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Subject:
McKesson Envirosystems Site
400 West Bear Street
Syracuse, New York
Site No. 7-34-020

ENVIRONMENT

Date:
December 18, 2015

Dear Mr. Long:

Arcadis of New York, Inc. (Arcadis) prepared this Periodic Review Report (PRR) for the McKesson Envirosystems Site (the Site; Figure 1), located at 400 Bear Street West in Syracuse, New York, on behalf of McKesson Corporation to fulfill the requirements set forth by Section 6.3(b) of the DER-10 Technical Guidance for Site Investigation and Remediation (DER-10; New York State Department of Environmental Conservation [NYSDEC] 2010). Accordingly, this PRR provides the information necessary to document the basis for the Institutional Control/Engineering Controls Certification (IC/EC Certification; Attachment A) for the October 14, 2014 through October 14, 2015 reporting period (NYSDEC 2015b).

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As identified in previous PRRs, the NYSDEC approved the shutdown of the Operable Unit No. 2 (OU2; Saturated Soil and Groundwater) remedial systems in a letter dated April 11, 2013 (NYSDEC 2013). The letter required implementation of a post-shutdown process control monitoring program to determine the continued effectiveness of the OU2 remedial action on the remaining contamination (NYSDEC 2013). The post-shutdown process control monitoring program is a continuation of the constituent of concern (COC) and hydraulic process control monitoring program that has been conducted at the Site since OU2 treatment activities commenced in 1998.

Our ref:
B0026003.2015.00190 #2

A summary of process control monitoring program activities conducted and the results obtained for this PRR reporting period are presented herein. These results demonstrate that the OU2 remedial action has continued effectiveness, showing that the remedy

continues to: (1) be protective of public health and the environment, (2) comply with the OU2 Record of Decision (ROD; NYSDEC 1997), and (3) meet remedial process closure requirements in Section 6.4 of DER-10 (NYSDEC 2010).

In addition, as noted above, this PRR includes the IC/EC Certification (Attachment A), as required by DER-10 (NYSDEC 2010) and provided by NYSDEC in a letter dated September 2, 2015 (NYSDEC 2015b). The annual Site-Wide Inspection Form, as required by the Site Management Plan (SMP; Arcadis 2014c), is also included (Attachment B).

To fulfill the requirements set forth by the SMP and Section 6.3(b) of DER-10, this PRR is arranged in the following sections:

- Section I - Site Background
- Section II - Remedial Treatment Program Summary
- Section III - Post-Shutdown Process Control Monitoring and Evaluation
- Section IV - Continued Effectiveness of Institutional and Engineering Controls
- Section V - Next Steps
- Section VI - Summary

SECTION I - SITE BACKGROUND

The 8.6-acre Site is divided into three areas (Areas 1, 2, and 3), and consists of two parcels of land (parcel numbers 029-300-380 and 029-300-390) (Figure 1). Additionally, the Site is divided vertically into two OUs: OU1 – Unsaturated Soil and OU2 – Saturated Soil and Groundwater. The NYSDEC-selected remedy for both OUs includes ongoing operations and maintenance activities. The ROD for OU1 (OU1 ROD), signed in March 1994 (NYSDEC 1994), called for in-situ aerobic bioremediation of the unsaturated soils comprising OU1. A ROD for OU2 signed in March 1997 (NYSDEC 1997) called for anaerobic bioremediation of groundwater and saturated soil.

Deed restrictions for the Site were recorded with the Onondaga County Clerk on October 3, 2014. In 2015, NYSDEC reclassified the Site from Class 2 to Class 4 (i.e., Inactive Hazardous Waste Disposal Site properly closed - requires continued management) (NYSDEC 2015a).

SECTION II - REMEDIAL TREATMENT PROGRAM SUMMARY

The OU1 bioremediation remedy implemented in 1994/1995 successfully treated an estimated 20,000 cubic yards (cy) of contaminated soil to the technology-based cleanup levels identified in the OU1 ROD. A minimum of one foot of clean fill material was installed over the treated soils to promote surface water runoff and limit the infiltration of rain and surface water into the remediated areas (Blasland, Bouck & Lee, Inc. 1995).

The OU2 in-situ bioremediation treatment remedy commenced in July 1998 and the initial components of the OU2 remedy are generally summarized below:

- An infiltration trench and a withdrawal trench were installed upgradient and downgradient, respectively, of Area 3 as a means to introduce nutrients into the shallow hydrogeologic unit to enhance naturally occurring anaerobic biodegradation of the COCs, while maintaining hydraulic control.
- Two additional infiltration trenches were installed within Area 3 to increase the distribution of nutrients and to act as overflow devices if the aforementioned infiltration trench exceeded maximum capacity.
- Groundwater was pumped from the withdrawal trench, amended with nutrients, and distributed into the shallow hydrogeologic unit via the infiltration trenches described above.
- Two infiltration trenches were installed in both Areas 1 and 2. Nutrient-amended groundwater was periodically introduced into these trenches by manually filling standpipes screened within the filter pack of the trenches (i.e., within the shallow hydrogeologic unit).

Figure 1 shows the locations of the withdrawal trench and the infiltration trenches. The trenches in Area 3 have been designated as main infiltration trench "C", secondary infiltration trench "B", and secondary infiltration trench "A".

A process control monitoring program commenced in 1998 to monitor the effectiveness of the in-situ anaerobic bioremediation treatment systems. The process control monitoring program initially included hydraulic, biological, and COC monitoring. The biological monitoring was discontinued in 2005, after more than 6 years of monitoring microbiological analytes, indicator compounds, and permanent gases. The hydraulic and COC monitoring are ongoing components of the process control monitoring program.

The data obtained during the process control monitoring program have been used to enhance the OU2 remedial program, as summarized below. The infiltration and withdrawal trenches were consistently used to create a closed loop hydraulic system and maintain hydraulic control.

- In 2004, an excavation program was implemented to remove 65 cy of saturated soil near MW-8S, approximately 6 cy of saturated soil around TW-02R, and approximately 1 cy of saturated soil around MW-27. The backfill placed in these excavation areas was amended with nutrients to facilitate the anaerobic degradation of COCs in groundwater. In addition, eight well points were installed around monitoring wells MW-27, MW-28, and MW-33 to allow for introduction of nutrient amendments to facilitate anaerobic degradation in these areas of relatively higher COC concentrations.
- In July 2006, the NYSDEC verbally approved the modification of the OU2 in-situ anaerobic bioremediation treatment program to an in-situ aerobic bioremediation treatment program as an alternate approach to lowering concentrations of semivolatile organic COCs. From August 2006 to October 2008, the in-situ aerobic bioremediation treatment program consisted of amending the groundwater in Areas 1, 2, and 3 with an oxygen source (i.e., dilute hydrogen peroxide) and macronutrients to facilitate aerobic degradation of COCs.

- In October 2008, the in-situ aerobic bioremediation treatment program was modified to provide a new and continuous source of oxygen to Areas 2 and 3; however, dilute hydrogen peroxide continued to be added to Area 1. The modifications included the following:
 - Constructing an oxygen gas infusion system in both Areas 2 and 3 via iSOC® units (Figures 2 and 3, respectively; installed in October 2008)
 - Installing an aerator stone in the equalization tank of the Area 3 treatment system to add oxygen gas to the groundwater before it was pumped into the infiltration trenches (installed in January 2009).
 - Discontinuing the macronutrient amendments in Areas 1, 2, and 3.
- Beginning in October 2010, the following modifications were made to the process control monitoring program:
 - Eliminating methanol analysis in select wells/piezometers
 - Removing select wells from the COC monitoring program
 - Removing select deep wells/piezometers from the hydraulic monitoring program
 - Adding MW-4S to the COC monitoring program as a downgradient sentinel well
 - Abandoning select wells/piezometers
- In November 2010, 117.39 tons of saturated soil from Area 2 were removed to address concentrations of aniline in the area between TW-02RR and MW-36. The backfill placed in the excavation area was amended with Oxygen Release Compound® (ORC®) to facilitate the aerobic degradation of COCs in groundwater.

In addition, a system of five standpipes was installed within the excavation area to allow for additional ORC® amendment.
- Beginning in June 2011, the in-situ aerobic bioremediation treatment program was modified to include monthly injections of ORC®-amended groundwater into the five standpipes within Area 2. Monthly ORC®-amended groundwater injections ended in December 2011.

The in-situ aerobic bioremediation treatment system (hydrogen peroxide amendments in Area 1 and oxygen infusion in Areas 2 and 3) and closed loop hydraulic system operated until April 10, 2013, at which time the NYSDEC approved the shutdown of OU2 remedial systems in a letter dated April 11, 2013 (NYSDEC 2013). The letter required the implementation of a post-shutdown process control monitoring program to determine the continued effectiveness of the OU2 remedial action on the remaining contamination (NYSDEC 2013). The post-shutdown monitoring program is a continuation of the COC and hydraulic process control monitoring program that has been conducted at the Site since OU2 treatment activities commenced in 1998.

Since the shutdown of the remedial systems, six post-shutdown process control monitoring events have been conducted in accordance with the SMP and are summarized in the following section.

SECTION III - POST-SHUTDOWN PROCESS CONTROL MONITORING AND EVALUATION

Post-shutdown process control monitoring events were performed in July 2013, October 2013, January 2014, April 2014, October 2014, and April 2015 following the shutdown of the remedial systems in April 2013. Descriptions of these events and the associated results were provided in the monitoring memoranda submitted to the NYSDEC following each monitoring event (Arcadis 2013c; Arcadis 2014a, 2014b, 2014d; Arcadis 2015a and 2015b; a copy of each memorandum [without the validated analytical laboratory reports] is provided in Attachment C). This section presents the established goals of the post-shutdown process control monitoring program, followed by a summary of the monitoring activities conducted and results obtained for this PRR reporting period, as well as the conclusions drawn from a comprehensive evaluation of the process control monitoring data.

Goals of the Post-Shutdown Process Control Monitoring Program

The established goals of the post-shutdown process control monitoring program are to determine the continued effectiveness of the OU2 remedial action and evaluate the need (if any) to re-start remedial systems. As outlined in the October 2013 PRR (Arcadis 2013b), the remedial action will be considered to have “continued effectiveness” if COC concentrations meet the following conditions:

- Do not rebound substantially above the pre-shutdown COC concentrations based on an evaluation of the most up-to-date dataset;
- Continue to trend at asymptotic levels; and
- Do not migrate beyond the site boundary above NYSDEC Class GA Groundwater Quality Standards (NYSDEC 1998), as determined by sampling from the sentinel and downgradient perimeter monitoring wells/piezometers.

Additionally, the post-shutdown process control monitoring program provides an evaluation of groundwater flow conditions following the April 2013 shutdown of the closed loop hydraulic system.

Post-Shutdown Process Control Monitoring Activities

As previously identified, six post-shutdown process control monitoring events have been conducted. Each monitoring event consisted of hydraulic and COC monitoring. In addition, the presence or absence of nonaqueous phase liquid (NAPL) was also assessed in each of the monitoring wells and piezometers included in the monitoring program, as well as the collection sump. NAPL was not observed during any of post-shutdown monitoring events.

Detailed descriptions of hydraulic and COC monitoring activities and associated results from the six post-shutdown monitoring events were provided in the monitoring memoranda submitted to NYSDEC following

each monitoring event (Arcadis 2013c; Arcadis 2014a, 2014b, 2014d; Arcadis 2015a, 2015b; see Attachment C), and are summarized below. Table 1 identifies each of the hydraulic and COC monitoring locations, which are shown on Figure 1.

Hydraulic Monitoring Activities

During hydraulic monitoring, groundwater level measurements were obtained at monitoring wells and piezometers that are screened entirely within the sand layer of the shallow hydrogeologic unit and located in and around Areas 1, 2, and 3. Additionally, a groundwater level measurement was obtained within the collection sump, and the Barge Canal surface-water elevation was obtained from measurements taken from a reference point on the Bear Street Bridge, which passes over the canal.

COC Monitoring Activities

The groundwater COCs for the Site are acetone, benzene, toluene, ethylbenzene, xylenes (total), methanol, trichloroethene, aniline, N,N-dimethylaniline, and methylene chloride. During each post-shutdown monitoring event, collected groundwater samples were analyzed for the COCs by TestAmerica Laboratories, Inc. (TestAmerica) in Edison, New Jersey via U.S. Environmental Protection Agency (USEPA) Methods 8260C (volatile organic compounds) and USEPA 8270D (semivolatile organic compounds), and in Amherst, New York via Method USEPA 8015D (methanol). TestAmerica is accredited pursuant to the New York State Department of Health Environmental Laboratory Accreditation Program for these analyses. Arcadis validated the laboratory analytical results using the Tier III full validation process.

