SURFACE WATER AND GROUNDWATER MONITORING PROGRAM FALL 2009 MONITORING REPORT

ARCH CHEMICALS
ROCHESTER PLANT SITE
ROCHESTER, NEW YORK

ARCH CHEMICALS, INC. CHARLESTON, TENNESSEE

MARCH 2010

SURFACE WATER AND GROUNDWATER MONITORING PROGRAM FALL 2009 MONITORING REPORT

ARCH CHEMICALS ROCHESTER PLANT SITE ROCHESTER, NEW YORK

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March 2010

3616086023.02

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EXECUTIVE SUMMARY

This monitoring report presents the results of an on-going groundwater and surface water monitoring program being conducted by Arch Chemicals, Inc., at its Rochester, New York, manufacturing facility. Results in this report include surface and groundwater samples collected in November 2009.

During this monitoring event, samples from a total of 28 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-six of the 28 monitoring wells sampled for chloropyridines had contaminant concentrations that were at or below their respective 5-year prior averages. Twenty-three of the 27 monitoring wells sampled for volatile organic compounds had concentrations at or below their 5-year prior average. Contaminant contour plots are generally consistent with past observations.

Sampling locations associated with the quarry included the main quarry seep (QS-4), the quarry ditch where the quarry dewatering discharge enters the ditch (QD-1), the quarry ditch as it enters the Erie Barge Canal (QO-2), and the surface water in the canal approximately 100-feet downstream of the quarry ditch (QO-2S1). Chloropyridine concentrations in quarry seep QS-4 were observed to be slightly above the prior 5-year average for this location. Samples from the quarry ditch and the canal were also slightly above the prior 5-year averages for their respective locations.

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

During the period June 2009 through November 2009, the on-site groundwater extraction system pumped approximately 8.1 million gallons of groundwater to the on-site treatment system, containing an estimated 480 pounds of chloropyridines and 56 pounds of target volatile organic compounds.

During the Fall of 2009, Arch undertook an assessment of operational and maintenance issues associated with the groundwater pumping system, and identified a number of actions designed to improve the capture of contaminated groundwater. These actions included inspection and cleaning of well pumps and discharge lines, and conversion of well BR-127 to an active pumping well. Observations from the Fall 2009 monitoring event indicate generally favorable impacts on groundwater levels and contaminant concentrations in the southeast portion of the property. An observed increase in volatile organic chemical concentrations in well PZ-107 is likely attributable to localized changes in the groundwater flow regime resulting from the added pumping stress imposed by the activation of BR-127.

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

1.0 INTRODUCTION

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

The Fall 2009 sampling event included the collection and analysis of a total of 32 groundwater, surface water, and seep samples from off-site and on-site locations. Samples were collected November 16 through 18, 2009, for analysis of selected chloropyridines and volatile organic compounds (VOCs).

This report presents the results of the Fall 2009 monitoring event.

2.0 SAMPLE COLLECTION AND ANALYSIS

2.1 **G**ROUNDWATER

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

Groundwater was collected with the low flow/low stress purging technique from most of the wells using bladder or peristaltic pumps. Samples from active pumping wells were collected from the discharge lines.

Groundwater piezometric elevations were measured on November 6, 2009. 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 NAPL (LNAPL) was observed in any of these wells.

2.2 SURFACE WATER

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

downstream of the quarry ditch (QO-2S1) were collected by TestAmerica on November 17, 2009. All quarry-related samples were analyzed for the Arch suite of selected chloropyridines. The quarry locations sampled during the Fall 2009 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 (μ g/L) and 5 to 25 μ g/L, respectively, for undiluted samples.

2.4 QUALITY CONTROL

All laboratory analytical results were reviewed and qualified following U.S. Environmental Protection Agency Contract Laboratory Program (USEPA CLP), "National Functional Guidelines for Organic Data Review", October, 1999, 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

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

<u>Holding Times</u>. A subset of samples was extracted for pyridines (Method 8270C) outside the seven day holding time. The samples were initially extracted within the holding time; however, laboratory internal review indicated that the samples may have been incorrectly prepared for extraction. The following samples required re-extraction after expiration of the holding times: S-3, PZ-106, PW-15, PW-10, MW-106, PW-14, MW-127, E-1, PZ-103. Positive and non-detected results for all semi-volatile organic target compounds were qualified as estimated (J/UJ).

<u>Miscellaneous</u>. Samples PW-12, BR-6A, PZ-107, MW-106, QS-4, PW-14, PZ-106, PW-15, MW-127, E-1, PW-10, BR-5A, BR-127, BR-7A, PZ-103, PZ-102, PZ-104, BR-126, and BR-7A DUP were analyzed at dilutions due to concentrations of volatile organic or semivolatile organic target analytes. Non-detects are reported at elevated reporting limits.

^{* -} all criteria were met for this parameter

3.0 ANALYTICAL RESULTS

3.1 GROUNDWATER

The validated results from the Fall 2009 groundwater monitoring event are provided in Tables 2 and 3. Table 4 provides a comparison of the Fall 2009 analytical results for selected chloropyridines and VOCs in representative wells to mean concentrations of the prior five years (Fall 2004 through Spring 2009). Long term trends for both selected chloropyridines and VOCs are also presented as time-series plots for representative wells in Appendix B. A summary of the analytical findings is presented below by parameter class.

3.1.1 Chloropyridines

<u>On-Site.</u> Chloropyridines were detected above sample quantitation limits in all 18 on-site wells sampled in the Fall 2009 event. Concentrations of chloropyridines ranged from 24 micrograms per liter (μ g/L) (sum of all chloropyridine and pyridine isomer concentrations) in monitoring well S-4 to 37,000 μ g/L in monitoring well PW-10. Sixteen of the 18 on-site wells exhibited total chloropyridine concentrations that were well below their respective means from monitoring events over the previous five years, with the exceptions being wells BR-6A and PZ-107 (see Table 4).

<u>Off-Site.</u> Chloropyridines were detected above sample quantitation limits in all 10 of the off-site wells that were sampled. Concentrations of total selected chloropyridines ranged from an estimated 7.2 μg/L in well MW-16 (on the former General Circuits property) to approximately 4,000 μg/L in well MW-106 west of McKee Road. None of the off-site wells contained total chloropyridine concentrations above their respective 5-year prior means.

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

3.1.2 Selected VOCs.

<u>On-Site.</u> Selected VOCs were detected in 16 of the 18 on-site wells sampled in the Fall 2009 event. Total concentrations of selected VOCs ranged from not detected (in wells BR-7A and PW-11) to 170,000 μg/L in PZ-106 for the sum of the principal site-related contaminants (carbon tetrachloride, chloroform, methylene chloride, tetrachloroethene, and trichloroethene). Three of the 18 on-site wells (BR-127, E-1, and PZ-107) contained concentrations of total VOCs above their 5-year prior means. The substantial increase observed in PZ-107 is likely attributable to localized changes in the groundwater flow regime as a result of the start-up of nearby BR-127 as a pumping well (see Section 4).

In addition to the selected VOCs, other notable constituents detected in on-site wells include chlorobenzene (in 12 out of 18 wells), benzene (12 of 18), toluene (12 of 18), carbon disulfide (12 of 18), vinyl chloride (9 of 18), 1,2-dichloroethene (9 of 18), total xylenes (7 of 18), ethylbenzene (5 of 18), acetone (5 of 18), 1,1-dichloroethane (5 of 18), bromoform (2 of 18), and 1,2-dichloroethane (2 of 18).

<u>Off-Site.</u> Selected VOCs were detected in just two of the 9 off-site wells sampled for VOCs in the Fall 2009 event. Total concentrations of selected VOCs ranged from not detected (in BR-106, BR-126, MW-106, PZ-101, PZ-102, PZ-103, and PZ-104) to $5.6 \mu g/L$ (in BR-105). One of the off-site wells (BR-105) had selected VOC concentrations slightly above its prior 5-year mean. In addition to the selected VOCs, other notable constituents detected in off-site wells include benzene (in 9 out of 9 wells), chlorobenzene (8 of 9), carbon disulfide (4 of 9), 1,2-dichloroethene (3 of 9), toluene (3 of 9), and 1,1-dichloroethane (3 of 9).

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

3.2 SURFACE WATER

Results from the Fall 2009 canal and quarry monitoring event are presented in Table 5, and summarized below. In general, chloropyridine concentrations in the quarry and canal samples remain low, but were slightly elevated in comparison to the past few years.

3.2.1 Quarry

One quarry seep (QS-4) was sampled in the Fall 2009 monitoring event, and contained 210 µg/L total chloropyridines.

3.2.2 Quarry Discharge Ditch

Two locations within the quarry discharge ditch were sampled and analyzed for chloropyridines: QD-1, at the point where the quarry's dewatering discharge enters the ditch; and QO-2, at the location where the ditch discharges to the canal. Total chloropyridines were detected in the sample from QD-1 at an estimated concentration of 6.0 μ g/L. Chloropyridines were detected in the sample at QO-2 at an estimated concentration of 8.6 μ g/L.

3.2.3 Barge Canal

One sample was collected from the Erie Barge Canal location (QO-2S1, approximately 100 feet downstream of QO-2). Chloropyridines were detected at an estimated concentration of $3.4 \mu g/L$ in this sample.

4.0 EXTRACTION SYSTEM PERFORMANCE AND MAINTENANCE

Table 6 is a summary of the system flow measurements for the on-site extraction wells from June 2009 through November 2009. The total volume pumped during the six-month period was approximately 8.1 million gallons.

Table 7 provides a calculation of mass removal rates since the previous groundwater monitoring event (i.e., from June 2009 through November 2009). Arch estimates that approximately 56 pounds of target VOCs and 480 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.

During the Fall of 2009, Arch undertook an assessment of operational and maintenance issues associated with the groundwater pumping system, and identified a number of actions designed to increase groundwater extraction rates and improve plume containment. Specific actions included the following:

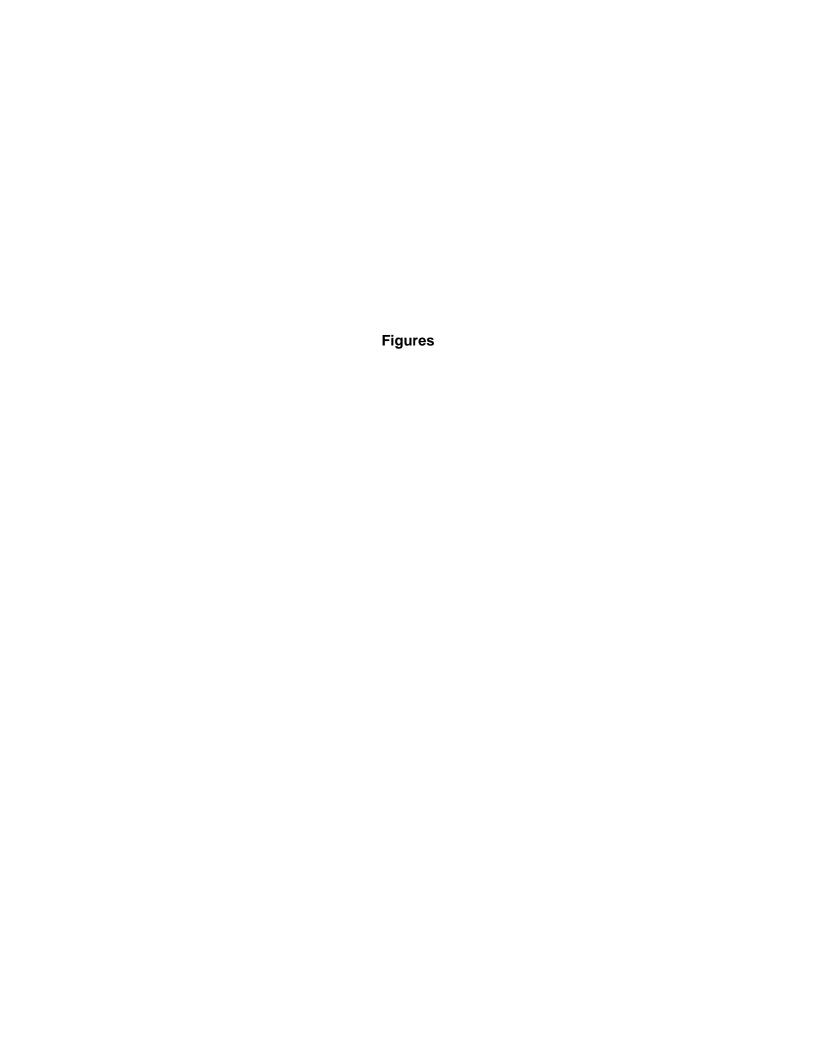
- A maintenance assessment of the wells and piping for the groundwater extraction system was conducted in September 2009 to determine potential problems and make recommendations for improvements. Pumps and controllers at all extraction wells were pulled and cleaned, and the condition of the wells and discharge lines were assessed. Scale and biofouling were observed in most wells, with the most significant issues noted in wells PW-13, PW-14, and PW-15. Samples of scale and water from the wells revealed that solids buildup consisted of primarily iron and calcium deposits. Recommended follow-up actions include physical and chemical cleaning of wells PW-13, PW-14, and PW-15, and chemical cleaning of the associated groundwater sewer lines.
- A new pump was installed in the groundwater collection pit in the south portion of the facility to improve reliability of the groundwater conveyance system. In addition, the main discharge line from the collection pit to the carbon treatment units was found to be nearly plugged with scale and was thoroughly cleaned.
- A temporary pump was installed in monitoring well BR-127 and connected to the existing groundwater collection system. The temporary system began operating on September 11, 2009, and has been consistently pumping in the range of 6 to 12 gallons per minute (gpm). During its first twelve weeks of operation, this well has resulted in the capture of an estimated 135 pounds of chloropyridines and two pounds of VOCs. The location of BR-127 is well-suited for improving groundwater capture in the southeast corner of the property, and its operation as a pumping well appears to be having an observable effect on the high groundwater levels observed in this portion of the site (as seen on Figures 3 and 4). Chloropyridine concentrations in several monitoring wells in this portion of the property have exhibited noticeable changes, with most showing significant declines (although well PZ-107 has exhibited a large increase in chloropyridine levels, probably as a result of changes in groundwater flow from the added pumping stress).

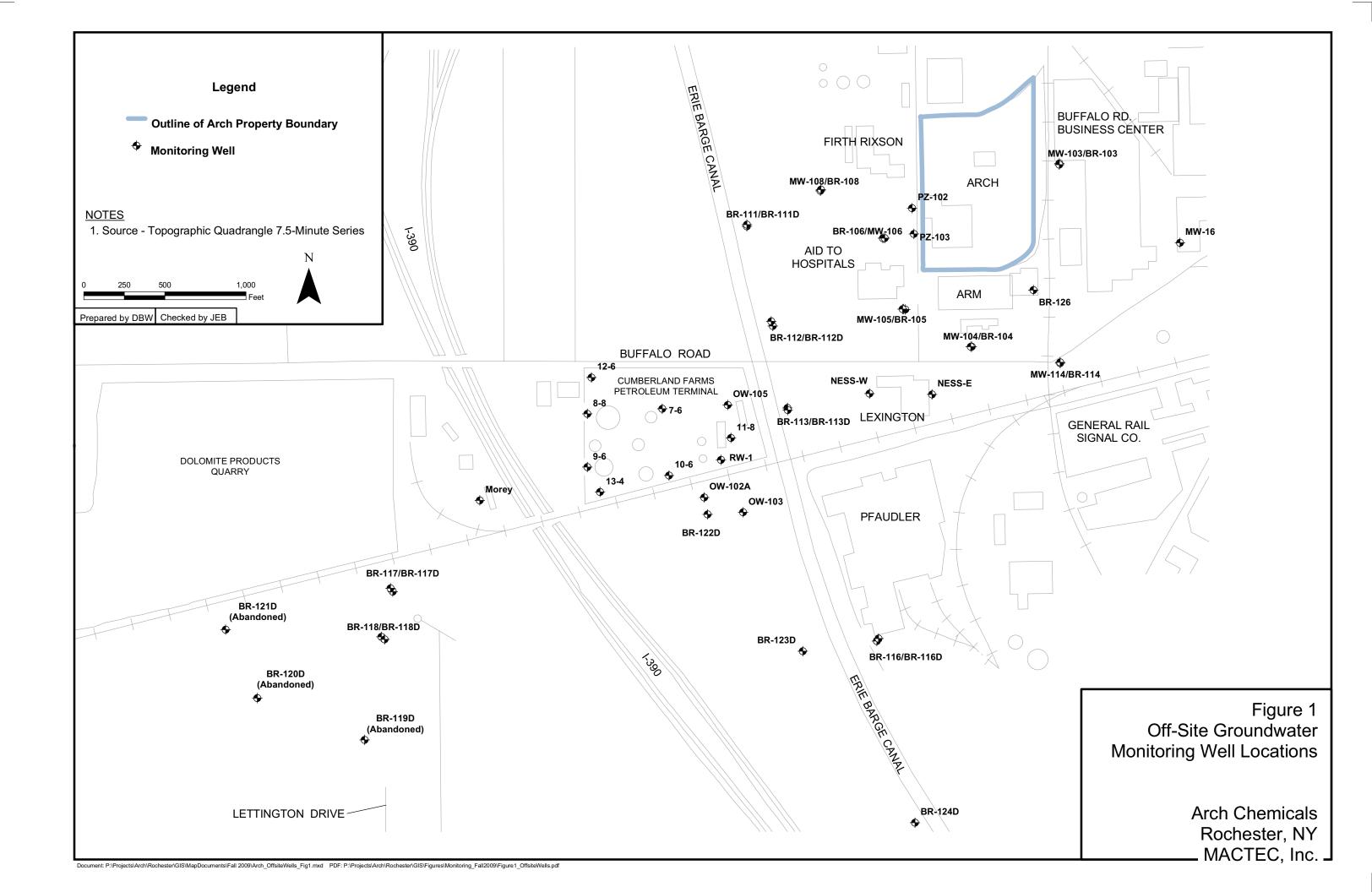
These actions have resulted in a significant improvement in capturing contaminated groundwater at the site. Based on the generally favorable observations in measured groundwater levels and contaminant levels, Arch has converted BR-127 into a permanent pumping well.

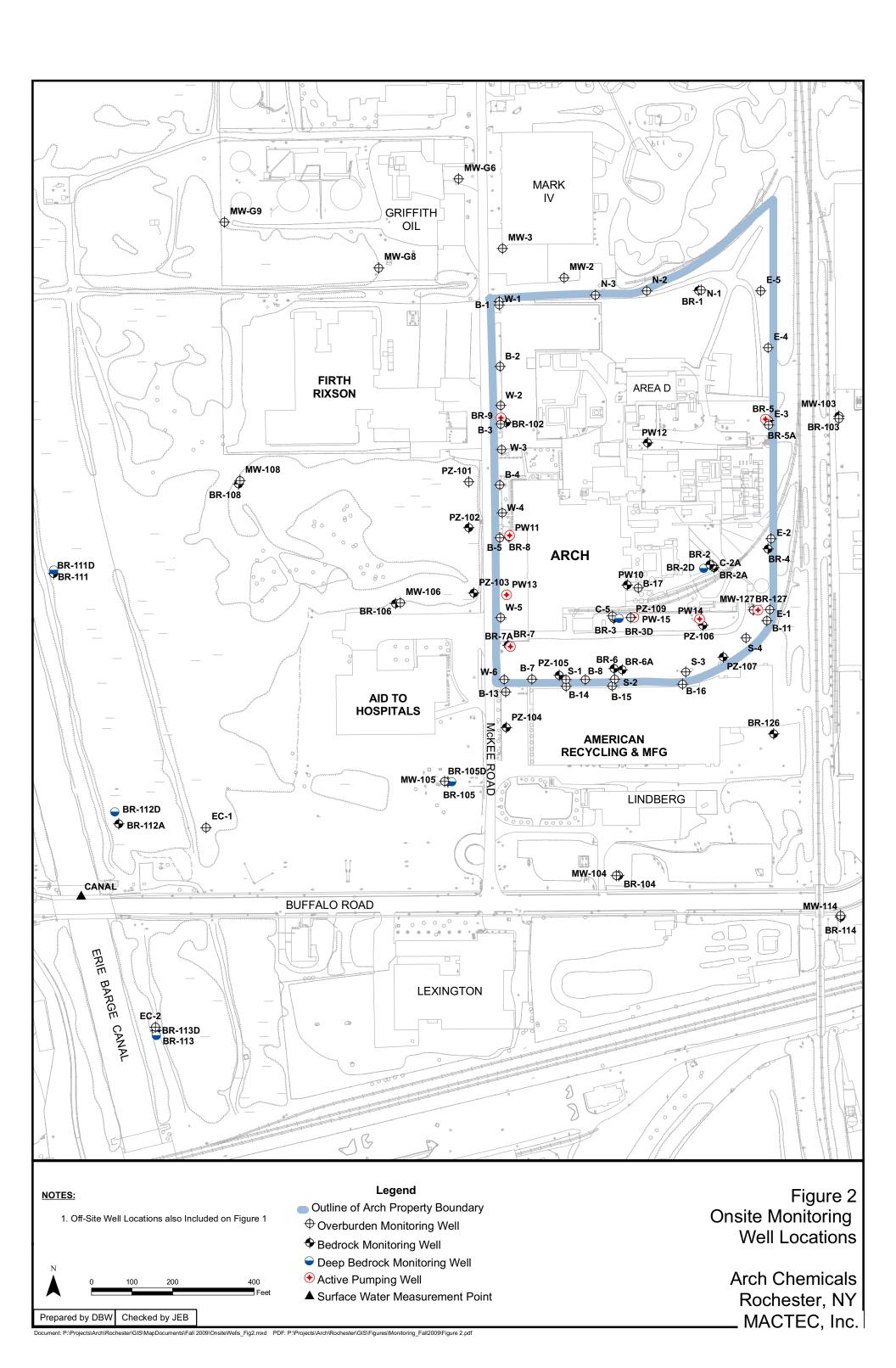
5.0 NEXT MONITORING EVENT

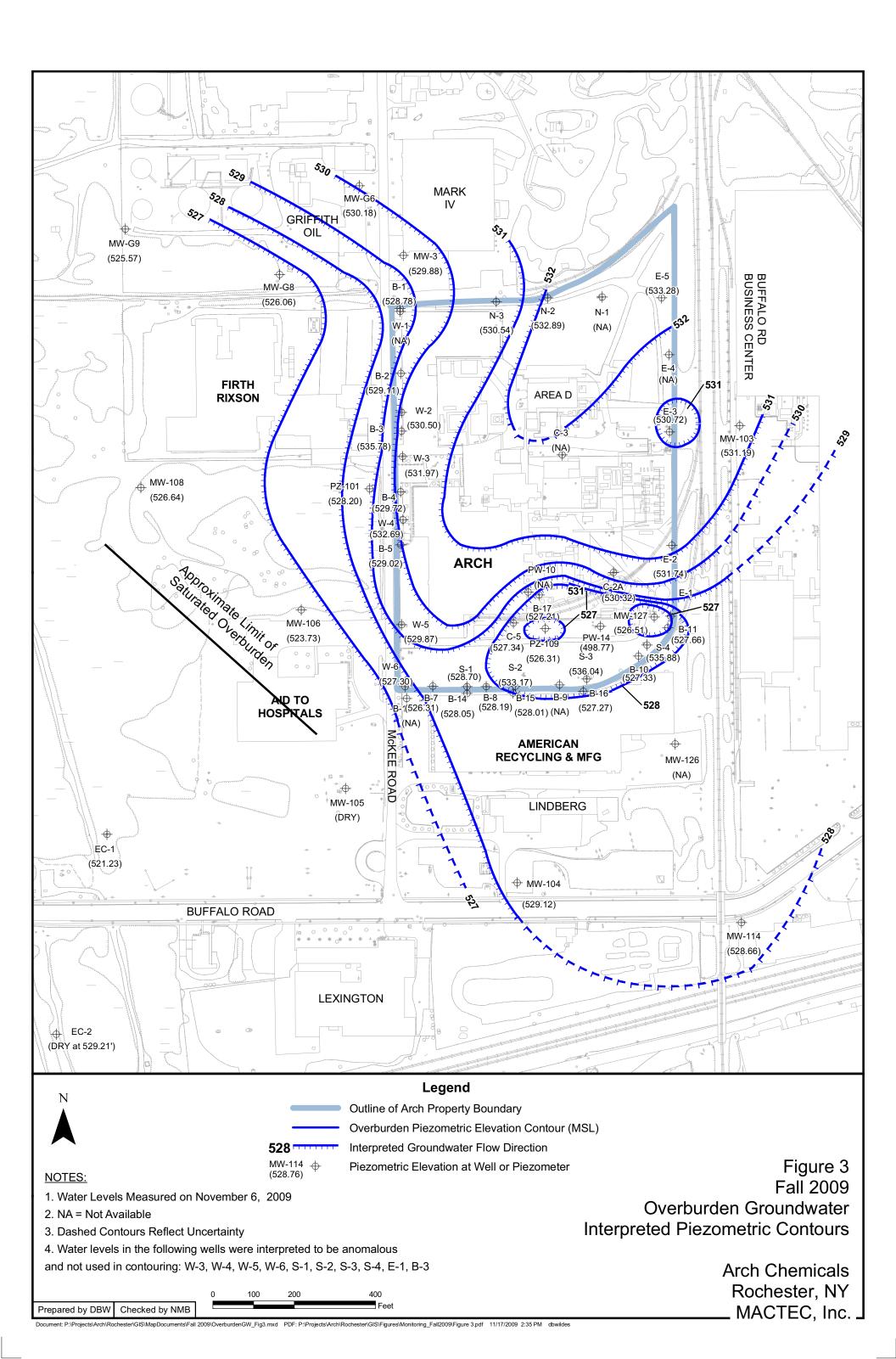
The next regular monitoring event will occur in May 2010 and will include groundwater, surface water, and seep sampling.

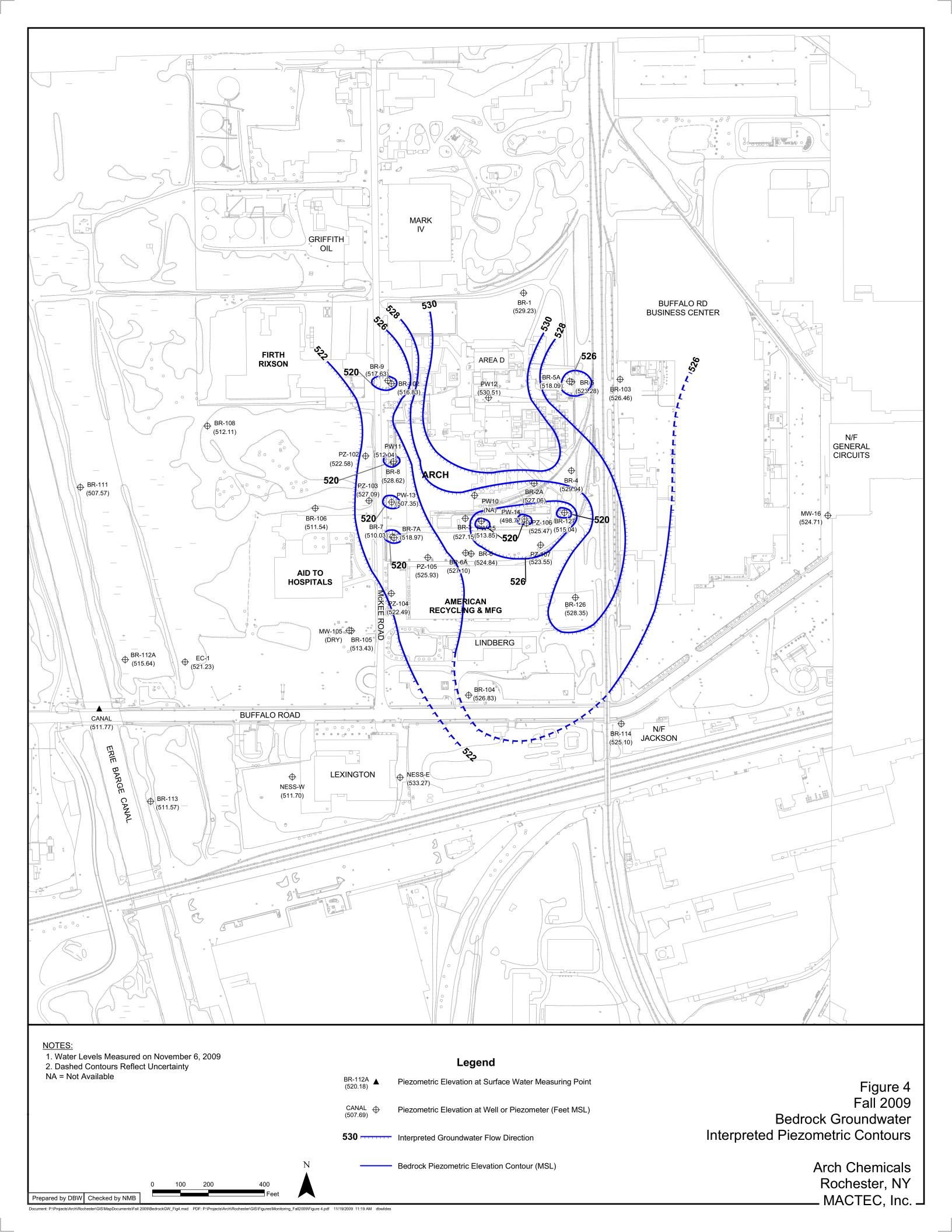
Table 8 shows the current monitoring program for the Arch Rochester site. Three overburden wells that had been included in the monitoring program were abandoned in December 2009 as part of an effort by Arch to eliminate wells that were non-functional or prone to accumulation of surface water in their well vaults. These three wells (E-1, S-3, and S-4) will be replaced in the monitoring program by nearby wells B-11 and B-16 to provide continued assessment of overburden groundwater quality in that portion of the site.

