



Mr. Payson Long  
Remedial Bureau E  
Section D  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
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ENVIRONMENTAL

Subject:  
McKesson Envirosystems  
Bear Street Site  
Syracuse, New York  
Site No. 07-34-020

Date:  
September 3, 2010

Dear Mr. Long:

Contact:  
David J. Ulm

This letter proposes modifications for the operation and maintenance (O&M) activities currently performed at the McKesson Envirosystems, Bear Street Site (the Site), located at 400 Bear Street in Syracuse, New York.

Phone:  
315.671.9210

The current O&M program is outlined in the New York State Department of Environmental Conservation- (NYSDEC-) approved Site Operation and Maintenance Plan (Site O&M Plan) (Blasland, Bouck & Lee, Inc. [BBL], Revised August 1999) and December 29, 1999 letter from Mr. David Ulm (BBL) to Mr. Michael Ryan, P.E. (NYSDEC), which presented the long-term process control monitoring program as an addendum to the Site O&M Plan. The Site O&M Plan and the addendum are collectively referred to as the Site O&M Plan. Some modifications were previously presented in the biannual reports submitted to NYSDEC.

Email:  
[David.Ulm@arcadis-us.com](mailto:David.Ulm@arcadis-us.com)

Our ref:  
B0026003.0000

ARCADIS proposes the following modifications on behalf of McKesson Corporation:

- Eliminating methanol analyses in select wells/piezometers
- Removing select wells from the constituent of concern (COC) monitoring program
- Removing select deep wells/piezometers from the hydraulic monitoring program
- Abandoning select wells/piezometers

Imagine the result

### **Methanol Analyses**

Methanol is currently monitored as part of the COC monitoring program. Table 1 presents the groundwater methanol data collected to date at the Site. Figure 1 presents a summary of methanol detections in groundwater. Methanol has never been detected in the following 14 wells/piezometers: MW-19, MW-23I, MW-24S/MW-24SR, MW-24D/MW-24DR, MW-25S, MW-25D, MW-27, MW-30, MW-33, MW-36, PZ-4D, PZ-4S, PZ-5D, and PZ-5S. Methanol has not been detected in more than 5 years in the following seven wells: MW-1, MW-3S, MW-8SR, MW-17R, MW-18, MW-23S, and MW-29. Methanol has been detected in the following eight wells within the past 5 years: MW-9S, MW-31, MW-32, and TW-01 in Area 1; MW-34, MW-35, and TW-02RR in Area 2; and MW-28 in Area 3. Note that methanol does not have a NYSDEC groundwater quality standard.

One of the remedial goals of the March 1997 Record of Decision (ROD) for the saturated soils operable unit is to "reduce, control, eliminate the concentrations of COCs present within the saturated soils". Because methanol has never been detected in groundwater from select wells or has not been detected in more than 5 years, the goal for that COC has been met in those wells.

ARCADIS is proposing that methanol monitoring continue in only the eight wells where methanol has been detected within the past 5 years. In addition to these eight wells, we will continue to monitor methanol in groundwater from perimeter monitoring points MW-17R, MW-18, MW-23S, and MW-23I in order to confirm that methanol is not migrating beyond the Site boundary.

### **COC Monitoring Program**

Table 2 presents the COC data collected to date for MW-19 (perimeter well) and MW-29 (Area 3). Figure 2 presents a summary of COC data for these two wells. Detected COC concentrations in these wells have not exceeded NYSDEC Groundwater Quality Standards since 2003. One of the remedial goals of the March 1997 ROD for the saturated soils operable unit is to "attain the NYSDEC Class GA Groundwater Quality Standards, to the extent practicable, for the COCs present in the onsite groundwater". Because this goal has been achieved in these two wells, ARCADIS proposes that they be removed from the COC monitoring program.

In addition, ARCADIS is proposing to remove upgradient wells MW-1 and MW-3S and perimeter wells/piezometers MW-24SR, MW-24DR, MW-25S, MW-25D, PZ-4S,

PZ-4D, PZ-5S, and PZ-5D from the COC monitoring program. Table 2 presents the COC data collected to date for these locations. Figures 2 and 3 present a summary of COC data for these locations. COCs have not been detected at these locations in at least 5 years except for the methylene chloride exceedance in April 2010 in PZ-4S and PZ-4D. The purpose of the perimeter wells/piezometers is to confirm that COCs are not migrating beyond the Site boundary. Due to the lack of exceedances of COCs in these perimeter wells/piezometers, this purpose has been met. COCs will still be monitored in perimeter wells MW-17R, MW-18, MW-23S, and MW-23I. The upgradient wells have also not yielded an exceedance of COCs in at least 5 years; therefore, these wells are no longer needed in the COC program.

### **Hydraulic Monitoring Program**

Due to the consistency in data from the deep hydrogeologic unit and the lack of upconing, ARCADIS is recommending that the measurement of groundwater levels in the deep hydrogeologic unit be stopped. Measurement would be reinstated if a significant increase in groundwater extraction was proposed in the future. This includes the following deep monitoring wells and piezometer: upgradient MW-3D; MW-6D and MW-9D in Area 1; PZ-9D in Area 2; MW-11D in Area 3; and perimeter MW-18, MW-19, MW-23I, MW-24DR, and MW-25D.

### **Abandoning Wells/Piezometers**

ARCADIS is proposing that selected monitoring wells/piezometers that are no longer in the COC monitoring program be abandoned. These wells/piezometers are: MW-1, MW-3S, MW-19, MW-29, PZ-4S, PZ-4D, and PZ-5S. In addition, the following wells/piezometer have not been part of the COC or hydraulic monitoring programs for many years and should be abandoned: MW-2S, MW-4S, MW-6S, MW-13S, MW-15S, MW-22, MW-26S, and PZ-9S. Table 3 presents a list of all the wells/piezometers to be abandoned.

These locations would be abandoned in general conformance with ASTM Method D5299<sup>1</sup> and in accordance with NYSDEC's policy document titled "CP-43:

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<sup>1</sup> ASTM D5299 - 99(2005) Standard Guide for Decommissioning of Ground Water Wells, Vadose Zone Monitoring Devices, Boreholes, and Other Devices for Environmental Activities

Groundwater Monitoring Well Decommissioning Policy" (November 2009)<sup>2</sup>. The monitoring well/piezometer construction materials (e.g., casing, grout, and sand pack) would be removed by overdrilling or pulling each well or piezometer. Upon removal of the well/piezometer construction materials, the borehole will be filled with a cement/bentonite grout mixture. The removed well/piezometer construction materials and drill cutting will be disposed of off site.

Figure 4 presents a summary of the modifications proposed in this letter. Table 4 presents a revised long-term hydraulic and COC process control monitoring schedule.

Because the fall 2010 sampling event is scheduled for the week of September 13, 2010, your approval of these modifications would be appreciated by Friday, September 10, 2010.

If you have any questions or require additional information, please do not hesitate to contact me at 315.671.9210.

Sincerely,

ARCADIS



David J. Ulm  
Senior Vice President

DEP/cmb  
Attachments

Copies:

Mr. Gerald Rider, NYSDEC  
Mr. Gregg Townsend, NYSDEC  
Mr. Chris Mannes, NYSDEC  
Mr. Richard Jones, NYSDOH  
Ms. Jean Mescher, McKesson Corporation

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<sup>2</sup> [http://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/cp43mwdecomm.pdf](http://www.dec.ny.gov/docs/remediation_hudson_pdf/cp43mwdecomm.pdf)



Mr. Payson Long  
September 3, 2010

Mr. Douglas Morrison, Bristol-Myers Squibb Company  
Mr. Christopher Young, P.G., de maximis, inc.

**ARCADIS**

**TABLES**

**ARCADIS**

**Table 1**

Summary of Groundwater  
Monitoring Data for Methanol,  
March 1988 through April 2010

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
MW-1	3/88	370.3	355.3	<1,000
	1/89			<1,000
	11/89			<1,000
	11/90			<1,000
	11/91			<1,000
	11/92			<1,000
	8/95			<1,000
	9/98			<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000
	3/01			<1,000
	9/01			<1,000 J
	4/02			990 J
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000 J
	11/06			<500
	6/07			<500
	11/07			<500 J
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500
MW-3S	3/88	365.1	350.1	<1,000
	1/89			<1,000
	11/89			<1,000
	11/91			<1,000
	8/95			<1,000
	9/98			<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000
	3/01			<1,000
	9/01			<1,000 J
	4/02			370 J
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			150 J
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/08			<500
	6/07			<500
	11/07			<500 J
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
MW-8 <sup>A</sup> (Replaced by MW-8S) <sup>B</sup>	1/89	364.7	355.1	430,000
	11/89			300,000
	11/91			150,000
	8/95			22,000
	9/98			7,900
	2/99			16,000 JN
	7/99			17,000
	3/00			30,000 J
	9/00			14,000 J
	3/01			53,000
	9/01			8,900 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			1,200 J
	6/04			<1,000
MW-8SR	11/04	362.7	352.7	<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/06			<500
	6/07			<500
	11/07			<500
	3/08			<500 [<500]
	8/08			<500 [<500]
	3/09			<500 [<500]
	9/09			<500 [<500]
	4/10			<500 [<500]
MW-9 <sup>A</sup> (Replaced by MW-9S)	1/89	365.6	356	<1,000
	11/89			<1,000
	11/91			<1,000
	8/95			<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000
	3/01			<1,000
	9/01			<1,000 J
	4/02			370 J
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000 J
	11/06			<500
	6/07			<500
	11/07			<500 J
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			730
	4/10			<500