Post-Shutdown Process Control Monitoring Results

Hydraulic Monitoring Results

Table 2 presents groundwater level measurements obtained during the six post-shutdown process control monitoring events, as well as those obtained since October 2006. Historical groundwater level measurements obtained from June 1998 (prior to commencing the in-situ anaerobic bioremediation treatment activities) through June 2006 (prior to initiating the in-situ aerobic bioremediation treatment program) are presented in Table 1 of Attachment D. Potentiometric surface maps of the Site's shallow hydrogeologic unit were generated using the July 2013, October 2013, January 2014, April 2014, October 2014 and April 2015 datasets, and were presented in the monitoring memoranda previously submitted to NYSDEC (Arcadis 2013c; Arcadis 2014a, 2014b, 2014d; Arcadis 2015a, 2015b, respectively; see Attachment C). A comparison of these potentiometric surface maps demonstrates that hydraulic conditions have remained consistent following the April 2013 shutdown of the closed loop hydraulic system in Area 3.

When comparing the post-shutdown potentiometric surface maps to those maps generated (and presented in previous PRRs) using groundwater elevation data obtained prior to system shutdown, the following conclusions are true:

- The closed depression around the groundwater withdrawal trench is no longer present.
- The potentiometric surface of the shallow hydrogeologic unit sand layer following the April 2013 system shutdown is generally consistent with the potentiometric surface prior to the 1998 implementation of the closed loop hydraulic system in Area 3.

COC Monitoring Results

The COC results obtained following the April 2013 shutdown of the in-situ bioremediation treatment system are consistent with those obtained prior to system shutdown.

Concentrations for most of the COCs in each of the three areas either were not detected or were below their respective NYSDEC Class GA Groundwater Quality Standards presented in the Technical and Operational Guidance Series 1.1.1 (NYSDEC 1998). COC groundwater analytical results are summarized in Table 3 (March 2009 to April 2015) and shown on Figures 4 and 5 (October 2010 to April 2015).

COCs have not been detected at sentinel wells MW-3S and MW-4S since October 2012, located downgradient of Areas 1 and 2, respectively (Table 3 and Figure 4). COCs were not detected in any of the downgradient perimeter/monitoring locations (MW-17R, MW-18, MW-23I, MW-23S, PZ-4S, and PZ-4D), except estimated concentrations of toluene below the NYSDEC Class GA Groundwater Quality Standard (5 parts per billion) at MW-18 (July and October 2013) and an anomalous detection of methanol at MW-17R (April 2014) (see Table 3 and Figure 5). Refer to the monitoring memoranda for event-specific COC monitoring results and the validated analytical laboratory reports (Arcadis 2013c; Arcadis 2014a, 2014b, 2014d, 2015a, 2015b). The COC groundwater analytical results obtained prior to March 2009 are summarized in Table 2 of Attachment D and presented on Figures 1 through 7 of Attachment D.

Comprehensive Process Control Monitoring Data Evaluation and Conclusions

To evaluate the continued effectiveness of the OU2 remedial action, the historical groundwater dataset (1998 through April 2014) has been used for comprehensive technical analyses. These technical analyses were originally detailed in the January 2013 PRR (Arcadis 2013a) and have been presented in each of the monitoring memoranda (Arcadis 2013c, 2014a, 2014b, 2014d, 2015a, 2015b; see Attachment C) using the up-to-date process control monitoring dataset at the time of preparation. The technical analyses consisted of the following:

- Change in annual total COC molar concentration (i.e., concentration normalized by its molecular weight) over time; and
- Statistical analyses that included first order decay functions and regression analyses between time (year) and percent COC reduction fitted to each area's annual total COC molar concentration.

As detailed in the aforementioned, previous submittals to NYSDEC, the data and results from these technical analyses demonstrate that the OU2 remedial action has continued effectiveness, showing that the remedy continues to: (1) be protective of public health and the environment, (2) comply with the OU2 Record of Decision (NYSDEC 1997), and (3) meet remedial process closure requirements in Section 6.4

of DER-10 (NYSDEC 2010). The conclusions developed based on groundwater data obtained from 1998 through April 2015 are summarized below.

- COC concentrations detected during the six post-shutdown monitoring events did not substantially rebound above pre-shutdown COC concentrations.
- COC concentrations were mostly not detected or below their respective NYSDEC Class GA Groundwater Quality Standard in each Area during the six post-shutdown monitoring events.
- COC concentrations continue to trend at asymptotic levels for each area.
- COC concentrations have not migrated beyond the site boundary above NYSDEC Groundwater Quality Standards.
- The remedy continues to achieve the bulk of reduction of groundwater contamination, as indicated by total COC molar concentrations exceeding 98.5 percent reduction in each area.

These conclusions confirm that groundwater quality conditions have not substantially changed since the shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems and fully demonstrate the continued effectiveness of the OU2 remedial action. Accordingly, there is no need to re-start the remedial systems, and the NYSDEC identified that the systems may remain shut down and be decommissioned (NYSDEC 2015c).

SECTION IV - CONTINUED EFFECTIVENESS OF INSTITUTIONAL AND ENGINEERING CONTROLS

The institutional controls (ICs) for the Site are in the form of deed restrictions, which were recorded with the Onondaga County Clerk on October 3, 2014. These restrictions require compliance with the SMP and the ICs placed on the Site.

In accordance with the SMP, a site-wide inspection was performed on October 9, 2015, and the completed Site-Wide Inspection Form is provided in Attachment B. The results of the site-wide inspection confirm the following:

- The Site is in compliance with ICs identified in the SMP, including site usage.
- The Site, including above-ground monitoring wells/piezometers, is in good condition.
- Site records are up to date.

For the engineering controls required at the Site (i.e., fencing/access control and groundwater containment), the following statements are true:

- The fencing/access engineering control employed at the Site remained in place and unchanged from the date of the last PRR.
- On April 10, 2013, the in-situ bioremediation treatment and closed loop hydraulic systems were discontinued at the Site and a post-shutdown process control monitoring program was implemented.

The groundwater containment engineering control is not in effect when the closed loop hydraulic system is shutdown.

- Nothing has occurred that would impair the ability of such controls to protect public health and the environment.
- Access to the Site will continue to be provided to the NYSDEC to evaluate the remedy, including access to evaluate the continued maintenance of the fencing/access engineering control.

Attachment A contains the IC/EC Certification, as required by the SMP and DER-10 (NYSDEC 2010).

SECTION V - NEXT STEPS

Based on our recent discussions and as identified in my December 7, 2015 email to you, McKesson is assembling a petition to delist the Site and plans to submit the petition to NYSDEC in January 2016. We understand that groundwater monitoring must continue until such time as a discontinuation of the groundwater long-term monitoring program is granted by NYSDEC, or the Site is delisted (NYSDEC 2015c). If the Site is not delisted by July 2016, McKesson will conduct a post-shutdown process control monitoring event in July 2016 unless an alternate program is proposed by McKesson and approved by NYSDEC in accordance with the SMP. Any event would be a continuation of the program conducted since shutdown of the remedial systems in April 2013 (Table 1). The activities conducted and the associated results will be documented (at minimum) in the next PRR.

Additionally, McKesson will prepare and submit a decommissioning plan to dismantle the remedial systems and continue to work with Ms. Margaret Sheen, counsel for NYSDEC, to determine the appropriate release mechanism for the Site.

SECTION VI - SUMMARY

The required IC/EC Certification and Site-Wide Inspection Form are provided as Attachments A and B, respectively.

Associated with this reporting period (October 14, 2014 through October 14, 2015) are two biannual process control monitoring events. These monitoring events occurred in October 2014 and April 2015. Descriptions of these events and the associated results were provided in the monitoring memoranda submitted to NYSDEC following each monitoring event (Arcadis 2015a, 2015b; a copy of each memorandum [without the validated analytical laboratory reports] is provided in Attachment C). The two monitoring events are part of the post-shutdown process control monitoring program implemented to determine the continued effectiveness of the OU2 remedial action.

Hydraulic monitoring results from the post-shutdown process control monitoring events indicate the closed depression around the groundwater withdrawal trench in Area 3 is no longer present, and that hydraulic conditions have remained consistent following the April 2013 shutdown of the closed loop hydraulic system. COC monitoring results from the post-shutdown monitoring events indicate that groundwater quality conditions are generally consistent with those prior to shutdown.

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December 18, 2015

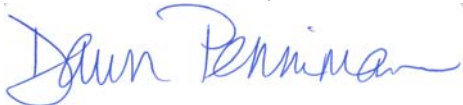
The OU2 remedial action demonstrates continued effectiveness, showing that the remedy continues to: (1) be protective of public health and the environment, (2) comply with the OU2 Record of Decision (NYSDEC 1997), and (3) meet remedial process closure requirements in Section 6.4 of DER-10 (NYSDEC 2010). Accordingly, there is no need to re-start the remedial systems, and the NYSDEC identified that the systems may remain shut down and be decommissioned (NYSDEC 2015c).

The next steps are as follows: 1) McKesson will continue to work with NYSDEC (Margaret Sheen) to determine the appropriate release mechanism for the Site, 2) McKesson will submit the petition to delist the Site in January 2016, and 3) McKesson will submit a decommissioning plan to remove the remedial systems after receiving feedback from the NYSDEC regarding the delisting petition.

As always, we appreciate NYSDEC's efforts to advance this project forward. If you have any questions or require additional information, please contact me at 315.671.9229.

Sincerely,

Arcadis of New York, Inc.



Dawn E. Penniman, P.E.
Certified Project Manager I

Copies:

Ms. Susan Edwards, NYSDEC
Mr. Harry Warner, NYSDEC
Mr. Richard Jones, NYSDOH
Ms. Margaret Sheen, Esq., NYSDEC
Mr. James E. Fleer, McKesson Corporation
Mr. Douglas Morrison, Bristol-Myers Squibb Company
Mr. Christopher Young, P.G., de maximis, inc.
Mr. Kevin Bernstein, Esq., Bond, Schoeneck & King

Enclosures:

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Table 3	Summary of Groundwater Monitoring Data, March 2009 through April 2015

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Figure 2	Oxygen Infusion System Layout Area 2

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Figure 3 Oxygen Infusion System Layout Area 3

Figure 4 Groundwater Monitoring Data Summary for October 2010 – April 2015, Areas 1 & 2

Figure 5 Groundwater Monitoring Data Summary for October 2010 – April 2015, Area 3

Attachments

Attachment A Institutional and Engineering Controls Certification

Attachment B Site-Wide Inspection Form

Attachment C Post-Shutdown Monitoring Memoranda

Attachment D Table 1 Summary of Historical Groundwater Level Measurements, June 1998 through June 2006

Table 2 Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Figures 1-7 Groundwater Monitoring Data Summaries

References:

Arcadis. 2013a. Periodic Review Report. McKesson EnviroSystems Former Bear Street Facility. January 15.

Arcadis. 2013b. Periodic Review Report. McKesson EnviroSystems Former Bear Street Facility. October 1.

Arcadis. 2013c. Monitoring Memorandum – July 2013 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. October 18.

Arcadis. 2014a. Monitoring Memorandum – October 2013 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. January 3.

Arcadis. 2014b. Monitoring Memorandum – January 2014 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. April 11.

Arcadis. 2014c. Site Management Plan. McKesson EnviroSystems Site. July 31.

Arcadis. 2014d. Monitoring Memorandum – April 2014 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. September 10.

Arcadis. 2015a. Monitoring Memorandum – October 2014 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. March 2.

Arcadis. 2015b. Monitoring Memorandum – April 2015 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. June 11.

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Blasland, Bouck & Lee, Inc. 1995. Remedial Design/Remedial Action Report Operable Unit No.1 – Unsaturated Soils. September 1995.

NYSDEC. 1994. Record of Decision for McKesson EnviroSystems Inactive Hazardous Waste Disposal Site, OU1. March 18.

NYSDEC. 1997. Record of Decision for McKesson EnviroSystems Inactive Hazardous Waste Disposal Site, OU2. March 19.

NYSDEC. 1998. Technical Operational Guidance Series 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June. Available online at:
http://www.dec.ny.gov/docs/water_pdf/togs111.pdf

NYSDEC. 2010. DER-10: Technical Guidance for Site Investigation and Remediation. May 3. Available online at: http://www.dec.ny.gov/docs/remediation_hudson_pdf/der10.pdf

NYSDEC. 2013. Letter from Payson Long, NYSDEC, to Jean Mescher, McKesson Corporation. RE: Discontinuation of Remedial Processes. April 11.

NYSDEC. 2015a. Letter from Kelly A. Lewandowski, NYSDEC, to James E. Fleer, McKesson Corporation. RE: reclassification of the Site. June 12.

NYSDEC. 2015b. Letter from Payson Long, NYSDEC, to James E. Fleer, McKesson Corporation. RE: Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal. September 2.

NYSDEC. 2015c. Letter from Payson Long, NYSDEC, to James E. Fleer, McKesson Corporation. RE: Review of Monitoring Memorandum of the April 2015 Monitoring Event. September 16.

TABLES



Table 1
Post-Shutdown Process Control Monitoring Wells and Piezometers
Periodic Review Report
McKesson Envirosystems Site
Syracuse, New York

Monitoring Location	Purpose of Monitoring
Sentinel	
MW-3S*	C
MW-4S*	C
Area 1	
TW-01	C
MW-9S	C
MW-31	C
MW-32	C
MW-33*	C
PZ-F	H
PZ-G	H
PZ-HR	H
PZ-P	H
PZ-Q	H
PZ-R	H
PZ-S	H
Area 2	
TW-02RRR	C
MW-34	C
MW-35	C
MW-36R*	C
PZ-I	H
PZ-J	H
PZ-T	H
PZ-U	H
PZ-V	H
Area 3	
MW-8SR*	C
MW-11S	H
MW-27*	C
MW-28	C
MW-29*	C
MW-30*	C
PZ-A	H
PZ-B	H
PZ-C	H
PZ-D	H
PZ-E	H
PZ-K	H

See notes on page 2.