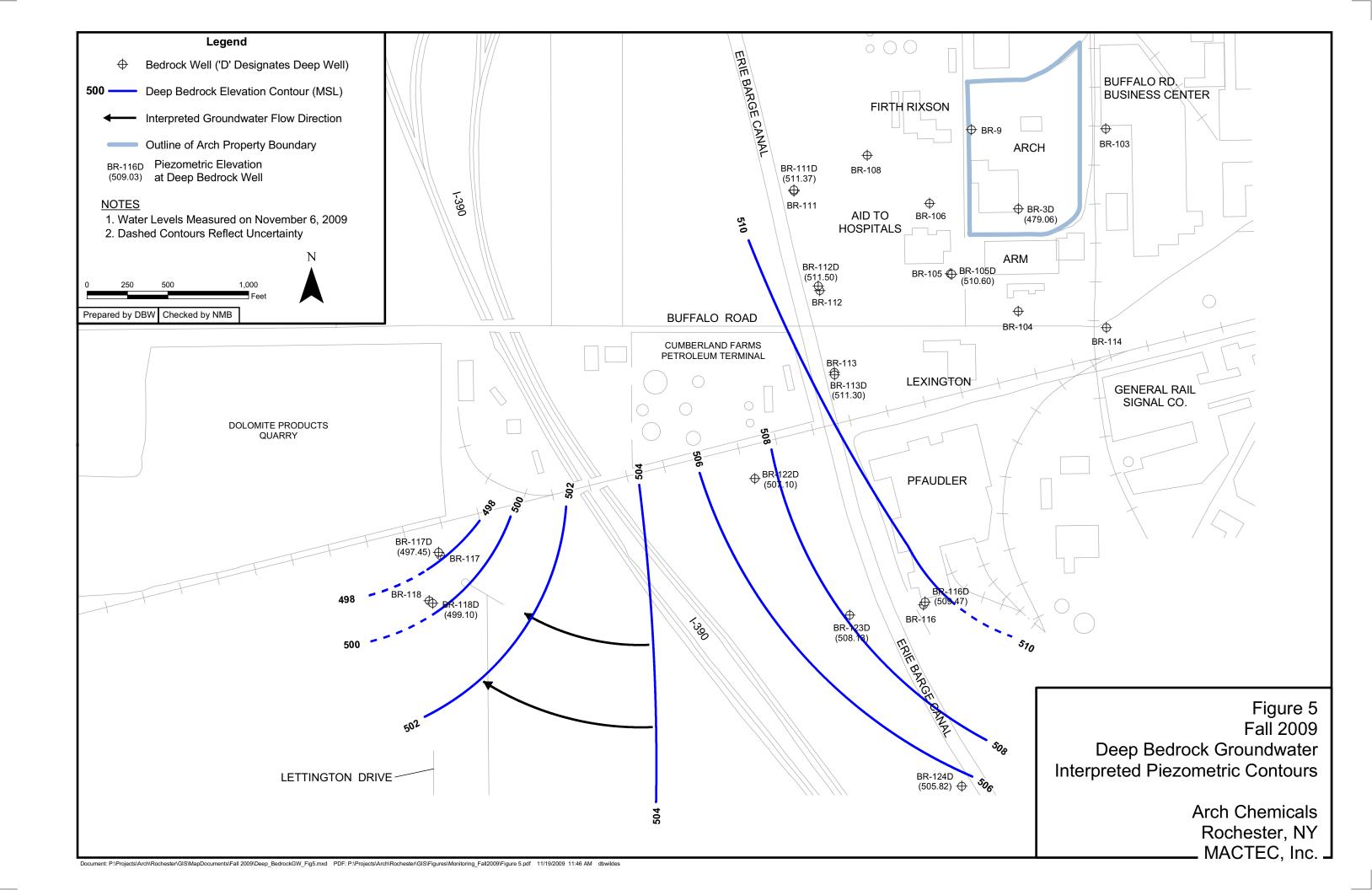


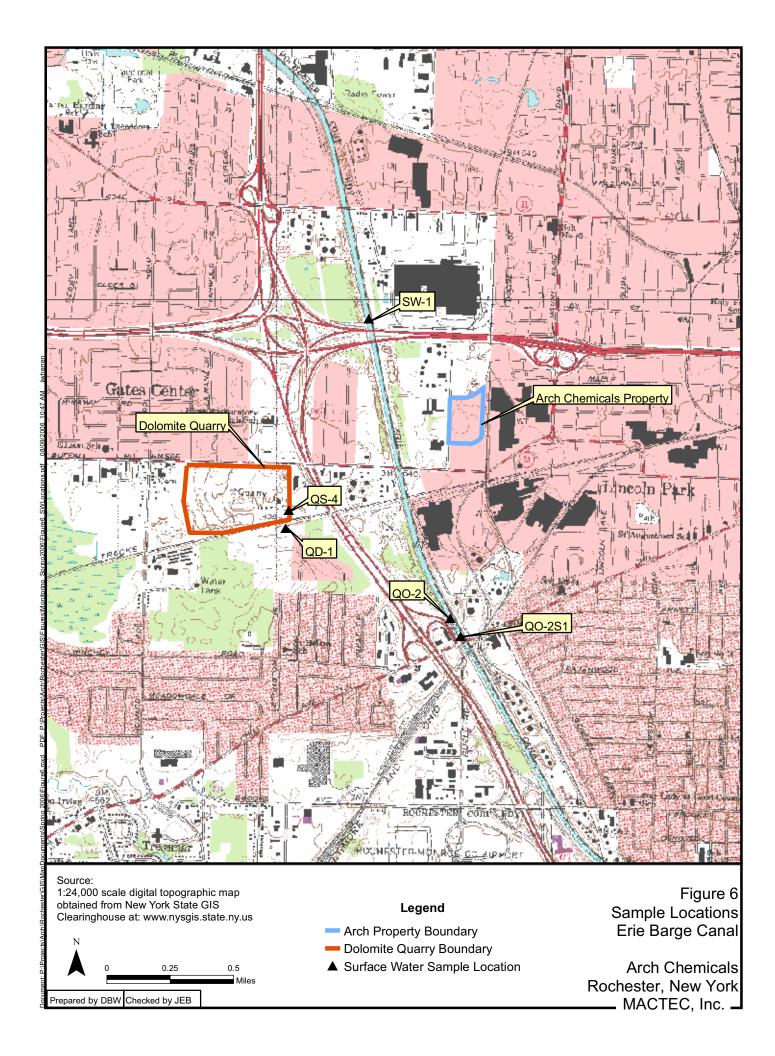


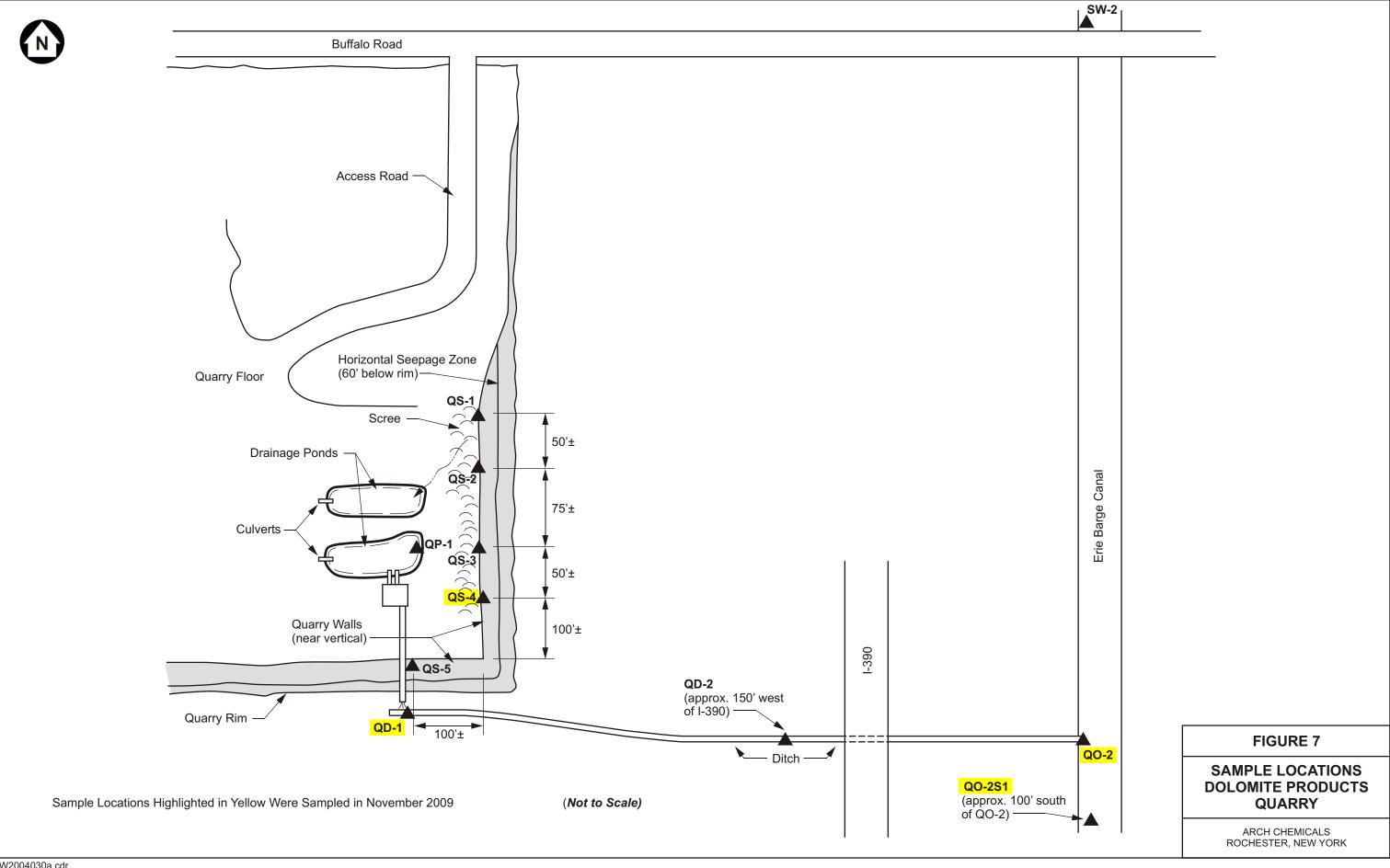


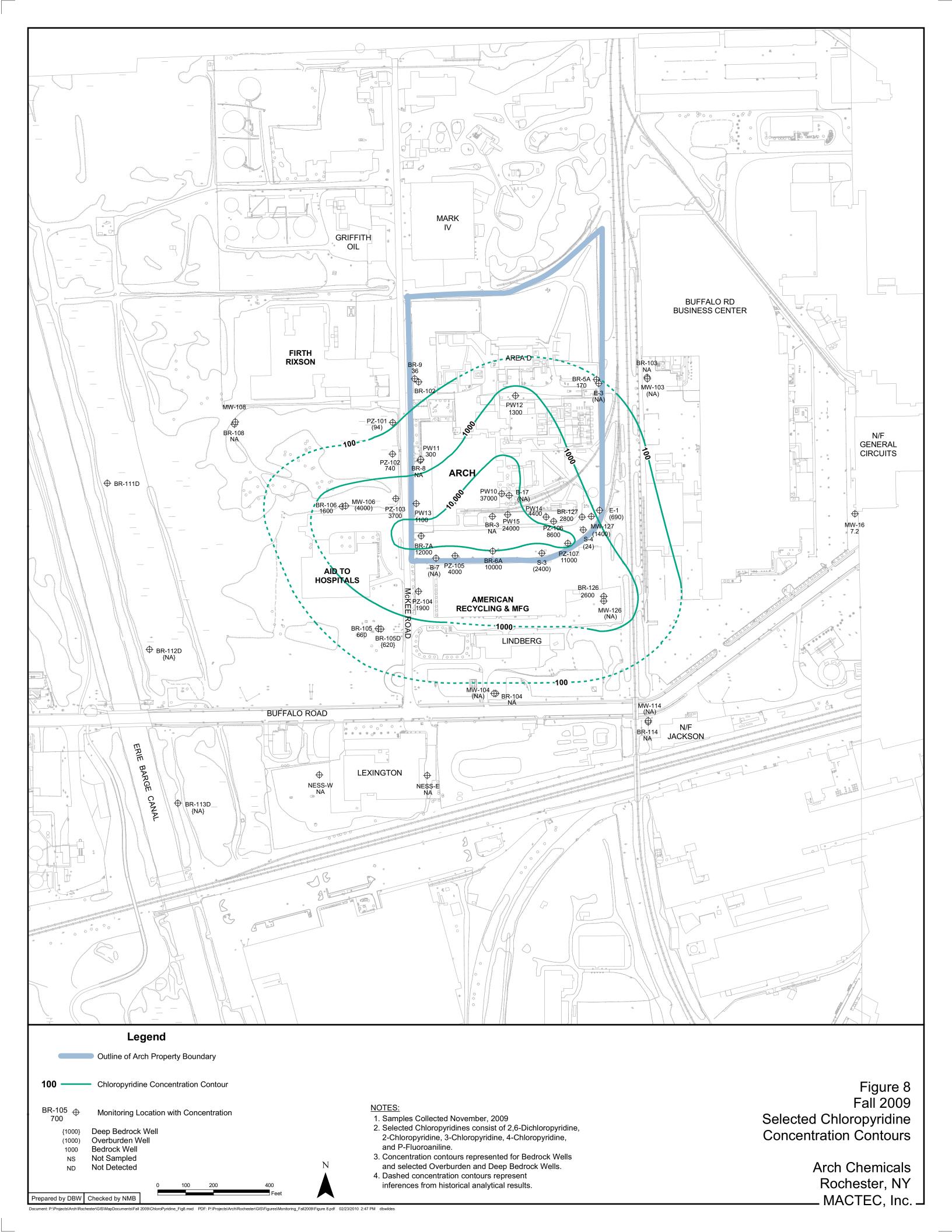


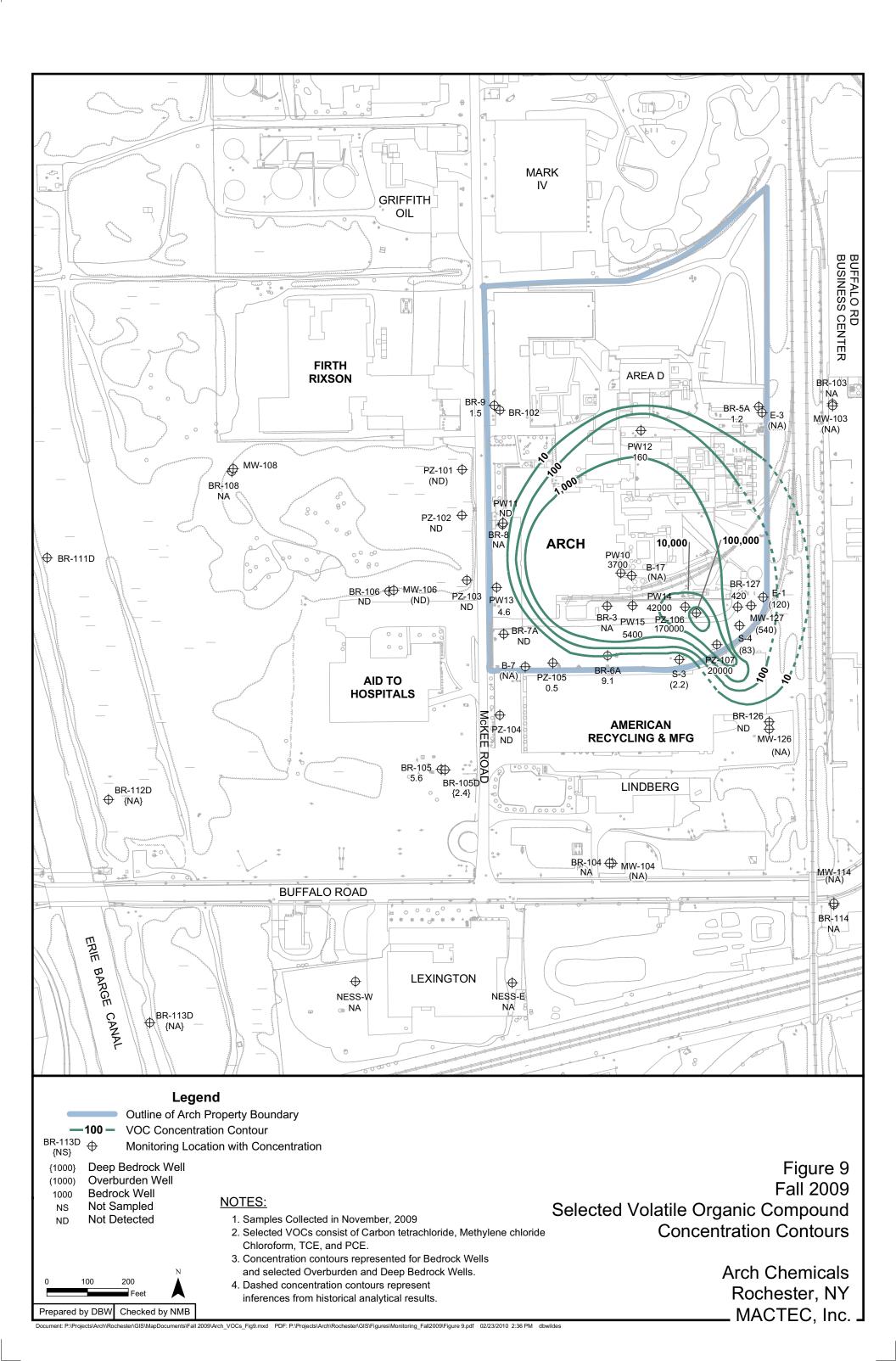












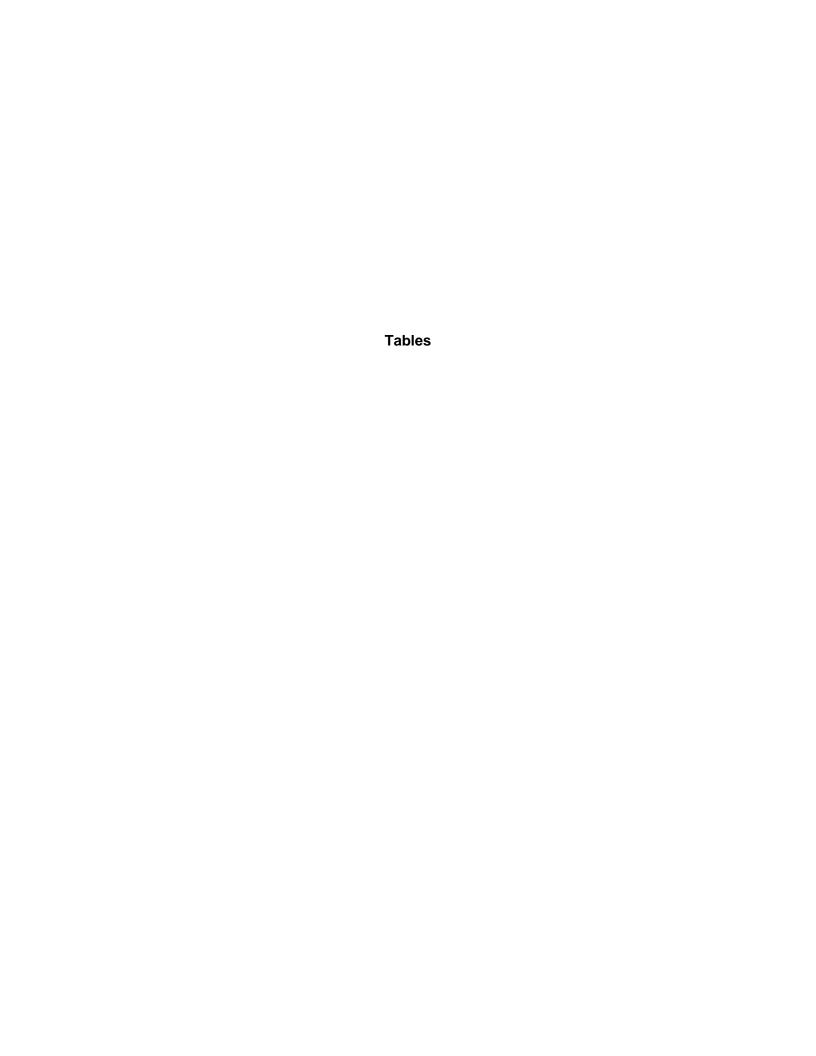


TABLE 1 FALL 2009 SAMPLING AND ANALYTICAL PROGRAM

ARCH CHEMICALS, INC ROCHESTER, NEW YORK

			ANALYSIS	PYRIDINES	VOCs
SITE / AREA	WELL / POINT	DATE	QC TYPE	•	
AID TO HOSPITALS	BR-106	11/17/2009	Sample	X	Х
	MW-106	11/17/2009	Sample	X	Х
	PZ-101	11/18/2009	Sample	X	Х
	PZ-102	11/18/2009	Sample	X	Х
	PZ-103	11/18/2009	Sample	X	Х
AMERICAN RECYCLING &	BR-126	11/18/2009	Sample	X	Х
MANUFACTURING (58 MCKEE ROAD)	PZ-104	11/18/2009	Sample	X	Х
ARCH ROCHESTER	BR-127	11/18/2009	Sample	X	Х
	BR-5A	11/17/2009	Sample	X	Χ
	BR-6A	11/16/2009	Sample	X	Х
	BR-7A	11/18/2009	Sample	Х	Х
	BR-7A	11/18/2009	Duplicate	X	Х
	BR-9	11/18/2009	Sample	X	Х
	E-1	11/17/2009	Sample	X	Χ
	MW-127	11/17/2009	Sample	X	Х
	PW10	11/17/2009	Sample	X	Х
	PW11	11/18/2009	Sample	X	Х
	PW12	11/16/2009	Sample	X	Х
	PW13	11/18/2009	Sample	X	Х
	PW14	11/17/2009	Sample	X	Х
	PW15	11/17/2009	Sample	X	Х
	PZ-105	11/16/2009	Sample	X	Х
	PZ-106	11/17/2009	Sample	X	Х
	PZ-107	11/16/2009	Sample	X	Х
	S-3	11/16/2009	Sample	X	Χ
	S-4	11/16/2009	Sample	X	Х
DOLOMITE PRODUCTS, INC.	QD-1	11/17/2009	Sample	X	
	QS-4	11/17/2009	Sample	X	
FORMER GENERAL CIRCUITS(Corner of Buffalo and Mt Read Blvd.)	MW-16	11/17/2009	Sample	Х	
ERIE BARGE CANAL(Samples in canal	QO-2	11/17/2009	Sample	X	
or property along canal)	QO-2S1	11/17/2009	Sample	X	
RG & E RIGHT OF WAY	BR-105	11/17/2009	Sample	Х	Х
	BR-105D	11/17/2009	Sample	Х	Х

Prepared/Date: BJS 02/09/10

Checked/Date: JEB 02/24/10

TABLE 2 FALL 2009 GROUNDWATER MONITORING RESULTS CHLOROPYRIDINES

ARCH CHEMICALS, INC. ROCHESTER, NEW YORK

LOCATION:	BR-105	BR-105D	BR-106	BR-126	BR-127	BR-5A	BR-6A	BR-7A	BR-7A	BR-9	E-1
SAMPLE DATE:	11/17/2009	11/17/2009	11/17/2009	11/18/2009	11/18/2009	11/17/2009	11/16/2009	11/18/2009	11/18/2009	11/18/2009	11/17/2009
QC TYPE:	Sample	Duplicate	Sample	Sample	Sample						
SELECTED CHLOROPYRIDINES											
BY SW-846 Method 8270C (μg/L)											
2,6-Dichloropyridine	81 J	39 J	310	420	360	30	1000	1600 J	1100	7.5 J	530 J
2-Chloropyridine	580	560	1300	2200	2400	120	9200	16000	11000	28	160 J
3-Chloropyridine	100 U	16 J	100 U	200 U	51 J	19 U	1000 U	2000 U	1000 U	9.7 U	500 UJ
4-Chloropyridine	100 U	50 U	100 U	200 U	250 U	19 U	1000 U	2000 U	1000 U	9.7 U	500 UJ
p-Fluoroaniline	100 U	8.7 J	29 J	200 U	250 U	19	1000 U	2000 U	1000 U	0.98 J	500 UJ
Pyridine	250 U	120 U	250 U	500 U	620 U	3.9 J	2500 U	5000 U	2500 U	24 U	1200 UJ

Notes:

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

J = Estimated value

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TABLE 2 FALL 2009 GROUNDWATER MONITORING RESULTS CHLOROPYRIDINES

ARCH CHEMICALS, INC. ROCHESTER, NEW YORK

LOCATION:	MW-106	MW-127	MW-16	PW10	PW11	PW12	PW13	PW14	PW15	PZ-101	PZ-102
SAMPLE DATE:	11/17/2009	11/17/2009	11/17/2009	11/17/2009	11/18/2009	11/16/2009	11/18/2009	11/17/2009	11/17/2009	11/18/2009	11/18/2009
QC TYPE:	Sample										
SELECTED CHLOROPYRIDINES											
BY SW-846 Method 8270C (μg/L)											
2,6-Dichloropyridine	1100 J	290 J	4 J	21000 J	56	420	150	490 J	1400 J	26	170
2-Chloropyridine	2800 J	1100 J	3.2 J	16000 J	230	820	910	3600 J	21000 J	67	550
3-Chloropyridine	500 U.	250 UJ	9.4 U	4000 UJ	50 U	100 U	100 U	130 J	5000 UJ	9.9 U	100 U
4-Chloropyridine	500 U.	250 UJ	9.4 U	4000 UJ	50 U	100 U	100 U	500 UJ	5000 UJ	9.9 U	100 U
p-Fluoroaniline	86 J	250 UJ	9.4 U	4000 UJ		95 J	9.8 J	500 UJ	5000 UJ	1.2 J	23 J
Pyridine	1200 U.	620 UJ	24 U	10000 UJ	120 U	250 U	250 U	140 J	1900 J	25 U	250 U

Notes:

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

J = Estimated value

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TABLE 2 FALL 2009 GROUNDWATER MONITORING RESULTS CHLOROPYRIDINES

ARCH CHEMICALS, INC. ROCHESTER, NEW YORK

LOCATION:	PZ-103	3	PZ-104		PZ-105	,	PZ-106	3	PZ-107	7	S-3		S-4	
SAMPLE DATE:	11/18/20	09	11/18/20	09	11/16/20	09	11/17/20	09	11/16/20	09	11/16/20	09	11/16/20	09
QC TYPE:	Sample)	Sample)	Sample)	Sample	9	Sample)	Sample	9	Sample	Э
SELECTED CHLOROPYRIDINES BY SW-846 Method 8270C (µg/L)														
2,6-Dichloropyridine	810	J	280		410	J	1200	J	1200		220	J	12	
2-Chloropyridine	2700	J	1600		3600		6900	J	9400		2200	J	12	
3-Chloropyridine	43	J	200	U	500	J	140	J	200	っ	250	3	9.4	U
4-Chloropyridine	250	IJ	200	U	500	\supset	1000	UJ	1000	כ	250	\Im	9.4	U
p-Fluoroaniline	110	J	200	U	500	U	1000	UJ	1000	J	250	UJ	9.4	U
Pyridine	620	UJ	500	U	1200	J	330	J	2500	U	620	UJ	24	U

Notes:

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

J = Estimated value

Prepared/Date: BJS 02/09/10 Checked/Date: JEB 02/24/09

TABLE 3 FALL 2009 GROUNDWATER MONITORING RESULTS VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC. ROCHESTER, NEW YORK

LOCATION:	BR-105	BR-105D	BR-106	BR-126	BR-127	BR-5A	BR-6A	BR-7A	BR-7A	BR-9
SAMPLE DATE:	11/17/2009	11/17/2009	11/17/2009	11/18/2009	11/18/2009	11/17/2009	11/16/2009	11/18/2009	11/18/2009	11/18/2009
QC TYPE:	Sample	Duplicate	Sample	Sample						
VOCs BY SW-846 Method 8260/5ML (µg/L)										
1,1,1-Trichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.3 J
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	0.89 J	1.7 J	0.81 J	5 U	5 U	5 U	5 U	1 J	5 U	7.3
1,1-Dichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.3 J
1,2,4-Trimethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.71 J
1,2-Dichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	14	6.7 J	10 U	10 U	18	9.4 J	32	2.1 J	10 U	130
1,2-Dichloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	25 U									
2-Hexanone	25 U									
4-Methyl-2-pentanone	25 U									
Acetone	25 U	25 U	2.2 J	25 U	3.2 J					
Benzene	1.2 J	4.2 J	6.6	3.1 J	3 J	7.2	2.1 J	11	11	55
Bromodichloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	5 U	1.7 J	0.72 J	5 U	56	0.93 J	5 U	9.9	9.9	5 U
Carbon tetrachloride	2.2 J	5 U	5 U	5 U	23	5 U	5 U	1.1 J	5 U	5 U
Chlorobenzene	3.8 J	5 U	70	2.2 J	2.8 J	13	27	290	280	4.8 J
Chlorodibromomethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	1.2 J	0.97 J	5 U	5 U	360	0.6 J	2.2 J	1 J	5 U	5 U
Chloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethyl benzene	5 U	5 U	5 U	5 U	5 U	5 U	1.1 J	0.66 J	5 U	2.4 J
Methylene chloride	0.45 J	1.4 J	5 U	5 U	12	5 U	5 U	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	1.7 J	5 U	5 U	5 U	14	5 U	3.7 J	5 U	5 U	5 U
Toluene	5 U	5 U	0.63 J	5 U	20	2.1 J	19	3.7 J	3.7 J	1.8 J
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5 U	5 U	5 U	5 U	7.3	0.57 J	3.2 J	0.51 J	5 U	1.5 J
Vinyl acetate	25 U									
Vinyl chloride	13	5 U	5 U	5 U	9	2.9 J	4.7 J	1 J	5 U	94
Xylenes, Total	15 U	0.87 J	5.1 J	2.2 J	15 U	2.1 J				

Notes:

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

J = Estimated value.

Prepared/Date: NMB 02/09/10 Checked/Date: JEB 02/24/10

TABLE 3 FALL 2009 GROUNDWATER MONITORING RESULTS VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC. ROCHESTER, NEW YORK

LOCATION:	E-1	MW-106	MW-127	PW10	PW11	PW12	PW13	PW14	PW15	PZ-101
SAMPLE DATE:	11/17/2009	11/17/2009	11/17/2009	11/17/2009	11/18/2009	11/16/2009	11/18/2009	11/17/2009	11/17/2009	11/18/2009
QC TYPE:	Sample									
VOCs BY SW-846 Method 8260/5ML (µg/L)										
1,1,1-Trichloroethane	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
1,1,2-Trichloroethane	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
1,1-Dichloroethane	10 U	10 U	10 U	80 U	3.2 J	120 U	4.1 J	200 U	40 U	5 U
1,1-Dichloroethene	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
1,2,4-Trimethylbenzene	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
1,2-Dichloroethane	10 U	10 U	10 U	80 U	0.56 J	78 J	5 U	200 U	40 U	5 U
1,2-Dichloroethene (total)	20 U	20 U	20 U	160 U	23	250 U	17	400 U	80 U	0.87 J
1,2-Dichloropropane	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
1,3,5-Trimethylbenzene	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
2-Butanone	50 U	50 U	50 U	400 U	2 J	620 U	25 U	1000 U	200 U	25 U
2-Hexanone	50 U	50 U	50 U	400 U	25 U	620 U	25 U	1000 U	200 U	25 U
4-Methyl-2-pentanone	50 U	50 U	50 U	400 U	25 U	620 U	25 U	1000 U	200 U	25 U
Acetone	50 U	50 U	50 U	350	7.2 J	620 U	25 U	1000 U	160	25 U
Benzene	10 U	50	4.9 J	80 U	27	120 U	12	200 U	74	0.53 J
Bromodichloromethane	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
Bromoform	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	21	5 U
Bromomethane	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
Carbon disulfide	16	10 U	97	80 U	1.5 J	120 U	5 U	920	280	5 U
Carbon tetrachloride	8.5 J	10 U	50	54	5 U	120 U	5 U	1600	270	5 U
Chlorobenzene	10 U	530	10 U	80 U	69	5400	35	200 U	140	6.2
Chlorodibromomethane	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
Chloroethane	10 U	10 U	10 U	80 U	0.91 J	120 U	5 U	200 U	40 U	5 U
Chloroform	110	10 U	480	2500	5 U	90 J	1.5 J	35000	3300	5 U
Chloromethane	10 U	10 U	10 U	80 U	0.6 J	120 U	5 U	200 U	40 U	5 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
Ethyl benzene	10 U	10 U	10 U	80 U	5 U	490	5 U	200 U	40 U	5 U
Methylene chloride	10 U	10 U	11	800	5 U	120 U	5 U	4700	980	5 U
Styrene	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
Tetrachloroethene	10 U	10 U	10 U	350	5 U	66 J	1.6 J	300	800	5 U
Toluene	10 U	10 U	10 U	80 U	0.69 J	9400	0.84 J	200 U	330	5 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	80 U	5 U	120 U	5 U	200 U	40 U	5 U
Trichloroethene	10 U	10 U	10 U	80 U	5 U	120 U	1.5 J	200 U	54	5 U
Vinyl acetate	50 U	50 U	50 U	400 U	25 U	620 U	25 U	1000 U	200 U	25 U
Vinyl chloride	10 U	10 U	10 U	80 U	13	120 U	29	200 U	16	5 U
Xylenes, Total	30 U	30 U	30 U	240 U	15 U	2800	15 U	600 U	120 U	15 U

Notes:

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

J = Estimated value.

TABLE 3 FALL 2009 GROUNDWATER MONITORING RESULTS VOLATILE ORGANIC COMPOUNDS

ARCH CHEMICALS, INC. ROCHESTER, NEW YORK

				<u> </u>				
LOCATION:	PZ-102	PZ-103	PZ-104	PZ-105	PZ-106	PZ-107	S-3	S-4
SAMPLE DATE:	11/18/2009	11/18/2009	11/18/2009	11/16/2009	11/17/2009	11/16/2009	11/16/2009	11/16/2009
QC TYPE:	Sample							
VOCs BY SW-846 Method 8260/5ML (µg/L)								
1,1,1-Trichloroethane	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
1,1-Dichloroethane	5 U	20 U	5 U	5 U	2000 U	0.8 J	3.2 J	5 U
1,1-Dichloroethene	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
1,2-Dichloroethane	5 U	20 U	5 U	5 U	2000 U	0.96 J	5 U	5 U
1,2-Dichloroethene (total)	10 U	40 U	10 U	0.74 J	4000 U	22	31	10 U
1,2-Dichloropropane	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
2-Butanone	25 U	100 U	25 U	25 U	10000 U	25 U	25 U	25 U
2-Hexanone	25 U	100 U	25 U	25 U	10000 U	25 U	25 U	25 U
4-Methyl-2-pentanone	25 U	100 U	25 U	25 U	10000 U	25 U	25 U	25 U
Acetone	25 U	100 U	25 U	25 U	10000 U	20 J	25 U	25 U
Benzene	11	75	2 J	4.6 J	2000 U	6.8	5 J	5 U
Bromodichloromethane	5 U	20 U	5 U	5 U	2000 U	0.63 J	5 U	5 U
Bromoform	5 U	20 U	5 U	5 U	2000 U	92	5 U	5 U
Bromomethane	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
Carbon disulfide	1.4 J	19 J	5 U	0.98 J	30000	27	5 U	0.46 J
Carbon tetrachloride	5 U	20 U	5 U	5 U	22000	3300	5 U	15
Chlorobenzene	160	1400	8.2	66	2000 U	8	44	2.9 J
Chlorodibromomethane	5 U	20 U	5 U	5 U	2000 U	3.6 J	5 U	5 U
Chloroethane	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
Chloroform	5 U	20 U	5 U	0.5 J	140000	14000	0.62 J	62
Chloromethane	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
Ethyl benzene	5 U	20 U	5 U	1.4 J	2000 U	0.41 J	0.7 J	5 U
Methylene chloride	5 U	20 U	5 U	5 U	4100	2300	5 U	5 J
Styrene	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
Tetrachloroethene	5 U	20 U	5 U	5 U	1600 J	550	0.74 J	1.4 J
Toluene	1.7 J	66	5 U	44	2000 U	39	8.6	4 J
trans-1,3-Dichloropropene	5 U	20 U	5 U	5 U	2000 U	5 U	5 U	5 U
Trichloroethene	5 U	20 U	5 U	5 U	2000 U	32	0.81 J	5 U
Vinyl acetate	25 U	100 U	25 U	25 U	10000 U	25 U	25 U	25 U
Vinyl chloride	5 U	20 U	5 U	5 U	2000 U	16	22	5 U
Xylenes, Total	15 U	60 U	15 U	8 J	6000 U	2.2 J	1.9 J	0.68 J

Notes:

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

J = Estimated value.