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
MW-17 <sup>c</sup> (Replaced by MW-17R)	11/90	365.7	356.1	<1,000
	11/91			<1,000
	11/92			<1,000
	8/95			<1,000
	8/96			<1,000
	8/97			<1,000
	2/99			<1,000
	3/00			<1,000 J
	9/00			<1,000 J
	3/01			<1,000
	9/01			<1,000
	4/02			620 J
	10/02			<1,000
	5/03			<1,000
	11/03			<1,000
	6/04			<1,000
	11/04			200 J
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/06			<500
	6/07			<500
	11/07			<500 J
MW-18	3/08			<500
	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500
	11/89	325.15	316.15	<1,000
	11/90			<1,000
	11/91			<1,000
	11/92			<1,000
	12/94			<200
	8/95			<1,000
	2/96			<1,000
	8/96			<1,000
	2/97			<1,000
	8/97			<1,000
	9/98			<1,000
	2/99			<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000 J
	3/01			<1,000
	9/01			<1,000
	4/02			720 J
	10/02			<1,000
	5/03			280 J
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/06			<500
	6/07			<500
	11/07			<500
	3/08			<500
	8/08			<500

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
MW-18 (cont'd.)	3/09	325.15	316.15	<500
	9/09			<500
	4/10			<500
MW-19	11/89	318.45	309.45	<1,000
	12/94			<200
	8/95			<1,000
	2/96			<1,000
	8/96			<1,000
	2/97			<1,000
	8/97			<1,000
	9/98			<1,000
	2/99			<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000 J
	3/01			<1,000
	9/01			<1,000
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/06			<500
	6/07			<500
	11/07			<500
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500
MW-23S	12/94	364.1	354.1	<200
	8/95			<1,000
	2/96			<1,000
	8/96			<1,000
	2/97			<1,000
	8/97			<1,000
	9/98			<1,000
	2/99			<1,000
	6/99			<1,000 J
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000 J
	3/01			<1,000
	9/01			<1,000
	4/02			<1,000
	10/02			<1,000
	5/03			380 J
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
MW-23S (cont'd.)	11/06	364.1	354.1	<500
	6/07			<500
	11/07			<500
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500
MW-23I	12/94	341.2	336.2	<200
	8/95			<1,000
	2/96			<1,000
	8/96			<1,000
	2/97			<1,000
	8/97			<1,000
	9/98			<1,000
	2/99			<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000 J
	3/01			<1,000
	9/01			<1,000
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/06			<500
	6/07			<500
	11/07			<500
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500
MW-24S <sup>c</sup> (Replaced by MW-24SR)	12/94	358.4	352.4	<1,000
	8/95			<1,000
	2/96			<1,000
	2/97			<1,000
	9/98			<1,000
	6/99			<1,000 J
	7/99			<1,000
	3/00			<1,000 J
	9/01			<1,000
	10/02			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	11/06			<500
	11/07			<500
	8/08			<500
	9/09			<500

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
MW-24D <sup>c</sup> (Replaced by MW-24DR)	12/94	334.4	341.2	<1,000
	8/95			<1,000
	2/96			<1,000
	2/97			<1,000
	9/98			<1,000
	7/99			<1,000
	9/00			<1,000 J
	9/01			<1,000
	10/02			<1,000
	10/03			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	11/06			<500
	11/07			<500
	8/08			<500
	9/09			<500
MW-25S	8/95	361.2	356.2	<1,000
	8/96			<1,000
	8/97			<1,000
	2/99			<1,000
	6/99			<1,000 J
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000 J
	3/01			<1,000
	9/01			<1,000
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	11/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/06			<500
	6/07			<500
	11/07			<500
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500
MW-25D	8/95	349.55	344.55	<1,000
	8/96			<1,000
	8/97			<1,000
	2/99			<1,000
	3/00			<1,000 J
	3/01			<1,000
	4/02			<1,000
	5/03			<1,000
	6/04			<1,000
	6/05			<1,000
	6/06			<1,000
	6/07			<500
	3/08			<500
	3/09			<500
	4/10			<500

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
MW-27	9/98	362.5	354.5	<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000 J
	3/01			<1,000
	9/01			<1,000 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000 (<1,000)
	6/06			<1,000 J (<1,000 J)
	11/06			<500 [<500]
	6/07			<500
	11/07			<500 [<500]
	3/08			<500
MW-28	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500
	9/98	363.6	355.6	2,200
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000 J
	3/01			<1,000
	9/01			<1,000 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			190 J
	6/05			<1,000
	11/05			<1,000 (<1,000)
	6/06			<500 J (<1,000 J)
	11/06			<500
	6/07			<500
	11/07			<500
MW-29	3/08			<500
	8/08			<500
	3/09			851
	9/09			<500
	4/10			<500
	9/98	362.9	345.9	<1,000
	2/99			<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000 J
	3/01			<1,000
	9/01			<1,000
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
MW-29 (cont'd.)	6/04	362.9	345.9	<1,000
	11/04			420 J
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/06			<500
	6/07			<500
	11/07			<500
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500
MW-30	9/98	363.5	355.5	<1,000
	2/99			<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000 J
	3/01			<1,000
	9/01			<1,000 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/06			<500
	6/07			<500
	11/07			<500
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500
MW-31	9/98	363.7	355.4	<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000
	3/01			<1,000
	9/01			<1,000 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000 J
	11/06			<500
	6/07			<500
	11/07			<500 J [<500 J]
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			730
	4/10			<500

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
MW-32	9/98	364	356	<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000
	3/01			<1,000
	9/01			<1,000 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000 J
	11/06			<500
	6/07			<500
	11/07			<500 J
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			1,200
	4/10			<500
MW-33	9/98	344.1	356.1	<1,000
	2/99			<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000
	3/01			<1,000
	9/01			<1,000 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000 J
	11/06			<500
	6/07			<500
	11/07			<500 J
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500
MW-34	9/98	362.7	354.7	<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000
	3/01			<1,000
	9/01			<1,000 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			180 J
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
MW-34 (cont'd.)	11/06	362.7	354.7	<500
	6/07			<500
	11/07			<500 J
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			1,000
	4/10			<500
MW-35	9/98	363	355	<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000
	3/01			<1,000
	9/01			<1,000 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			240 J
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/06			<500
	6/07			<500
	11/07			<500 J
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			1,100
	4/10			<500
MW-36	9/98	363.6	355.6	<1,000
	2/99			<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000 J
	3/01			<1,000
	9/01			<1,000 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/06			<500
	6/07			<500
	11/07			<500 J
	3/08			<500
	8/08			<500
	3/09			<500
	9/09			<500
	4/10			<500
TW-01	12/96	365.1	355.4	<1,000
	9/98			<1,000
	2/99			<1,000
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000
	3/01			<1,000

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
TW-01 (cont'd.)	9/01	365.1	355.4	<1,000 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000 J
	11/06			<500
	6/07			<500
	11/07			<500 J
	3/08			<500
	8/08			<500
	3/09			22,300
	9/09			970
	4/10			<500
TW-02 <sup>c</sup> (Replaced by TW-02R) <sup>d</sup>	12/96	363.3	353.3	<1,000
	9/98			5,000
	2/99			14,000 JN
	7/99			<1,000
	3/00			<1,000 J
	9/00			<1,000
	3/01			<1,000
	9/01			<1,000 J
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	10/03			<1,000
	6/04			<1,000
TW-02RR	11/04	363.3	353.3	<1,000
	6/05			<1,000
	11/05			<1,000
	6/06			<1,000
	11/06			<500
	6/07			<500
	11/07			<500 J
	3/08			<500 [<500]
	8/08			<500 [<500]
	3/09			<500 [<500]
	9/09			1,000 [1,200]
	4/10			<500 [<500]
PZ-4D	11/89	350.8	345.9	<1,000
	11/90			<1,000
	11/91			<1,000
	11/92			<1,000
	8/95			<1,000
	8/96			<1,000
	8/97			<1,000
	2/99			<1,000
	3/00			<1,000 J
	3/01			<1,000
	4/02			<1,000
	5/03			<1,000
	6/04			<1,000
	6/05			<1,000
	6/06			<1,000
	6/07			<500
	3/08			<500
	3/09			<500
	4/10			<500

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Methanol
		Top	Bottom	
PZ-4S	11/89	362.79	357.88	<1,000
	11/90			<1,000
	11/91			<1,000
	11/92			<1,000
	8/95			<1,000
	8/96			<1,000
	8/97			<1,000
	2/99			<1,000
	6/99			<1,000 J
	3/00			<1,000 J
	3/01			<1,000
	4/02			<1,000
	10/02			<1,000
	5/03			<1,000
	6/04			<1,000
	6/05			<1,000
	6/06			<1,000
	6/07			<500
	3/08			<500
	3/09			<500
	4/10			<500
PZ-5D	11/89	353.5	348.6	<1,000
	12/94			<200
	2/96			<1,000
	2/97			<1,000
	9/98			<1,000
	7/99			<1,000
	9/00			<1,000 J
	9/01			<1,000
	10/02			<1,000
	10/03			<1,000
	6/04			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	11/06			<500
	11/07			<500
	8/08			<500
	9/09			<500
PZ-5S	11/89	361.42	356.52	<1,000
	12/94			<200
	2/96			<1,000
	2/97			<1,000
	9/98			<1,000
	6/99			<1,000
	7/99			<1,000 J
	9/00			<1,000 J
	9/01			<1,000
	10/02			<1,000
	10/03			<1,000
	11/04			<1,000
	6/05			<1,000
	11/05			<1,000
	11/06			<500
	11/07			<500
	8/08			<500
	9/09			<500

See notes on page 13.