Table 1
Post-Shutdown Process Control Monitoring Wells and Piezometers
Periodic Review Report
McKesson Envirosystems Site
Syracuse, New York

Monitoring Location	Purpose of Monitoring
Area 3 (cont'd)	
PZ-L	H
PZ-M	H
PZ-N	H
PZ-O	H
Downgradient Perimeter	
MW-17R	C
MW-18	C
MW-23I	C
MW-23S	C, H
MW-24SR	H
MW-25S	H
PZ-4S*	C
PZ-4D*	C, H
PZ-5D	H
Barge Canal	H

Notes:

1. The table lists monitoring wells and piezometers that are part of the constituent of concern (COC) and/or hydraulic post-shutdown process control monitoring program.
2. Hydraulic monitoring involves obtaining groundwater level measurements from monitoring wells/piezometers identified in the table and surface-water level measurements from the Barge Canal. The surface-water level of the Barge Canal is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal. Groundwater elevation data are used to map potentiometric surface of the shallow hydrogeologic unit sand layer.
3. The COCs are acetone, benzene, toluene, ethylbenzene, xylenes (total), methanol, trichloroethene, aniline, N,N-dimethylaniline, and methylene chloride.
4. Monitoring well MW-4S and piezometer PZ-4S have been included in the COC monitoring program every third and second monitoring event, respectively; however, both were included in the April 2015 COC monitoring program (the last groundwater monitoring event identified in the July 31, 2014 Site Management Plan prepared by ARCADIS).

C = COC monitoring.

H = hydraulic monitoring.

* = New York State Department of Environmental Conservation-approved the elimination of methanol analysis from the COC groundwater monitoring program (NYSDEC. 2010. Letter from Payson Long, NYSDEC, to David Ulm, ARCADIS. RE: Requested Changes in Remedial Monitoring Program. September 23.).

Table 2
Summary of Groundwater Level Measurements, October 2006 through May 2015
Periodic Review Report
McKesson Envirosystems Site
Syracuse, New York

Location	Reference Elevation (feet amsl)	10/30/06	6/6/07	11/12/07	3/24/08	8/25/08	3/23/09	9/14/09	4/26/10	10/11/10	4/4/11	10/24/11
Barge Canal ^A	393.39	364.29	362.99	362.06	364.34	363.21	363.54	362.89	362.97	363.49	362.07	363.71
Collection Sump ^B	372.81	363.18	362.26	361.86	363.81	362.14	362.20	362.18	362.18	360.72	359.90	361.33
MW-3S ^B	376.54	369.08	--	367.60	367.93	365.19	367.32	365.50	365.67	367.95	369.21	--
MW-11S	373.50	366.11	364.27	363.88	365.69	363.86	364.88	363.89	364.42	364.30	365.00	364.18
MW-18 ^B	372.57	363.82	362.63	362.32	363.51	362.26	363.16	362.22	362.67	362.87	363.82	--
MW-23I ^B	372.77	366.43	365.02	364.74	366.12	364.64	365.69	364.67	365.19	365.38	366.57	--
MW-23S	372.61	365.28	362.98	362.56	364.81	362.62	363.50	362.63	362.99	362.71	364.57	362.66
MW-24SR	375.55	366.49	365.21	364.83	366.26	364.73	365.81	364.79	365.32	365.81	366.60	365.63
MW-25S	373.39	365.26	363.32	362.87	364.84	362.88	363.97	362.89	363.34	363.30	364.10	363.17
PZ-4D	376.11	366.64	365.29	364.98	366.39	364.90	365.96	364.94	365.49	366.02	366.74	365.78
PZ-5D	375.58	366.87	365.49	365.19	366.69	365.09	366.21	365.14	365.01	366.09	366.99	366.02
PZ-A	373.94	365.62	363.11	362.72	364.83	362.96	363.56	362.95	362.28	362.35	362.68	362.53
PZ-B	373.92	365.85	363.12	362.62	365.03	362.87	363.64	362.83	362.96	362.22	363.24	362.47
PZ-C	374.85	367.14	365.85	365.30	367.15	365.16	366.71	365.23	366.37	367.11	367.88	366.6
PZ-D	375.12	367.68	365.98	365.40	367.29	365.28	366.81	365.40	366.57	367.17	368.20	366.87
PZ-E	374.12	368.13	365.16	364.07	366.58	364.14	366.82	364.20	364.25	364.16	364.83	364.18
PZ-F	377.06	368.32	366.18	365.76	367.99	365.50	367.41	365.69	366.72	367.10	368.10 ^B	367.04
PZ-G	377.16	368.64	366.28	365.82	368.14	365.94	367.29	367.22	367.32	367.36	368.12	367.17
PZ-HR	376.99	368.31	366.23	365.74	368.00	365.48	367.41	365.63	366.65	367.15	368.00 ^B	367.04
PZ-I	375.15	369.00	366.49	365.92	368.55	365.50	367.97	365.71	367.04	367.49	368.60	367.47
PZ-J	374.89	367.96	366.16	365.82	367.69	365.55	367.20	365.70	366.55	367.05	367.81	366.94
PZ-K	373.19	365.58	363.36	362.91	364.96	363.08	363.80	363.04	363.33	363.34	361.94	362.97
PZ-L	374.62	365.23	362.94	362.63	364.64	362.79	363.39	362.80	363.80	362.36	362.52	362.54
PZ-M	374.35	365.60	363.54	363.11	365.13	363.30	364.00	363.31	363.62	363.04	363.47	363.22
PZ-N	376.94 ^C	367.51	365.76	365.26	367.05	365.09	366.63	365.17	366.22	367.01	367.79	366.62
PZ-O	375.36	365.42	363.22	362.82	365.01	362.91	363.94	362.93	363.35	362.90	363.57	362.94
PZ-P	376.89	368.30	366.31	365.83	368.06	365.58	367.51	365.75	366.76	367.26	368.08	367.15
PZ-Q	377.61	368.61	366.33	365.83	368.23	365.57	367.61	365.77	366.78	367.26	368.13	367.21
PZ-R	377.05	368.51	366.19	365.79	368.20	365.55	367.57	365.73	366.74	367.24	368.10	367.15
PZ-S	378.13	372.48	366.51	365.81	368.21	365.55	367.60	365.74	366.76	367.13	369.67 ^B	367.48
PZ-T	376.25	368.04	366.24	365.84	367.89	365.52	367.37	365.66	366.63	367.12	367.94	367.00
PZ-U	375.35	367.99	366.07	365.80	367.75	365.52	367.25	365.66	366.52	367.05	367.83	366.92
PZ-V	375.78	367.97	366.17	365.78	367.78	365.48	367.24	365.64	366.52	367.04	367.81	366.93

See notes on page 3.

Table 2
Summary of Groundwater Level Measurements, October 2006 through May 2015
Periodic Review Report
McKesson Envirosystems Site
Syracuse, New York

Location	Reference Elevation (feet amsl)	4/9/2012	10/1/2012	4/1/2013	7/18/2013 ^D	10/17/2013 ^D	1/17/2014 ^D	4/14/2014 ^D	10/20/2014 ^D	3/30/2015 ^D	5/14/2015 ^{D,F}
Barge Canal ^A	393.39	358.39	360.59	360.74	360.69	360.69	361.38	362.29	360.87	361.21	361.27
Collection Sump ^B	372.81	360.95	361.70	361.24	364.71	364.84	366.14	366.92	364.73	368.31 ^B	--
MW-3S ^B	376.54	366.44	365.15	367.55	366.11	366.62	367.83	368.66	366.70	368.67	--
MW-11S	373.50	363.92	363.62	364.42	364.95	365.08	366.08	366.94	365.00	366.95	365.64
MW-18 ^B	372.57	362.57	362.32	362.85	362.74	363.54	363.57	364.50	365.00	363.84	--
MW-23I ^B	372.77	364.99	364.73	365.29	365.23	365.33	366.02	366.86	365.32	359.26	--
MW-23S	372.61	362.23	362.29	362.88	364.20	364.37	365.30	366.06	364.14	366.95	364.91
MW-24SR	375.55	365.09	364.84	365.48	365.39	365.46	366.25	367.09	365.40 ^E	366.48	366.07
MW-25S	373.39	362.81	362.61	363.48	364.08	364.23	365.14	365.89	364.22	366.09	364.42
PZ-4D	376.11	365.24	364.94	365.59	365.47	365.59	366.34	367.06	365.60	366.51	366.13
PZ-5D	375.58	365.48	365.16	365.84	365.67	365.81	366.57	367.42	365.78	366.78	366.33
PZ-A	373.94	363.24	362.54	362.68	364.78	364.92	366.08	366.87	364.84	367.79	365.39
PZ-B	373.92	362.14	362.35	362.64	364.77	364.88	366.08	366.86	364.79	368.01	365.32
PZ-C	374.85	366.10	365.41	366.76	365.75	365.84	366.65	367.50	365.78	367.16	366.26
PZ-D	375.12	366.39	365.65	367.07	365.87	365.97	366.82	367.66	365.90	367.31	366.39
PZ-E	374.12	363.67	363.35	364.38	365.12	365.22	366.44	367.22	365.21	368.66	365.64
PZ-F	377.06	366.46	365.44	366.91	366.52	366.57	367.61	368.66	366.51	368.33	366.96
PZ-G	377.16	366.53	365.48	367.04	366.67	366.70	367.74	368.74	366.54	368.39	366.99
PZ-HR	376.99	366.40	365.38	366.90	366.46	366.50	367.61	368.60	366.47	368.32	366.95
PZ-I	375.15	366.77	365.36	367.52	366.60	366.70	368.20	369.15	366.80	368.94	367.29
PZ-J	374.89	366.30	365.55	366.74	366.39	366.48	367.50	368.37	366.48	368.06	366.98
PZ-K	373.19	362.65	362.75	363.03	364.79	364.96	365.97	366.77	364.86	367.18	365.43
PZ-L	374.62	362.16	362.42	362.60	364.61	364.77	365.90	366.71	364.69	367.51	365.24
PZ-M	374.35	362.86	362.87	363.28	364.93	364.96	366.18	366.98	364.98	367.54	365.56
PZ-N	376.94 ^C	366.06	365.33	366.72	365.67	365.81	366.57	367.46	365.73	367.14	366.20
PZ-O	375.36	362.61	362.52	363.14	364.50	364.64	365.72	366.48	364.56	366.56	365.16
PZ-P	376.89	366.49	365.45	366.93 ^B	366.57	366.63	367.69	368.69	366.58	368.34	367.04
PZ-Q	377.61	366.52	365.44	367.04	366.59	366.65	367.76	368.80	366.56	368.46	367.04
PZ-R	377.05	366.48	365.45	367.03	366.54	366.59	367.74	368.75	366.55	368.43	367.02
PZ-S	378.13	366.51	365.45	367.34 ^B	366.58	366.61	368.27	369.73	366.76	369.01	367.14
PZ-T	376.25	366.32	365.41	366.86	366.42	366.49	367.64	368.55	366.50	368.20	366.97
PZ-U	375.35	366.29	365.44	366.77	366.38	366.47	367.55	368.42	366.45	368.13	366.96
PZ-V	375.78	366.28	365.40	366.77	366.37	366.46	367.53	368.44	366.43	368.18	366.93

See notes on page 3.

Table 2
Summary of Groundwater Level Measurements, October 2006 through May 2015
Monitoring Memorandum
McKesson EnviroSystems Site
Syracuse, New York

Superscript Notes:

- ^A = Surface-water level measurements are obtained from the Barge Canal. The surface-water level is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal.
- ^B = Data not used in potentiometric surface mapping of the shallow hydrogeologic unit sand layer.
- ^C = The reference elevation for PZ-N was 376.02 feet amsl prior to November 16, 2000. The new reference elevation is 376.94 feet amsl.
- ^D = Groundwater elevations reflect hydrogeologic conditions after the April 2013 shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems.
- ^E = Monitoring well MW-24SR was not accessible on October 20, 2014 and was monitored on October 21, 2014.
- ^F = A second round of hydraulic gauging was performed on May 14, 2015 due to groundwater mounding observed in Area 3 during the March 30, 2015 gauging event. The groundwater mounding was caused by saturated conditions at the Site from recent snow melt.

Abbreviations:

-- = not measured

amsl = above mean sea level (National Geodetic Vertical Datum of 1929)

See notes on page 3.

Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2015
Periodic Review Report
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	50 ⁶
MW-3S	3/09	365.1	350.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	0.17 J	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA	
	10/11			<10	<1.0	<1.0	<1.0	0.35 J	<1.0	<3.0	<5.0	<1.0	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	0.27 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.61 J	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
MW-4S	10/10	365.5	350.5	<10 [<10]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<3.0 [<3.0]	<5.0 [<5.0]	<1.0 [<1.0]	<500 J [<500 J]
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
MW-8SR ^B	3/09	362.7	352.7	6.5 J [5.8 J]	6.8 [6.8]	66 [63]	<1.0 [<1.0]	10 [10]	<1.0 [<1.0]	140 [140]	2,200 [1,800]	<12 [<12]	<500 [<500]
	6/09			NA	NA	NA	NA	NA	NA	NA	7,000	<50	NA
	9/09			<10 [8.3 J]	8.5 J [7.9]	44 J [38]	<1.0 [<1.0]	6.8 J [6.5]	<1.0 J [<1.0]	81 J [71]	4,000 [3,400]	<20 [<20]	<500 [<500]
	4/10			<10 [<10]	4.2 [3.5]	23 J [18]	<1.0 [<1.0]	4.6 [3.7]	<1.0 [<1.0]	41 [33]	370 J [720 J]	1.0 J [<5.0]	<500 [<500]
	10/10			<10	2.7	16	<1.0	2.0	<1.0	31	220	1.6	NA
	4/11			5.9 J [4.3 J]	3.2 [3.2]	10 [8.8]	<1.0 [<1.0]	2.8 [2.6]	<1.0 [<1.0]	32 [31]	57 J [64]	1.5 [1.6]	NA
	10/11			<10 [<10]	1.9 [2.0]	2.0 [2.1]	<1.0 [<1.0]	1.3 [1.3]	<1.0 [<1.0]	14 [15]	<5.0 [<5.0]	2.6 [<1.0]	NA
	4/12			8.7 J [6.7 J]	1.2 [1.7]	2.3 [3.3]	<0.18 [<0.18]	0.76 J [1.2]	<0.090 [<0.090]	9.5 [15]	<1.9 [<1.9]	2.4 [2.6]	NA
	10/12			<10 [<10]	0.69 J [0.70]	0.16 J [0.14 J]	<1.0 [<1.0]	0.36 J [0.39 J]	<1.0 [<1.0]	1.4 J [1.2 J]	<5.3 [<5.0]	2.3 [2.7]	NA
	4/13			<10 [<10]	1.1 [1.1]	0.32 J [0.28 J]	<1.0 [<1.0]	0.67 J [0.68 J]	<1.0 [<1.0]	7.7 [8.0]	<5.1 [<5.1]	1.7 [1.4]	NA
	7/13			5.1 J [8.7 J]	1.9 [1.8]	0.17 J [0.18 J]	<1.0 [<1.0]	1.0 [0.96J]	<1.0 [<1.0]	11 [9.4]	2.5 [2.5]	0.89 J [0.96 J]	<1,000 [<1,000]
	10/13			<10	2.9	0.21 J	<1.0	1.3	<1.0	13	2.6 J	0.83 J	NA
	1/14			<10 J [<10 J]	2.4 [2.6]	0.19 J [<1.0]	<1.0 [<1.0]	0.94 J [1.1]	<1.0 [<1.0]	11 [13]	5.1 J [<10]	2.0 [1.7]	NA
	4/14			<10 [<10]	3.2 [3.3]	0.25 J [0.27 J]	<1.0 [<1.0]	1.2 [1.1]	<1.0 [<1.0]	13 [13]	3.9 J [5.6 J]	1.4 [1.9]	NA
	10/14			18 J [38 J]	1.7 [1.9]	0.16 J [0.18 J]	0.27 J [<0.1]	1.2 [1.3]	<1.0 [<1.0]	5.9 [6.4]	3.1 J [2.3 J]	1.8 [1.3]	NA
4/15	15 [8.4 J]	3.5 [3.7]	<1.0 [0.36 J]	<1.0 [<1.0]	1.3 [1.2]	<1.0 [<1.0]	19 [18]	2.7 J [3.6 J]	2.6 [2.7]	NA			
MW-9 ^C (Replaced by MW-9S)	3/09	365.6	356	<10	1.2	27	<1.0	2.5	<1.0	65	<5.0	4.2	<500
	9/09			<10	1.7	20	<1.0	2.2	<1.0	70	<5.0	4.1	730
	4/10			<10	0.86 J	26	<1.0	2.1	<1.0	69	<5.0	6.5	<500
	10/10			<10	1.3	11	<1.0	1.9	<1.0	45	<5.1	7.5	<500 J
	4/11			<10	0.91 J	29	<1.0	2.6	<1.0	89	<5.3	5.4	<500
	10/11			<10	1.2	4.2	<1.0	1.8	<1.0	41 J	<5.0	7.6	<500
	4/12			7.5 J	1.1	18	<0.18	1.5	<0.090	67	<1.9	6.3	<500
	10/12			<10	1.9 J	4.7	<1.0	3.2	<1.0	84	<5.0	3.9	NA
	4/13			12 J	0.95 J	19	<1.0	1.6	<1.0	62	<5.1	5.9	<1,000
	7/13			<10	1.9	12	<1.0	2.0	<1.0	45	<1.0	2.0	<1,000
	10/13			<5.0	2.9	10	<1.0	2.6	<1.0	60	<5.0	5.2	<500
	1/14			<10 J	1.1	13	<1.0	1.6	<1.0	54	<1.0	7.2	<500
	4/14			<10	1.0	19	<1.0	2.2	<1.0	74	<1.0	5.7	<500
	10/14			<10 J	1.5	8.8	<1.0	2.2	0.82 J	72	<1.0	5.9	<500
	4/15			<10	1.4	22	<1.0	2.5	<1.0	79	<1.1	6.5	<500

See Notes on Page 8.

Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2015
Periodic Review Report
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	1	50 ⁶	
MW-17 ^D (Replaced by MW-17R)	3/09	365.7	356.1	<10	2.3	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	0.86 J	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	0.22 J	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			<10	1.3	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500 J	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	<500	
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	<1.0	<500
	4/12			<2.7	0.22 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	0.55 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.2	<1.2	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.4	<1.1	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	2,700
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	MW-18			3/09	325.15	316.15	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
9/09		<10 J	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
4/10		<10	<1.0	<1.0			33	<1.0	<1.0	<3.0	<5.0	<1.0	<500
6/10		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	NA	NA	NA
10/10		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500 J
4/11		<10 J	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
10/11		<10	<1.0	<1.0			<1.0	0.23 J	<1.0	<3.0 J	<5.0	<1.0	<500
4/12		<2.7	<0.080	<0.10			<0.18	0.27 J	<0.090	<0.36	<1.8	<0.21	<500
10/12		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
4/13		<10	<1.0	<1.0			<1.0	0.60 J	<1.0	<3.0	<4.8	<0.95	<1,000
7/13		<10	<1.0	<1.0			<1.0	0.25 J	<1.0	<3.0	<1.0	<1.0	<1,000
10/13		<10	<1.0	<1.0			<1.0	0.19 J	<1.0	<3.0	<5.4	<1.1	<500
1/14		<10 J	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
4/14		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
10/14		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
4/15		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
MW-23S	3/09	364.1	354.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			3.7 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.31 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500 J
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500

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Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2015
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Syracuse, New York

Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	50 ⁶
MW-23I	3/09	341.2	336.2	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	<1.0	<1.0	8.4	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.29 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<9.5	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
MW-27	3/09	362.5	354.5	14 J	8.7	36	<1.0	9.4	<1.0	88	8,200 J	<50 J	<500
	6/09			NA	NA	NA	NA	NA	NA	7,400	<50	NA	
	9/09			10	6.2	5.9	<1.0	6.9	<1.0	23	2,100	<10	<500
	4/10			<10	4.5	6.1	<1.0	2.4	<1.0	10	1,300	<10	<500
	10/10			<10	2.7	1.4	<1.0	1.3	<1.0	3.4	220	2.5	NA
	4/11			3.9 J	3.1	5.1	<1.0	5.7	<1.0	9.1	1,000	<11	NA
	10/11			<10	2.1	2.2	<1.0	1.3	<1.0	3.1	36	2.7	NA
	4/12			<2.7	1.5	1.4	<0.18	0.45 J	<0.090	2.2 J	<1.9	2.7	NA
	10/12			<10	1.1	<1.0	<1.0	0.22 J	<1.0	<3.0	<5.0	2.2	NA
	4/13			<10	1.1	0.88 J	<1.0	0.34 J	<1.0	1.4 J	11	2.4	NA
	7/13			<10	2.0	<1.0	<1.0	0.60 J	<1.0	<3.0	1.5	1.1	<1,000
	10/13			<10	2.6	<1.0	<1.0	0.75 J	<1.0	3.9	<5.0	0.73 J	NA
	1/14			<10 J	0.89 J	<1.0	<1.0	0.33 J	<1.0	0.22 J	<12	0.75 J	NA
	4/14			<10	1.0	<1.0	<1.0	0.41 J	<1.0	0.92 J	0.60 J	0.48 J	NA
	10/14			<10	2.0	0.12 J	<1.0	1.2	<1.0	3.5	16	1.4	NA
	4/15			<10	2.4	0.98 J	<1.0	1.9	<1.0	9.5	20	1.0 J	NA
MW-28	3/09	363.6	355.6	<10	3.5	0.8 J	<1.0	0.3 J	<1.0	1.1 J	18	<0.5	851
	9/09			<10	3.1	0.32 J	<1.0	0.25 J	<1.0	0.48 J	6.7	<1.0	<500
	4/10			<10	2.8	0.60 J	<1.0	0.23 J	<1.0	0.46 J	<5.0	0.49 J	<500
	10/10			<10	1.8	<1.0	<1.0	<1.0	<1.0	<3.0	2.4 J	0.60 J	<500 J
	4/11			4.3 J	2.3	<1.0	<1.0 B	0.11 J	<1.0	<3.0	3.9 J	0.75 J	<500
	10/11			<10	1.8	<1.0	<1.0	0.38 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	1.4	<0.10	<0.18	0.22 J	<0.090	<0.36	<1.8	0.48 J	<500
	10/12			<10	1.9	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.62 J	NA
	4/13			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.32 J	410 J
	7/13			<10	1.7	<1.0	<1.0	0.22 J	<1.0	<3.0	<1.0	0.35 J	<1,000
	10/13			<10	1.7	<1.0	<1.0	0.49 J	<1.0	0.68 J	<5.0	0.70 J	<500
	1/14			<10 J	1.2	<1.0	<1.0	0.22 J	<1.0	<3.0	<10	0.75 J	<500
	4/14			13	1.7	<1.0	<1.0	0.29 J	<1.0	<3.0	<10	0.72 J	<500
	10/14			51	1.3	<1.0	0.41 J	1.1	<1.0	0.90 J	1.2 J	1.3	<500
	4/15			7.6 J	1.6	<1.0	<1.0	0.39 J	<1.0	0.75 J	1.2 J	1.3	<500

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Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	50 ⁶
MW-29	3/09	362.9	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.29 J	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA
	10/11			<10	<1.0	<1.0	<1.0	0.22 J	<1.0	<3.0 J	<5.0	0.22 J	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	7/13			<10	0.26 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/13			<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	<1.1	NA
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	10/14 ^F			790,000 D	<500 D	<500 D	<500 D	<500 D	<500 D	<1,500 D	<10	<1.0	NA
	12/14 ^F			370 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/15			12	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<12	0.66 J	NA
MW-30	3/09	363.5	355.5	<10	0.8 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	0.78 J	<1.0	<1.0	0.17 J	<1.0	<3.0	21	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10 J	0.14 J	<1.0	37	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA
	10/11			<10	<1.0	<1.0	<1.0	0.18 J	<1.0	<3.0 J	<5.0	<1.0	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	0.099 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	0.20 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.30 J	NA
	10/13			<10	0.29 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.85 J	NA
	1/14			<10 J	0.19 J	<1.0	<1.0	<1.0	<1.0	0.14 J	<11	<1.1	NA
	4/14			<10	0.37 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.43 J	NA
	10/14			<10	0.18 J	<1.0	<1.0	<1.0	<1.0	0.15 J	<10	1.5	NA
	4/15			<10	0.24 J	<1.0	<1.0	<1.0	<1.0	<3.0	<11	2.0	NA
	MW-31			3/09	363.7	355.4	9.4 J	8.3	<1.0	<1.0	0.6 J	<1.0	0.8 J
9/09		<10	10	<1.0			<1.0	0.49 J	<1.0	2.0 J	<5.0	2.5	730
4/10		<10	4.8	<1.0			<1.0	0.40 J	<1.0	1.3 J	<5.0	2.3	<500
10/10		<10	6.9	<1.0			<1.0	0.50 J	<1.0	1.5 J	<5.3	3.5	<500 J
4/11		<10	8.3	<1.0			<1.0	0.77 J	<1.0	2.5 J	<5.3	2.3	<500
10/11		<10	5.7	<1.0			<1.0	0.62 J	<1.0	1.5 J	<5.0	3.5	<500
4/12		6.5 J	6.8	0.16 J			<0.18	0.65 J	<0.090	2.7 J	<1.9	2.1	<500
10/12		<10	6.3 J	0.16 J			<1.0	0.44 J	<1.0	2.3 J	<5.0	0.90 J	NA
4/13		<10	12	0.21 J			<1.0	1.3	<1.0	5.6	<5.2	1.1	<1,000
7/13		<10	11	<1.0			<1.0	1.2	<1.0	5.1	0.72 J	1.6	<1,000
10/13		<10	11	0.15 J			<1.0	1.4	<1.0	6.1	<5.2	2.2	<500
1/14		<10 J	8.2	<1.0			<1.0	1.2	<1.0	6.3	<10	2.2	NA
4/14		<10	7.5	0.22 J			<1.0	0.93 J	<1.0	4.6	0.75 J	1.9	<500
10/14		7.1 J	6.5	<1.0			<1.0	1.4	<1.0	4.5	1.1 J	2.2	<500
3/15		<10 J	9.1	<1.0			<1.0	1.3	<1.0	8.9	0.52 J	1.6	<500