TABLE 4 COMPARISON OF FALL 2009 CHLOROPYRIDINES AND VOLATILE ORGANICS CONCENTRATIONS IN GROUNDWATER TO PREVIOUS RESULTS (ug/L)

ARCH ROCHESTER SEMI-ANNUAL GROUNDWATER MONITORING REPORT

WELL	SE	LECTED CHLOR	ROPYRIDINES	SELECTED VOCs				
	# EVENTS IN	HISTORIC	5-YEAR	NOV-2009	# EVENTS IN	HISTORIC	5-YEAR	NOV-2009
	PRIOR 5 YRS	MAXIMUM	MEAN	RESULT	PRIOR 5 YRS	MAXIMUM	MEAN	RESULT
ON-SITE W	/ELLS/LOCATIO	NS	•			-	•	
B-17	5	28,000,000	470,000		5	345,000	15,000	
B-7	5	9,100	1,000		5	256	32	
BR-127	10	29,000	6,900	2,800	10	1,300	130	420
BR-3	5	6,500,000	70,000		5	920,000	180,000	
BR-5A	10	1,700	290	170	10	9,400	25	1.2
BR-6A	10	144,500	5,800	10,000	10	26,000	340	9.1
BR-7A	10	510,000	27,000	12,000	10	3,000	140	ND
BR-8	5	57,000	230		5	6,900	11	
BR-9	10	720	130	36	10	160	5.6	1.5
E-1	10	171,680	46,000	690	10	5,300	110	120
E-3	5	600	150		5	12,000	36	
MW-127	10	15,000	7,600	1,400	10	180	540	540
PW10	10	244,000	100,000	37,000	10	120,000	12,000	3,700
PW11	10	27,000	1,100	300	10	30,000	100	ND
PW12	10	15,000	2,600	1,300	10	120,000	510	160
PW13	10	7,500	2,400	1,100	10	920	210	4.6
PW14	9	29,000	24,000	4,400	9	160,000	31,000	42,000
PW15	5	729,000	300,000	24,000	5	8,200	6600	5,400
PZ-105	9	190,000	11,000	4,000	9	9,700	140	1
PZ-106	9	124,000	70,000	8,600	9	1,359,000	350,000	170,000
PZ-107	10	11,000	6,900	11,000	10	12,000	6.7	20,000
S-3	10	21,000	7,000	2,400	10	2,500	39	2.2
S-4	10	3,200	130	24	10	870	ND	83
	WELLS/LOCATION		.00			3. 0		
BR-103	5	400	11		5	38	7.6	
BR-104	5	3,100	4.8		-	9		
BR-105	10	24,000	960	660	10	310	4.6	5.6
BR-105D	10	10,000	900	620	10	230	4.5	2.4
BR-106	10	24,600	4,700	1,600	10	6,300	0.062	ND
BR-108	5	1,700	37	1,000		ND		
BR-112D	5		49			4.3		
BR-113D	5	490	28			2.8		
BR-114	5	520	190		5	12	0.24	
BR-116	5	12	ND			84	-	
BR-116D	5	710	22			120		
BR-117D	5	80	7.8			1.9		
BR-118D	5	330	63			6.6		
BR-122D	5	650	160			ND		
BR-123D	5	860	87			4		
BR-126	8	9,000	3,800	2,600	8	230	72	ND
MW-103	5	97	19	2,000	5	750	17	
MW-104	5	180	3.6			1	.,	

TABLE 4 COMPARISON OF FALL 2009 CHLOROPYRIDINES AND VOLATILE ORGANICS CONCENTRATIONS IN GROUNDWATER TO PREVIOUS RESULTS (ug/L)

ARCH ROCHESTER SEMI-ANNUAL GROUNDWATER MONITORING REPORT

WELL	SE	LECTED CHLC	ROPYRIDINE	S	SELECTED VOCs						
	# EVENTS IN	HISTORIC	5-YEAR	NOV-2009	# EVENTS IN	HISTORIC	5-YEAR	NOV-2009			
	PRIOR 5 YRS	MAXIMUM	MEAN	RESULT	PRIOR 5 YRS	MAXIMUM	MEAN	RESULT			
MW-106	10	130,000	7,000	4,000	10	453	0.29	ND			
MW-114	5	18	ND		5	24	19				
MW-126	1	63	63		1	ND	ND				
MW-16	5	360	41	7	1	8	8				
NESS-E	5	5,000	150			700					
NESS-W	5	2,100	1.0			89					
PZ-101	10	27,000	330	94	10	6.1	0.25	ND			
PZ-102	10	58,000	1,300	740	10	10,000	2.4	ND			
PZ-103	10	73,000	8,600	3,700	10	44,300	4.8	ND			
PZ-104	10	9,100	2,600	1,900	10	40	0.14	ND			
QD-1	7	11	4.1	6.0	1	ND	ND				
QO-2	11	380	4.6	8.6	1	ND	ND				
QO-2S1	11	27	0.55	3	1	ND	ND				
QS-4	12	3,400	190	210	2	ND	ND				

Note:

- 1) Number of samples and mean reflect 5-year sampling period from November 2004 through May 2009. Historic maximum based on all available results from March 1990 through June 2009.
- 2) Chloropyridines represented by: 2-Chloropyridine, 2,6-Dichloropyridine, and 3-Chloropyridine, 4-Chloropyridine, p-Fluoroaniline, and Pyridine.
- 3) Selected VOCs represented by Carbon Tetrachloride, Chloroform, Methylene Chloride, Tetrachloroethene, and Trichloroethene.
- 4) Bold and shade November 2009 exceeds 5-year mean.
- 5) ND = Not detected BLANK = Not sampled

Prepared/Date: BJS 02/16/09 Checked/Date: JEB 02/24/09

TABLE 5 FALL 2009 QUARRY SEEP AND OUTFALL WATER SAMPLE RESULTS CHLOROPYRIDINES

ARCH CHEMICALS, INC. ROCHESTER, NEW YORK

LOCATION:	QS-4		QD-1		QO-2		QO-2S1	
SAMPLE DATE:	11/17/200	09	11/17/2009		11/17/2009		11/17/200	
QC TYPE:	Sample		Sample		Sample		Sample	
SELECTED CHLOROPYRIDINES BY								
SW-846 Method 8270C (µg/L)								
2,6-Dichloropyridine	37		2.5	٦	3.3	J	9.4	U
2-Chloropyridine	170		3.5	7	5.3	J	3.4	J
3-Chloropyridine	19	U	9.4	U	9.6	U	9.4	U
4-Chloropyridine	19	U	9.4	U	9.6	U	9.4	U
p-Fluoroaniline	19	U	9.4	U	9.6	U	9.4	U
Pyridine	48	U	24	U	24	U	24	U

Notes:

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

J = Estimated value

Prepared/Date: BJS 02/09/10

Checked/Date: JEB 02/24/10

TABLE 6 EXTRACTION WELL WEEKLY FLOW MEASUREMENTS - JUNE 2009 THROUGH NOVEMBER 2009

ARCH CHEMICALS, INC. ROCHESTER, NEW YORK

	Week Ending	BR-5A [Gal./Wk.]	BR-7A [Gal./Wk.]	BR-9 [Gal./Wk.]	PW-11 [Gal./Wk.]	PW-13 [Gal./Wk.]	PW-14 [Gal./Wk.]	PW-15 [Gal./Wk.]	BR-127 [Gal./Wk.]	Total [Gal.]
Model Mode	06/07/08		•				•		-	350,803
Mode			,	·			•			
Total [Gal.] Tota		11,536 **	21,519 *** 36,274		,	- , -	,	,		,
Jul '99 0	00/20/00	· ·	33,2.	2.,0	3,2. 3	.00,00.	-	.0,000		936,968
071/8/69 0 ** 41,008 49,587 5,697 157,468 6,349 14,019 224,122 071/12/09 26 ** 40,502 56,328 7,826 148,505 5,314 16,885 275,38 071/26/09 11,864 ** 58,490 47,906 6,816 138,523 4,966 8,336 ** 276,30 071/26/09 11,864 ** 58,490 47,906 6,816 138,523 4,966 8,336 ** 276,30 08/02/09 7,408 ** 54,729 41,443 2,216 ** 124,668 3,085 4,581 ** 238,13 08/09/09 17,405 ** 47,789 42,189 3,850 116,722 2,266 140 ** 230,56 08/16/09 38,947 53,352 47,220 2,134 110,240 2,345 9,964 ** 264,20 08/23/09 36,336 57,849 50,722 2,501 58,716 ** 1,754 ** 29,559 237,43 08/30/09 43,303 50,035 60,272 6,180 0 ** 1,917 50,274 211,98 09/06/09 43,458 53,026 41,933 ** 1,878 ** 38,311 ** 2,147 40,651 221,40 09/13/09 36,376 51,597 55,539 3,754 77,079 1,557 ** 27,371 ** 33,486 286,79 09/020/09 39,117 72,676 57,805 3,750 77,219 1,665 13,806 ** 81,428 347,46 09/27/09 44,971 73,177 51,293 5,412 72,191 1,954 50,622 88,942 388,56 10/11/09 46,739 56,814 78,467 4,237 97,103 2,304 45,827 125,401 456,88 10/18/09 46,058 58,006 53,747 2,822 85,057 2,211 41,344 92,054 380,29 10/11/09 46,739 56,814 78,467 4,237 97,103 2,304 45,827 125,401 456,88 10/18/09 44,055 58,006 53,747 2,822 85,057 2,211 41,344 92,054 380,29 10/11/09 46,739 56,814 78,467 4,237 97,103 2,304 45,827 125,401 456,88 10/18/09 44,055 46,683 39,947 2,444 10,9802 1,640 37,257 59,197 394,98 11/18/09 41,876 35,243 95,977 3,053 116,810 2,378 37,127 86,307 418,14 11/18/09 34,766 35,243 95,977 3,453 03,688 2,455 33,778 39,240 406,72 11/18/09 38,745 43,685 43,685 43,685 43,685 43,685 43,685 43,685 43,685 43,685 43,685 43,685 43,685 43,685 43,685										
07/12/09	Jul '09									
07/19/09			,	•						274,128
11,864 ** 58,490				,			•			275,386
Aug '09				,	,	,	,			,
Aug '09 08/02/09 7,408 ** 54,729	07/26/09	11,864	58,490	47,906	0,816	138,523	•	8,336		
08/02/09							i otai [Gai.]			1,092,051
08/09/09 17,405 ** 47,789 42,189 3,850 116,722 2,266 140 ** 230,36 08/16/19 38,947 53,352 47,220 2,134 110,240 2,345 9,964 ** 264,200 08/23/09 36,336 57,849 50,722 2,501 58,716 ** 1,754 ** 29,559 237,43 08/30/09 43,303 50,035 60,272 6,180 0 ** 1,917 50,274 211,98 09/06/09 43,458 53,026 41,933 ** 1,878 ** 38,311 ** 2,147 40,651 221,40 09/13/09 36,376 51,597 55,539 3,794 77,079 1,557 ** 27,371 ** 33,486 286,79 09/20/09 39,117 72,676 57,805 3,750 77,219 1,665 13,806 ** 81,428 347,46 09/27/09 44,971 73,177 51,293 5,412 72,191 1,954 50,622 88,942 388,56 09/20/09 46,058 58,006 53,747 2,822 85,057 2,211 41,344 92,054 380,291 10/04/09 45,058 58,006 53,747 2,822 85,057 2,211 41,344 92,054 380,291 10/01/10/09 46,739 56,814 78,457 4,237 97,103 2,304 45,827 125,401 456,881 10/18/09 46,058 58,081 76,488 4,537 103,768 2,285 43,162 112,563 446,941 10/25/09 40,045 57,992 68,509 4,536 98,828 2,500 39,806 95,007 407,222 11/08/09 41,838 55,367 72,431 4,333 103,284 2,455 33,778 ** 93,240 406,722 11/08/09 41,876 35,243 95,977 3,053 116,180 2,378 37,127 86,307 418,141 11/12/09 38,730 55,824 98,870 1,476 ** 98,380 2,136 34,688 63,815 393,911 11/129/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,471 11/129/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,471 11/129/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,471 11/129/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,471 11/129/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,472 Total [Gal.]	_									
08/16/09 38,947 53,352 47,220 2,134 110,240 2,345 9,964 ** 264,20. 08/23/09 36,336 57,849 50,722 2,501 58,716 ** 1,754 ** 29,559 237,43 08/30/09 43,303 50,035 60,272 6,180 0 ** 1,917 50,274 211,98 **Total [Gal.]** **Total [Gal.]** **Sep '09 09/06/09 43,458 53,026 41,933 ** 1,878 ** 38,311 ** 2,147 40,651 221,40 09/13/09 36,376 51,597 55,539 3,794 77,079 1,557 ** 27,371 ** 33,486 286,79 09/20/09 39,117 72,676 57,805 3,750 77,219 1,665 13,806 ** 81,428 347,46 09/27/09 44,971 73,177 51,293 5,412 72,191 1,954 50,622 88,942 388,56 **Total [Gal.]** **Oct '09 10/04/09 45,058 58,006 53,747 2,822 85,057 2,211 41,344 92,054 380,29 10/11/09 46,058 58,081 76,488 4,537 103,768 2,285 43,162 112,563 446,94 10/25/09 40,045 57,992 68,509 4,536 98,828 2,500 39,806 95,007 407,222 **Total [Gal.]** **Nov '09 11/01/09 41,838 55,367 72,431 4,333 103,284 2,455 33,778 ** 93,240 406,72 11/08/09 44,015 46,683 93,947 2,444 109,802 1,640 37,257 59,197 394,988 11/15/09 41,876 35,243 95,977 3,053 116,180 2,378 37,127 86,307 418,14 11/22/09 38,730 55,824 98,870 1,476 ** 98,380 2,136 34,688 63,815 399,911 11/29/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,47 **Total [Gal.]** **Total [Gal.]*		•	,	•						238,130
08/23/09		,	,	,		,				230,361
Nov '09 Nov		,	,	·	,		,			· ·
Sep '09								,		
Sep '09	08/30/09	45,505	30,033	00,272	0,100	O	-	30,274		
09/06/09 43,458 53,026 41,933 ** 1,878 ** 38,311 ** 2,147 40,651 221,40 09/13/09 36,376 51,597 55,539 3,794 77,079 1,557 ** 27,371 ** 33,486 286,79 09/20/09 39,117 72,676 57,805 3,750 77,219 1,665 13,806 ** 81,428 347,461 09/27/09 44,971 73,177 51,293 5,412 72,191 1,954 50,622 88,942 388,561 Oct '09 10/04/09 45,058 58,006 53,747 2,822 85,057 2,211 41,344 92,054 380,291 10/11/09 46,739 56,814 78,457 4,237 97,103 2,304 45,827 125,401 456,881 10/18/09 46,058 58,081 76,488 4,537 103,768 2,285 43,162 112,563 446,941 10/25/09 40,045 57,992 68,509 4,536 98,828 2,500 39,806 95,007 407,222 Total [Gal.] Nov '09 11/01/09 41,838 55,367 72,431 4,333 103,284 2,455 33,778 ** 93,240 406,721 11/08/09 44,015 46,683 93,947 2,444 109,802 1,640 37,257 59,197 394,981 11/15/09 41,876 35,243 95,977 3,053 116,180 2,378 37,127 86,307 418,14 11/22/09 38,730 55,824 98,870 1,476 ** 98,380 2,136 34,688 63,815 393,911 11/29/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,471 Total [Gal.] Total [Gal.]							Total [Gal.]			1,102,111
09/13/09 36,376 51,597 55,539 3,794 77,079 1,557 ** 27,371 ** 33,486 286,799 09/20/09 39,117 72,676 57,805 3,750 77,219 1,665 13,806 ** 81,428 347,461 09/27/09 44,971 73,177 51,293 5,412 72,191 1,954 50,622 88,942 388,562 Total [Gal.]	-									
09/20/09 33,117 72,676 57,805 3,750 77,219 1,665 13,806 81,428 347,466 09/27/09 44,971 73,177 51,293 5,412 72,191 1,954 50,622 88,942 388,562		·		,	•	•		•		·
Op/27/09 44,971 73,177 51,293 5,412 72,191 1,954 50,622 88,942 388,562 1,244,23 Oct '09 10/04/09 45,058 58,006 53,747 2,822 85,057 2,211 41,344 92,054 380,299 10/11/09 46,739 56,814 78,457 4,237 97,103 2,304 45,827 125,401 456,888 10/18/09 46,058 58,081 76,488 4,537 103,768 2,285 43,162 112,563 446,94 10/25/09 40,045 57,992 68,509 4,536 98,828 2,500 39,806 95,007 407,22 Total [Gal.] Total [Gal.] 1,691,344 Nov '09 11/01/09 41,838 55,367 72,431 4,333 103,284 2,455 33,778 *** 93,240 406,722 11/08/09 44,015 46,683 93,947 2,444 109,802 1,640 37,257 59,197 394,98 11/		,	,	,	,		,		,	,
Total [Gal.] 1,244,23 Oct '09 10/04/09 45,058 58,006 53,747 2,822 85,057 2,211 41,344 92,054 380,29 10/11/09 46,739 56,814 78,457 4,237 97,103 2,304 45,827 125,401 456,88 10/18/09 46,058 58,081 76,488 4,537 103,768 2,285 43,162 112,563 446,94 10/25/09 40,045 57,992 68,509 4,536 98,828 2,500 39,806 95,007 407,22 Nov '09 11/01/09 41,838 55,367 72,431 4,333 103,284 2,455 33,778 *** 93,240 406,726 11/08/09 44,015 46,683 93,947 2,444 109,802 1,640 37,257 59,197 394,98 11/15/09 41,876 35,243 95,977 3,053 116,180 2,378 37,127 86,307 418,14		,	,	,	,	,	,	,	,	,
Oct '09 10/04/09	03/2//03	44,971	73,177	31,293	3,412	72,191	•	30,022	00,942	
10/04/09							Total [Gal.]			1,244,231
10/11/09										
10/18/09 46,058 58,081 76,488 4,537 103,768 2,285 43,162 112,563 446,942 10/25/09 40,045 57,992 68,509 4,536 98,828 2,500 39,806 95,007 407,223 1,691,344			•	,	•		•			
10/25/09			•	•					•	·
Nov '09 11/01/09		-,	/	-,		,		-, -		
11/01/09 41,838 55,367 72,431 4,333 103,284 2,455 33,778 ** 93,240 406,720 11/08/09 44,015 46,683 93,947 2,444 109,802 1,640 37,257 59,197 394,985 11/15/09 41,876 35,243 95,977 3,053 116,180 2,378 37,127 86,307 418,14 11/22/09 38,730 55,824 98,870 1,476 ** 98,380 2,136 34,688 63,815 393,919 11/29/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,470 Total [Gal.] Total 6 Mo. Removal	10/20/09	10,010	01,002	00,000	1,000	00,020	•	00,000	00,001	1,691,346
11/01/09 41,838 55,367 72,431 4,333 103,284 2,455 33,778 ** 93,240 406,720 11/08/09 44,015 46,683 93,947 2,444 109,802 1,640 37,257 59,197 394,985 11/15/09 41,876 35,243 95,977 3,053 116,180 2,378 37,127 86,307 418,14 11/22/09 38,730 55,824 98,870 1,476 ** 98,380 2,136 34,688 63,815 393,919 11/29/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,470 Total [Gal.] Total 6 Mo. Removal	N100									
11/08/09 44,015 46,683 93,947 2,444 109,802 1,640 37,257 59,197 394,981 11/15/09 41,876 35,243 95,977 3,053 116,180 2,378 37,127 86,307 418,141 11/22/09 38,730 55,824 98,870 1,476 ** 98,380 2,136 34,688 63,815 393,911 11/29/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,470 Total [Gal.] Total 6 Mo. Removal		41 838	55 367	72 <u>4</u> 31	4 333	103 284	2 455	33 778 **	93 240	406 726
11/15/09 41,876 35,243 95,977 3,053 116,180 2,378 37,127 86,307 418,14 11/22/09 38,730 55,824 98,870 1,476 ** 98,380 2,136 34,688 63,815 393,919 11/29/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,470 Total [Gal.] Total 6 Mo. Removal		·		•	•	•		•	•	·
11/22/09 38,730 55,824 98,870 1,476 ** 98,380 2,136 34,688 63,815 393,911 11/29/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,477 Total [Gal.] Total 6 Mo. Removal			,	,	,	,	,			418,141
11/29/09 37,515 87,586 50,964 2,062 17,041 1,913 32,402 80,993 310,470 Total [Gal.] Total 6 Mo. Removal			,	,	•	•		•	•	393.919
Total 6 Mo. Removal		,	,-	,	, -	,	•	- ,	,	310,476
Removal	İ	•	•	,	•	•		•	•	1,924,247
Removal	Total 6 Mo									
(Gal.) 801,239 1,346,850 1,559,555 93,869 2,487,271 84,508 685,229 1.012.433 8.070.95										
· · · · · · · · · · · · · · · · · · ·	(Gal.)	801,239	1,346,850	1,559,555	93,869	2,487,271	84,508	685,229	1,012,433	8,070,954

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

TABLE 7

MASS REMOVAL SUMMARY PERIOD: JUNE 2009 - NOVEMBER 2009

ARCH ROCHESTER FALL 2009 GROUNDWATER MONITORING REPORT

Well	Total Vol. Pumped (gallons)	Avg. VOC Conc. (ppm)	Avg. PYR. Conc. (ppm)	VOCs Removed (pounds)	PYR. Removed (pounds)
BR-5A	801,000	0.002	0.19	0.01	1.3
BR-7A	1,347,000	0	13	0	149
BR-9	1,560,000	0	0.067	0.01	0.9
PW-11	94,000	0.009	0.76	0.01	0.6
PW-13	2,487,000	0.014	2.2	0.280	46
PW-14	85,000	34	7	24	5
PW-15	685,000	5	25	30	140
BR-127	1,012,000	0.209	16	1.8	135
Totals:	8,071,000		_	56	478

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

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

ARCH ROCHESTER							2010				
MONITORING PROGRAM						SPRING		FALL		TOTAL	
						nes		ıes		idines Ss	
	Well	zone	area	Frequency/Parameters	Purpose	\$	VOCs	\$	VOCs	Ρχ	VOCs
OFF-SITE	MW-103	OB	BRBC	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
MONITORING	BR-103	BR	BRBC	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
	MW-104	OB		annual monitoring, PYR	trend monitoring	1				1	0
	BR-104	BR		annual monitoring, PYR	trend monitoring	1				1	0
	BR-105	BR	AID-HOSP	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1		2
	BR-105D	BR deep	AID-HOSP	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1		2
	MW-106	ОВ	AID-HOSP	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1		2
	BR-106	BR	AID-HOSP	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1		2
	BR-108	BR	AID-HOSP	annual monitoring, PYR	trend monitoring	1					0
	BR-112D	BR deep	NYSDOT	annual monitoring, PYR	trend monitoring	1				- 1	0
	BR-113D	BR deep	NYSDOT	annual monitoring, PYR	trend monitoring	1	,				0
	MW-114	OB	JACKSON	annual monitoring, VOCs & PYR	trend monitoring		1				
	BR-114	BR BR	JACKSON	annual monitoring, VOCs & PYR	trend monitoring		1				1
	BR-116 BR-116D		PFAUDLER	annual monitoring, PYR	trend monitoring	1 1				- 1	0
	BR-110D	BR deep BR deep	PFAUDLER QUARRY	annual monitoring, PYR	trend monitoring trend monitoring					· ·	0
	BR-117D	BR deep	QUARRY	annual monitoring, PYR annual monitoring, PYR	trend monitoring						0
	BR-1122D	BR deep	QUARRY	annual monitoring, PYR	<u> </u>						0
	BR-122D	BR deep	QUARRY	annual monitoring, PYR	trend monitoring trend monitoring						0
	NESS-E	BR deep	NESS	annual monitoring, PYR	trend monitoring					- 1	0
	NESS-W	BR deep	NESS	annual monitoring, PYR	trend monitoring						0
	PZ-101	BR deep BR	McKee Rd	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring		1	1	1		2
	PZ-101	BR	McKee Rd	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1		2
	PZ-103	BR	McKee Rd	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring		1	1	1		2
	PZ-104	BR	ALH	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	Ιί	1	1	1		2
	BR-126	BR	ALH	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1		2
	MW-16	BR	Gen'l Circuits	annual monitoring, PYR	trend monitoring			1	-	1	0
ON-SITE	PZ-107	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
MONITORING	PZ-106	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1		2
	PZ-105	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1		2
	BR-127	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1	2	2
	BR-3	BR	ON-SITE	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
	BR-8	BR	ON-SITE	annual monitoring, VOCs & PYR	trend monitoring	1	1			1	1
	BR-9	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1	Sevingines 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2
	BR-5A	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1	2	2
	BR-6A	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1	2	2
	BR-7A	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1	2	2
	B-17	OB	ON-SITE	annual monitoring, VOCs & PYR	trend monitoring	1	1				1
	B-7	OB	ON-SITE	annual monitoring, VOCs & PYR	trend monitoring	1	1				1
	B-11	OB	ON-SITE	semi-annual monitoring, VOCs & PYR	continue until replaced by trench	1	1	1	1		2
	B-16	ОВ	ON-SITE	semi-annual monitoring, VOCs & PYR	continue until replaced by trench	1	1	1	1		2
	E-3	OB		annual monitoring, VOCs & PYR	trend monitoring	1	1				1
	MW-127	OB	ON-SITE	semi-annual monitoring, VOCs & PYR	perimeter sentinel/trend monitoring	1	1	1	1		2
	PW10	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1		2
	PW11	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1		2
	PW12	BR	ON-SITE	semi-annual monitoring, VOCs & PYR	trend monitoring	1	1	1	1		2
	PW13	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1		2
	PW14	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1		2
	PW15	pumping well	ON-SITE	semi-annual monitoring, VOCs & PYR	mass removal/trend monitoring	1	1	1	1		2
QUARRY/CANAL	QS-4	quarry seep	QUARRY	semi-annual monitoring, PYR	trend monitoring	1	l	1			0
MONITORING	QD-1	quarry ditch	DITCH	semi-annual monitoring, PYR	trend monitoring	1	l	1			0
	QO-2	quarry outfall	DITCH	semi-annual monitoring, PYR	trend monitoring	1	l	1			0
	QO-2S1	canal at outfall	CANAL	semi-annual monitoring, PYR	surface water monitoring	1	<u> </u>	1			0
TOTAL SAMP	LES					52	35	31	26	83	6′

Revised: 12/29/09

Appendix A Groundwater Field Sampling Data Sheets



FIELD REPORT

TestAmerica Laboratories, Inc.

REMEDIAL INVESTIGATION SAMPLING ARCH CHEMICAL ROCHESTER, NEW YORK

FALL 2009 Event

Prepared For:

MacTec, Inc. 511 Congress Street Portland, Maine 04101

Attention: Mr. Nelson Breton

Prepared By:

TEST AMERICA LABORATORIES, INC.

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

NY5A5762

Written By:

Roger Senf

Reviewed By:

Date:

1-08-10

1.0 INTRODUCTION

This report describes the sampling of the following points:

- Twenty-eight (28) groundwater samples (MW-126 not located)
- One (1) barge canal sample
- One (2) quarry outfall samples
- One (1) quarry seep/pond sample

These activities were in support of the Phase II Remediation Investigation being conducted at the Arch Chemical facility in Rochester, New York. The samples were collected from November 6-18, 2009 by Test America Laboratories, Inc. (TAL) 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:

- Purging three (3) times the standing water volume using precleaned or dedicated 1.25" X
 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, one (1) outfall sample 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 a seep 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 <u>Trip Blanks</u>

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.

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
B-1	11/06/09	8.97		-8.97	1130	NO L-NAPL ; NO D-NAPL
B-10		11.47		-11.47	1257	NO L-NAPL ; NO D-NAPL
B-11		8.34		-8.34	1255	NO L-NAPL
B-13		DRY		#VALUE!	1258	
B-14		9.90		-9.90	1103	
B-15		7.28		-7.28	1105	
B-16		8.94		-8.94	1107	
B-17		11.53		-11.53	1308	NO L-NAPL ; NO D-NAPL
B-2		9.91		-9.91	1133	NO L-NAPL ; NO D-NAPL
B-3		6.03		-6.03	1135	NO L-NAPL ; NO D-NAPL
B-4		13.15		-13.15	1213	NO L-NAPL ; NO D-NAPL
B-5		11.19		-11.19	1208	NO L-NAPL ; NO D-NAPL
B-7		14.80		-14.80	1331	NO L-NAPL ; NO D-NAPL
B-8		10.69		-10.69	1245	NO L-NAPL ; NO D-NAPL
BR-1		8.05		-8.05	1225	NO L-NAPL ; NO D-NAPL
BR-102		22.60		-22.60	1339	
BR-103		6.73		-6.73	1135	
MW-103		2.06		-2.06	1137	
BR-104		10.73		-10.73	1145	
MW-104		8.42		-8.42	1146	
BR-105		23.47		-23.47	1240	
BR-105D		25.89		-25.89	1241	
MW-105		DRY		#VALUE!	1243	
BR-106		24.20		-24.20	1247	
MW-106		11.71		-11.71	1248	
BR-108		28.47		-28.47	1310	
MW-108		14.05		-14.05	1311	
BR-111		32.85		-32.85	1233	
BR-111D		28.97	,	-28.97	1235	
BR-112A		32.08	3	-32.08	1222	
BR-112D		36.41		-36.41	1225	
BR-113		31.45	5	-31.45	1156	

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
BR-113D	11/06/09	31.63		-31.63	1157	
BR-114		14.67		-14.67	1140	
MW-114		11.03		-11.03	1142	
BR-116		29.83		-29.83	1120	
BR-116D		35.75		-35.75	1122	
BR-117		24.00		-24.00	1050	CASCADING WELL
BR-117D		49.71		-49.71	1052	
BR-118		36.05		-36.05	1059	
BR-118D		48.83		-48.83	1100	
BR-122D		45.24		-45.24	1115	
BR-123D		45.49		-45.49	1110	
BR-124D		31.63		-31.63	1105	
BR-126		9.55		-9.55	1053	
MW-126						NOT LOCATED
BR-127		19.76			1300	NO L-NAPL ; NO D-NAPL
MW-127		10.36			1259	NO L-NAPL ; NO D-NAPL
BR-2		15.55		-15.55	1307	NO L-NAPL ; NO D-NAPL
BR-2A		13.30		-13.30	1305	NO L-NAPL ; NO D-NAPL
BR-2D		0.05		-0.05	1306	NO L-NAPL ; NO D-NAPL
BR-3		11.05		-11.05	1314	NO L-NAPL
BR-3D		58.61		-58.61	1313	NO L-NAPL ; NO D-NAPL
BR-4		9.09		-9.09	1301	NO L-NAPL
BR-5		13.02			1235	NO L-NAPL ; NO D-NAPL
BR-5A		18.26		-18.26	1236	0.00 GPM
BR-6		12.91		-12.91	1248	NO L-NAPL ; NO D-NAPL
BR-6A		13.80		-13.80	1247	
BR-7		29.07		-29.07	1328	
BR-7A		20.15		-20.15	1327	NO L-NAPL ; NO D-NAPL
BR-8		11.10		~11.10	1207	NO L-NAPL ; NO D-NAPL
BR-9		24.54		-24.54	1340	0.00 GPM
C-2A		9.34		-9.34	1304	NO L-NAPL ; NO D-NAPL
C-3				0.00	1236	BURIED

SAMPLE POINT	DATE	DEPTH TO WATER	CASING ELEVATION	GW ELEVATION	TIME	Comments
	11/06/09			0.00		
C-5		12.29		-12.29	1314	NO L-NAPL ; NO D-NAPL
E-1		1.71		-1.71	1256	NO L-NAPL
E-2		6.58		-6.58	1302	NO L-NAPL ; NO D-NAPL
E-3		5.87		-5.87	1234	NO L-NAPL ; NO D-NAPL
E-4				0.00	1230	OBSTRUCTED AT 2.60
E-5		6.03		-6.03	1227	NO L-NAPL ; NO D-NAPL
EC-1		18.76		-18.76	1215	
EC-2				0.00	1158	DRY AT 12.79 '
ERIE CANAL		33.02		-33.02	1210	
MW-16		12.08		-12.08	1130	
MW-3		6.01		-6.01	1302	
MW-G6		4.47		-4.47	1308	
MW-G7						NOT LOCATED
MW-G8		8.19		-8.19	1312	
MW-G9		11.03		-11.03	1315	
N-1				0.00	1226	OBSTRUCTED
N-2		4.44		-4.44	1222	NO L-NAPL ; NO D-NAPL
N-3		6.84		-6.84	1128	NO L-NAPL
NESS-E		7.04		-7.04	1151	
NESS-W		31.34		-31.34	1152	
PW-10				0.00	1309	UNDER TANK TOTE
PW-11		26.13		-26.13	1209	NO L-NAPL
PW-12		6.98		-6.98	1237	
PW-13		28.78		-28.78	1325	NO L-NAPL; NO D NAPL
PW-14		38.26		-38.26	1318	NO L-NAPL
PW-15		24.47		-24.47	1310	NO L-NAPL; NO D-NAPL
PZ-101		14.75		-14.75	1122	
PZ-102		18.31		-18.31	1120	
PZ-103		13.11		-13.11	1125	
PZ-104		14.36		-14.36	1100	
PZ-105		11.00		-11.00	1241	NO L-NAPL ; NO D-NAPL

PZ-106 1 PZ-107	1/06/09	WATER	ELEVATION	GW ELEVATION	TIME	Comments
PZ-107	1/00/03	11.77		-11.77	1317	NO L-NAPL ; NO D-NAPL
I I		14.84		-14.84	1251	NO L-NAPL ; NO D-NAPL
PZ-109		12.28		-12.28	1311	NO L-NAPL; NO D-NAPL
S-1		8.79		-8.79	1242	NO L-NAPL ; NO D-NAPL
S-2		3.98		-3.98	1246	NO L-NAPL
S-3		1.15		-1.15	1250	NO L-NAPL ; NO D-NAPL
S-4		0.90		-0.90	1253	
W-1				0.00	1129	OBSTRUCTED
W-2		9.82		-9.82	1134	NO L-NAPL ; NO D-NAPL
W-3		10.67		-10.67	1139	NO L-NAPL ; NO D-NAPL
W-4		8.41		-8.41	1211	NO L-NAPL ; NO D-NAPL
W-5		8.66		-8.66	1326	NO L-NAPL ; NO D-NAPL
W-6		11.69		-11.69	1330	NO L-NAPL ; NO D-NAPL

TestAmerica

Sampling Summary Table ARCH CHEMICAL

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NOVEMBER 2008

RI SAMPLING/ROCHESTER NY FACILITY

ents	DO(ppm)= 0.75	DO(ppm)= 0.60	00(ppm)= 0.48	0.97 (mdd)DQ			DO(ppm)= 1.53					DO(ppm)= 0.74	DO(ppm)= 0.95	00(maa)= 0.86		00(ppm) = 0.91	DO(ppm)= 0.80		
Other Field Measurements	EH(mv)= -247	EH(mv)= -320	EH(mv)= -222	EH(mv)= -111	EH(mv)= 10	EH(mv)= -93	EH(mv)= -72	EH(mv)= -101		EH(mv)= -103	EH(mv)= -10	EH(mv)= -96	EH(mv)= -268	FH/m/)= -138		EH(mv)= -161	EH(mv)= -84	77- =(/m/H3	
Turb. (NTU)	0.87	1.85	9.80	21.90	10.01	15.25	7.60	16.85		16.80	141.00	22.10	1.89		:	28.90	124.00	168 00	
Temp (°C)	13.5	13.0	12.4	15.3	15.8	13.4	15.1	15.7		15.7	15.0	9.5	12.6	0 21	2	13.9	13.4	14.4	
Spec. Cond. (umhos)	1778	26670	3387	720	2578	1484	1111	2431		2431	2268	12750	5844	COC		3061	9181	2220	7777
pH (STD) (Units)	26.9	6.87	6.87	7.25	76.7	7.39	8.88	8.21		8.20	6.92	60.6	96.9	7		7.21	9.80	88	9
	1225	1145	1340	1345	1203	1425	1240	1227	į	1228	1127	1255	1305	,	033	1425	1400	2,0	2
Field Measurements Date Time	11/17/2009	11/17/2009	11/17/2009	11/18/2009	11/18/2009	11/17/2009	11/16/2009	11/18/2009		11/18/2009	11/18/2009	11/17/2009	11/17/2009	00000	11/11/2009	11/17/2009	11/17/2009	000000000000000000000000000000000000000	4007/01/11
Bottom Of Well (ft)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	:	N/A	N/A	N/A	N/A	* * * * * * * * * * * * * * * * * * * *	N/A JENT DRY	N/A	N/A	*	N/A
Water Elevation (ft)**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S) N/A		N/A	N/A	A/N	N/A	:	N/A	N/A	N/A		N/A IMITED REC
Water Level E (ft)*	23.22	25.50	24.08	9.85	18.42	21.19	14.21	LACK SPEC	REY	29.74	Ke 1700P 32.07	RBID 1.78	ODER 11.73		(U.23	12.40	RANGE TIN 11.39	AMBER	25.72 RED TINT/1
Water Level Date Time	11/17/2009 1112	Comments: CLEAR 11/17/2009 1110	Comments: CLEAR 11/17/2009 1310	Comments: CLEAR 11/18/2009 1309	Comments: CLEAR 11/18/2009 1200	Comments: CLEAR 11/17/2009 1420	Comments: CLEAR 11/16/2009 1216	Comments: CLEAR/BLACK SPECKS	Comments: CLEAR GREY	11/18/2009 1225	Comments: CLEAR GRE7/DUP 11/18/2009 1125 32.07	Comments: GREY TURBID	Comments: CLEAR/ ODER 11/17/2009 1237 11	Comments: CLEAR	11/11/2009 1200 10.23 N/A N/A N/A Comments: CIEAR/SAMPLED REFORE WELL WENT DRY	11/17/2009 1355 12.40	Comments: CLEAR/ORANGE TINT 11/17/2009 1309 11.39	Comments: TURBID AMBER	11/18/2009 1050 25.72 N/A N/Y Comments: TURBID RED TINT/LIMITED RECHARGE
Sample Point	BR-105	BR-105D	BR-106	BR-126	BR-127	BR-5A	BR-6A	7v - 00	DK-7.	BR-7A	BR-9		MW-106		MW-12/	MW-16	01-70	2 :	P¥-11