**Table 1. Summary of Groundwater Monitoring Data for Methanol, March 1988 through April 2010,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

**General Notes:**

1. Concentrations are presented in micrograms per liter, which is equivalent to parts per billion.
2. Only sampling dates with methanol results are shown. Methanol detections are indicated by bold-faced type.
3. Replacement wells for MW-8 and MW-9 were installed 8/95.
4. Replacement wells for MW-17, MW-24S, MW-24D and TW-02 were installed 11/97 - 12/97.
5. The laboratory analytical results for the duplicate sample collected from monitoring well MW-23S during the 7/99 sampling event indicated the presence of methanol at 5.1

**Superscript Notes:**

- A = Wells/piezometers MW-8 and MW-9 were abandoned during OU No.1 soil remediation activities (1994).  
B = Wells MW-8S and TW-02R were abandoned in 8/04 and replacement wells MW-8SR and TW-02RR were installed in 8/04.  
C = Wells/piezometers MW-17, MW-24S, MW-24D, and TW-02 were abandoned 11/97 - 1/98.

**Abbreviation:**

AMSL = Above mean sea level (National Geodetic Vertical Datum of 1929).

**Analytical Qualifiers:**

- J = The compound was positively identified; however, the numerical value is an estimated concentration only.  
JN = The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.  
< = Compound was not detected at the listed quantitation limit.



**ARCADIS**

**Table 2**

Summary of Groundwater  
Monitoring Data for Select Wells,  
March 1988 through April 2010



**Table 2. Summary of Groundwater Monitoring Data for Select Wells, March 1988 through April 2010, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)	Top	Bottom	Acetone	Benzene	Toluene	Ethylbenzene	Xylene <sup>A</sup>	Methanol	Trichloroethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)		356.3	370.3	356.3										
MW-1	3/88	<100	<1	<1	50	1	5	5	5	NA	5	5	1	5
	1/89	<100	<1	<1						<1,000	<1	<10	<10	<1
	11/89	<100	<1	<1						<1,000	<1	<11	<11	<1
	11/90	<100	<1	<1						<1,000	<1	<10	<10	<1
	11/91	<100	<1	<1						<1,000	<1	<10	<10	<1
	11/92	<100	<1	<1						<1,000	<1	<10	<10	<1
	8/95	<1,000	<5	<5						<1,000	<5	<5	<10	<10
	9/98	<10	<10	<10						<1,000	<10	<10	<10	<10
	7/99	<10	<10	<10						<1,000	<10	<10	<10	<10
	3/00	<10	<10	<10						<1,000	<10	<5	<10	<10
	9/00	8 J	<10 J	3 J						<1,000	<10 J	<10 J	<10 J	<10 J
	3/01	<10	<10	<10						<1,000	<10	<10	<10	<10
	9/01	<10	<10	<10						<1,000	<10	<10	<10	<10
	4/02	<12	<5.0	<5.0						990 J	<5	<5	<5	<5
	10/02	<25	<10	<10						<1,000	<10	<5	R	<10
	5/03	<12	<5	<5						<1,000	<5	<5	<5	<5
	10/03	<12	<5	<5						<1,000	<5	2 J	<5	<5
	6/04	<25	<10	<10						<1,000	<10	<5	<10	<10
	11/04	--	--	--						<1,000	--	<5	--	--
	6/05	<5.0 J	<1.0	<4.0						<5.0	<1.0	0.2 J	<1.0	<3.0
	11/05	<1.3 J	<0.3	<0.4						<0.5	<1,000	<0.4	<1.0 J	<0.5
	6/06	<5.0 J	<1.0 J	<5.0 J						<5.0 J	<1,000 J	<1.0 J	<1.0 J	<3.0 J
	11/06	<5.0	<1.0	<5.0						<5.0	<500	<1.0	<1.0	<3.0
	6/07	<5	<1.0	<5.0						<5.0	<500	<1.0	<5.0	<3.0
	11/07	<5.0	<1.0	<5.0						<5.0	<500 J	<1.0	<5.0	<3.0
	3/08	<5.0 J	<1.0	<5.0						<5.0	<500	<1.0	<5.0	<3.0
	8/08	7.4	<1.0	<5.0						<5.0	<500	<1.0	<5.6	<3.0
	3/09	<10	<1.0	<1.0						<3.0	<500	<1.0	<5.0	<1.0
	9/09	8.9 J	<1.0	<1.0						<3.0	<500	<1.0	<5.0	<1.0
	4/10	<10	<1.0	<1.0						<3.0	<500	<1.0	<5.0	<1.0
	3/88	<100	<1	<1						<1,000	50	<10	<10	110
	1/89	<10,000	<100	120						<1,000	1,000	<11	5,570	4,700
	11/89	<10,000	<100	<100						<1,000	100	<52	440	2,700
	11/91	2,900	10	10	4.0	31				<1,000	<10	790	170	<10
	8/95	<1,000	<5	<5						<5	<5,000	<5,0	15	2,0 J
	9/98	<10	<10	<10						<10	<1,000	<10	<10	<10
	7/99	<10	1 J	0.7 J						<10	<1,000	<10	9 J	<10
	3/00	<10 J	<10	<10						<10	<1,000 J	<10	<10	<10
	9/00	<10 J	1 J	2 J						<10 J	<1,000	2 J	1 J	<10 J
	3/01	<10	<10	<10						<10	<1,000	<10	<10	<10
	9/01	3 J	8 J	1 J	2 J					<1,000 J	<10	690 D (69) <sup>B</sup>	4 J	<10
	4/02	<12	<5	<5						<5	370 J	<5,0	1.7 J	<5
	10/02	<25	<10	<10						<20	<1,000	<10	<5	R
	5/03	<12	<5	<5						<5	<1,000	<5	<5	<5
	10/03	<12	<5	<5						<10	<1,000	<5	4 J	<5
	6/04	6.0 J	<10	<10						<20	<1,000	<10	0.8 J	<6
	11/04	<25	<10	<10						<20	150 J	<10	4 J	<5

See Notes on Page 7.

**Table 2. Summary of Groundwater Monitoring Data for Select Wells, March 1988 through April 2010, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Benzene	Toluene	Ethylbenzene	Xylene <sup>A</sup>	Methanol	Trichloroethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom	Acetone								
MW-3S (Cont.)	6/05	<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<0.4	<1.0	<1.0	<3.0
	11/05	<1.3 J	<0.3	<0.4	<0.5	<0.4	<1,000	<1,000	<1.0	<1.0	<1.0	<0.5
	6/06	<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1,000	<1.0	<1.0	<1.0	<3.0
	11/08	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0	<1.0	<3.0
	6/07	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<1.0	<3.0
	11/07	<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<0.5	<3.0
	3/08	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<0.5	<3.0
	8/08	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<0.6	<3.0
	3/09	<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0	<1.0
	9/09	<10	0.17 J	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0	<1.0
	4/10	<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0	<1.0
MW-19	3/18/99	318.45	309.45	<100	<1	<1	<1	<1,000	<1	<10	<10	<1
	12/94	<10	<5	<5	<5	<5	<200	<5	<5	<10	<10	<5
	8/95	<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10	<12
	10/95	NA	<5	<5	<5	<5	NA	<5	NA	NA	NA	<5
	2/96	<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<10
	8/96	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<10
	2/97	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<10
	8/97	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<10
	9/98	<10	<10	<10	<10	<10	<1,000	<10	<5 <sup>C</sup>	5 J	<11	<5
	2/99	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<5
	7/99	<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<5	<10	<10	<10 J
	3/00	<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10	<10
	9/00	<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10	<10 J
	3/01	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<10
	9/01	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<10
	4/02	<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5	<5
	10/02	<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 <sup>D</sup>	<5 <sup>D</sup>	<10	<10
	5/03	<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5	<5
	10/03	<11	<5	<5	<5	<10	<1,000	<5	51 J	16 J	<5	<5
	6/04	<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10	<10
	11/04	<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10	<10
	6/05	<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0	<3.0
	11/05	<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<1.0	<3.0
	6/06	<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<1.0	<3.0
	11/06	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0	<1.0	<3.0
	6/07	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.5	<1.1	<3.0	<3.0
	11/07	<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<0.5	<3.0
	3/08	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<0.5	<3.0
	8/08	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<0.6	<3.0
	3/09	<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<0.5	<1.0
	9/09	<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0	<1.0
	4/10	<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0	<1.0