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Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	50 ⁶
MW-32	3/09	364	356	<10	0.5 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	1,200	
	4/10			<10	0.23 J	<1.0	<1.0	<1.0	<3.0	<5.0	0.89 J	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.87 J	<500 J	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500	
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	1.5	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.1	<500
	10/12			<10	<1.0 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.2	NA
	4/13			<10	0.098 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	0.91 J	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.82 J	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.2	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.85 J	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.1	<500
	10/14			<10 J	0.10 J	<1.0	<1.0	0.20 J	<1.0	<3.0	<10	1.5	<500
	3/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	1.1	<500
MW-33	3/09	344.1	356.1	<10	3.2	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.4	<500
	9/09			<10	2.6	<1.0	<1.0	0.20 J	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	1.6	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.0	<500
	10/10			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.7	NA
	4/11			<10	0.79 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.9	NA
	10/11			<10	0.58 J	<1.0	<1.0	0.12 J	<1.0	<3.0	<5.3	1.9	NA
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.3	NA
	10/12			<10	0.33 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.1	NA
	4/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8 J	2.1 J	NA
	7/13			<10	0.46 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.96 J	<1,000
	10/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	0.69 J	NA
	1/14			<10 J	0.69 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.7	NA
	4/14			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	0.32 J	2.3	NA
	10/14			<10 J	0.45 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.3	NA
	4/15			<10	0.57 J	<1.0	<1.0	<1.0	<1.0	<3.0	<11	2.2	NA
MW-34	3/09	362.7	354.7	14	1.4	<1.0	<1.0	0.7 J	<1.0	1.5 J	12	2.0	<500
	9/09			24	<1.0	<1.0	<1.0	0.64 J	<1.0	1.7 J	<5.0	2.5	1,000
	4/10			50 J	0.82 J	<1.0	<1.0	0.42 J	<1.0	1.4 J	<5.0	2.4	<500
	10/10			20	1.0	<1.0	<1.0	0.44 J	<1.0	1.3 J	1.8 J	2.9	<500 J
	4/11			16	1.7	<1.0	<1.0	0.74 J	<1.0	2.0 J	10	2.7	<500
	10/11			350	1.2	<1.0	<1.0	0.71 J	<1.0	0.90 J	<5.6	2.5	<500
	4/12			37 J	1.3	<0.10	<0.18	0.59 J	<0.090	1.4 J	2.1 J	2.4	<500
	10/12			61	1.6	<1.0	<1.0	0.78 J	<1.0	2.2 J	<5.2	2.7	NA
	4/13			26 J	1.3	<1.0	<1.0	0.60 J	<1.0	2.3 J	<4.8	1.7	<1,000
	7/13			32	1.3	<1.0	<1.0	0.66 J	<1.0	2.0 J	0.56 J	0.92 J	NA
	10/13			15	1.2	<1	<1.0	0.69 J	0.13 J	2.2 J	<5.0	1.3	<500
	1/14			15 J	0.91 J	<1.0	<1.0	0.44 J	<1.0	1.3 J	<10	1.9	<500
	4/14			57	1.4	0.11 J	<1.0	0.62 J	<1.0	3.6	2.6 J	1.6	<500
	10/14			31 J	1.4	<1.0	<1.0	0.75 J	<1.0	1.9 J	0.77 J	1.9	<500
	3/15			32	1.5	<1.0	<1.0	0.94 J	<1.0	3.3	<10	2.7	<500

See Notes on Page 8.

Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2015
Periodic Review Report
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	1	50 ⁶	
MW-35	3/09	363	355	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			6.5 J	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	<1.0	1,100
	4/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500
	4/12			14 J	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<36 B	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	470 J
	7/13			4.2 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0 J	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2 J	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.6	<500
	10/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/15			<10	<1.0	<1.0	<1.0	0.44 J	<1.0	<3.0	<10	<1.0	<500
MW-36 ^E (Replaced by MW-36R)	3/09	363.6	355.6	28	2.4	<1.0	<1.0	0.8 J	<1.0	2.8 J	150	2.8	<500
	6/09			NA	NA	NA	NA	NA	NA	460	<5.0	NA	
	9/09			21	3.1	<1.0	<1.0	0.96 J	<1.0	3.2	390	3.1	<500
	4/10			<10 J	3.3	0.26 J	<1.0	1.1	<1.0	5.4	77	2.6	<500
	10/10			12	3.9	0.28 J	<1.0	1.2	<1.0	4.8	620	<5.0	<500 J
	4/11			<10	4.3	<1.0	<1.0	0.95 J	<1.0	4.4	310	4.0	NA
	10/11			<10	1.8	<1.0	<1.0	0.66 J	<1.0	1.4 J	92	3.6	NA
	12/11			NA	NA	NA	NA	NA	NA	120	NA	NA	
	4/12			6.3 J	1.6	0.16 J	<0.18	0.45 J	<0.090	1.9 J	150	4.1	NA
	10/12			<10	1.5 J	<1.0	<1.0	0.54 J	<1.0	2.2 J	10	3.1	NA
	4/13			<10	1.8	0.14 J	<1.0	0.53 J	<1.0	2.9 J	150	4.0	NA
	7/13			<10	1.4	0.11 J	<1.0	0.46 J	<1.0	1.7 J	97	2.0	<1,000
	10/13			<10	1.3	<1.0	<1.0	0.45 J	<1.0	1.7 J	110	1.9	NA
	1/14			<10 J	1.2	<1.0	<1.0	0.42 J	<1.0	1.4 J	180	4.1	NA
	4/14			5.5 J	1.1	0.12 J	<1.0	0.42 J	<1.0	1.6 J	140	3.4	NA
10/14	<10 J	0.62 J	<1.0	<1.0	0.32 J	<1.0	0.60 J	74	3.3	NA			
3/15	<10	0.85 J	<1.0	<1.0	0.42 J	<1.0	0.88 J	25	3.8	NA			
TW-01	3/09	365.1	355.4	<10	1.9	<1.0	<1.0	<1.0	<1.0	0.6 J	<5.0	<0.5	22,300
	9/09			2.9 J	<1.0	<1.0	<1.0	0.11 J	<1.0	<3.0	<5.0	1.1	970
	4/10			<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.3	<500 J
	4/11			<10	0.21 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0 J	<5.6	1.6	<500
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.7	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	1.9	NA
	4/13			<10	0.090 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.98 J	<1,000
	7/13			<10	0.11 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.98 J	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.3	<500
	10/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	0.19 J	<10	1.4	<500
	3/15			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	1.1	<500

See Notes on Page 8.

Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2015
Periodic Review Report
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	50 ^G
TW-02RR ^{B,E} (Replaced by TW-02RRR)	3/09	363.3	353.3	<10 [<10]	5.0 [4.6]	1.5 [1.6]	<1.0 [<1.0]	1.0 [1.0 J]	<1.0 [<1.0]	4.2 [4.1]	2,000 [1,600]	<10 [<10]	<500 [<500]
	6/09			NA	NA	NA	NA	NA	NA	NA	2,800	<20	NA
	9/09			<10 [<10]	4.3 [4.2]	1.2 [1.3]	<1.0 [<1.0]	0.79 J [0.81 J]	<1.0 [<1.0]	3.5 [3.6]	1,600 [1,500]	<10 [<10]	1,000 [1,200]
	4/10			9.5 J [12 J]	4.1 [4.0]	1.2 [1.2]	<1.0 [<1.0]	0.78 J [0.75 J]	<1.0 [<1.0]	4.2 [4.0]	2,800 J [3,100 J]	<20 J [<20 J]	<500 [<500]
	10/10			<10 [<10]	3.3 [3.0]	1.0 [0.91 J]	<1.0 [<1.0]	0.82 J [0.76 J]	<1.0 [<1.0]	3.6 [3.6]	760 [810]	<5.0 [2.2 J]	<500 J [<500 J]
	4/11			<10 [<10]	2.1 [2.0]	1.2 [1.3]	<1.0 [<1.0]	0.74 J [0.75 J]	<1.0 [<1.0]	5.2 [5.3]	1.9 J [2.1 J]	3.4 [3.3]	<500 [<500]
	10/11			<10 [<10]	1.2 [1.1]	0.67 J [0.69 J]	<1.0 [<1.0]	0.53 J [0.48 J]	<1.0 [<1.0]	1.5 J [1.4 J]	1,300 D [1,500 D]	5.5 [6.2]	<500 [<500]
	12/11			NA	NA	NA	NA	NA	NA	NA	1,400	NA	NA
	4/12			15 J [13 J]	1.6 [1.5]	0.73 J [0.76 J]	<0.18 [<0.18]	0.51 J [0.48 J]	<0.090 [<0.090]	1.6 J [1.6 J]	1,400 J [1,600 J]	<2.2 J [<2.2 J]	<500 [<500]
	10/12			<10 [<10]	1.1 J [0.98 J]	0.29 J [0.27 J]	<1.0 [<1.0]	0.26 J [0.27 J]	<1.0 [<1.0]	0.91 J [0.89 J]	<5.2 [3.2 J]	2.2 [1.9]	NA
	4/13			<10 [<10]	1.4 [1.3]	0.60 J [0.64 J]	<1.0 [<1.0]	0.36 J [0.38 J]	<1.0 [<1.0]	1.5 J [1.5 J]	620 [700]	3.5 J [3.4 J]	<1,000 [<1,000]
	7/13			<10 [<10]	0.91 J [0.91 J]	0.25 J [0.26 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 J [14 J]	0.72 J [0.70 J]	150 [170]	1.7 [1.8]	<1,000 [<1,000]
	10/13			<10 [<10]	0.60 J [0.60 J]	<1.0 [0.15 J]	<1.0 [<1.0]	0.20 J [0.17 J]	0.15 J [0.11 J]	<3.0 [<3.0]	90 [72]	2.1 [1.4]	<500 [<500]
	1/14			<10 J [<10 J]	1.1 [1.1]	0.27 J [0.33 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	0.69 J [0.77 J]	660 [750 D]	1.8 J [3.7]	<500 [<500]
	4/14			8.0 J [10]	1.2 [1.2]	0.51 J [0.44 J]	<1.0 [<1.0]	0.18 J [0.17 J]	<1.0 [<1.0]	1.0 J [0.96 J]	1,300 J [1,700 J]	2.8 J [3.5 J]	<500 [<500]
	10/14			<10 J [<10 J]	1.3 [0.88 J]	0.18 J [0.12 J]	<1.0 [<1.0]	0.42 J [0.26 J]	<1.0 [<1.0]	1.2 J [0.46 J]	3.8 J [3.1 J]	2.8 [2.4]	<500 [<500]
	3/15			<10 [<10]	1.1 [0.99 J]	0.31 J [0.43 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	0.81 J [0.75 J]	170 [150]	2.2 [1.7]	<500 [<500]
PZ-4D	3/09	350.8	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	4/10			<10	<1.0	<1.0	5.3 J	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/12			<2.7	<0.080	<0.10	<0.18	0.23 J	<0.090	<0.36	<1.8	<0.21	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<0.95	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
PZ-4S	3/09	362.79	357.88	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	4/10			<10	<1.0	<1.0	17	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	<1.1	NA
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10 J	<1.0 J	NA

See Notes on Page 8.

Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2015
Periodic Review Report
McKesson EnviroSystems Site
Syracuse, New York

General Notes:

1. Concentrations are presented in micrograms per liter, which is equivalent to parts per billion (ppb).
2. Compounds detected are indicated by bold-faced type.
3. Detections exceeding NYSDEC Groundwater Standards (TOGS 1.1.1; NYSDEC 1998) are indicated by shading.
4. Duplicate sample results are presented in brackets (e.g., [14]).
5. The sampling event in June 2010 was an interim sampling event to check for the presence of methylene chloride.
6. Results following the April 2013 sampling event reflect groundwater quality conditions after the shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems.

Superscript Notes:

- ^A = Data presented is total xylenes (m- and p-xylenes and o-xylenes).
- ^B = Wells MW-8S and TW-02R were abandoned in August 2004 and replacement wells MW-8SR and TW-02RR were installed in August 2004.
- ^C = Well MW-9 was abandoned during Operable Unit No. 1 soil remediation activities (1994).
- ^D = Well/piezometer MW-17 was abandoned from November 1997 through January 1998.
- ^E = Wells/piezometers MW-36, PZ-5S, PZ-W, and TW-02RR were abandoned in November 2010. Replacement wells TW-02RRR (replaced TW-02RR) and MW-36R (replaced MW-36 and PZ-W) were installed in November 2010.
- ^F = Detections of acetone at well MW-29 since the October 2014 sampling event are attributed to the repair of the PVC stick-up on June 26, 2014, and are not site-related.
- ^G = Methanol has a New York State Department of Health drinking water standard of 50 ppb. This standard (i.e., maximum contaminant level) is for an "unspecified organic contaminant" (NYCRR Title 10, Part 5, Subpart 5-1).