SG - Specific Gravity EH - Redox DO - Dissolved Oxygen

* From Top of Riser ** Elevation Above Sea Level

Date: 12/14/2009 Time: 11:23:35

Sampling Summary Table ARCH CHEMICAL

RI SAMPLING/ROCHESTER NY FACILITY NOVEMBER 2008

Rept: AN0821

	DO(ppm)= 0.91				00(ppm)= 0.96	DO(ppm)= 0.82	00(ppm)= 0.96	DO(ppm)= 0.84	00(ppm)= 0.96	DO(ppm)= 0.85	DO(ppm)= 0.81					DO(ppm)= 0.93	
rements	DO				DO	DO	Ď	Ö	Ď	Ŏ 	0					000	
Other Field Measurements	EH(mv)= -38	EH(mv)= -85	EH(mv)= -175	EH(mv)= -204	EH(πv)= -16	EH(mv)= -138	EH(mv)= -201	EH(mv)= -146	EH(mv)= -12	EH(mv)= -140	EH(mv)= -78	EH(mv)= -132	EH(mv)= -20	EH(πν)= -98	EH(mv)= -159	EH(mv)= 24	
Turb. (NTU)	6.41	17.34	35.80	18.70	2.69	2.19	1.58	7.86	128.00	9.00	78.4	N/A	N/A	N/A	N/A	4.29	
4	l,																
Temp (°C)	14.0	16.8	15.4	15.5	13.4	12.0	12.6	15.8	14.5	13.4	12.9	8.9	9.1	8.3	8.9	10.3	
Spec. Cond. (umhos)	2710	2407	3937	7401	7462	8269	2790	1489	1306	0267	3788	1775	1774	77.1	1682	2251	
pH (STD) (Units)	6.80	8.10	6.85	67.6	6.74	6.86	6.62	7.08	7.50	08.90	7.27	7.93	8.07	7.98	7.93	7.19	
	1110	1249	1123	1153	1215	1125	1045	1250	1155	1125	1350	1515	1540	1605	1525	1315	
Field Measurements Date Time	11/16/2009	11/18/2009	11/17/2009	11/17/2009	11/18/2009	11/18/2009	11/18/2009	11/18/2009	11/16/2009	11/17/2009	11/16/2009	11/17/2009	11/17/2009	11/17/2009	11/17/2009	11/16/2009	
Bottom Of Well (ft)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4/N	N/A	N/A	N/A	N/A	N/A	
Water Elevation (ft)**	N/A KS	N/A	N/A	TINT N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A KS	
Water Level (ft)*	7.47	27.91	38.20	11D YELLOW 26.08	LEAR 15.06	18.71	13.43	14.66	11.34	GREY 12.14	ELLOW TIN	0.00	00.00	00.00	0.00	0.95 ILACK SPEC	į
—Water Level— Date Time	11/16/2009 1045 7.47 Comments: CLEAR/BLACK SPECKS	11/18/2009 1245	11/17/2009 1120	Comments: SL.TURBID YELLOW TINT 11/17/2009 1150 26.08 N,	Comments: AMBER CLEAR 11/18/2009 1146 15	Comments: CLEAR 11/18/2009 1059	Comments: CLEAR 11/18/2009 1010	Comments: CLEAR 11/18/2009 1226	Comments: CLEAR 11/16/2009 1130	_	Comments: CLEAR YELLOW TINT	Comments: CLEAR 11/17/2009 1510	Comments: CLEAR 11/17/2009 1535	Comments: CLEAR 11/17/2009 1555	Comments: CLEAR 11/17/2009 1520	Comments: CLEAR 11/16/2009 1253 0.95 Comments: CLEAR BLACK SPECKS	
Sample Point	PW-12(BR-101)	PW-13	PW-14	PW-15	PZ-101	PZ-102	PZ-103	PZ-104	PZ-105	PZ-106	P. C.	100	00-2	00-281	7-SD	8-3	

SG - Specific Gravity EH - Redox DO - Dissolved Oxygen

TestAmerica

^{*} From Top of Riser

^{**} Elevation Above Sea Level

TestAmerica

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Sampling Summary Table ARCH CHEMICAL

Date: 12/14/2009 Time: 11:23:35

NOVEMBER 2008 RI SAMPLING/ROCHESTER NY FACILITY

		ements	DO(ppm)= 1.00
		Other Field Measurements	EH(mv)= -43
	Turb.	(NTU)	5.61
	Тетр	(၁.)	788 11.5 5.61
Spec.	Cond. Temp	(nmhos)	788
퓹	(STD)		1430 8.37
Measurements	Time		1430
Field Measur	Date		11/16/2009
Bottom	Of Well	(ft)*	N/A
Water	Level Elevation		N/A
Water	Level	(ft)*	1.01
-Water Level Water	Date Time		
—Water	Date		11/16/2009 1333 Comments: CLEAR
Sample	Point		7-S

SG - Specific Gravity EH - Redox DO - Dissolved Oxygen

* From Top of Riser ** Elevation Above Sea Level

Facility: ARCH	Sample Point ID: BR-105
Field Personnel: R, SENE	Sample Matrix: G/w
MONITORTING WELL INSPECTION:	
Date/Time 11-17-09 1 1112	Cond of seal: Cood () Cracked % () None () Buried
Prot. Casing/riser height:	Cond of prot. Casing/riser: () Unlocked () Good () Loose . XFlush Mount () Damaged
If prot.casing; depth to riser below:	<u> </u>
Gas Meter (Calibration/ Reading): % Gas:	
Vol. Organic Meter (Calibration/Reading):	Volatiles (ppm'/
PURGE INFORMATION:	
Date / Time Initiated: //-/7-09 / //55	Date / Time Completed: 11-17-09 1/225
Cont Barre Die () Drot Carine Ave.	
Surf. Meas. Pt: () Prot. Casing Riser	Riser Diameter, Inches: 4.0
Initial Water Level, Feet: 23, 22	Elevation. G/W MSL:
Initial Water Level, Feet: 23, 22	Elevation. G/W MSL: BLADDEL
Initial Water Level, Feet: 23, 22 Well Total Depth, Feet:	Elevation. G/W MSL: Method of Well Purge: BLADOCE PUND
Initial Water Level, Feet: 23, 22 Well Total Depth, Feet: One (1) Riser Volume, Gal:	Elevation. G/W MSL: Method of Well Purge: Dedicated: Method of Well Purge:
Initial Water Level, Feet: 23, 22 Well Total Depth, Feet: One (1) Riser Volume, Gal: Total Volume Purged, Gal:	Elevation. G/W MSL: Method of Well Purge: Dedicated: Purged To Dryness Y (N)

101(05.		. (II appi							
Time	, .	ge Rate m/htz)	Cumulative Volume	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other ・ <u>シ</u> C
1200	150	23,55		13.3	7.33	1824	2,52	-272	0.93
1205	150	23,55	-	13.4	7.13	1785	1.14	-249	0.80
1210	150	95,55		13,5	6.99	1780	0.85	-247	0,73
1225	150			13.5	6,97	1778	0.87	-247	0,15
	1								
						And the state of t			

SAMPLED AT 1230/11-17-09

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Field Form Revision 0

03/14/02

SAMPLING INFORM	ATION:		POINT	ID		
Date/Time			Water Le	evel @ Sampling	, Feet:	
Method of Sampling:				Dedicated:	Y/N	
Multi-phased/ layered:	()Yes	() No	If YES:	() light	() heavy	
SAMPLING DATA:	<u></u>	en e			()	
Time Temp.		Conduct (Umhos/cm)	Turb. (NTU)	Other ()	Other	
					1.1	
					<u>1</u>	ng kanalang di salah br>Salah salah sa
						en e
INSTRUMENT CHECK	DATA:					· · · · · · · · · · · · · · · · · · ·
Turbidity Serial #:		=NTU	N	TU std. =		
pH Serial #:		7.0) std.=		.0 std. =	<i>₩</i>
Conductivity Serial #: Solutions:			mhos/cm=_		umhos/cm=	
GENERAL INFORMATI	ON:	The State of the S			el y	r Herring (M. Tolke)
Weather conditions @ tin						er en
Sample Characteristics:						
COMMENTS AND OBSI	ERVATIONS:	in the state of th				
						· · · · · · · · · · · · · · · · · · ·
					د الله الله الله الله الله الله الله الل	
						·
certify that sampling proc protocals.	cedures were in a	ccordance with	ı all applica	ble EPA, State a	nd Site-Specific	
Pate: 11	Ву:		the state of the s	Company:	,	·
			•		man of the particle of event, the restificant and made a support	the said females of the said o

Facility: ARCH	Sample Point ID: BP-105 D
Field Personnel: R. SRNR	Sample Matrix: 6/6/
MONITORTING WELL INSPECTION:	
Date/Time /1-17-09 1/1/0	Cond of seal: (Good () Cracked % () None () Buried
Prof. Casing/riser height:	Cond of prot. Casing/riser: () Unlocked () Good () Loose
If prot.casing; depth to riser below:	() Damaged
Gas Meter (Calibration/ Reading): % Gas:	% LEL:
Vol. Organic Meter (Calibration/Reading):	Volatiles (ppm'/
PURGE INFORMATION:	
Date / Time Initiated: //-/7-091 ///5	Date / Time Completed: 11-12-09 V145
Surf. Meas. Pt: () Prot. Casing Riser	Riser Diameter, Inches: 2.0
Initial Water Level, Feet: 25.50	Elevation. G/W MSL:
Well Total Depth, Feet:	Method of Well Purge: Beappar
One (1) Riser Volume, Gal:	Dedicated:
Total Volume Purged, Gal:	Purged To Dryness Y (N)
Purge Observations: <u>LO-FLOW</u>	Start BLACK TINT Finish CLRAR
PURGE DATA: (if applicable)	

Time	(gp	ge Rate m/htz)	Cumulative Volume	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb.	Other	Other
1115		25.82		13.0	7.10	25,230	1	-32/	0,69
1125		25,90		13.1	6,93	25,980	2.07	-323	0,63
1135		25.90		13,0	6,91	26,510	1.93	-321	0.59
0145	180	25.80		13.0	6.87	26,670	1.85	-320	0.60

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Field Form Revision 0 03/14/02

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	1.
SAMPLING DATA:	() neavy	
Time Temp. pH Conduct (°C) (std units) (Umhos/cm)	Turb. Other Other (NTU)	
		i .
		r
INSTRUMENT CHECK DATA:		3
Turbidity Serial #:NTU std. =NTU Solutions: A9042	<u>/ONTU</u> std. = <u>_/O</u> NTU	1, A W
pH Serial #: 1201 4.0 std.= 4.00 7.0 Solutions: 4 None 7-NMI	std.= 7-00 10.0 std. =	The state of the s
Conductivity Serial #: 1234 1006 um Solutions: 7643	hos/cm=(500umhos/cm=	.959.5 43.7 40.4
GENERAL INFORMATION:		11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Weather conditions @ time of sampling:		* Carrier of the second
Sample Characteristics:		
COMMENTS AND OBSERVATIONS:		1 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -
		<u> </u>
	3	
		·
certify that sampling procedures were in accordance with a protocals.	all applicable EPA, State and Site-Specific	
Pate: By:	Company:	•

Facility: ARCH	Sample Point ID: BR-106
Field Personnel: R, SENK	Sample Matrix: G/w
MONITORTING WELL INSPECTION:	
Date/Time // - /7 - 09 1/3/0	Cond of seal: () Good () Cracked % () None () Buried
Prot. Casing/riser height:	Cond of prot. Casing/riser: () Unlocked () Good () Loose 、火) 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: //-/2-09 / /3/5	Date / Time Completed: 11-17-09 1 1340
Surf. Meas. Pt: () Prot. Casing Riser	Riser Diameter, Inches: 4.0
Initial Water Level, Feet: 24.08	Elevation. G/W MSL:
Well Total Depth, Feet:	Method of Well Purge: Pump
One (1) Riser Volume, Gal:	Dedicated:
Total Volume Purged, Gal:	Purged To Dryness Y
Purge Observations: 20 - FCOW	Start St. Tursio Finish CC217
The second control of	

PURGE DATA: (if applicable)

Time	-(apr	e Rate	Cumulative Volume	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other Do
1325	2000	WL 24.15		12.2	7.02	3376	23,9	-/99	0,49
		24.15		12,4	6.93	3408	10,3	-223	0.51
1335	200	24.15		12,4	6,91	3396	11.1	-222	0,49
1340	200	24.15		12.4	6:87	3387	9.80	-525	0.48
					,				

SAMPLED AT 1340/11-17-09
PAGE 1 OF 2

Field Form Revision 0

03/14/02

SAMPLING INFORMAT	TON:		POINT	ID		
Date/Time			Water Le	evel @ Sampling	ı. Feet	-
Method of Sampling:				Dedicated:	Y / N	
Multi-phased/ layered:	() Yes	() No	If YES:	() light	() heavy	,
SAMPLING DATA:	dining the state of the state o	· · · · · · · · · · · · · · · · · · ·		()	() neavy	
Time Temp. (°C)	pH (std units)	Conduct	Turb.	Other	Other	***
	(std diffts)	(Umhos/cm)	(NTU)	()	()	$x = x + x_1$
				4		e Pydrologia
			-			
MOTOURED						
INSTRUMENT CHECK D				•		
Turbidity Serial #: Solutions:	NTU std. :	=NTU	N	ITU std. =	NTU	
	4.2		·	**************************************		
pH Serial #:Solutions:	4.0 std.=).0 std. =	
Conductivity Serial #:					e e e e e e e e e e e e e e e e e e e	
Solutions:		<u> </u>	mhos/cm=_		umhos/cm=	The same
GENERAL INFORMATIO	N:	· · · · · · · · · · · · · · · · · · ·			4	
Weather conditions @ time	of sampling:			the second	+ a 1	A CONTRACTOR
Sample Characteristics:						
COMMENTS AND OBSER	N/ATIONO			<u>.</u>		e de la companya de La companya de la co
	VATIONS:					\$
*						
			•			-
Cartifu that come?		į.		i i	*	
certify that sampling proced otocals.	dures were in a	ccordance with	all applica	ble EPA, State a	and Site-Specific	;
ate:	Ву:					
	-y		, and the same of	Company:	and the control of the control of the published and the control of	- Ann Bay (1) your end of the Marketine Marketine desired by May 1

Facility: ARCH		Samp	le Point I <u>D:</u>	3R - 1Z	6	_
Field Personnel: Pt, JJ	RK	Samp	le Matrix:	- Glu		_
MONITORTING WELL INSPECTION	1:					
Date/Time ((-18-09	309	Cond	of seal: () Good () Nor	d () Cracked ne (X Buried	Buried Stone f	ander %
Prot. Casing/riser height:			of prot. Casing/	riser: () Unl () Loose	ocked()(∋ood
If prot.casing; depth to riser below:		Popular de Caralina e vo	-	() Damage	a	- ≫ 4
Gas Meter (Calibration/ Reading):	% Gas:		% LEL	:	<u> </u>	- v
Vol. Organic Meter (Calibration/Readin	g):	Volati	les (ppm;	1 —	<u>-</u> •	
PURGE INFORMATION:		, e e e e gere e e e				v . •
Date / Time Initiated: 11-18-09 / (314	Date /	Time Complete	d: /	1-18-09	1345
Surf. Meas. Pt: () Prot. Casing	Riser	Riser	Diameter, Inche	s:	4.0	
Initial Water Level, Feet: 9.8	5	Elevat	ion. G/W MSL:			
Well Total Depth, Feet: 45.45		Metho	d of Well Purge	: <u>,</u> (Peristat	tic Pump
One (1) Riser Volume, Gal:		Dedica	ated:	Ø1 N		
Total Volume Purged, Gal:		Purge	d To Dryness	YIM		
Purge Observations:		Start	Turbid	Finish	Clear	
PURGE DATA: (if applicable)		. •	and the			
Time Purge Rate Cumulative (gpm/htz) Volume	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ORP	Other Do
1319 200 9.89 . 9	515,77	7.55	651	102	-118	1.22
1324	15.1	7.40	706	80.4	-116	1.14
1329	15.1	7,31	711	62,3	-115	1.10
1335	15.0	7:27	715	39.2	-113	1.01
1740	15.1	7.25	719	28.6	/13	0.99

SAMRI Q 1345 / 11-18-05

1345

15:3

PAGE 1 OF 2

7.25

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Field Form Revision 0 03/14/02

21.9

SAMPLING INFORMATION:	7.1	POINT I	D		•
Date/Time /		Water Le	vel @ Sampling	ı, Feet:	in the second second
Method of Sampling:			Dedicated:	Υ/N	17 E 1986
Multi-phased/ layered: () Yes	(·) Nó	If YES:	() light	() heavy	· ·
SAMPLING DATA:					
Time Temp. pH (°C) (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other	
		107			The William
3	δ_{ϵ}^{a}		New York	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	e Stranger
			4.1		ila satah jarah
ISTRUMENT CHECK DATA:					2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
urbidity Serial #:NTU std. =	NTU NTU	N	TU std. =	NTÚ	dua di senerali di
oranous:		·			, V. O
Serial #: 4.0 std.=	7.0	std.=	10	.0 std. =	er of the second
nductivity Serial #:	an te il loris all		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
lutions:	un	nhos/cm=_ /-∖		umhos/cm=	, 10 (10 (10 (10 (10 (10 (10 (10
ENERAL INFORMATION:		.:.		in the state of the state of	and the state of
eather conditions @ time of sampling:	: · · · · · · · · · · · · · · · · · · ·	•			
mple Characteristics:		•			
MMENTS AND OBSERVATIONS:					
4					
					1
		4.		-	
				•	
	* *				
rtify that sampling procedures were in actocals.	cordance with	all applica	ble EPA, State	and Site-Specific	
e: <u>/ / </u>	÷	·	Company:		• :
D	AGE 2 OF 2		combană:		· · · · · · · · · · · · · · · · · · ·
· 1 /	コンスピーア モンド・フ				

LeachField Form Revision 0 March, 15 2002

				•		00.12	1
Facility:	ARCH			Sample Po	oint ID:	15/2010	
Field Person		Pl. JS		Sample M	atrix:	BR12-0	mposite
SAMPLING	INFORMATIC	N:					
	11-18-09	, ,	200	Water Lev	rel @ Sampling	, Feet:	16.52
	ampling:	IN-5100	punt		_Dedicated:	(V) N	
Multi-phase		() Yes		If YES:	() light	() heavy	•
SAMPLING	DATA:					Other	
Time	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (OV)	()	
1263	15.8	7.87	2578	10-01	10		
Turbidity Se		NTU std.				10.0 std. =	
Conductivi Solutions: GENERAL		ON:		_umhos/cm	=	umhos/cr	n=
Weather co	onditions @ tim	ne of sampling:		<u>u 51</u>			
Sample Ch	naracteristics:		Clear				<u> </u>
		ERVATIONS:				:	
٠.			·				
				, , , , , , , , , , , , , , , , , , , ,			·
I certify the	nat sampling pr // ///// 06		in accordance	e with all ap	plicable EPA, S Compan	State and Site-Sp y:	

LeachField Form Revision 0 March, 15 2002

		FIELD OD	OFILALIE.	N E G ANDA		DD eA	
acility:	ARCH			Sample Po	oint ID:	BR-SA	
ield Person	inel:	Pl. 55		Sample Ma	atrix:	60 Grab () Co	mposite
SAMPLING	INFORMATIO	N:	•			• •	
Date/Time	11-17-69	1 14	120	Water Lev	el @ Sampling	, Feet:	21.19
	ampling:				_Dedicated:	ON	
Viulti-phase	d/ layered:	() Yes	& No	If YES:	() light	() heavy	
SAMPLING	DATA:		· 		Other	Other	
Time	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (OVP)	()	
1925	13.4	7.39	1484	15.25	-93		
Solutions: pH Serial # Solutions: Conductivi	•			7.0 std.=	- 	10.0 std. =umhos/cm	
Solutions: GENERAL	INFORMATIO	ON:					
Weather co	onditions @ tim	e of sampling:	Seed	45			
	naracteristics:		Cler				
COMMEN	ITS AND OBS	ERVATIONS:					
	<u></u>			<u> </u>			
I certify the	•					State and Site-Spo	
Date:	11 111 09	Ву:	1		Compan	у	

Facility:		SRCH.	· · · · · · · · · · · · · · · · · · ·		Sample Point ID: BR-6A					
Field Per	sonnel	:	PG JS		Samp	le Matrix:	6h		- -	
MONITO	ORTING	WELL	INSPECTION	! :						
Date/Tim	e //·	-16-69	1 /	216	Cond	of seal: () Good () Non	I () Cracked le () Buried		%	
Prot. Cas	sing/rise	er heigh	t <u>:</u>		_ Cond	of prot. Casing/		() Flush	ood	
If prot.ca	sing; d	epth to r	iser below:			-	() Damage	<u>u</u>	• •. ,	
Gas Mete	er (Calib	ration/ l	Reading):	% Gas:		% LEL	·· <u>/</u>			
Vol. Orga	ınic Me	ter (Calil	bration/Readin	g):	Volati	les (ppm;	I			
PURGE	INFOR	MATIO	N:				• •			
Date / Tin	ne Initia	ited: /	1-16=4 1 1	220	_ Date /	Time Complete	d:	1-16-09 1	1240	
Surf. Mea	ıs. Pt: ()	∮ Prot. C	asing	() Riser	Riser	Diameter, Inche	s:	6.0		
Initial Wa	ter Lev	el, Feet:	14.2	<i>j</i>	Elevat	ion. G/W MSL:	٠	· · · · · · · · · · · · · · · · · · ·		
Well Tota	l Depth	, Feet:			Metho	d of Well Purge:	· ,	Perism	HTIC	
One (1) R	iser Vo	lume, G	al:		Dedica	ated: (DIN			
Total Vol	ume Pu	rged, Ga	al:		Purge	d To Dryness	Y /(A)		4	
Purge Ob	servati	ons:		•		Besseh Weby		Cleir Beach		
PURGE	DATA:	(if appl	icable)	·				- - <u>-</u> .		
Time	-	e Rate n/htz)	Cumulative Volume	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other Ø	
1225	200	WL 1433		14.9	8.64	1122	9.02	-66	1.61	
/230		14.37		15-1	8.71	1115	8-97	-70 .	1.58	
1235				15.1	8.07	1112	7.62	-71	1.56	
1240				45-1	8.38	111\$	7.60	- 72	1,53	
	A									

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Field Form Revision 0 03/14/02

SAMPLING INFORMAT	ION:		POINT I	D		V
Date/Time			Water Le	evel @ Sampling	g, Feet:	Der eine der Stadt der Erge
Method of Sampling:				Dedicated:	Y/N	tus siring bases
Multi-phased/ layered:	() Yes	() No	If YES:	() light	() heavy	
SAMPLING DATA:						egesta en gran
Time Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (Other	Supervision (Supervision Supervision Super
						ស្រាប់ ដូវគឺស្រាប់ ស្រាស់
	1. 1. 1.	i di		2 4 A	(4.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	11 (11) 40 hold o
INSTRUMENT CHECK D	ATA:				V	
Turbidity Serial #:	NTU std.	=NTU	N	ITU std. =	_NTU_	August Torong Charles
	- <u> </u>					in agradity
pH Serial #: Solutions:	_ 4.0 std.=	<u></u>	O std.=	10	0.0 std. =	1.5
Conductivity Serial #:		- 4 do - 3 do -		-	the second of the Second	
	10 10 10 10	u 	mhos/cm=_		umhos/cm=_	- Constant Section
GENERAL INFORMATION	v :			•	$\label{eq:definition} f(x) = \frac{1}{2} \left($	ing distribution of the con-
Veather conditions @ time	of sampling:					
cample Characteristics:					(,
OMMENTS AND OBSER	VATIONS:					
\$				· · · · · · · · · · · · · · · · · · ·	<u> </u>	<u> </u>
				· · · · · · · · · · · · · · · · · · ·		· :::
	:					d ·
				•		· · · · · · · · · · · · · · · · · · ·
		:				
certify that sampling proced otocals.	dures were in a	ccordance with	all applica	ible EPA, State	and Site-Specific	
ate: / /	Ву:	'				•
	<i>□</i> y	-		Company: _		

LeachField Form Revision 0 March, 15 2002

Facility:	ARCH			Sample Po	oint ID:	BR.	7A
Field Person		Pl. 55		Sample M	atrix:	600 N Grab () C	omposite
SAMPLING	INFORMATIO						
Date/Time	11-18-09		25	Water Lev	rel @ Sampling		29.74
Method of Sa	ampling:	IN-5,00			_Dedicated:	(Y) N	
Multi-phased	l/ layered:	() Yes	MNO	If YES:	() light	() heavy	
SAMPLING	DATA:		· · · · · · · · · · · · · · · · · · ·		Other	Other	1
Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	(odo)	()	
12.27	1527	8-2(2431	16.85			
1228	15.7	8,20	2431	16.90	- 103		
Solutions: Conductivit Solutions:				7.0 std.= _umhos/cm	 =	10.0 std. = umhos/c	
	nditions @ time		5	in S	3°		
Sample Ch	aracteristics:		Clev	<u>- 6.</u>	ing for		
COMMEN.	TS AND OBSE	RVATIONS:		DUP_			
I certify tha	at sampling pro	cedures were	in accordance	with all ap	plicable EPA, S	State and Site-Sp	pecific
protocals. Date:	11 18 109	Ву:	J.	2	Compan	y:	

LeachField Form Revision 0 March, 15 2002

1 4	FIELD OD.		Sample Po	nint ID:	BR-9		
eld Personnel:	PL, 55		Sample M		BR-9 Gab () Composite		
eid Personner. AMPLING INFORMA					() Grab () Co	mposite	
		25	Water Lev	vel @ Sampling	ı, Feet: _	3207	
lethod of Sampling:				_Dedicated:	Ø/ N		
lulti-phased/ layered:	() Yes		If YES:	() light	() heavy		
AMPLING DATA:		·			Other		
Time Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (OV)	()		
1127 15,0	6.92	2268	141	-10			
		· .					
pH Serial #: Solutions: Conductivity Serial #: Solutions: GENERAL INFORMA	<u> </u>			 '	10.0 std. = umhos/cm		
Weather conditions @	time of sampling:	Su~	51			· ·	
Sample Characteristic	s:	6124					
COMMENTS AND O	BSERVATIONS:			•			
I certify that sampling protocals.	y procedures were		with all ap				
Date: // ////	<i>01</i> By:	fa	/	Compan	y: <u>TAL</u>	· · · · · · · · · · · · · · · · · · ·	

Facility:		ARCH			Sam	ple Point ID:	E-1			
Field Pe	rsonne	d:	Ph JS	·	Samı	ole Matrix:	6W			
MONITO	ORTIN	G WELL	INSPECTION	1:		1/	AUT		-	
Date/Tim	ne <i>//</i>	-17-09	1	1234	Cond	l of seal: () Goo			<u></u> %	
Prof. Cas	sing/ris	er heigh	t <u>:</u>	·	_ Cond	of prot. Casing	() Loose	() Flush	Good Mount	
If prot.ca	ısing; c	lepth to	riser below:		35	_	() Damage	ed	- 	
Gas Mete	er (Cali	bration/	Reading):	% Gas:	J	_ % LEL	.: <u> </u>		-	
Vol. Orga	anic Me	eter (Cali	bration/Readin	g):	Volati	iles (ppm)	I			
PURGE	INFOF	RMATIO	N:				•		•	
Date / Tir	ne Initi	ated: //	1-17-09 1	235	_ Date /	Time Complete	d:	11-17-69	1125	
Surf. Mea	as. Pt: (() Prot. C	Casing	() Riser	Riser	Diameter, Inche	s:	VA	_	
Initial Wa	iter Les	/el, Feet:	1.78		Elevation. G/W MSL:					
Well Tota	i Depti	h, Feet:			_ Metho	STALTIC				
One (1) R	Riser Vo	olume, G	al:		_ Dedicated: Ø1					
Total Vol	ume Pı	urged, G	al:		· Purge	d To Dryness	YID			
Purge Ob	servat	ions:			_ Start	Chen	Finish	Clear		
PURGE	DATA:	(if appl	icable)						•	
Time	(gpi	je Rate m/htz)	Cumulative Volume	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other	
1240	WL 1.78	m1/w 200		9,6	9,20	12,770	24.2	-92	086	
1245				9.4	9.15	12761	23.8	-95	8.77	
1250 .				9.5	9.11	13755	23,6	-95	6,75	
1255				9.5	9:09	12,750	22.1	- 96	0.74	
		٧								

SAMBON @ 1255/11-17-09

2 PAGE 1 OF 2

Field Form Revision 0 03/14/02

SAMPLING INFORMAT	ION:		POINT I	D		
Date/Time			Water Le	vel @ Sampling,		. \$ 10 12 2 2 1
Method of Sampling:	· · · · · · · · · · · · · · · · · · ·			Dedicated:	Y / N	
Multi-phased/ layered:	()Yes	() No	If YES:	() light	() heavy	\$ - 4
SAMPLING DATA:	<u></u>					
Time Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (Other	
						jåskelisi €
•	1.	· ·				一、龍、石
		Part of the second	<u> </u>		***************************************	
INSTRUMENT CHECK D	ATA:					
Turbidity Serial #:	NTU std. :	=NTU	N	TU std. =		
pH Serial #:	4.0 std.=	7.0) std.=		0 std. =	ortenidijos —
Conductivity Serial #	0.7				umhos/cm=_	
GENERAL INFORMATION	V•		.T		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Tarwalla (1997)
Weather conditions @ time		e San	,			
Sample Characteristics:	· · · · · · · · · · · · · · · · · · ·					
COMMENTS AND OBSER	RVATIONS:			ž ,		
					<u> </u>	
			· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	
					•	<u></u>
•		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			
l certify that sampling proced protocals.	dures were in a	ccordance with	n all applica	able EPA, State a	nd Site-Specific	
Date: 1 1	Ву:			Company:	1	

200	10 : ///
Facility: ARCH	Sample Point ID: MW - 106
Field Personnel: RISENK	Sample Matrix: 6/W
MONITORTING WELL INSPECTION:	
Date/Time 11-17-09 11237	Cond of seal: Good () Cracked % () None () Buried
Prot. Casing/riser height:	Cond of prot. Casing/riser: () Unlocked () Good () Loose
If prot.casing; depth to riser below:	() Damaged
Gas Meter (Calibration/ Reading): % Gas:	/ % LEL: / / -
Vol. Organic Meter (Calibration/Reading):	Volatiles (ppm / / —
PURGE INFORMATION:	
Date / Time Initiated: 11-17-69, 1240	Date / Time Completed: 11-17-09 / 1305
Surf. Meas. Pt: () Prot. Casing Riser	Riser Diameter, Inches: 2,0
Initial Water Level, Feet: //, 73	Elevation. G/W MSL:
Well Total Depth, Feet:	Method of Well Purge: Punp
One (1) Riser Volume, Gal:	Dedicated: (Y) N
Total Volume Purged, Gal:	Purged To Dryness Y (N)
Purge Observations: <u>LO-FLOW</u>	Start BLACK Finish CRAR
PURGE DATA: (if applicable)	
Time Purge Rate Cumulative Temp. p	H Conduct Turb. Other Other

IUICL	PURGE DATA: (II applicable)											
Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other Occ	Other DO			
1245	me/min	11,92		12.9	6.97	5728	3,97	-251	0,99			
1250	150	11.90		12.9	6,88	5802	2,01	-260	1,05			
1255	150	11,90		12.7	6.93	5833	l	1				
1305	150	11.90		12.6	6.96	5844	1,89	-268	0.95			

5AMOLRO AT 1305/11-12-09

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Field Form

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SAMPLING INFORMAT	ION:		POINT I	D		
Date/Time	1		Water Le	vel @ Sampling	g, Feet:	
Method of Sampling:				Dedicated:	Y / N	
Multi-phased/ layered:	() Yes	() No	If YES:	()light	() heavy	e g ^{er} in e v
SAMPLING DATA:	ing a state of the state of th	t in the second				ji karani ka maja
Time Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (Other	
				·		194 (M)
	A. C.					i distributi ga fi T
	1.	The second secon		<u> </u>	Addition of particular	indina yanda j ank
INSTRUMENT CHECK D.	ATA:					
Turbidity Serial #:				· *		a a fatar
Solutions:	NTU Sta. =	=NTU	N	TU std. =	NTU SAN A	. 2 ^e ±
pH Serial #:) std.=	• ·		ARANY Francis
Solutions:			ว รเน.–		0.0 std. =	
Conductivity Serial #: Solutions:		u	mhos/cm=_		umhos/cm=_	The state of the s
GENERAL INFORMATION	J•	3				La Callada
Weather conditions @ time	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Sample Characteristics:	-					
COMMENTS AND OBSER	VATIONS:	19 1				
	•					
					and the second section and evidence of the section of the second section of the sect	The state of the s
· · · · · · · · · · · · · · · · · · ·			·			or the second
			٠			
certify that camelia			-			
certify that sampling proced rotocals.	lures were in a	ccordance with	all applica	ble EPA, State	and Site-Specific	
Pate: / /	Ву:	<u> </u>		Company:		•
	_		a transmit to the same of the	poets g ,	The state of the s	r y artines harringen risk freithrensak risk og en 192 by sjak

Facilit	у:	ARCI	i.f		Sai	mple Point ID:	MW-12	7	•
Field F	ersonn	el:	Pl, J	Ĩ.	•	nple Matrix:	64		
MONI	TORTIN	IG WEL	L INSPECTIO	N:					
Date/Ti	ime/	1-17-0	<u>Î</u>	1260	Cor	nd of seal: (A Go	od () Crack one () Burie	ed	
Prot. C	asing/ri	ser heig	ht:		Con	d of prot. Casin	g/riser: () U		Good
If prot.c	asing;	depth to	riser below:				() Damag	jed	
Gas Me	ter (Cali	ibration/	Reading):	% Gas:		% LE	L: /		₩, , , ,
Vol. Org	janic M	eter (Cal	libration/Readi	ng):	Vola	tiles (ppm <u>'</u>		· .	
PURGE	INFO	RMATIC)N:						
Date / Ti	ime Initi	iated:	11-17-02 / /	205	Date	/ Time Complet	ed:	(117-09	1 1210
Surf. Me	as. Pt: (() Prot.	Casing	Ø Riser	Riser	Diameter, Inch	es:	2.0	
Initial W	ater Lev	/el, Feet	[10.23		Eleva	ution. G/W MSL:			
Well Tot	al Depti	n, Feet:	11-25		Meth	od of Well Purge	:	Perisi	ALICE
One (1) I	Riser Vo	olume, G	ial:		Dedic	· ated:	Ø N		
Total Vol	lume Pu	ırged, G	al:		· Purge	ed To Dryness	Y 1(N)		
Purge Ol	oservati	ons:			•	Clean	Finish	Cleer	
PURGE	DATA:	(if appl	licable)					<u></u>	-
Time		e Rate n/htz)	Cumulative Volume	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other 20
1210	50	10-36		13.9	7.41	4112	12.39	-142	0.90
1215		1043		13-9	7.47	4091	6.00	-139	0.88
220		10-49		13.5	7.48	4090	2.11	_138	0.86
225					·			12,00	
					The state of the s				and and an array of the second
							- <u></u>		
 S1	gmfinl	AT 1	1220 //-	17-09					
			sod Dry		PAGE 1 OF	2	Field Form		

Field Form Revision 0 03/14/02

SAMPLIN	G INFORMAT	ION:		POINT I	i de tal		
Date/Time			. *	Water Le	evel @ Samplin	n Feet	· Ly, · · · · · · · · · · · · · · · · · · ·
Method of S	Sampling:	-			Dedicated:	y / N	78 78 97 8 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Multi-phase	ed/ layered:	() Yes	() No	If YES:			State State
SAMPLING	DATA:	·					e Quinter
Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other	, swe with a
		for the second		(1170)		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
		1 T					and Japan March
			(A)				
INSTRUME	NT CHECK D	ATA:					$\{1,1,2,\dots,M_1\},\{1,2,\dots,M_n\}$
Turbidity Sei Solutions:	rial #:	NTU std. =	NTU (N	TU std. =	_NTU	
				<u> </u>	•		
pH Serial #: _ Solutions: _		4.0 std.=	7.0	std.=	1	0.0 std. =	
Conductivity Solutions:	Serial #:		un	nhos/cm=_		umhos/cm=	lander (d. 1905) <u>1860 - Johan Di</u> nes et German
	NFORMATION			·			and the second
	ditions @ time			•			
ample Chara		<u>-</u>					
OMMENTS	AND OBSER	VATIONS:		•			er alle
· · · · · · · · · · · · · · · · · · ·		<u>-</u> -	N. C.				
			<u> </u>			· · · · · · · · · · · · · · · · · · ·	
						· · · · · · · · · · · · · · · · · · ·	<u> </u>
							
							-
ertify that sa	ampling proced	lures were in ac	cordance with	all applica	ble EPA. State	and Site-Specific	
	į				, = ====	opcome	•
ate:	1 1	Ву:			Company:		
		, id	ACE 0 05 0		· •		