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**Table 2. Summary of Groundwater Monitoring Data for Select Wells, March 1988 through April 2010, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Toluene	Ethyl-benzene	Xylene <sup>A</sup>	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom	Acetone	Benzene						
MW-24S <sup>E</sup> (Replaced by MW-24SR)	12/94	368.4	352.4	<10	<5	<5	<5	<1,000	<5	<5	<5
	8/95			<1,000	<5	<5	<5	<1,000	<5	<5	<5
	2/96			<1,000	<10	<10	<10	<1,000	<10	<10	<10
	2/97			<1,000	<10	<10	<10	<1,000	<10	<10	<10
	9/98			<10	<10	<10	<10	<1,000	<10	<10	<10
	6/99			<10 J	<10	<10	<10	<1,000 J	<10 J	<10 J	<10 J
	7/99			<10 J	<10	<10	<10	<1,000	<10 J	<10 J	<10 J
	3/00			<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10 J
	9/01			<10	<10	<10	<10	<1,000	<10	<10	<10
	6/02 <sup>F</sup>			NS	NS	NS	NS	NS	ND	ND	NS
	10/02			<25 J	<10	<10	<20 J	<1,000	<10	<5 <sup>D</sup>	<10
MW-24D <sup>E</sup> (Replaced by MW-24DR)	10/03			<12	<5	<5	<10	<1,000	<5	<6	<5
	6/04 <sup>G</sup>			<25	<10	<10	<20	<1,000	<10	<5	<10
	11/04			--	--	--	--	<1,000	--	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1.0	<1.0 J	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<1.0	<1.0 J	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<1.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<1.0	<0.6	<3.0
	9/09			<10	<1.0	<1.0	<3.0	<500	<1.0	<1.0	<1.0
	12/94	334.4	341.2	<10	<5	<5	<5	<1,000	<5	<5	<5
	8/95			<1,000	<5	<5	<5	<1,000	<5	<5	<5
	2/96			<1,000	<10	<10	<10	<1,000	<10	<5	<10
MW-25S	2/97			<1,000	<10	<10	<10	<1,000	<10	<5	<10
	9/98			<10	<10	<10	<10	<1,000	<10	<5	<10
	7/99			<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10 J	<10 J
	9/00			<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10 J
	9/01			<10	<10	<10	<10	<1,000	<10	<10	<10
	6/02 <sup>F</sup>			NS	NS	NS	NS	NS	ND	ND	NS
	10/02			<25 J	<10	<10	<20 J	<1,000	<10	<5 <sup>D</sup>	<10
	10/03			<12	<5	<5	<10	<1,000	<5	<5	<5
	11/04			--	--	--	--	<1,000	--	<5	--
	6/05			<5 J	<1	<5	<4	<5	<1	<1	<3
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1.0	<1.1 J	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<1.0	<1.0 J	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<1.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<1.0	<0.6	<3.0
	9/09			<10	<1.0	<1.0	<1.0	<500	<1.0	<1.0	<1.0
	10/95	361.2	356.2	<1,000	<5	<5	<5	<1,000	<5	<0.5 J	<10
	8/96			NA	<5	<5	<5	NA	<5	<5	<5
	8/97			<10	<10	<10	<10	<1,000	<10	<5	<10
	2/99			<10	<10	<10	<10	<1,000	<10	130	<10 J
	6/99			<10 J	<10	<10	<10	<1,000 J	<10	110 J	<10 J
	7/99			<10 J	<10	<10	<10	<1,000	<10	21 J	<10 J
	3/00			<10	<10	<10	<10	<1,000	<10	5 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<1,000 J	<10	<5 J	<10

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**Table 2. Summary of Groundwater Monitoring Data for Select Wells, March 1988 through April 2010, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Benzene	Toluene	Ethylbenzene	Xylene <sup>A</sup>	Methanol	Trichloroethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom									
MW-25S (Cont.)												
9/01	3/01	<10	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
4/02		<10	<5	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
10/02		<25	<10	<10	<10	<20	<1,000	<10	<5 <sup>D</sup>	<5 <sup>D</sup>	<10	<10
5/03		<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5	<5
11/03		<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5	<5
6/04		<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10	<10
11/04		-	-	-	-	-	<1,000	-	<5	<5	-	-
6/05		<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0	<3.0
11/05		<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0	<3.0
6/06		<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0	<3.0
11/06	R	<1.0	<5.0	<4.0	<5.0	<5.0	<500	<1.0	<1.0	<1.0	<3.0	<3.0
6/07		<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<5.0	<3.0	<3.0
11/07		<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<5.0	<3.0	<3.0
3/08		<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<5.0	<3.0	<3.0
8/08		<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.2	<5.2	<3.0	<3.0
3/09		<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<5.0	<1.0	<1.0
9/09		<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<6.0	<6.0	<1.0	<1.0
4/10		<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<5.0	<1.0	<1.0
MW-25D		349.55	344.55	<1.000	<5	<5	<5	<1,000	<5	<5	1 J	<5
10/95		NA	<5	<5	<5	<5	NA	3 J	<5	<10	<5	<5
8/96	15	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<10
8/97		<10	<10	<10	<10	<10	<1,000	<10	<5	<11	<10	<10
2/99		<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	<10 J
3/00		<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10	<10
3/01		<10	<10	<10	<10	<10	<1,000	<10	5 J	<10	<10	<10
4/02		<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5	<5
5/03		<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5	<5
6/04		<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10	<10
6/05		<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0	<3.0
6/06		<5.0 J	<1.0	0.7 J	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0	<3.0
6/07		12 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<5.0	<1.0	<3.0
3/08		<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<5.0	<3.0	<3.0
3/09		<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<5.0	<1.0	<1.0
4/10		<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<5.0	<1.0	<1.0
9/98	362.9	345.9	<10	<10	<10	<10	2 J	<1,000	<10	<10	13	<10
2/99		7 J	<10	<10	<10	<10	1 J	<1,000	<10	5 J	4 J	<10
7/99		<10	<10	<10	<10	<10	<1,000	<10	2 J	2 J	4 J	<10
3/01		<10	<10	<10	<10	<10	<1,000 J	<10 J	<1,000 J	450 D	6 J	<10 J
9/01		<10	<10	<10	<10	<10	<1,000	<10	30	4 J	<10	<10
4/02		<10	<5	<5	<5	<10	<1,000	<10	7 J	2 J	2 J	<10
3/00		<10	<10	<10	<10	<10	<1,000 J	<10 J	<1,000 J	450 D	6 J	<10 J
9/00		<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	24 J	4 J	<10 J	<10 J
3/01		<10	<10	<10	<10	<10	<1,000	<10	30	4 J	<10	<10
9/01		<10	<10	<10	<10	<10	<1,000	<10	7 J	2 J	2 J	<10
4/02		<10	<5	<5	<5	<10	<1,000	<10	3 J	9	9	<6
10/02		<25 J	<10	<10	<10	<20	<1,000	<10	8	R	4 J N	<3
5/03		<12	<5	<5	<5	<10	<1,000	<5	19	1 J	<3	<3
10/03		<12	<5	<5	<5	<10	<1,000	<5	2 J	<5	<5	<5
6/04		<25	<10	<10	<10	<20	<1,000	<10	3 J	<5	<10	<10
11/04		<120	<50	<50	<50	<100	420 J	<50	<5	<5	<50	<3.0
6/05		<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<1.0	<3.0

