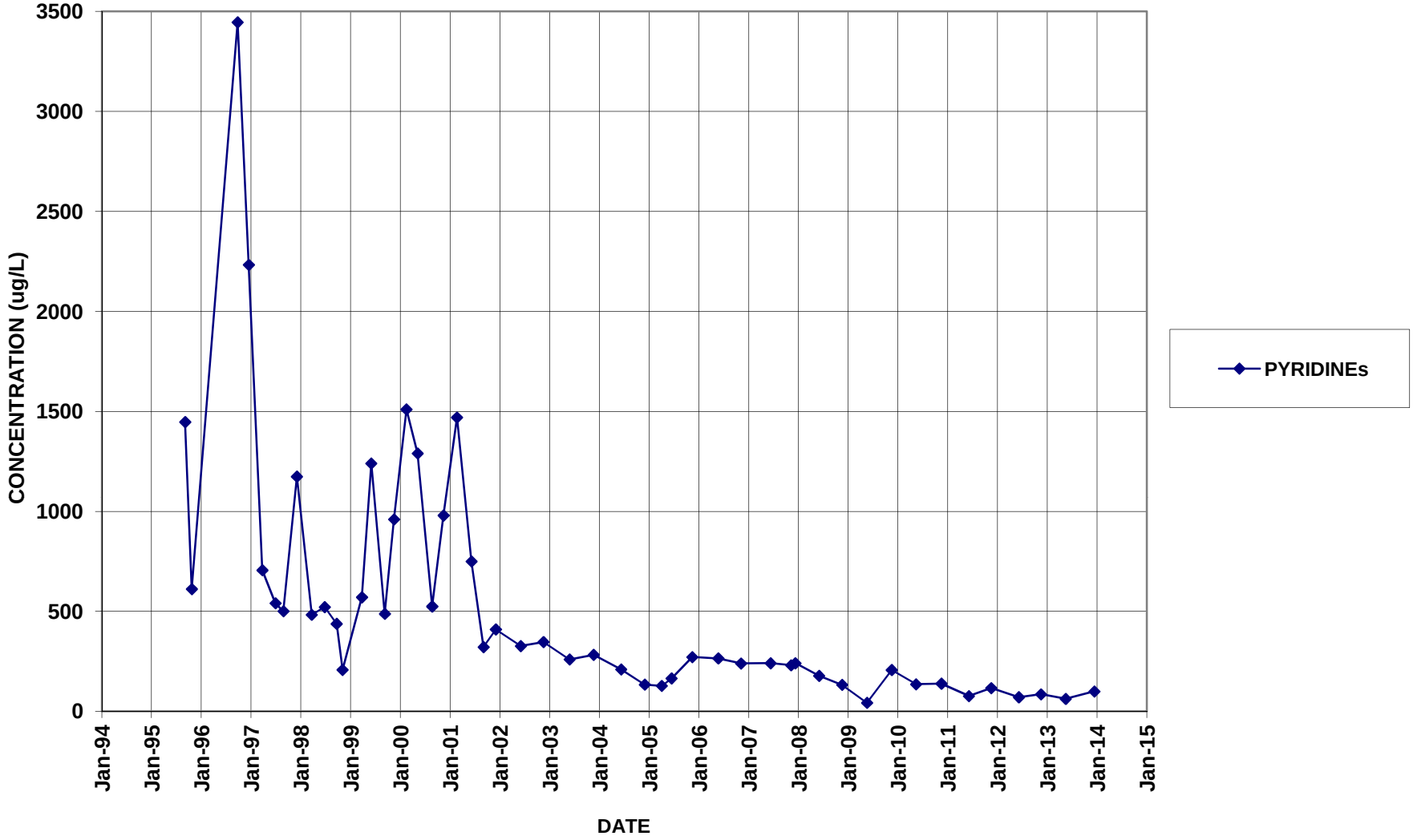


Prepared by: nmb
Reviewed by: jeb



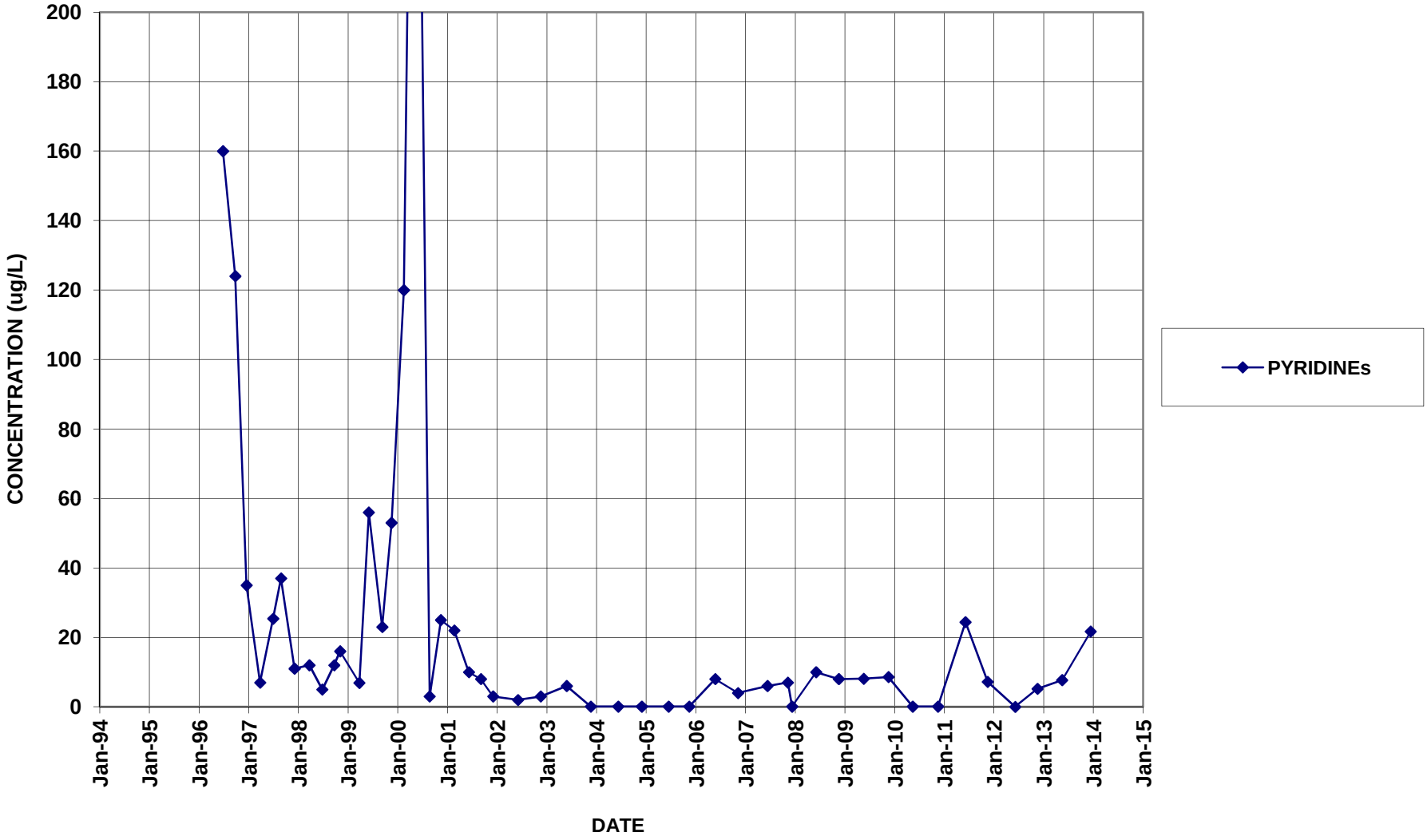
Prepared by: nmb
Reviewed by: jeb

QS-4 (QUARRY SEEP)



Prepared by: nmb
Reviewed by: jeb

QO-2 (QUARRY OUTFALL)



Prepared by: nmb
Reviewed by: jeb