Facility: ARCH	Sample Point ID: MW -/6
Field Personnel: R. SANF	Sample Matrix: 6/w
MONITORTING WELL INSPECTION:	
Date/Time 1/-17-09 1 1355	Cond of seal: (**Good () Cracked
Prot. Casing/riser height:	Cond of prot. Casing/riser: () Unlocked () Good () Loose
If prot.casing; depth to riser below:	() Damagea
Gas Meter (Calibration/ Reading): % Gas:	% LEL:/
Vol. Organic Meter (Calibration/Reading):	Volatiles (ppm'/
PURGE INFORMATION:	
Date / Time Initiated:) 1-17-09, 1400	Date / Time Completed: 11-17-09 1/425
Surf. Meas. Pt: () Prot. Casing Riser	Riser Diameter, Inches:
Initial Water Level, Feet: 12, 40	Elevation. G/W MSL:
Well Total Depth, Feet: 34,40	Method of Well Purge: Plans Punp
One (1) Riser Volume, Gal:	Dedicated:
Total Volume Purged, Gal:	Purged To Dryness Y /(N)
Purge Observations: LO-FCO	Start Trut Finish Trut
PURGE DATA: (if applicable)	

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other A o
1410	150 mm	12.55		13.8	7,35	2987	25.8	-180	0,98
1415	150	12,55		13,9	7.25	3013	27,7	-160	0. 93
1420	150			13.9	7,22	3063	28.5	-160	0.93
1425	\downarrow	12,55		13.9	7.21	3061	28.9	-161	0,91
							The state of the s		

5AMDURO AT 1425/11-17-09
PAGE 1 OF 2

Field Form Revision 0 03/14/02

SAMPLING INFORMA	TION:		POINT I	D		
Date/Time	. 1		Water Le	evel @ Sampling	ı. Feet:	<u></u>
Method of Sampling:				Dedicated:	Y / N	
Multi-phased/ layered:	() Yes	() No	If YES:	() light	() heavy	
SAMPLING DATA:	·					ور دان
Time Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (Other (
						* 1. (*))**********************************
INSTRUMENT CHECK E	PATA:				<u></u>	AM ^C +
Turbidity Serial #:Solutions:	NTU std.		N	TU std. =	NTU	
pH Serial #: Solutions:) std.=	10).0 std. =	7 1 1 14.
Conductivity Serial #: Solutions:	\$	ur	nhos/cm=_		umhos/cm=	
GENERAL INFORMATIO	N:					
Weather conditions @ time			-			
Sample Characteristics:	er sampling,		• ,			· · · · · · · · · · · · · · · · · · ·
COMMENTS AND OBSE	DVATIONS				<u> </u>	1 - 4 - 5 - 6
	(AVIIO42)			· · · · · · · · · · · · · · · · · · ·	<u> </u>	·.
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			· · · · · · · · · · · · · · · · · · ·			
<u> </u>						
				~	· · · · · · · · · · · · · · · · · · ·	
certify that sampling proce rotocals.	dures were in a	ccordance with	all applica	ble EPA, State :	and Site-Specific	-
Pate: / / /	Ву:			Company:		

Facility:	_ ARCH			Sam	ple Point ID:	PW-10	7	
Field Pe	rsonnel:	PG JS		Sam	ole Matrix:	PW-11		-
MONIT	ORTING WELI	_ INSPECTIO	٧:					-
Date/Tim	ne //- /7 - o	9. 1 1	13 09	Cond	of seal: () Goo () No	d () Cracked ne () Buried		%
Prot. Cas	sing/riser heigh	st <u>:</u>		_ Cond	of prot. Casing	/riser: () Un () Loose () Damage	() Flush	Sood Mount
If prot.ca	ising; depth to	riser below:				() Damage	:u <u> </u>	<u>.</u>
Gas Mete	er (Calibration/	Reading):	% Gas:		_ % LEI	<u>/</u>		
Vol. Orga	anic Meter (Cali	bration/Readin	g):	Volati	les (ppm)	Ï		
PURGE	INFORMATIO	N:				•		•
Date / Tir	ne Initiated:	11-17-69 / 13	315	_ Date /	Time Complete	d:	11-17-691	
Surf. Mea	ıs. Pt: () Prot. (Casing	() Riser	Riser	Diameter, Inche	:s:		
Initial Wa	iter Level, Feet:	11.39		Eleva	tion. G/W MSL:			
Well Tota	l Depth, Feet:			Metho	d of Well Purge	:		
One (1) R	iser Volume, G	al.		Dedic	ated:	Ø/ N		
Total Vol	ume Purged, G	al:		Purge	d To Dryness	Y 100	70 <i>i Bi0</i>	
Purge Ob	servations:	•		Start	Yellow	Finish	Amer	
PURGE I	DATA: (if appl	icable)	•			· .		
Time	Purge Rate	Cumulative	Temp.	рН	Conduct	Turb.	Other	Other
i	(gpm/htz)	Volume	(0)	(etd unite)	(IImbaclam)	CATTIL		20

			licable)	_`				-	
Time		e Rate	Cumulative	Temp.	рН	Conduct	Turb.	Other	Other
	$\frac{ \psi }{ \omega }$	n/htz)	Volume	(C)	(std units)	(Umhos/cm)	(NTU)	ON	00
1320	11.45	200		13.9	9.16	1943	108	-59	0.98
1321	11.56			13.9	9.19	1927	102	-62	0.97
1330	11.60			138	9.22	1930	104	-63	6. 95
1335				13.7	9.29	2025	100	-65	0.82
1340				13.5	9.51	1955	79	-67	0.90
1345				13.4	9,59	8111	109	-69	0.87
1350				13.4	9.64	9 000	115	-80	0.85
1355		-4-1		13.5	PAGE 1 OF	29162	Field Form	-02	0.82
1400	<u> </u>	1		13:4	9.80		03/14/02	-94	0.80
			SAMME		Į		t	1	
. ,	i			11-17	-09 d	1 2			l

ORMATIC)N:	•	POINT I	D	gr.	
		į.	Water Le	vel @ Sampling,	Feet:	to a stora e to the self-
ing:				Dedicated:		一个多数等于最高的基本的。 - 1
ered:	() Yes	() No	If YES:	()light	() heavy	
A:						Mean Mark Ja
Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ()	Other (
				* 1 * **		and the state of t
		jango kato				
HECK DA	ΤΔ·	1				n A. 🗸 🖔
	•	=NTU		TU std. =	114 V	eli en
-,	<u> </u>		9		· · ·	
	4.0 std.=	7.0	std.=	10.	0 std. =	ng kang meneral dalam Tanggaran
I #:		ur	mhos/cm=_		umhos/cm=	
MATION		•	:		13 St. 1 8 1.	18 T 4
						ing section in the Addison to
•	r sampling:					
			· · · · · · · · · · · · · · · · · · ·			.4.4
OBSERV	'ATIONS:				•	
	· ·					
	:		<u>.</u>		<u> </u>	
	3	:		<u> </u>		
					· :	
	 			<u> </u>		
ng procedi	ıres were in a	ccordance with	all applica	able EPA, State a	and Site-Specific	
	ing: ered: FA: Temp. (°C) HECK DA I#: RMATION: s @ time of stics:	rered: () Yes FA: Temp. pH (°C) (std units) HECK DATA: NTU std. = 4.0 std.= I#: RMATION: s @ time of sampling:		Water Le	Water Level @ Sampling, Dedicated:	Water Level @ Sampling, Feet: Ing:

			A 11
Facility: AR	C #	Sample Point l	10: <u>fiv-ll</u>
Field Personnel:	PL 55	Sample Matrix	(C) Grab () Composite
SAMPLING INFORMA	TION:		%
Date/Time // // // // // Date/Time			Sampling, Feet: 23, 72 dicated: \bigcirc / N
Method of Sampling:	IN-5100 Pon		
Multi-phased/ layered:	()Yes Mo	If YES: ()	light () heavy
SAMPLING DATA:	nH Cond	ucf Turb.	Other Other
Time Temp.	1 1	os/cm) (NTU)	(ar) ()
1040 14.4	6.88 32	29 168	- 44
Solutions: pH Serial #: Solutions: Conductivity Serial #: Solutions: GENERAL INFORMA		7.0 std.=	
Weather conditions @		Red	
Sample Characteristic		Limited Up	
I certify that sampling protocals.		ordance with all applica	

Facility: ARCH		Sam	ple Point ID:	Pw-12			
Field Personnel: PL, JJ		Sam	ple Matrix:	6h		-	
MONITORTING WELL INSPECTION:							
Date/Time 11-16-05 1 10 45	<u> </u>	Cond	of seal: () Goo			· %	
Prot. Casing/riser height:		_ Cond	of prot. Casing	() Loose.	locked () (Good Mount	
If prot.casing; depth to riser below:			_ .	() Damage	:d		
Gas Meter (Calibration/ Reading): % G	as:		_ % LEL	<u> </u>		•	
Vol. Organic Meter (Calibration/Reading):		Volati	iles (ppm)	,		_	
PURGE INFORMATION:					- 		
Date / Time Initiated: //-/6-07 / /05-0		_ Date /	Time Complete	d:	11-16-09	1 1116	
Surf. Meas. Pt: () Prot. Casing () R	iser	Riser	Diameter, Inche	s:	6.0		
Initial Water Level, Feet: 7.47		Eleva	tion. G/W MSL:				
Well Total Depth, Feet:		Method of Well Purge: Personer Per					
One (1) Riser Volume, Gal:		Dedic	ated:	9/ N	•		
Total Volume Purged, Gal:	•	Purge	d To Dryness	YIM			
Purge Observations: 60 - FLO	<u>.</u>	Start	Bester stan	Finish	W Space	k J	
PURGE DATA: (if applicable)							
(gpm/htz) Volume (mp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other 0	
profee wil	15	6-63	スフタン	9.43	-31	0.97	
1100 14		6.65	2728	8.53	- 35	0.85	
1105. 14.		6.71	2711	6.53	-37	0.73	
1110 1 14-	c	6.80	2710	6.41	-38	6.91	

SANU 0 1110 /11-16-09

PAGE 1 OF 2

SAMPLING IN	FORMATI	ON:		POINT I	DPW-	12	
Date/Time	<u>-</u>			Water Le	vel @ Samplin	g. Feet:	
Method of Samp	oling:		_		Dedicated:	Y / N	
Multi-phased/ la	yered:	() Yes	() No	If YES:	() light	() heavy	*: 0 7 2.
SAMPLING DA	TA:						Section 1 Section 18
Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ()	Other (n gjann sagar
				 		-	isig ishaba
				1			
INSTRUMENT (CHECK DA	NTA:			,		, K
Turbidity Serial #	f:		=NTU	N	ITU std. =	NTU.	
pH Serial #: Solutions:	203713		00 7.		00 1	0.0 std. =	
Conductivity Seri	ial #:	6203713	<u>/000 u</u> 7643	mhos/cm=	1000	umhos/cm=_	
GENERAL INFO					•		า กราการสิจที่ที่ก็ได้เร
Veather condition	ns @ time o	of sampling:		47	•		
Sample Character	istics:	Clea	- iv SA	Peki			
COMMENTS AN	D OBSER	VATIONS:					
<u> </u>		3.1		\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	*		<u> </u>
i.					<u> </u>		
:	- 4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 		3	3	The state of the s		4 · · · · · · · · · · · · · · · · · · ·
							
							
certify that sampl	ling proced	ures were in a	ccordance wit	h all applica	able EPA. State	and Site-Specific	
•	5109,	Ву:	De 7	1 1-1100	Company:	TAC	**************************************
			ACE 2 OF 2	-	Company:	190	

EIEID ORSERVATIONS

Sample Point ID: April A			FIELD OR	SERVATIO	142		///	
SAMPLING INFORMATION:	acilitv:	ARCH			Sample Po	int ID:	- flu-1.	3
SAMPLING INFORMATION:			PL 55		Sample Ma	itrix:	600 (A) Grab () C	omposite
Multi-phased/ layered: () Yes K) No If YES: () light () heavy SAMPLING DATA: Time Tamp. pH Conduct (NTU). Other (NTU). (Our) (Other) [249	SAMPLING I	NFORMATIO	N:					
Multi-phased/ layered: () Yes K) No If YES: () light () heavy SAMPLING DATA: Time Tamp. pH Conduct (NTU). Other (NTU). (Our) (Other) [249	Date/Time _	11-1809	1 /	1245	Water Leve	el @ Sampling	, Feet:	27.81
Multi-phased/ layered: () Yes () No If YES: () light () heavy SAMPLING DATA: Time Temp. pH (std units) (Umhos/cm) (NTU). (Our) () 1249	Viethod of Sa	mpling:	IN-5100	punt		Dedicated:	(A) I N	
Time Temp. (*C) (std units) (Umhos/cm) (NTU) (ACC) (STD) (STD) (STD) (STD) (NTU) (ACC) (AC			()Yes	M) No	If YES:	() light	() heavy	
Time Temp. (*C) (std units) (Umhos/cm) (NTU) (ACC) (STD) (STD) (STD) (STD) (NTU) (ACC) (AC	SAMPLING	DATA:				Othor	Other	7
INSTRUMENT CHECK DATA: Turbidity Serial #:NTUNTU std. =NTUNTU std. =NTU std. =NTUNTU std. =NTU st		Temp.		L	1 .		()	
INSTRUMENT CHECK DATA: Turbidity Serial #:NTU std. =NTUNTU std. =NTU std. =NTUNTU std. =NTUNTU std. =NTU std. =NTUNTU std. =NTU std. =	1249	16.8	8.10	2407	17.34	-85	<u> </u>	
Turbidity Serial #:NTU std. =NTUNTU std. =NTU Solutions:								
PH Serial #:	Turbidity Se	rial #:	NTU std.	=:NTU	1	NTU std. =	_NTU	·
Conductivity Serial #:umhos/cm=umhos/cm=umhos/cm= GENERAL INFORMATION: Weather conditions @ time of sampling:	pH Serial #:		4.0 std.=					
Weather conditions @ time of sampling: Sample Characteristics: Clear COMMENTS AND OBSERVATIONS: I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.	Conductivity	y Serial #:		<u>-</u>	_umhos/cm=	=	umhos/c	m=
Sample Characteristics: Comments And Observations: Comments And Observations: I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.				•	Co2 5	, ,		
COMMENTS AND OBSERVATIONS: I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.	Weather co	nditions @ tim	e of sampling:			 -		
I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.	Sample Cha	aracteristics:			•	• "		
I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.	COMMEN	TS AND OBSI	ERVATIONS:					
I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.								
I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.								
protocals. 7AC Company:	-							
protocals. 7AC Company:	I certify tha	at sampling pro	ocedures were	in accordance	with all ap	plicable EPA, S	State and Site-S	pecific
	protocals.		_				Al	

•		LIELD OR	SERVATIO	M2		Walch, 13 2002	
acility:	ARCH	<i>t</i> .		Sample Point ID: Por-14			
_		Pl. 55		Sample M	atrix:	Grab () Composite	
SAMPLING	INFORMATIO	ON:					
Date/Time	11-17-69	1 /	126	Water Lev	rel @ Sampling	g, Feet:	38.20
Viethod of Sa	ampling:	IN-SIOU	Pint		_Dedicated:	(N	
7	I/ layered:		(A) No	If YES:	() light	() heavy	
SAMPLING	DATA:					Other	7
Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (OV)	()	
1123	15.4	6.85	3937	35.8	-175		-
pH Serial #: Solutions: Conductivit Solutions: GENERAL	y Serial #: 	-	7			10.0 std. = umhos/c	
Weather co	nditions @ tin	ne of sampling:	Sew				
Sample Cha	aracteristics:		E TURBIA	yellew	Test		
COMMEN.	TS AND OBS	ERVATIONS:					
				<u></u>			
I certify that		ocedures were			•	State and Site-Sp	
-	11 117109	Ву:			Compan	y: <u> </u>	
Date:	# # [# #] T	- 					

Facility:	ARCH	4		Sample Po	oint ID:	Par-1.)	
Field Person		PL, 55		Sample Ma	atrix:	$\frac{\rho \omega - 15}{6\omega}$ () Grab () Composite		
	INFORMATION					() Grab ()	Composite	
			EΛ	Materia	el @ Sampling,	Feet:	26.08	
Date/Time	11-17-09							
Method of S	ampling:	IN-5100	punp	<u> </u>	_Dedicated:	WIN		
Multi-phase	d/ layered:	<i>In-s, au</i> () Yes	(A-No	If YES:	() light	() heav	.	
SAMPLING			Conduct	Turb.	Other	Other		
Time	Temp.	pH (std units)	(Umhos/cm)	(NTU)	، جس ا	()	_	
1153	15.5	9.49	7401	18.70	-267	-		
1133								
Solutions: pH Serial #: Solutions: Conductivit Solutions:	ty Serial #:	NTU std.		7.0 std.=	<u> </u>	0.0 std. =		
	. INFORMATI					•		
Weather co	onditions @ tin	ne of sampling:						
Sample Ch	aracteristics:		Fee	en Ame				
COMMEN	TS AND OBS	ERVATIONS:					·	
I certify th	at sampling pr	ocedures were		with all app				
Date:	!(<i> 17 </i> 09	By:	PW 2	<u></u>	Company	TA		

Facility: MCH	Sample Point ID: PZ - (6 (
Field Personnel: PL JJ RK	Sample Matrix: 6W						
MONITORTING WELL INSPECTION:							
Date/Time 11-18-09 / 111/6	Cond of seal: () Good () Cracked () None () Buried	<u>%</u>					
Prot. Casing/riser height:	Cond of prot. Casing/riser: () Unlocked () Good () Loose () Flush Mount () Damaged						
If prot.casing; depth to riser below:	() Samageu						
Gas Meter (Calibration/ Reading): % Gas:	/ % LEL: /						
Vol. Organic Meter (Calibration/Reading):	Volatiles (ppm'/						
PURGE INFORMATION:							
Date / Time Initiated: (1-18-09 / 1150	Date / Time Completed: (1-18-09 / 12 /	5					
Surf. Meas. Pt: () Prot. Casing (X) Riser	Riser Diameter, Inches: 2 0						
Initial Water Level, Feet: 15.06	Elevation. G/W MSL:						
Well Total Depth, Feet: 21.69	Method of Well Purge: Peristallic P	<u>~~</u> ~					
One (1) Riser Volume, Gal:	_ Dedicated: (Ý) N						
Total Volume Purged, Gal:	Purged To Dryness Y / N						
Purge Observations:	Start Clear of Finish Clear						
PURGE DATA: (if applicable)	Specs						
Time Purge Rate Cumulative Temp. (gpm/htz) Volume (C)	pH Conduct Turb. Other Other (std units) (Umhos/cm) (NTU) ORP DO	≥ Γ					
1155 150 15.59 13.1	7.00 7499 12.69 -33 1.02	·					
1200 13.2	6.83 7464 6.14 -31 1.00						
1205 13.2	6.78 7464 3.58 -15 0.90	8					
1210 13.3	6.83 7468 3.18 -11 0.9	7					

Sampled at	1215	11-18-09 PAGE 1 OF 2
		2,02

1215

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SAMPLING IN	IFORMATI	ON:		POINT	D	. %	The second of th
Date/Time	· · · · · · · · · · · · · · · · · · ·			4.4	evel @ Sampling	ı. Feet	to the appropriately
Method of Sam	pling:					n Property	77.
Multi-phased/ la	ayered:	() Yes	() No	If YES:	Dedicated: ()light	Y / N () heavy	A SELECTION
SAMPLING DA	ATA:	<u>arangan nangangan sa</u>	4				ž viau
Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (Other ()	
					* * *		ali ali ali ali
		* " " (i au				16 - 14 (10 mail 1
			r.i		Peak Look		
INSTRUMENT	CHECK DA	ТΑ·		<u></u>			
			/ <u>/ </u>				And American
Turbidity Serial # Solutions:		NIU std. =	NTU	N	TU std. =	NTU	1.0
pH Serial #:				• .	· · · · · · · · · · · · · · · · · · ·		
pH Serial #: Solutions:		4.0 Stu.=				.0 std. =	
Conductivity Seri	ial #:		* * * * * * * * * * * * * * * * * * *				•
Solutions:		보기 가 보고 가 가 보고	ur	nhos/cm=_		umhos/cm=_	<u>a santa da </u>
GENERAL INFO	RMATION						
Weather condition	ns@timeo	f campling.	, (. •	
Sample Character		r sampinig;	;			<u> </u>	-44,1116
and the second	No. of the Control of		<u>, </u>	·			aw.
COMMENTS AN	D OBSERV	ATIONS:					
-			**************************************			· · · · · · · · · · · · · · · · · · ·	•
1				.:		· <u> </u>	
· · · · · · · · · · · · · · · · · · ·	1						:
						·	·
					b .		·
certify that sample otocals.	ing procedu	ires were in ac	cordance with	all applica	ble EPA, State a	and Site-Specific	
ate:/	<u>/</u>	Ву:				- + F-50111C	. (
		4.2.5			Company:		
	*	P_I	AGE 2 OF 2				

	•				•					
Facility:	/	Reit			Samp	ole Point ID:	2-102			
Field Pe	rsonnel:	:	Ph Js		Samp	ole Matrix:	64		.· 	
MONITO	ORTING	WELL	INSPECTION	4:						
Date/Tim	ne <u>[[</u>	-18-10	9 110	059	Cond	of seal: () Good	d () Cracke ne (<u>)</u> Buried		%	
Prot. Cas	sing/rise	er heigh	t:		_ Cond	of prot. Çasing/		. () Flush		
If prot.ca	ısing; de	epth to i	iser below:						- ·/- ;	
Gas Mete	er (Calib	ration/	Reading):	% Gas:		% LEL	:		·	
Vol. Orga	anic Met	er (Cali	oration/Readin	g):	Volati	les (ppm;				
PURGE	INFOR	MATIO	٧:	•			•	•		
Date / Tir	ne Initia	ited: (1-18-09/ 16	05	_ Date /	Time Complete	d:	11-18-09	11125	
Surf. Meas. Pt: () Prot. Casing & Riser				Riser	Diameter, Inche	s:	2.0			
Initial Wa	iter Leve	el, Feet:	1871		Eleva	tion. G/W MSL:				
Well Tota	al Depth	, Feet:	32.6	0	Method of Well Purge: Peristaltic Pany					
One (1) F	Riser Vol	iume, G	al:		_ Dedic	ated:	Ø/ H			
Total Vol	ume Pu	rged, Ga	al:		Purge	d To Dryness	YIN	·		
Purge Ob	oservatio	ons:			Start	Clear	Finish	Clear		
PURGE	DATA:	(if appl	icable)	•						
Time	1 -	Rate n/htz)	Cumulative Volume	Temp.	pH (std units)	Conduct	Turb.	Other	Other	
	ml/min	WL	FOIGITE	16)		(Umhos/cm)	(MTU)	ORP	D.O.	
1110	150	19.12		12.0	7.13	6968	2.11	-109	7.02	
1115				12.1	7.02	6962	2.24	-119	0.96	
1120				12-1	6.90	6948	2.28	-130	0.86	
1125				[2.0	6.86	6938	2.19	-138	0.82	

Sampled at 1125 11-18-09
PAGE 1 OF 2

		POINT I		*1	
	in the second	Water Le	vel @ Sampling	, Feet:	The state of the s
			Dedicated:	Y/N	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
(~) Yes	() No	If YES:	() light	() heavy	रा १६५ जा । वर्षे
pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ()	Other (ing that sold its
\$ 13	2.4%		Maria A	a salar salar salar	Turk Mariana
	in the diff				
A:					
			TU std. =	NTU.	
			10		
	u	mhos/cm=_			
*	· · · · · · · · · · · · · · · · · · · ·	9 1			ner og hager i de
sampling:					Tentino 196
		•			
ATIONS:	an a Agusti.				
		-			
<u> </u>				<u>.</u>	
				3	
					
res were in a	ccordance with	all applica	able EPA, State	and Site-Specific	
	•				•
	pH (std units) A: NTU std. = 4.0 std.= Sampling:	pH Conduct (Umhos/cm) A: NTU std. =NTU 4.0 std.=	pH (std units) Conduct (Umhos/cm) (NTU) (A: NTU std. =NTUN 4.0 std.= umhos/cm= sampling:		Dedicated: Y / N

Facility: ARCH	02-127
Facility: //////	Sample Point ID: $\sqrt{2-103}$
Field Personnel: Pt. JJ, RK	Sample Matrix: 6W
MONITORTING WELL INSPECTION:	
Date/Time ((-(8-09 1010	Cond of seal: () Good () Cracked % () None M Buried
Prot. Casing/riser height:	Cond of prot. Casing/riser: () Unlocked (≯Good () Loose () Flush Mount () Damaged
If prot.casing; depth to riser below:	
Gas Meter (Calibration/ Reading): % Gas:	/ % LEL:/
Vol. Organic Meter (Calibration/Reading):	Volatiles (ppm'
PURGE INFORMATION:	
Date / Time Initiated: //-18-09 / /0/5	Date / Time Completed: 11-18-09 1 1045
Surf. Meas. Pt: () Prot. Casing 🙀 Riser	Riser Diameter, Inches: 2.0
Initial Water Level, Feet: 13.43	Elevation. G/W MSL:
Well Total Depth, Feet: 32.52	Method of Well Purge: Peristalfic Pump
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 Cumulative (gpm/htz) Volume		Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other 8RP	Other Po	
1020	in/min 150	WL.		12.6	5.73	5547	1.77	-153	1.10
1025				12.6	6.03	5632	1.66	-173	0,98
1030				12.7	6.24	5688	1.62	-186	0.96
1035				12.6	6.53	5758	1.67	-19,4	79,6
1040				12.6	6.60	5778	1.55	-198	0.96
1045	11			12:6	6.62	5790	1.58	-zol	0.96

PAGE 1 OF 2

SAMPLING	S INFORMATI	ON:	e e e e e e e e e e e e e e e e e e e	POINT I	D PZ-1	03		
Date/Time							The state of the s	
Method of S					Dedicated:	and the second second	14.54	733277
Multi-phase	d/ layered:	()Yes	() No	If YES:	()light	() heavy	€ -1	i sudd dir.
SAMPLING	DATA:	· · · · · · · · · · · · · · · · · · ·				., .,		
Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other		
	-						ý A	, M.,
		V	. 87		11.13	4. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	artist s vý arc	7 i
				ent l		7 (P. 195),		. 3 12 Je
INSTRUME	NT CHECK DA	ATA:				<u> </u>		May je i
Turbidity Ser Solutions:	ial#: 36407	S_NTU std. =	5,0 NTU		TU std. =	_NTÜ		
pH Serial #: <u> </u> Solutions: _	10215171	4.0 std.= 4 AM 0	.b.C 7.0) std.= 7.	. <u>00</u> 1	0.0 std. = 10.0	<u>) </u>	
Conductivity Solutions:	Serial #:	(0215171	<u>l 000 ur</u> 76 43	mhos/cm=_	1000	umhos/cm=		
GENERAL II	FORMATION	f:				e e e e e e e e e e e e e e e e e e e		37 (20.4)
Weather cond	itions @ time c	of sampling:					v 1 71 +	100
Sample Chara	cteristics:							
COMMENTS	AND OBSER	VATIONS:				tal V	<u></u>	p. 1
					1 9			
								 \
a de la companya de l				· · · · · · · · · · · · · · · · · · ·				
		11.41.1				a a		
* 4 T		:						
certify that sa rotocals.	mpling proced	ures were in a	ccordance with	ı all applica	ble EPA, State	and Site-Specif	ic	
ate:	1 1	Ву:			Company:		•	
		р	AGE 2 OF 2	f <u>.</u> .	_			

	Aas	1									
Facility:	- ARCH			Sam	ple Point ID:	PZ-109	1				
Field Pe	ersonnel:	Py JS	RK	Sam	ple Matrix:	6W		-			
MONIT	ORTING WELI	L INSPECTIO	N:								
Date/Tin	ne [(-[8-c	09 1 (226	Conc	Cond of seal: () Good () Cracked () None () Buried						
Prot. Ca	sing/riser heigl	nt:		Cond	of prot. Casing	/riser: () Unl () Loose () Damage	 € Flush	Sood Mount			
If prot.ca	asing; depth to	riser below:				· Damaye	u	-			
Gas Met	er (Calibration/	Reading):	% Gas:		% LEI	-i		_			
Vol. Org	anic Meter (Cali	bration/Readir	ig):	Volati	iles (ppm)	<i>I</i>	_				
PURGE	INFORMATIO	N:									
Date / Ti	me Initiated: ((-18-09/ 12	230	_ Date /	Time Complete	d: ((-18-091	1250			
Surf. Me	as. Pt: () Prot. (Casing	X Riser	Riser	Diameter, Inche	s:	Z-0				
Initial Wa	ater Level, Feet:	14.66		Eleva	tion. G/W MSL:						
Well Tota	al Depth, Feet:			_ Metho	d of Well Purge	: :	Peristal	tie Pump			
One (1) F	Riser Volume, G	al:		_ Dedic	ated: (91 N		ν			
Total Vol	ume Purged, G	al:	· · · · · · · · · · · · · · · · · · ·	· Purge	d To Dryness	Y / (1)					
Purge Ot	servations:			Start	Clear	Finish	Clear				
PURGE	DATA: (if appl	licable)	•			•					
Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other IRP	Other Do			
	Inale a list i	t		1							

Time	Purge Rate Cumulative (gpm/htz) Volume			Temp.	pН	Conduct	Turb.	Other	Other
 	1 , ,		Volume	(C)	(std units)	(Umhos/cm)	(UTV)	IRP	Do
12 35	200	14.74		15.5	7.37	1530	6.24	-143	0.87
1240				15.6	7.29	1506	5.92	-137	0.86
1245				15.7	7.16	14.89	5.19	-142	0.85
1250	الم			15.8	7:08	1489	4.86	-146	0.84

Supled at 1250 11-18-09 J-L SCH

PAGE 1 OF 2

SAMPLING INFORMATION	ON:	k et est	POINT I	D		
Date/Time		· .	Water Le	vel @ Sampling	, Feet:	ing 4 km manang 1 gerb
Method of Sampling:	<u> </u>			Dedicated:	Y/N	하는 중요성원 <u>및 1</u>7.4선 및 (
Multi-phased/ layered:	() Yes	() No	If YES:	 ()light	() heavy	
SAMPLING DATA:	, , , , , , , , , , , , , , , , , , ,			(,)	() mary	
Time Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other	us no e ilibra
			1.1.0/			
			R			$\gamma = \chi_{x} - (N(\hat{\chi}_{x}))^{2}$
	3	1 25 4	ra" .			a jointain in so
NSTRUMENT CHECK DA	\TA:					
Turbidity Serial #3	NTU eta :	E L				. The Mark To Asset
S T 4.7			N	TU std. =	NTU	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
oH Serial #:) std.=	016:	.0 std. =	aniya sikila
Solutions:					.0 5(0	ing the second s
Conductivity Serial #:			mhos/cm=_			
SENERAL INFORMATION					$e_{\pi}^{-1}\mathcal{F}_{i_{k}})$	ได้รับสูงสัมพิธีรถใช้ได้สัมพันธ์
/eather conditions @ time o						e e e e e e e e e e e e e e e e e e e
	or sampling:		<u>-</u>			
ample Characteristics:	,C					
OMMENTS AND OBSERV	VATIONS:					4.
	\$.				E S	•
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		100 A.	* * * * * * * * * * * * * * * * * * *			· · · · · · · · · · · · · · · · · · ·
						
						
ertify that sampling proced otocals.	ures were in a	ccordance with	ı all applica	ble EPA, State a	and Site-Specific	

Facility:		ARCH			Sample Point ID: P2-105						
Field Pe	rsonne	i:	PG JS	·	Samı	ole Matrix:	6h		· ·		
MONITO	ORTINO	3 WELL	_ INSPECTIO	٧:					_		
Date/Tin	ne //-	-16-09	·	1/36	Cond of seal: () Good () Cracked () None (A Buried						
Prot. Ca	sing/ris	er heigh	t:		Cond of prot. Casing/riser: () Unlocked () Good () Loose Flush Mount						
If prot.ca	asing; d	epth to	riser below:			~	() Damage	ed			
Gas Met	er (Calil	oration/	Reading):	% Gas:		% LEL	. <u>.</u>		· ·		
Vol. Orga	anic Me	ter (Cali	bration/Readin	ıg):	Volati	les (ppm)	1	_			
PURGE	INFOR	MATIO	N:						. •		
Date / Ti	Date / Time Initiated: /1-/6-9 / /135					Time Complete	d:	11-16-0¢	1 1155		
Surf. Meas. Pt: () Prot. Casing () Riser				(*) Riser	Riser	Diameter, Inche	s:	2	2		
Initial Wa	ater Lev	el, Feet:		/	Elevation. G/W MSL:						
Well Tota	al Depth	, Feet:	32.86		Method of Well Purge: Pc, 574cmc						
One (1) F	Riser Vo	lume, G	al:		_ Dedicated: YI N						
Total Vol	ume Pu	rged, G	al:		Purge	d To Dryness	Y (N)				
Purge Ot	oservati	ons:			Start	TURA	Finish	70120	-		
PURGE	DATA:	(if appl	icable)								
Time	(gpr	e Rate n/htz)	Cumulative Volume	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other Do		
1140	75	11.91		14.9	7.54	1353	131	-17	100		
1145		12.22		14.5	7.54	1299	132	-15	1.00		
1150		12.31		14.6	7.52	1300	130	=/3	0.98		
1155		12-33		14.5	7.50	1306	138	¥12	0.96		
	. ,				gar a ma l'againmhaire in Sa	<u></u>	<u>.</u>				

SAMPL @ 1155 / 11-16.09

PAGE 1 OF 2

H Conduct (Umhos/o	if YES: Turb. (NTU)	evel @ SamplingDedicated: () light Other ()	Y / N () heavy Other ()	
H Conduct Inits) (Umhos/o	If YES: Turb. (NTU)	Dedicated: () light Other ()	Y / N () heavy Other ()	
H Conduct Inits) (Umhos/o	t Turb. cm) (NTU)	() light Other ()	() heavy Other ()	
J std. =NT0	em) (NTU)	NTU std. =	Other ()	. , ,
J std. =NT0	em) (NTU)	NTU std. =	NTU	. , ,
J std. =NT(U,	NTU std. =		. , ,
J std. =NT(U,	NTU std. =		. , ,
<u> </u>	U,	en e		. , ,
<u> </u>		en e		
<u>.</u>		en e		1. 14 (1) 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
	7 D etd =			
	7.0 stu	10	.0 std. =	
	umhos/cm=	<u> </u>	umhos/cm=	
**************************************		-	7. y į	
ing:		•		n v ala i saka i
			<u></u> <u></u>	3 (1)
S:	r i			44
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Å.				
			<u>-</u>	· · · · · · · · · · · · · · · · · · ·
				
/				·
re in accordance	with all applica	able EPA, State a	and Site-Specific	#
			•	•
,	IS:	IS:	re in accordance with all applicable EPA, State a	IS:

Facility: ARCH	Sample Point ID: P2-16 G
Field Personnel: Pt. JS	Sample Point ID: P2-16 G Sample Matrix: GW
MONITORTING WELL INSPECTION:	
Date/Time //- // 09 / // // // // // // // Prot. Casing/riser height:	Cond of seal: () Good () Cracked % () None () Buried Cond of prot. Casing/riser: () Unlocked () Good () Loose () Flush Mount
If prot.casing; depth to riser below:	() Damaged
Gas Meter (Calibration/ Reading): % Gas	s:/ % LEL: /
Vol. Organic Meter (Calibration/Reading):	Volatiles (ppm)/
PURGE INFORMATION:	
Date / Time Initiated: //-17-05 / //05	Date / Time Completed: //-17-09 / //25
Surf. Meas. Pt: () Prot. Casing	
Initial Water Level, Feet: 12.14	Elevation. G/W MSL:
Well Total Depth, Feet: 27, 90	Method of Well Purge:
One (1) Riser Volume, Gal:	Dedicated:
Total Volume Purged, Gal:	Purged To Dryness Y (N)
Purge Observations:	Start Yellow Finish yellow Tear
PURGE DATA: (if applicable)	
Time Purge Rate Cumulative Temp	