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Table 2. Summary of Groundwater Monitoring Data for Select Wells, March 1988 through April 2010, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Benzene	Toluene	Ethylenetoluene	Xylene <sup>A</sup>	Methanol	Trichloroethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom	Acetone								
MW-29 (Cont.)	11/05	<5.0 J	<1.0	<5.0	<4.0	<5.0	<5.0	<1,000	<1.0	<1.0 J	<1.0 J	<3.0
	6/06	<5.0	<1.0	<5.0	<4.0	<5.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	5,4	<1.0	<5.0	<4.0	<5.0	<5.0	<5.0	<500	<1.0	0.4 J	<1.0	<3.0
	6/07	<5.0	<1.0	<5.0	<4.0	<5.0	<5.0	<500	<1.0	<5.5	<1.1	<3.0
	11/07	<5.0 J	<1.0	<5.0	<4.0	<5.0	<5.0	<500	<1.0	<5.0 J	<0.5 J	<3.0
	3/08	<5.0	<1.0	<5.0	<4.0	<5.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08	<5.0	<1.0	<5.0	<4.0	<5.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	<10	<1.0	<1.0	<5.0	<4.0	<5.0	<5.0	<500	<1.0	<5.0	<0.5	<1.0
	3/09	<10	<1.0	0.16 J	<1.0	<3.0	<3.0	<500	<1.0	<5.0	0.29 J	<1.0
	9/09	<10	<1.0	<1.0	<1.0	<3.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	4/10	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<500	<1.0	<5.0	<1.0	<1.0
PZ-4D	11/89	350.8	345.9	<100	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90	<100	<1	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91	<100	<1	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92	<100	<1	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	8/95	<1,000	<5	<5	<5	<5	<5	<1,000	<5	<5	0.8 J	<5
	10/95	NA	<5	<5	<5	<5	<5	NA	<5	<5	<10	<5
	8/96	<10	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	8/97	<10	<10	<10	<10	<10	<10	<1,000	<10	<6	<12	<10
	2/99	<10	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00	<10	<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	3/01	<10	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02	<10	<5	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	5/03	<12	<5	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04	<25	<10	<10	<10	<10	<20	<1,000	<10	<5	<5	<10 J
	6/05	<5.0 J	<1.0	<5.0	<4.0	<5.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/06	<5.0	<1.0	0.5 J	<4.0	<5.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/07	<5.0	<1.0	<5.0	<4.0	<5.0	<5.0	<500	<1.0	<5.5	<1.1	<3
	3/08	<5.0	<1.0	<5.0	<4.0	<5.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/09	<10	<1.0	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	4/10	<10	<1.0	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<3.0 J
	6/10	<10	<1.0	<1.0	<1.0	<1.0	<3.0	NS	<1.0	NS	NS	<1.0
	11/89	362.79	357.88	<100	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90	<100	<1	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/91	<100	<1	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/92	<100	<1	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	8/95	<1,000	<5	<5	<5	<5	<5	<1,000	<5	<5	<10	<18
	10/95	NA	<5	<5	<5	<5	<5	NA	<5	NA	NA	<5
	8/96	<10	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97	<10	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/99	<10	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	6/99	<10	<10	<10	<10	<10	<10	<1,000 J	<10	<10 J	<10 J	<10 J
	3/00	<10	<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	3/01	<10	<10	<10	<10	<10	<10	<1,000	<10	<10	3 J	<10
	4/02	<14	<5	<5	<5	<5	<10	<1,000	<5	8 (<5) F	<5 (<5) F	<5
	10/02	<25 J	<10	<10	<10	<10	<20 J	<1,000	<10	<5 D	<5 D	<10
	5/03	<12	<5	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04	<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<5	<10
	6/05	<5.0 J	<1.0	<5.0	<4.0	<4.0	<1,000	<1.0	<1.0	<1.0	<1.0	<3.0

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**Table 2. Summary of Groundwater Monitoring Data for Select Wells, March 1988 through April 2010, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Benzene	Toluene	Ethylbenzene	Xylene <sup>A</sup>	Methanol	Trichloroethene	Aniline	<i>N,N</i> -Dimethyl-aniline	Methylene Chloride
		Top	Bottom									
PZ-4S (Cont.)	6/06	<5.0	<1.0	0.6 J	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<1.0	<3.0
	6/07	<5.0	<1.0	0.6 J	<4.0	<5.0	<500	<1.0	<5.5	<1.1	<1.1	<3.0
	3/08	<5.0	<1.0	0.6 J	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<0.5	<3.0
	3/09	<10	<1.0	0.6 J	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<0.5	<1.0
	4/10	<10	<1.0	0.6 J	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.1	<1.7
	6/10	<10 J	<1.0	0.6 J	<1.0	<3.0	NS	<1.0	NS	NS	NS	<1.0
	11/89	353.5	348.6	<100	<1	<1	<1,000	<1	<1,000	<10	<10	<1
PZ-5D	12/94	<10	<5	<5	<5	<5	<200	<5	<5	<10	<10	<5
	2/96	<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<10
	2/97	<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<10
	9/98	<10	<10	<10	<10	<10	<1,000	<10	<5 <sup>C</sup>	<10	<10	<12
	7/99	<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10	<10	<10	<10 J
	9/00	<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10	<10 J
	9/01	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	<10
	10/02	<25 J	<10	<10	<20 J	<10	<1,000	<10	<5 <sup>D</sup>	<5 <sup>D</sup>	<10	<5
	10/03	<12	<5	<5	<5	<10	<1,000	<5	46	<5	<5	<5
	6/04 J	<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<5	<10
	11/04	--	--	--	--	--	<1,000	--	<5	<5	<5	--
	6/05	<5.0 J	<1.0	<4.0	<5.0	<5.0	<1,000	<1.0	<1.0	<1.0	<1.0	<3.0
	11/05	<5.0 J	<1.0	0.7 J	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<1.0	<3.0
	11/06	<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0	<1.0	<3.0
	11/07	<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<0.5	<3.0
	8/08	<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.1	<0.5	<0.5	<3.0
	9/09	<10 J	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0
PZ-5S	11/89	361.42	356.52	<100	<1	<1	<1,000	<1	<11	<11	<1	<1
	12/94	<10	<5	<5	<5	<5	<200	<5	<5	<10	<10	<5
	2/96	<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<10
	5 J	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	<10
	9/98	<10	<10	<10	<10	<10	<1,000	<10	<5 <sup>C</sup>	<10	<10	<12
	6/99	<10 J	<10	<10 J	<10 J	<10 J	<1,000	<10	<10 J	<10 J	<10	<10 J
	7/99	<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10 J	<10	<10 J
	9/00	<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10 J	<10	<10 J
	9/01	<7 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	<10
	10/02	<25 J	<10	<10	<20 J	<10	<1,000	<10	<5 <sup>D</sup>	<5 <sup>D</sup>	<10	<5
	10/03	<12	<5	<5	<10	<10	<1,000	<5	<5	<5	<5	<5
	11/04	--	--	--	--	--	<1,000	--	<5	<5	<5	--
	6/05	<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<1.1	<3.0
	11/06	<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<0.5	<3.0
	11/07	<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<0.5	<3.0
	8/08	<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<0.5	<3.0
	9/09	<10 J	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0

See Notes on Page 7.

**Table 2. Summary of Groundwater Monitoring Data for Select Wells, March 1988 through April 2010, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

**General Notes:**

1. Concentrations are presented in micrograms per liter, which is equivalent to parts per billion.
2. Compounds detected are indicated by bold-faced type.
3. Deliberations exceeding New York State Department of Environmental Conservation (NYSDDEC) Groundwater Standards (TOGS 1.1.1) are indicated by shading.
4. The initial volatile organic compound results were irratifiable due to laboratory equipment failure for monitoring location MW-29; however, results for subsequent dilutions of these groundwater samples were valid, but the detection limits were high. This well was not resampled.
5. N,N-dimethylaniline data for 10/02 sampling event for MW-1, MW-3S, and MW-29 were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. These wells are not perimeter monitoring locations and were not resampled.
6. Volatile organic compound (VOC) results for the 11/04 sampling event were inadvertently lost due to laboratory equipment failure for monitoring locations MW-1, MW-24DR, MW-24SR, MW-25, PZ-5D and PZ-5S. These wells were not resampled.

**Superscript Notes:**

- <sup>A</sup> = Data presented are total xylenes (m- and p-xylenes and o-xylenes). For the 1995 data, the listed quantitation limit applies to the analyses conducted for m- and p-xylenes and o-xylenes.
- <sup>B</sup> = Because aniline was detected at monitoring well MW-3S at a concentration of 650 ug/l during the September 2001 sampling event, this well was resampled for aniline on November 8, 2001. Aniline was detected in MW-3S during the November 8, 2001 resampling event at a concentration of 69 ug/l.
- <sup>C</sup> = MW-19, MW-24DR, MW-24SR, PZ-4S and PZ-5D wells/piezometers were resampled for aniline during 12/98, because the 9/98 results were rejected due to laboratory error.
- <sup>D</sup> = MW-19, MW-24DR, MW-24SR, MW-25S, PZ-4S, PZ-5S and PZ-5D wells/piezometers were resampled for aniline and N,N-dimethylaniline during 1/03, because the 1/02 results were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. These wells and piezometers are perimeter monitoring locations.
- <sup>E</sup> = Wells MW-24S and MW-24D were abandoned 11/97 - 1/98.
- <sup>F</sup> = PZ-4S was resampled for aniline and N,N-dimethylaniline on June 18, 2002, because N,N-dimethylaniline and/or aniline was detected during the April 2002 sampling event. The results of this additional sampling event are shown in parenthesis. MW-24SR and MW-24DR were also sampled for aniline and N,N-dimethylaniline on June 18, 2002, because N,N-dimethylaniline and/or aniline was detected at nearby perimeter monitoring locations during the April 2002 sampling event.
- <sup>G</sup> = MW-24SR and PZ-5D well and piezometer were sampled during the June 2004 sampling event because N,N-dimethylaniline and/or aniline was detected at nearby perimeter monitoring locations during the October 2003 sampling event.

**Abbreviations:**

AMSL = Above mean sea level (National Geodetic Vertical Datum of 1929).

NA = Not available.

NS = Not sampled.

TOGS = Technical & Operational Guidance Series.

**Analytical Qualifiers:**

D = Indicates the presence of a compound in a secondary dilution analysis.

J = The compound was positively identified; however, the numerical value is an estimated concentration only.

JN = The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

L = Compound was not detected at the listed quantitation limit.

R = The sample results were rejected.

— = Sample results are not available. (See Note 7.)



