SURFACE WATER AND GROUNDWATER MONITORING PROGRAM
SPRING 2013 MONITORING REPORT

ARCH CHEMICALS
ROCHESTER PLANT SITE
ROCHESTER, NEW YORK

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

AUGUST 2013

SURFACE WATER AND GROUNDWATER MONITORING PROGRAM
SPRING 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)

August 2013

3616086023.06

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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 May 2013, samples from a total of 53 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. Twenty-nine of the 53 monitoring wells sampled for chloropyridines had contaminant concentrations that were at or below their respective 5-year prior averages. Twenty-nine of the 40 monitoring 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 past depictions due to the inclusion of chlorobenzene in the list of selected VOCs starting with this monitoring event. Concentrations, however, remain similar to or below historical measurements 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). Chloropyridines in the two ditch samples were slightly above their prior 5-year mean concentrations; however, quarry seep QS-4 was below its prior 5-year average. Chloropyridines were not detected in the canal water at sample location QO2-S1.

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

During the period December 2012 through May 2013, the on-site groundwater extraction system pumped approximately 6.4 million gallons of groundwater to the on-site treatment system, containing an estimated 749 pounds of chloropyridines and 44 pounds of target volatile organic compounds. Improved mass removal was noted in extraction wells PW-13, PW-15, PW-16, and BR-127.

The facility has continued to make operational improvements to the groundwater extraction system. The new-style pump in extraction well PW-15 has been operating more reliably than the electric pump it replaced. A similar style pump was installed at well BR-127 in mid-February 2013, and that well has recently been pumping in the 4 to 6 gallons per minute (gpm) range. Flow from PW-16 has been increased from 3 gpm to approximately 5 gpm.

New well PW-17 was activated on May 27, 2013, but the yield from this well has been lower than expected. PW-17 was installed during the hydrofracturing pilot test

conducted in the fall of 2012 and the poor yield suggests that fracturing was not effective, at least in the immediate vicinity of PW-17.

The next regular monitoring event will occur in November 2013 and will include groundwater, surface water, and seep sampling.

1.0 INTRODUCTION

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

The Spring 2013 sampling event included the collection and analysis of a total of 57 groundwater, surface water, and seep samples from off-site and on-site locations. Samples were collected May 17 through 24, 2013, for analysis of selected chloropyridines and volatile organic compounds (VOCs).

This report presents the results of the Spring 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 May 16, 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 May 17, 2012. All quarry-related samples were analyzed for the Arch suite of selected chloropyridines. The quarry locations sampled during the Spring 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 8270C and 8260B, respectively. The reporting limits for the chloropyridines and VOCs are approximately 10 micrograms per liter (µg/L) and 5 to 25 µg/L, respectively, for undiluted samples.

2.4 QUALITY CONTROL

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.

Laboratory Control Samples (LCS). Percent recovery of 4-methyl-2-pentanone (66) in the LCS associated with a subset of samples was below the 71-125 control limits, indicating a potential low bias for 4-methyl-2-pentanone. 4-Methyl-2-pentanone was not detected in the samples, and quantitation limits for 4-methyl-2-pentanone in samples PW-12, PW-17, W-5, and B-7 were qualified as estimated (UJ).

Percent recovery of 4-methyl-2-pentanone (70) in the LCS associated with a subset of samples was below the 71-125 control limits, indicating a potential low bias for 4-methyl-2-pentanone. 4-Methyl-2-pentanone was not detected in the samples, and quantitation limits for 4-methyl-2-pentanone in samples PZ-101, PZ-102, MW-114, BR-114, BR-106, BR-105, and BR-105D were qualified as estimated (UJ).

Matrix Spike/Matrix Spike Duplicates (MS/MSD). Percent recoveries of chloroform (66, 51) in the MS/MSD associated with sample PZ-106 were below control limits, indicating potential low biases for chloroform. In addition, the relative percent difference (RPD) between percent recoveries for chloroethane (33) was above the control limit. Chloroethane was not detected in sample PZ-106, and the quantitation limit was qualified as estimated (UJ). The positive detection of chloroform in sample PZ-106 was qualified as estimated (J) and may represent a potential low bias.

Percent recovery of chloroform (69) in the MS/MSD associated with sample BR-3 was below control limits, indicating potential a low bias for chloroform. The positive detection of chloroform in sample BR-3 was qualified as estimated (J) and may represent a potential low bias.

Percent recoveries of 4-methyl-2-pentanone (68, 69) in the MS/MSD associated with sample PW-12 were below control limits, indicating potential low biases for 4-methyl-2-pentanone. 4-Methyl-2-pentanone was not detected in sample PW-12, and the quantitation limit was qualified as estimated (UJ).

Percent recoveries of 2,6-dichloropyridine (52) and 2-chloropyridine (41, 26) in the MS/MSD associated with sample BR-106 were below control limits, indicating potential low biases for 2,6-dichloropyridine and 2-chloropyridine. The positive detections of 2,6-dichloropyridine and 2-chloropyridine in sample BR-106 were qualified as estimated (J) and may represent potential low biases.

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 Spring 2013 groundwater monitoring event are provided in Tables 2 and 3. Table 4 provides a comparison of the Spring 2013 analytical results for selected chloropyridines and VOCs in representative wells to mean concentrations of the prior five years (Spring 2008 through Fall 2012). 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 24 of the 25 on-site wells sampled in the Spring 2013 event. Chloropyridines were not detected in well W-5, which was one of four additional wells (along with B-4, B-5, and B-15) sampled during this event at the request of the NYSDEC. It should be noted though, that the sample from well W-5 was diluted before it was analyzed because it had historically contained very high levels of target analytes. In the remaining on-site wells, concentrations of chloropyridines

ranged from 16 micrograms per liter (µg/L) (sum of all chloropyridine and pyridine isomer concentrations) in monitoring well E-3 to 260,000 µg/L in monitoring well B-17. Eleven 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). Six of those were active pumping wells.

Off-Site. Chloropyridines were detected above sample quantitation limits in 23 of the 28 off-site wells that were sampled. Concentrations of total selected chloropyridines ranged from non-detect (in wells BR-104, BR-116, MW-103, MW-104, and NESS-W) to 11,000 µg/L in well PZ-103 on the west side of McKee Road. Nine 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.

3.1.2 Selected VOCs.

On-Site. Selected VOCs were detected in all 25 on-site wells sampled in the Spring 2013 event. Total concentrations of selected VOCs ranged from 0.8 µg/L (in well E-3) to 690,000 µg/L in PZ-106 for the sum of the principal site-related contaminants. At the request of the NYSDEC, starting with this 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. Seven of the on-site wells contained concentrations of total VOCs above their 5-year prior means (see Table 4). Five of those were active pumping wells.

In addition to the selected VOCs, other notable constituents detected in multiple on-site wells include toluene (in 14 out of 25 wells), benzene (11 of 25), carbon disulfide (10 of 25), 1,2-dichloroethene (9 of 25), vinyl chloride (7 of 25), total xylenes (5 of 25), bromoform (3 of 25), acetone (3 of 25), and 1,1-dichloroethane (2 of 25).

Off-Site. Selected VOCs were detected in 10 of the 15 off-site wells sampled for VOCs in the Spring 2013 event. The total concentration of selected VOCs ranged from non-detect (in wells BR-103, BR-126, MW-103, PZ-101, and B-15) to 530 µg/L in PZ-103. Five 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 10 out of 15 wells), carbon disulfide (3 of 15), 1,2-dichloroethene (2 of 15), vinyl chloride (2 of 15), and 1,1-dichloroethane (2 of 15).

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 has altered the shape of the VOC groundwater plume somewhat, in comparison to previous interpretations. Concentrations, however, remain similar to or below historical measurements in most wells.

3.2 SURFACE WATER

Results from the Spring 2013 canal and quarry monitoring event are presented in Table 5, and summarized below.

3.2.1 Quarry

One quarry seep (QS-4) was sampled in the Spring 2013 monitoring event. The sample contained 63 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. Low levels of chloropyridine-related compounds were detected in these two ditch samples at estimated values of 6.5 µg/L and 7.7 µg/L, respectively. Both were slightly above their prior 5-year means.

3.2.3 Barge Canal

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

4.0 EXTRACTION SYSTEM PERFORMANCE AND MAINTENANCE

Table 6 is a summary of the system flow measurements for the on-site extraction wells from December 2012 through May 2013. The total volume pumped during the six-month period was approximately 6.4 million gallons.

The facility has continued to make operational improvements to the groundwater extraction system. The new-style pump (QED AutoPump Model AP4+) in extraction well PW-15 has been operating more reliably than the electric pump it replaced, although the well is still experiencing issues with scaling. The scale appears to be primarily calcium-based, and can be removed with commercial lime removal chemicals. A similar style pump was installed at well BR-127 in mid-February 2013, and that well has recently been pumping in the 4 to 6 gallons per minute (gpm) range. Flow from PW-16 has been increased from 3 gpm to approximately 5 gpm. Also, new well PW-17 was activated on May 27, 2013, but the yield from this well has been lower than expected. PW-17 was installed during the hydrofracturing pilot test and the poor yield suggests that fracturing was not effective, at least in the immediate vicinity of PW-17.

Table 7 provides a calculation of mass removal rates since the previous groundwater monitoring event (i.e., from June 2012 through November 2012). Arch estimates that approximately 44 pounds of target VOCs and 749 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 wells PW-13, PW-15 and PW-16, and from the re-activation of BR-127.

5.0 NEXT MONITORING EVENT

The next regular monitoring event will occur in November 2013 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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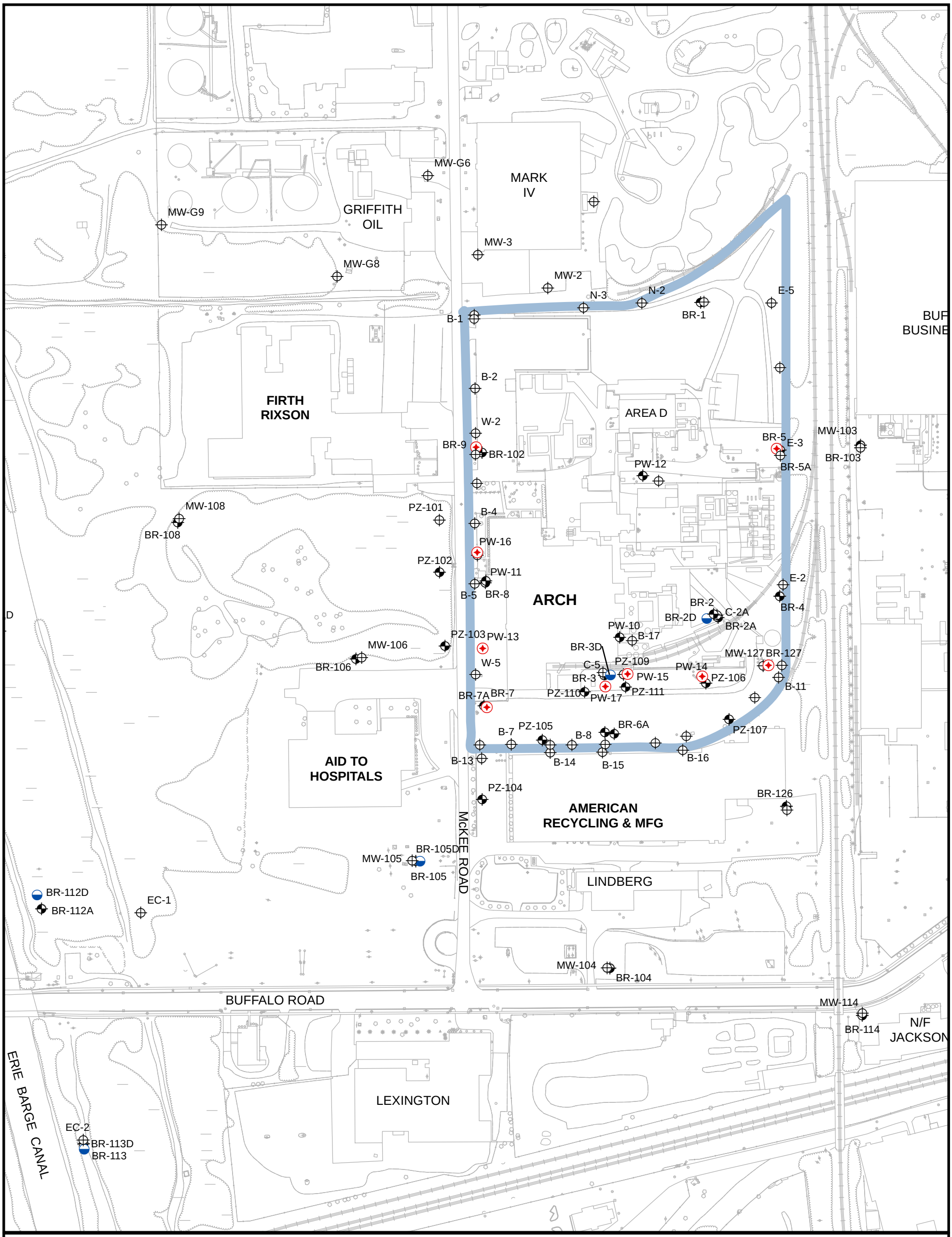

NOTES:

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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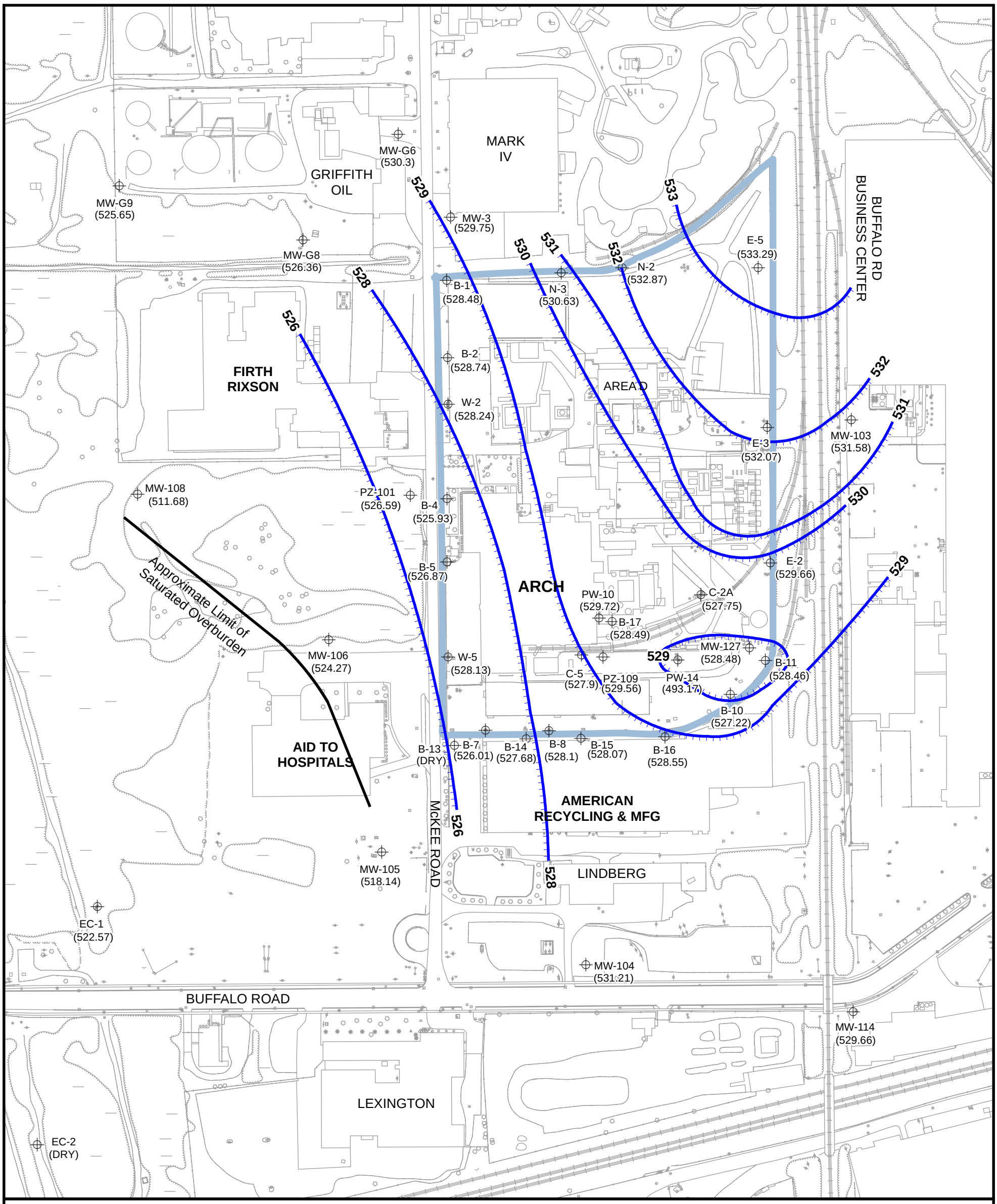


Legend

- Interpreted Groundwater Flow Direction
- 528 — Overburden Piezometric Elevation Contour (MSL)
- Outline of Arch Property Boundary
- MW-114 (529.66) — Piezometric Elevation at Well or Piezometer

N

NOTES:

1. Water Levels Measured on May 16, 2013
2. Measurements at wells W-5 and MW-108 are considered anomalous and were not used in contouring.

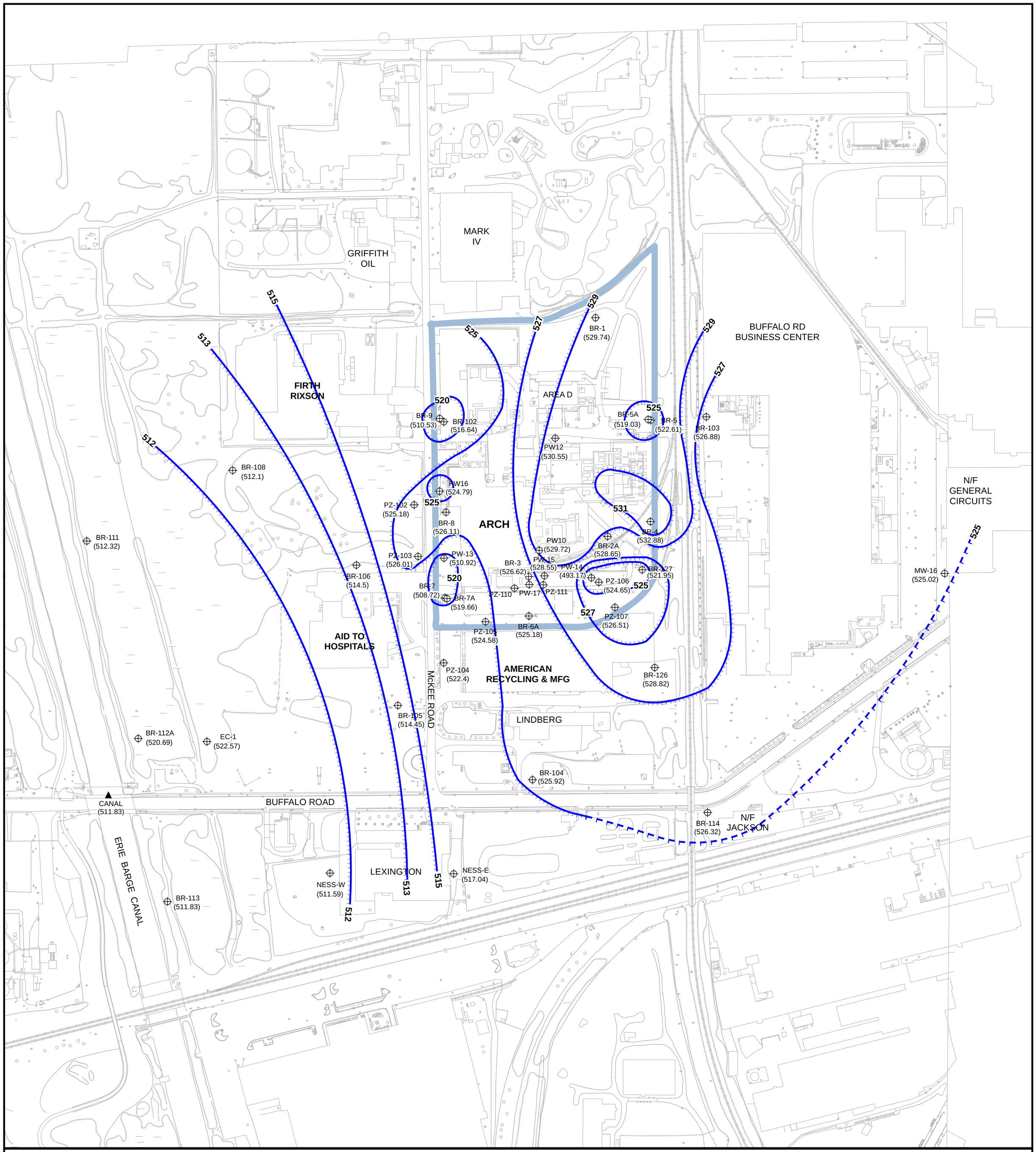
0 100 200 400 Feet

Prepared/Date: MJW 07/23/13 | Checked/Date: JEB 07/23/13

Figure 3
Spring 2013
Overburden Groundwater
Interpreted Piezometric Contours

Arch Chemicals
Rochester, NY

amec



NOTES:

1. Water Levels Measured on May 16, 2013
2. Dashed Contours Reflect Uncertainty
3. Measurements in wells BR-112A and EC-1 are considered anomalous and were not used in contouring.

N

0 100 200 400 Feet

Legend

- BR-112A (520.69) — Piezometric Elevation at Well or Piezometer (Feet MSL)
- CANAL (511.83) — Piezometric Elevation at Surface Water Measuring Point
- Outline of Arch Property Boundary
- Interpreted Groundwater Flow Direction
- 525 — Bedrock Piezometric Elevation Contour (MSL)

Figure 4
Spring 2013
Bedrock Groundwater
Interpreted Piezometric Contours

Arch Chemicals
Rochester, NY

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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 May 16, 2013
2. Dashed Contours Reflect Uncertainty

N

0 250 500 1,000 Feet

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ERIE BARGE CANAL
I-390
BUFFALO RD. BUSINESS CENTER
FIRTH RIXSON
BR-9
ARCH
BR-103
BR-108
BR-111D (511.29)
BR-111
AID TO HOSPITALS
BR-106
BR-3D (482.45)
ARM
BR-105
BR-105D (510.92)
BR-112D (511.7)
BR-112
BR-104
BR-114
BUFFALO ROAD
CUMBERLAND FARMS PETROLEUM TERMINAL
BR-113
BR-113D (511.65)
LEXINGTON
GENERAL RAIL SIGNAL CO.
DOLOMITE PRODUCTS QUARRY
BR-122D (506.93)
PFAUDLER
BR-117D (496.88)
BR-117
BR-118
BR-118D (498.81)
BR-116D (509.46)
BR-116
BR-123D (507.85)
BR-124D (505.87)
LETTINGTON DRIVE
498
500
502
504
506
508
510

Figure 5
Spring 2013
Deep Bedrock Groundwater
Interpreted Piezometric Contours

Arch Chemicals
Rochester, NY

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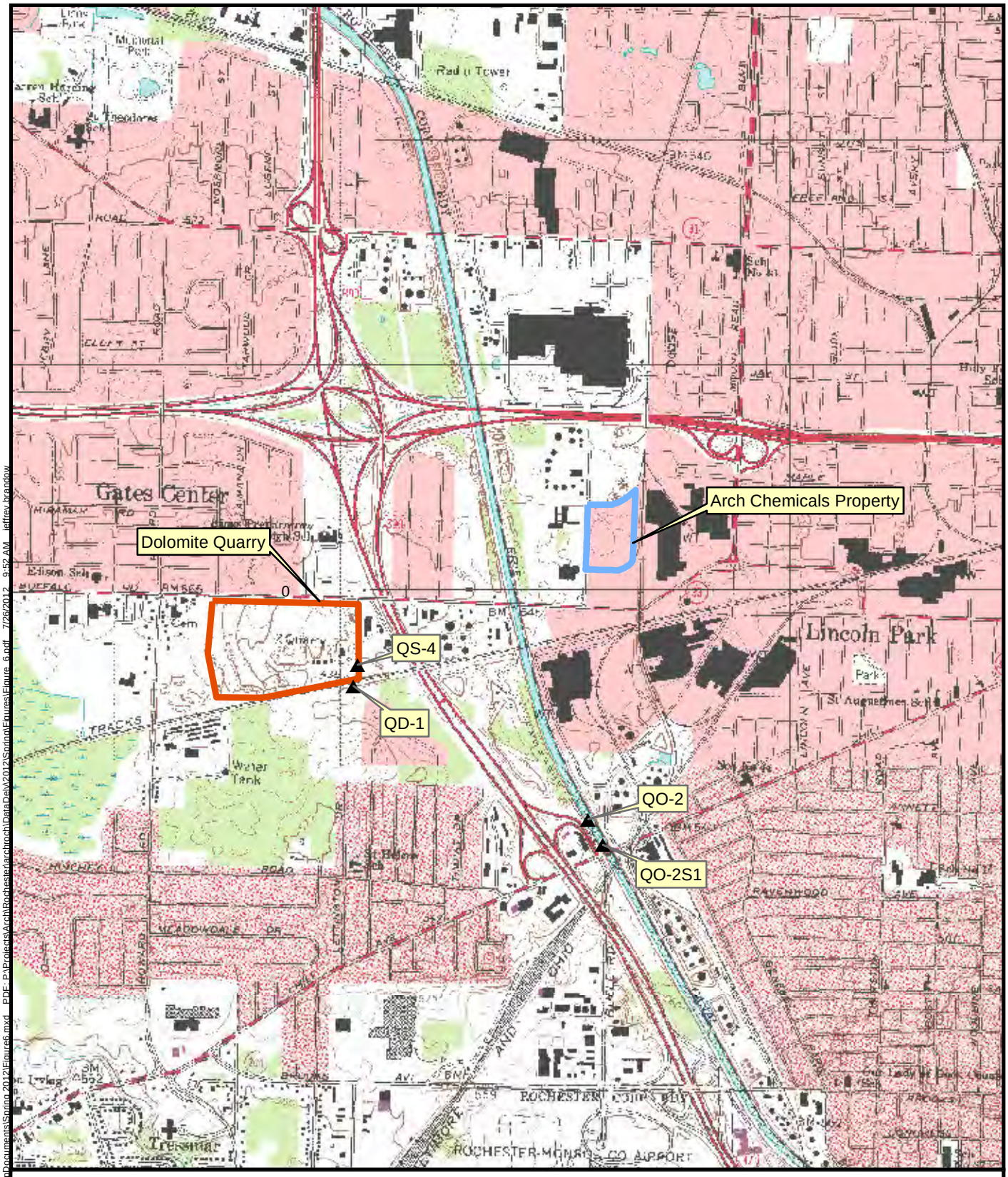

Source:
1:24,000 scale digital topographic map
obtained from New York State GIS
Clearinghouse at: www.nysgis.state.ny.us

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

amec

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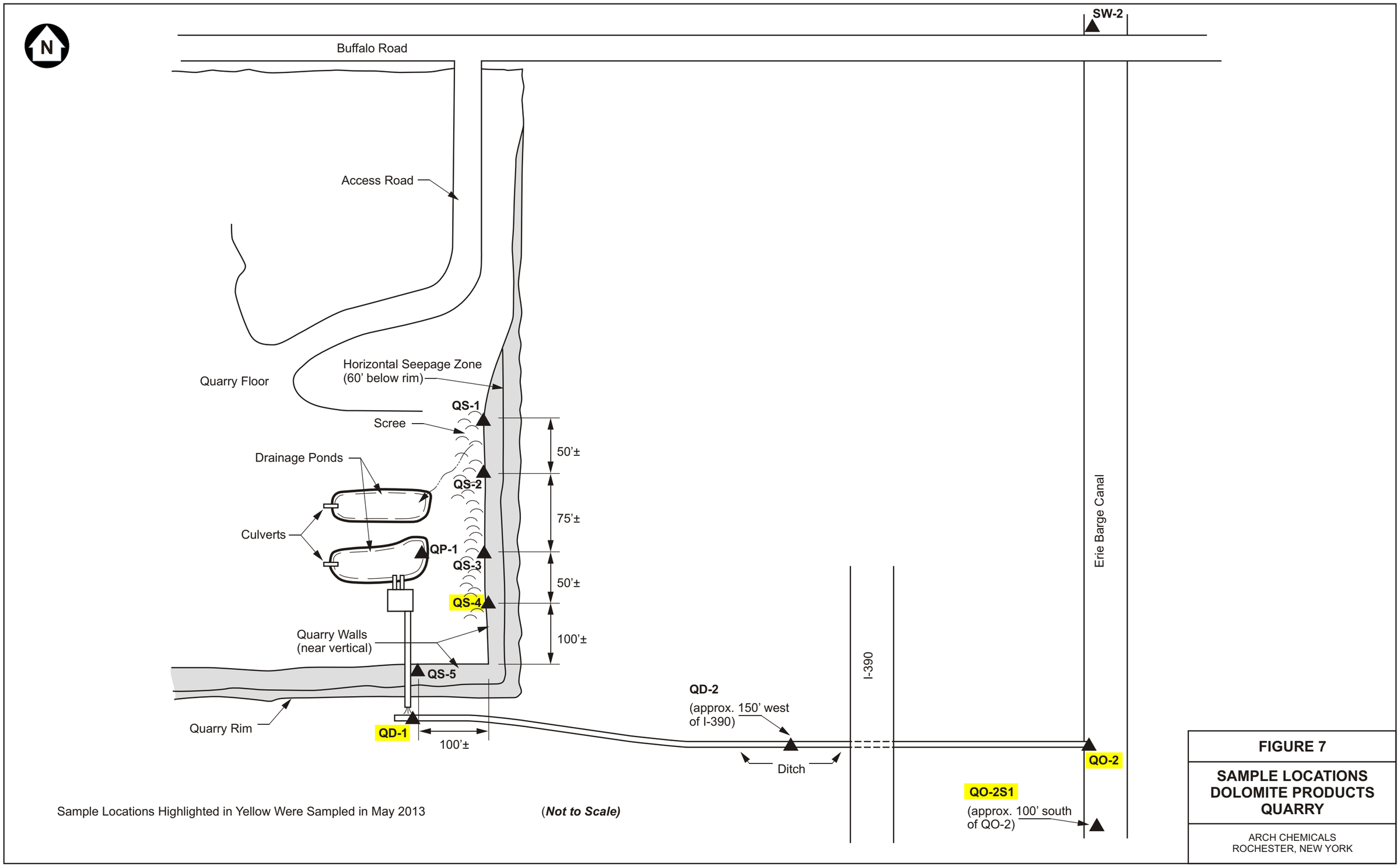


Sample Locations Highlighted in Yellow Were Sampled in May 2013

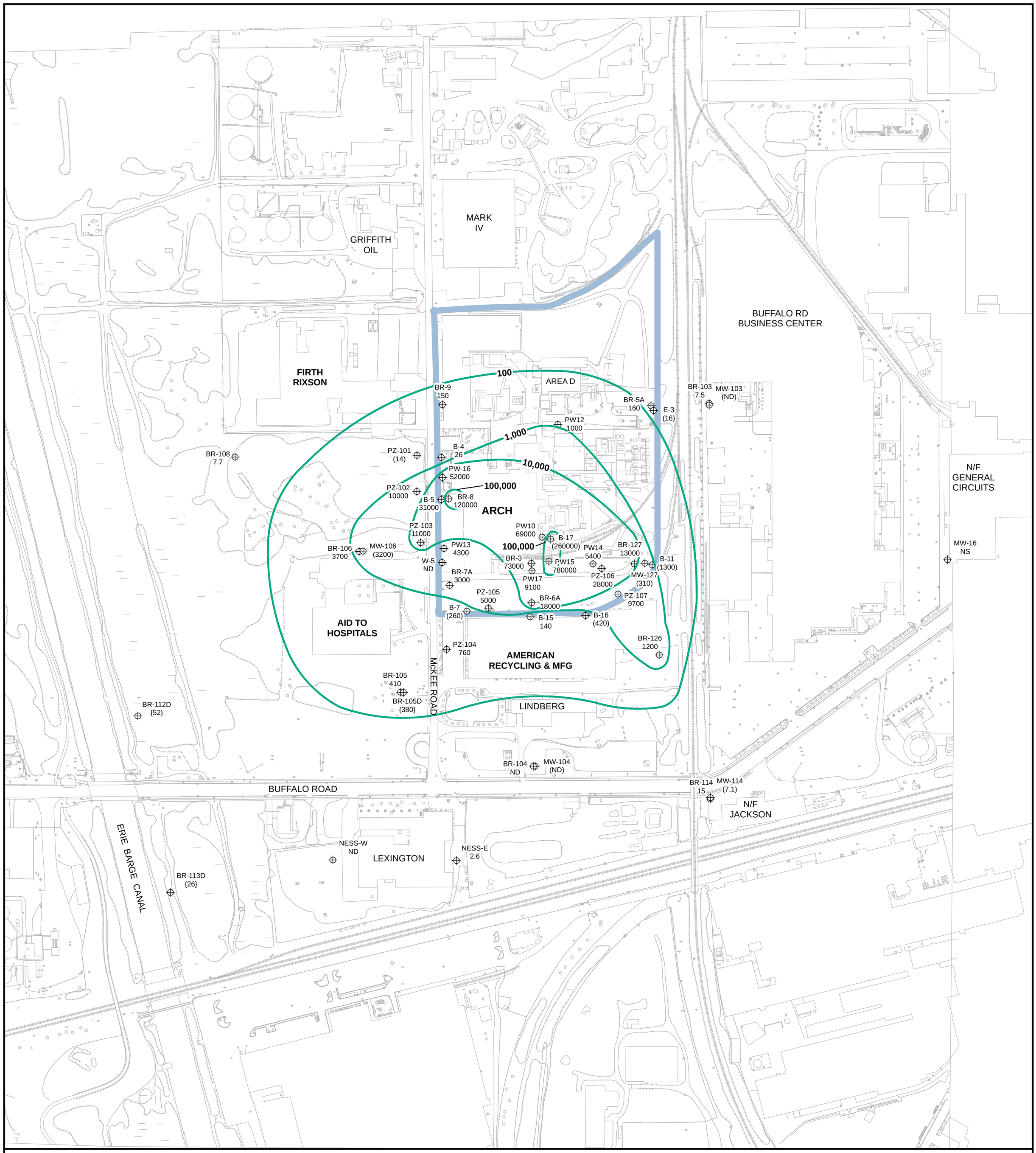
(***Not to Scale***)

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

0 100 200 400 Feet

N

Prepared/Date: MJW 07/18/13 | Checked/Date: JEB 07/18/13

NOTES:

1. Samples Collected May, 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

Figure 8
Spring 2013
Selected Chloropyridine Concentration Contours

Arch Chemicals
Rochester, NY

amec

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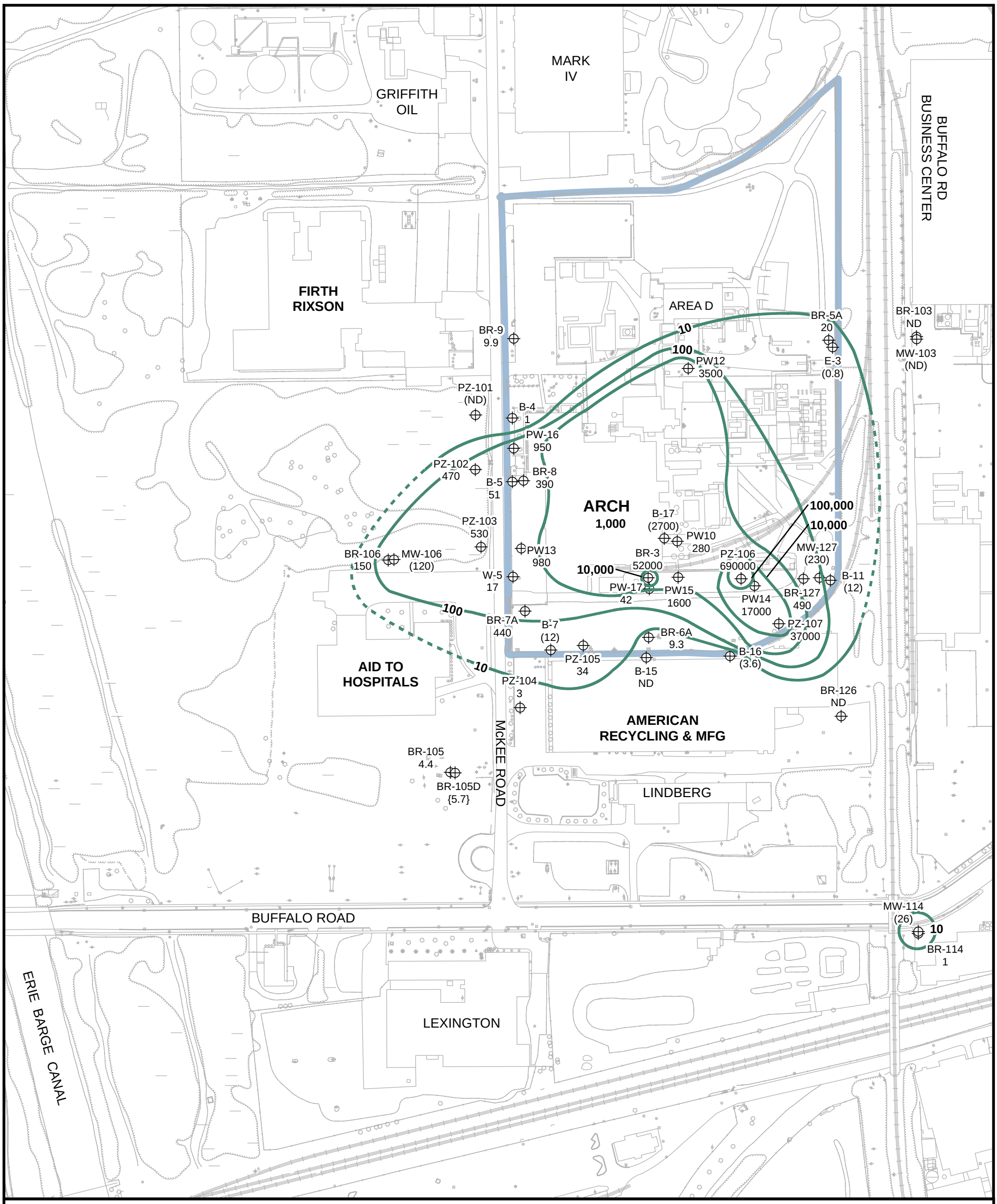

Legend

- 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

NOTES:

1. Samples Collected in May 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

Prepared/Date: MJW 07/12/13 | Checked/Date: JEB 07/12/13

Figure 9
Spring 2013
Selected Volatile Organic Compound Concentration Contours

Arch Chemicals
Rochester, NY

amec

Tables

TABLE 1
SPRING 2013 GROUNDWATER SAMPLING AND ANALYTICAL PROGRAM

ARCH CHEMICALS, INC
ROCHESTER, NEW YORK

			ANALYSIS	PYRIDINES	VOCs
SITE / AREA	**WELL / POINT**	**DATE**	**QC TYPE**		
AID TO HOSPITALS	BR-106	5/20/2013	Sample	X	X
	BR-108	5/20/2013	Sample	X	
	MW-106	5/20/2013	Sample	X	X
	PZ-101	5/20/2013	Sample	X	X
	PZ-102	5/20/2013	Sample	X	X
	PZ-103	5/17/2013	Sample	X	X
AMERICAN RECYCLE MANUF. (58 MCKEE ROAD)	B-15	5/17/2013	Sample	X	X
	B-16	5/17/2013	Sample	X	X
	BR-126	5/17/2013	Sample	X	X
	PZ-104	5/17/2013	Sample	X	X
ARCH ROCHESTER	B-11	5/22/2013	Sample	X	X
	B-17	5/22/2013	Sample	X	X
	B-4	5/22/2013	Sample	X	X
	B-5	5/22/2013	Sample	X	X
	B-7	5/24/2013	Sample	X	X
	BR-127	5/23/2013	Sample	X	X
	BR-3	5/22/2013	Sample	X	X
	BR-5A	5/23/2013	Sample	X	X
	BR-6A	5/21/2013	Sample	X	X
	BR-7A	5/23/2013	Sample	X	X
	BR-8	5/22/2013	Sample	X	X
	BR-9	5/23/2013	Sample	X	X
	E-3	5/22/2013	Sample	X	X
	MW-127	5/21/2013	Sample	X	X
	PW10	5/22/2013	Sample	X	X
	PW12	5/24/2013	Sample	X	X
	PW13	5/23/2013	Sample	X	X
	PW14	5/23/2013	Sample	X	X
	PW15	5/23/2013	Sample	X	X
	PW16	5/23/2013	Sample	X	X
	PW17	5/24/2013	Sample	X	X
	PZ-105	5/21/2013	Sample	X	X
	PZ-106	5/21/2013	Sample	X	X
	PZ-107	5/21/2013	Sample	X	X
	W-5	5/24/2013	Sample	X	X
DOLOMITE PRODUCTS, INC.	BR-117D	5/17/2013	Sample	X	
	BR-118D	5/17/2013	Sample	X	
	QD-1	5/17/2013	Sample	X	
	QS-4	5/17/2013	Sample	X	
ERIE BARGE CANAL (Samples in canal or property along canal)	BR-112D	5/20/2013	Sample	X	
	BR-113D	5/20/2013	Sample	X	
	BR-122D	5/17/2013	Sample	X	
	BR-123D	5/17/2013	Sample	X	
	QO-2	5/17/2013	Sample	X	
	QO-2S1	5/17/2013	Sample	X	
JACKSON WELDING	BR-114	5/20/2013	Sample	X	X
	MW-114	5/20/2013	Sample	X	X
BUFFALO RD BUSINESS CENTER (FORMER KODAK PROPERTY)	BR-103	5/22/2013	Sample	X	X
	MW-103	5/22/2013	Sample	X	X
LEXINGTON MACHINING (Formerly Ness Precision Products)	NESS-E	5/20/2013	Sample	X	
	NESS-W	5/20/2013	Sample	X	

TABLE 1
SPRING 2013 GROUNDWATER SAMPLING AND ANALYTICAL PROGRAM

ARCH CHEMICALS, INC
ROCHESTER, NEW YORK

			ANALYSIS	PYRIDINES	VOCs
SITE / AREA	**WELL / POINT**	**DATE**	**QC TYPE**		
FORMER GENERAL CIRCUTS	BR-116	5/17/2013	Sample	X	
	BR-116D	5/17/2013	Sample	X	
RG & E RIGHT OF WAY	BR-104	5/22/2013	Sample	X	
	BR-105	5/20/2013	Sample	X	X
	BR-105D	5/20/2013	Sample	X	X
	MW-104	5/22/2013	Sample	X	

TABLE 2
SPRING 2013 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	B-11	B-15	B-16	B-17	B-4	B-5	B-7	BR-103	BR-104	BR-105
SAMPLE DATE:	5/22/2013	5/17/2013	5/17/2013	5/22/2013	5/22/2013	5/22/2013	5/24/2013	5/22/2013	5/22/2013	5/20/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (ug/L)										
2,6-Dichloropyridine	310	65 J	270	5800 J	19	3900	160 J	9.5 U	9.5 U	84
2-Chloropyridine	950	71 J	150	240000	6.7 J	27000	100 J	3.6 J	9.5 U	330
3-Chloropyridine	67 U	190 U	9.5 U	25000 U	9.5 U	77	190 U	9.5 U	9.5 U	50 U
4-Chloropyridine	67 U	190 U	9.5 U	25000 U	9.5 U	9.5 U	190 U	9.5 U	9.5 U	50 U
p-Fluoroaniline	67 U	190 U	4.5 J	25000 U	9.5 U	30	190 U	3.9 J	9.5 U	50 U
Pyridine	170 U	480 U	24 U	13000 J	24 U	24 U	470 U	24 U	24 U	130 U

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

TABLE 2
SPRING 2013 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-105D	BR-106	BR-108	BR-112D	BR-113D	BR-114	BR-116	BR-116D	BR-117D	BR-118D
SAMPLE DATE:	5/20/2013	5/20/2013	5/20/2013	5/20/2013	5/20/2013	5/20/2013	5/17/2013	5/17/2013	5/17/2013	5/17/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (ug/L)										
2,6-Dichloropyridine	36	480 J	9.5 U	47 U	2.5 J	4.6 J	47 U	4.6 J	9.7 U	3.4 J
2-Chloropyridine	280	3200 J	7.7 J	52	23	10	47 U	17	3.8 J	32
3-Chloropyridine	12	500 U	9.5 U	47 U	9.4 U	9.5 U	47 U	9.6 U	9.7 U	9.8 U
4-Chloropyridine	33	500 U	9.5 U	47 U	9.4 U	9.5 U	47 U	9.6 U	9.7 U	9.8 U
p-Fluoroaniline	18	500 U	9.5 U	47 U	9.4 U	9.5 U	47 U	9.6 U	9.7 U	9.8 U
Pyridine	24 U	1300 U	24 U	120 U	24 U	24 U	120 U	24 U	24 U	25 U

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

TABLE 2
SPRING 2013 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-122D	BR-123D	BR-126	BR-127	BR-3	BR-5A	BR-6A	BR-7A	BR-8	BR-9
SAMPLE DATE:	5/17/2013	5/17/2013	5/17/2013	5/23/2013	5/22/2013	5/23/2013	5/21/2013	5/23/2013	5/22/2013	5/23/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (ug/L)										
2,6-Dichloropyridine	11	7.8 J	300	930	6200 J	22	2400 J	420 J	100000 U	23
2-Chloropyridine	67	59	910	11000	59000	120	16000	2600	120000	120
3-Chloropyridine	9.5 U	9.5 U	100 U	280	2900 J	9.5 U	5000 U	500 U	100000 U	9.5 U
4-Chloropyridine	9.5 U	9.5 U	100 U	47 J	10000 U	9.5 U	5000 U	500 U	100000 U	9.5 U
p-Fluoroaniline	0.82 J	9.5 U	100 U	13 J	10000 U	15	5000 U	500 U	100000 U	2.2 J
Pyridine	24 U	24 U	250 U	290	4900 J	24 U	13000 U	1300 U	250000 U	24 U

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

TABLE 2
SPRING 2013 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	E-3	MW-103	MW-104	MW-106	MW-114	MW-127	NESS-E	NESS-W	PW10	PW12
SAMPLE DATE:	5/22/2013	5/22/2013	5/22/2013	5/20/2013	5/20/2013	5/21/2013	5/20/2013	5/20/2013	5/22/2013	5/24/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (ug/L)										
2,6-Dichloropyridine	12	9.5 U	9.5 U	570	2.1 J	160 J	9.5 U	9.4 U	31000	260
2-Chloropyridine	4 J	9.5 U	9.5 U	2600	5 J	150 J	2.6 J	9.4 U	38000	530
3-Chloropyridine	9.5 U	9.5 U	9.5 U	100 U	9.5 U	250 U	9.5 U	9.4 U	10000 U	64
4-Chloropyridine	9.5 U	9.5 U	9.5 U	100 U	9.5 U	250 U	9.5 U	9.4 U	10000 U	9.5 U
p-Fluoroaniline	9.5 U	9.5 U	9.5 U	30 J	9.5 U	250 U	9.5 U	9.4 U	10000 U	150
Pyridine	24 U	24 U	24 U	250 U	24 U	630 U	24 U	24 U	25000 U	18 J

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

TABLE 2
SPRING 2013 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PW13	PW14	PW15	PW16	PW17	PZ-101	PZ-102	PZ-103	PZ-104	PZ-105
SAMPLE DATE:	5/23/2013	5/23/2013	5/23/2013	5/23/2013	5/24/2013	5/20/2013	5/20/2013	5/17/2013	5/17/2013	5/21/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (ug/L)										
2,6-Dichloropyridine	290 J	560	3500 J	4900 J	1300	7.8 J	930 J	1300 J	170	880
2-Chloropyridine	4000	4800	68000	47000	7800	6.3 J	8900	9900	580	4100
3-Chloropyridine	1000 U	72 J	750 J	5000 U	1000 U	9.5 U	59	92 J	50 U	24 J
4-Chloropyridine	1000 U	500 U	5000 U	5000 U	1000 U	9.5 U	50 U	100 U	50 U	100 U
p-Fluoroaniline	1000 U	500 U	5000 U	5000 U	1000 U	9.5 U	63	71 J	6.7 J	42 J
Pyridine	2500 U	1300 U	5800 J	13000 U	2500 U	24 U	130 U	250 U	130 U	250 U

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

TABLE 2
SPRING 2013 GROUNDWATER MONITORING RESULTS
CHLOROPYRIDINES

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PZ-106	PZ-107	W-5
SAMPLE DATE:	5/21/2013	5/21/2013	5/24/2013
QC TYPE:	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (ug/L)			
2,6-Dichloropyridine	5900	1400	10000 U
2-Chloropyridine	21000	7900	10000 U
3-Chloropyridine	190	150	10000 U
4-Chloropyridine	160 U	100 U	10000 U
p-Fluoroaniline	160 U	100 U	10000 U
Pyridine	620	200 J	25000 U

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

TABLE 3
SPRING 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	B-7	BR-103	BR-105
SAMPLE DATE:	5/22/2013	5/17/2013	5/17/2013	5/22/2013	5/22/2013	5/22/2013	5/24/2013	5/22/2013	5/20/2013
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	20 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	0.41 J
1,1-Dichloroethene	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	1.4 J	10 U	10 U	40 U	10 U	4.3 J	10 U	10 U	5.9 J
1,2-Dichloropropane	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	25 U	25 U	25 U	200 U	25 U	25 U	25 U	25 U	25 U
2-Hexanone	25 U	25 U	25 U	100 U	25 U	25 U	25 U	25 U	25 U
4-Methyl-2-pentanone	25 U	25 U	25 U	100 U	25 U	25 U	25 UJ	25 U	25 UJ
Acetone	25 U	25 U	25 U	200 U	25 U	3.2 J	25 U	25 U	25 U
Benzene	5 U	5 U	0.76 J	110	5 U	2.3 J	5 U	5 U	1.1 J
Bromodichloromethane	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
Bromoform	5 U	5 U	5 U	38	5 U	5 U	5 U	5 U	5 U
Bromomethane	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	5 U	5 U	5 U	50	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	2.2 J	5 U	5 U	460	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	0.82 J	5 U	3.6 J	140	5 U	40	11	5 U	4.4 J
Chlorodibromomethane	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
Chloroform	8.2	5 U	5 U	1400	1 J	0.63 J	0.49 J	5 U	5 U
Chloromethane	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
Ethyl benzene	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5 U	5 U	5 U	46	5 U	5 U	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	0.73 J	5 U	5 U	680	5 U	5 U	0.36 J	5 U	5 U
Toluene	5 U	5 U	5 U	67	5 U	5.3	11	5 U	5 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	20 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5 U	5 U	5 U	20	5 U	10	5 U	5 U	5 U
Vinyl acetate	25 U	25 U	25 U	100 U	25 U	25 U	25 U	25 U	25 U
Vinyl chloride	5 U	5 U	5 U	20 U	5 U	5 U	5 U	8.9	4.5 J
Xylenes, Total	15 U	15 U	15 U	40 U	15 U	15 U	3.4 J	15 U	15 U

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

TABLE 3
SPRING 2013 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-105D	BR-106	BR-114	BR-126	BR-127	BR-3	BR-5A	BR-6A	BR-7A
SAMPLE DATE:	5/20/2013	5/20/2013	5/20/2013	5/17/2013	5/23/2013	5/22/2013	5/23/2013	5/21/2013	5/23/2013
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	5 U	25 U	500 U	5 U	10 U	25 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
1,1,2-Trichloroethane	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
1,1-Dichloroethane	1.7 J	5 U	5 U	5 U	25 U	500 U	5 U	10 U	3.3 J
1,1-Dichloroethene	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
1,2,4-Trimethylbenzene	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
1,2-Dichloroethane	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
1,2-Dichloroethene (total)	6.9 J	10 U	10 U	10 U	6 J	1000 U	9.1 J	20 U	6.6 J
1,2-Dichloropropane	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
1,3,5-Trimethylbenzene	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
2-Butanone	25 U	25 U	25 U	25 U	130 U	5000 U	25 U	100 U	130 U
2-Hexanone	25 U	25 U	25 U	25 U	130 U	2500 U	25 U	50 U	130 U
4-Methyl-2-pentanone	25 UJ	25 UJ	25 UJ	25 U	130 U	2500 U	25 U	50 U	130 U
Acetone	25 U	25 U	25 U	25 U	130 U	5000 U	25 U	100 U	130 U
Benzene	4.7 J	12	2.7 J	1.7 J	25 U	500 U	7.6	10 U	7 J
Bromodichloromethane	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
Bromoform	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
Bromomethane	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
Carbon disulfide	0.85 J	0.19 J	5 U	5 U	86	350 J	1.1 J	10 U	25 U
Carbon tetrachloride	5 U	5 U	5 U	5 U	65	6500	5 U	10 U	60
Chlorobenzene	3.9 J	150	1 J	5 U	4.9 J	500 U	18	9.3 J	47
Chlorodibromomethane	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
Chloroethane	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
Chloroform	0.83 J	5 U	5 U	5 U	380	37000 J	0.72 J	10 U	230
Chloromethane	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
Ethyl benzene	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
Methylene chloride	0.96 J	5 U	5 U	5 U	13 J	6600	5 U	10 U	91
Styrene	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
Tetrachloroethene	5 U	5 U	5 U	5 U	20 J	1600	5 U	10 U	9.7 J
Toluene	5 U	0.51 J	5 U	5 U	7 J	2200	3.6 J	29	3 J
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	25 U	500 U	5 U	10 U	25 U
Trichloroethene	5 U	5 U	5 U	5 U	6.3 J	500 U	1.3 J	10 U	2.5 J
Vinyl acetate	25 U	25 U	25 U	25 U	130 U	2500 U	2.4 J	50 U	130 U
Vinyl chloride	5 U	5 U	5 U	5 U	6.1 J	500 U	1.9 J	34	11 J
Xylenes, Total	15 U	15 U	15 U	15 U	75 U	1000 U	1.2 J	20 U	75 U

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

TABLE 3
SPRING 2013 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	BR-8	BR-9	E-3	MW-103	MW-106	MW-114	MW-127	PW10	PW12
SAMPLE DATE:	5/22/2013	5/23/2013	5/22/2013	5/22/2013	5/20/2013	5/20/2013	5/21/2013	5/22/2013	5/24/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)									
1,1,1-Trichloroethane	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
1,1,2,2-Tetrachloroethane	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
1,1,2-Trichloroethane	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
1,1-Dichloroethane	50 U	5 J	5 U	5 U	10 U	5 U	25 U	5 U	500 U
1,1-Dichloroethene	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
1,2,4-Trimethylbenzene	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
1,2-Dichloroethane	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
1,2-Dichloroethene (total)	100 U	100	10 U	10 U	20 U	10 U	50 U	10 U	1000 U
1,2-Dichloropropane	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
1,3,5-Trimethylbenzene	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
2-Butanone	250 U	50 U	25 U	25 U	50 U	25 U	130 U	50 U	2500 U
2-Hexanone	250 U	50 U	25 U	25 U	50 U	25 U	130 U	25 U	2500 U
4-Methyl-2-pentanone	250 U	50 U	25 U	25 U	50 U	25 UJ	130 U	25 U	2500 UJ
Acetone	250 U	50 U	25 U	25 U	50 U	25 U	130 U	1100	2500 U
Benzene	50 U	33	5 U	5 U	8.1 J	5 U	25 U	2.7 J	500 U
Bromodichloromethane	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
Bromoform	50 U	10 U	5 U	5 U	10 U	5 U	25 U	24	500 U
Bromomethane	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
Carbon disulfide	50 U	10 U	5 U	5 U	0.51 J	5 U	240	17	500 U
Carbon tetrachloride	50 U	10 U	5 U	5 U	10 U	0.61 J	29	39	500 U
Chlorobenzene	380	8.8 J	5 U	5 U	120	2.2 J	25 U	5.4	2900
Chlorodibromomethane	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
Chloroethane	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
Chloroform	50 U	10 U	0.8 J	5 U	10 U	14	180	170	200 J
Chloromethane	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
cis-1,3-Dichloropropene	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
Ethyl benzene	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	270 J
Methylene chloride	5.9 J	10 U	5 U	5 U	0.95 J	5 U	5 J	13	200 J
Styrene	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
Tetrachloroethene	50 U	10 U	5 U	5 U	10 U	3.2 J	17 J	44	160 J
Toluene	50 U	10 U	5 U	5 U	10 U	5 U	25 U	12	4300
trans-1,3-Dichloropropene	50 U	10 U	5 U	5 U	10 U	5 U	25 U	5 U	500 U
Trichloroethene	50 U	1.1 J	5 U	5 U	10 U	5.6	25 U	4.4 J	500 U
Vinyl acetate	250 U	50 U	25 U	25 U	50 U	25 U	130 U	25 U	2500 U
Vinyl chloride	50 U	50	5 U	5 U	10 U	5 U	25 U	5 U	500 U
Xylenes, Total	150 U	30 U	15 U	15 U	30 U	15 U	75 U	28	1700

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

TABLE 3
SPRING 2013 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PW13	PW14	PW15	PW16	PW17	PZ-101	PZ-102	PZ-103	PZ-104
SAMPLE DATE:	5/23/2013	5/23/2013	5/23/2013	5/23/2013	5/24/2013	5/20/2013	5/20/2013	5/17/2013	5/17/2013
QC TYPE:	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)									
1,1,1-Trichloroethane	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
1,1,2,2-Tetrachloroethane	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
1,1,2-Trichloroethane	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
1,1-Dichloroethane	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
1,1-Dichloroethene	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
1,2,4-Trimethylbenzene	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
1,2-Dichloroethane	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
1,2-Dichloroethene (total)	18 J	400 U	40 U	200 U	19	10 U	100 U	100 U	10 U
1,2-Dichloropropane	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
1,3,5-Trimethylbenzene	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
2-Butanone	100 U	2000 U	200 U	500 U	40 U	25 U	250 U	250 U	25 U
2-Hexanone	50 U	1000 U	100 U	500 U	20 U	25 U	250 U	250 U	25 U
4-Methyl-2-pentanone	50 U	1000 U	100 U	500 U	20 UJ	25 UJ	250 UJ	250 U	25 U
Acetone	100 U	2000 U	200 U	500 U	40 U	25 U	250 U	250 U	25 U
Benzene	11	200 U	23	22 J	3.5 J	5 U	21 J	17 J	1.1 J
Bromodichloromethane	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
Bromoform	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
Bromomethane	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
Carbon disulfide	10 U	200 U	58	100 U	4	5 U	50 U	50 U	5 U
Carbon tetrachloride	190	1400	8.6 J	100 U	4 U	5 U	50 U	50 U	5 U
Chlorobenzene	50	200 U	47	950	33	5 U	470	530	3 J
Chlorodibromomethane	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
Chloroethane	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
Chloroform	590	15000	1300	100 U	4 U	5 U	50 U	50 U	5 U
Chloromethane	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
cis-1,3-Dichloropropene	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
Ethyl benzene	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
Methylene chloride	130	680	52	100 U	2.9 J	5 U	50 U	4.4 J	5 U
Styrene	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
Tetrachloroethene	18	150 J	130	100 U	1.8 J	5 U	50 U	50 U	5 U
Toluene	5.6 J	200 U	100	100 U	22	5 U	50 U	50 U	5 U
trans-1,3-Dichloropropene	10 U	200 U	20 U	100 U	4 U	5 U	50 U	50 U	5 U
Trichloroethene	10 U	200 U	21	100 U	4.7	5 U	50 U	50 U	5 U
Vinyl acetate	50 U	1000 U	100 U	500 U	20 U	25 U	250 U	250 U	25 U
Vinyl chloride	30	200 U	20 U	100 U	11	5 U	50 U	50 U	5 U
Xylenes, Total	20 U	400 U	40 U	300 U	8 U	15 U	150 U	150 U	15 U

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

TABLE 3
SPRING 2013 GROUNDWATER MONITORING RESULTS
VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC.
ROCHESTER, NEW YORK

LOCATION:	PZ-105	PZ-106	PZ-107	W-5
SAMPLE DATE:	5/21/2013	5/21/2013	5/21/2013	5/24/2013
QC TYPE:	Sample	Sample	Sample	Sample
VOCs BY SW-846 Method 8260/5ML (µg/L)				
1,1,1-Trichloroethane	5 U	4000 U	500 U	20 U
1,1,2,2-Tetrachloroethane	5 U	4000 U	500 U	20 U
1,1,2-Trichloroethane	5 U	4000 U	500 U	20 U
1,1-Dichloroethane	5 U	4000 U	500 U	20 U
1,1-Dichloroethene	5 U	4000 U	500 U	20 U
1,2,4-Trimethylbenzene	5 U	4000 U	500 U	20 U
1,2-Dichloroethane	5 U	4000 U	500 U	20 U
1,2-Dichloroethene (total)	10 U	8000 U	120 J	40 U
1,2-Dichloropropane	5 U	4000 U	500 U	20 U
1,3,5-Trimethylbenzene	5 U	4000 U	500 U	20 U
2-Butanone	25 U	40000 U	2500 U	100 U
2-Hexanone	25 U	20000 U	2500 U	100 U
4-Methyl-2-pentanone	25 U	20000 U	2500 U	100 UJ
Acetone	5.6 J	40000 U	2500 U	100 U
Benzene	5.8	4000 U	500 U	20 U
Bromodichloromethane	5 U	4000 U	500 U	20 U
Bromoform	5 U	17000	500 U	20 U
Bromomethane	5 U	4000 U	500 U	20 U
Carbon disulfide	0.3 J	120000	500 U	20 U
Carbon tetrachloride	5 U	22000	1200	20 U
Chlorobenzene	34	4000 U	500 U	15 J
Chlorodibromomethane	5 U	4000 U	500 U	20 U
Chloroethane	5 U	4000 UJ	500 U	20 U
Chloroform	5 U	650000 J	25000	20 U
Chloromethane	5 U	4000 U	500 U	20 U
cis-1,3-Dichloropropene	5 U	4000 U	500 U	20 U
Ethyl benzene	5 U	4000 U	500 U	20 U
Methylene chloride	5 U	16000	9800	2.4 J
Styrene	5 U	4000 U	500 U	20 U
Tetrachloroethene	5 U	3000 J	1300	20 U
Toluene	5 U	4000 U	500 U	20
trans-1,3-Dichloropropene	5 U	4000 U	500 U	20 U
Trichloroethene	5 U	4000 U	500 U	20 U
Vinyl acetate	25 U	20000 U	2500 U	100 U
Vinyl chloride	5 U	4000 U	500 U	20 U
Xylenes, Total	15 U	8000 U	1500 U	4.5 J

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

TABLE 4
COMPARISON OF SPRING 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	MAY 2013 RESULT	# EVENTS IN PRIOR 5 YRS	HISTORIC MAXIMUM	5-YEAR MEAN	MAY 2013 RESULT
ON-SITE WELLS/LOCATIONS								
B-11	6	4,800	1,400	1,300	6	570	120	12
B-17	5	28,000,000	360,000	260,000	5	350,000	11,000	2,700
B-4	0	740	NA	26	0	42	NA	1
B-5	0	1,400	NA	31,000	0	320	NA	51
B-7	5	9,100	710	260	5	270	32	12
BR-127	10	29,000	8,700	**13,000**	10	1,300	230	**490**
BR-3	5	6,500,000	61,000	**73,000**	5	930,000	97,000	52,000
BR-5A	10	1,700	190	160	10	9,400	22	20
BR-6A	10	140,000	13,000	**18,000**	10	26,000	280	9.3
BR-7A	10	510,000	21,000	3,000	10	4,400	400	**440**
BR-8	5	160,000	58,000	**120,000**	5	7,800	560	390
BR-9	10	720	98	**150**	10	210	11	9.9
E-3	5	600	160	16	5	15,000	47	0.8
MW-127	10	15,000	4,000	310	10	7,500	1,300	230
PW10	10	240,000	54,000	**69,000**	10	120,000	1,700	280
PW12	10	15,000	1,200	1,000	10	120,000	9,700	3,500
PW13	10	7,500	3,000	**4,300**	10	1,800	290	**980**
PW14	10	29,000	6,700	5,400	10	160,000	22,000	17,000
PW15	10	730,000	73,000	**78,000**	10	8,300	5,000	1,600
PW16	5	31,000	17,000	**52,000**	5	1,200	760	**950**
PW17	1	3,800	3,800	**9,100**	1	33	33	**42**
PZ-105	10	190,000	10,000	5,000	10	9,900	110	34
PZ-106	10	120,000	37,000	28,000	10	1,400,000	370,000	**690,000**
PZ-107	10	11,000	6,000	**9,700**	10	89,000	20,000	**37,000**
W-5	0	450,000	NA	ND	0	2,500	NA	17
OFF-SITE WELLS/LOCATIONS								
B-15	0	13,000	NA	140	0	1,600	NA	ND
B-16	6	33,000	820	420	6	4,500	11	3.6
BR-103	5	400	0.78	**7.5**	5	46	ND	ND
BR-104	5	3,100	1.6	ND		11		
BR-105	10	24,000	760	410	10	350	6.9	4.4
BR-105D	10	10,000	340	**380**	10	230	3.7	**5.7**
BR-106	10	25,000	3,000	**3,700**	10	12,000	120	**150**
BR-108	5	1,700	24	7.7		2		
BR-112D	5	310	43	**52**		4.3		
BR-113D	5	490	23	**26**		2.8		
BR-114	5	520	94	15	5	12	0.1	**1.0**
BR-116	5	12	ND	ND		86		
BR-116D	5	710	37	22		130		
BR-117D	5	80	5.5	3.8		1.9		
BR-118D	5	330	46	35		6.6		
BR-122D	5	650	130	79		ND		
BR-123D	5	860	50	**67**		7		
BR-126	10	12,000	2,900	1,200	10	240	3.7	ND

TABLE 4
COMPARISON OF SPRING 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	MAY 2013 RESULT	# EVENTS IN PRIOR 5 YRS	HISTORIC MAXIMUM	5-YEAR MEAN	MAY 2013 RESULT
MW-103	5	97	0.6	ND	5	750	ND	ND
MW-104	5	180	1.2	ND		5.8		
MW-106	10	130,000	7,800	3,200	10	4,000	320	120
MW-114	5	18	ND	**7**	5	27	21	**26**
MW-16	5	360	7.9			10		
NESS-E	5	5,000	53	2.6		710		
NESS-W	5	2,100	ND	ND		94		
PZ-101	10	27,000	59	14	10	620	3.2	ND
PZ-102	10	58,000	4,100	**10,000**	10	11,000	290	**470**
PZ-103	10	73,000	9,000	**11,000**	10	46,000	1,100	530
PZ-104	10	9,100	1,600	760	10	52	8	3
QD-1	10	11	5	**6.5**		ND		
QO-2	10	380	7.2	**7.7**		ND		
QO-2S1	10	27	2.4	ND		ND		
QS-4	10	3,400	120	63		ND		

Note:
1) Number of samples and mean reflect 5-year sampling period from May 2008 through November 2012. Historic maximum based on all available results from March 1990 through November 2012.
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** - May 2013 exceeds 5-year mean.
5) ND = Not detected
BLANK = Not sampled

TABLE 5
SPRING 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:	5/17/2013	5/17/2013	5/17/2013	5/17/2013
QC TYPE:	Sample	Sample	Sample	Sample
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)				
2,6-Dichloropyridine	11	3.1 J	9.5 U	2.9 J
2-Chloropyridine	52	4.6 J	9.5 U	3.6 J
3-Chloropyridine	9.5 U	9.5 U	9.5 U	9.7 U
4-Chloropyridine	9.5 U	9.5 U	9.5 U	9.7 U
p-Fluoroaniline	9.5 U	9.5 U	9.5 U	9.7 U
Pyridine	24 U	24 U	24 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 - DECEMBER 2012 THROUGH MAY 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.]	BR-127 **** [Gal./Wk.]	Total [Gal.]
Dec '12									
12/02/12	21,672	92,430	49,952	24,339	1,394	7,877	38,664	0	236,328
12/09/12	21,184	85,281	46,638	0	1,045	52,198	39,847	0	246,193
12/16/12	20,230	83,795	37,135	1	1,113	49,431	40,377	0	232,082
12/23/12	19,775	59,757	20,434	6,592	1,069	27,663	30,054	0	165,344
12/30/12	21,514	87,319	39,233	7,866	1,244	32,919	39,160	0	229,255
								Total [Gal.]	1,109,202
Jan '13									
01/06/13	20,424	81,570	35,592	7,575	1,111	16,331 **	39,635	0	202,238
01/13/13	21,101	62,180 **	35,726 **	6,579 **	935 **	40,135	29,233 **	0	195,889
01/20/13	20,906	83,063	45,436	8,616	1,223	62,909	39,109	0	261,262
01/27/13	17,991	81,416	41,060	8,281	1,079	60,186	37,260	0	247,273
								Total [Gal.]	906,661
Feb '13									
02/03/13	18,608	84,694	38,206	8,552	1,182	58,002	39,161	0	248,405
02/10/13	17,677	81,241	39,683	8,636	1,155	36,193	38,420	0	223,005
02/17/13	17,609	79,565	39,349	8,731	1,159	16,753 **	38,469	19,353	220,989
02/24/13	15,093	58,342	28,373	5,741	914	16,626 **	23,550	38,011	186,650
								Total [Gal.]	879,049
Mar '13									
03/03/13	17,306	84,904	48,873	9,327	1,193	21,188	37,888	26,996	247,675
03/10/13	18,039	79,992	47,438	9,193	1,156	5,687 **	36,177	20,407	218,090
03/17/13	17,376	79,518	50,997	9,669	1,152	4,795 **	36,300	20,584	220,391
03/24/13	16,701	79,140	49,729	9,632	1,156	5,599 **	36,079	15,714	213,750
03/31/13	16,041	78,285	47,796	9,305	1,093	28,165	35,662	20,957	237,304
								Total [Gal.]	1,137,210
Apr '13									
04/07/13	15,694	77,857	46,583	9,134	1,006	30,650	35,120	26,515	242,559
04/14/13	15,693	76,620	44,389	9,331	1,018	17,947 **	34,313	26,007	225,318
04/21/13	14,647	69,865	54,166	10,239	1,057	10,205 **	31,113	16,996	208,287
04/28/13	15,285	71,495	51,126	57,677	1,314	31,332	32,411	20,092	280,732
								Total [Gal.]	956,896
May '13									
05/05/13	15,086	45,083	105,703	72,527	1,374	4,691 **	38,673	55,044	338,181
05/12/13	12,000	50,070	93,452 *	72,745	1,338	15,491 **	44,097	70,291	359,484
05/19/13	16,320	50,216	96,533	73,484	1,330	17,615 **	43,879	63,192	362,569
05/26/13	13,890	71,029	52,022	78,780	1,322	8,230 **	46,425	61,783	333,481
								Total [Gal.]	1,393,714
Total 6 Mo. Removal (Gal.)	457,862	1,934,727	1,285,624	532,552	30,132	678,816	961,076	501,942	6,382,732

Notes:
1) * - Flow rate is estimated due to a meter failure or reading error
2) ** - Flow rate adversely affected by pump failure, pluggage in discharge line, or other maintenance activity
3) *** - Well yield at PW-14 has been minimal from 2010 - 2013. An attempt to rehab the well by physical and chemical cleaning in October 2010 failed to increase yield.
4) **** - Well BR-127 was re-activated in February 2013 with an air-driven pump.

TABLE 7

MASS REMOVAL SUMMARY
PERIOD: DECEMBER 2012 - MAY 2013

ARCH ROCHESTER
SPRING 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	457,900	0.018	0.16	0.07	0.6
BR-7A	1,934,700	0.89	4.0	14	65
BR-9	1,285,600	0.009	0.15	0.10	1.6
PW-13	532,600	1.4	3.7	6.1	17
PW-14	30,100	21	3.9	5.2	1.0
PW-15	678,800	1.5	53	8.5	300
PW-16	961,100	1.1	42	8.7	333
BR-127	501,900	0.25	7.6	1.0	32
Totals:	6,382,700			44	749

Notes: VOC and pyridine concentrations used in this table are an average of the analytical results from the Fall 2012 and Spring 2013 sampling events for each well;
Total select VOCs now includes chlorobenzene in addition to PCE, TCE, methylene chloride, carbon tetrachloride, and chloroform

Appendix A

Groundwater Field Sampling Data Sheets

FIELD REPORT

REMEDIAL INVESTIGATION SAMPLING
LONZA CHEMICAL
ROCHESTER, NEW YORK

SPRING 2013 Event

Prepared For:

AMEC, Inc.
511 Congress Street
Portland, Maine 04101

Attention: Mr. Nelson Breton

Prepared By:

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10 Hazelwood Drive
Amherst, New York 14228-2298

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Written By: Roger Senf

Reviewed By:

Date: 6-26-13

1.0 INTRODUCTION

This report describes the sampling of the following points:

- Twenty-eight (53) groundwater samples
- One (1) barge canal sample
- Two (2) quarry outfall samples
- One (1) quarry seep sample

These activities were in support of the Phase II Remediation Investigation being conducted at the Lonza Chemical facility in Rochester, New York. The samples were collected from May 16 - 24, 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.