Abbreviations:

amsl = above mean sea level (National Geodetic Vertical Datum of 1929)
NA = compound was not analyzed for in the sample
NYCRR = New York State Codes, Rules, and Regulations
NYSDEC = New York State Department of Environmental Conservation
PVC = polyvinyl chloride
TOGS = Technical and Operational Guidance Series

Analytical Qualifiers:

B = The compound was found in associated method blank.
D = Concentration is based on a diluted sample analysis.
J = The compound was positively identified; however, the numerical value is an estimated concentration only.
< = Compound was not detected at the listed quantitation limit.

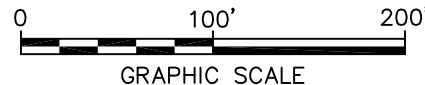
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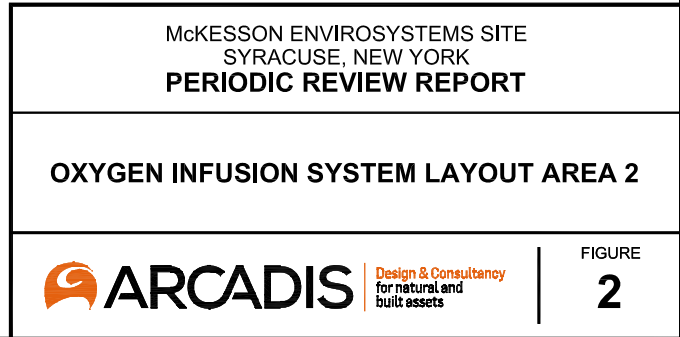
NYSDEC. 1998. Technical Operational Guidance Series 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June.
Available online at: http://www.dec.ny.gov/docs/water_pdf/togs111.pdf

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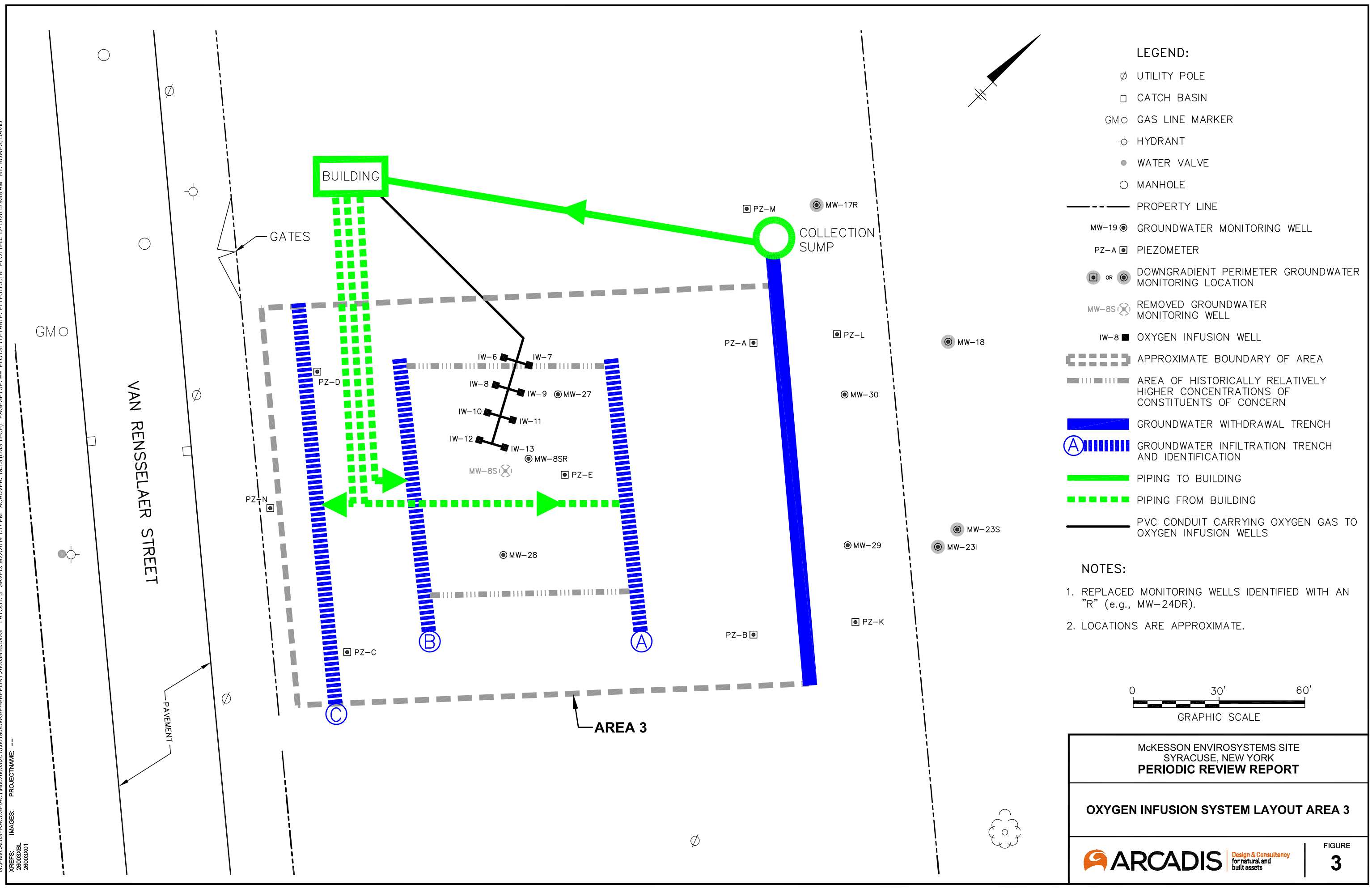
FIGURES







CITY: SYRACUSE, NY DIV/GROUP: ENV/IM/ADV DB: NSMITHGALL, KSARTORI, R, ALLEN LD: PIC: PM-B, BYRNES, TM: LYR: ON=OFF=REF, AREA=HIGHER, ITREE
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McKESSON ENVIROSYSTEMS SITE
SYRACUSE, NEW YORK
PERIODIC REVIEW REPORT

OXYGEN INFUSION SYSTEM LAYOUT AREA 3

ARCADIS

Design & Consultancy
for natural and
built assets

FIGURE
3

Date	10/14/2010	4/5/2011	10/27/2011	12/15/2011	4/12/2012	10/5/2012	4/8/2013	7/25/2013	10/24/2013	1/24/2014	4/17/2014	10/21/2014	3/31/2015
Acetone	<10	<10	<10	<10	NA	15 J	13 J	<10	<10	<10	8.0 J	<10	<10
Benzene	3.3	3.0	2.1	2.0	1.2	1.1	0.98 J	1.4	1.3	0.91 J	0.91 J	0.60 J	0.60 J
Ethylbenzene	1.0	0.91 J	1.2	1.1	0.67 J	0.69 J	NA	0.73 J	0.76 J	0.27 J	0.33 J	0.18 J	0.12 J
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<0.18	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	0.82 J	0.76 J	0.74 J	0.75 J	0.53 J	0.48 J	NA	0.51 J	0.48 J	0.26 J	0.27 J	0.20 J	0.17 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	NA	<0.090	<0.090	<1.0	<1.0	<1.0	1.4 J	0.15 J	0.11 J
Xylenes (total)	3.6	3.6	5.2	5.3	1.5 J	1.4 J	NA	1.6 J	1.6 J	0.91 J	0.89 J	1.5 J	1.5 J
Aniline	760	810	1.9 J	2.1 J	1300 D	1500 D	1400	1400 J	1600 J	<5.2	3.2 J	620	700
N,N-Dimethylaniline	<5.0	2.2 J	3.4	3.3	5.5	6.2	NA	<2.2 J	<2.2 J	2.2	1.9	3.5 J	3.4 J
Methanol	<500 J	<500 J	<500	<500	NA	<500	<500	NA	<1000	<1000	<1000	<500	<500

Date	10/14/2010	4/5/2011	10/26/2011	4/12/2012	10/4/2012	4/8/2013	7/26/2013	10/24/2013	1/24/2014	4/17/2014	10/21/2014	3/31/2015
Acetone	20	16	350	37 J	61	26 J	32	15	15 J	57	31 J	32
Benzene	1	1.7	1.2	1.3	1.6	1.3	1.3	1.2	0.91 J	1.4	1.4	1.5
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.11 J	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	0.44 J	0.74 J	0.71 J	0.59 J	0.78 J	0.60 J	0.66 J	0.69 J	0.44 J	0.62 J	0.75 J	0.94 J
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	0.13 J	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	1.3 J	2.0 J	0.90 J	1.4 J	2.2 J	2.3 J	2.0 J	2.2 J	1.3 J	3.6	1.9 J	3.3
Aniline	1.8 J	10	<5.6	2.1 J	<5.2	<4.8	0.56 J	<5.0	<10	2.6 J	0.77 J	<10
N,N-Dimethylaniline	2.9	2.7	2.5	2.4	2.7	1.7	0.92 J	1.3	1.9	1.6	1.9	2.7
Methanol	<500 J	<500	<500	<500	NA	<1000	NA	<500	<500	<500	<500	<500

NOTES:

- REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (E.G., MW-24DR).
- TRENCH LOCATIONS ARE APPROXIMATE.
- MONITORING LOCATIONS ARE APPROXIMATE.
- FIGURE ONLY SHOWS CONSTITUENT OF CONCERN (COC) CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE COC PROCESS CONTROL MONITORING LOCATIONS.
- ONLY COCS WITH CURRENT OR PAST DETECTIONS ARE PRESENTED ON THIS FIGURE.
- < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
- NA = COMPOUND WAS NOT ANALYZED FOR IN THE SAMPLE.
- J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER, THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
- D = CONCENTRATION IS BASED ON A DILUTED SAMPLE ANALYSIS.
- B = COMPOUND FOUND IN ASSOCIATED METHOD BLANK.
- SAMPLE DATA ARE COMPARED TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) GROUNDWATER QUALITY STANDARDS (GQS) (TECHNICAL AND OPERATIONAL GUIDANCE SERIES 1.1.1).
- NS = GQS NOT AVAILABLE.
- RESULTS FOR DUPLICATE SAMPLES ARE SHOWN IN BRACKETS NEXT TO PARENT SAMPLE RESULTS.
- PPB = PARTS PER BILLION.
- RESULTS FOLLOWING THE APRIL 2013 SAMPLING EVENT REFLECT GROUNDWATER QUALITY CONDITIONS AFTER SHUTDOWN OF THE IN-SITU BIOREMEDIATION TREATMENT AND CLOSED LOOP HYDRAULIC SYSTEMS.
- * = NEW YORK STATE DEPARTMENT OF HEALTH DRINKING WATER STANDARD (I.E., MAXIMUM CONTAMINANT LEVEL) FOR AN "UNSPECIFIED ORGANIC CONTAMINANT" (NYCRR TITLE 10, PART 5, SUBPART 5-1).