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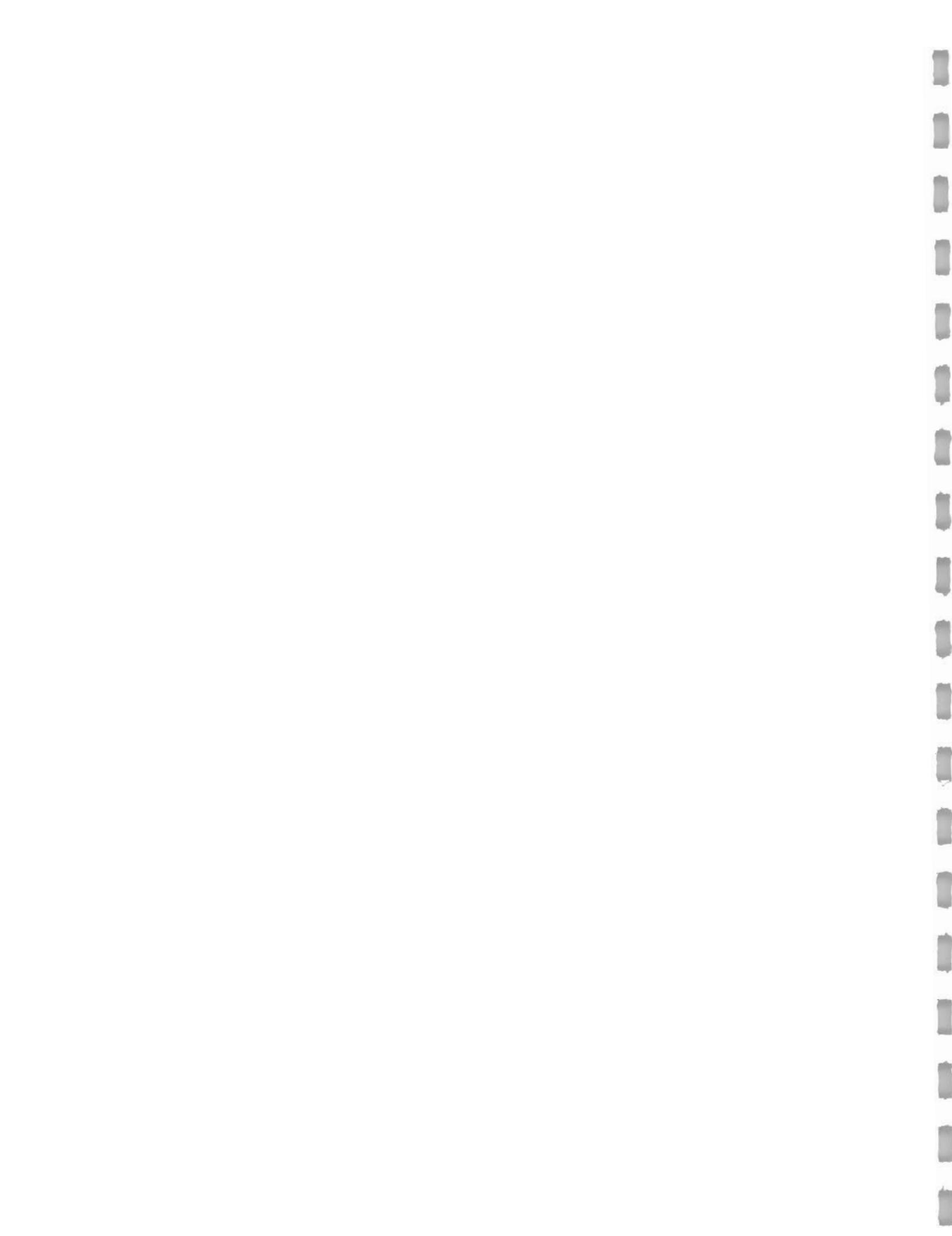
**Table 3**

Revised Long-Term Hydraulic and  
COC Process Control Monitoring  
Schedule



**Table 3. Proposed Wells to Abandon, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

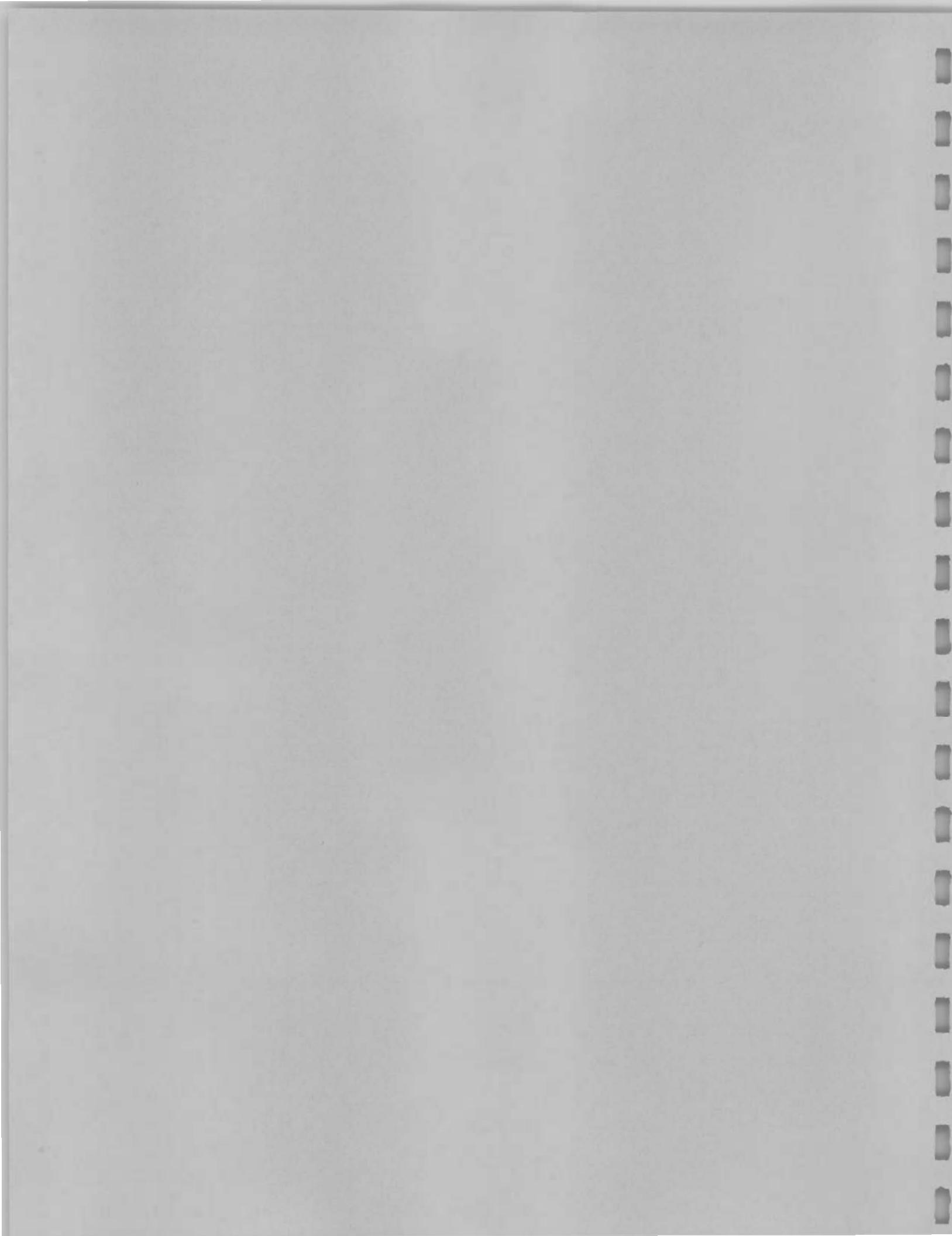
- MW-1
- MW-2S
- MW-3S
- MW-4S
- MW-6S
- MW-13S
- MW-15S
- MW-19
- MW-22
- MW-26S
- MW-29
- PZ-4D
- PZ-4S
- PZ-5S
- PZ-9S



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**Table 4**

Revised Long-Term Hydraulic and  
COC Process Control Monitoring  
Schedule



**Table 4. Revised Long-Term Hydraulic and COC Process Control Monitoring Schedule,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

Monitoring Location	Annual Sampling Schedule	
	First Sampling Event	Second Sampling Event
<b>Upgradient</b>		
MW-1	C	C
MW-3S	C	C
MW-3D	H	H
<b>Area 1</b>		
TW-01	C	C
MW-6D	H	H
MW-9S	C	C
MW-9D	H	H
MW-31	C	C
MW-32	C	C
MW-33 (1)	C	C
PZ-F	H	H
PZ-G	H	H
PZ-HR	H	H
PZ-P	H	H
PZ-Q	H	H
PZ-R	H	H
PZ-S	H	H
<b>Area 2</b>		
TW-02RR	C	C
PZ-9D	H	H
MW-34	C	C
MW-35	C	C
MW-36 (1)	C	C
PZ-I	H	H
PZ-J	H	H
PZ-T	H	H
PZ-U	H	H
PZ-V	H	H
PZ-W	H	H
<b>Area 3</b>		
MW-8SR (1)	C	C
MW-27 (1)	C	C
MW-28	C	C
MW-29	G	G
MW-30 (1)	C	C
PZ-A	H	H
PZ-B	H	H
PZ-C	H	H
PZ-D	H	H
PZ-E	H	H
PZ-K	H	H
PZ-L	H	H

See Notes on Page 2.