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	5/20/2013	1100	16.61		6.72	2475	16.9	7.01	108	0.17
PZ-102	5/20/2013	1205	15.90		6.82	3257	16.2	0.95	-29	0.28
PZ-103	5/17/2013	1330	15.12		6.77	3074	14.6	1.70	-63	0.49
PZ-104	5/17/2013	1025	14.51		6.91	2592	13.7	4.52	-110	0.52
PZ-105	5/21/2013	1140	12.15		6.98	1398	18.5	93	-138	0.48
PZ-106	5/21/2013	1355	12.81		5.90	10010	17.5	14.75	-2	0.48
PZ-107	5/21/2013	1315	12.13		6.90	3435	17.9	5.18	-91	0.58
BR-3	5/22/2013	1040	11.72		7.10	10630	18.3	20.3	-185	0.42
BR-5A	5/23/2013	1125	19.63		7.71	1442	14.7	18.3	-115	
BR-6A	5/21/2013	1230	13.80		7.45	4479	19.7	23.9	-222	0.37
BR-7A	5/23/2013	1155	27.90		7.39	1839	15.1	5.73	-134	
BR-8	5/22/2013	1425	13.13		7.91	5458	16.5	4.76	-31	0.27
BR-9	5/23/2013	1145	27.97		7.31	2085	16.5	5.32	-86	
BR-103	5/22/2013	1125	6.40		7.12	772	13.5	5.32	-74	0.79
BR-104	5/22/2013	1250	11.97		7.87	382	12.3	9.13	-35	0.75
BR-105	5/20/2013	1420	22.96		7.71	2251	17.6	17.7	-239	
BR-105D	5/20/2013	1320	26.09		6.97	25680	20.0	3.37	-334	
BR-106	5/20/2013	1140	23.40		6.91	3463	14.6	13.2	-15	0.84
BR-108	5/20/2013	1435	28.48		7.94	1073	19.2	327	-187	
BR-112D	5/20/2013	1330	36.22		7.31	2522	10.6	8.57	-201	
BR-113D	5/20/2013	1245	31.63		6.81	2910	12.7	5.92	-180	0.42
BR-114	5/20/2013	1410	13.59		6.90	1833	18.5	2.11	-78	0.28
BR-116	5/17/2013	1335	28.52		6.89	3082	16.3	11.1	-82	0.83
BR-116D	5/17/2013	1415	35.91		6.98	1839	16.0	14.6	-118	0.49
BR-117D	5/17/2013	955	50.80		8.23	1569	10.8	43.3	-76	0.51
BR-118D	5/17/2013	1030	49.40		8.33	1180	11.0	45.7	-54	0.36
BR-122D	5/17/2013	1120	45.73		7.11	2232	10.9	25.3	-182	0.54
BR-123D	5/17/2013	1158	46.00		7.10	2030	10.9	12.9	-175	0.42
BR-126	5/17/2013	1255	9.11		6.97	982	15.2	2.14	-63	0.59
BR-127	5/23/2013	1115	12.85		8.21	2831	16.1	20.5	-164	
MW-103	5/22/2013	1205	1.70		7.26	690	13.8	60.3	-52	0.81
MW-104	5/22/2013	1335	8.28		7.41	663	12.8	86.0	55	
MW-106	5/20/2013	1055	12.34		6.72	1891	13.1	4.62	-40	0.98
MW-114	5/20/2013	1310	10.23		7.18	1079	20.5	10.67	-7	0.72
MW-127	5/21/2013	1435	8.85		7.68	3917	18.9	9.52	15	0.5
PW-10	5/22/2013	1215	10.13		8.37	7291	19.6	3.36	-70	0.44
PW-12	5/24/2013	1205	12.30		7.28	4711	10.3	10.1	-132	1.07

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)
PW-13	5/23/2013	1215	27.98		7.14	2526	16.8	3.30	-146	
PW-14	5/23/2013	1100	27.67		7.16	3151	20.1	266	-164	
PW-15	5/23/2013	1040	28.94		7.91	4614	15.1	45.0	-82	
PW-16	5/23/2013	1240	13.51		7.16	4950	15.9	8.45	-145	
PW-17	5/24/2013	1110	12.21		7.88	1981	8.4	3.44	-157	0.97
B-4	5/22/2013	1325	17.01		7.62	8124	20.1	13.97	19	
B-5	5/22/2013	1345	13.37		7.74	3498	20.6	20.7	-3	
B-7	5/24/2013	1435	16.96		6.98	1397	12.2	261	-21	0.67
B-11	5/22/2013	1240	9.56		7.65	2145	19.7	25.9	-52	
B-15	5/17/2013	1106	9.15		7.05	856	15.0	83.4	-63	0.33
B-16	5/17/2013	1145	8.73		7.02	1068	12.6	5.34	-39	0.50
B-17	5/22/2013	1125	10.24		8.15	8766	18.7	79.8	-93	0.44
W-5	5/24/2013	1310	9.32		7.69	552	12.5	50.2	-33	0.81
E-3	5/22/2013	1300	5.15		7.25	3180	20.1	36.5	-73	
QD-1	5/17/2013	1520	NA		7.49	1642	13.8		111	
QO-2	5/17/2013	1220	NA		7.96	1637	12.8		-109	
QO-2S1	5/17/2013	1205	NA		8.03	515	16.1		-98	
QS-4	5/17/2013	1505	NA		7.24	1824	13.2		115	
NESS-EAST	5/20/2013	1130	23.77		6.86	483	14.3	15.0	-105	0.66
NESS-WEST	5/20/2013	1055	31.67		6.75	1490	14.5	8.11	-156	0.49

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

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
B-1	05/16/13	9.27		-9.27	1230	NO L-NAPL ; NO D-NAPL
B-10		11.58		-11.58	1152	NO L-NAPL ; NO D-NAPL
B-11		7.54		-7.54	1157	NO L-NAPL ;NO D-NAPL 11.55 BOT.
B-13		12.87		-12.87	1259	DRY @ 12.87
B-14		10.27		-10.27	1302	
B-15		7.22		-7.22	1309	
B-16		7.66		-7.66	1315	NO L-NAPL ;NO D-NAPL 13.20 BOT.
B-17		10.25		-10.25	1125	NO L-NAPL ; NO D-NAPL
B-2		10.28		-10.28	1228	NO L-NAPL ; NO D-NAPL
B-4		16.94		-16.94	1112	NO L-NAPL ; NO D-NAPL
B-5		13.34		-13.34	1110	NO L-NAPL ; NO D-NAPL
B-7		15.10		-15.10	1246	NO L-NAPL ; NO D-NAPL
B-8		10.78		-10.78	1146	NO L-NAPL ; NO D-NAPL
BR-1		7.54		-7.54	1159	NO L-NAPL ; NO D-NAPL
BR-102		22.79		-22.79	1225	
BR-103		6.31		-6.31	1230	
MW-103		1.67		-1.67	1232	
BR-104		11.64		-11.64	1229	
MW-104		6.33		-6.33	1228	
BR-105		22.45		-22.45	1215	
BR-105D		25.57		-25.57	1140	
MW-105		18.77		-18.77	1142	
BR-106		21.24		-21.24	1153	
MW-106		11.17		-11.17	1154	
BR-108		28.48		-28.48	1204	
MW-108		29.01		-29.01	1203	
BR-111		28.10		-28.10	1105	
BR-111D		29.05		-29.05	1108	
BR-112A		27.03		-27.03	1053	
BR-112D		36.21		-36.21	1050	
BR-113		31.19		-31.19	1128	

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

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
BR-113D		31.28		-31.28	1131	
BR-114	05/16/13	13.45		-13.45	1226	
MW-114		10.03		-10.03	1225	
BR-116		28.28		-28.28	1238	
BR-116D		35.76		-35.76	1240	
BR-117		24.00		-24.00	1330	CASCADING WELL
BR-117D		50.28		-50.28	1332	
BR-118		23.70		-23.70	1310	
BR-118D		49.12		-49.12	1312	
BR-122D		45.41		-45.41	1257	
BR-123D		45.77		-45.77	1253	
BR-124D		31.58		-31.58	1248	
BR-126		9.08		-9.08	1327	
BR-127		12.85			1154	NO L-NAPL
MW-127		8.39			1153	NO L-NAPL ; NO D-NAPL
BR-2		10.75		-10.75	1123	NO L-NAPL ; NO D-NAPL
BR-2A		11.71		-11.71	1120	NO L-NAPL ; NO D-NAPL
BR-2D		0.05		-0.05	1124	NO L-NAPL ; NO D-NAPL
BR-3		11.58		-11.58	1139	NO L-NAPL
BR-3D		55.22		-55.22	1138	NO L-NAPL ; NO D-NAPL
BR-4		6.15		-6.15	1127	NO L-NAPL
BR-5		13.69		-13.82	1204	NO L-NAPL ; NO D-NAPL
BR-5A		17.32		-17.32	1203	NO L-NAPL
BR-6A		15.72		-15.72	1145	NO L-NAPL
BR-7		30.38		-30.38	1242	NO L-NAPL
BR-7A		19.46		-19.46	1243	NO L-NAPL ; NO D-NAPL
BR-8		13.61		-13.61	1109	NO L-NAPL ; NO D-NAPL
BR-9		31.64		-31.64	1226	NO L-NAPL
C-2A		11.91		-11.91	1121	NO L-NAPL ; NO D-NAPL
C-3						BURIED
C-5		11.73		-11.73	1140	NO L-NAPL ; NO D-NAPL

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

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
E-2		8.66		-8.66	1128	NO L-NAPL ; NO D-NAPL
E-3		4.52		-4.52	1205	NO L-NAPL ; NO D-NAPL
E-5	05/16/13	6.02		-6.02	1201	NO L-NAPL ; NO D-NAPL
EC-1		17.42		-17.42	1145	
EC-2		DRY		#VALUE!	1238	DRY
ERIE CANAL		32.96		-32.96	1140	
MW-16		11.77		-11.77	1233	
MW-3		6.14		-6.14	1155	
MW-G6		4.35		-4.35	1157	
MW-G7						NOT LOCATED
MW-G8		7.89		-7.89	1150	
MW-G9		10.95		-10.95	1153	
N-2		4.46		-4.46	1202	NO L-NAPL ; NO D-NAPL
N-3		6.75		-6.75	1232	NO L-NAPL
NESS-E		23.27		-23.27	1212	
NESS-W		31.45		-31.45	1217	
PW-10		9.04		-9.04	1126	NO L-NAPL
PW-12		6.94		-6.94	1209	NO L-NAPL
PW-13		25.21		-25.21	1239	NO L-NAPL; NO D NAPL
PW-14		43.86		-43.86	1131	NO L-NAPL
PW-15		9.77		-9.77	1135	NO L-NAPL
PW-16		14.53			1111	NO L-NAPL
PW-17		11.68			1141	NO L-NAPL ; NO D-NAPL
PZ-101		16.36		-16.36	1217	
PZ-102		15.71		-15.71	1255	
PZ-103		14.19		-14.19	1253	
PZ-104		14.45		-14.45	1257	
PZ-105		12.35		-12.35	1147	NO L-NAPL ; NO D-NAPL
PZ-106		12.59		-12.59	1130	NO L-NAPL ; NO D-NAPL
PZ-107		11.88		-11.88	1151	NO L-NAPL ; NO D-NAPL

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

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
PZ-109	05/16/13	9.03		-9.03	1136	NO L-NAPL; NO D-NAPL
PZ-110		10.07			1140	NO L-NAPL ; NO D-NAPL
PZ-111		8.11			1144	NO L-NAPL ; NO D-NAPL
W-2		12.08		-12.08	1227	NO L-NAPL ; NO D-NAPL
W-5		10.40		-10.40	1240	NO L-NAPL ; NO D-NAPL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: GD-1

Field Personnel: R. SAVA

Sample Matrix: S/W

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-17-13 1520

Water Level @ Sampling, Feet: N/A

Method of Sampling: MANUAL GRAB

Dedicated: (Y) / N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1525	13.8	7.49	1642	—	111	—

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%)
C								
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Sunny, 60°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: 5/17/13 By: [signature] Company: JAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: GO-2

Field Personnel: R. SENF

Sample Matrix: S/W

(X) Grab ( ) Composite

SAMPLING INFORMATION

Date/Time 5-17-13 1 ~~1220~~ 1220 RS

Water Level @ Sampling, Feet: N/A

Method of Sampling: MANUAL GRAB

Dedicated: (Y) N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1225	12.8	7.96	1637	—	-109	

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, 60°

Sample Characteristics: CLAY

COMMENTS AND OBSERVATIONS:

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

Date: 5/17/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: CONZA

Sample Point ID: 90-251

Field Personnel: R. SENF

Sample Matrix: CANAL

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-17-13 / 1205

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 (ORP)	Other ( )
1210	16.1	8.03	515	—	-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: SUNNY, 60°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: 5/17/13 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: LONZA | Sample Point ID: QS-4

Field Personnel: R-SENF | Sample Matrix: SERP

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-17-13 1505 | Water Level @ Sampling, Feet: N/A

Method of Sampling: MANUAL GRAB | Dedicated: (Y) / N

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

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1510	13.2	7.24	1824	—	115	—

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%)
C								
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUNNY, 60°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: 5/17/13 By: [signature] Company: JAC

FIELD OBSERVATIONS

Facility: Lonza

Sample Point ID: PZ-101

Field Personnel: PL

Sample Matrix: Gw

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1035

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1040

Date / Time Completed: 5-20-13 / 1100

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 16.55

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: ____

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
1045	ML/MN 150	WL 16.61		16.2	6.72	2486	13.06	111	0.22
1050		↓		16.6	6.75	2476	8.68	109	0.20
1055				16.7	6.71	2475	7.92	109	0.19
1100				16.9	6.72	2475	7.01	108	0.17

SAMPLE @ 1100 / 5-20-13

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: _____

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

Date: / / By: _____ Company: _____

FIELD OBSERVATIONS

Facility: CONTA | Sample Point ID: PZ-102

Field Personnel: PC | Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / ~~10~~ 1135 | Cond of seal: ( ) Good ( ) Cracked ( ) None (X) Buried ____ %

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1140 | Date / Time Completed: 5-20-13 / 1205

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

Initial Water Level, Feet: 15.86 | Elevation. G/W MSL: ____

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

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

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

Purge Observations: ____ | 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
1150	MP/MW 100	WL 15.90		16.1	6.82	3244	1.07	-23	0.33
1155	↓	↓		15.7	6.82	3251	1.01	-25	0.32
1200				15.5	6.82	3250	0.98	-27	0.30
1205	↓	↓		16.2	6.82	3257	0.95	-29	0.28

SAMPLED @ 1205 / 5-2013

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: _____

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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: PZ-103

Field Personnel: PL, RS, PN, TW Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-17-13 / 1313 Cond of seal: (X) Good ( ) Cracked ____ %
( ) None ( ) Buried

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-17-13 / 1315 Date / Time Completed: 5-17-13 / 1330

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

Initial Water Level, Feet: 14.31 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)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
	mL/min | WL							
1320	150 | 15.12		14.3	6.78	3055	2.05	-61	0.56
1325	↓ | ↓		14.5	6.79	3069	1.91	-61	0.52
1330	↓ | ↓		14.6	6.77	3074	1.70	-63	0.49

Sampled on 5-17-13 @ 1330

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: _____

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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: PZ-104

Field Personnel: PL, RS, PN, TW Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-17-13 / 1003 Cond of seal: (Y) Good ( ) Cracked ( ) None ( ) Buried %

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

If prot.casing; depth to riser below:

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-17-13 / 1005 Date / Time Completed: 5-17-13/1025

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

Initial Water Level, Feet: 14.43 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
	mL/min | WL							
1010	150 | 14.48		13.7	6.95	2638	0.2	-178	0.49
1015	14.49		13.8	6.99	2628	4.99	-92	0.51
1020	14.49		13.8	6.93	2616	4.64	-102	0.52
1025	14.51		13.7	6.91	2592	4.52	-110	0.52

Sampled on 5-17-13 @ 1025

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: _____

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

Date: / / By: _____ Company: _____

FIELD OBSERVATIONS

Facility: LCW2A

Sample Point ID: P2-105

Field Personnel: PL, PA

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-21-13 / 1117

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-21-13 / 1120

Date / Time Completed: 5-21-13 / 1140

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 11.95

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: ____

Start Turbid Grey

Finish Turbid Grey

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1125	mL/m 150	mL 12.13		17.6	7.06	1449	93	-142	0.52
1130	↓	12.15		17.9	7.01	1415	94	-140	0.50
1185	↓	↓		18.2	7.00	1399	92	-138	0.49
1140	↓	↓		18.5	6.99	1398	93	-138	0.48

Sampled @ 1140 / 5-21-13

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: _____

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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: PZ-106

Field Personnel: PL, PN | Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-21-13 / 1325 | Cond of seal: ( ) Good ( ) Cracked ( ) None (A) Buried ____ %

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-21-13/ 1332 | Date / Time Completed: 5-21-13/ 1355

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

Initial Water Level, Feet: 12.58 | 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 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
1340	MP 80	WL 12.64		18.2	5.89	9973	20.3	-4	0.52
1345	↓	12.69		18.3	5.92	9990	17.98	-3	0.50
1350		12.75		17.9	5.90	10,000	15.25	-2	0.49
1355	↓	12.81		17.5	5.90	10,010	14.75	-2	0.48

Sample @ 1355 / 5-21-13

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: _____

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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: PZ-107

Field Personnel: PC, PN | Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-21-13 / 1253 | Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-21-13 / 1255 | Date / Time Completed: 5-21-13/1315

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

Initial Water Level, Feet: 12.11 | Elevation. G/W MSL: ____

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

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

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

Purge Observations: ____ | 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	MAX 200	WL 12.13		17.1	6.98	3499	5.39	-89	0.62
1305	↓	↓		17.5	6.95	3440	5.27	-91	0.60
1310				17.6	6.90	3439	5.20	-91	0.59
1315	↓	↓		17.9	6.90	3435	5.18	-91	0.58

SAMPLED @ 1315 / 5-21-13

PC

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: _____

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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-3

Field Personnel: PL, AN, JW | Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-22-13 / 1015 | Cond of seal: ( ) Good ( ) Cracked ( ) None (X) Buried ____ %

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-22-13 / 1017 | Date / Time Completed: 5-22-13 / 1040

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

Initial Water Level, Feet: 11.65 PL | 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 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
1025	100	11.67		18.1	7.04	10,600	24.2	-190	0.47
1030	↓	11.69		18.0	7.09	10,620	23.9	-187	0.45
1035	↓	11:70		17.7	7.11	10.630	22.1	-186	0.43
1040	↓	11:72		18.3	7.10	10,630	20.3	-185	0.42

Sample @ 1040 / 5-22-13

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: _____

_____

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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 5-23-13 / 1125

Water Level @ Sampling, Feet: 19.63

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 ( )
1129	14.7	7.71	1442	18.29	-115	

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: clouds 70

Sample Characteristics: Clear Red TINT

COMMENTS AND OBSERVATIONS:

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

Date: 5/23/13 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-6A

Field Personnel: PL, PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-21-13 / 1203

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-21-13 / 1200

Date / Time Completed: 5-21-13 / 1230

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 13.78

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ____

Dedicated: Y / (N)

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: ____

Start SL TURB. yellow tint

Finish SL 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
1215	mV/m 200	wl 13.80		19.7	7.39	4391	41.7	-219	0.41
1220	↓	↓		20.2	7.42	4482	25.1	-220	0.40
1225	↓	↓		19.9	7.42	4482	24.6	-220	0.38
1230	↓	↓		19.7	7.45	4479	23.9	-222	0.37

SAMPLED @ 1230 / 5-21-13

DL 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: _____

_____

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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, PN

Sample Matrix: GW

(A) Grab ( ) Composite

SAMPLING INFORMATION

Date/Time 5-23-13 / 1155

Water Level @ Sampling, Feet: 27.90

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 ( )
1157	15.1	7.39	1839	5.73	-134	

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: Clouds 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: 5/23/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-8

Field Personnel: PL, PN, JW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-22-13 / 1350

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-22-13 / 1400

Date / Time Completed: 5-22-13 / 1425

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 13.01

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 SC Rinsate yellow Finish Clear 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
	ml/mn	wl							
1410	200	13.13		18.4	7.80	5580	7.37	-24	0.32
1415	↓	↓		16.4	7.90	5466	6.99	-30	0.30
1420				16.2	7.91	5460	5.02	-31	029
1425	↓	↓		16.5	7.91	5458	4.76	-31	0.27

Stopped @ 1425 / 5-22-13

PL 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-9

Field Personnel: PL, PN

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-23-13 / 1145

Water Level @ Sampling, Feet: 27.97

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 ( )
1146	16.5	7.31	2087	5.52	-96	

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 AND 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: 5/23/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-103

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-22-13 / 1055

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-22-13 / 1100

Date / Time Completed: 5-22-13 / 1125

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 6.35

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
1110	ml/100 | WL 6.40		13.7	7.01		CLEAR	-80	0.95
1115	|		13.5	7.10		↓	-77	0.82
1120	|		13.5	7.12		↓	-75	0.80
1125	↓ | 6.40		13.5	7.12	772	5.32	-74	0.79

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID BR-103

Date/Time 5-22-13 / 1130 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: Sunny, 75°F

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

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

Date: 5/22/13 By: _____ Company: JAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-104

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-22-13 / 1215

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-22-13 / 1220

Date / Time Completed: 5-22-13 / 1250

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 11.97

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
1230	100 ml/min	WL		12.4	8.02	385	13.7	42	0.85
1235	100			12.4	7.95	381	9.25	-36	0.73
1240	100			12.3	7.92	386	9.13	-35	0.75
1245	100			12.3	7.89	383	9.10	-34	0.76
1250	100			12.3	7.87	382	9.13	-35	0.75

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: 5/22/13 By: BJ Company: JEC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-105

Field Personnel: TW, PL, RS, PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1402

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

Prot. Casing/riser height:

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

If prot.casing; depth to riser below:

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1405

Date / Time Completed: 5-20-13 / 1420

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

Riser Diameter, Inches: 4"

Initial Water Level, Feet: 22.93

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: (Y) / N

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: 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
	ml/min	GAL							
1410	180	22.96		17.9	7.95	2267	19.8	-244 ~~-249~~ PN	
1415	↓	↓		17.7	7.68	2260	18.1	-244	
1420				17.6	7.71	2251	17.7	-239	

Sampled on 5-20-14 @ 1420

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: TW, PL, RS, PN | Sample Matrix: G-W

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1258 | Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried ____ %

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1300 | Date / Time Completed: 5-20-13/1320

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

Initial Water Level, Feet: 25.62 | Elevation. G/W MSL: ____

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

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

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

Purge Observations: 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
	mfgmax / WL							
1310	80 / 26.09		19.6	6.90	24990	3.56	-301	
1315	↓ / ↓		19.9	6.91	25180	3.25	-326	
1320	↓ / ↓		20.0	6.97	25680	3.37	-334	

Sampled on 5-20-13 @ 1320

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-106

Field Personnel: TW, PL, RS, PN | Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1113 | Cond of seal: (Y) Good ( ) Cracked ( ) None ( ) Buried ____ %

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1115 | Date / Time Completed: 5-20-13 / 1140

Surf. Meas. Pt: ( ) Prot. Casing (Y) Riser | Riser Diameter, Inches: 4"

Initial Water Level, Feet: 23.67 | 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
	mL/min / WL							
1125	150 / 23.40		14.6	6.70	3431	10.1	38	0.91
1130			14.8	6.98	3459	14.2	-11	0.87
1135			14.6	6.93	3467	13.9	-16	0.87
1140			14.6	6.91	3463	13.2	-15	0.84

Sampled on 5-20-13 @ 1140

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-108

Field Personnel: TW, PL, RS, PN Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1018 Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

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

If prot.casing; depth to riser below:

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1020 Date / Time Completed: 5-20-13/1025

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser Riser Diameter, Inches: 4"

Initial Water Level, Feet: 28.48 Elevation. G/W MSL:

Well Total Depth, Feet: 29.75 Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 0.820 Dedicated: (Y) / N

Total Volume Purged, Gal: 1.0 gal to Dry Purged To Dryness (Y) / N

Purge Observations: Start Brown Finish Brown

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1445			19.2	7.94	1073	327	-187	

Sampled on 5-20-13 @1435

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-112 D

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1255

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1300

Date / Time Completed: 5-20-13 / 1320

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 36.20

Elevation. G/W MSL:

Well Total Depth, Feet: 72.15

Method of Well Purge: BAILER

One (1) Riser Volume, Gal: 5.9

Dedicated: (Y) N

Total Volume Purged, Gal: 18.0

Purged To Dryness Y / (N)

Purge Observations:

Start CLEAR Finish CLEAR

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1310			10.8	7.13	2910	4.95	-207	—
1315			10.9	7.20	2612	10.8	-199	—
1320			~~7.24~~	7.24	2528	10.5	-196	—
			11.0 RS					

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID BR-112D

Date/Time 5/20/13 / 1330 Water Level @ Sampling, Feet: 36.22

Method of Sampling: BAILER 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 ( )
1335	~~10.6~~ RS ~~7.31~~ RS	7.31	2522	8.57	-201	—
	10.6					

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 80°F

Sample Characteristics: CLEAR WITH PARTICLES

COMMENTS AND OBSERVATIONS:

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

Date: 5/29/13 By: BJ Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-113D

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1210

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1215

Date / Time Completed: 5-20-13 / 1240

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 31.39

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: SAMPLE PRO BLADDER PUMP

One (1) Riser Volume, Gal:

Dedicated: Y (N)

Total Volume Purged, Gal:

Purged To Dryness Y (N)

Purge Observations: LO-FLO

Start CLEAR Finish CLEAR

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1220	120 mL/Min	31.62		12.7	6.81	2523	5.77	-155	0.50
1225	120	31.63		12.7	6.77	2895	6.09	-177	0.37
1230	120	31.63		12.7	6.78	2920	6.03	-180	0.40
1235	120	31.63		12.7	6.77	2916	5.95	-182	0.41

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID BC-113D

Date/Time 5-20-13 / 1245 Water Level @ Sampling, Feet: 31.63

Method of Sampling: BLADDER 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)
1240	12.7	6.81	2910	5.92	-180	0.42

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, 75°F

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS:

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

Date: 5/29/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-114

Field Personnel: PL

Sample Matrix: ~~Study~~ GW

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1324

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1345

Date / Time Completed: 5-20-13 / 1410

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: ~~13.56~~ 13.56

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
1355	ml/m 200	WL 13.59		19.4	6.94	1826	4.13	-72	0.33
1400	↓	↓		19.3	6.90	1830	3.40	-75	0.31
1405	↓	↓		18.7	6.90	1833	2.97	-77	0.30
1410	↓	↓		18.5	6.90	1833	2.11	-78	0.28

SAMPLE @ 1410 / 5-20-13

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-116

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-17-13 / 1230

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-17-13 / 1255

Date / Time Completed: 5-17-13 / 1335

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 28.30

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: STAMPER PRO

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start SC-TINT 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
1310	150 / 28.52		16.4	6.87	2791	13.3	-85	0.85
1325	150 / 28.52		16.3	6.89	2971	10.9	-83	0.79
1335	150 / 28.52		16.3	6.89	3082	11.1	-82	0.83

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID BR-11D

Date/Time 5-17-13 / 1335 Water Level @ Sampling, Feet: 28.52

Method of Sampling: SAMPLE PRO 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 ( )	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: Sunny, 60°F

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

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

Date: 5/17/13 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-116D

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-17-13 / 1228

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: 1340/5-17-13

Date / Time Completed: 5-17-13 / 1415

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 35.76

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: SAMPLE PRO

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
1350	150	35.90		16.0	7.12	1667	17.7	-135	0.52
1400	150	35.91		16.0	6.99	1842	14.5	-121	0.50
1410	150	35.91		16.0	6.98	1839	14.6	-118	0.49

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID BR-116 D

Date/Time 5-17-13 1 1415 Water Level @ Sampling, Feet: 35.91

Method of Sampling: SAMPLE PRO 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 ( )	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: Sunny, 60°

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS:

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

Date: 5/17/13 By: [signature] Company: JAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-117D

Field Personnel: R. SENF

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 5-17-13 1090

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-17-13 / 0915

Date / Time Completed: 5-17-13 / 0955

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 50.28

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: SAMPLE PRO

One (1) Riser Volume, Gal:

Dedicated: Y (N)

Total Volume Purged, Gal:

Purged To Dryness Y (N)

Purge Observations: LO-FLO

Start PARTICULATE Finish BLACK TINT

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	WL	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
0930	INIT. 150	INIT. 50.82		10.7	8.92	1655	BLACK SPECS	-60	0.68
0940	150	50.80		10.7	8.23	1592	↓	-71	0.49
0950	↓	50.80		10.7	8.21	1575	↓	-75	0.50
0955	↓	↓		10.8	8.23	1569	43.3	-76	0.51

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID BR-117 D

Date/Time 5-17-13 / 0955 Water Level @ Sampling, Feet: 50.80

Method of Sampling: SAMPLE PRO 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 ( )	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~~ 1000 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
C	7.00	4.00	—	6.97	1000			
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUNNY, 55°

Sample Characteristics: BLACK TINT

COMMENTS AND OBSERVATIONS:

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

Date: 5/17/13 By: [signature] Company: Tx

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-118D

Field Personnel: R. SENF

Sample Matrix: G/W

MONITORTING WELL INSPECTION:

Date/Time 5-17-13 / 1000

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-17-13 / 1005

Date / Time Completed: 5-17-13 / 1030

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 49.10

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: SAMPLE PUMP

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start BLACK TINT

Finish BLACK TINT

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1010	ml/m 150	WL 49.39		11.2	7.99	1217	BLACK TINT	-62	0.49
1015	150	49.40		11.0	8.30	1182	↓	-56	0.39
1025	150	49.40		10.9	~~8~~ 8.36	1151	↓	-54	0.37
1030	150	49.40		11.0	8.33	1180	45.7	-54	0.36

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID BR-118D

Date/Time 5-17-13 / 1030 Water Level @ Sampling, Feet: 45.40

Method of Sampling: SAMPLE PRO 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 ( )	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%)
C								
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: SUNNY, 50°

Sample Characteristics: BLACK TINT

COMMENTS AND OBSERVATIONS:

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

Date: 5/17/13 By: [signature] Company: TDC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-122 D

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-17-13 / 1045

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-17-13 / 1050 RS

Date / Time Completed: 5-17-13 / 1120

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 45.41

Elevation. G/W MSL:

Well Total Depth, Feet: ~~45.41~~ RS

Method of Well Purge: SAMPLE PRO

One (1) Riser Volume, Gal:

Dedicated: Y (N)

Total Volume Purged, Gal:

Purged To Dryness Y (N)

Purge Observations: CO-FLO

Start BLACK TINT Finish BLACK TINT

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	WL	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1100	150	45.72		10.7	7.19	2235	CLEAR	-186	0.57
1110	150	45.73		10.9	7.16	2229	↓	-179	0.55
1120	150	45.73		10.9	7.11	2232	25.3	-182	0.54

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID BR-122D

Date/Time 5-17-13 1120 Water Level @ Sampling, Feet: 45.23

Method of Sampling: SAMPLER PRO 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 ( )	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: 5/17/13 By: [signature] Company: TOC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-123D

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-17-13 / 1125

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-17-13 / 1128

Date / Time Completed: 5-17-13 / 1158

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 45.77

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: SAMPLE PRO

One (1) Riser Volume, Gal: ____

Dedicated: Y / (N)

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: CO-FCO

Start BLACK TINT Finish CLEAR

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	WL	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1140	150	46.00		10.9	6.99	2036	21.3	-169	0.45
1147	150	46.00		10.9	7.03	2032	13.6	-173	0.43
1155	150	46.00		10.9	7.10	2030	12.9	-175	0.42

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID BR-123D

Date/Time 5-17-13 1158 Water Level @ Sampling, Feet: 46.00

Method of Sampling: SAMPLE PRO 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 ( )	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: SUNNY, 50°F

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS:

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

Date: 5/17/13 By: [signature] Company: JAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: BR-126

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-17-13 / 1234 /

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

Prot. Casing/riser height:

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

If prot.casing; depth to riser below:

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-17-13 / 1235

Date / Time Completed: 5-17-13 / 1255

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 8.95

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
	mL/min | WL							
1245	200 | 9.11		14.8	7.05	986	1.81	-50	0.62
1250	↓ | 9.11		15.0	6.99	989	2.01	-57	0.60
1255	↓ | 9.11		15.2	6.97	982	2.14	-63	0.59

Sampled @1255 on 5-17-13

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-127

Field Personnel: PL, PN

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION

Date/Time 5-23-13 / 1115

Water Level @ Sampling, Feet: 12.85

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 ( )
1117	16.1	8.21	2831	20.5	-164	

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 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: 5/23/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: MW-103

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-22-13 / 1050

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-22-13 / 1140

Date / Time Completed: 5-22-13 / 1205

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 1.70

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 TO SL TAN

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1150			13.9	7.19	698	CLEAR TO SL TAN	-19	0.95
1155			13.8	7.22	701	↓	-46	0.82
1200			13.8	7.23	694	↓	-49	0.79
1205			13.8	7.26	690	60.3	-52	0.81

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID MW-103

Date/Time 5-22-13 / 1205 Water Level @ Sampling, Feet: _____

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 ( )	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: 5/22/13 By: _____ Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: MW-104

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-22-13 / 1305

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-22-13 / 1310

Date / Time Completed: 5-22-13 / 1335

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 8.28

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: (Y) N

Total Volume Purged, Gal:

Purged To Dryness Y (N)

Purge Observations: CO-FCO

Start SL. TURBID Finish TAN 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
1320	ml/min 80		12.9	7.51	663	152	61	
1325	70		12.8	7.49	666	88.2	59	
1330	70		12.8	7.43	665	85.3	57	
1335	70		12.8	7.41	663	86.0	55	

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: 5/22 13 By: _____ Company: JOC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: MW-106

Field Personnel: TW, PL, RS, PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1033

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1035

Date / Time Completed: 5-20-13 / 1055

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

Riser Diameter, Inches: 2"

Initial Water Level, Feet: 11.39

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
	ml/min	WL							
1045	150	12.29		12.7	6.64	1721	5.48	-51	1.09
1050	↓	12.31		12.9	6.67	1836	4.99	-47	1.02
1055	↓	12.34		13.1	6.72	1891	4.62	-40	0.98

Sampled on 5-20-13 @ 1055

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: _____

_____

_____

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_____

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-114

Field Personnel: RL

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1235

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

Prot. Casing/riser height:

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

If prot.casing; depth to riser below:

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1240

Date / Time Completed: 5-20-13 / 1310

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 10.18

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations:

Start SL TURBID 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
1250	ML/MIN 80	WL 10.23		19.1	7.24	1111	24.7	-15	0.77
1255	↓	↓		19.6	7.20	1080	17.15	-10	0.75
1300				20.1	7.18	1080	14.61	-9	0.74
1305				20.6	7.18	1080	11.19	-7	0.73
1310	↓	↓		20.5	7.18	1079	10.67	-7	0.72

SAMPLE @ 1310 5-20-13

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: _____

_____

_____

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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: PL, PN

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-21-13 / 1413

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-21-13 / 1417

Date / Time Completed: 5-21-13 / 1435

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 8.83

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ____

Dedicated: Y / (N)

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: ____

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
1425	mL/m 60	mL 8.05		18.1	7.73	3925	12.21	15	0.54
1430	↓	↓		19.7	7.69	3920	10.17	15	0.53
1435	↓	↓		18.9	7.68	3917	9.52	15	0.50

Sample @ 1435 / 5-21-13

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-10

Field Personnel: PL, AN, JW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-22-13 / 1137

Cond of seal: ( ) Good ( ) Cracked FORMER PUMP WELL % ( ) None ( ) Buried

Prot. Casing/riser height:

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

If prot.casing; depth to riser below:

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-22-13 / 1153

Date / Time Completed: 5-22-13 / 1215

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

Riser Diameter, Inches: PW

Initial Water Level, Feet: 10.11

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations:

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
1200	200	10.13	19.9	8.36	7221	3.72	-76	0.49
1205	↓	↓	20.1	8.37	7283	3.61	-74	0.48
1210			19.7	8.37	7287	3.41	-72	0.46
1215	↓	↓	19.6	8.37	7291	3.36	-70	0.44

SAMPLE @ 1215 / 5.22.13

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: _____

_____

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_____

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-12

Field Personnel: PL, AN, JW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-24-13 / 1138

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

Prot. Casing/riser height:

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

If prot.casing; depth to riser below:

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-24-13/ 1140

Date / Time Completed: 5-24-13/1205

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

Riser Diameter, Inches: PW

Initial Water Level, Feet: 12.17

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
1150	200	12.25		10.0	7.30	4729	18.9	-125	1.09
1155	↓	12.27		10.1	7.28	4706	10.5	-125	1.10
1200	↓	12.30		10.3	7.29	4709	9.8	-129	1.04
1205	↓	⊥		10.3	7.28	4711	10.1	-132	1.07

sampled on 5-24-13 @1205

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: _____

_____

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_____

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, PN

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION

Date/Time 5-23-13 / 1215

Water Level @ Sampling, Feet: 27.98

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 ( )
1217	16.8	7.14	2526	3.30	-146	

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 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: 5/23/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: PW-14

Field Personnel: PL, PN

Sample Matrix: GW

(N) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-23-13 / 1100

Water Level @ Sampling, Feet: 27.67

Method of Sampling: SAMPLE PORT

Dedicated: (Y) / N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1102	20.1	7.16	3151	266	-164	

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: LT RAIN 70

Sample Characteristics: TURBID GRAY

COMMENTS AND OBSERVATIONS:

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

Date: 5/23/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: PW-15

Field Personnel: PL, PN

Sample Matrix: GW

(X) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-23-13 / 1040

Water Level @ Sampling, Feet: 28.94

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 ( )
1045	15.1	7.91	4614	45.0	-82	

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: LT RAIN 70

Sample Characteristics: SC TURBID YELLOW

COMMENTS AND OBSERVATIONS:

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

Date: 5/23/13 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: PW-16

Field Personnel: PL, PN

Sample Matrix: GW

(Y) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 5-23-13 / 1240

Water Level @ Sampling, Feet: 13.51

Method of Sampling: ~~SAMPLE PORT~~ BAILER

Dedicated: (Y) N

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

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1242	15.9	7.16	4950	8.45	-145	

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: 5/23/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: PW-17

Field Personnel: PL, AN, JW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-24-13 / 1045

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

Prot. Casing/riser height:

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

If prot.casing; depth to riser below:

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-24-13 / 1047

Date / Time Completed: 5-24-13 / 1110

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

Riser Diameter, Inches: PW

Initial Water Level, Feet: 12.07

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
1055	mL/m 200	wl 12.06		8.9	7.86	1972	3.77	-176	1.16
1100	↓	12.07		8.5	7.87	1979	3.85	-169	1.09
1105	↓	12.18		8.4	7.85	1987	3.67	-152	1.01
1110	↓	12.21		8.4	7.88	1981	3.44	-157	0.97

Sampled on 5-24-13 @ 1110

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: B-4

Field Personnel: PL, AN, JW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-21-13 / 1013

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-21-13 / 1014

Date / Time Completed: 5-21-13 / 1016

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 16.94

Elevation. G/W MSL: ____

Well Total Depth, Feet: 22.95

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: 1.0

Dedicated: Y / (N)

Total Volume Purged, Gal: Purge 1 GAL to DRY

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
	mL/min	mL							

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID B-4

Date/Time 5-22-13 / 1325 Water Level @ Sampling, Feet: 17.01

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 ( )
1326	20.1	7.62	8124	13.97	19	

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 83

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS: Limited volume

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

Date: 5/24/13 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: B5

Field Personnel: AL, AN, JW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-21-13 / 1011

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

Prot. Casing/riser height: _____

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

If prot.casing; depth to riser below: _____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-21-13 / 1020

Date / Time Completed: 5-21-13 / 1023

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 13.34

Elevation. G/W MSL: _____

Well Total Depth, Feet: 18.00

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: 0.76

Dedicated: Y / (N)

Total Volume Purged, Gal: Purged 1 GAL TO Dry

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
	mL/hr	mL							

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID B5

Date/Time 5-22-13 / ~~1345~~ 1345 Water Level @ Sampling, Feet: 1337

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 ( )
1347	20.6	7.74	3458	20.7	-3	

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: HAZY 83

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

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

Date: 5/24/13 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: B-7

Field Personnel: PL, AN, JW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-24-13 / 1407

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-24-13 / 1410

Date / Time Completed: 5-24-13 / 1435

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

Riser Diameter, Inches: ____

Initial Water Level, Feet: 15.28

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ____

Dedicated: (Y) N

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: ____

Start ORANGE Finish ORANGE turbid

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/hr	ml							
1420	150	16.92		12.2	7.02	1410	312	-26	0.76
1425	↓	16.96		12.4	6.99	1404	275	-23	0.76
1430	↓	↓		12.1	6.97	1401	269	-21	0.71
1435	↓	↓		12.2	6.98	1397	261	-21	0.67

Sampled on 5-24-13 @ 1435

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: B11

Field Personnel: AL, AN, JW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-21-13 / 1430

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

Prot. Casing/riser height: _____

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

If prot.casing; depth to riser below: _____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-21-13 / 1439

Date / Time Completed: 5-21-13 / 1443

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 7.54

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: 1.5 TODAY

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
	mL/mn	mL							

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID B11

Date/Time 5-22-13 / 1240 Water Level @ Sampling, Feet: 9.56

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 ( )
1242	19.7	7.65	2145	25.9	-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: HAZY 83

Sample Characteristics: SL TURBID

COMMENTS AND OBSERVATIONS: Limited volume

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

Date: 5/22/13 By: [signature] Company: TH

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: B-15

Field Personnel: PG, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-17-13 / 1049

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

Prot. Casing/riser height:

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

If prot.casing; depth to riser below:

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-17-13 / 1050

Date / Time Completed: 5-17-13 / 1106

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 7.19

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: Low flow

Start SL. Turbid Finish SL TURBID

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	WL							
1100	150	8.58		15.0	7.04	871	95.3	-31	0.27
1103	100	8.99		14.9	7.05	855	93.9	-49	0.29
1106	100	9.15		15.0	7.05	856	83.4	-63	0.33

Sampled before went dry @ 1106 on 5-17-13

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: B-16

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-17-13 / 1123

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

Prot. Casing/riser height:

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

If prot.casing; depth to riser below:

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-17-13 / 1125

Date / Time Completed: 5-17-13 / 1145

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 7.97

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
1130	150	8.91		12.7	7.20	1050	5.18	-51	0.51
1135		8.73		12.8	7.00	1056	5.21	-49	0.51
1140		8.73		12.8	7.05	1060	5.30	-42	0.53
1145		8.73		12.6	7.02	1068	5.34	-39	0.50

Sampled @ 1145 on 5-17-13

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: B-17

Field Personnel: AL, AN, JW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-22-13 / 1104

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-22-13 / 1105

Date / Time Completed: 5-22-13 / 1125

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 10.20

Elevation. G/W MSL: ____

Well Total Depth, Feet: ____

Method of Well Purge: Peristaltic

One (1) Riser Volume, Gal: ____

Dedicated: Y / (N)