Date	10/13/2010	4/5/2011	10/25/2011	4/12/2012	10/5/2012	4/8/2013	7/26/2013	10/25/2013	1/24/2014	4/18/2014	10/22/2014	4/1/2015
Acetone	<10	<10	<10	7.5 J	<10	12 J	<10	<5.0	<10 J	<10	<10 J	<10
Benzene	1.3	0.91 J	1.2	1.1	1.9 J	0.95 J	1.9	2.9	1.1	1.0	1.5	1.4
Ethylbenzene	11	29	4.2	18	4.7	19	12	10	13	19	8.8	22
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	1.9	2.6	1.8	1.5	3.2	1.6	2.0	2.6	1.6	2.2	2.2	2.5
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.82 J	<1.0
Xylenes (total)	45	89	41 J	67	84	62	45	60	54	74	72	79
Aniline	<5.1	<5.3	<5.0	<1.9	<5.0	<5.1	<1.0	<5.0	<10	<10	<10	<11
N,N-Dimethylaniline	7.5	5.4	7.6	6.3	3.9	5.9	2.0	5.2	7.2	5.7	5.9	6.5
Methanol	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	<500	<500	<500

Date	10/13/2010	4/5/2011	10/25/2011	4/12/2012	10/5/2012	4/8/2013	7/25/2013	10/24/2013	1/24/2014	4/17/2014	10/21/2014	3/31/2015
Acetone	<10	<10	<10	6.5 J	<10	<10	<10	<10	<10 J	<10	7.1 J	<10 J
Benzene	6.9	8.3	5.7	6.8	6.3 J	12	11	11	8.2	7.5	6.5	9.1
Ethylbenzene	<1.0	<1.0	<1.0	0.16 J	0.16 J	0.21 J	<1.0	<1.0	0.15 J	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	0.50 J	0.77 J	0.62 J	0.65 J	0.44 J	1.3	1.2	1.4	1.2	0.93 J	1.4	1.3
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	1.5 J	2.5 J	1.5 J	2.7 J	2.5 J	5.6	5.1	6.1	4.6	4.6	4.5	8.9
Aniline	<5.3	<5.3	<5.0	<1.0	<5.0	<5.2	0.72 J	<5.2	<10	0.75 J	1.1 J	0.52 J
N,N-Dimethylaniline	3.5	2.3	3.5	2.1	0.90 J	1.1	1.6	2.2	2.2	1.9	2.2	1.6
Methanol	<500 J	<500	<500	<500	NA	<1000	<1000	<500	NA	<500	<500	<500

Date	10/12/2010	4/4/2011	10/25/2011	4/11/2012	10/5/2012	4/4/2013	7/25/2013	10/23/2013	1/23/2014	4/17/2014	10/21/2014	3/31/2015
Acetone	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	0.35 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.2	<5.3 J	<5.0	<1.8	<5.0	<5.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<1.0	<1.1 J	<1.0	<0.21	<0.61 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methanol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Date	10/14/2010	4/5/2011	10/26/2011	4/11/2012	10/4/2012	4/4/2013	7/24/2013	10/23/2013	1/23/2014	4/16/2014	10/21/2014	4/1/2015
Acetone	<10	<10	<10	14 J	<36 B	<10	4.2 J	<10	<10 J	<10 J	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.44 J
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.6	<5.1	<1.8	<5.0	<5.1	<1.0 J	<5.2 J	<10	<10	<10	<10
N,N-Dimethylaniline	<5.0	<1.1	<1.0	<0.21	<1.0	<1.0	<1.0	<1.0	<1.0	1.6	<1.0	<1.0
Methanol	<500 J	<500	<500	<500	NA	470 J	<1000	<500	<500	<500	<500	<500

Date	10/14/2010	4/5/2011	10/26/2011	12/15/2011	4/12/2012	10/5/2012	4/8/2013	7/26/2013	10/24/2013	1/24/2014	4/17/2014	10/21/2014	3/31/2015
Acetone	12	<10	<10	NA	6.3 J	<10	<10	<10	<10	<10 J	5.5 J	<10 J	<10
Benzene	3.9	4.3	1.8	NA	1.6	1.5 J	1.8	1.4	1.3	1.2	1.1	0.62 J	0.85 J
Ethylbenzene	0.28 J	<1.0	<1.0	NA	0.16 J	<1.0	0.14 J	0.11 J	<1.0	<1.0	0.12 J	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	NA	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	1.2	0.95 J	0.66 J	NA	0.45 J	0.54 J	0.53 J	0.46 J	0.45 J	0.42 J	0.32 J	0.42 J	<1.0
Trichloroethene	<1.0	<1.0	<1.0	NA	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	4.8	4.4	1.4 J	NA	1.9 J	2.2 J	2.9 J	1.7 J	1.7 J	1.4 J	1.6 J	0.60 J	0.88 J
Aniline	620	310	92	120	150	10	150	97	110	180	140	74	25
N,N-Dimethylaniline	<5.0	4.0	3.6	NA	4.1	3.1	4.0	2.0	1.9	4.1	3.4	3.3	3.8
Methanol	<500 J	NA	NA	NA	NA	NA	NA	<1000	NA	NA	NA	NA	NA

MW-45				
Date	4/11/2012	7/24/2013	4/16/2014	4/1/2015
Acetone	<2.7	<10	<10	<10
Benzene	<0.080	<1.0	<1.0	<1.0
Ethylbenzene	<0.10	<1.0	<1.0	<1.0
Methylene Chloride	<0.18	<1.0	<1.0	<1.0
Toluene	<0.15	<1.0	<1.0	<1.0
Trichloroethylene	<0.090	<1.0	<1.0	<1.0
Xylenes (total)	<0.36	<3.0	<3.0	<3.0
Aniline	<1.8	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<0.21	<1.0	<1.0	<1.0
Methanol	NA	NA	NA	NA

ATTACHMENT A

Institutional and Engineering Controls Certification





Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site No. 734020

Site Details

Box 1

Site Name McKesson Envirosystems (Inland Site)

Site Address: 400 Bear Street West Zip Code: 13204
City/Town: Syracuse
County: Onondaga
Site Acreage: 8.6

Reporting Period: October 14, 2014 to October 14, 2015

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
029-300-380	McKesson Corp	Monitoring Plan O&M Plan Ground Water Use Restriction Site Management Plan IC/EC Plan Soil Management Plan Landuse Restriction

Deed Restriction was filed with Onondaga County October 3, 2014. The Deed Restriction requires property use to be restricted to: restricted residential, commercial, or industrial; requires certain restrictions on groundwater use; and requires compliance with the Site Management Plan which includes a soils management plan, monitoring plan, IC/EC plan and an Operation and Maintenance plan.

029-300-390	McKesson Corp	Ground Water Use Restriction IC/EC Plan Landuse Restriction Site Management Plan Soil Management Plan Monitoring Plan Site Management Plan O&M Plan

Deed Restriction was filed with Onondaga County October 3, 2014. The Deed Restriction requires property use to be limited to restricted residential, commercial, or industrial; includes a groundwater Use restriction; and requires compliance with the Site Management Plan including a soils management plan, a monitoring plan, IC/EC plan and O and M plan.

Description of Engineering Controls

<u>Parcel</u>	<u>Engineering Control</u>
029-300-380	Groundwater Containment Fencing/Access Control
029-300-390	Fencing/Access Control Groundwater Containment

Groundwater Containment is maintained through collection trenches.
Fencing/Access control-A perimeter fence is onsite to restrict access.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted

YES NO



2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO



**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 734020

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1, 2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I James Fleer at One Post Street, San Francisco, CA
print name print business address

am certifying as Owner and Remedial Party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.


Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

12/14/2015
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Dawn Elaine Penniman at 6723 Towpath Rd., E. Syracuse, NY
print name print business address

am certifying as a Professional Engineer for the Owner + Remedial Party
(Owner or Remedial Party)

Dawn Elaine Penniman

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification



Stamp
(Required for PE)

12-18-15
Date

Note regarding Box 2 Question 7
McKesson Envirosystems Site
Reporting Period: October 14, 2014 – October 14, 2015
Syracuse, New York
Site No. 7-34-020

Groundwater Containment

The groundwater containment engineering control was shut down on April 10, 2013 upon approval of NYSDEC and a post-shutdown process control monitoring program was implemented. The groundwater containment engineering control is not in effect when the closed loop hydraulic system is shutdown.

As stated in NYSDEC's April 11, 2013 letter (NYSDEC 2013), the purpose of the post-shutdown process control monitoring program is to determine the continued effectiveness of the remedial action and to evaluate the need to re-start the remedial processes (i.e., the *in-situ* bioremediation treatment and closed loop hydraulic systems). As detailed in the Periodic Review Report for the above-referenced reporting period, there is no need to re-start the remedial processes and NYSDEC identified that the systems may remain shut down and be decommissioned (NYSDEC 2015c).

ATTACHMENT B

Site-Wide Inspection Form



SITE-WIDE INSPECTION FORM
McKesson EnviroSystems Site, Syracuse, New York

Form Completed By: Tim Henson
Representing: ARCADIS

Date of Inspection: 10/9/15
Inspection Reporting Period: August 1, 2014 through October 14, 2015

ON-SITE INSPECTION

1. List other individuals and their company/agency that were present during the inspection. None

2. Is health & safety equipment (e.g., fire extinguishers) available on site and up-to-date? ☒ Yes ☐ No

3. Is the current Site use consistent with the use(s) below? restricted residential, commercial, and industrial ☒ Yes ☐ No

4. Is the Site currently undergoing development? If yes, explain below. ☐ Yes ☒ No

5. Is groundwater being used? If yes, explain below. ☐ Yes ☒ No

6. Is there visual evidence of any other activities and/or uses of the Site since the last inspection that are potentially contrary to the restrictions of the Deed Restrictions? If yes, describe below. ☐ Yes ☒ No

7. Is there visual evidence of damage to the above-ground monitoring wells/piezometers or issues in the surrounding area? Are any of the monitoring wells/piezometers missing covers or locks? Is there settling or ponded water in areas around the monitoring wells/piezometers?

☒ No

☐ Yes - If yes, describe below and show the location(s) of affected monitoring well/piezometers on a Site map.

8. Is there visual evidence of significant disturbance to the vegetated cover?

☒ No

☐ Yes - If yes, describe below and show the location(s) of such disturbance on a Site map.

(Inspection Form continued on page 2)

SITE-WIDE INSPECTION FORM
McKesson Envirosystems Site, Syracuse, New York

Form Completed By: Tim Henson
Representing: ARCADIS

Date of Inspection: 10/9/15
Inspection Reporting Period: August 1, 2014 through October 14, 2015

9. Is there visual evidence that the clean fill layer has been breached, penetrated, or temporarily removed?

- ☒ No
☐ Yes - If yes, describe below and show the location(s) of such disturbance on a Site map.

10. Check to confirm that the following documents are available on site.

- ☒ Emergency Contact Numbers
☒ Site Management Plan (date of document July 2014)
☒ Health and Safety Plan (date of document July 2014)

Engineering Control: Fencing/Access Control

11. Is there visual evidence of damage to the fence, gate locks, and/or signage surrounding the perimeter of the Site?

- ☒ No
☐ Yes - If yes, describe below and show the location(s) of such damage on a Site map.

12. Is there visual evidence of trespassing on the Site?

- ☒ No
☐ Yes - If yes, describe below and show the location(s) of such activity on a Site map.

Engineering Control: Groundwater Containment

13. Has the closed loop hydraulic system been operating during the inspection reporting period?

- ☒ No
☐ Yes - if yes, complete the next question.

14. Have *In-Situ* Bioremediation System Operation and Maintenance Log Sheets been completed weekly during the inspection reporting period?

- ☒ No - If no, explain why.
☐ Yes

System is currently not in operation.

**** If necessary, attach additional pages for descriptions, drawings, and/or photographs to document inspection observations and/or suggested action items.**

ATTACHMENT C

Post-Shutdown Monitoring Memoranda





Mr. Payson Long
Remedial Bureau E
Section D
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, New York 12233-7013

Subject:

McKesson Envirosystems
Former Bear Street Facility
400 West Bear Street
Syracuse, New York
Site No. 7-34-020

Dear Mr. Long:

ARCADIS of New York, Inc. (ARCADIS) prepared this monitoring memo for the McKesson Envirosystems Former Bear Street Facility (the Site), on behalf of McKesson Corporation, to present the results of the first monitoring event conducted following shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems at the Site on April 10, 2013. The New York State Department of Environmental Conservation's (NYSDEC's) approval for shutdown of the Operable Unit No. 2 (OU2) remedial systems was documented in an April 11, 2013 letter from Mr. Payson Long (NYSDEC) to Ms. Jean Mescher (McKesson Corporation) and required implementation of a post-shutdown process control monitoring program to determine the continued effectiveness of the OU2 remedial action on the remaining contamination (NYSDEC 2013). The post-shutdown monitoring program is a continuation of the constituent of concern (COC) and hydraulic process control monitoring program that has been conducted at the Site since OU2 treatment activities commenced in 1998.

The main objective of this and future monitoring memos is to provide timely updates of groundwater conditions for monitoring events that do not coincide with the annual Periodic Review Report (PRR) required for the Site. This monitoring memo describes the groundwater monitoring activities and presents the results of first post-shutdown process control monitoring event, conducted in July 2013. Specifically, this monitoring memo describes/presents the following information:

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October 18, 2013

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B0026003.0002.00190 #2

- Goals of the Post-Shutdown Process Control Monitoring Program
- July 2013 Post-Shutdown Process Control Monitoring Activities
- July 2013 Monitoring Results
- Data Evaluation and Conclusions
- Proposed Next Steps

Goals of the Post-Shutdown Process Control Monitoring Program

The goals of the post-shutdown process control monitoring program are to determine the continued effectiveness of the OU2 remedial action and evaluate the need (if any) to re-start remedial processes. As outlined in the October 2013 PRR (ARCADIS 2013a), the remedial action will be considered to have “continued effectiveness” if COC concentrations meet the following conditions:

- Do not rebound substantially above the pre-shutdown COC concentrations based on an evaluation of the most up-to-date dataset
- Continue to trend at asymptotic levels
- Do not migrate beyond the Site boundary above NYSDEC Class GA Groundwater Quality Standards (NYSDEC 1998), as determined by sampling from the sentinel and downgradient perimeter monitoring wells/piezometers

Additionally, the post-shutdown process control monitoring program will provide an evaluation of groundwater flow conditions following the April 2013 shutdown of the closed loop hydraulic system.

July 2013 Post-Shutdown Process Control Monitoring Activities

The first post-shutdown process control monitoring event consisted of hydraulic monitoring on July 18, 2013 and COC monitoring from July 22 through 26, 2013. Table 1 identifies each of the hydraulic and COC monitoring locations, which are shown on Figure 1.

The presence or absence of nonaqueous phase liquid (NAPL) was also assessed in the monitoring wells and piezometers included in the monitoring program, as well as

the collection sump. NAPL was not identified in any of the monitoring wells, piezometers, or the collection sump.