**Table 4. Revised Long-Term Hydraulic and COC Process Control Monitoring Schedule,  
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York**

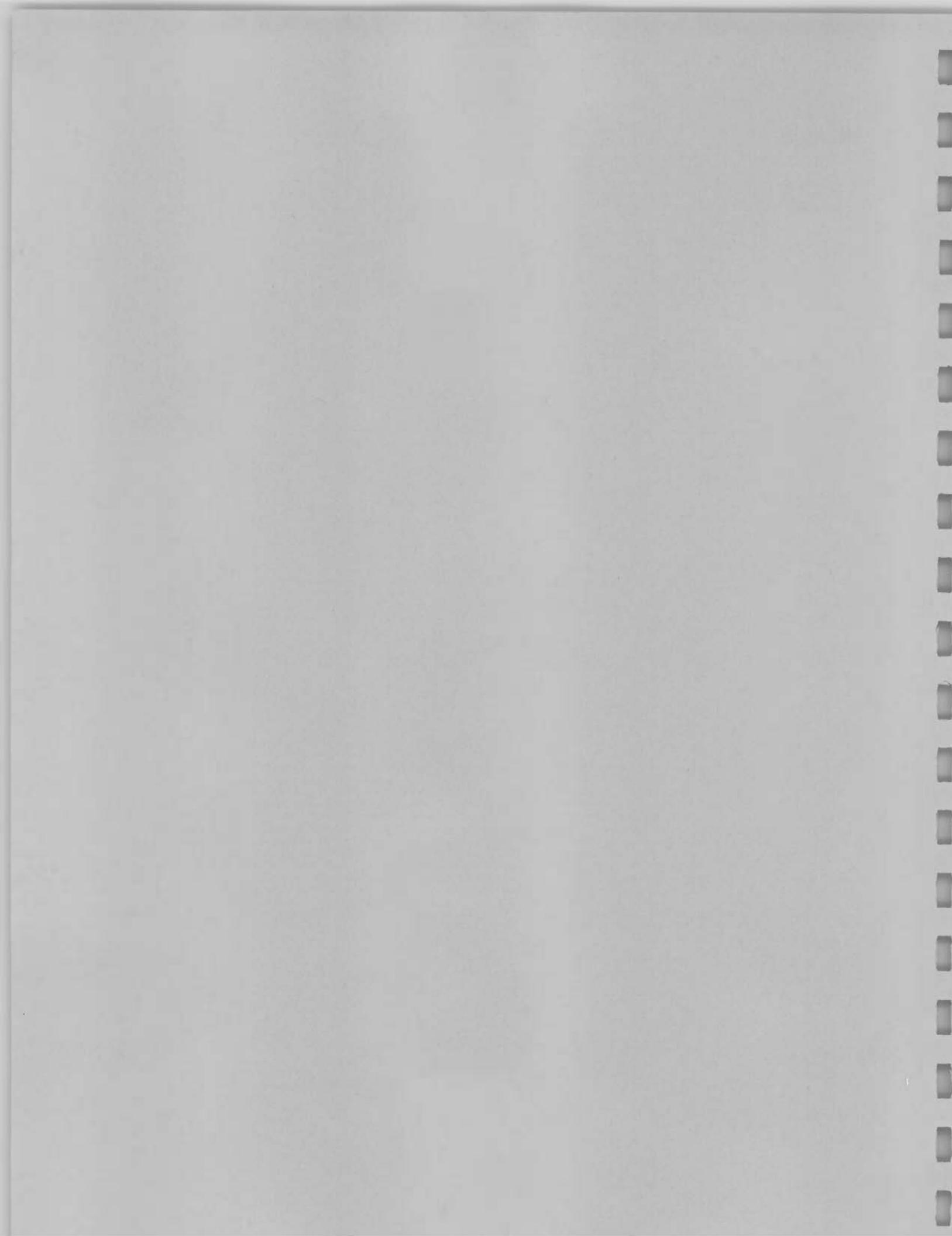
Monitoring Location	Annual Sampling Schedule	
	First Sampling Event	Second Sampling Event
<b>Area 3 (Cont'd.)</b>		
PZ-M	H	H
PZ-N	H	H
PZ-O	H	H
MW-11S	H	H
MW-11D	H	H
<b>Downgradient Perimeter Monitoring Locations</b>		
MW-17R	C	C
MW-18	C, H	C, H
MW-19	C, H	C, H
MW-23I	C, H	C, H
MW-23S	C, H	C, H
MW-24SR	H	C, H
MW-24DR	H	C, H
MW-25S	C, H	C, H
MW-25D	C, H	H
PZ-4S (1)	C	NM
PZ-4D (1)	C, H	H
PZ-5S	NM	C
PZ-5D	H	C, H

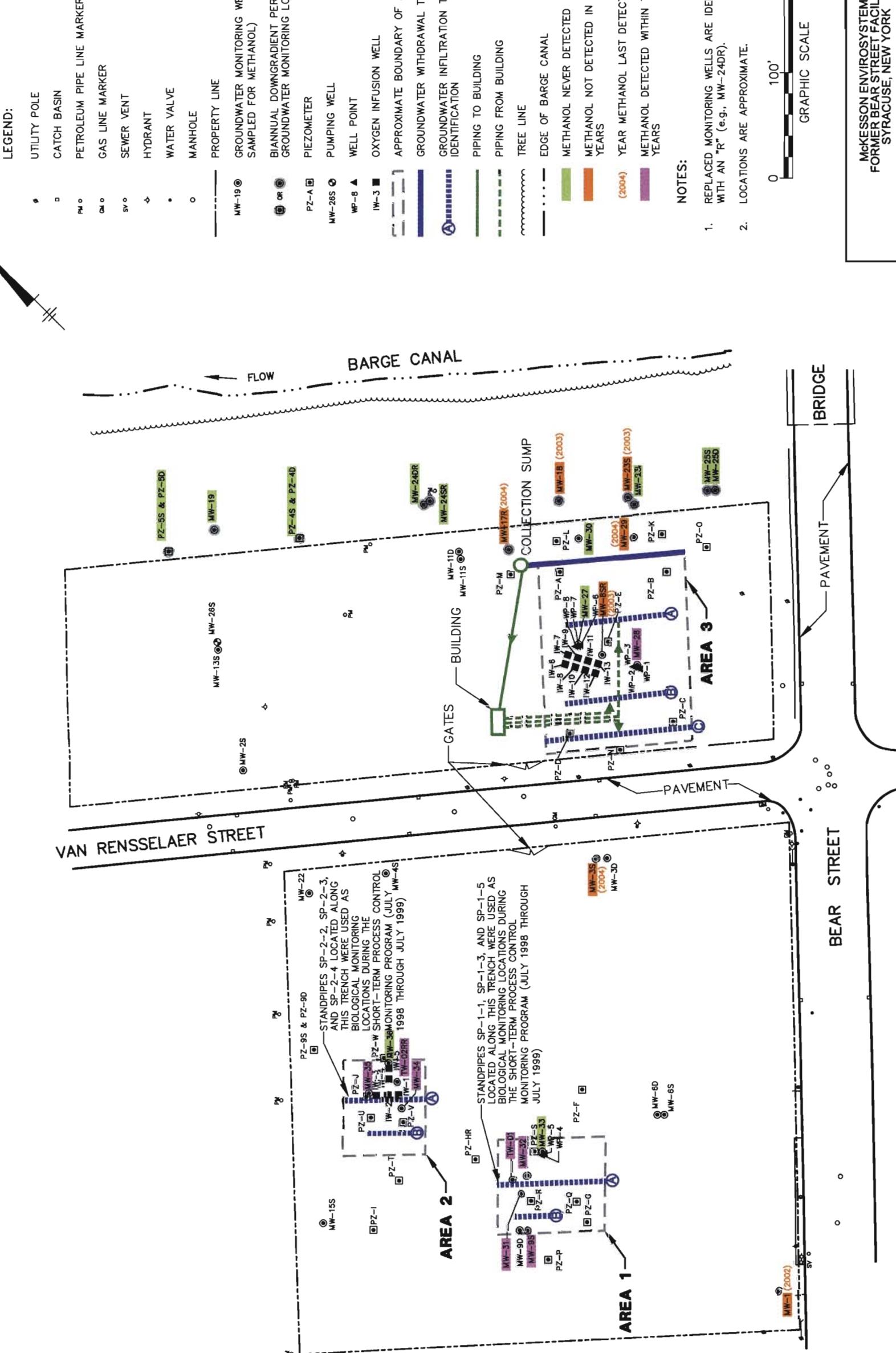
**Notes:**

1. Methanol not analyzed for in chemical of concern (COC) monitoring.
2. H = Hydraulic monitoring (groundwater level measurements).
3. C = Monitoring for chemicals of concern (COCs).
4. NM = Not monitored.
5. The hydraulic monitoring identified in this table will be conducted on a semi-annual basis. The hydraulic monitoring also includes measuring the conductivity of groundwater recovered from Area 3 from a sampling port located before the equalization tank.
6. Field groundwater parameters including pH, temperature, conductivity, dissolved oxygen, and oxidation/reduction potential are measured during each COC sampling event.
7. Each of the monitoring wells and piezometers used for hydraulic and COC monitoring during the semi-annual monitoring event are checked for the presence (if any) of non-aqueous phase liquid.
8. Based on the results obtained, the scope and/or the frequency for the hydraulic and/or COC components of the long-term process control monitoring program, as detailed herein, may be modified. Any modifications would be made in consultation with the New York State Department of Environmental Conservation (NYSDEC).
9. This table is based on the NYSDEC-approved Operation and Maintenance Plan (Blasland, Bouck & Lee, Revised August 1999), including the NYSDEC-approved December 29, 1999 Addendum with the modifications detailed in the October 2004 Biannual Process Control Monitoring Report.