Total Volume Purged, Gal: ____

Purged To Dryness Y / (N)

Purge Observations: ____

Start ~~clear~~ yellow Finish yellow / orange

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1110	ml/mn 120	wl 10.24		18.2	7.99	8779	120	-87	0.49
1115	↓	↓		18.3	7.99	8770	78.4	-90	0.47
1120	↓	↓		18.5	8.11	8766	80.2	-93	0.46
1125	↓	↓		18.7	8.15	8766	79.8	-93	0.44

SAMPLE @ 1125 5-22-13

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: W-5

Field Personnel: PL, AN, JW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-24-13 / 1241

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

Prot. Casing/riser height:

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

If prot.casing; depth to riser below:

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-24-13 / 1244

Date / Time Completed: 5-24-13 / 1310

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

Riser Diameter, Inches: VAULT

Initial Water Level, Feet: 8.02

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: Low Flow

Start Turbid 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
	ml/min	wl						
1255	150	9.17	12.9	7.68	611	66.8	-20	0.89
1300	↓	9.21	12.7	7.77	532	44.2	-25	0.83
1305	↓	9.30	12.7	7.73	548	47.1	-30	0.79
1310	↓	9.32	12.5	7.69	552	50.2	-33	0.81

Sampled on 5-24-13 @ 1310

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: E3

Field Personnel: PL, AN, JW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-21-13 / 1035

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

Prot. Casing/riser height: ____

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

If prot.casing; depth to riser below: ____

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

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

PURGE INFORMATION:

Date / Time Initiated: 5-21-13 / 1037

Date / Time Completed: 5-21-13 / 1040

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

Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 4.52

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: 1 GAL TO DRY

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
	mL/mn	mL							

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID E3

Date/Time 5-22-13 / 1300 Water Level @ Sampling, Feet: 5.15

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 ( )
1304	20.1	7.25	3180	36.5	-73	

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 63

Sample Characteristics: SC TURB Red Tint

COMMENTS AND OBSERVATIONS:

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

Date: 5/22/13 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: NESS - E

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1100

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1105

Date / Time Completed: 5-20-13 / 1125

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 23.27

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: PERISTALTIC

One (1) Riser Volume, Gal:

Dedicated: (Y) N

Total Volume Purged, Gal:

Purged To Dryness Y (N)

Purge Observations: 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
1110	100	23.80		14.5	6.72	479	18.3	-98	0.97
1115	100	23.82		14.4	6.85	477	15.2	-105	0.63
1120	100	23.79		14.3	6.88	475	14.9	-108	0.65
1125	100	23.77		14.3	6.86	483	15.0	-105	0.66

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID ~~BR~~ RS - NESS - E

Date/Time 5-20-13 / 1130 Water Level @ Sampling, Feet: 23.77

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 ( )	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: SUNNY, 70°F

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS:

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

Date: 5/20/13 By: [signature] Company: TN

FIELD OBSERVATIONS

Facility: LONZA

Sample Point ID: NESS - W

Field Personnel: PL, RS, PN, TW

Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 5-20-13 / 1017

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

Prot. Casing/riser height: —

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

If prot.casing; depth to riser below: —

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

% LEL: — / —

Vol. Organic Meter (Calibration/Reading):

Volatiles (ppm) — / —

PURGE INFORMATION:

Date / Time Initiated: 5-20-13 / 1020

Date / Time Completed: 5-20-13/1050

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

Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 31.45

Elevation. G/W MSL:

Well Total Depth, Feet:

Method of Well Purge: BLADDER PUMP

One (1) Riser Volume, Gal:

Dedicated: Y / (N)

Total Volume Purged, Gal:

Purged To Dryness Y / (N)

Purge Observations: LO-FLO

Start CLEAR Finish CLEAR

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other ORP	Other DO
1030	150 / 31.67		14.2	6.65	1515	7.10	-162	0.53
1040	150 / 31.67		14.4	6.72	1497	8.13	-157	0.49
1050	150 / 31.67		14.4	6.73	1488	8.19	-155	0.47

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID NESS - W

Date/Time 5-20-13 / 1055 Water Level @ Sampling, Feet: 31.67

Method of Sampling: BLADDER 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)
1055	14.5	6.75	1490	8.11	-156	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: SUNNY, 70°F

Sample Characteristics: CLEAR

COMMENTS AND OBSERVATIONS:

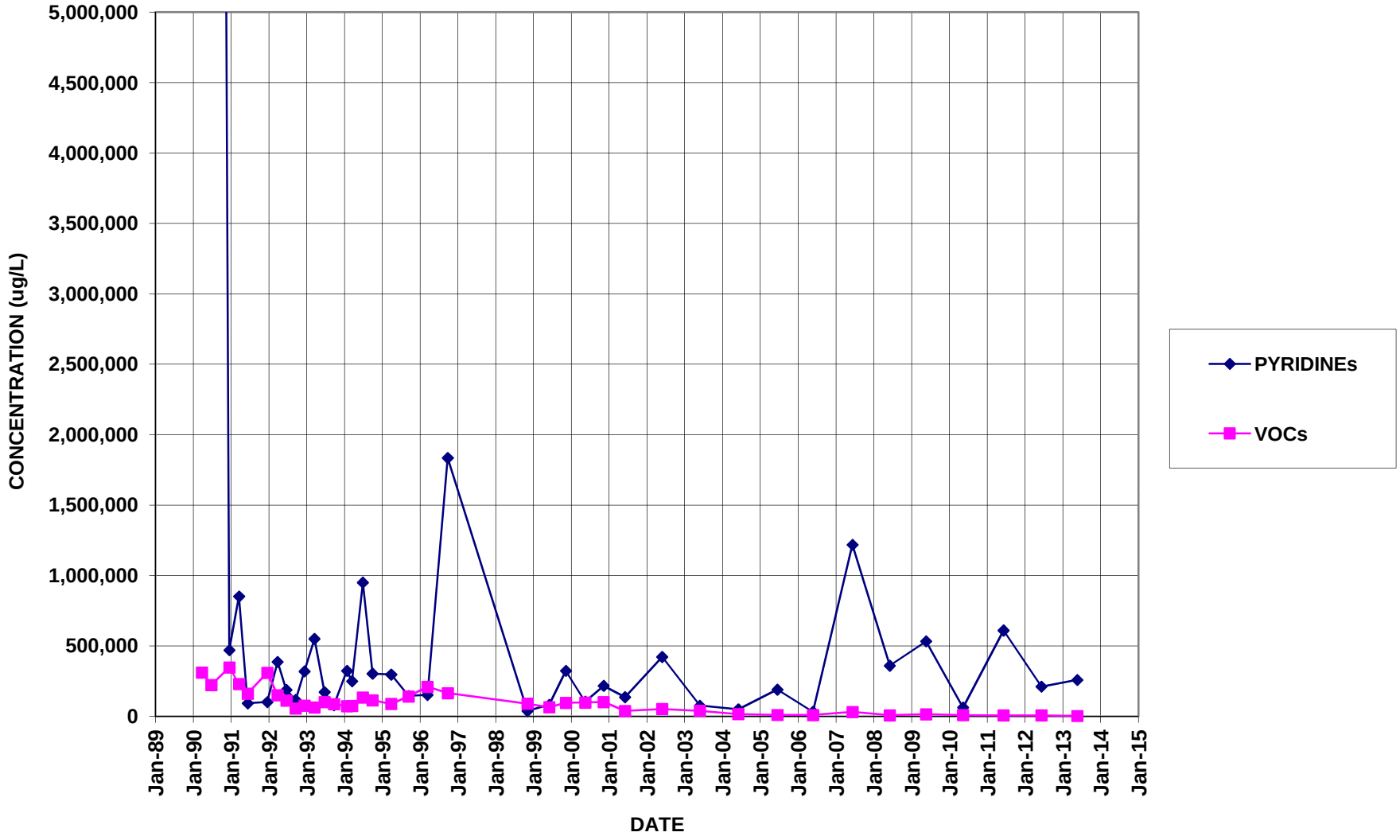
I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 5/20/13 By: [signature] Company: TAC