Time	Pura	e Rate	Cumulative	I. op-				<u> </u>	
		n/htz)	Volume	Temp.	PH	Conduct	Turb.	Other	Other
	mila	wi	ADIGME	(C)	(std units)	(Umhos/cm)	(NTU)	ON	Do
///0	lov	12.22		14.2	6.90	5025	9.80	-136	0.42
1115		12.25		13.9	6.87	5011	7.21	- 137	0.80
1120				13.3	6.84	4925	6.41	-139	0 37
1125	4			13.4	6.80	4920	6-00	-140	0.85
					ma - ann taga a taga a Tar an	* 11 de 14			
								` `	
						-			

SAMPLU @ 1125/11-17-09

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SAMPLIN	G INFORMATIO	DN:	* * * * * * * * * * * * * * * * * * * *	POINT I	D		
Date/Time		<u> 53 - 1</u>	· · · · · · · · · · · · · · · · · · ·	Water Le	vel @ Sampling	, Feet:	
Method of	Sampling:				Dedicated:	Y/N	
Multi-phase	ed/ layered:	() Yes ,	() No	If YES:	() light	() heavy	
SAMPLING	G DATA:			X .			in the second second
Time	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ()	Other (
				N.	*, , , , , , , , , , , , , , , , , , ,		Propies e
		:	\$ 10 m) <u>r</u> sc.		
INSTRUME	NT CHECK DA	TA:		- 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Turbidity Se	rial #: 36407	NTU std. =	. 5.0 NTU	N	ITU std. ≕	UTU	
pH Serial #: Solutions:	6215171	4.0 std.= 4	.00 7.1	0 std.= 7.	00 10	0.0 std. =	i distribution de la constantina de la La constantina de la
Conductivity Solutions:	/ Serial #:	2 15171	<u>/000_u</u> 43	mhos/cm=	1000		<u>: 22 (1888)</u>
	INFORMATION	•			• 	; *	A STATE OF THE STA
Weather con	dítions @ time o	of sampling:	et.				A STATE OF THE STA
Sample Char	acteristics:			•			
COMMENT	S AND OBSERI	VATIONS:			\$	•	
				*	***		
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \						
						•	
		10 4 4 4 5 4		· · · · · · · · · · · · · · · · · · ·			
certify that s	sampling proced	ures were in a	ccordance wit	h all applic	able EPA, State	and Site-Specifi	ic
Pate: _	1 1	By:			Company:		· · · · · · · · · · · · · · · · · · ·

			-						
: ARCH	<u> </u>		Sam	ple Point ID:	PZ-10	7			
ersonnel:	PG JS		Sam	ple Matrix:	Gli		-		
ORTING WEL	L INSPECTIO	N:							
me 11-16-6	9 1	1321	Cond of seal: () Good () Cracked () None () Buried						
, -			Cond of prot. Casing/riser: () Unlocked () Good () Loose () Flush Mount						
asing; depth to	riser below:		- 		· () Damage		_		
er (Calibration/	Reading):	% Gas:		_ % LEI	<u> </u>		·*· ,		
anic Meter (Cal	ibration/Readir	ng):	Volat	iles (ppm'	1	_	_		
INFORMATIO	N:					•			
me Initiated:	11-1609 1 1	730	Date /	Time Complete	d:	11-16-09	1 1350		
as. Pt: () Prot. (Casing	(ARiser	Riser	Diameter, Inche	s:	<i>Z</i> .	0		
ater Level, Feet:	12.26		Eleva	lion. G/W MSL:					
al Depth, Feet:	27,90		Metho	d of Well Purge	· •	Personer	u (
Riser Volume, G	al:		_ Dedic	ated: (91 N				
ume Purged, G	al:		· Purge	d To Dryness	Y 100				
servations:		·	Start	Cler	Finish	Cler			
DATA: (if appl	licable)	•		-			•		
Purge Rate	Cumulative	Temp.	рН	Conduct	Turb.	Other	Other		
	ersonnel: ORTING WEL me //-/6-6 Ising/riser height asing; depth to ler (Calibration/ anic Meter (Calibration/ anic M	ORTING WELL INSPECTION The 11-16-69 The sing/riser height: The casing; depth to riser below: The casing depth	Personnel: ORTING WELL INSPECTION: Ine 1/-16-69 /32/ Issing/riser height: Ine (Calibration/Reading): % Gas: Inc (Calibration/Reading): INFORMATION: Ine Initiated: //-/6-1 /330 INFORMATION: Ine Initiated: //-/6-1 /330 Ine Initiated: //-/6-1 /330 Ine Initiated: //-/6-1 /330 In Information (Info 1 /330) In Information (Info 1	Personnel: Parsonnel: Parson	Sample Point ID: Sample Id: Sample Point ID: Sample Point ID: Sample Point ID:	ersonnel: PL JS Sample Matrix: CW ORTING WELL INSPECTION: me 1/-/6-69 /32/	Sample Point ID: 2-76 Parsonnel: PL J Sample Matrix: Sample Matri		

Time		je Rate m/htz)	Cumulative Volume	Temp.	pH	Conduct	Turb.	Other	Other
	in i	nila			(std units)	(Umhos/cm)	(NTU)	ON	00
1335	12.31	200		13.0	7.11	3962	4.86	-87	0.88
1340			·	12.9	7.29	3798	4.41	-80	0.86
1345				12.9	7.25	3790	4.89	-78	6.84
1350				12.9	7.27	3788	4.84	-78	0.81
					407. W. 1 - W. 40 110 11 14 14 14 14				gamenta andrea e ga

SAMPUL @ 1350 /11-1609

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			POINT			n in the contract
Date/Time	1		Water Le	vel @ Sampling	, Feet:	
Method of Sampling:				Dedicated:	Y/N	e e e e e e e e e e e e e e e e e e e
Multi-phased/ layered:	() Yes	() No	If YES:	() light	() heavy	. No. 19. ∓ 1. 29
SAMPLING DATA:	· · · · · · · · · · · · · · · · · · ·					t in the second
Time Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other (Other ()	
				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		.e
	, .		,	((1)		
INSTRUMENT CHECK DA	ATA:	,				V - Company
Turbidity Serial #:	NTU std. =	= NTU	N.	TII c4d	A CONTRACTOR OF THE SECOND	The Adaptive Community of the Community
Solutions:				i i O sta. =	MIU	15 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -
pH Serial #:	4.0 std.=	7.0		10	.0 std. =	1 (15 to 40 17)
\$ 8xx				• · · · · · · · · · · · · · · · · · · ·		ji salika
		u	mhos/cm=_		umhos/cm=	2
GENERAL INFORMATION				•		Maj su Pac
Weather conditions @ time o		,				
Sample Characteristics:	சு sampiing:					<u> </u>
				· · · · · · · · · · · · · · · · · · ·		vi.
COMMENTS AND OBSER	VATIONS:		· · · · · · · · · · · · · · · · · · ·		•	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	-		<u> </u>			
						<u> </u>
4						
	i .					
					· · · · · · · · · · · · · · · · · · ·	
certify that sampling proced protocals.	lures were in a	ccordance with	all applica	able EPA, State	and Site-Specific	⇒

FIFI D OBSERVATIONS

		LIEFD OR:	SERVATIO	NA2		March, 10 2002	
acility:	ARCH			Sample Po	oint ID:	<u> 9D-1</u>	<u> </u>
Field Person	nnel:	R.SEV.	<i></i>	Sample M	atrix:	9D-/ S/w MGrab () Cor	nposite
	INFORMATIO	N:	•			,	NA
Date/Time	11-17-0	9 1 /.	510	Water Lev	rel @ Sampling	g, Feet:	PICI
Viethod of S		MANUS					
Vlulti-phase	d/ layered:	() Yes	() No	If YES:	() light	() heavy	
SAMPLING	DATA:			T 7	Other	Other	
Time	Temp. (°C)	pH (std units)	(Umhos/cm)	Turb. (NTU)	(ORP)	()	
. 1515	8.9	7.93	1775		-/32		
			<u> </u>				
INSTRUM	ENT CHECK D	ATA:					
Turbidity S	erial #:	NTU std.	=NTU		NTU std. =	NTU	
pH Serial #	:	4.0 std.=				10.0 std. =	
Conductivi	ity Serial #:				=	umhos/cm	
GENERAL	L INFORMATIO	ON:					• • •
Weather c	onditions @ tim	e of sampling:	SUNN	7, 50%	C		
Sample Ch	haracteristics:	CCR	AL				
COMMEN							
I certify the	hat sampling pro	ocedures were	in accordance	1		State and Site-Spe	cific
Date:	11 111 09	Ву:	4/	7-	Compan	y: 18C	

					00-2	
acility:	1		Sample Po	oint ID:	90-2 5/w	
ield Personnel:	R. SRN.	<u> </u>	Sample M	atrix:	Grab () Co	omposite
SAMPLING INFORMATIO	N:	-				. 7.
Date/Time //-/7- 69	9 11-	535	Water Lev	rel @ Sampling	ı, Feet:	NA
Method of Sampling:	MANU	AC GRAD	3 	_Dedicated:	(Y)/ N	
Viulti-phased/ layered:	() Yes	∭No	If YES:	() light	() heavy	
SAMPLING DATA:		·		Other	Other	1
Time Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)		()	
1540 9.1	8.07	1774		-20		
Turbidity Serial #: Solutions: pH Serial #:		_		·	10.0 std. =	
Solutions:						
Conductivity Serial #: Solutions:			_umhos/cm)=	umhos/cr	n=
GENERAL INFORMATION	ON:					
Weather conditions @ tim	ne of sampling:	SUNO	7, 50°	°.C		
Sample Characteristics:	CLEGR					<u></u>
COMMENTS AND OBS						
					or real Site Sn	o cific
			with all ar	onlicable EPA.	State and Site-Sh	JCCIIIC
I certify that sampling pr protocals.	cocedures were	in accordance	. 17		ny: TAC	

SAMPLING INFORMATION: Date/Time	Facility:	BRCI	4		Sample Po	oint ID:	G0-25 CANAC	5/
SAMPLING INFORMATION: Date/Time	_				Sample M	atrix:	(XGrab () Co	mposite
Multi-phased/ layered: () Yes ANO IF YES: () light () heavy SAMPLING DATA: Time Temp. (°C) (std units) (Umhos/cm) (NTU) (OCC) (CC) (Std units) (Umhos/cm) (NTU) (OCC) (CC) (Std units) (Umhos/cm) (NTU) (OCC) (CC) (CC) (CC) (CC) (CC) (CC) (C	SAMPLING	INFORMATIO	N:	٠			/	
Multi-phased/ layered: () Yes No If YES: () light () heavy SAMPLING DATA: Time Temp. (°C) (std units) (Umhos/cm) (NTU) (OCO) (OTO) (Std units) (Umhos/cm) (NTU) (OCO) (NT	Date/Time	11-17-0	911	555	**	W 1		<i>D/A</i>
SAMPLING DATA: Time Temp. pH Conduct (NTU) (OCC) (Umhos/cm) (Umhos/						-		
Time Temp. (std units) (Umhos/cm) (NTU) (ORD) (Umhor (NTU) (ORD) (Umhor (NTU) (ORD)) (Umhor (NTU) (Umhor (NTU) (ORD)) (Umhor (NTU) (Umhor (NTU) (ORD)) (Umhor (NTU) (Umhor (Umhor (NTU) (Umhor (Umhor (NTU) (Umhor (Umho	Multi-phased	l/ layered:	() Yes	(X) No	If YES:	() light	() neavy	
Time Temp. (°C) (std units) (Umhos/cm) (NTU) (OCO) () 1605	SAMPLING	DATA:			Turb	Other	Other	
INSTRUMENT CHECK DATA: Turbidity Serial #:NTU std. =NTUNTU std. =NTU Solutions: pH Serial #:4.0 std.=7.0 std.=10.0 std. = Conductivity Serial #:umhos/cm=umhos/cm=umhos/cm= GENERAL INFORMATION: Weather conditions @ time of sampling:45°C Sample Characteristics:	Time	7		1	1	(ORP)	()	
Turbidity Serial #:NTUNTU std. =NTUNTU std. =NTU std. =NTUNTU std. =NTU	1605	8,3	7.98	フフノ		-58		
Turbidity Serial #:NTUNTU std. =NTUNTU std. =NTU std. =NTUNTU std. =NTU						<u> </u>		
Solutions: pH Serial #:	INSTRUME	NT CHECK D	ATA:	-				
Solutions: pH Serial #:	Turbidity Se	rial #:	NTU std.	=NTU		NTU std. =	_NTU	
PH Serial #:	Solutions:							
Conductivity Serial #:umhos/cm=_umhos/cm=_umhos/	pH Serial #:		4.0 std.=		7.0 std.=	· · · · · · · · · · · · · · · · · · ·	10.0 std. =	
Conductivity Serial #: Solutions: GENERAL INFORMATION: Weather conditions @ time of sampling: SUNNY, 45°/C Sample Characteristics: CCRAN COMMENTS AND OBSERVATIONS: I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.	Solutions:						umboslon	1 =
GENERAL INFORMATION: Weather conditions @ time of sampling: SUNNY, 45°F Sample Characteristics: CCAAL COMMENTS AND OBSERVATIONS: I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.				_	umhos/cm		umnos/cm	
Weather conditions @ time of sampling: SUNN, 45°F Sample Characteristics: CCRAN COMMENTS AND OBSERVATIONS: I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.						·	,	
Sample Characteristics: CCRAL COMMENTS AND OBSERVATIONS: I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.				SUNN	1, 45°!	K		
COMMENTS AND OBSERVATIONS: I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.			and to					
I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.			RVATIONS:					
protocals.	COMME	IO AILD ODG.						
protocals.								
protocals.	•							
protocals.								
(\cdot) (\cdot) (\cdot) (\cdot) (\cdot)		at sampling pro	ocedures were	in accordance	with all ap	plicable EPA, S	state and Site-Spo	ecific
Date: ///// By: Company	•	11/17/09	Э ву:	03	21	Company	r. TAC	<u> </u>

LeachField Form Revision 0 March, 15 2002

Facility:	ARCH	۷		Sample Po	oint ID:	95-4	1
Field Persor	nnel:	R, SANF		Sample Ma	atrix:	SER? MGrab ()Co	mposite
	INFORMATIC		•			(
Date/Time	11-17-08				el @ Sampling	, Feet:	N/4
Method of S	.αρg.	MANUAC			Dedicated:		
Multi-phase	d/ layered:	() Yes	XNo	If YES:	() light	() heavy	
SAMPLING						Other	
Time	Temp. (°C)	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	()	
1525	8,9	7,93	1682		-159		
Turbidity S		NTU std.			_	_NTU	· .
pH Serial # Solutions: Conductivi	ty Serial #:	74.0 std.= 4, Nr 622517	7 1000	umhos/cm=	0-1	10.0 std. = umhos/cm	
Solutions:			7643				
	_INFORMATIC			- 2			
Weather co	onditions @ tim	e of sampling:	SUUN	50	-		
Sample Ch	aracteristics:	CCEAR				· · · · · · · · · · · · · · · · · · ·	
COMMEN	TS AND OBSE	RVATIONS:					
I certify th protocals.	at sampling pro	ocedures were i By:	n accordance	with all app	dicable EPA, S	tate and Site-Spe	cific

PAGE 1 OF 1

10.11	
Facility: ARCH	Sample Point ID: 5-3
Field Personnel: Pt. JJ	Sample Matrix: 6W
MONITORTING WELL INSPECTION:	VAULT
Date/Time 11-16-09 1 /253	Cond of seal: () Good () Cracked () None () Buried
Prot. Casing/riser height:	Cond of prot. Casing/riser: () Unlocked () Good () Loose () Flush Mount
If prot.casing; depth to riser below:	() Damaged
Gas Meter (Calibration/ Reading): % Gas:	/ % LEL:/
Vol. Organic Meter (Calibration/Reading):	Volatiles (ppm)/
PURGE INFORMATION:	
Date / Time Initiated: 11-16-4 / 1255	Date / Time Completed: //-/6-27 / /3/)
Surf. Meas. Pt: () Prot. Casing () Riser	Riser Diameter, Inches: VAULT
Initial Water Level, Feet: 0.95	Elevation. G/W MSL:
Well Total Depth, Feet:	Method of Well Purge: Pers statemen
One (1) Riser Volume, Gal:	Dedicated: N
Total Volume Purged, Gal:	Purged To Dryness Y / Af
Purge Observations:	Start But Sout Finish But Shah
PURGE DATA: (if applicable)	

7	I B	-							
Time		e Rate	Cumulative	Temp.	pН	Conduct	Turb.	Other	Other
	(gpr	n/htz)	Volume	(C)	(std units)	(Umhos/cm)	(NTU)	app	00
	Melow	wi			1,				
1300	200	0.95		11-1	7.13	2245	5.07	26	0.97
1305				10.9	7.18	2248	5.37	24	0.96
1300.				10.3	7.19	2250	4.32	24	0.94
1315		1		10.3	7.19	2251	4.29	24	0.93
			·		·				

SAMANI @ 1315 /11-16-09.

PAGE 1 OF 2

SAMPLING INFORMAT	ION:		POINT I	D_		
Date/Time	I		Water Le	evel @ Sampling,	Feet:	
Method of Sampling:				Dedicated:	Y/N	- 10 g 2
Multi-phased/ layered:	() Yes	() No	If YES:	()light	() heavy	
SAMPLING DATA:						ing the state of t
Time Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ()	Other	
				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
		is, in the			·	
INSTRUMENT CHECK D	ATA:					
Turbidity Serial #:		=NTU		ITU std. =	ITU.	
pH Serial #: Solutions:) std.=		0 std. =	
Conductivity Serial #: Solutions:			mhos/cm=		_umhos/cm=	
GENERAL INFORMATION	V: 300 V	· · · · · · · · · · · · · · · · · · ·				
Weather conditions @ time	of sampling:		,			
Sample Characteristics:						
COMMENTS AND OBSER	VATIONS:			<u> </u>		
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			· .		 , ,,
	•				· · · · · ·	· · · · · · · · · · · · · · · · · · ·
h 4	e e			<u>.</u>	·	 `.
		<u> </u>				
I certify that sampling proceed protocals.	dures were in a	eccordance with	all applica	able EPA, State a	nd Site-Specific	; ≽
Date: //	Ву:			Company:		·

Facility:	ARCH .			Samp	ole Point ID:	5-4		
Field Pe	rsonnel: PL	II		Samp	ole Matrix:	64	V	
	ORTING WELL INSPECT		Table	Cond	of seal: () Go		ced .	%
	sing/riser height:sing; depth to riser below:			Cond	•	lone () Buri ng/riser: () L () Loose () Dama	Jnlocked () God	od unt
	er (Calibration/ Reading):	% Gas:		J	. % Li	EL:/_	w.	• .
Vol. Orga	ınic Meter (Calibration/Rea	iding):		Volati	es (ppm)			
PURGE	INFORMATION:		•	`				
Date / Tin	ne Initiated: 11-16-04 /	1410	_	Date /	Time Comple	ted:	11-16-09 1/	430
Surf. Mea	s. Pt: () Prot. Casing	() Riser		Riser I	Diameter, Inch	nes:	VAULT	
Initial Wa	ter Level, Feet: /.º/		_	Elevat	ion. G/W MSL	:		·
Well Tota	I Depth, Feet:	. ,	_	Metho	d of Well Purg	je:	Peristour	"(
One (1) R	iser Volume, G <u>al:</u>		·	Dedica	ited:	(9) N		
Total Volu	ıme Purged, Gal:		<u>.</u> 1	Purgeo	l To Dryness	YIN		
Purge Ob	servations:	-		Start _	Clear	Finish	che-	
	DATA: (if applicable)							
Time	Purge Rate Cumulativ	e Temp.	pН	T	Conduct	I Turb	Other	Other

Time		je Rate m/htz)	Cumulative Volume	Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other	Other 00
1415	1.01	200 myn		/i. ⁶	7.46	806	29.6	-48	1.11
1420				11.5	8.39	790	11.61	-46	1.06
1425				11.5	8-39	790	9.40	=44	1.04
1430				11,5	8:37	788	5,61	-43	1,00
					·				
					·				

(Aur C 1430 / 11-16-09

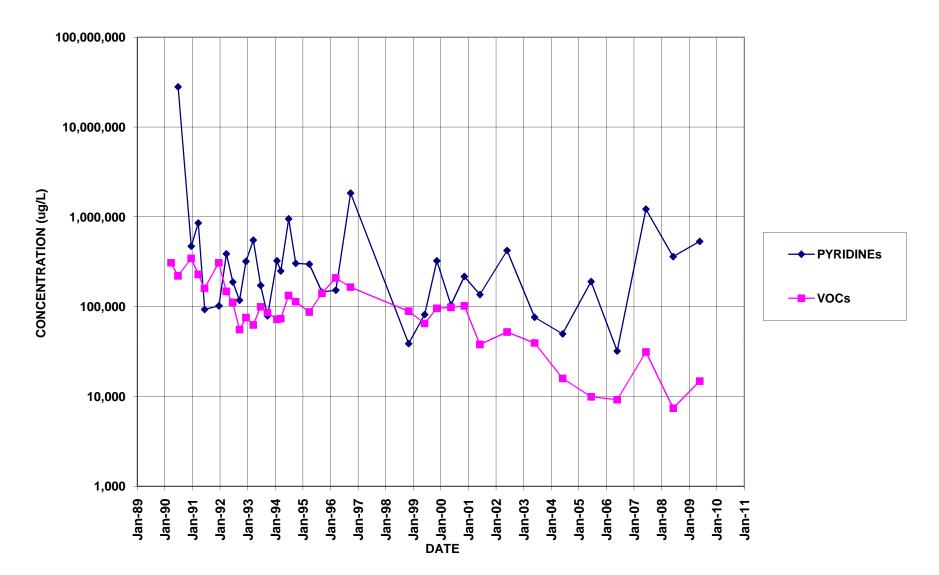
R 2

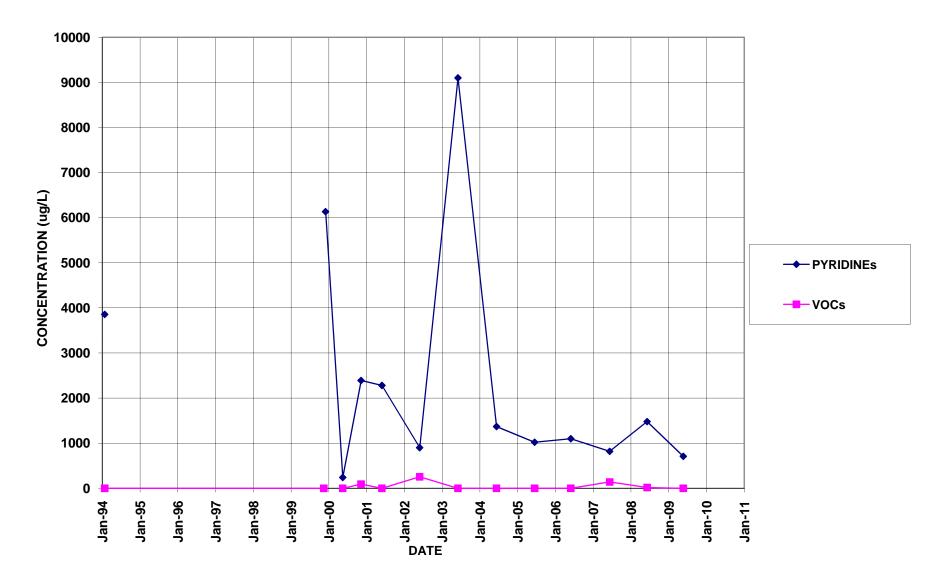
PAGE 1 OF 2

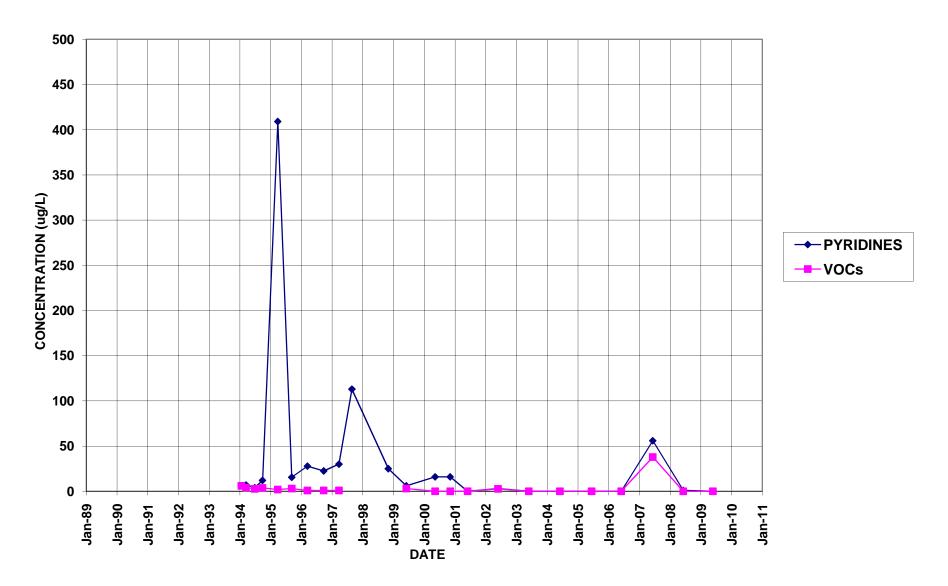
SAMPLING INFORMATION	ON:		POINT I	D		
Date/Time			Water Le	vel @ Sampling	, Feet:	· · · · · · · · · · · · · · · · · · ·
Method of Sampling:	 			_Dedicated:	Y/N	
Multi-phased/ layered:	() Yes	() No 114-676	If YES:	() light	() heavy	A STATE OF THE STA
SAMPLING DATA:	· · · · · · · · · · · · · · · · · · ·				()	
Time Temp.	pH (std units)	Conduct (Umhos/cm)	Turb. (NTU)	Other ()	Other (
		\$ 0°	ļ			e de gerañ
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	.#		4.4	i jazin
<u> </u>		1 111 1 11		- 1.1		
INSTRUMENT CHECK DA	NTA:		,	•	i e i e i e i e i e i e i e i e i e i e	
Turbidity Serial #:	NTU std.	=NTU	N	TU std. =	n de ja esta. NTU esta 40 esta esta	
pH Serial #:	4.0 std.=	7.0) std.=	•	.u stu. –	
	1.		mhos/cm=_		umhos/cm=	. spi 130 1 <u>. w e</u> d (1)
GENERAL INFORMATION	* : · · ·	in the second	int's			427 h - 3511 (10%)
Weather conditions @ time o						1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
Sample Characteristics:			•	ĭ.		
COMMENTS AND OBSER	VATIONS:					
				 		
	1 X	4				, h
West Control of the C						
						,
		· .	· · · · · · · · · · · · · · · · · · ·			
certify that sampling proced rotocals.	ures were in a	accordance with	ı all applica	able EPA, State	and Site-Specific	; >
ate: / /	Ву:			Company:	Yes and the second of the seco	