**ARCADIS**

**FIGURES**



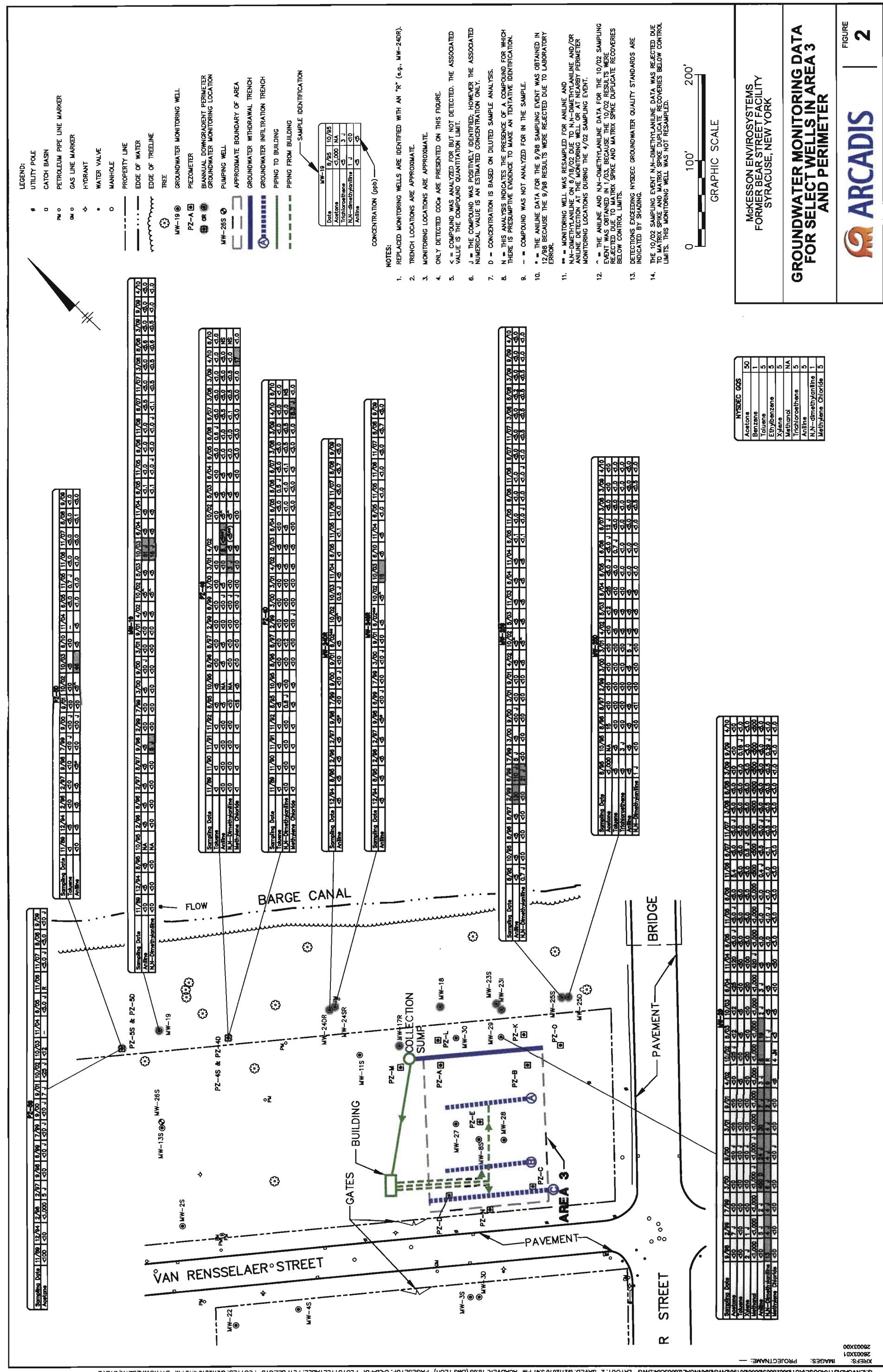


McKESSON ENVIRONMENTAL SYSTEMS  
FORMER BEAR STREET FACILITY  
SYRACUSE, NEW YORK

## METHANOL IN GROUNDWATER



FIGURE  
1



2



2

## **GROUNDWATER MONITORING DATA FOR SELECT WELLS IN AREA 3 AND PERIMETER**

MCKESSION ENVIRONMENTAL SYSTEMS  
FORMER BEAR STREET FACILITY  
SYRACUSE, NEW YORK

**MCKELESSON ENVIROSYSTEMS**  
**FORMER BEAR STREET FACILITY**  
**SYRACUSE, NEW YORK**

NYSDEC GOS	50
Acetone	1
Benzene	5
Toluene	3
Ethylbenzene	5
Xylene	NA
Methylal	NA
Methylcyclohexene	5
Aniline	5
N,N-dimethylaniline	1
Methylene Chloride	5

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XREFS:  
28003X01  
28003X00

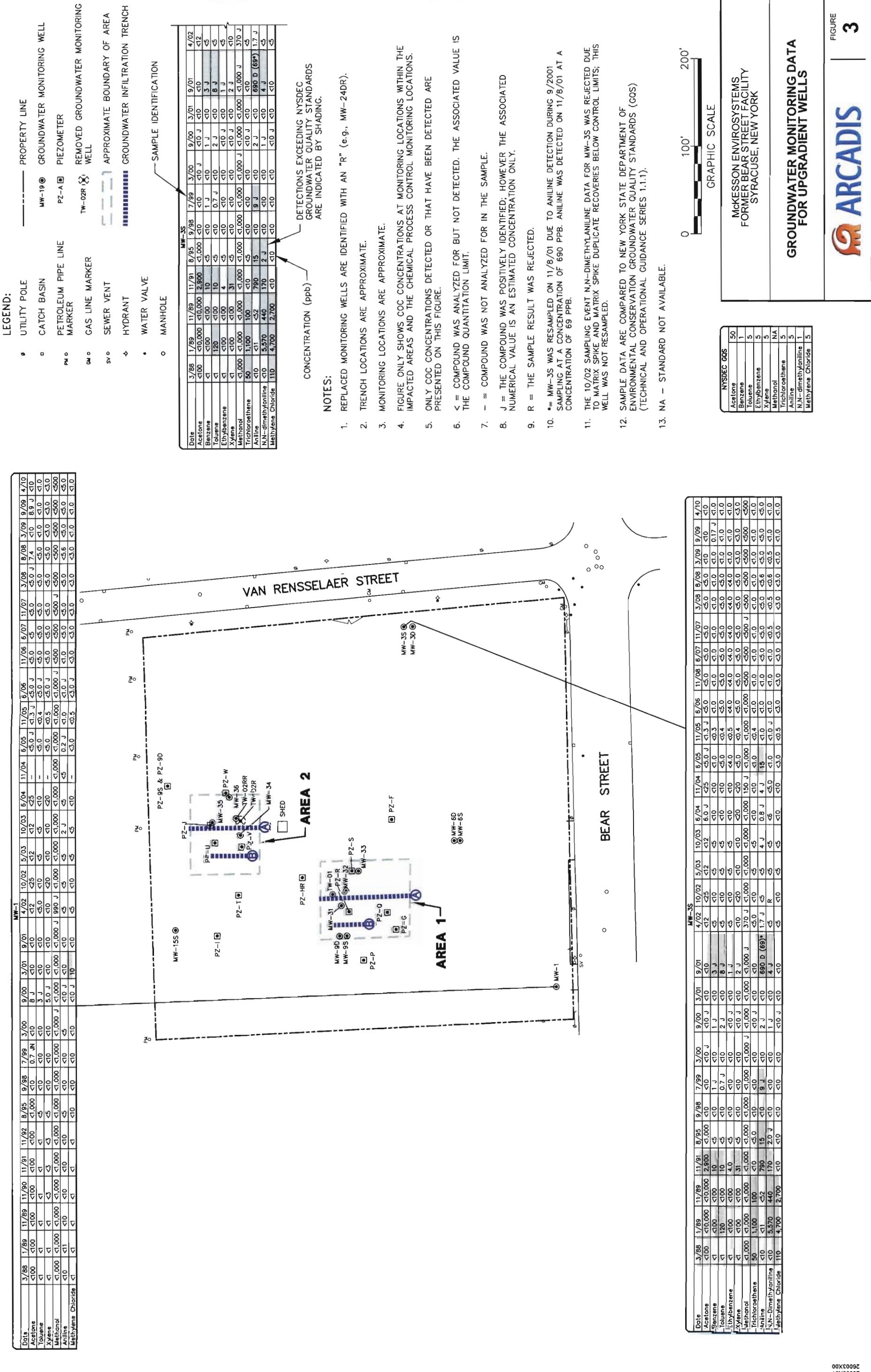


FIGURE 3 | ARCADIS