Appendix B

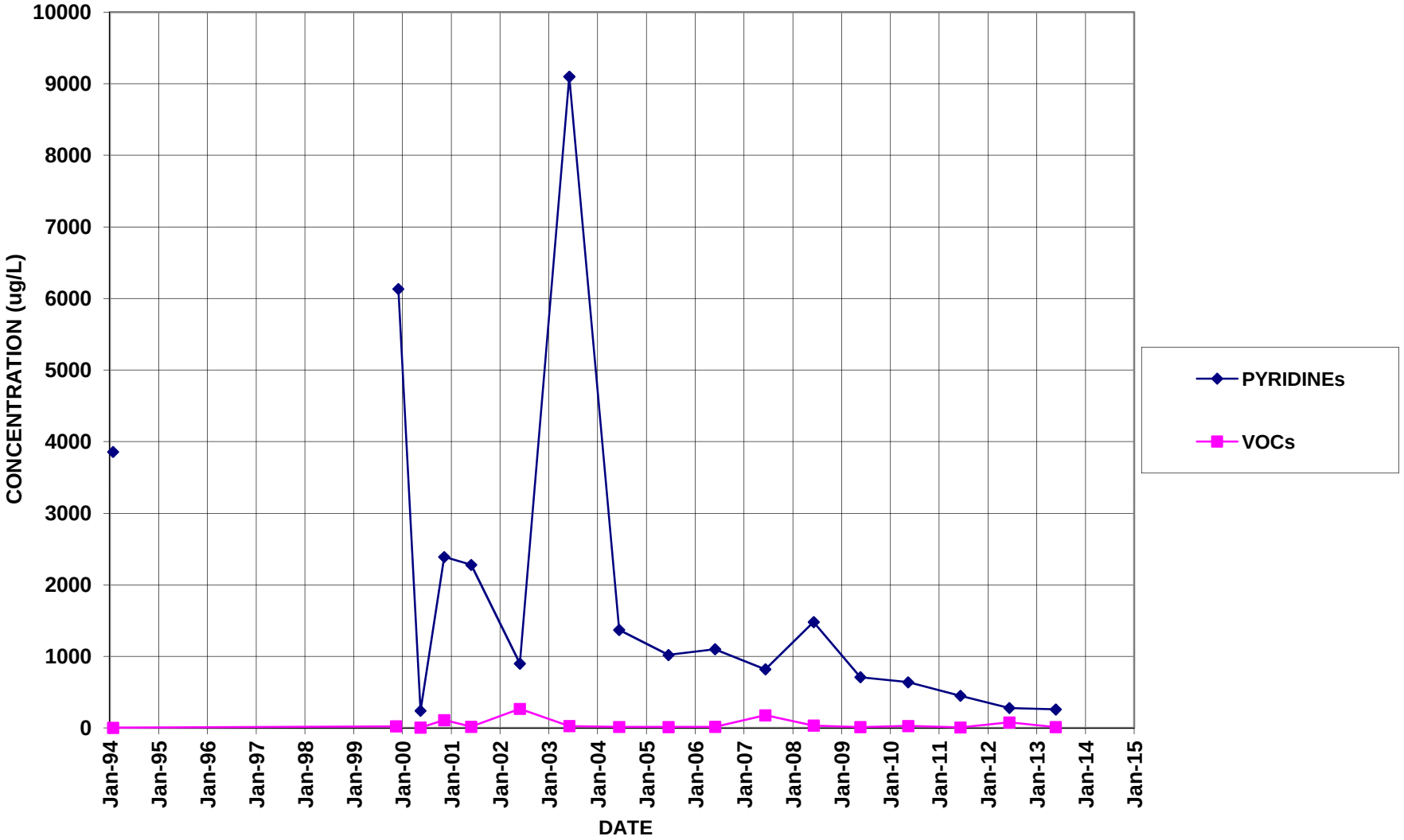
Well Trend Data

B-17



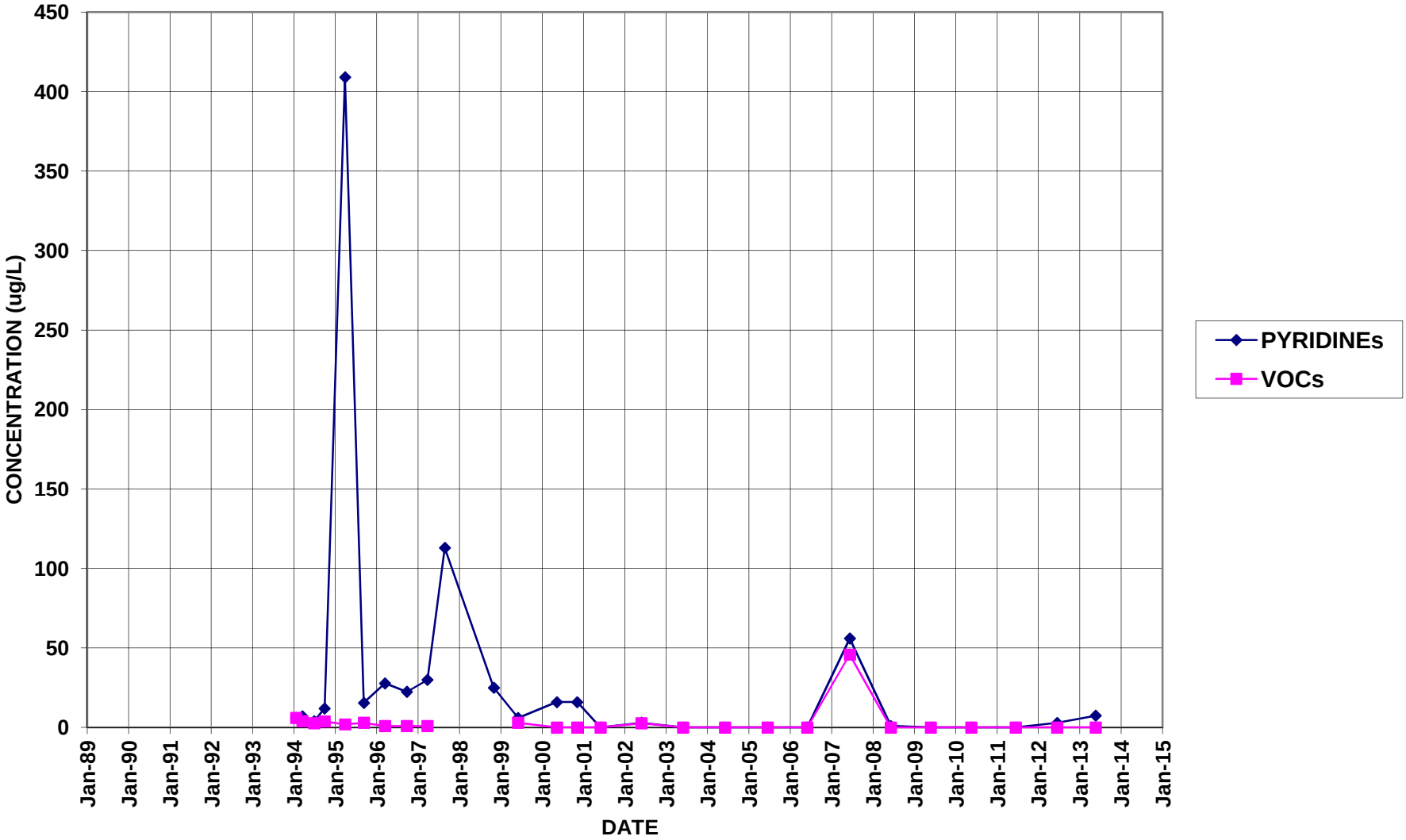
Prepared by: nmb
Reviewed by: jeb

B-7



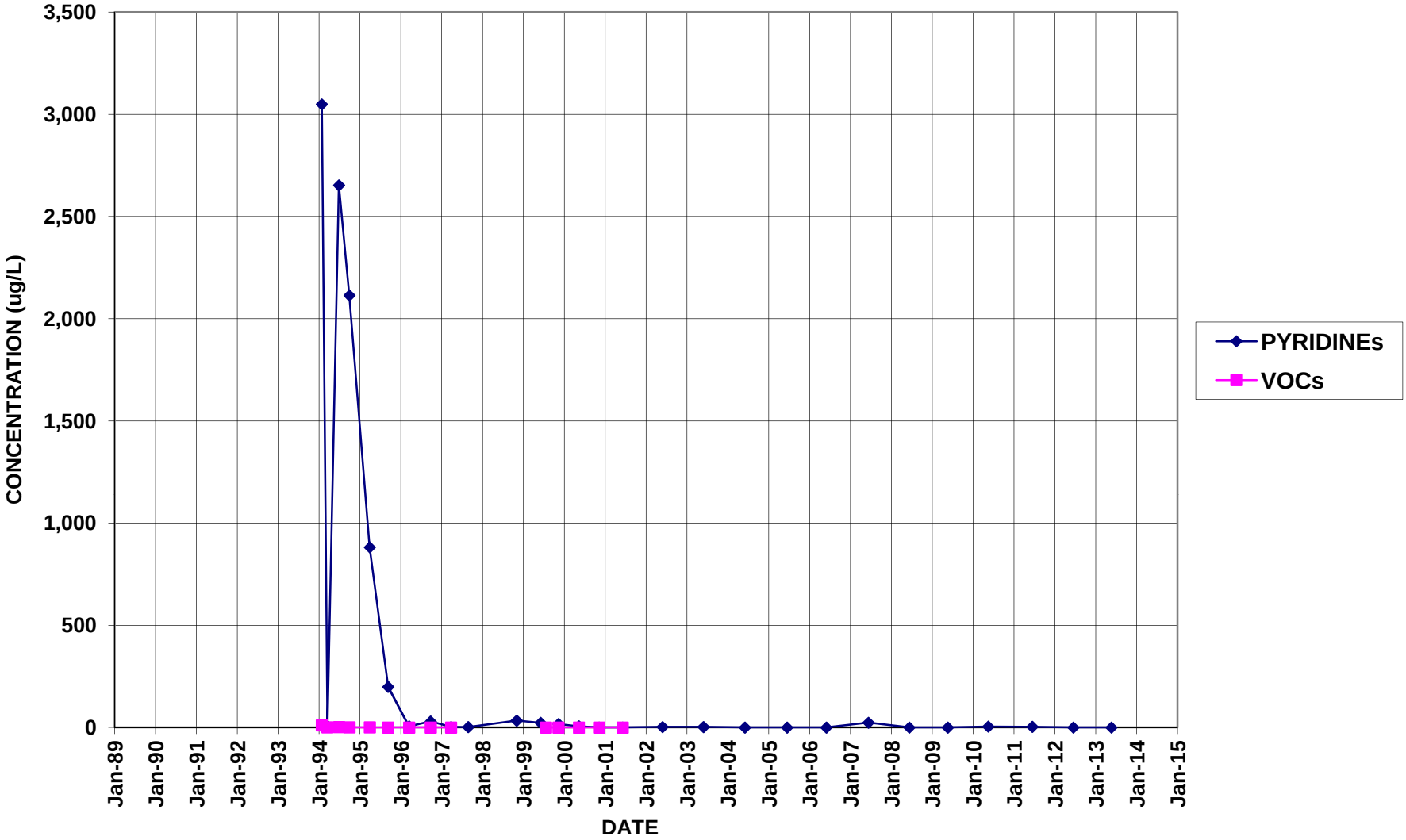
Prepared by: nmb
Reviewed by: jeb

BR-103

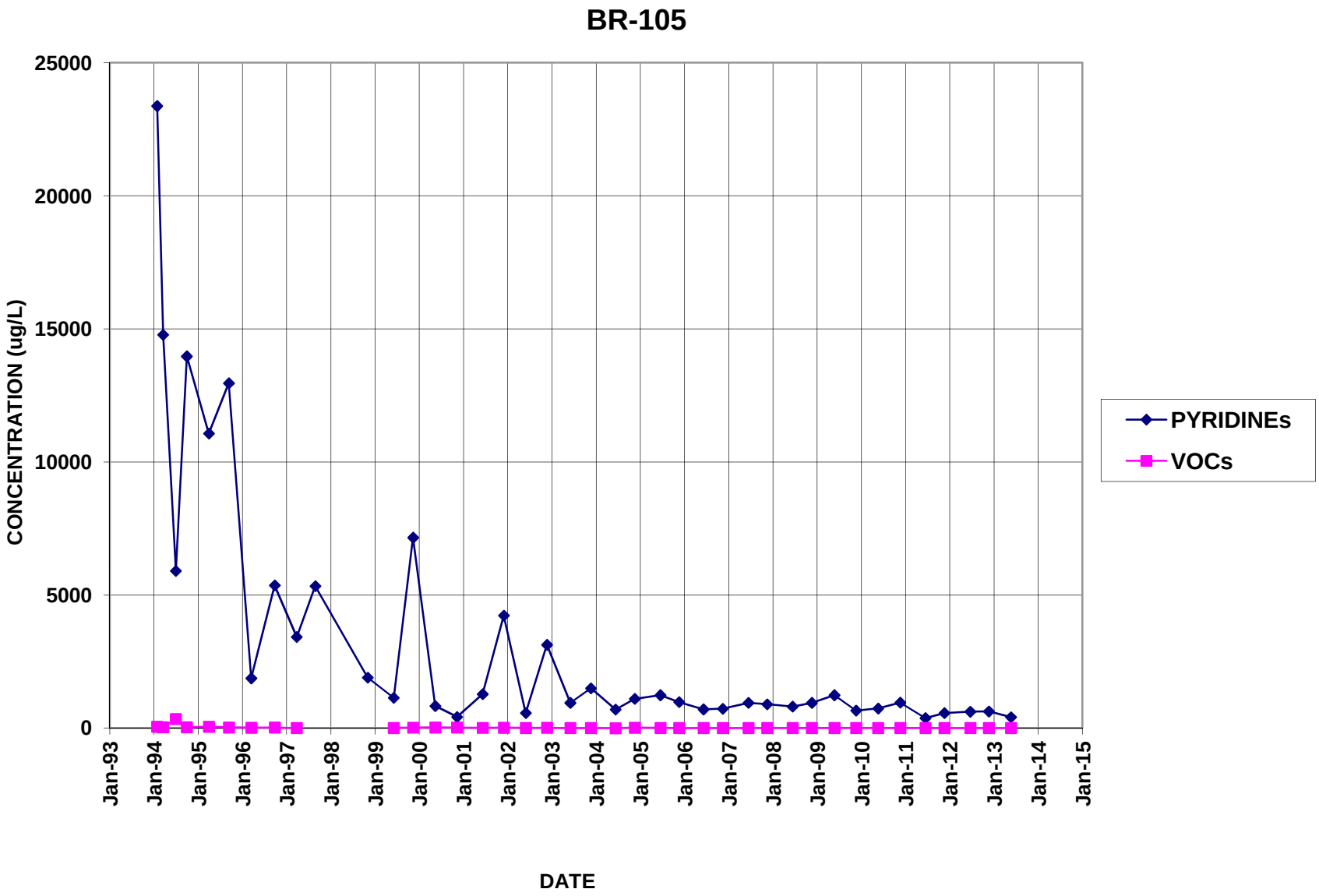


Prepared by: nmb
Reviewed by: jeb

BR-104

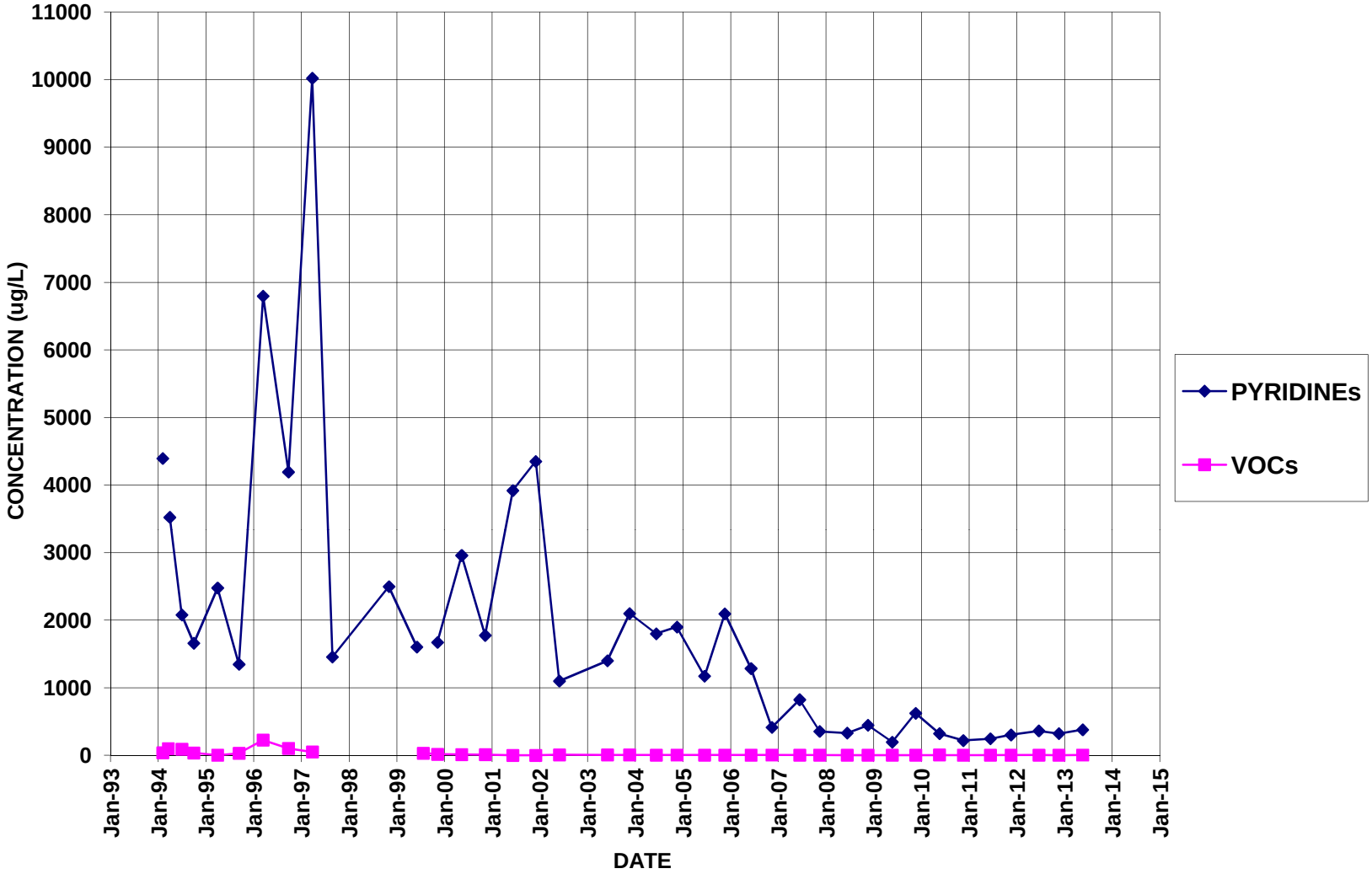


Prepared by: nmb
Reviewed by: jeb



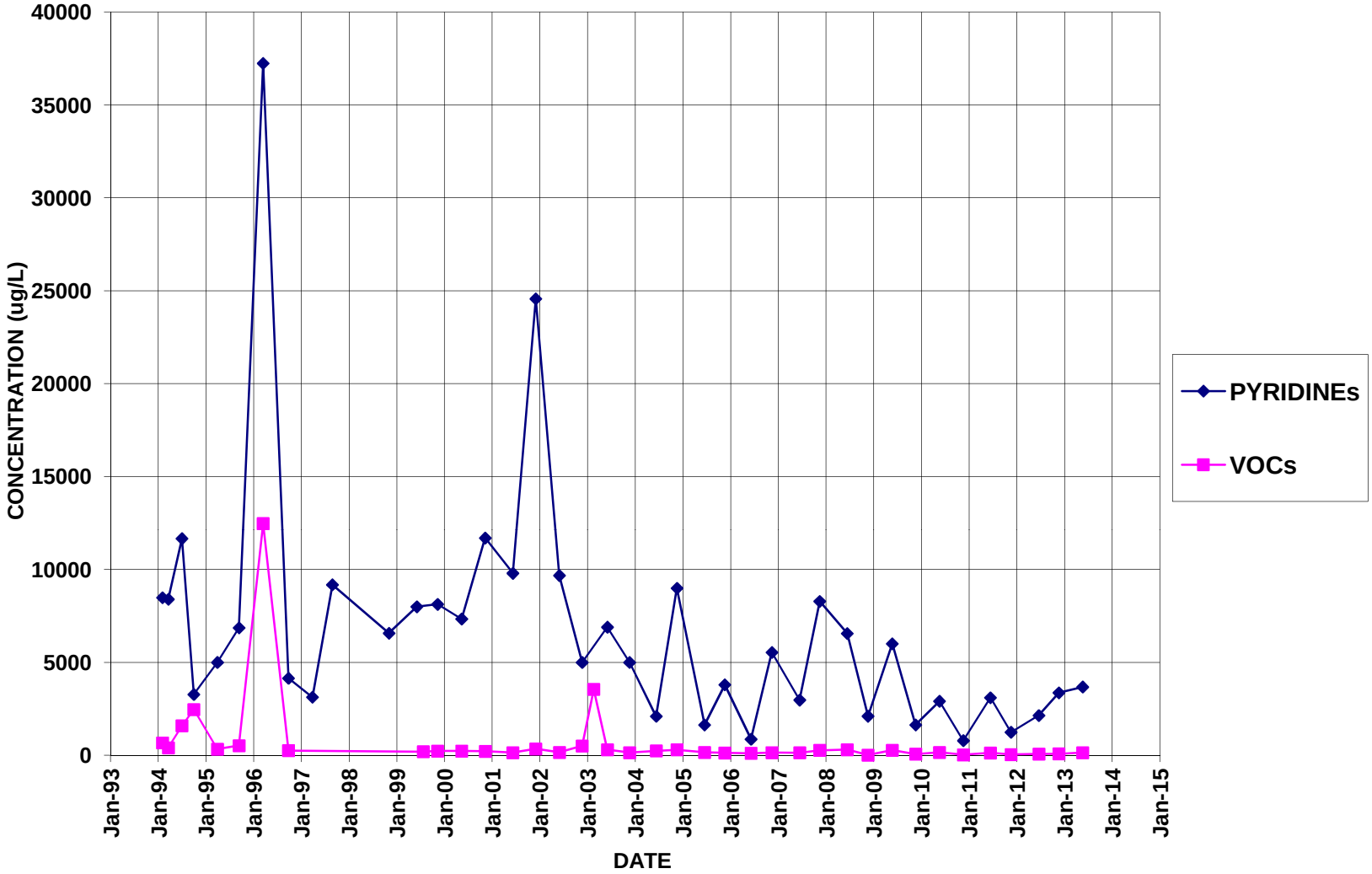
Prepared by: nmb
Reviewed by: jeb

BR-105D

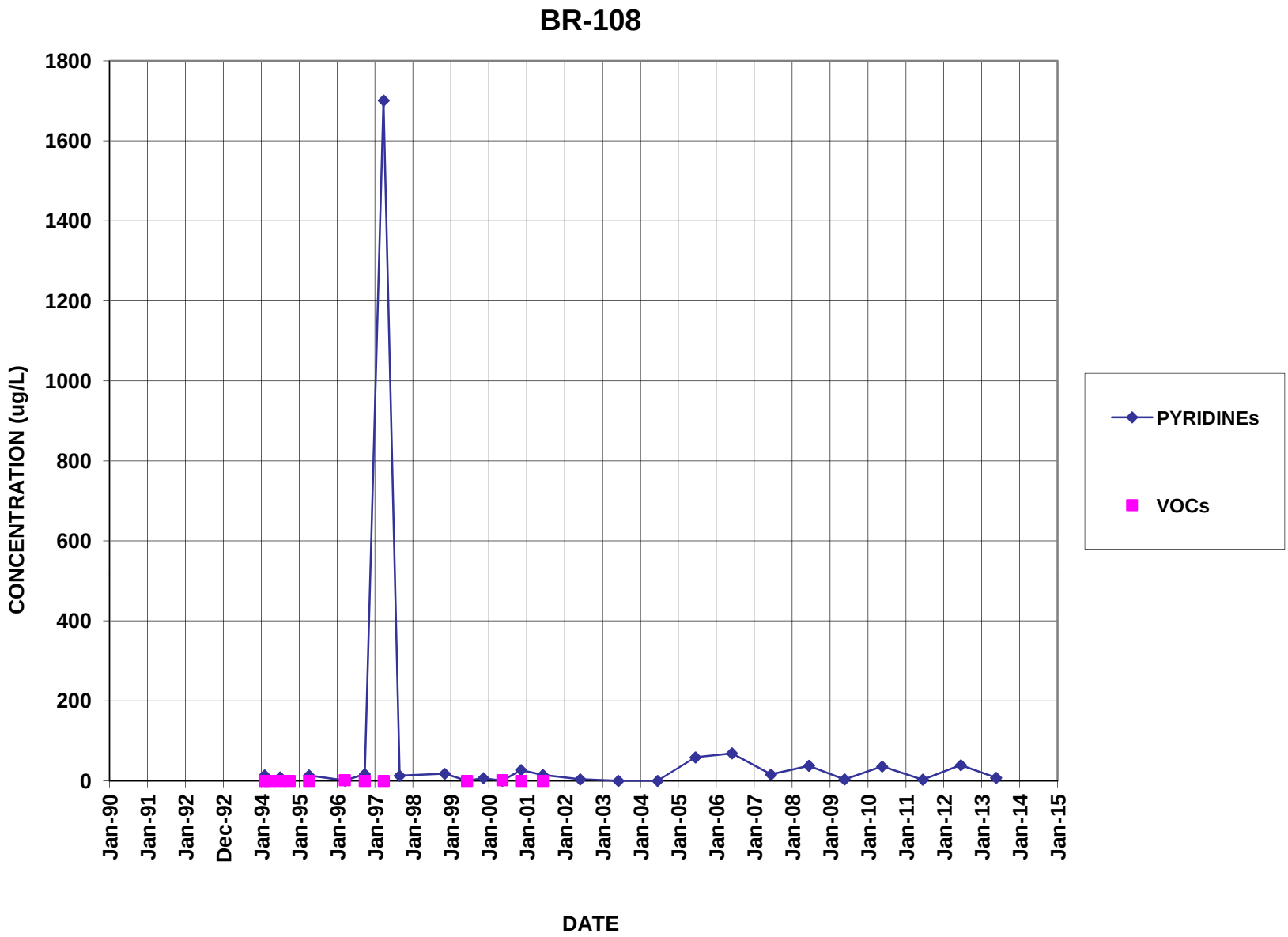


Prepared by: nmb
Reviewed by: jeb

BR-106

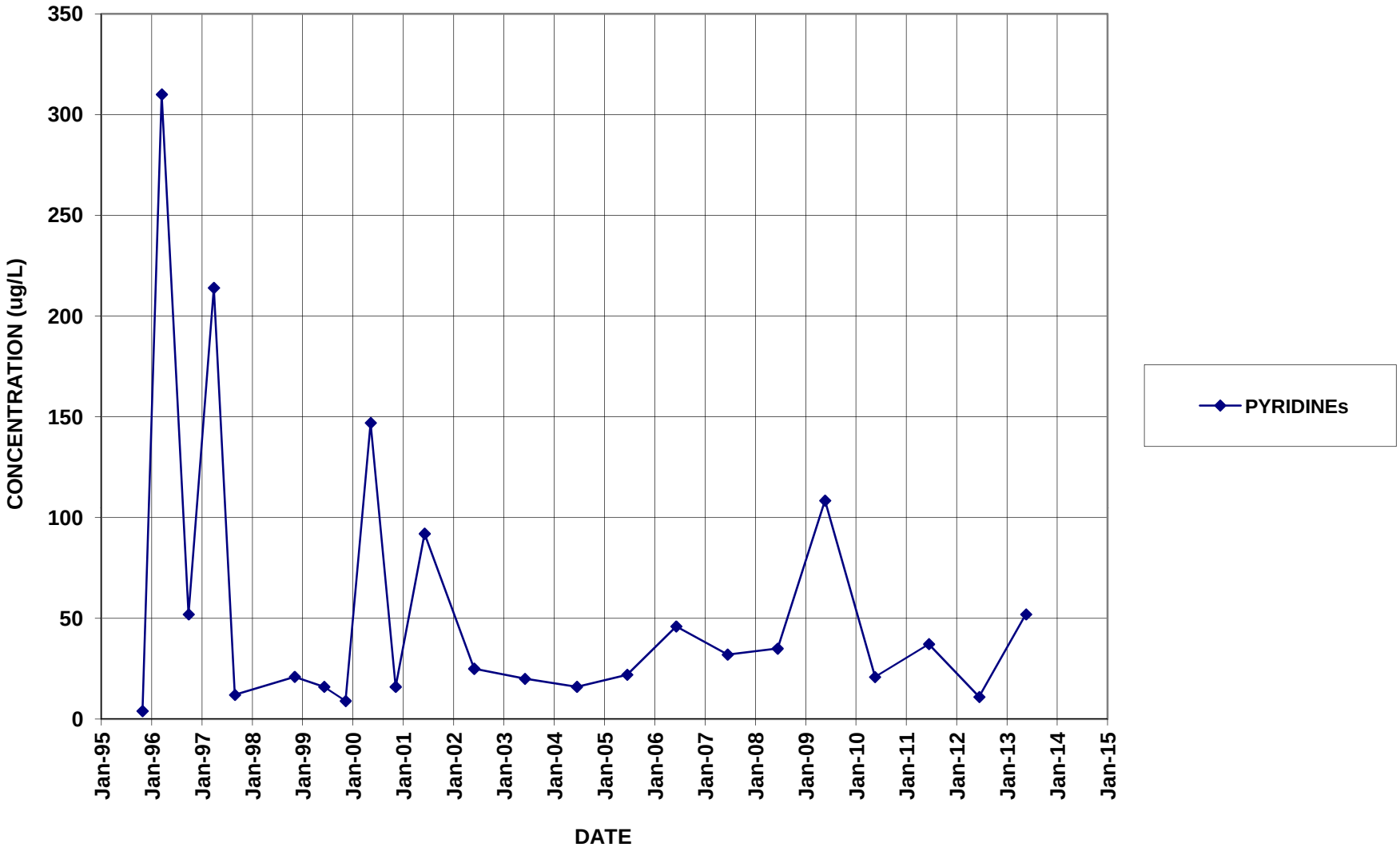


Prepared by: nmb
Reviewed by: jeb



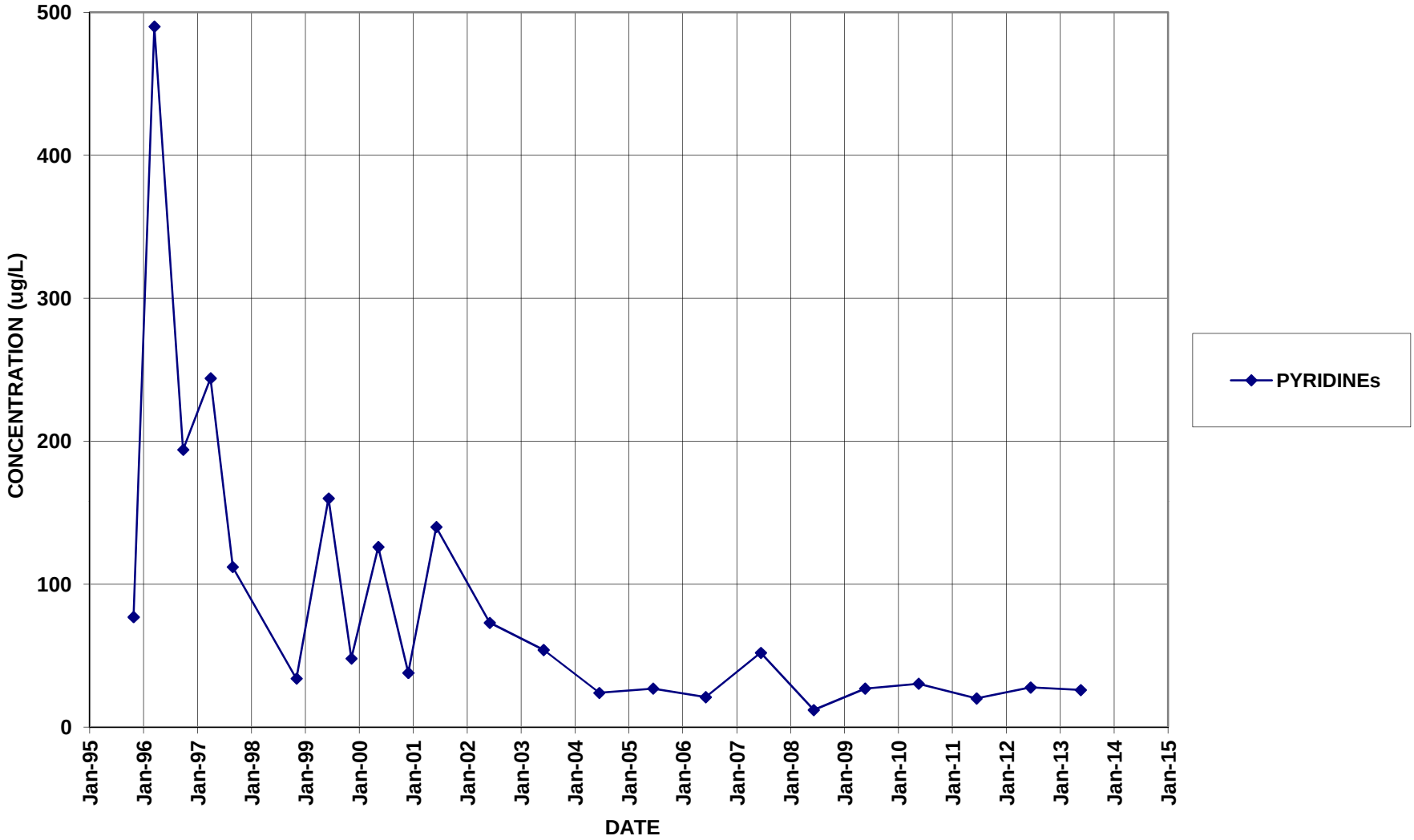
Prepared by: nmb
Reviewed by: jeb

BR-112D



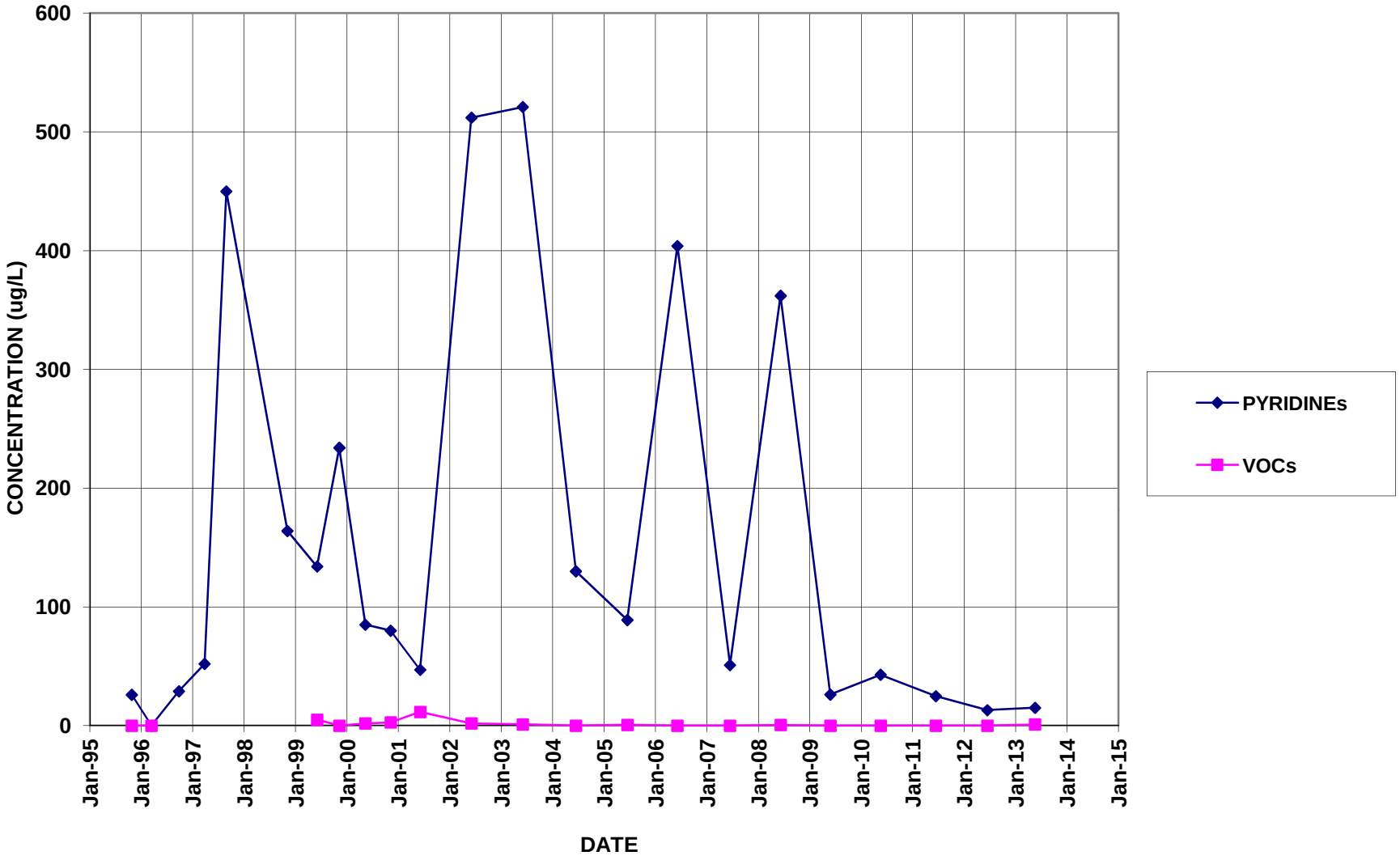
Prepared by: nmb
Reviewed by: jeb

BR-113D



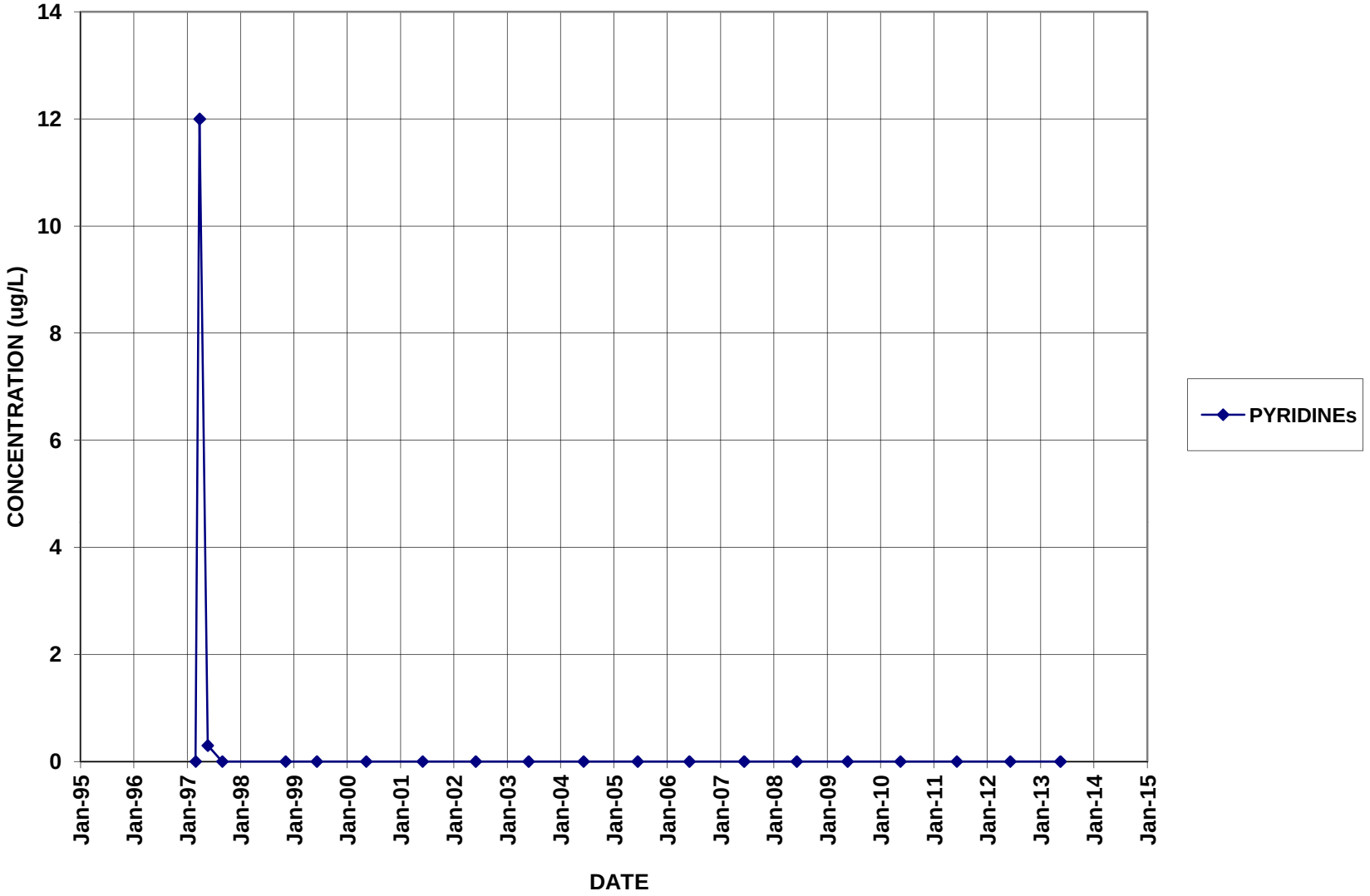
Prepared by: nmb
Reviewed by: jeb

BR-114



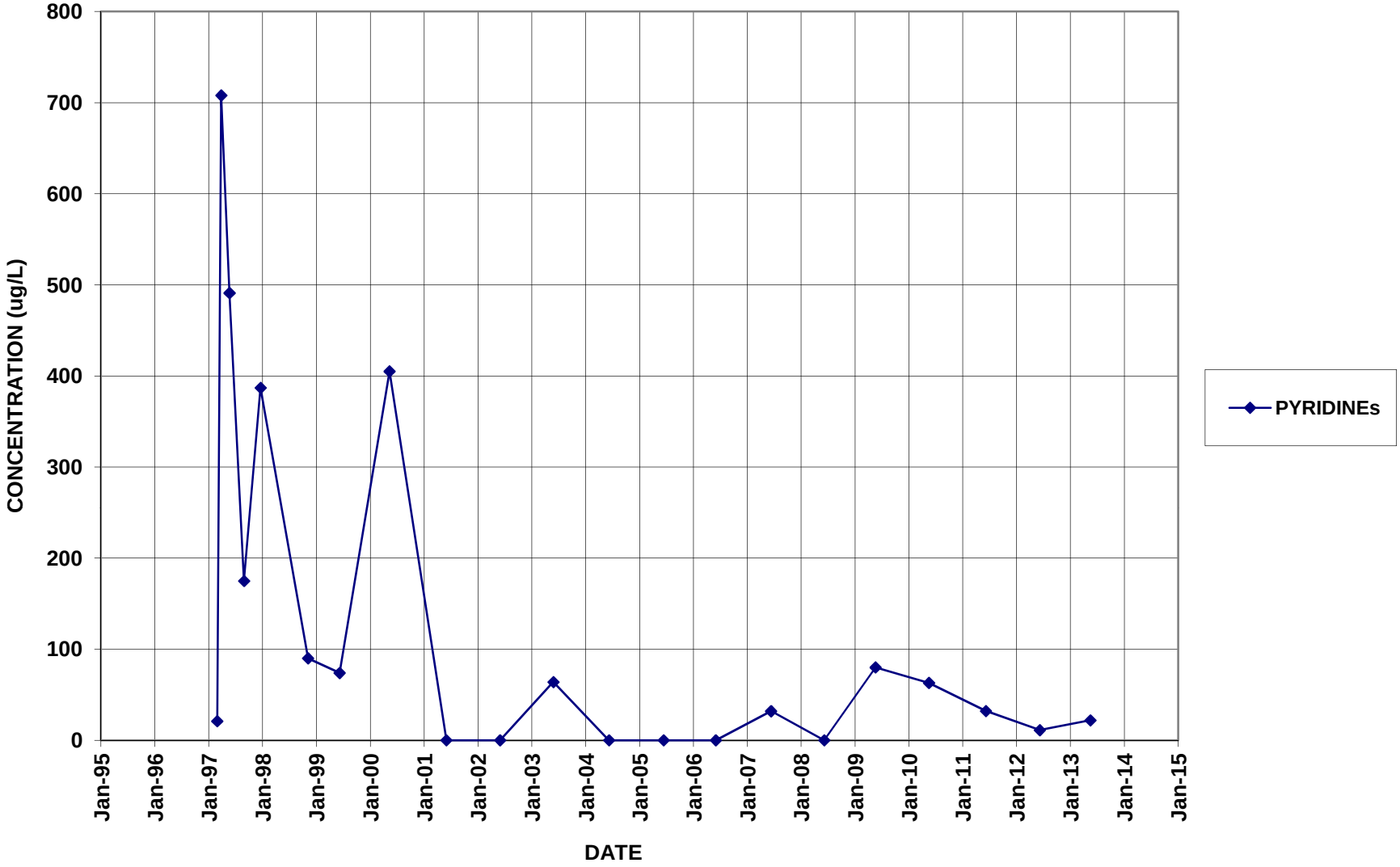
Prepared by: nmb
Reviewed by: jeb

BR-116



Prepared by: nmb
Reviewed by: jeb

BR-116D



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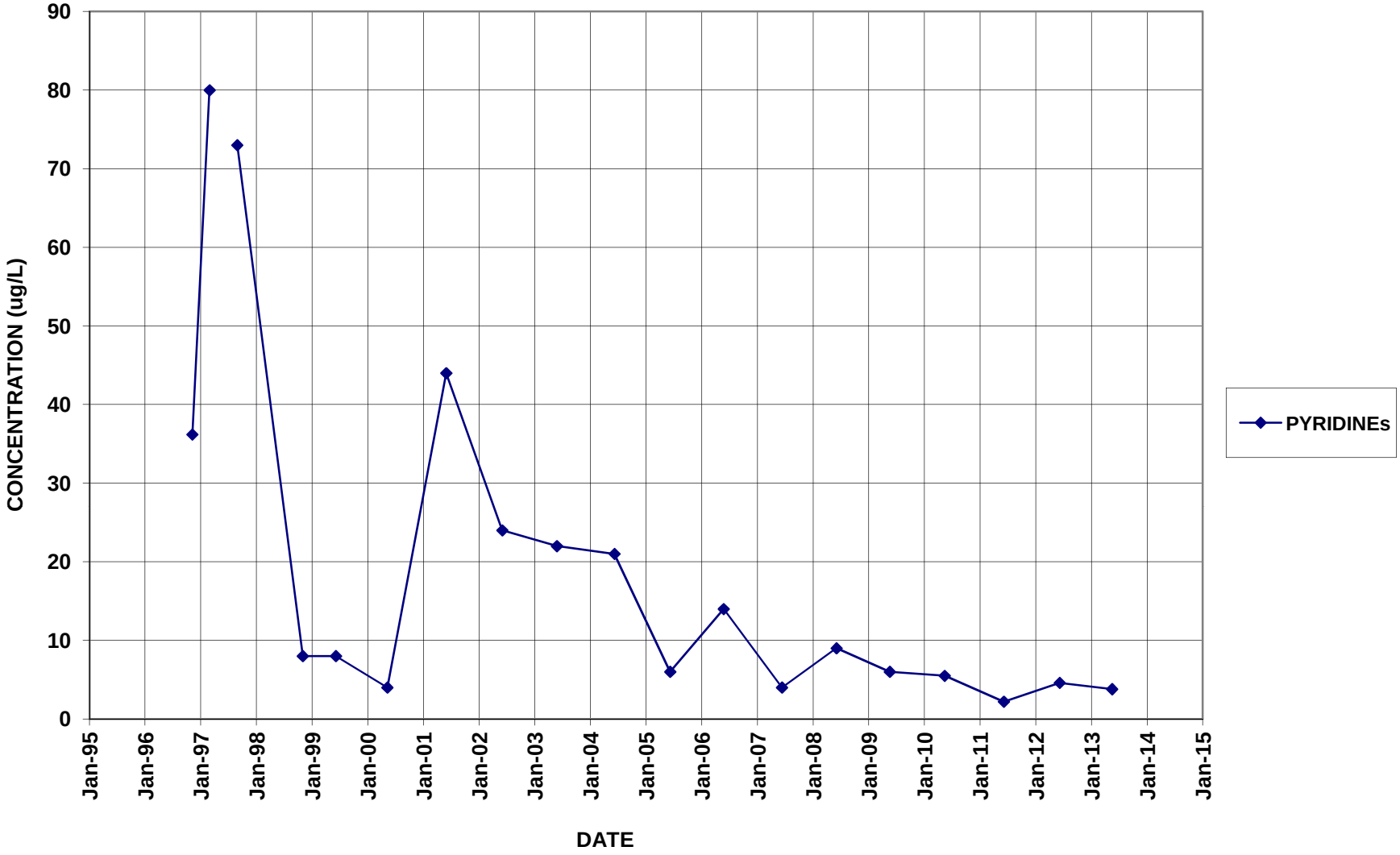
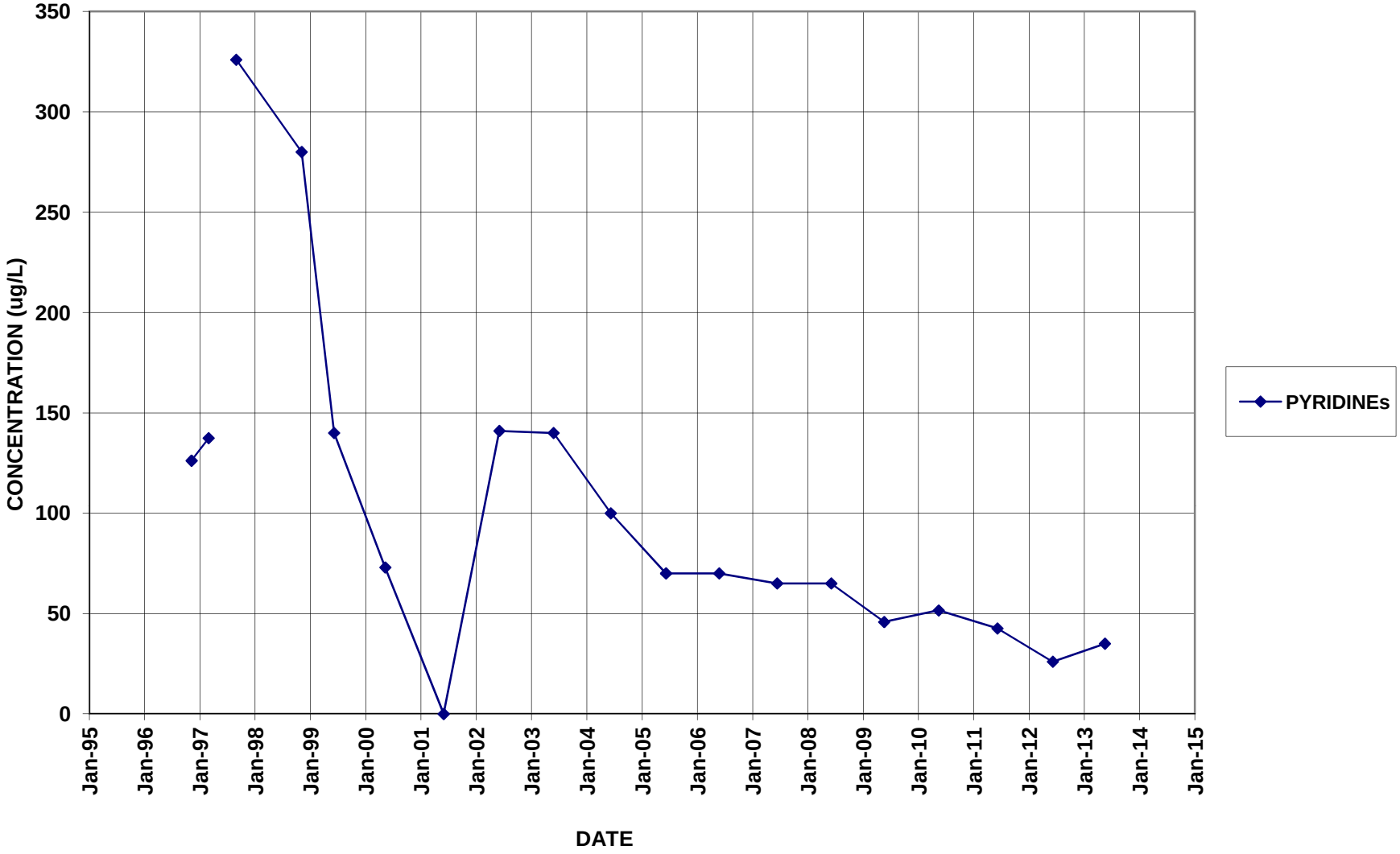
Reviewed by: jeb