Appendix B

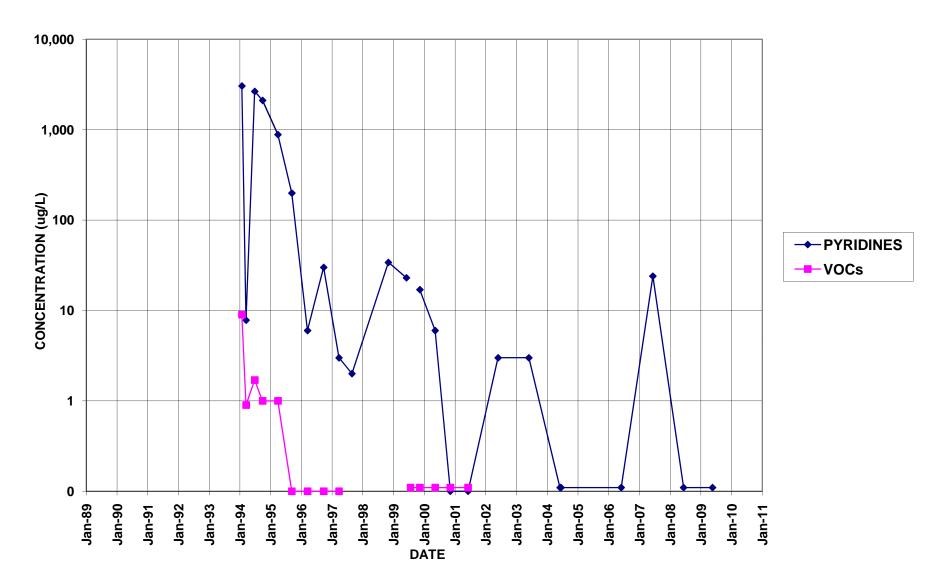
Well Trend Data

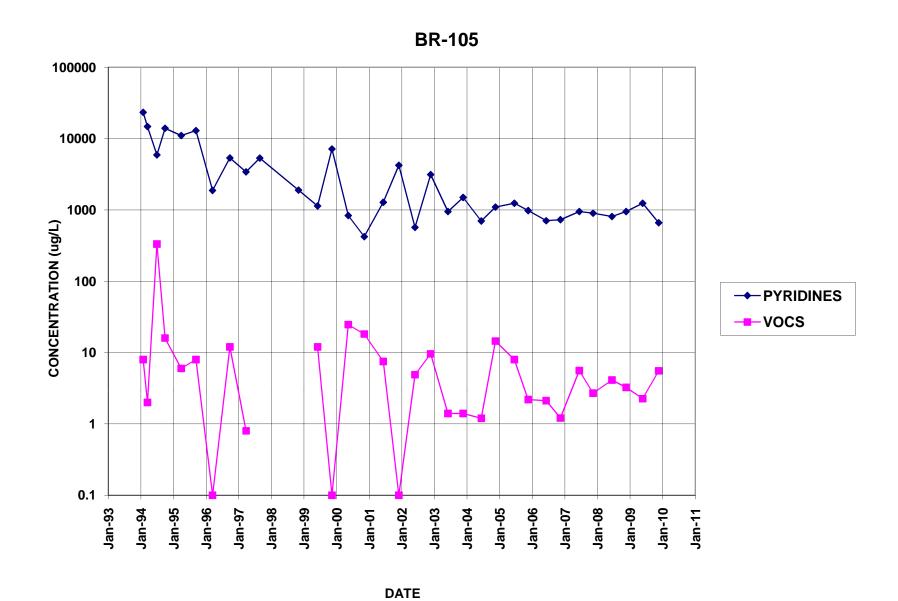




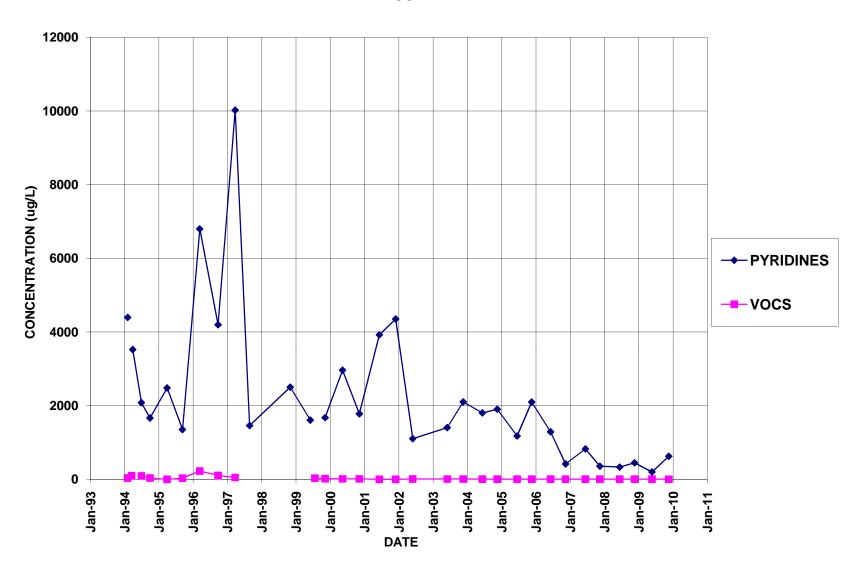


BR-104

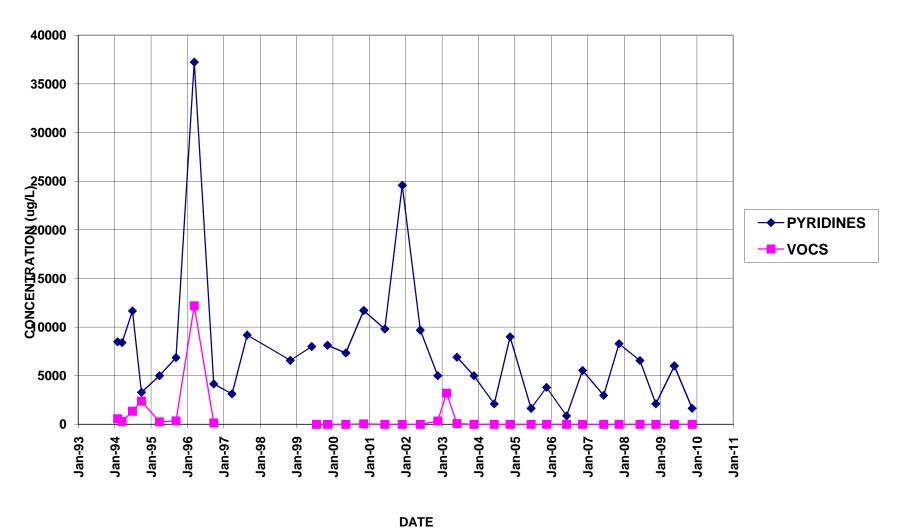


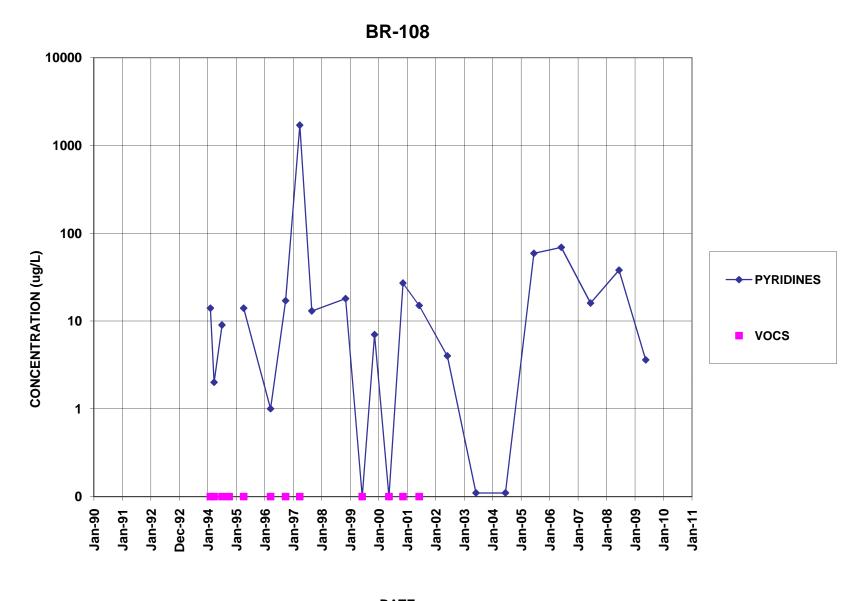


BR-105D

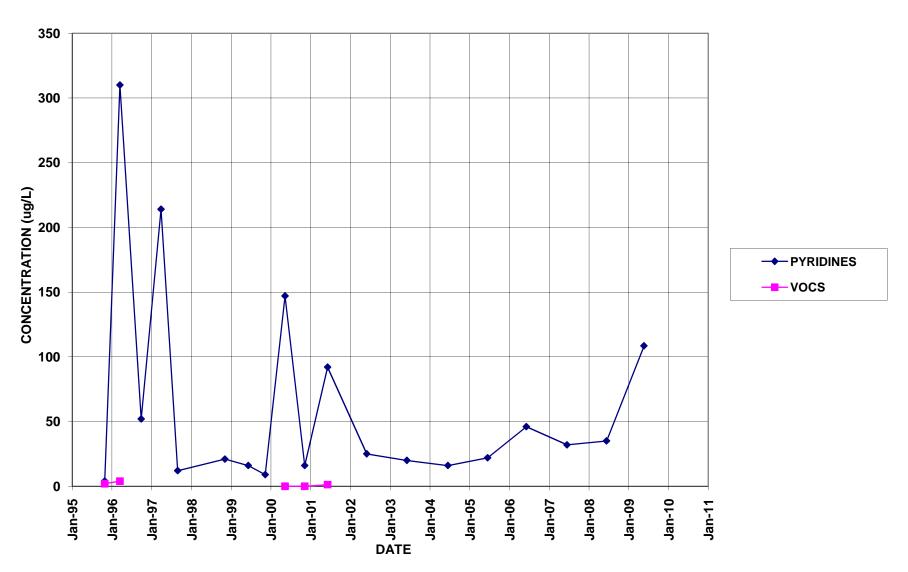


BR-106

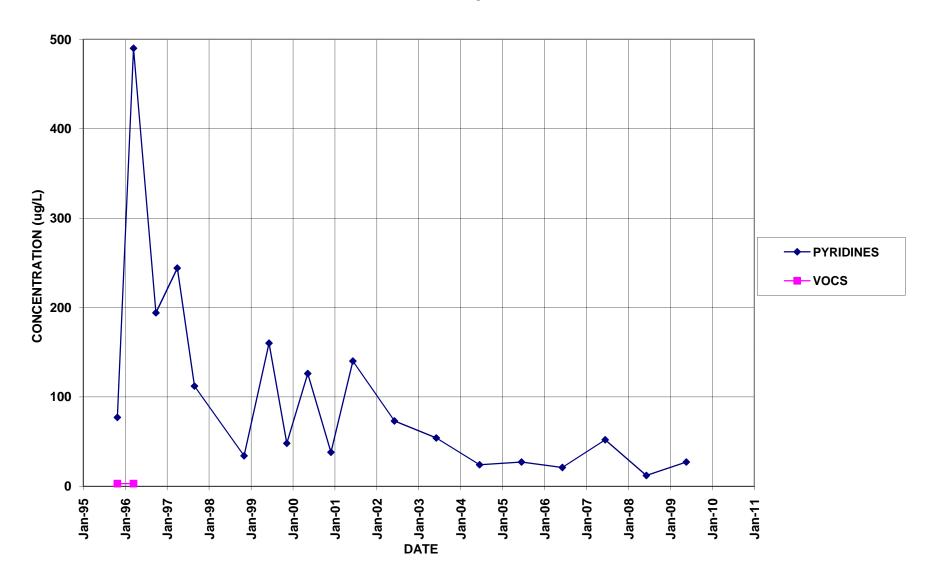




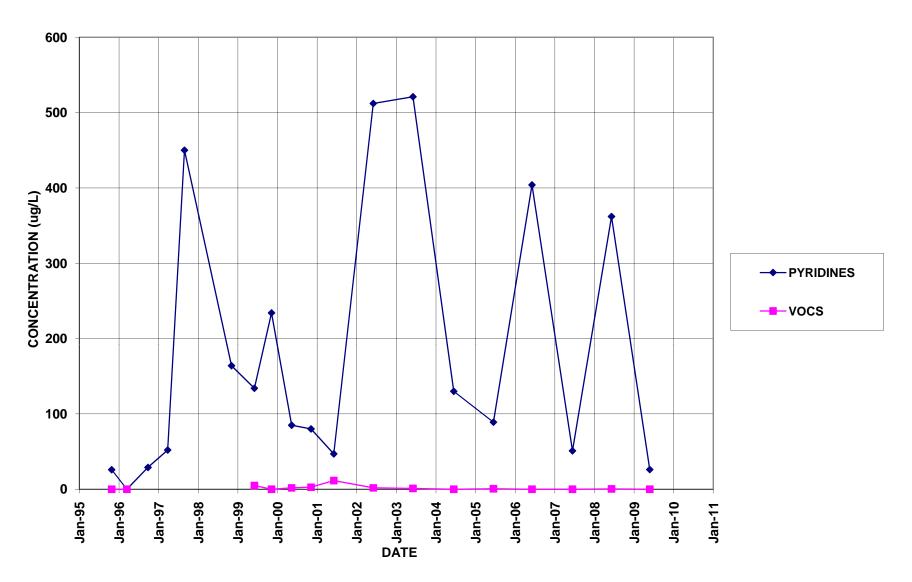




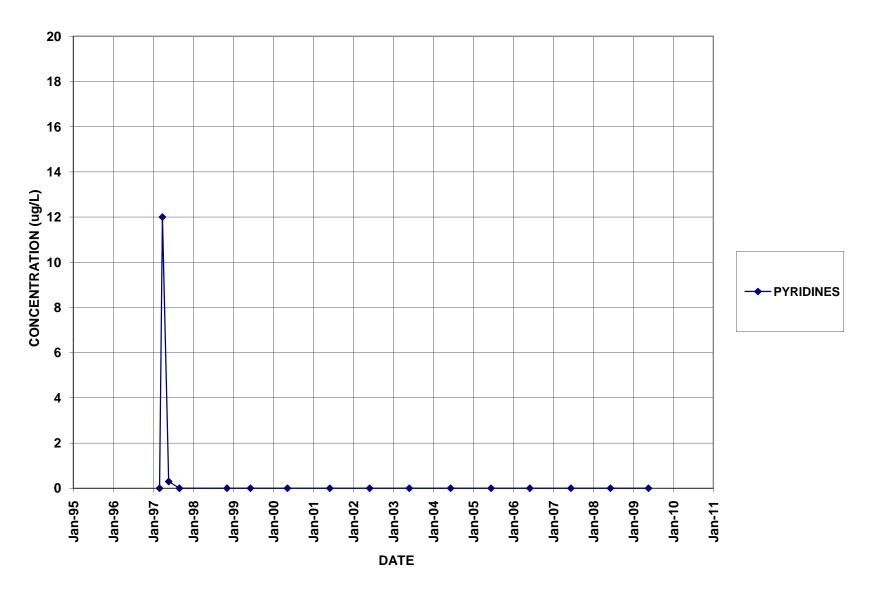
BR-113D



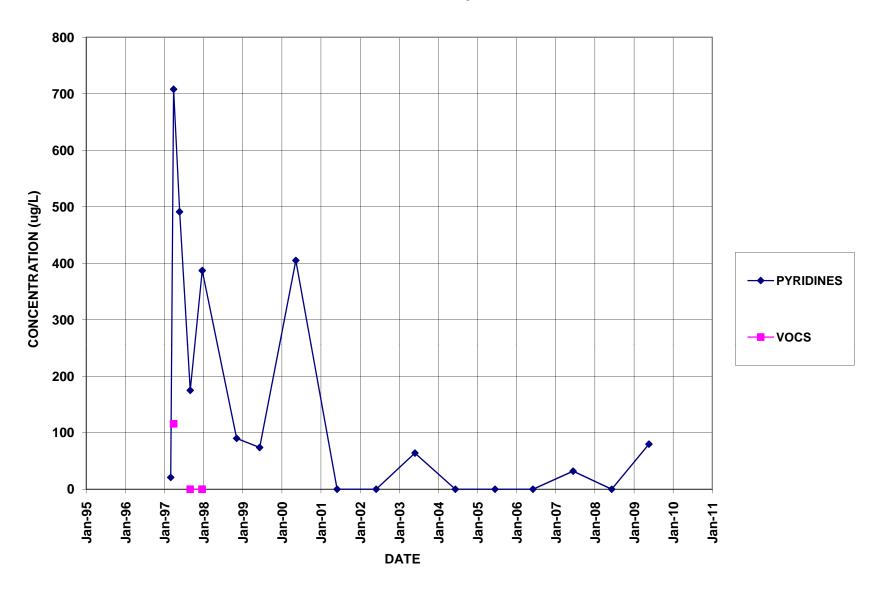
BR-114



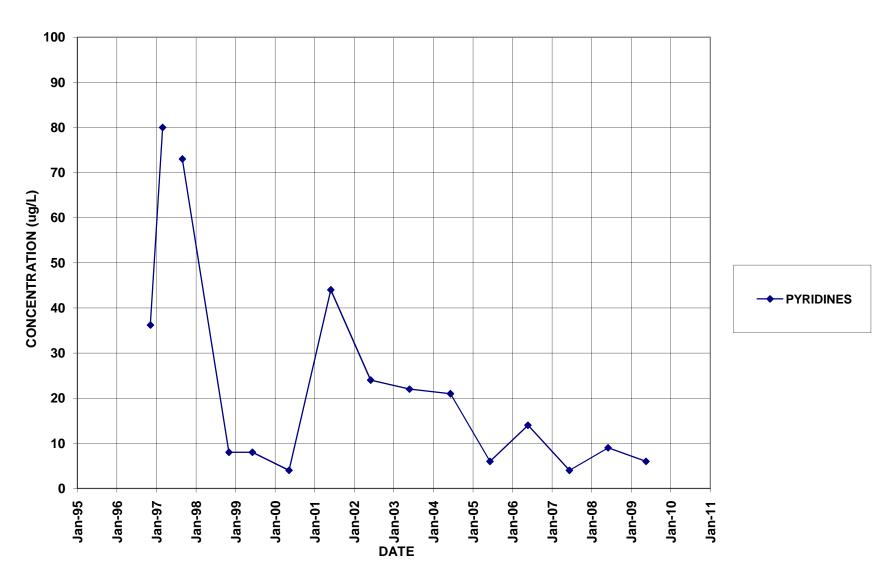




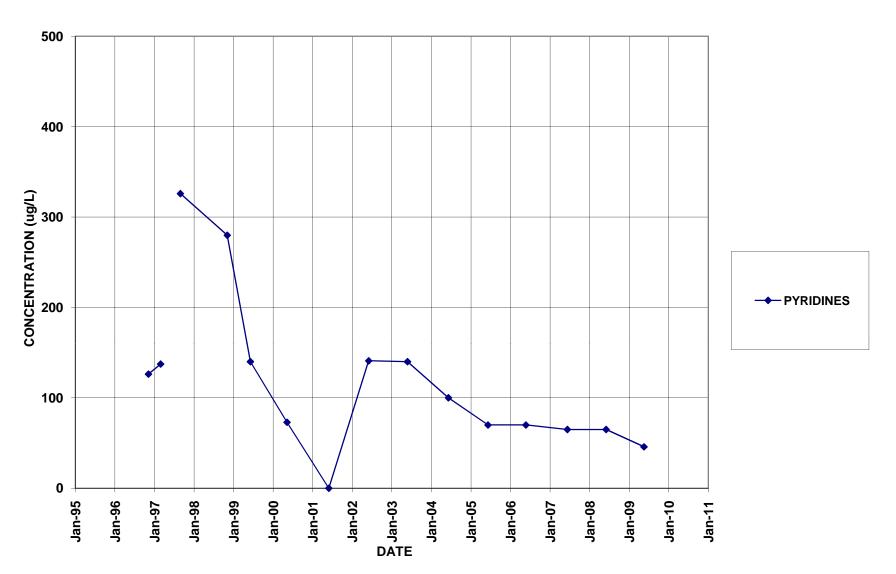
BR-116D



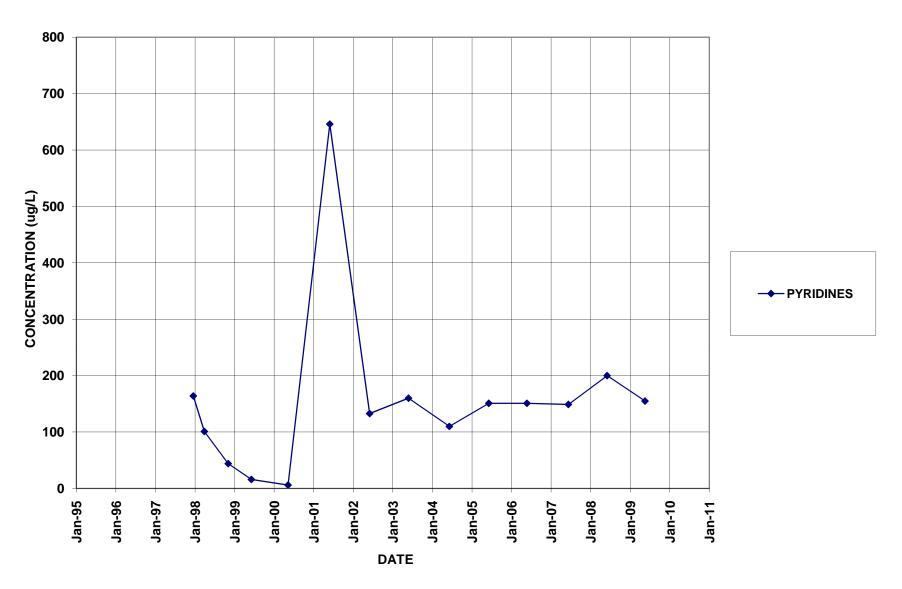
BR-117D



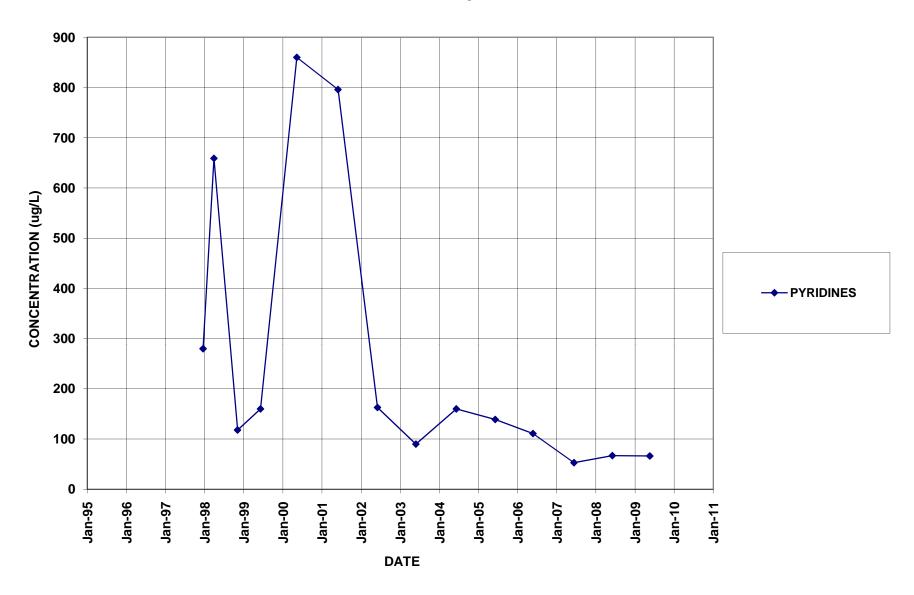
BR-118D



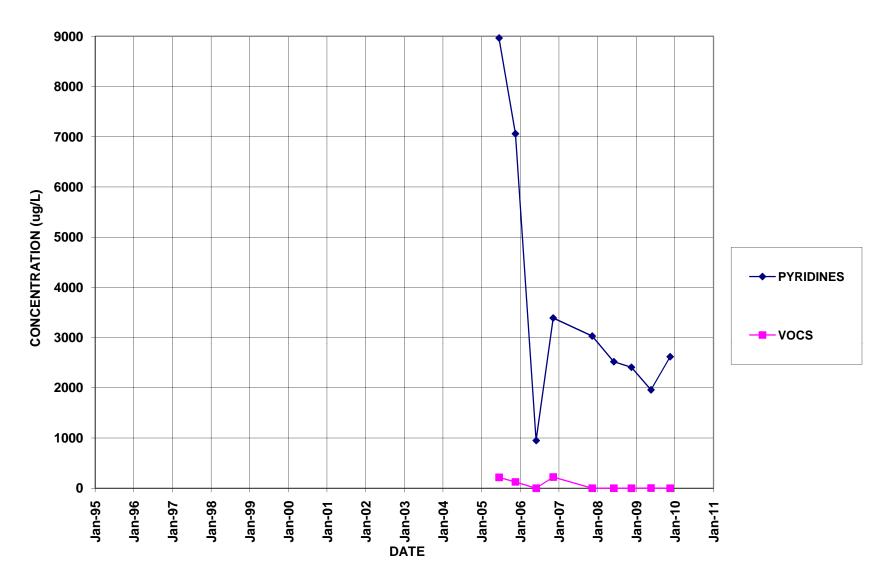
BR-122D



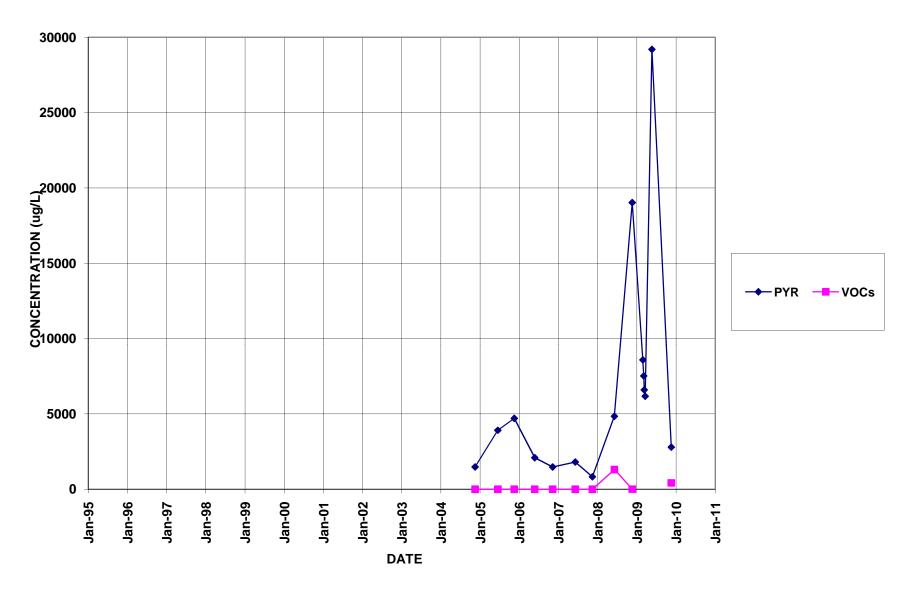
BR-123D



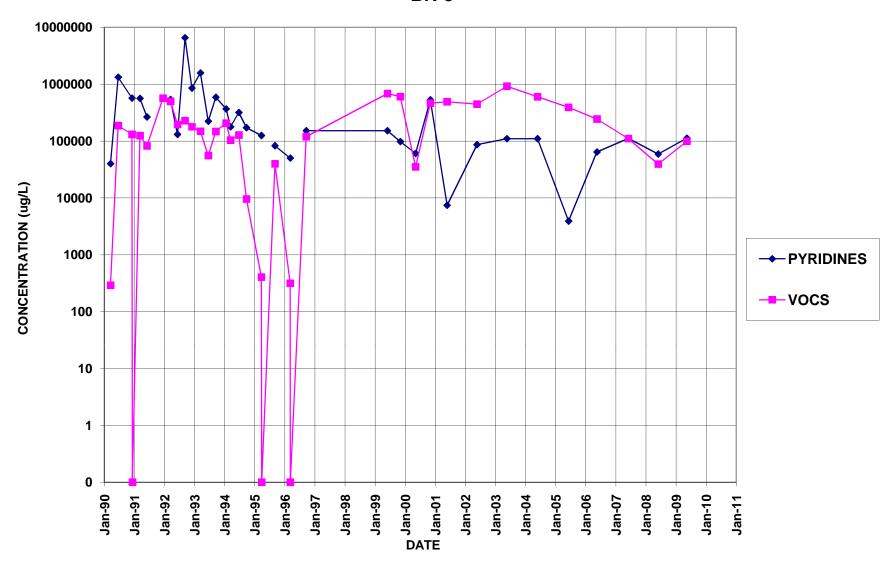




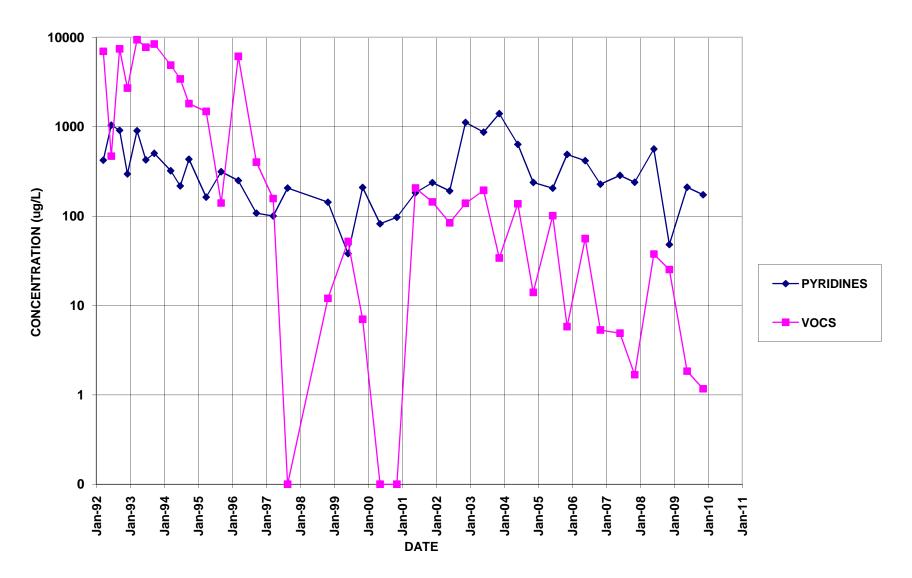
BR-127



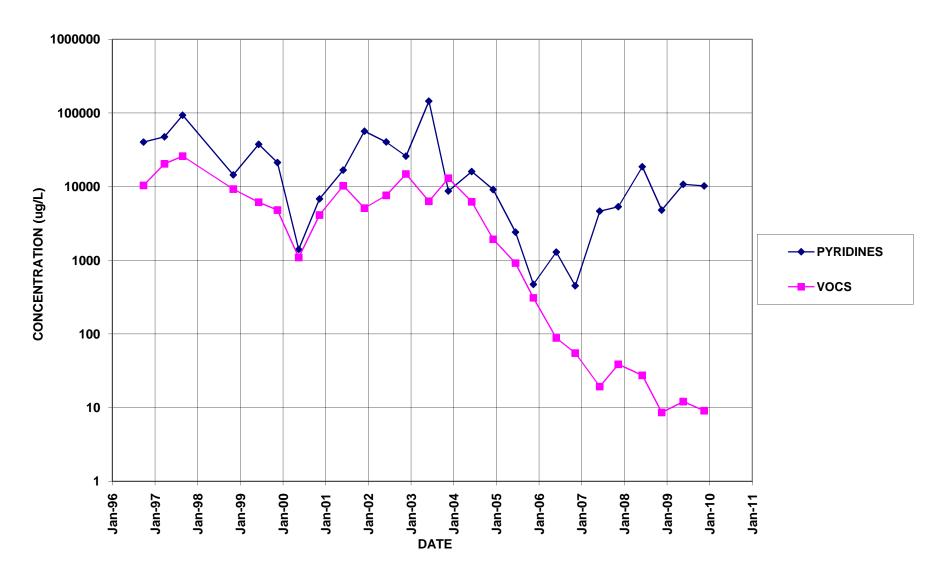


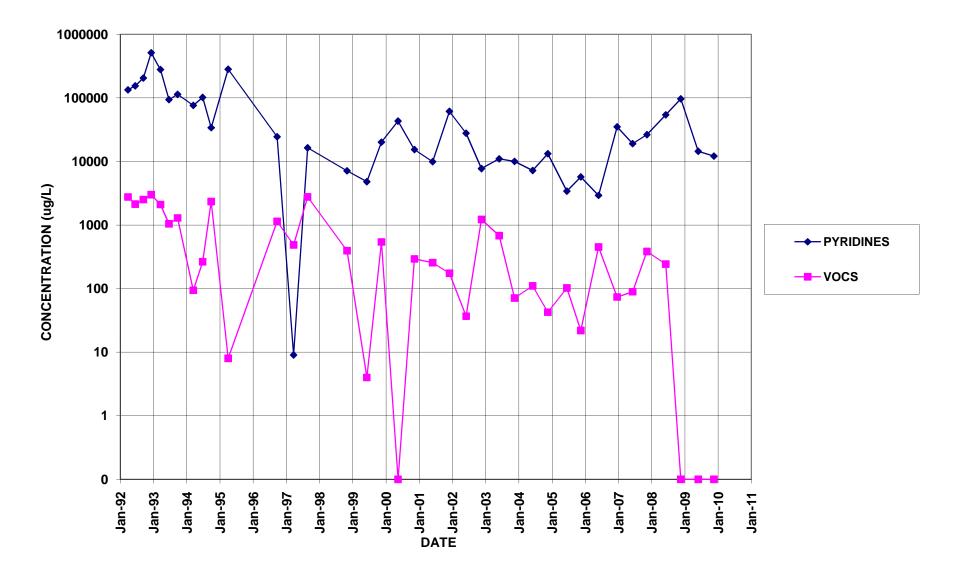


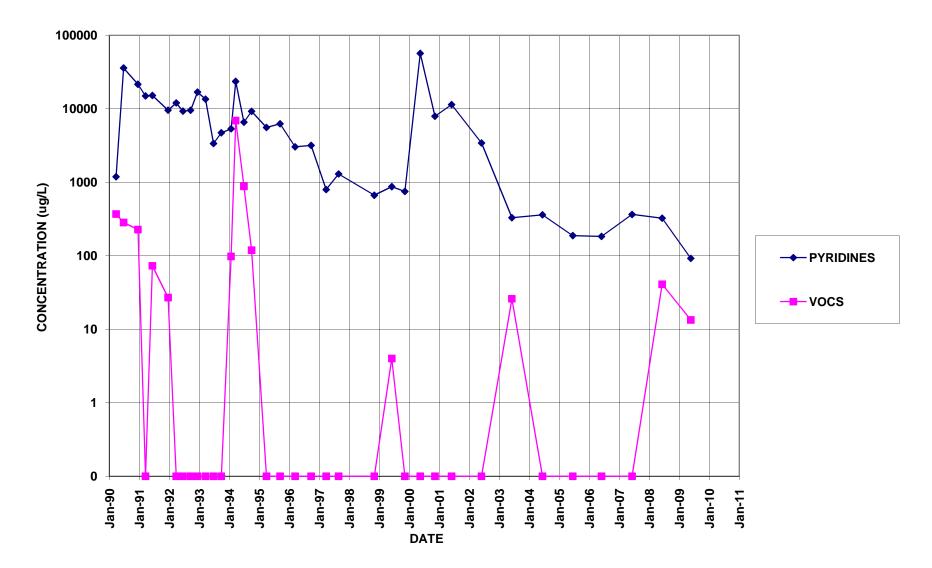


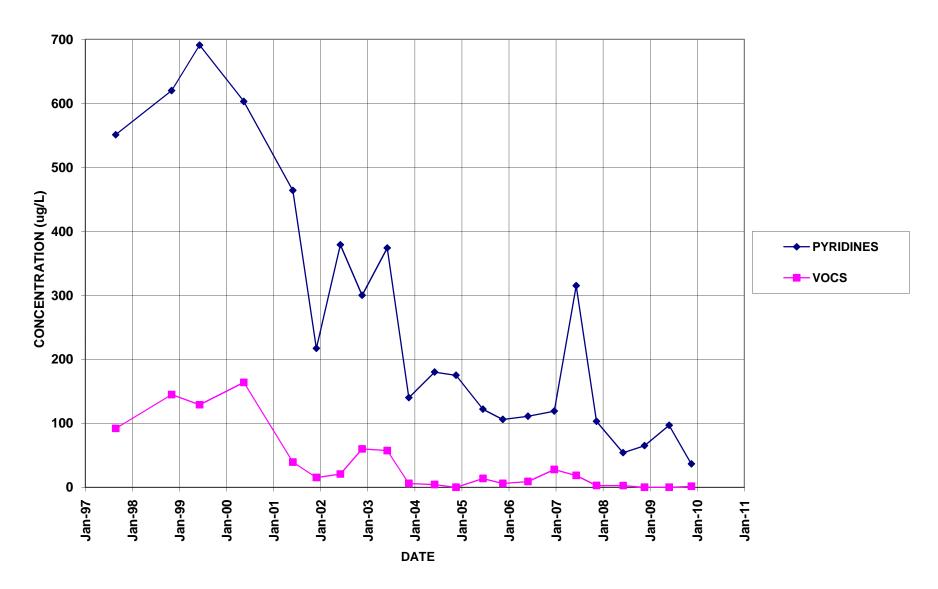


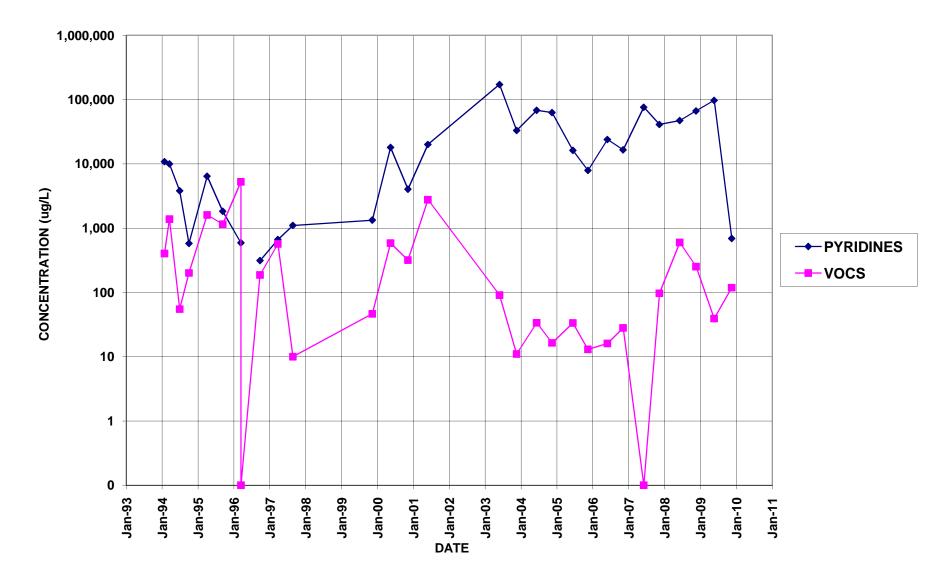
BR-6A

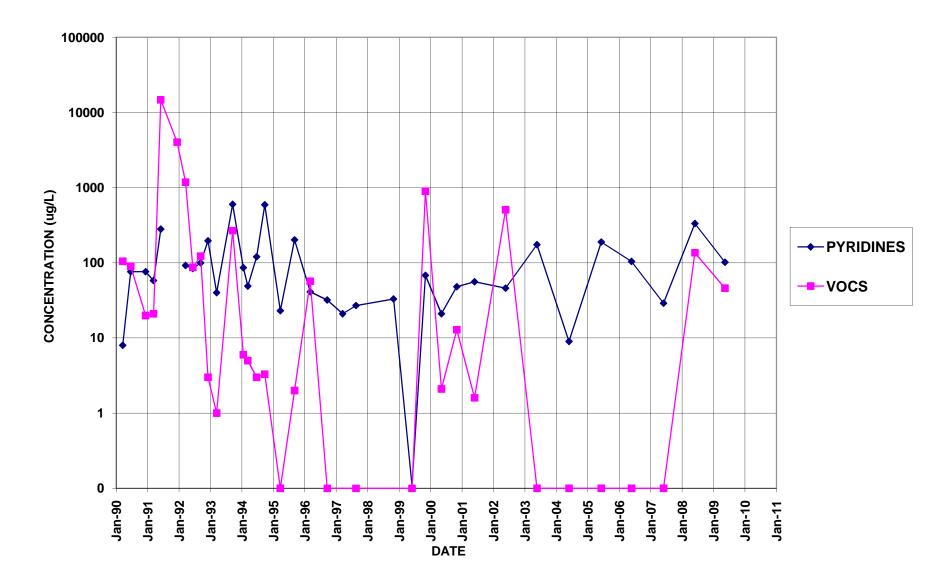




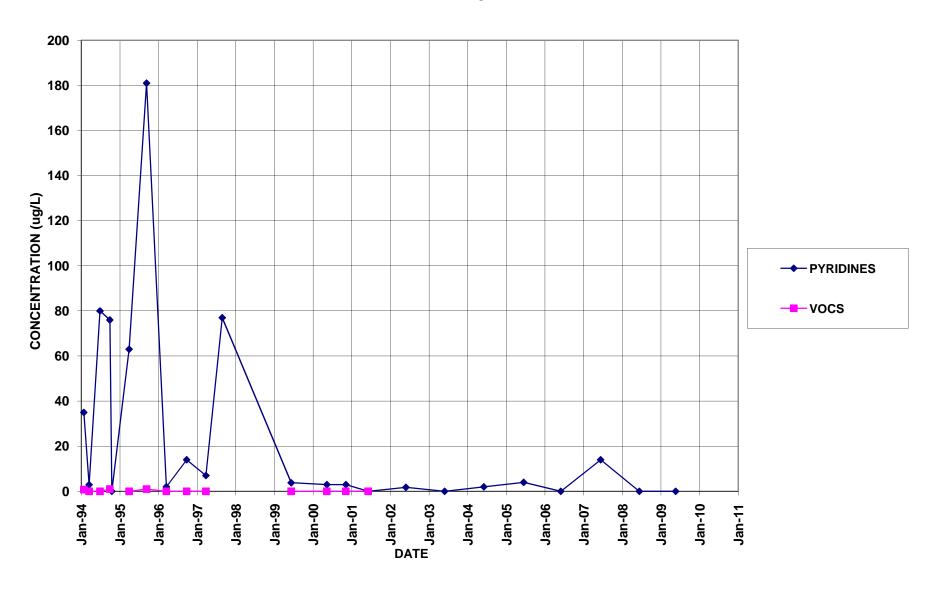




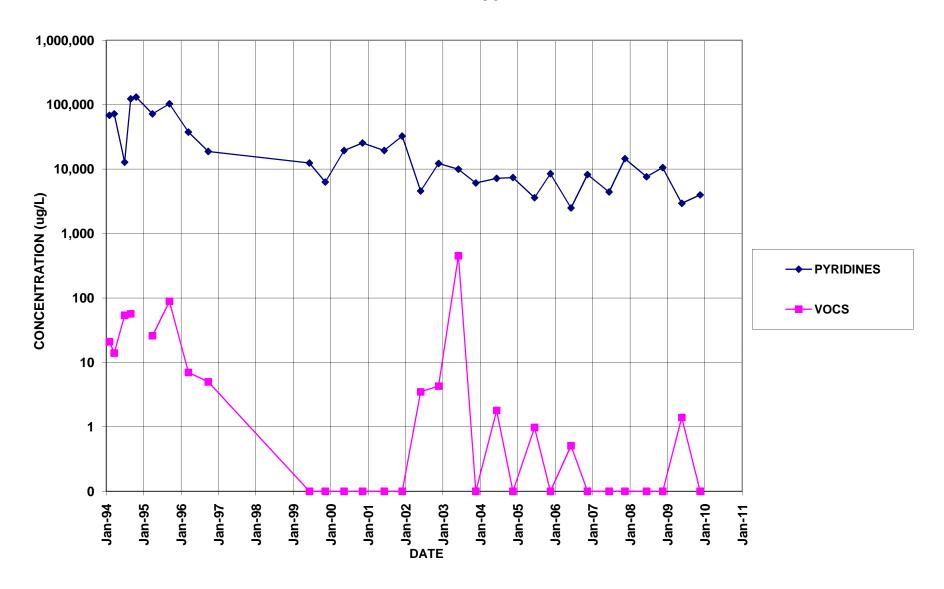




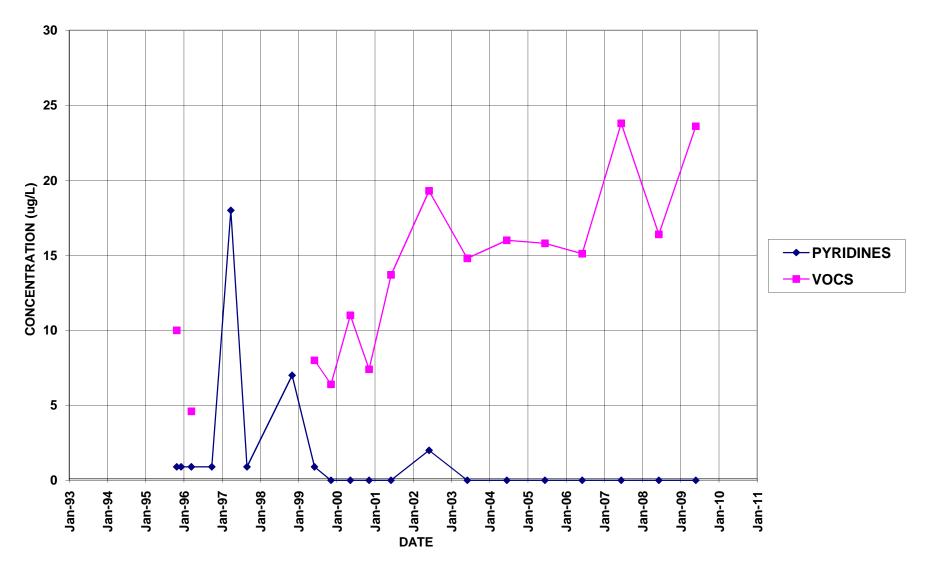
MW-104



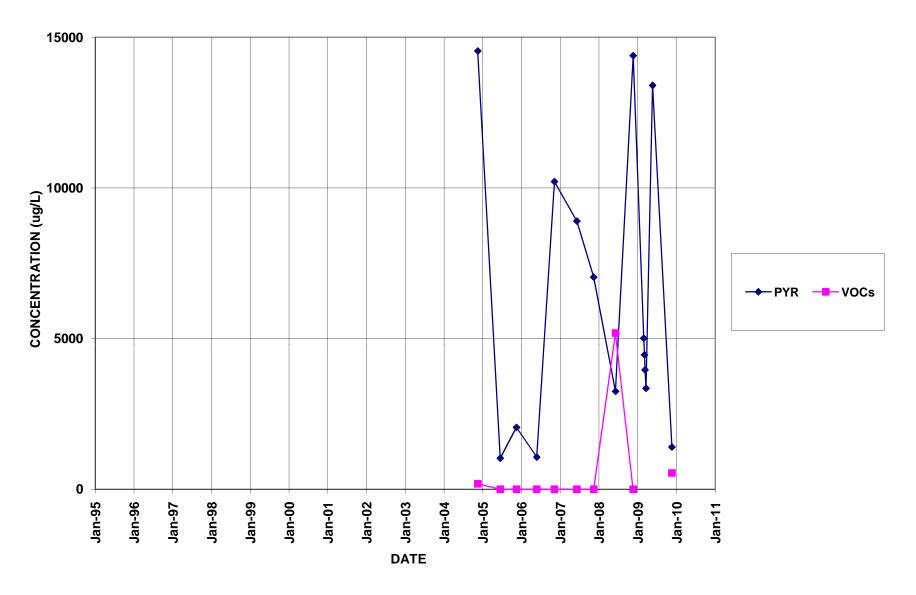
MW-106



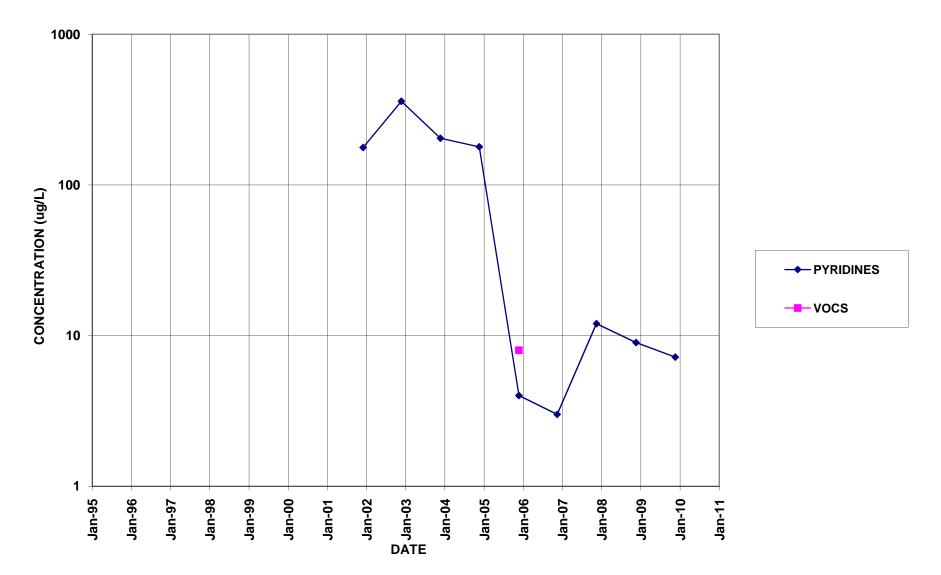




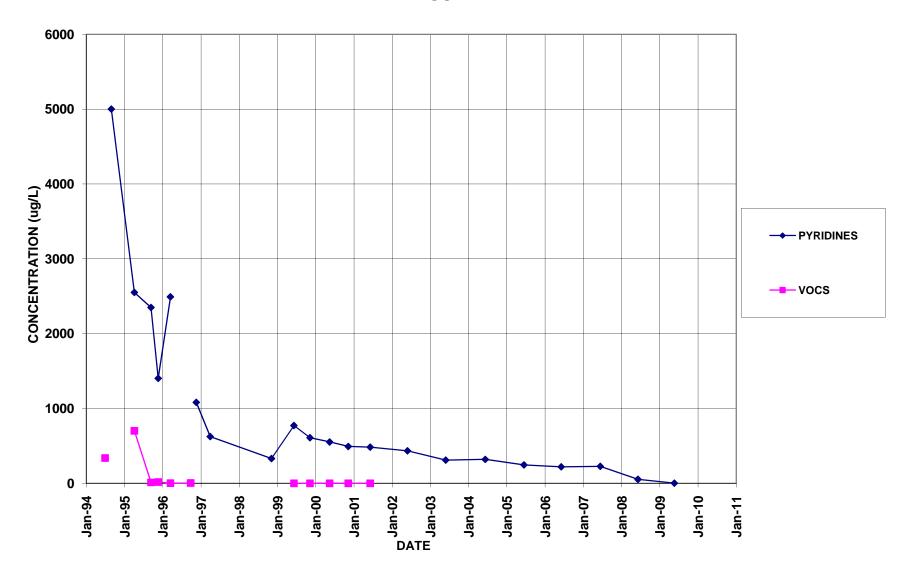
MW-127



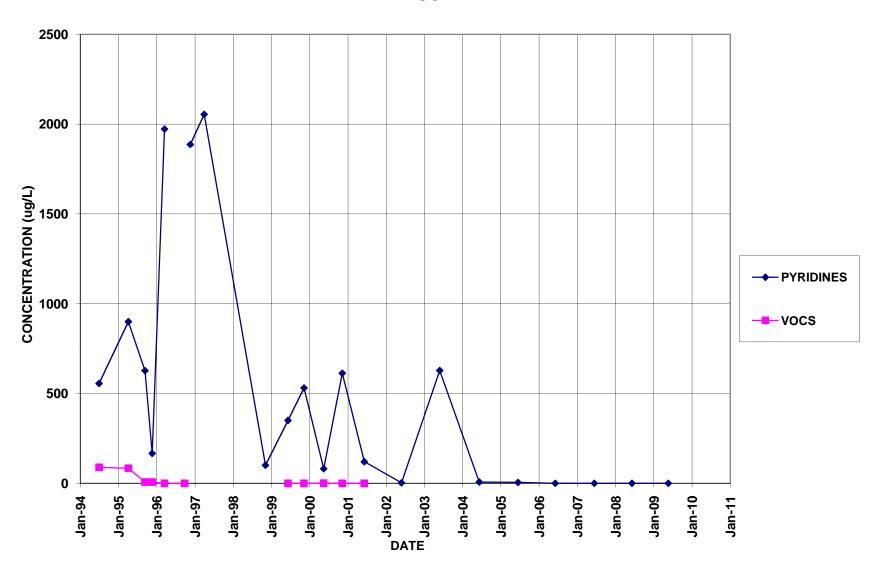
MW-16



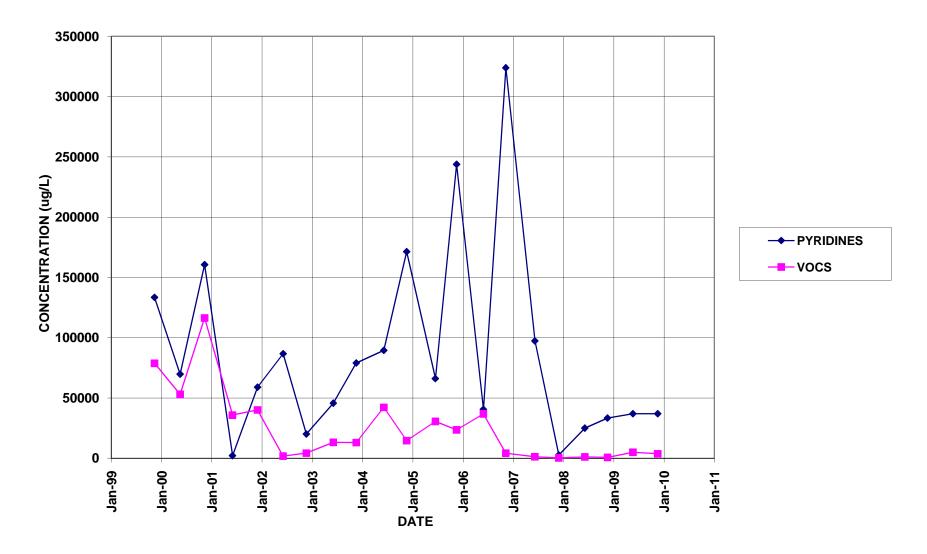
NESS-E



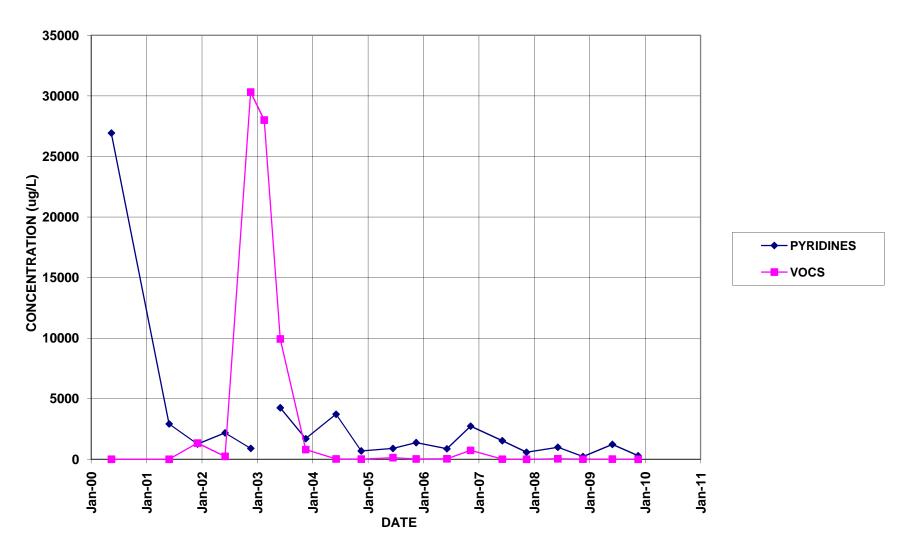
NESS-W



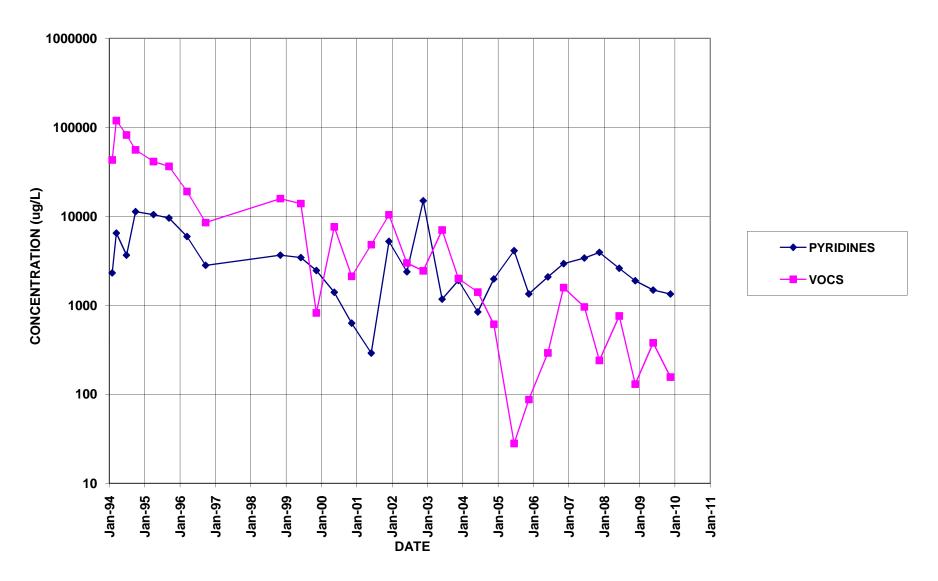
PW10



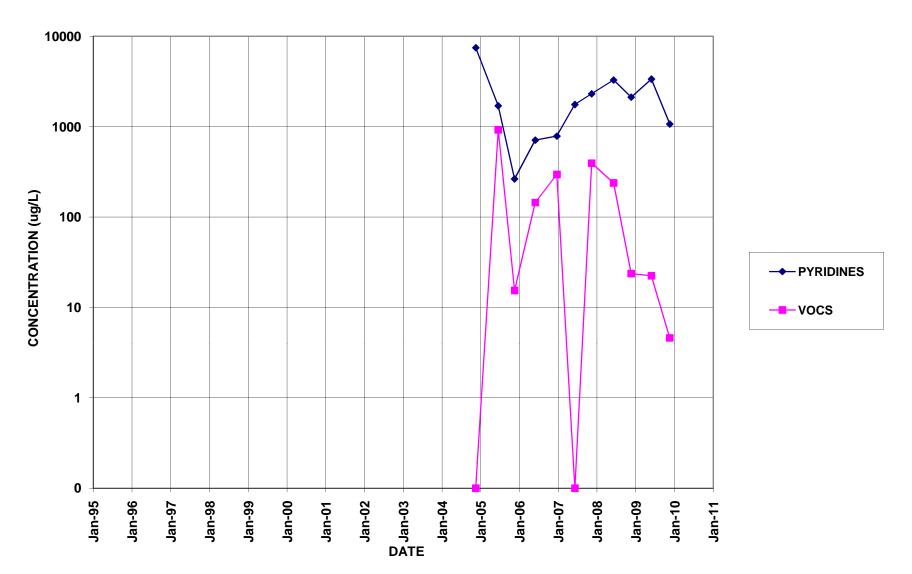




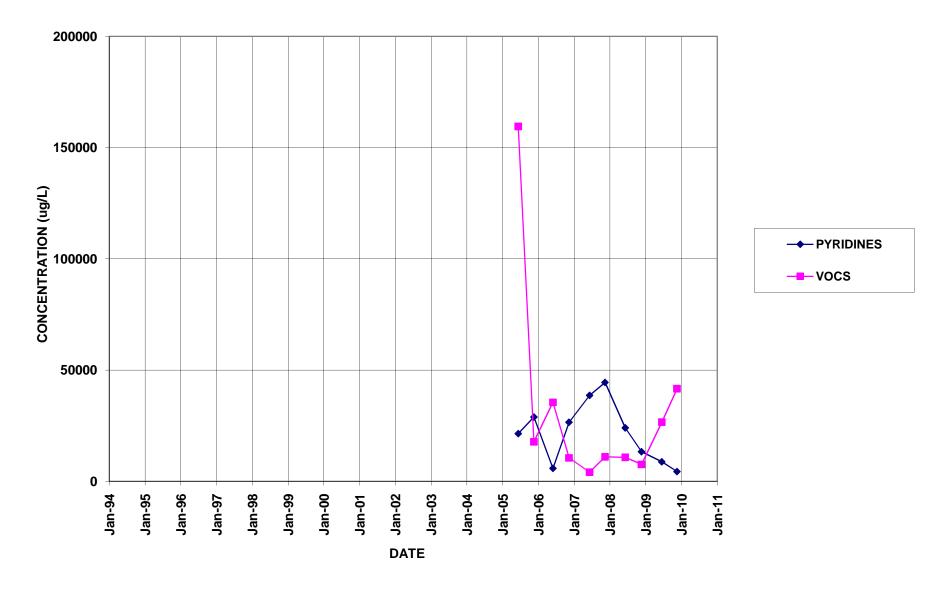
PW12 (Formerly BR-101)



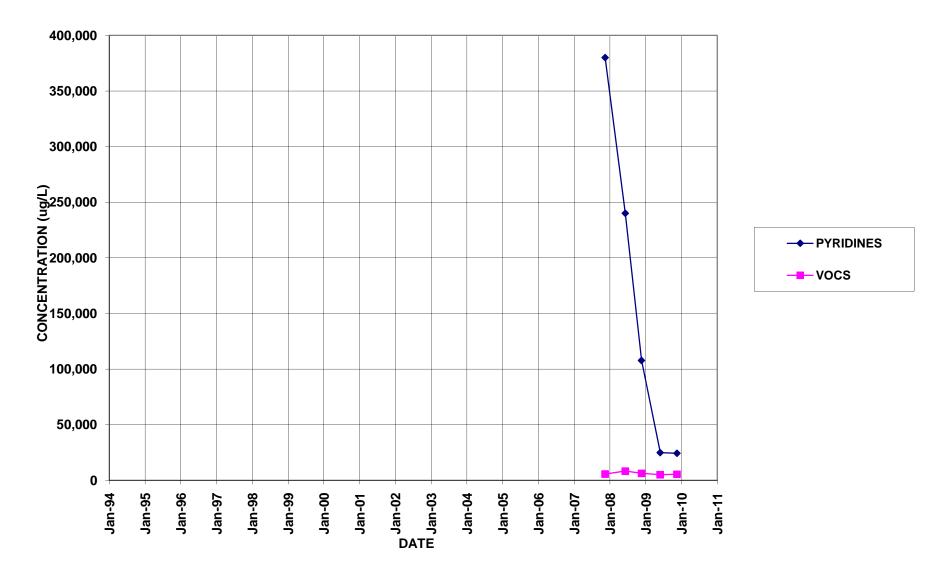




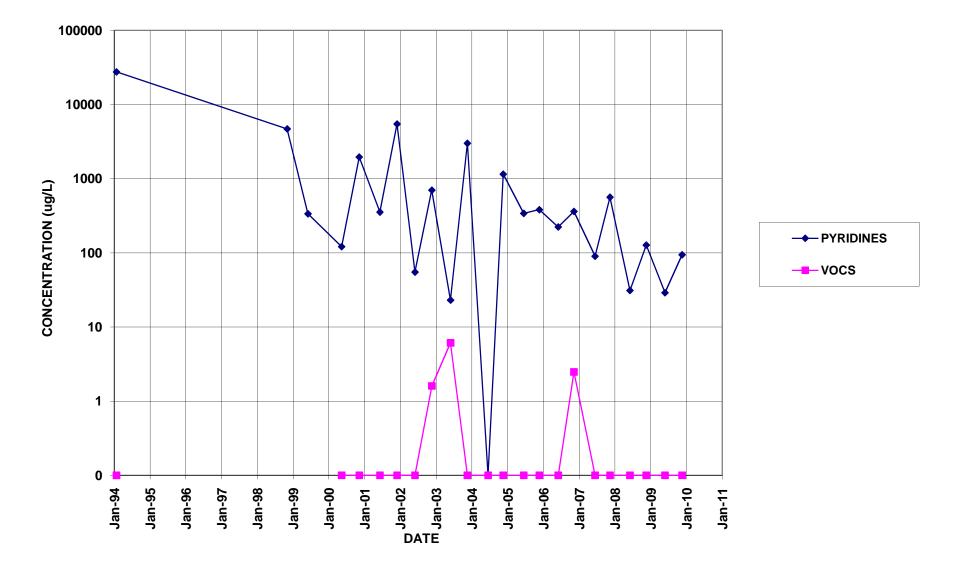


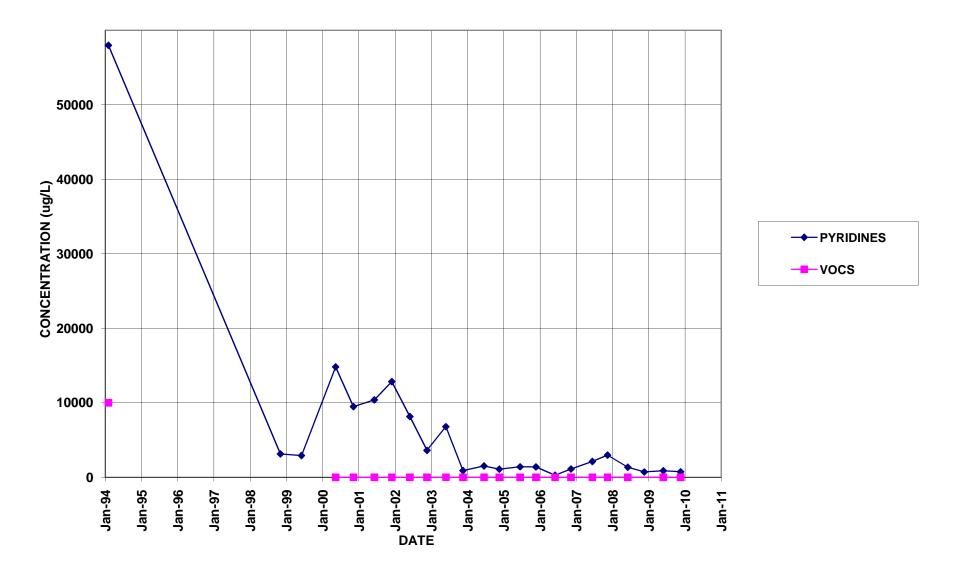


PW15

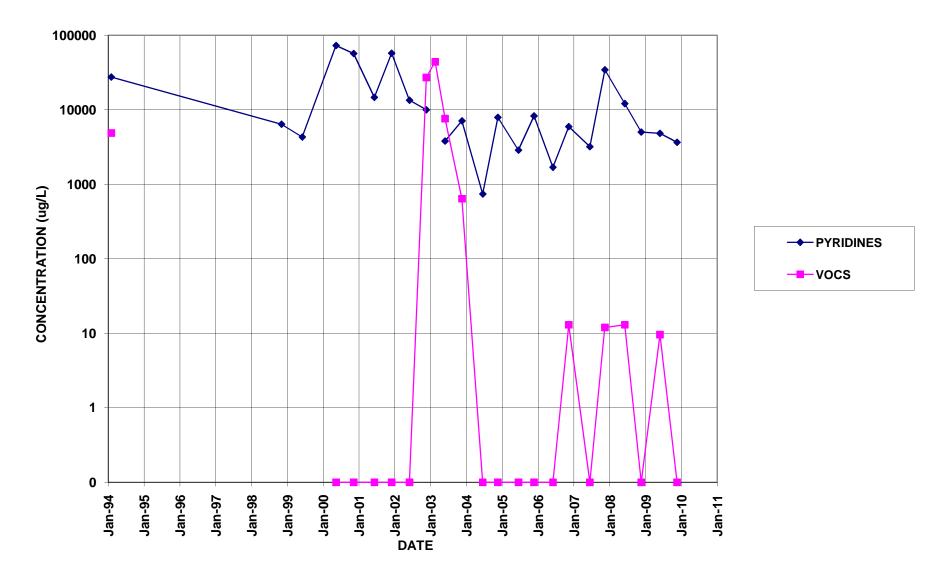


PZ-101

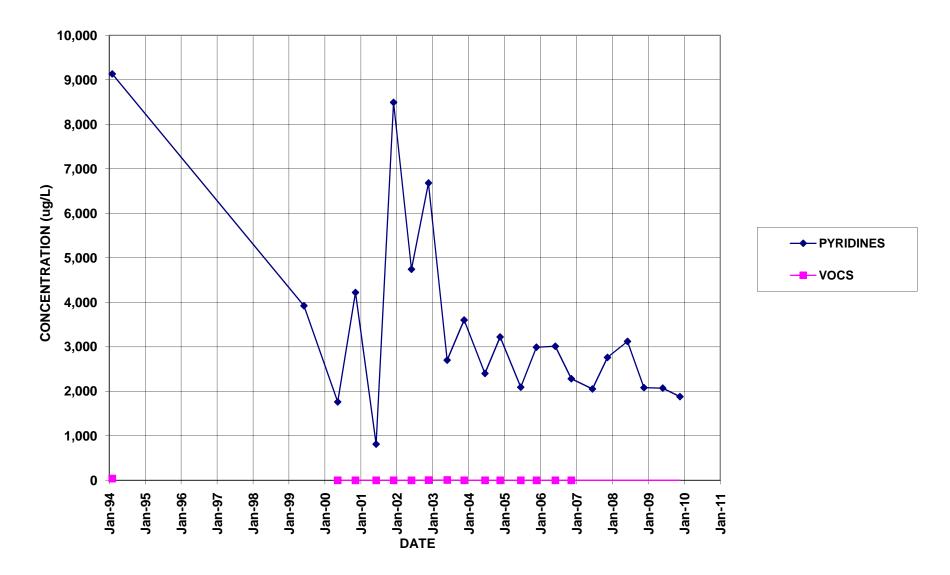


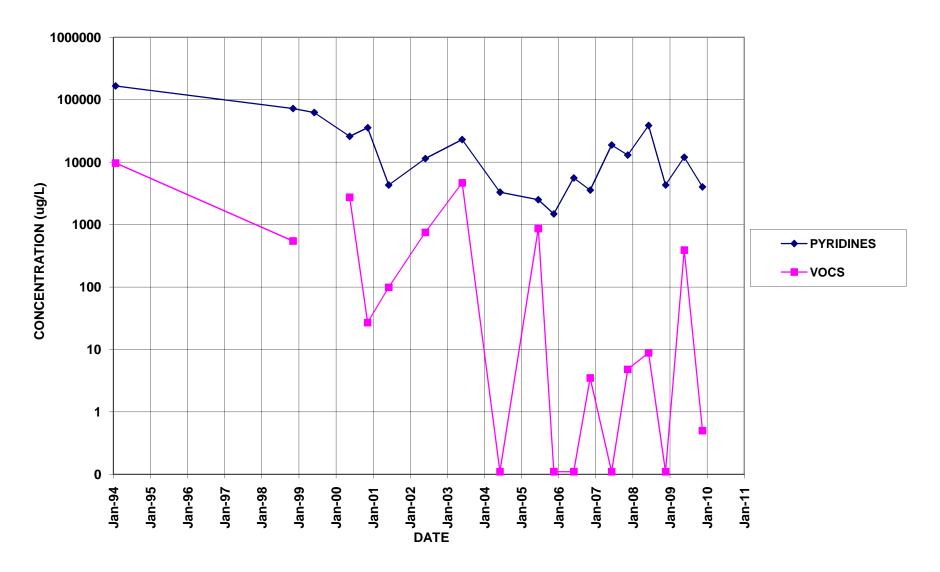


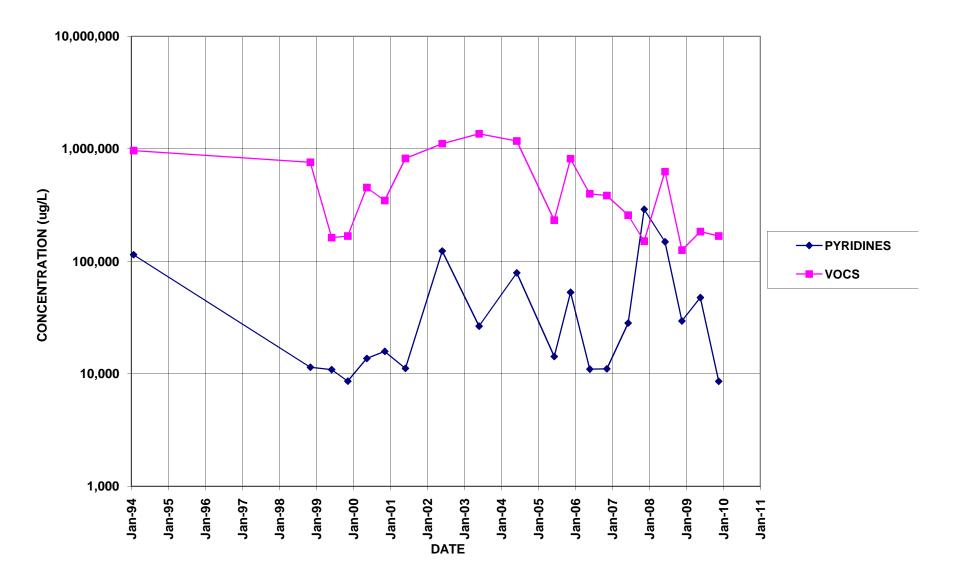




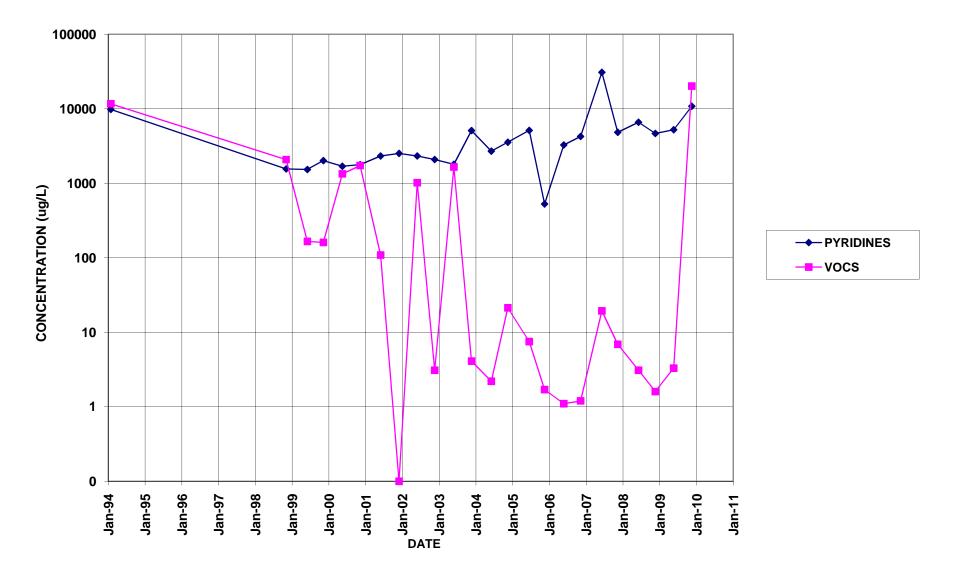
PZ-104

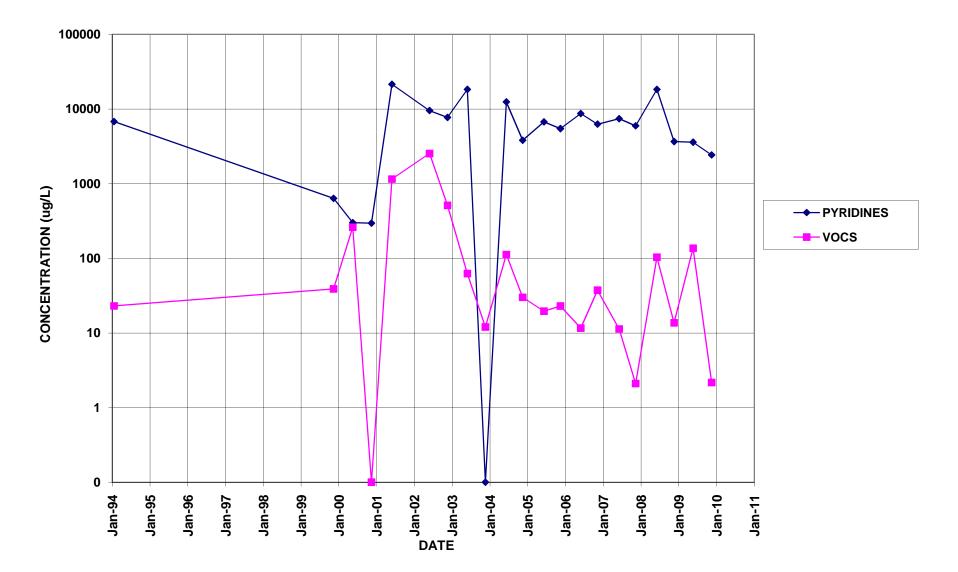




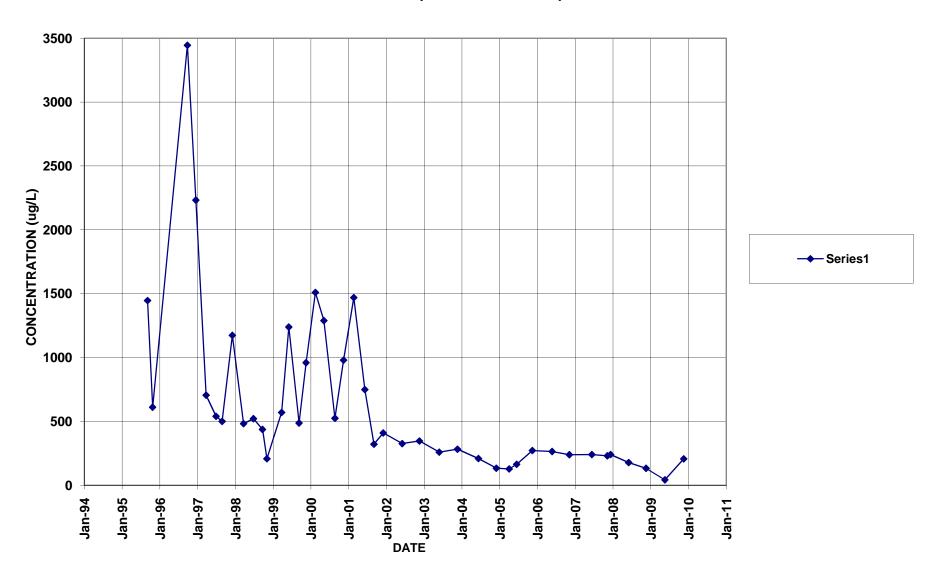


PZ-107





QS-4 (QUARRY SEEP)



QO-2 (QUARRY OUTFALL)