BR-117D



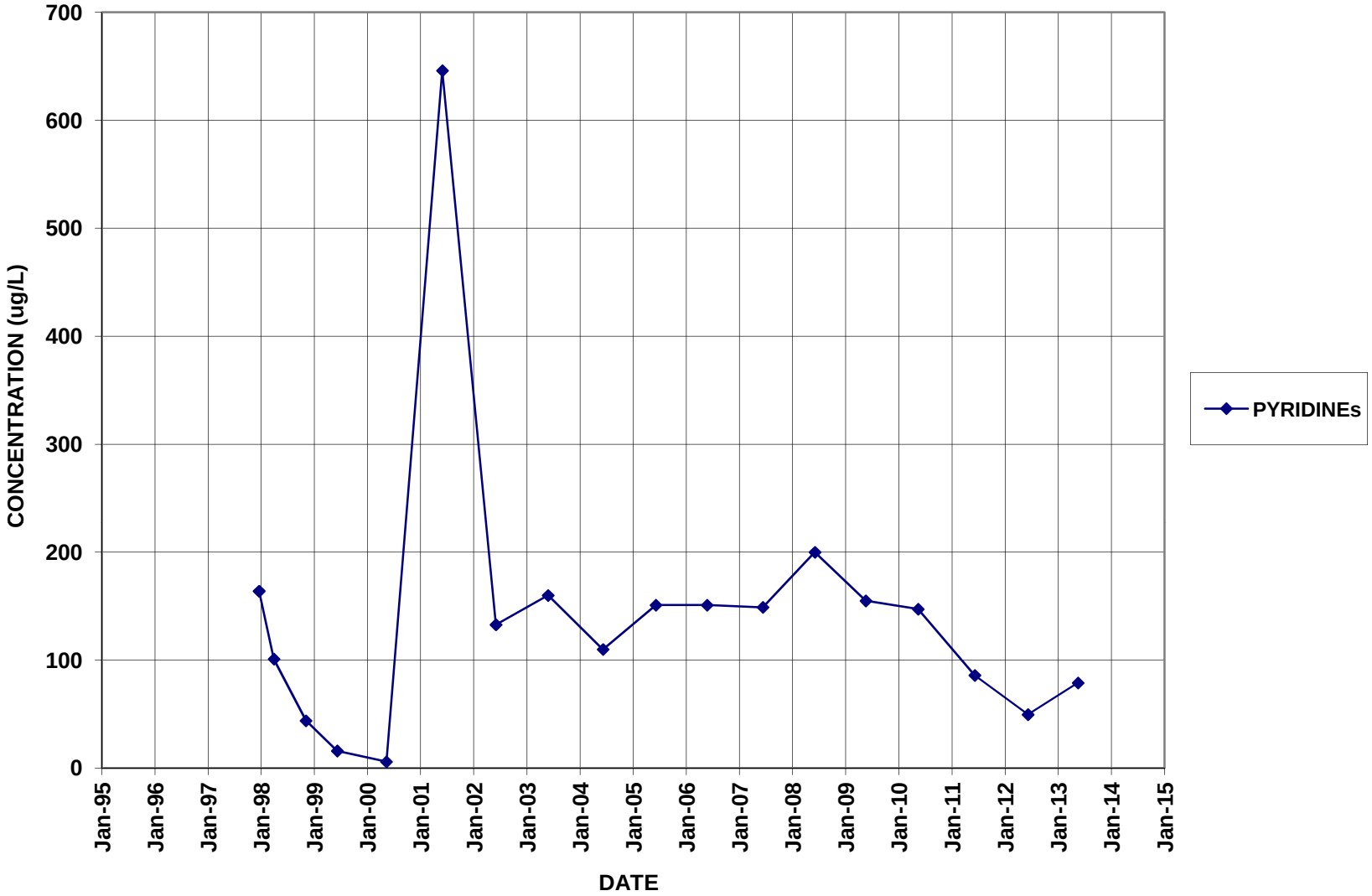
Prepared by: nmb
Reviewed by: jeb

BR-118D



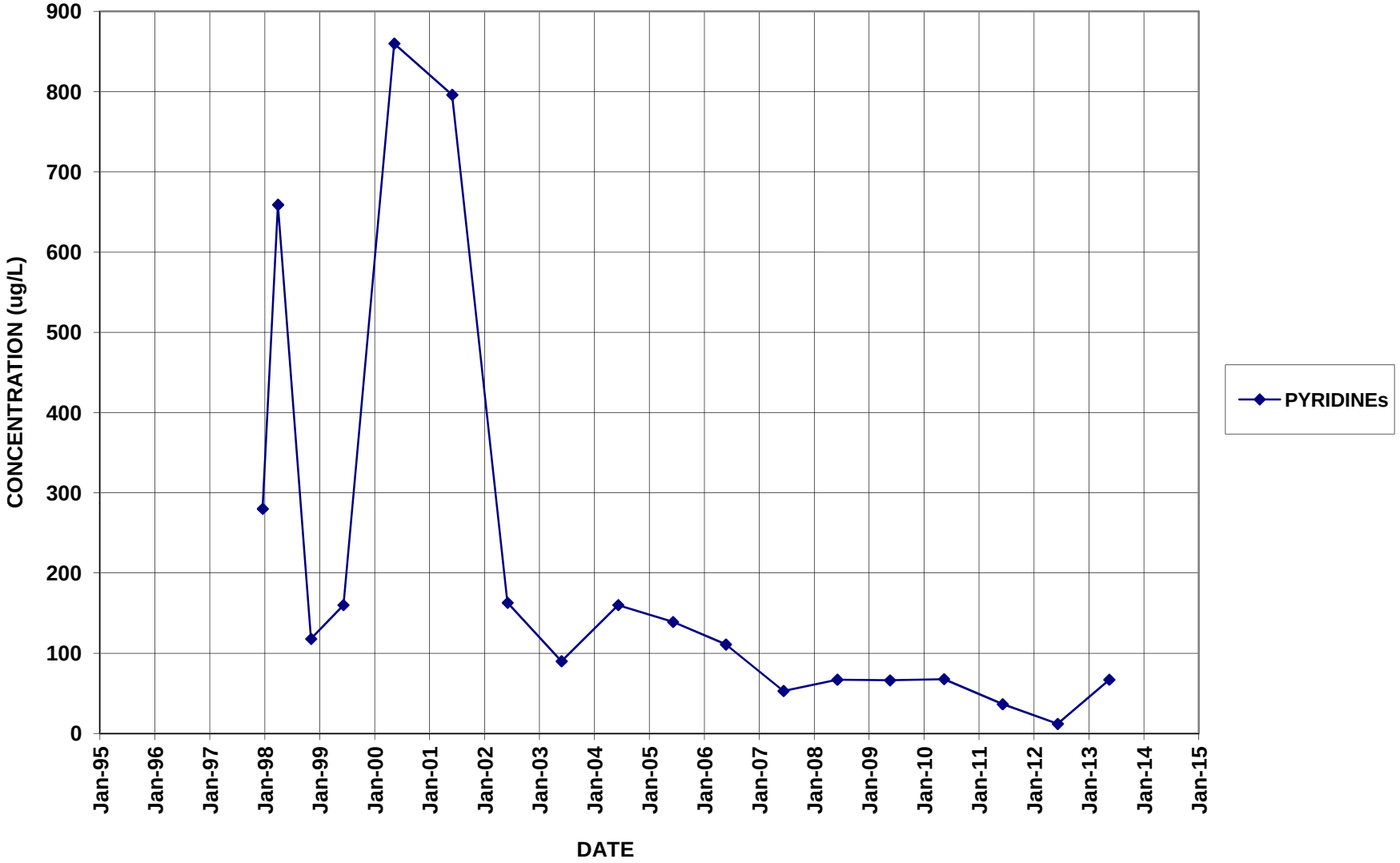
Prepared by: nmb
Reviewed by: jeb

BR-122D



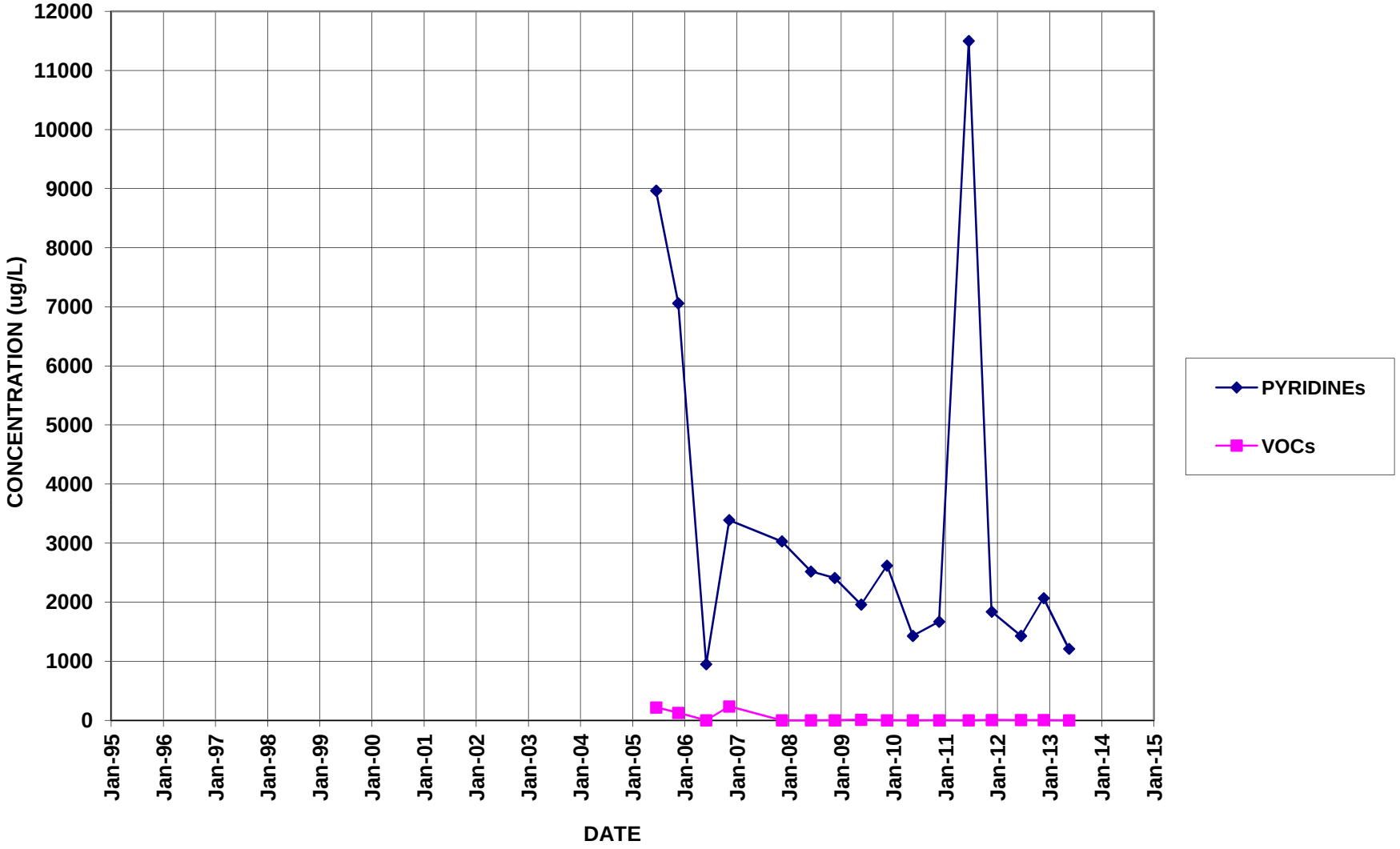
Prepared by: nmb
Reviewed by: jeb

BR-123D



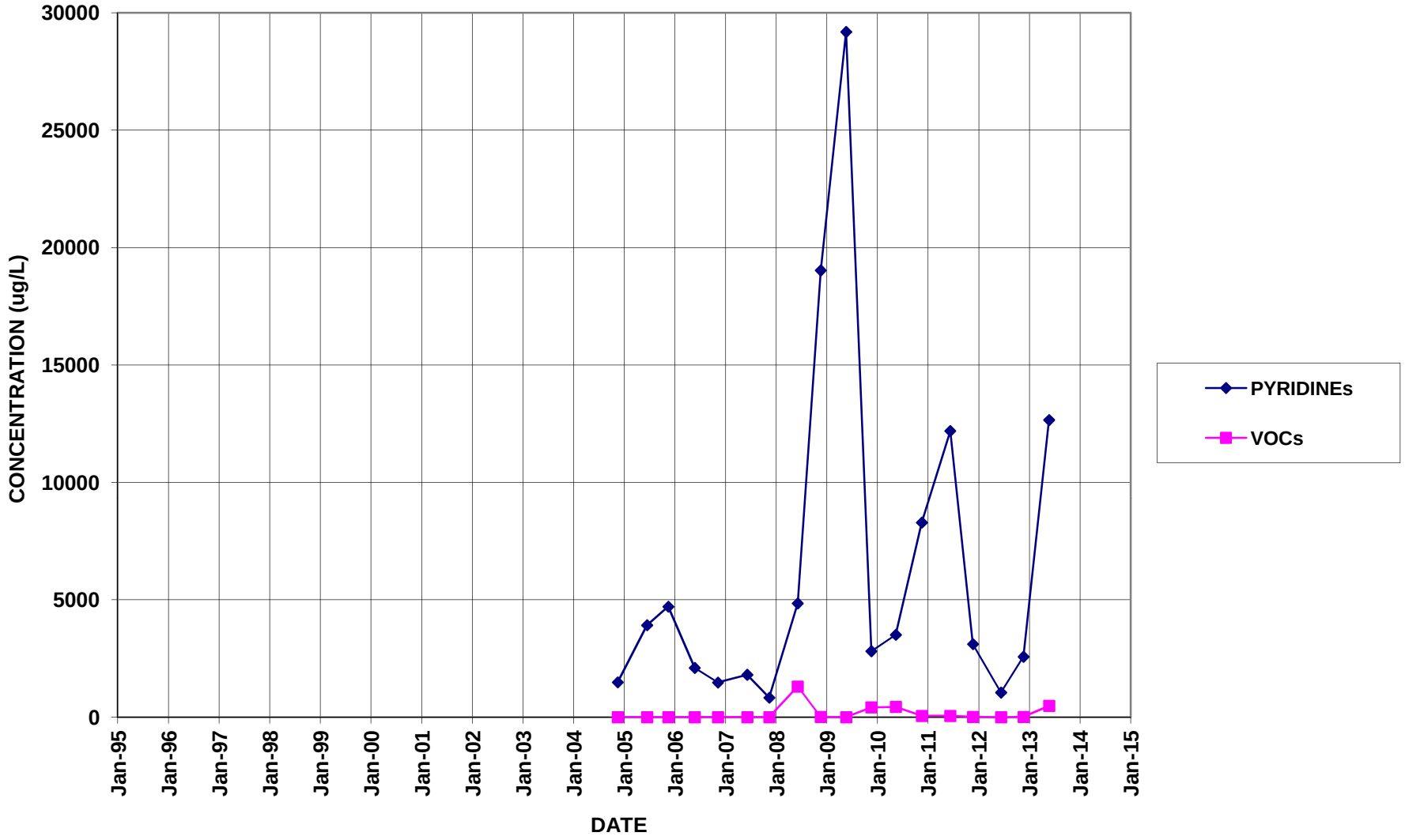
Prepared by: nmb
Reviewed by: jeb

BR-126



Prepared by: nmb
Reviewed by: jeb

BR-127



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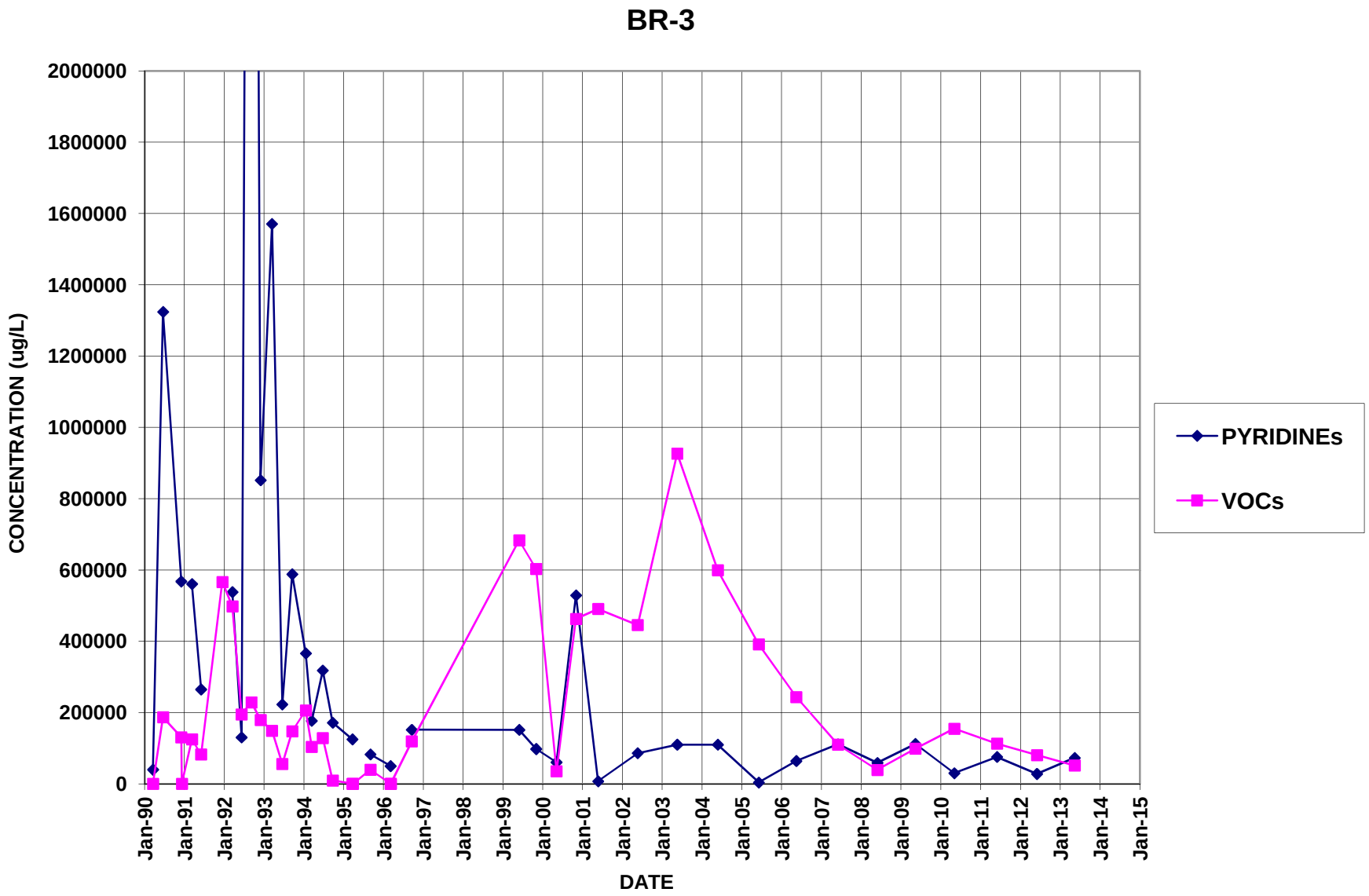
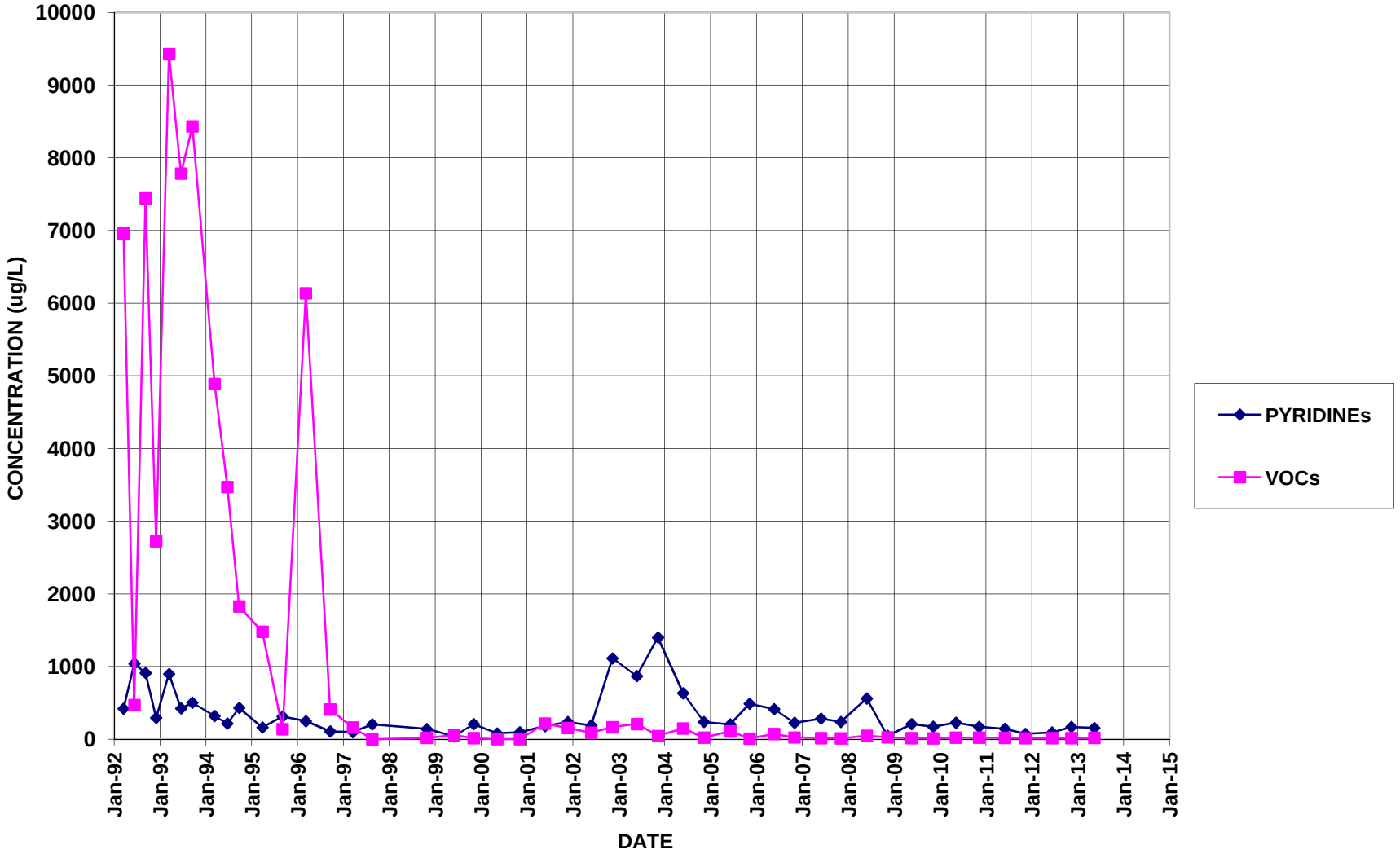
Reviewed by: jeb



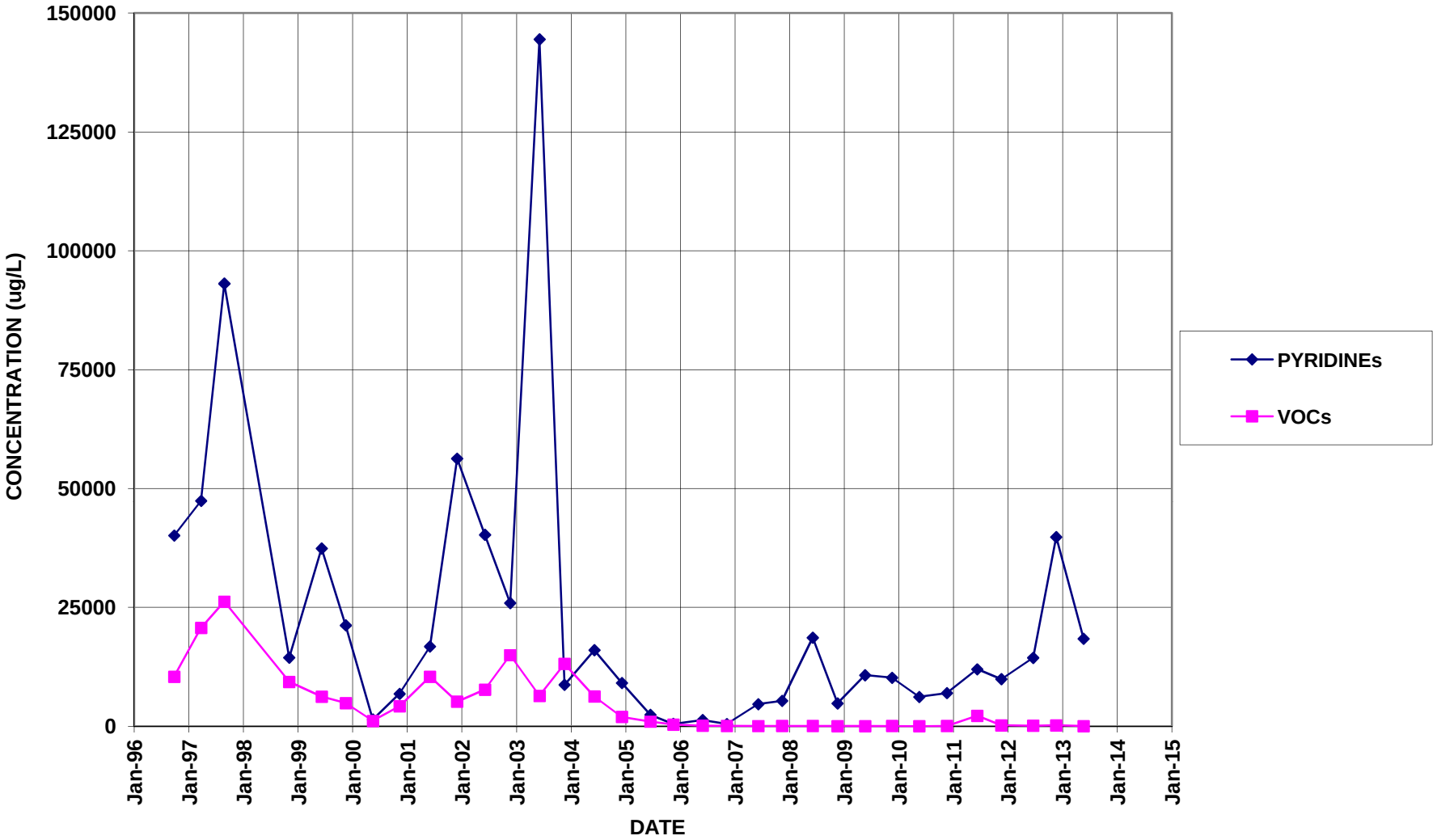
Prepared by: nmb
Reviewed by: jeb

BR-5A



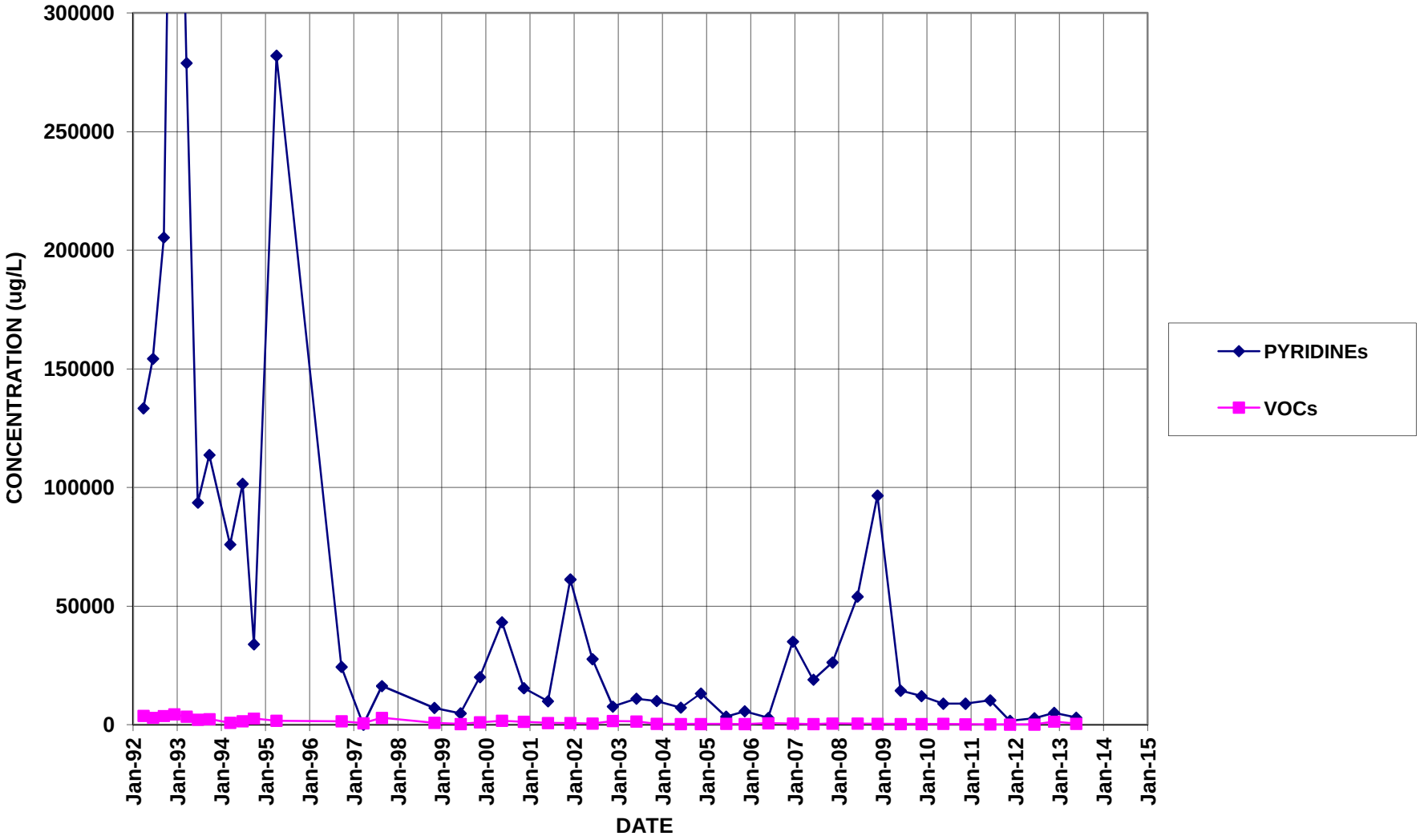
Prepared by: nmb
Reviewed by: jeb

BR-6A



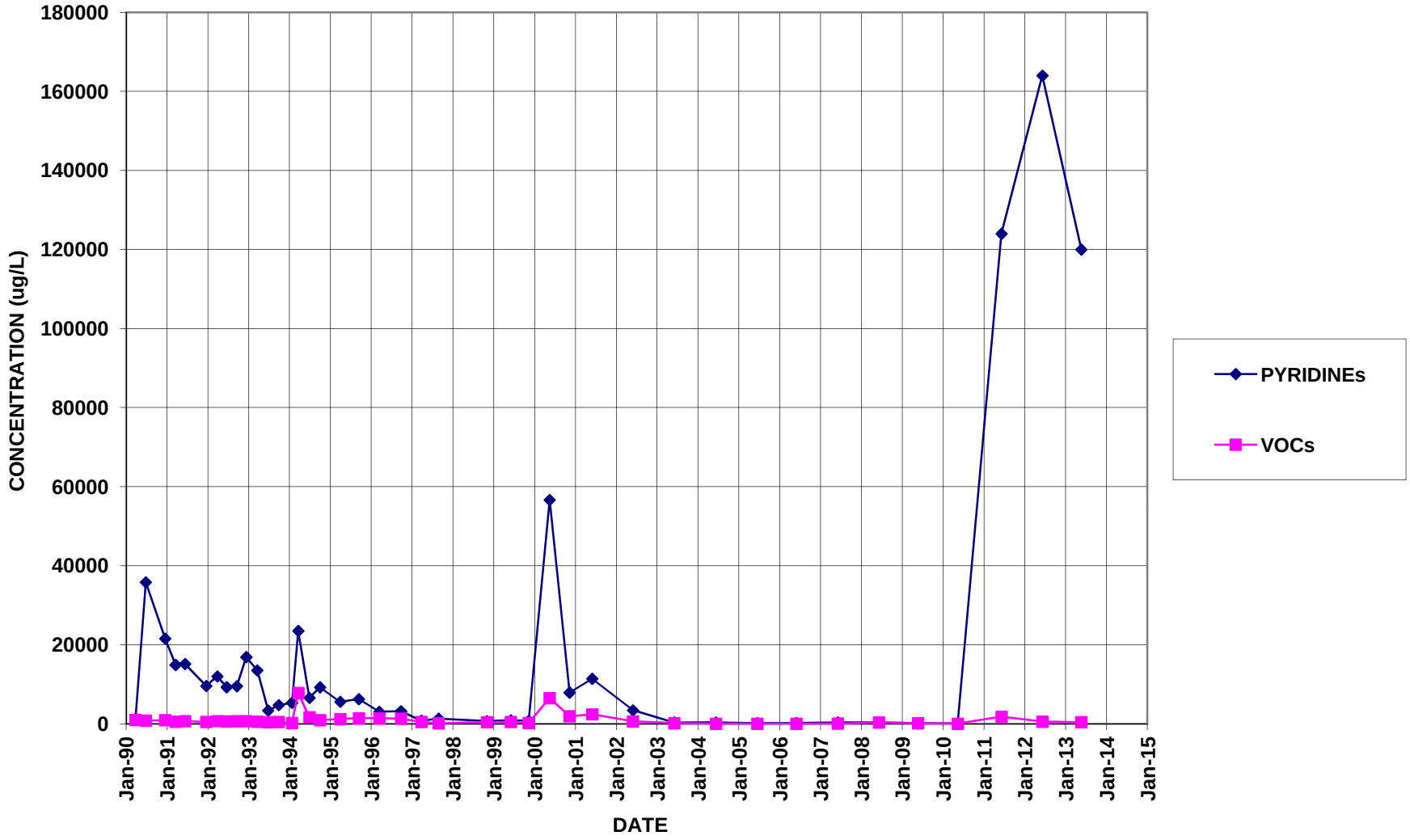
Prepared by: nmb
Reviewed by: jeb

BR-7A



Prepared by: nmb
Reviewed by: jeb

BR-8



Prepared by: nmb
Reviewed by: jeb

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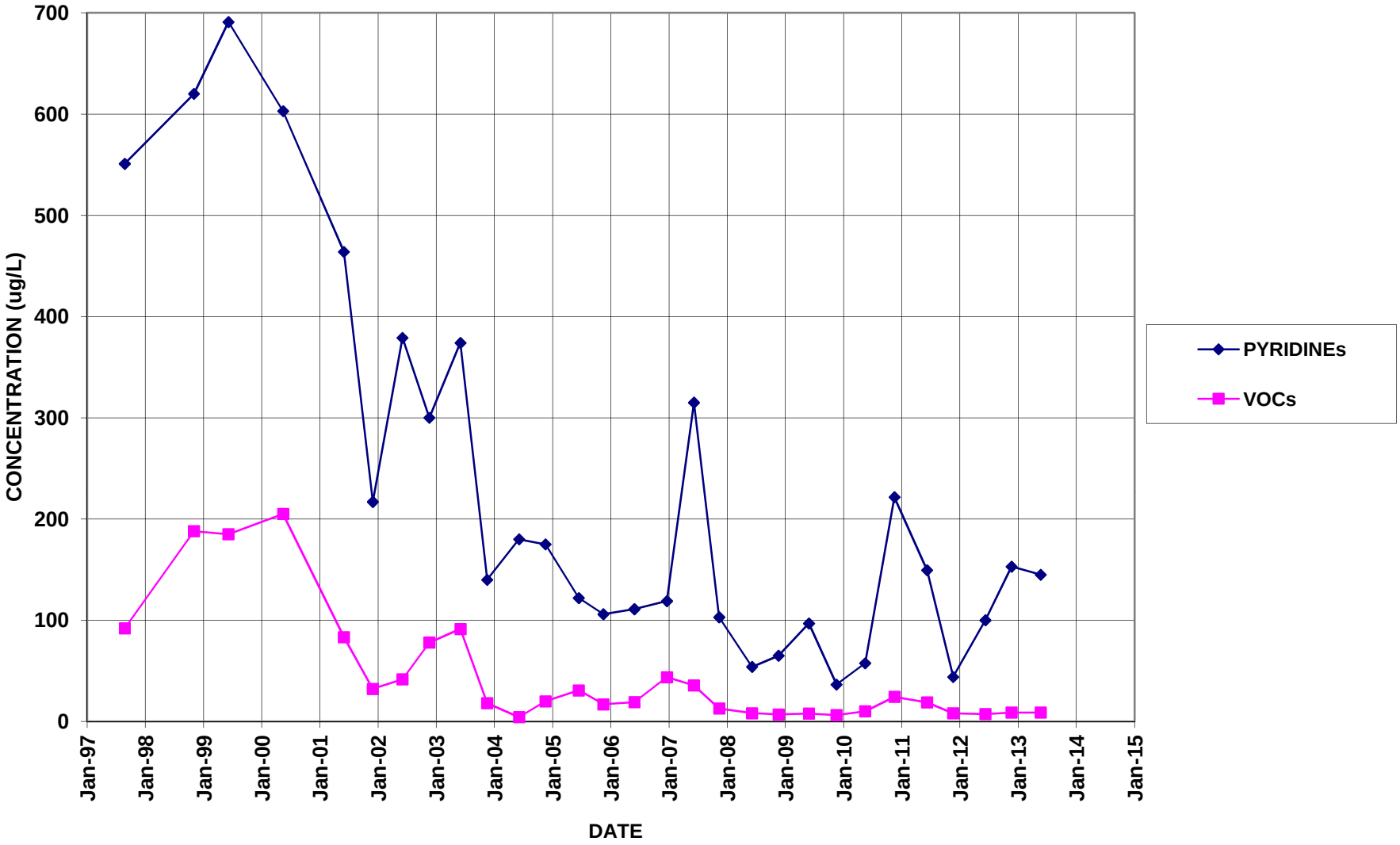
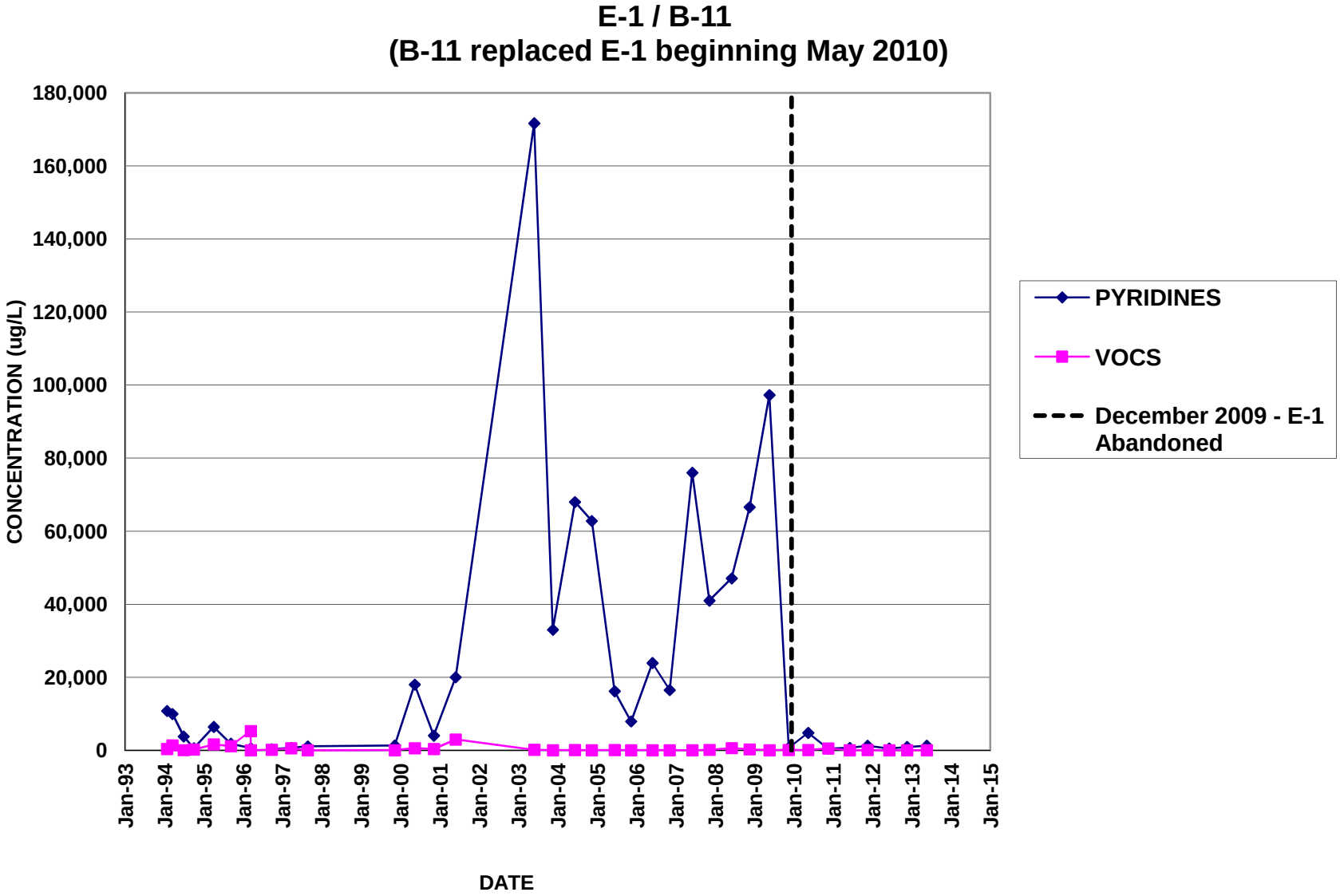
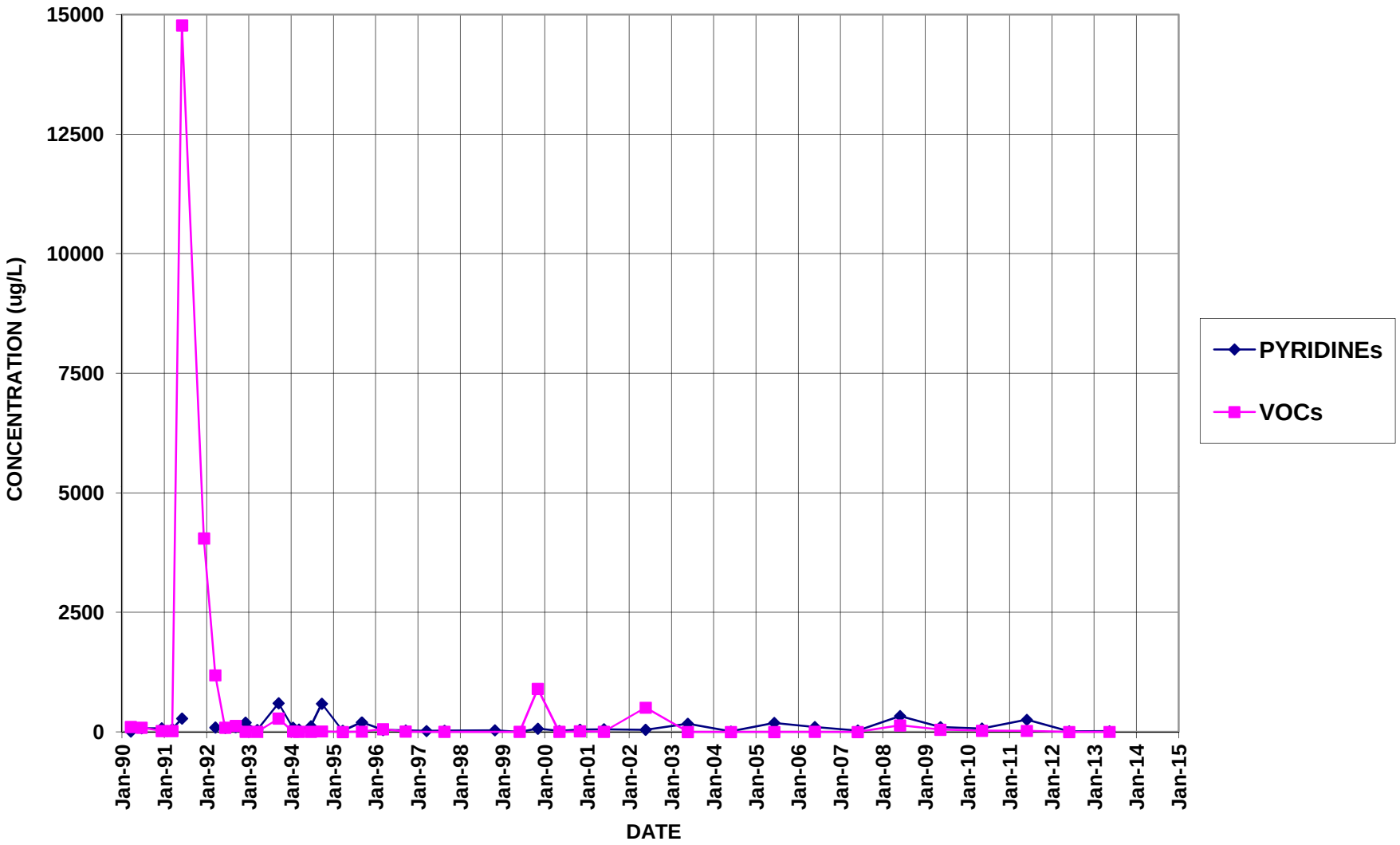


Prepared by: nmb
Reviewed by: jeb



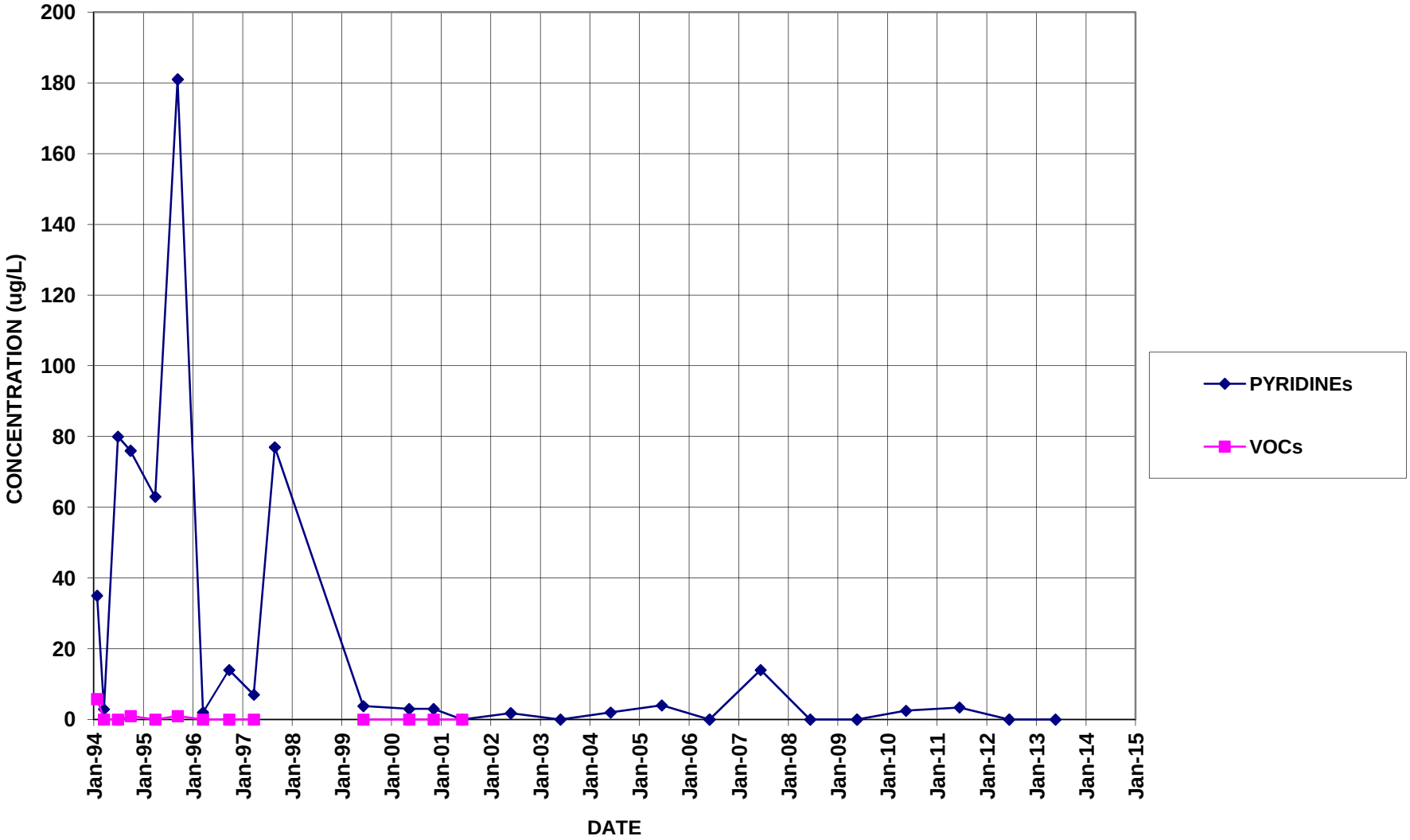
Prepared by: nmb
Reviewed by: jeb

E-3



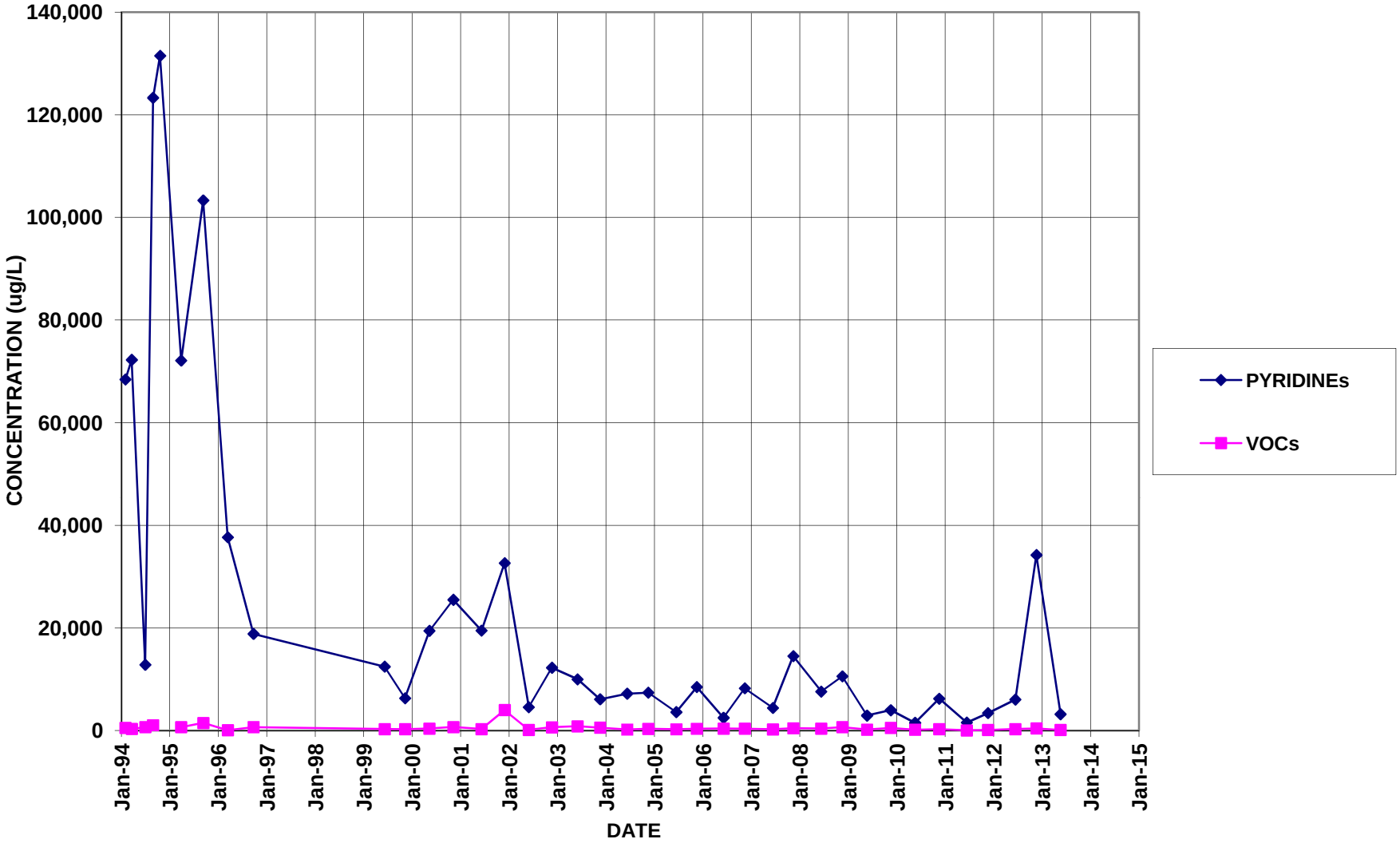
Prepared by: nmb
Reviewed by: jeb

MW-104



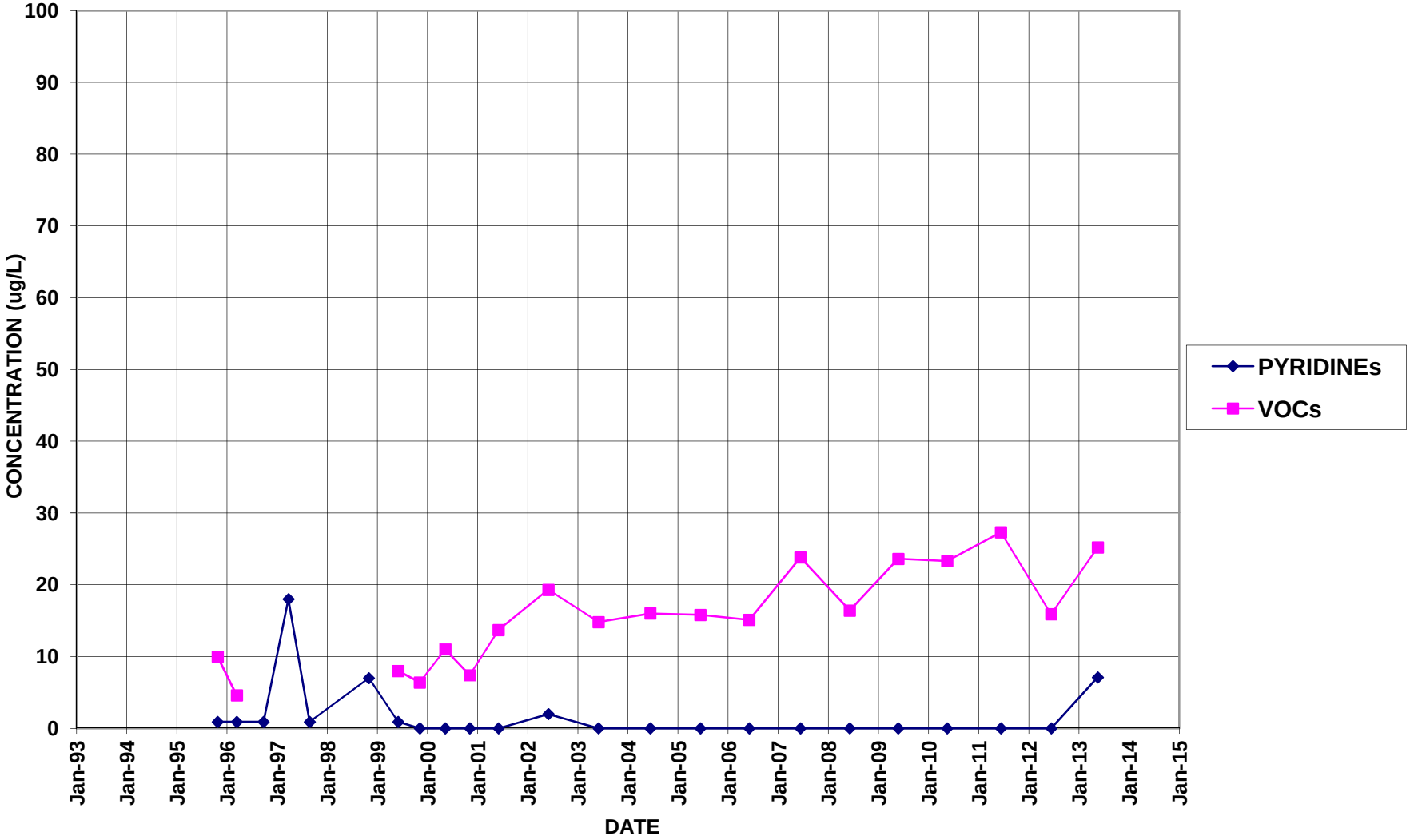
Prepared by: nmb
Reviewed by: jeb

MW-106



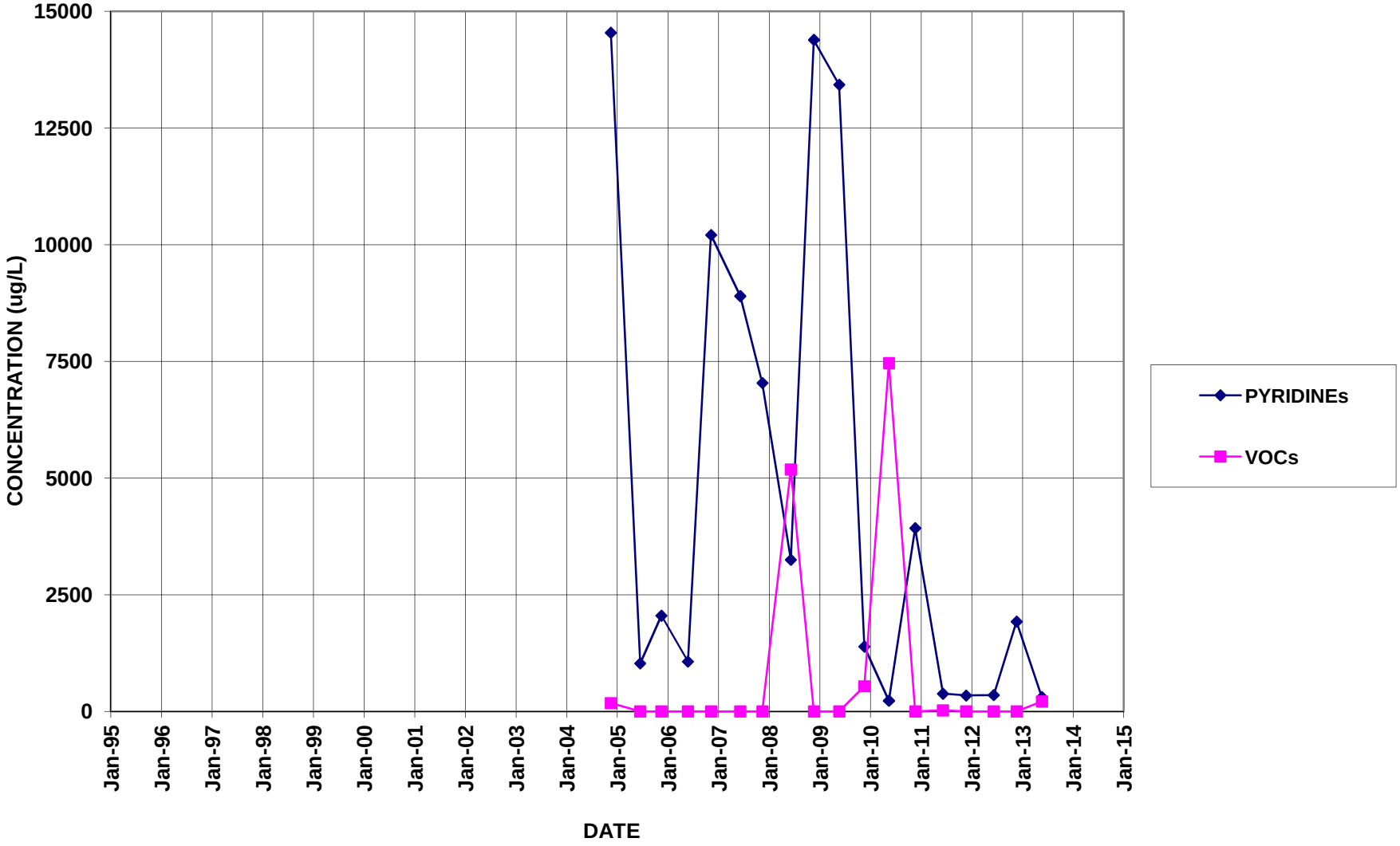
Prepared by: nmb
Reviewed by: jeb

MW-114



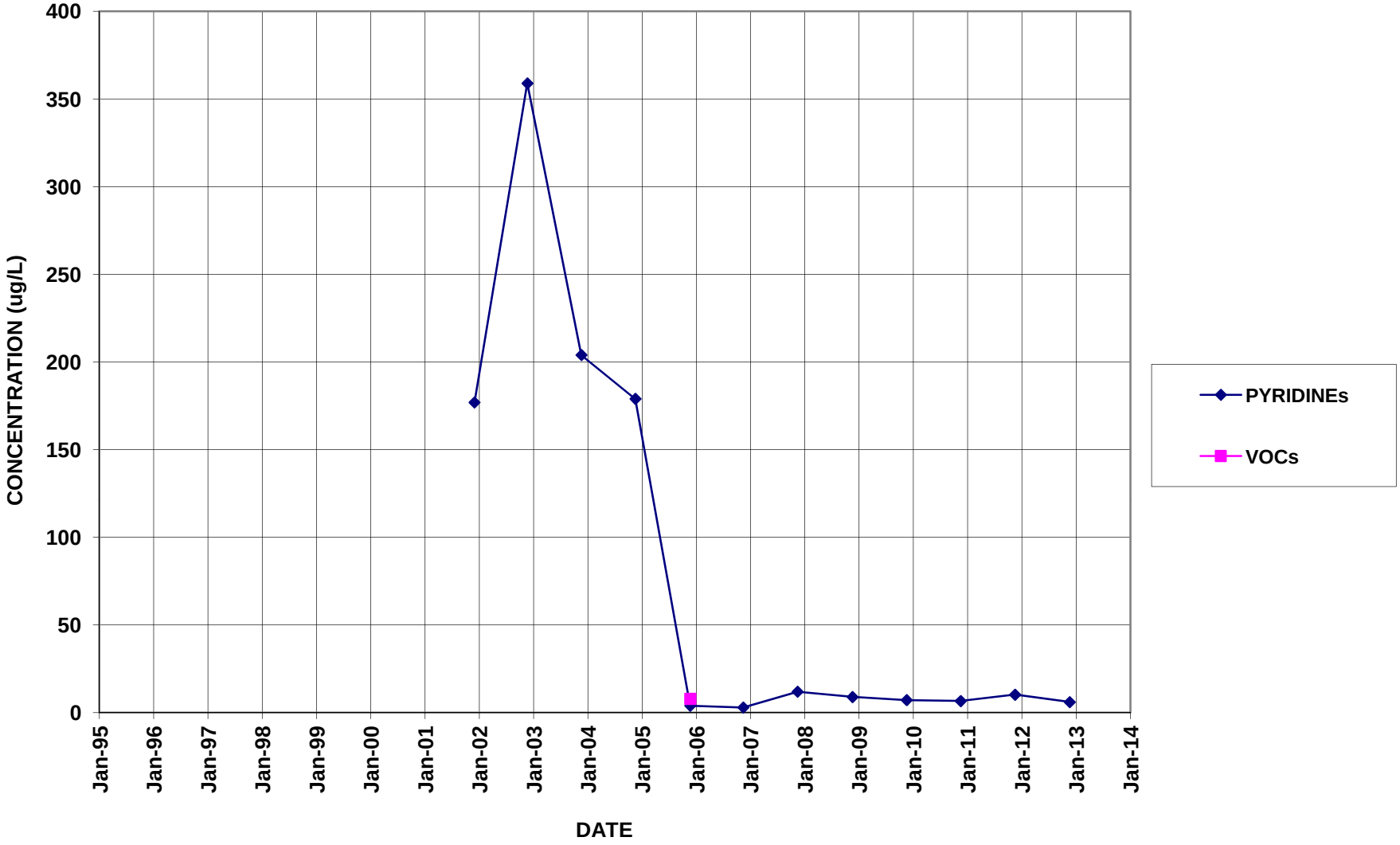
Prepared by: nmb
Reviewed by: jeb

MW-127



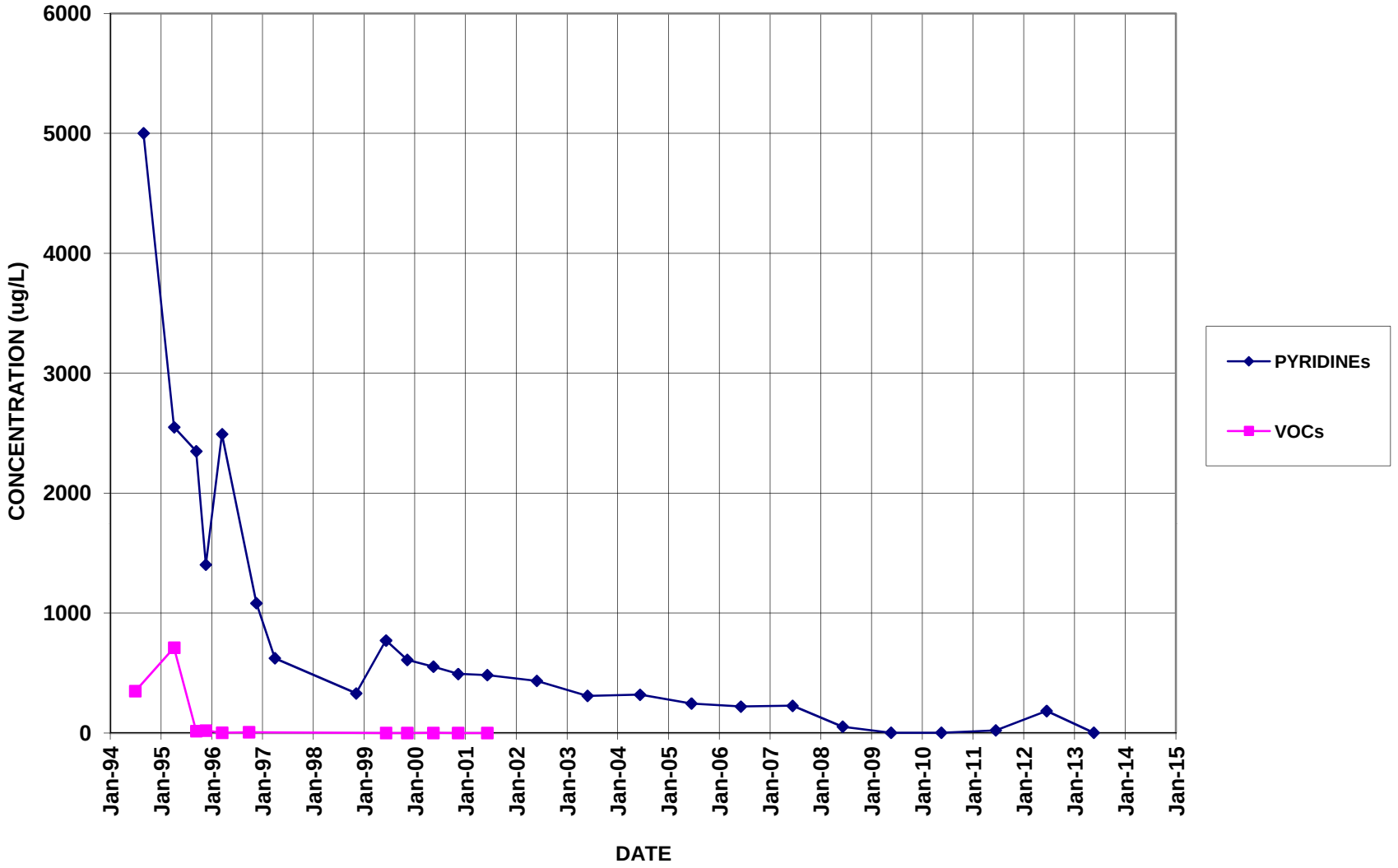
Prepared by: nmb
Reviewed by: jeb

MW-16



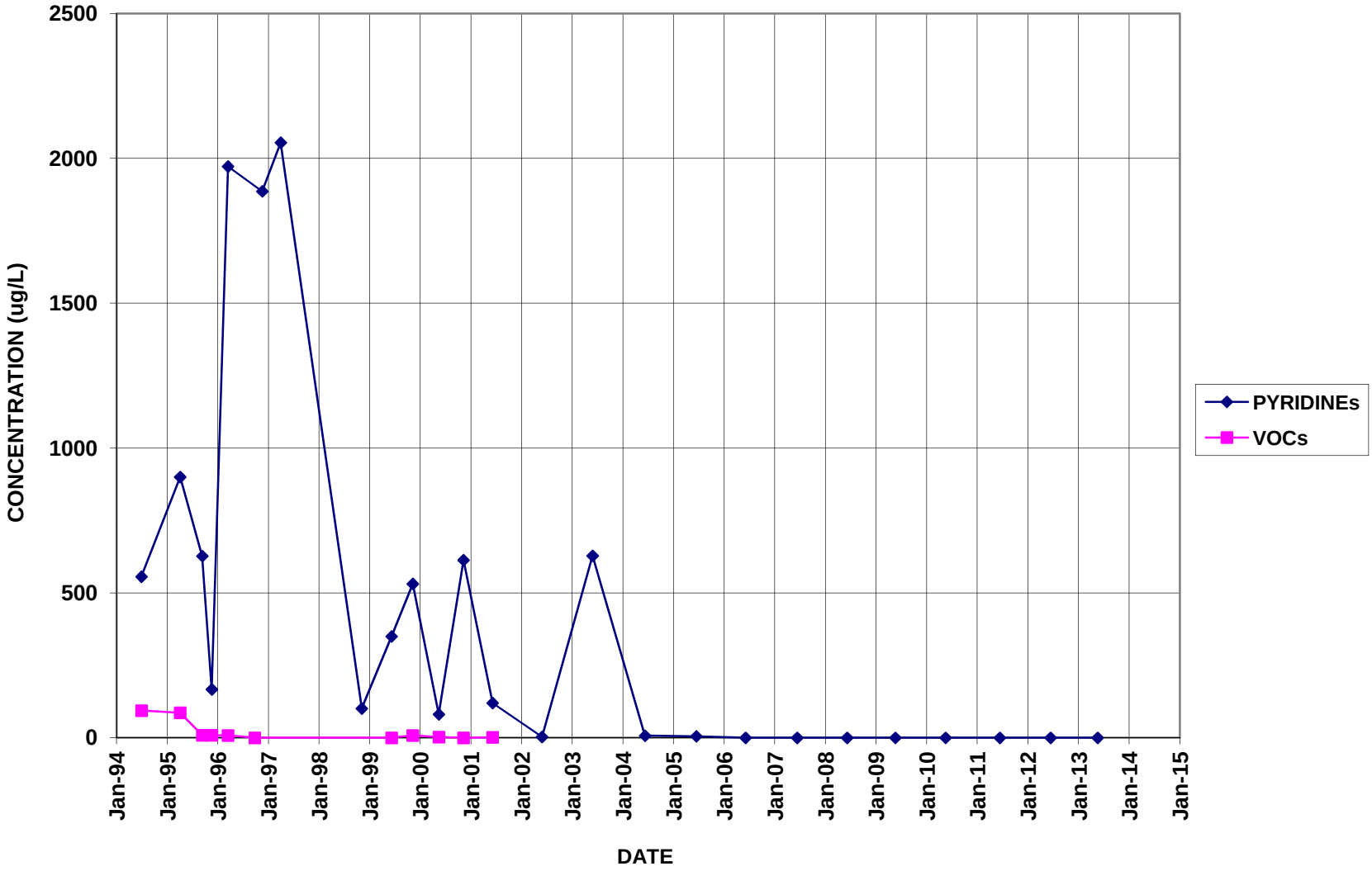
Prepared by: nmb
Reviewed by: jeb

NESS-E



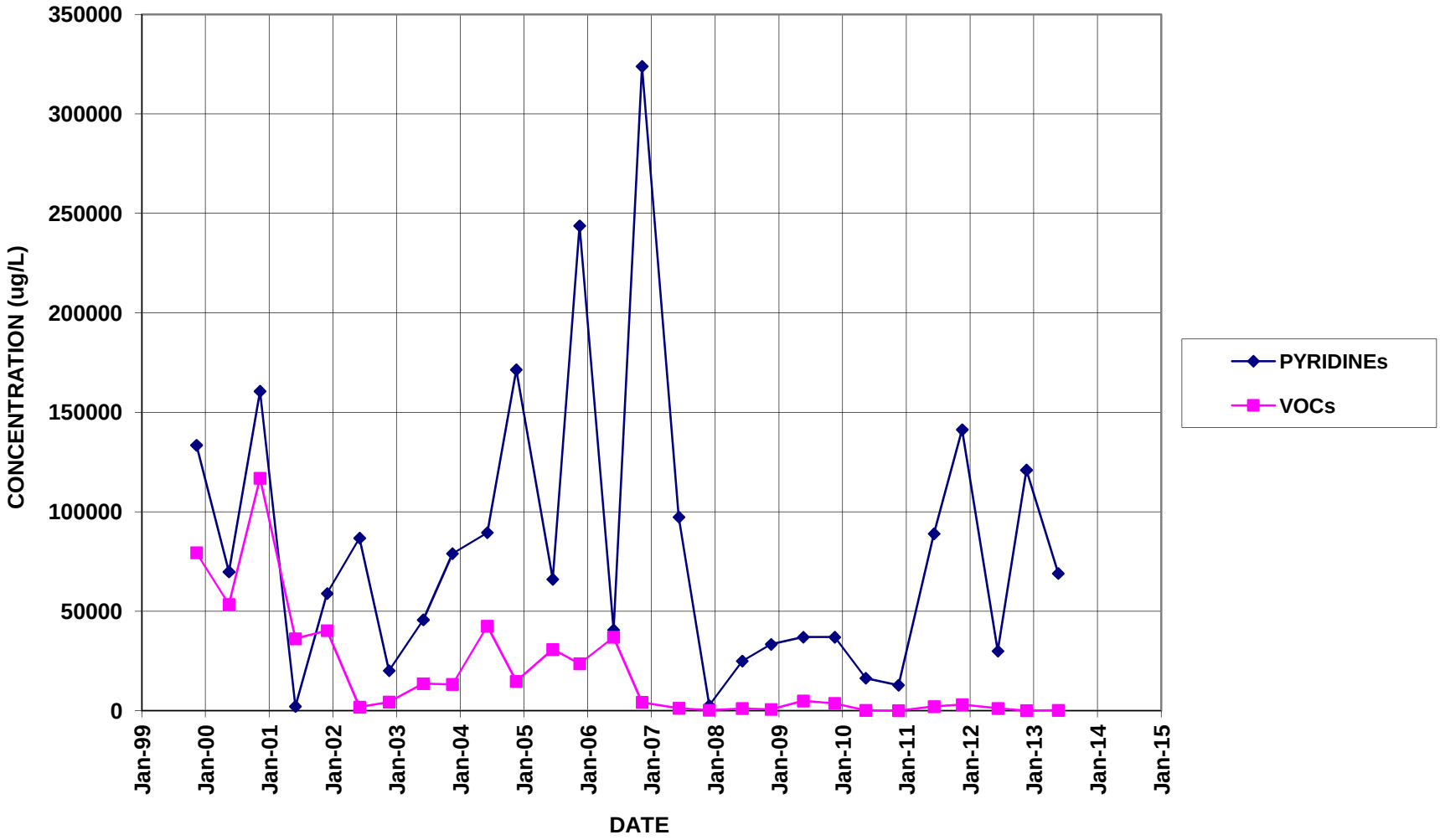
Prepared by: nmb
Reviewed by: jeb

NESS-W



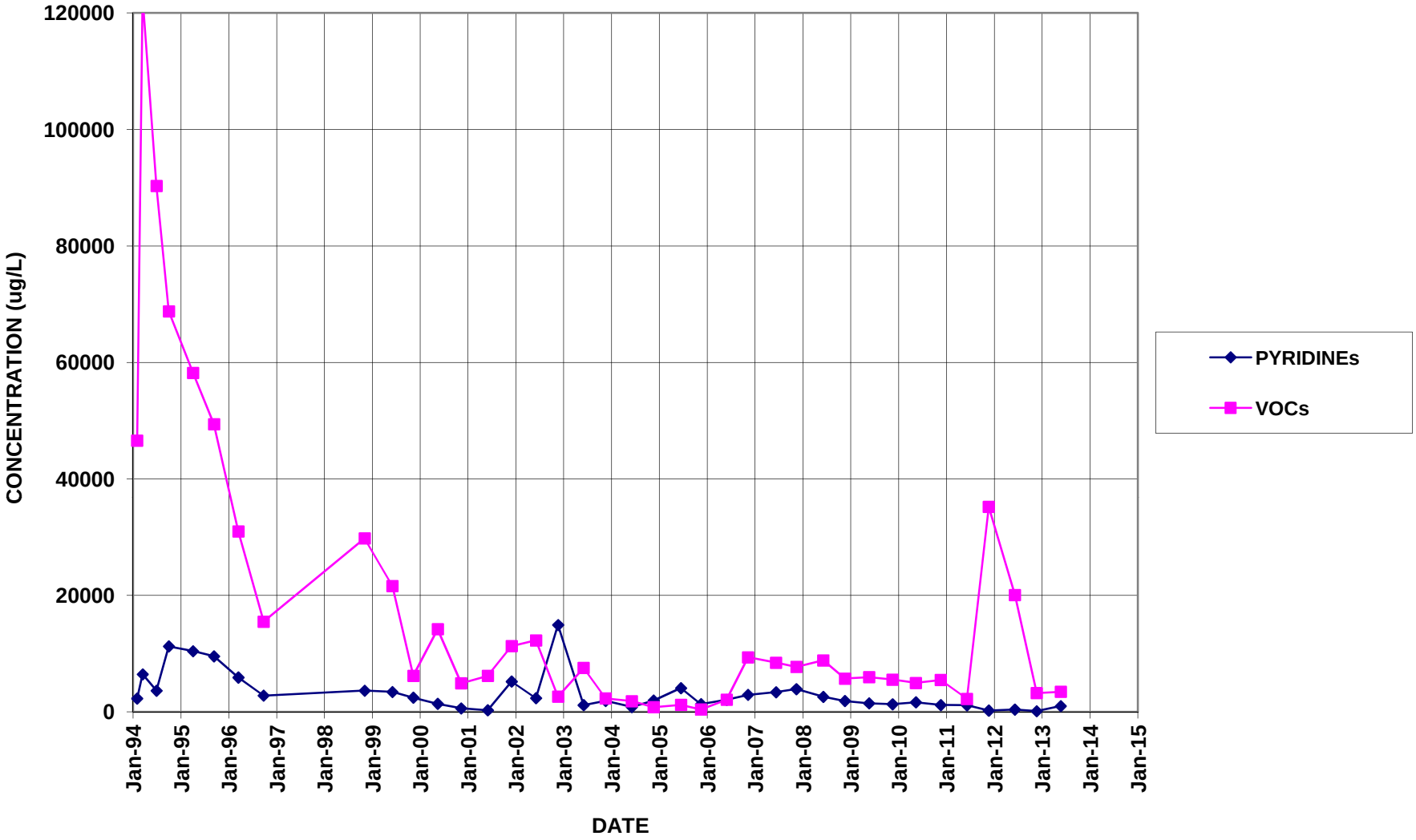
Prepared by: nmb
Reviewed by: jeb

PW10



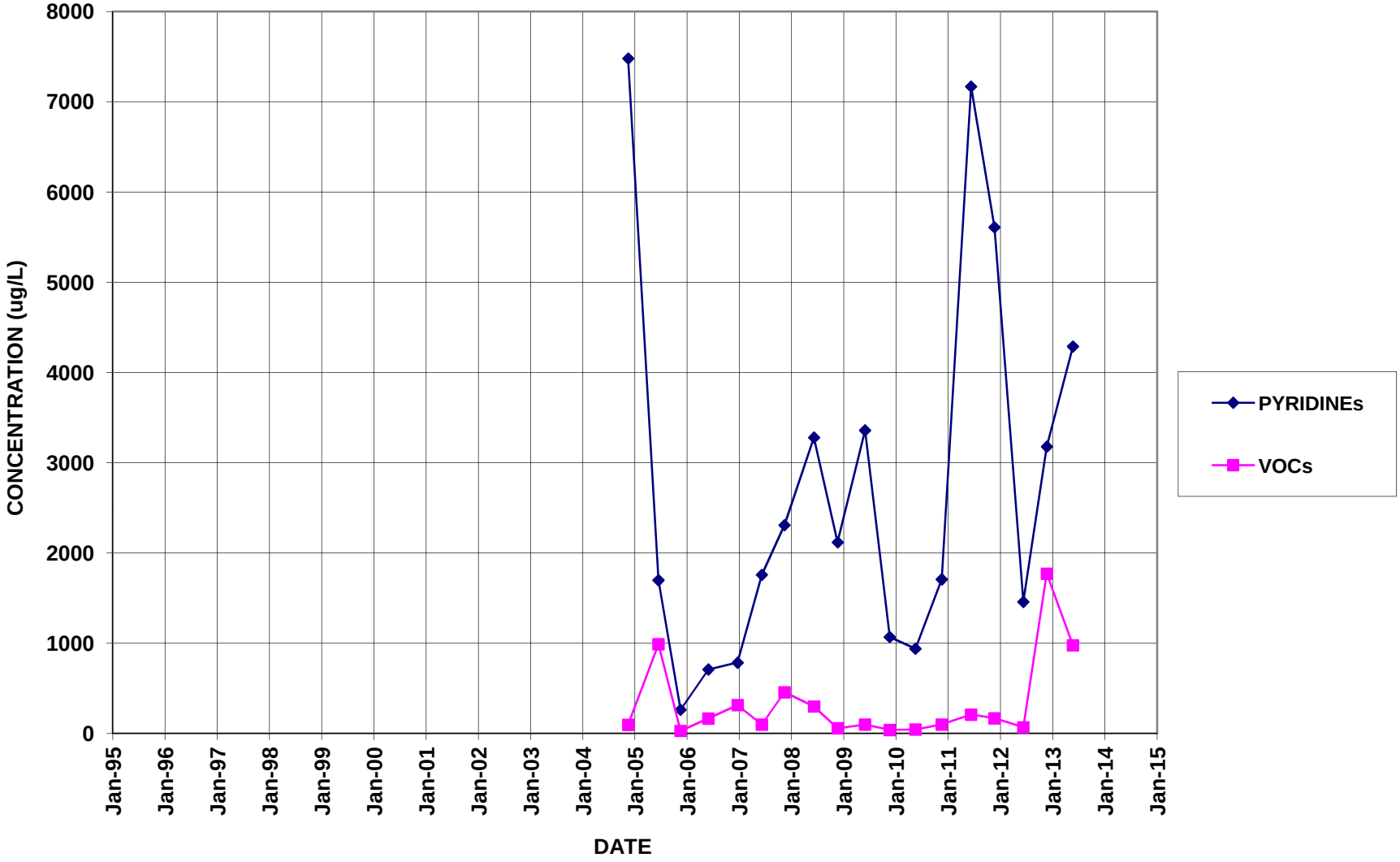
Prepared by: nmb
Reviewed by: jeb

PW12 (Formerly BR-101)



Prepared by: nmb
Reviewed by: jeb

PW13



Prepared by: nmb
Reviewed by: jeb

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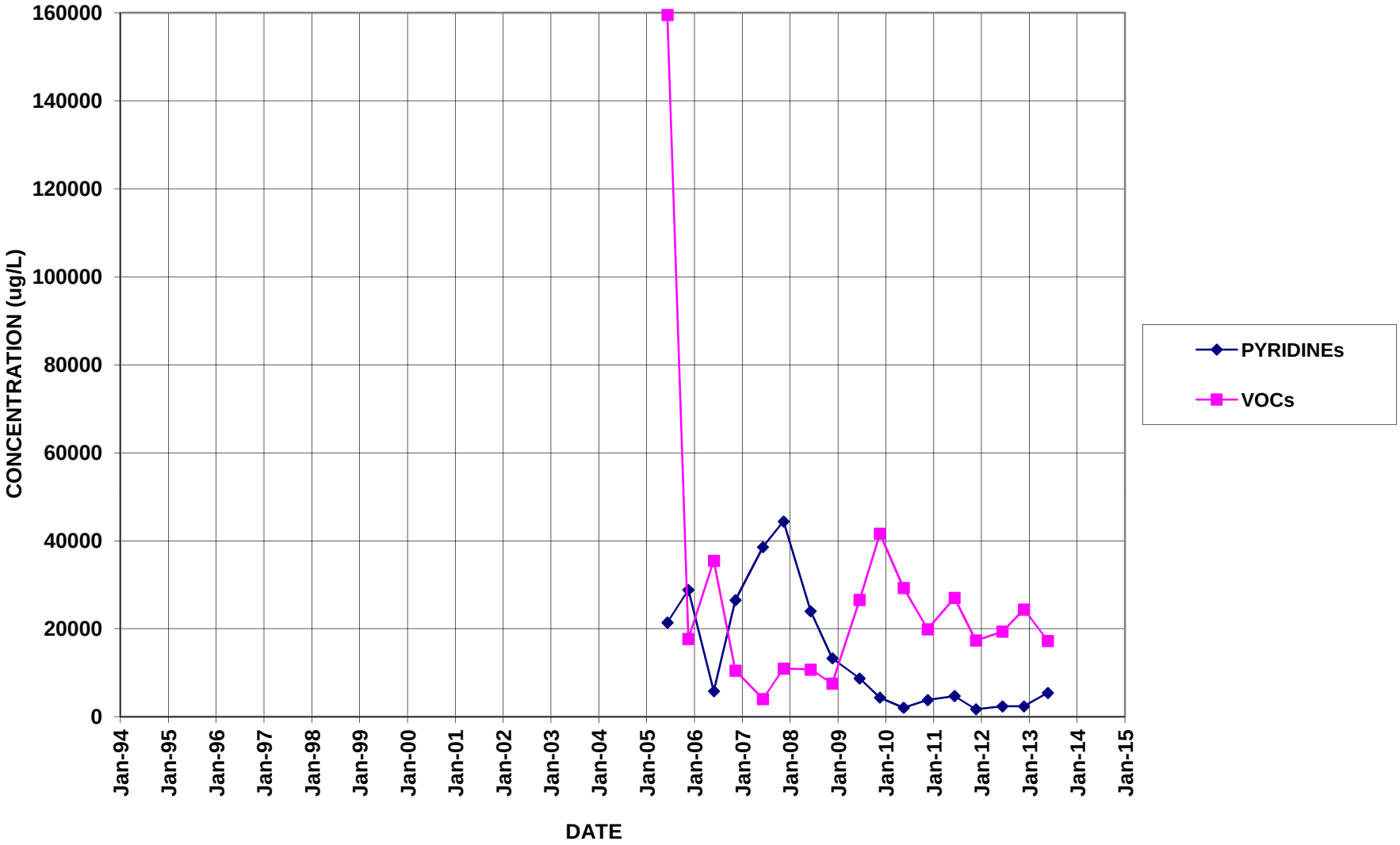
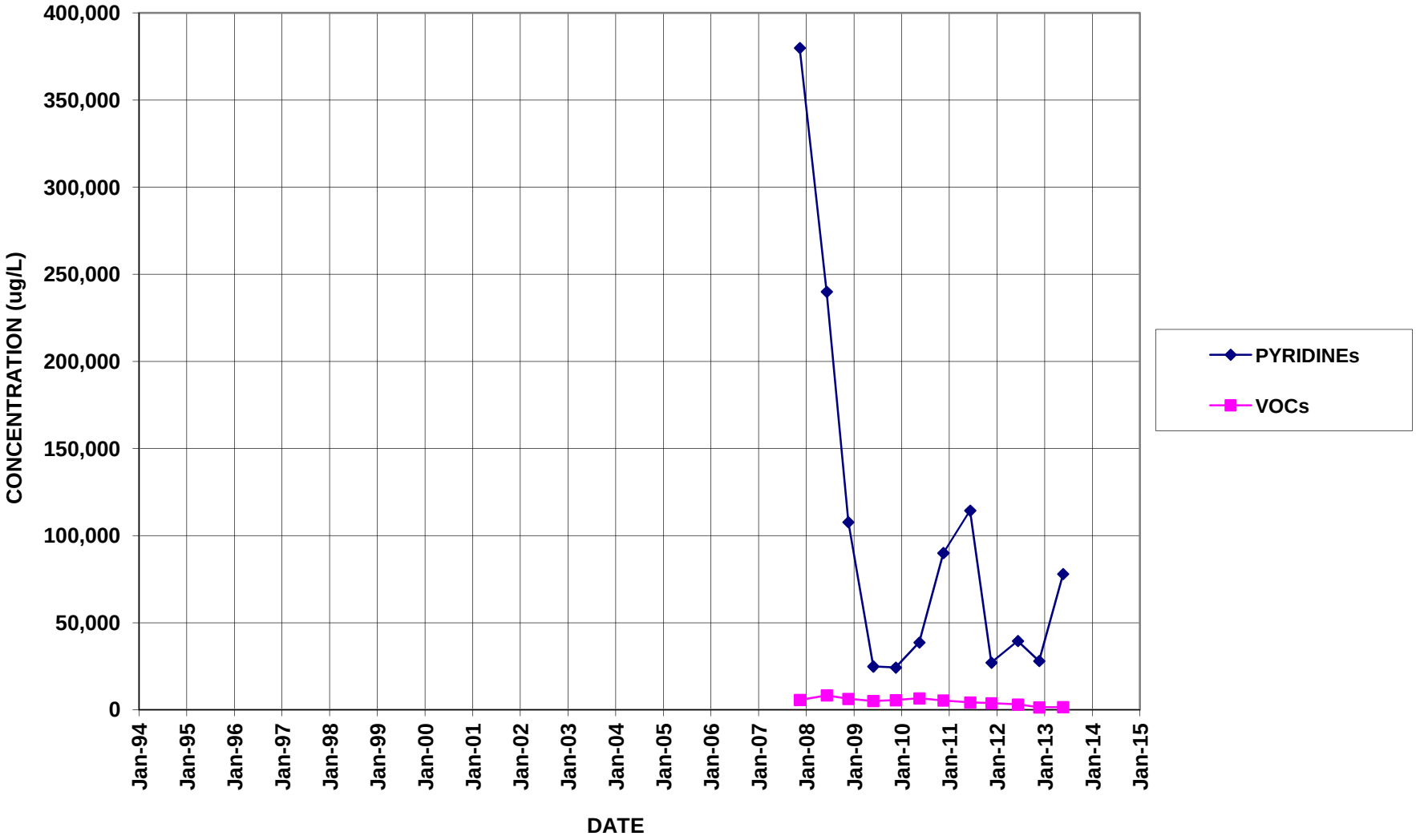


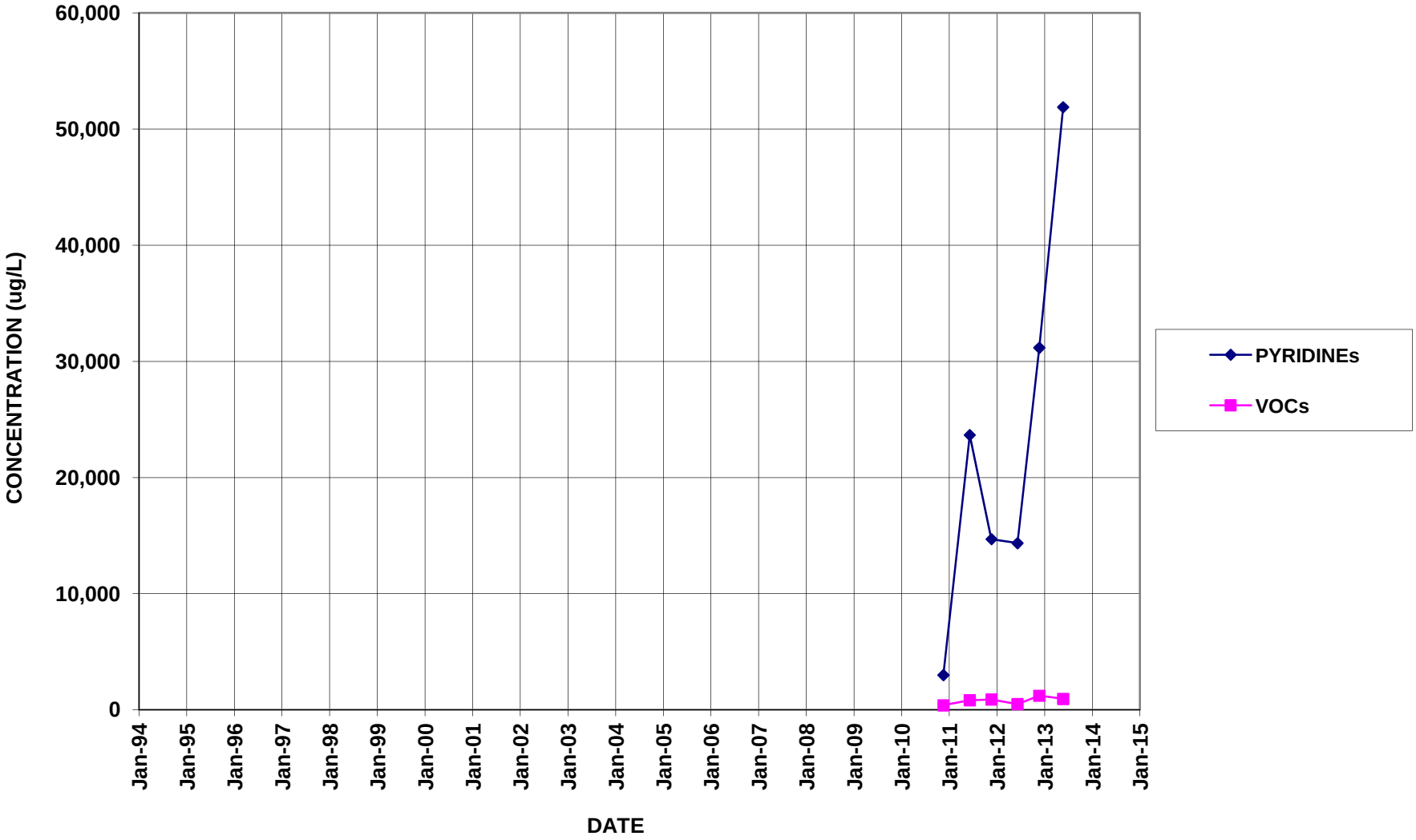
Prepared by: nmb
Reviewed by: jeb

PW15



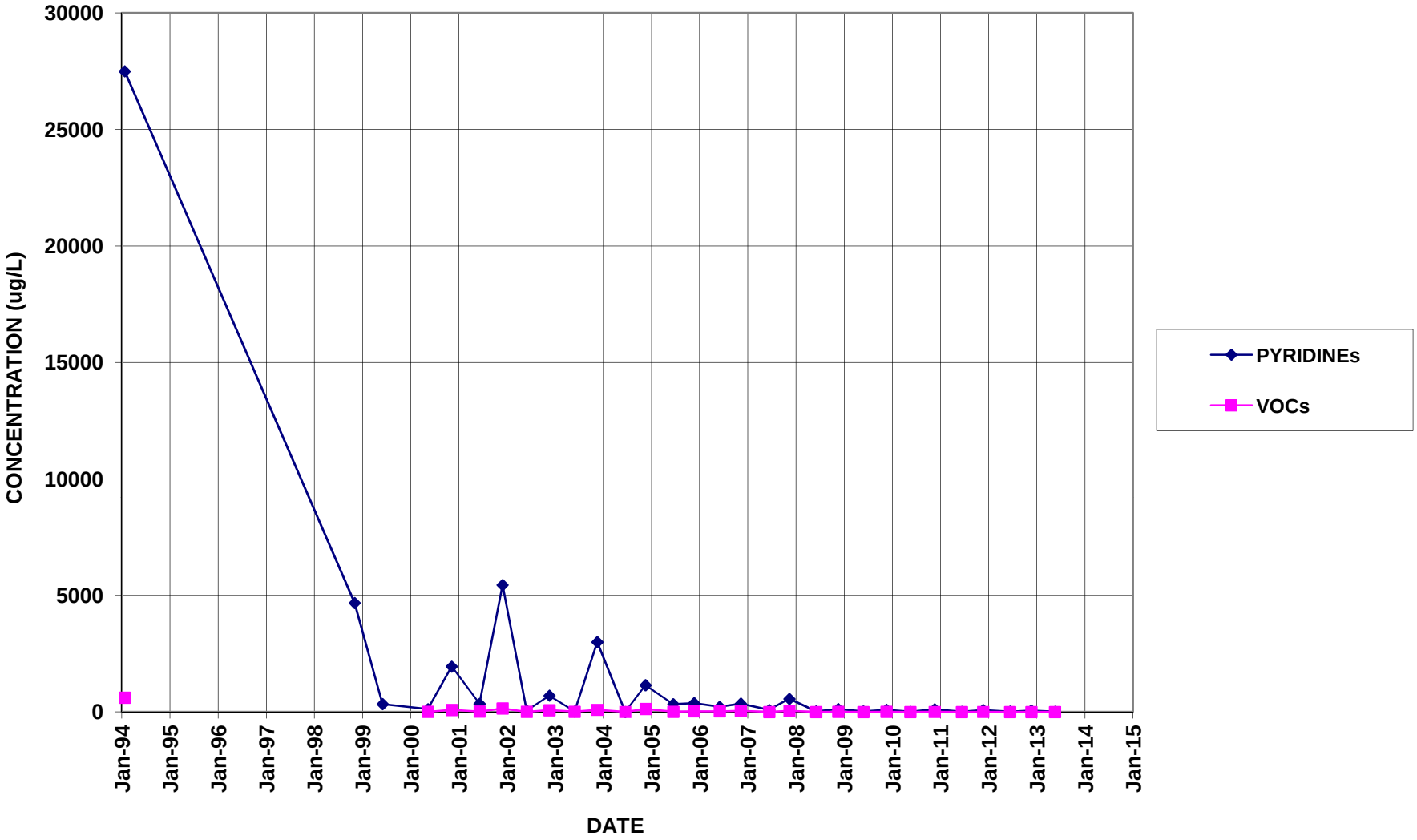
Prepared by: nmb
Reviewed by: jeb

PW16



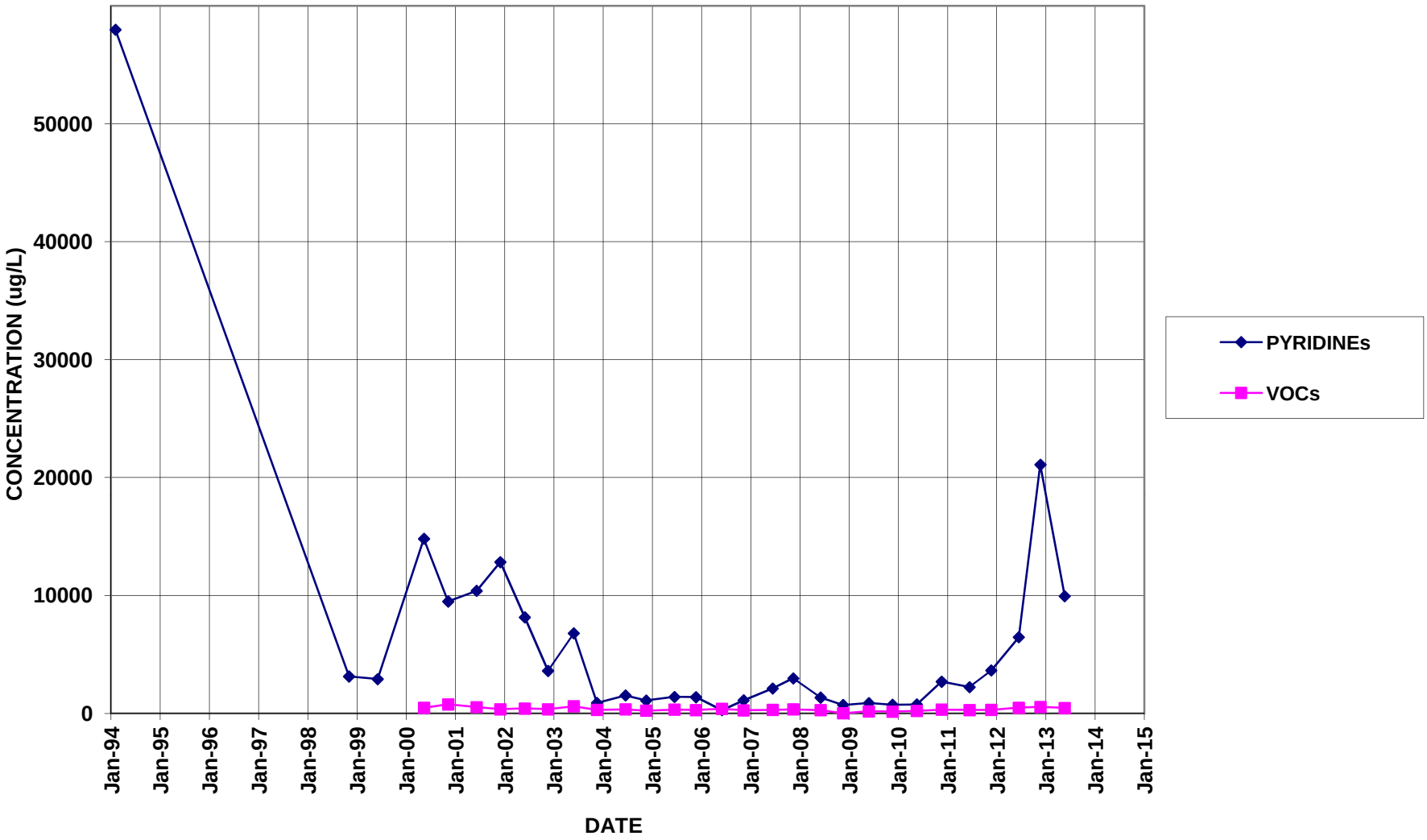
Prepared by: nmb
Reviewed by: jeb

PZ-101



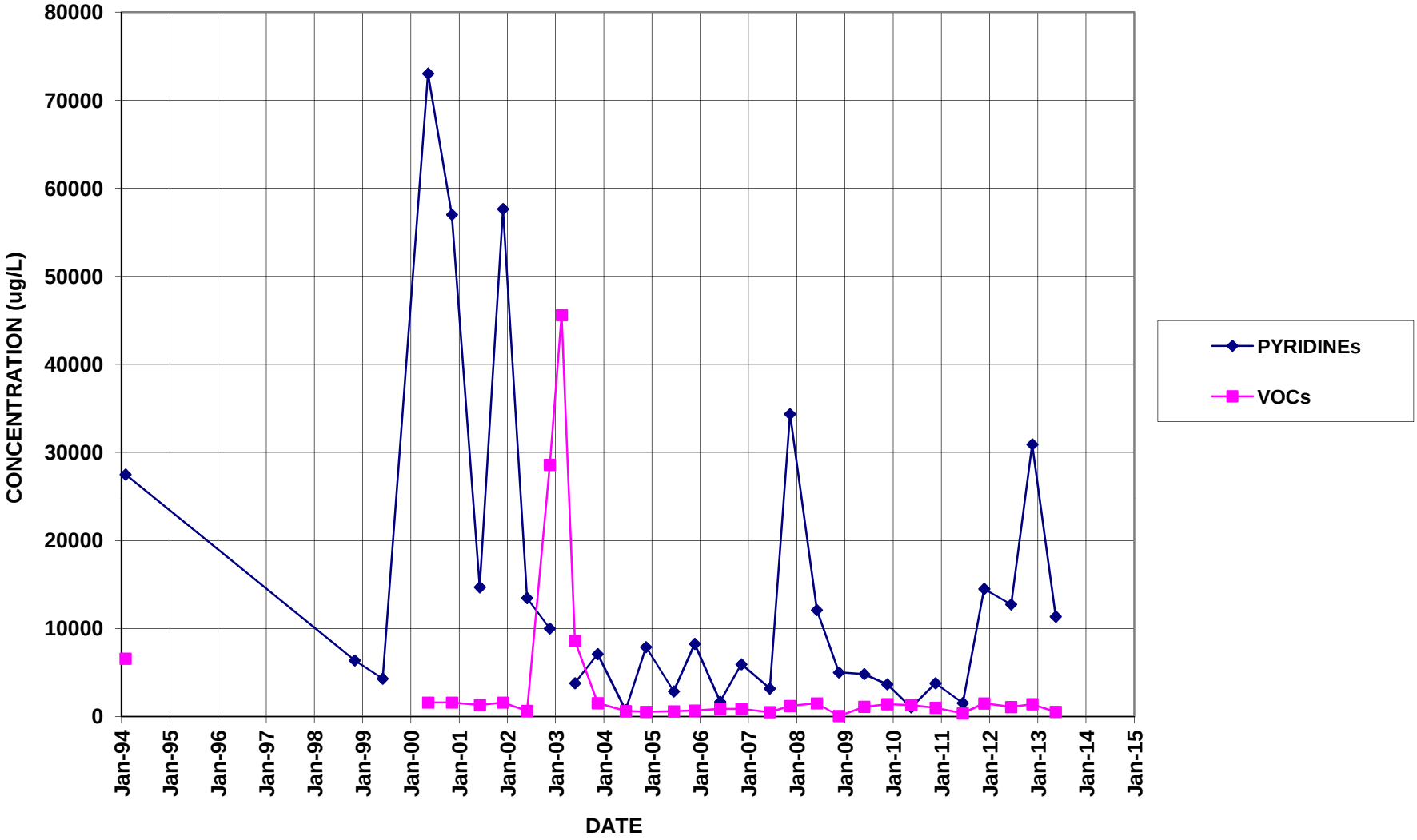
Prepared by: nmb
Reviewed by: jeb

PZ-102



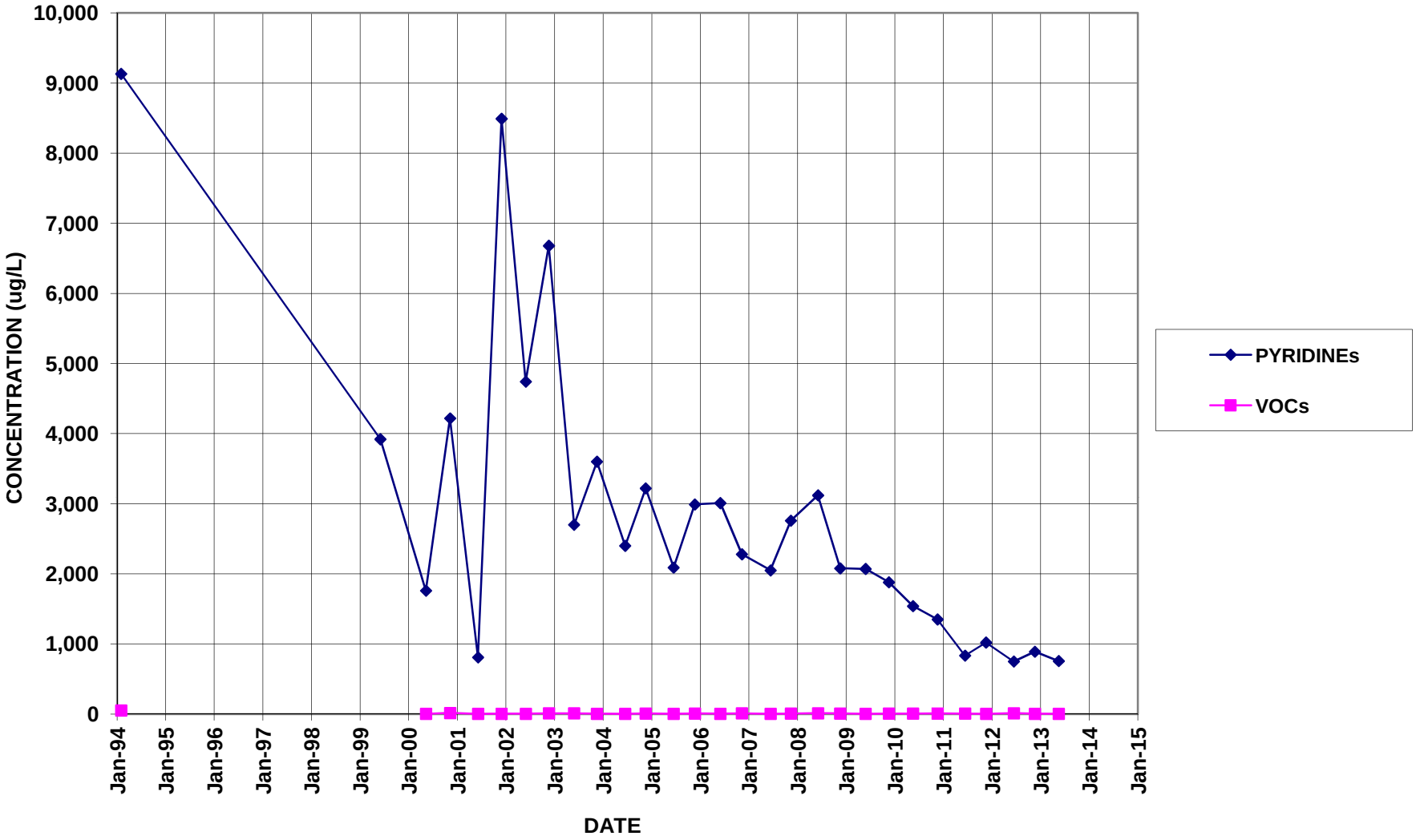
Prepared by: nmb
Reviewed by: jeb

PZ-103



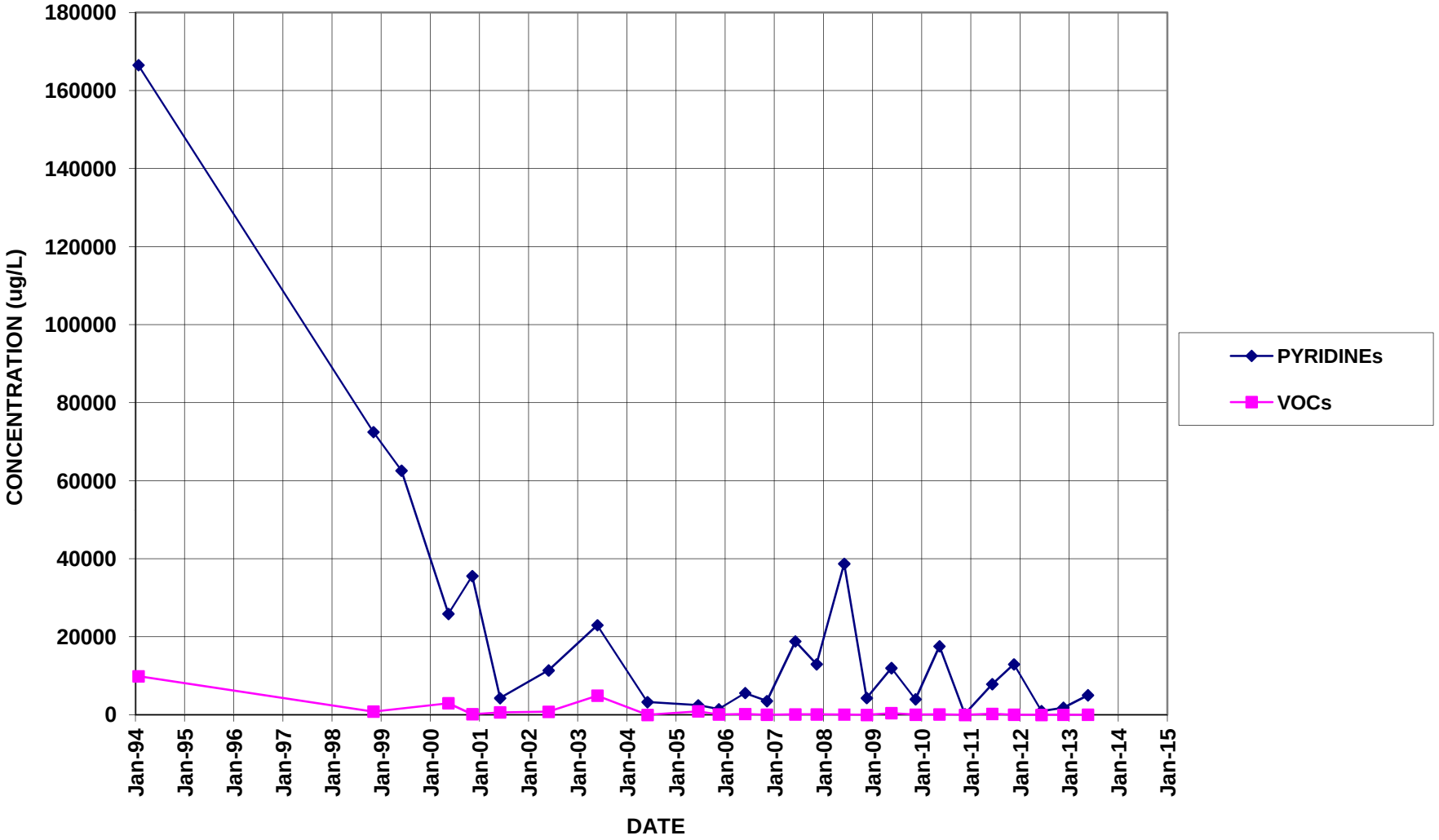
Prepared by: nmb
Reviewed by: jeb

PZ-104



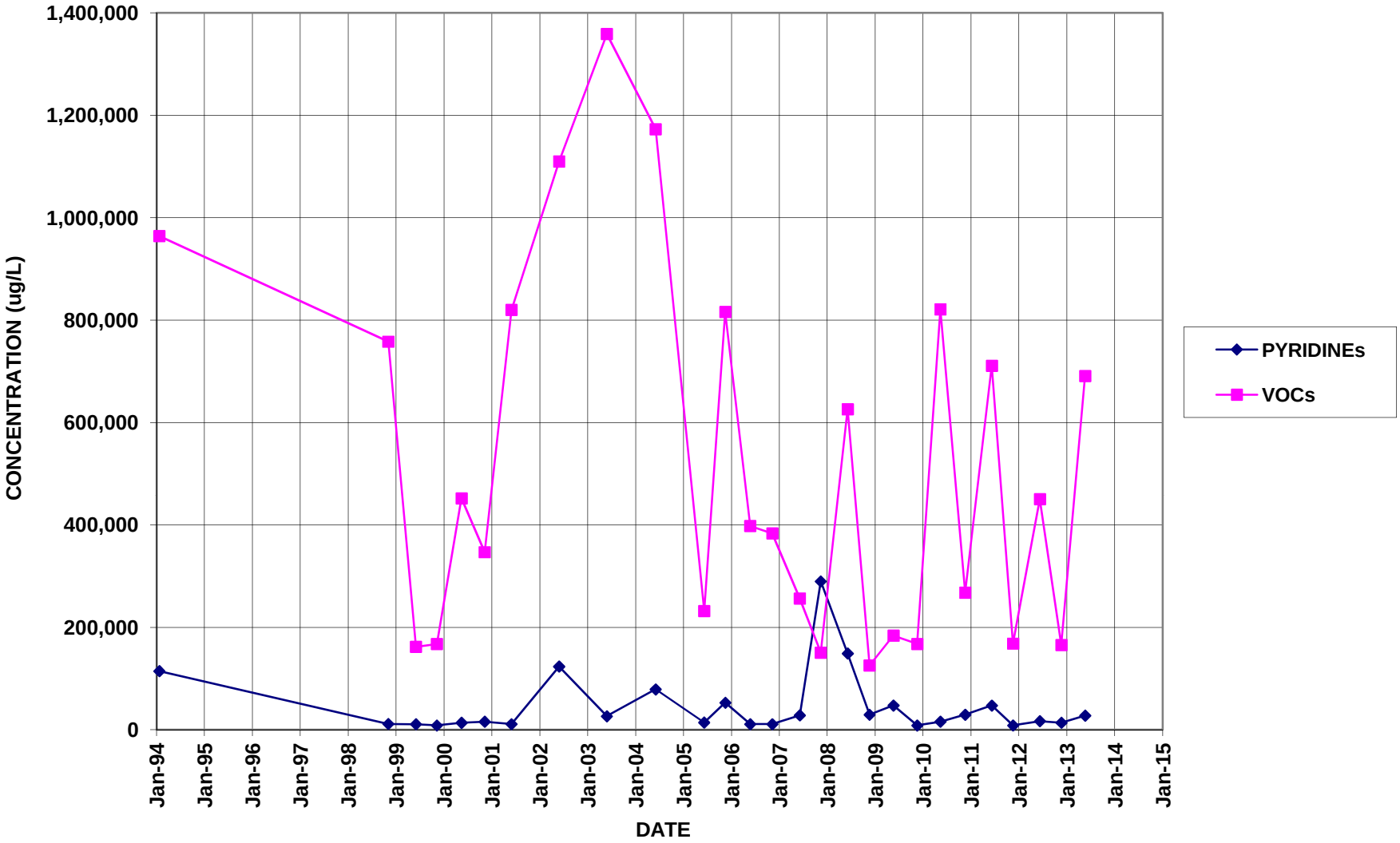
Prepared by: nmb
Reviewed by: jeb

PZ-105



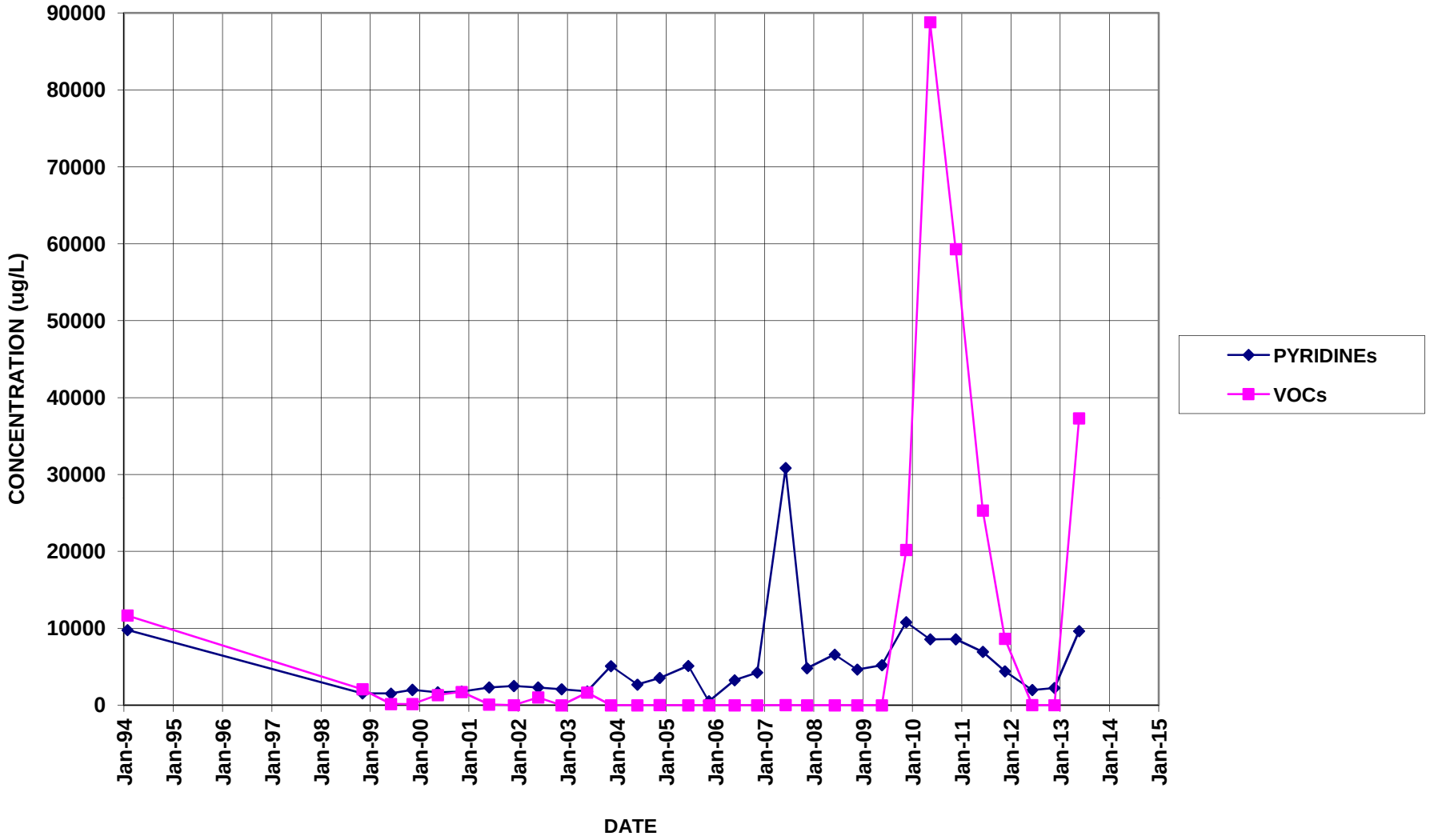
Prepared by: nmb
Reviewed by: jeb

PZ-106

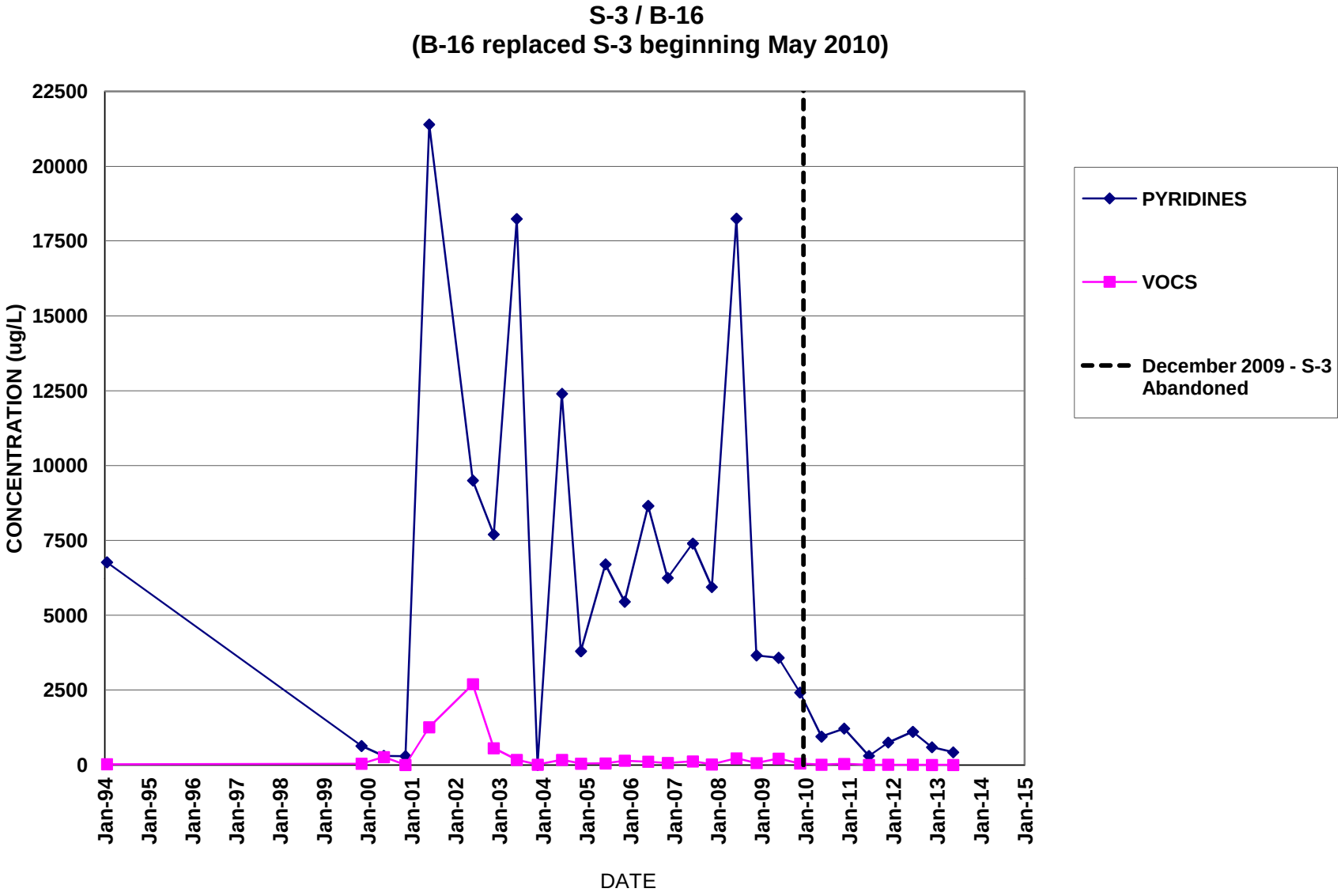


Prepared by: nmb
Reviewed by: jeb

PZ-107

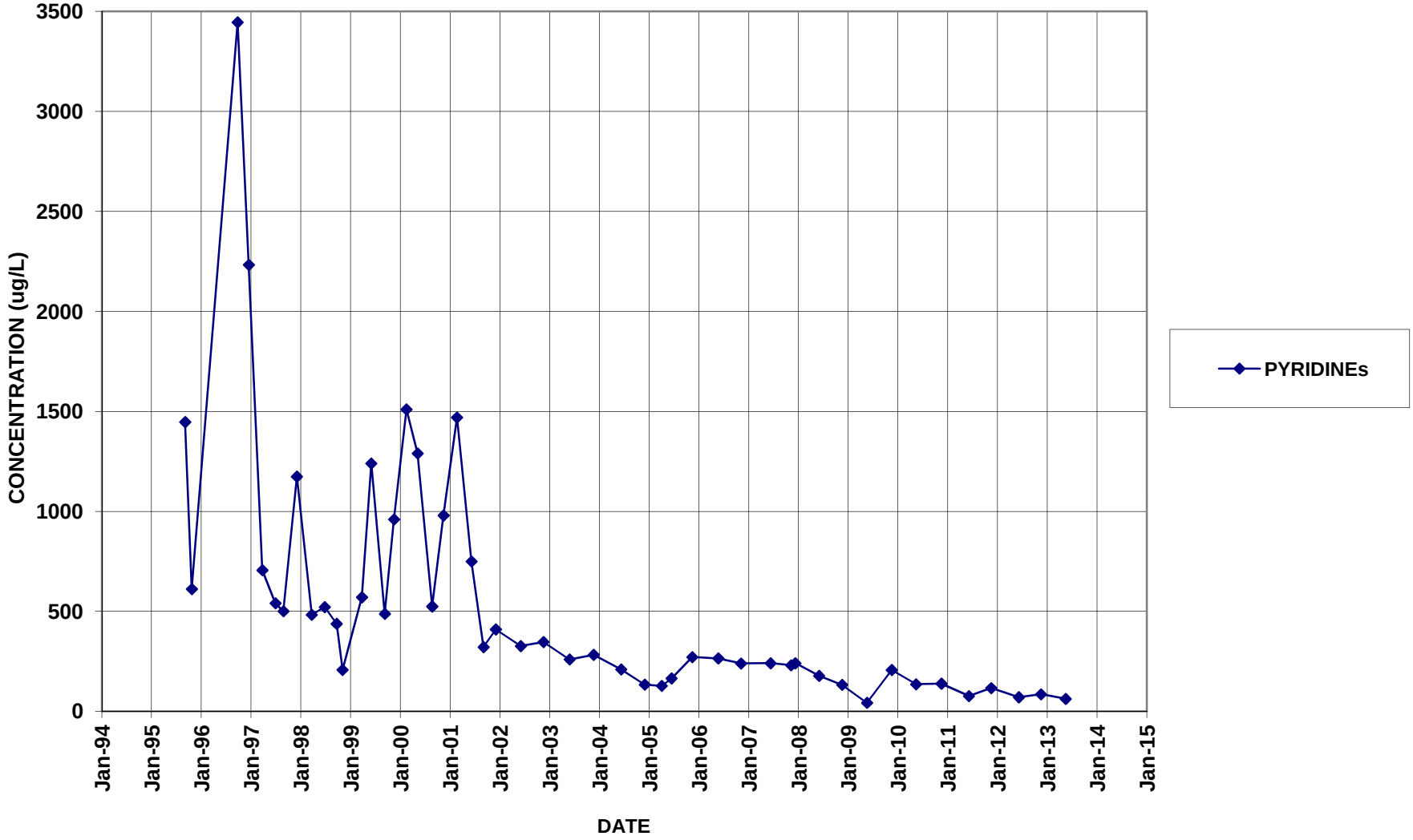


Prepared by: nmb
Reviewed by: jeb



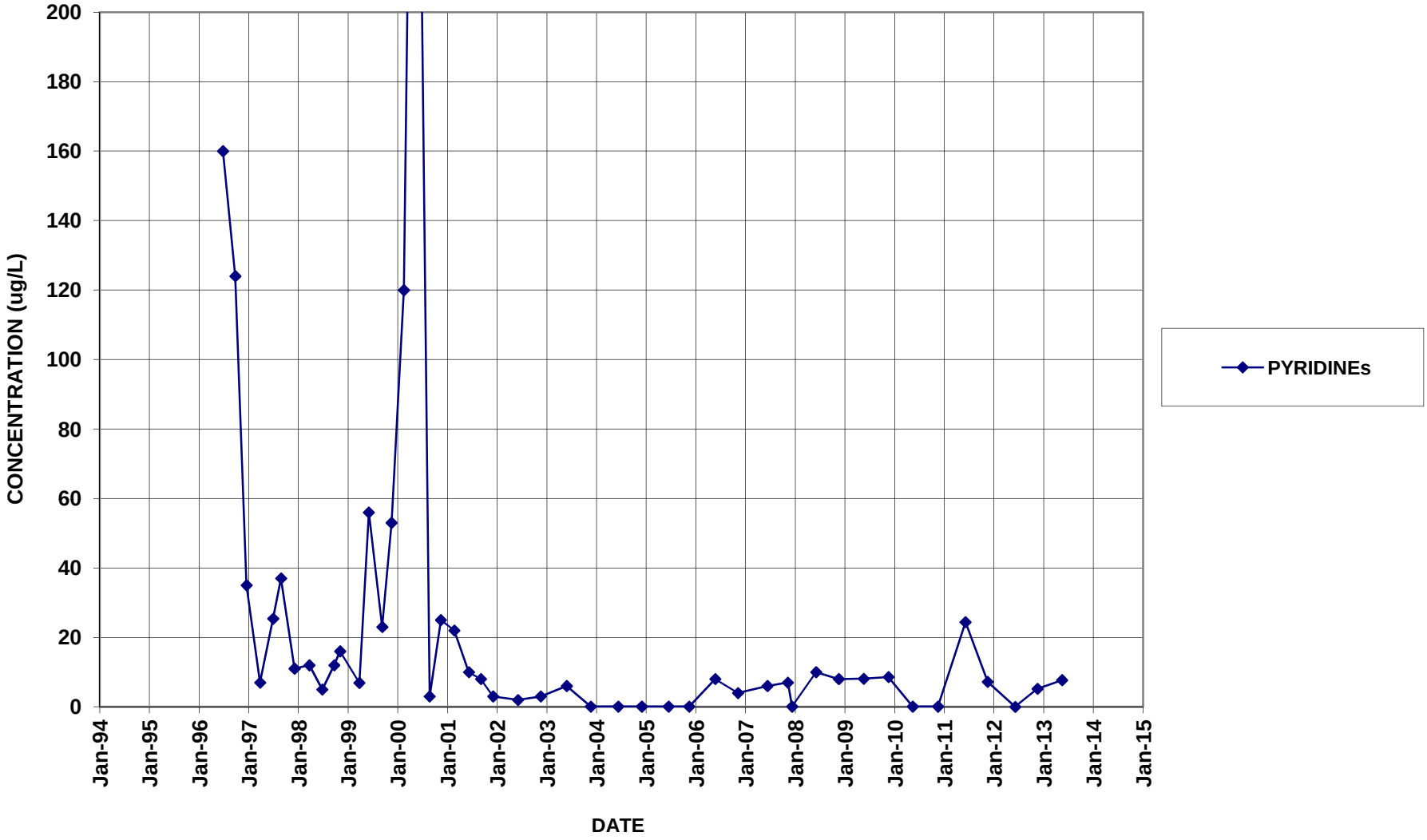
Prepared by: nmb
Reviewed by: jeb

QS-4 (QUARRY SEEP)



Prepared by: nmb
Reviewed by: jeb

QO-2 (QUARRY OUTFALL)



Prepared by: nmb
Reviewed by: jeb