Hydraulic Monitoring

During hydraulic monitoring, groundwater level measurements were obtained at monitoring wells and piezometers that are screened entirely within the sand layer of the shallow hydrogeologic unit and located in and around Areas 1, 2, and 3. Additionally, a groundwater level measurement was obtained within the collection sump and the Barge Canal surface-water elevation was obtained from measurements made from a reference point on the Bear Street Bridge, which passes over the canal.

COC Monitoring

The groundwater COCs for the Site are acetone, benzene, toluene, ethylbenzene, xylenes (total), methanol, trichloroethene, aniline, N,N-dimethylaniline, and methylene chloride. For this monitoring event, four monitoring wells that were previously eliminated from the monitoring program for methanol analysis upon NYSDEC approval in 2010 (MW-33 [Area 1], MW-36R [(Area 2], MW-8SR and MW-27 [Area 3]) were sampled for methanol analysis in order to provide a baseline of methanol concentrations following the April 2013 shutdown of the systems (NYSDEC 2010a). MW-4S and PZ-4S were also sampled this round to provide post-shutdown baseline data. Note that methanol was accidentally not analyzed for in MW-34.

Groundwater samples were analyzed for the COCs by TestAmerica Laboratories, Inc. (TestAmerica) in Edison, New Jersey via Methods 8260B (volatile organic compounds) and 8270C (semi-volatile organic compounds), and in Amherst, New York via Method 8015B (methanol). TestAmerica is accredited pursuant to the New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) for these analyses. ARCADIS validated the laboratory analytical results using the Tier III full validation process. Copies of the validated analytical laboratory reports associated with the July 2013 monitoring event are presented in Attachment A.

July 2013 Monitoring Results

Hydraulic Monitoring Results

Groundwater level measurements obtained during the July 18, 2013 hydraulic monitoring event, as well as those obtained since October 2006, are presented in Table 2. A potentiometric surface of the Site's shallow hydrogeologic unit using the July

18, 2013 data set is depicted on Figure 2. A comparison of the July 2013 potentiometric surface map to those generated (and presented in previous PRRs) using groundwater elevation data obtained prior to shutting down the closed loop hydraulic system in Area 3 demonstrates that:

- the closed depression around the groundwater withdrawal trench is no longer present; and
- the July 18, 2013 potentiometric surface of the shallow hydrogeologic unit sand layer is generally consistent with the potentiometric surface prior to the 1998 implementation of the closed loop hydraulic system in Area 3.

COC Monitoring Results

COC groundwater analytical results are summarized in Table 3 and shown on Figures 3 and 4. COC groundwater analytical results are compared to the NYSDEC Groundwater Quality Standards presented in the Technical and Operational Guidance Series 1.1.1.1 (NYSDEC 1998). The July 2013 COC results are consistent with those obtained prior to shutdown of the *in-situ* bioremediation treatment system. The COC concentrations were mostly not detected or below their respective NYSDEC Class GA Groundwater Quality Standards in each area.

The analytical results for the July 2013 COC monitoring event are summarized below for each area (Areas 1, 2, and 3), as well as sentinel and downgradient perimeter monitoring locations.

Area 1

At 3 out of 5 monitoring locations in Area 1 (MW-32, MW-33, and TW-01), all COCs were either not detected or were detected at concentrations below their respective NYSDEC Groundwater Quality Standards. At the remaining two monitoring locations (MW-9S and MW-31), a maximum of four COCs (benzene, xylenes, N,N-dimethylaniline, and ethylbenzene) were detected at concentrations slightly exceeding their respective standards (see Table 3 and Figure 3).

Area 2

All COC concentrations were not detected at monitoring location MW-35, except acetone, which was present below the standard. At the remaining three monitoring locations in Area 2 (MW-34, TW-02RRR, and MW-36R), a maximum of four COCs

(benzene, trichloroethene [only detected in a duplicate sample], aniline, and N,N-dimethylaniline) were detected at concentrations above their respective standards (see Table 3 and Figure 3).

Area 3

At two out of five monitoring locations in Area 3 (MW-29 and MW-30), all COC concentrations were non-detect or below their respective standards. At the remaining three monitoring locations (MW-27, MW-28, and MW-8SR), a maximum of three COCs (benzene, xylenes, and N,N-dimethylaniline) were detected at concentrations slightly exceeded their respective standards (see Table 3 and Figure 4).

Sentinel Wells

COCs were not detected at sentinel wells MW-3S or MW-4S, located downgradient of Areas 1 and 2, respectively (Table 3 and Figure 3).

Downgradient Perimeter Wells/Piezometers

COCs were not detected in any of the downgradient perimeter monitoring locations (MW-17R, MW-18, MW-23I, MW-23S, PZ-4S, and PZ-4D), except toluene at MW-18 (0.25 J parts per billion [ppb]; which is below the standard of 5 ppb) (Table 3 and Figure 4).

Data Evaluation and Conclusions

In order to evaluate the continued effectiveness of the OU2 remedial action and the need (if any) to re-start the remedial process, July 2013 data were incorporated into the historical groundwater dataset (1998 through July 2013) for technical analyses. The technical analyses performed were the same as those detailed in the January 2013 PRR (ARCADIS 2013b) and consisted of the following:

- Change in annual total COC molar concentration (i.e., concentration normalized by its molecular weight) over time.
- Statistical analyses that included first order decay functions and regression analyses between time (year) and percent COC reduction fitted to each Area's annual total COC molar concentration.

The data and results from these technical analyses demonstrate that the OU2 remedial action has continued effectiveness, showing that the remedy continues to: (1) be protective of public health and the environment, (2) comply with the OU2 Record of Decision (ROD) (NYSDEC 1997), and (3) meet remedial process closure requirements in Section 6.4 of DER-10 (NYSDEC 2010b). The conclusions developed based on groundwater data obtained from 1998 through July 2013 are summarized below.

- COC concentrations detected in July 2013 did not substantially rebound above pre-shutdown COC concentrations.
- COC concentrations were mostly not detected or below their respective NYSDEC Class GA Groundwater Quality Standard in each Area during the July 2013 monitoring event.
- COC concentrations continue to trend at asymptotic levels.
- COC concentrations have not migrated beyond the Site boundary above NYSDEC Groundwater Quality Standards. In July 2013, COCs were not detected in any of the sentinel or perimeter monitoring wells/piezometers (except toluene at 0.25 J ppb in MW-18).
- The remedy continues to achieve the bulk of reduction of groundwater contamination, as indicated by total COC molar concentrations exceeding 98.5 percent reduction in each area.

These conclusions confirm that groundwater quality conditions have not substantially changed since the shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems and fully demonstrate the continued effectiveness of the OU2 remedial action. Accordingly, there is no need to re-start the remedial processes.

Proposed Next Steps

As also outlined in the October 2013 PRR (ARCADIS 2013a), the post-shutdown process control monitoring program is proposed to be conducted for two years (2013 - 2015), consisting of quarterly monitoring during the first year and biannual monitoring during the second year. The next quarterly post-shutdown process control monitoring event is planned to occur the week of October 21, 2013 and will consist of hydraulic and COC monitoring similar to that conducted in July 2013. As detailed in Table 1, the October 2013 monitoring event will consist of measuring groundwater/surface water elevations at the locations identified with an "H" and

collecting groundwater samples from the monitoring wells/piezometers identified with a "C", except for MW-4S and PZ-4S which will continue to be included in the COC monitoring program every third and second monitoring event, respectively.

Following the October 2013 monitoring event, the data will be evaluated to determine the continued effectiveness of the remedial action. Similar to this monitoring memo, the October 2013 groundwater monitoring activities, results, and proposed next steps will be documented in a monitoring memo. That memo will be submitted to NYSDEC prior to the third post-shutdown process control monitoring event, which is planned to occur in January 2014.

If you have any questions or require additional information, please contact me at 315.671.9210.

Sincerely,

ARCADIS of New York, Inc.



David J. Ulm
Senior Vice President

AS/lar

Enclosures:

Tables

Table 1	Post-Shutdown Process Control Monitoring Wells and Piezometers
Table 2	Summary of Groundwater Level Measurements, October 2006 through July 2013
Table 3	Summary of Groundwater Monitoring Data, March 2009 through July 2013

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Figure 1	Site Plan
Figure 2	Potentiometric Surface of the Shallow Hydrogeologic Unit Sand Layer July 18, 2013

Figure 3 Groundwater Monitoring Data Summary for April 2010 – July 2013, Areas 1 & 2

Figure 4 Groundwater Monitoring Data Summary for April 2010 – July 2013, Area 3

Attachment

Attachment A Validated Analytical Laboratory Reports

Copies:

Ms. Susan Edwards, NYSDEC (w/out Attachment A)
Mr. Harry Warner, NYSDEC (w/out Attachment A)
Mr. Richard Jones, NYSDOH (w/out Attachment A)
Margaret A. Sheen, Esq., NYSDEC (w/out Attachment A)
Ms. Jean Mescher, McKesson Corporation (w/out Attachment A)
Mr. Douglas Morrison, Bristol-Myers Squibb Company (w/out Attachment A)
Christopher Young, P.G., de maximis, inc. (w/out Attachment A)
Kevin Bernstein, Esq., Bond Schoeneck & King PLLC (w/out Attachment A)

References

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Tables

Table 1. Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memo, McKesson EnviroSystems, Former Bear Street Facility, Syracuse, New York

Monitoring Location	Purpose of Monitoring
Sentinel	
MW-3S*	C
MW-4S*	C
Area 1	
TW-01	C
MW-9S	C
MW-31	C
MW-32	C
MW-33*	C
PZ-F	H
PZ-G	H
PZ-HR	H
PZ-P	H
PZ-Q	H
PZ-R	H
PZ-S	H
Area 2	
TW-02RRR	C
MW-34	C
MW-35	C
MW-36R*	C
PZ-I	H
PZ-J	H
PZ-T	H
PZ-U	H
PZ-V	H
Area 3	
MW-8SR*	C
MW-11S	H
MW-27*	C
MW-28	C
MW-29*	C
MW-30*	C
PZ-A	H
PZ-B	H
PZ-C	H
PZ-D	H
PZ-E	H
PZ-K	H
PZ-L	H
PZ-M	H
PZ-N	H
PZ-O	H
Collection Sump	H
Downgradient Perimeter	
MW-17R	C
MW-18	C
MW-23I	C
MW-23S	C, H
MW-24SR	H
MW-25S	H
PZ-4S*	C
PZ-4D*	C, H
PZ-5D	H
Barge Canal	H

See Notes on Page 2.

Table 1. Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memo, McKesson EnviroSystems, Former Bear Street Facility, Syracuse, New York

Notes:

1. The table lists the monitoring wells and piezometers that are part of the constituent of concern (COC) and/or hydraulic post-shutdown process control monitoring program.
2. Hydraulic monitoring involves obtaining groundwater level measurements from monitoring wells/piezometers identified in the table and surface-water level measurements from the Barge Canal. The surface-water level of the Barge Canal is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal. Groundwater elevation data are used to map potentiometric surface of the shallow hydrogeologic unit sand layer.
3. The COCs are acetone, benzene, ethylbenzene, methylene chloride, toluene, trichloroethene, xylenes, aniline, N,N-dimethylaniline, and methanol.
4. Monitoring well MW-4S and piezometer PZ-4S are included in the COC monitoring program every third and second monitoring event, respectively.

C = COC monitoring.

H = hydraulic monitoring.

* = New York State Department of Environmental Conservation approved the elimination of methanol analysis from the COC groundwater monitoring program (NYSDEC 2010a).

Table 2. Summary of Groundwater Level Measurements, October 2006 through July 2013
Monitoring Memo, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Location	Reference Elevation (feet AMSL)	10/30/06	6/6/07	11/12/07	3/24/08	8/25/08	3/23/09	9/14/09	4/26/10	10/11/10	4/4/11	10/24/11	4/9/2012	10/1/2012	4/1/2013	7/18/2013 ⁴
Barge Canal ³	393.39	364.29	362.99	362.06	364.34	363.21	363.54	362.89	362.97	363.49	362.07	363.71	358.39	360.59	360.74	360.69
Collection Sump	372.81	363.18	362.26	361.86	363.81	362.14	362.20	362.18	362.18	360.72	359.90	361.33	360.95	361.70	361.24	364.71
MW-3S ¹	376.54	369.08	--	367.60	367.93	365.19	367.32	365.50	365.67	367.95	369.21	--	366.44	365.15	367.55	366.11
MW-11S	373.50	366.11	364.27	363.88	365.69	363.86	364.88	363.89	364.42	364.30	365.00	364.18	363.92	363.62	364.42	364.95
MW-18 ²	372.57	363.82	362.63	362.32	363.51	362.26	363.16	362.22	362.67	362.87	363.82	--	362.57	362.32	362.85	362.74
MW-23I ¹	372.77	366.43	365.02	364.74	366.12	364.64	365.69	364.67	365.19	365.38	366.57	--	364.99	364.73	365.29	365.23
MW-23S	372.61	365.28	362.98	362.56	364.81	362.62	363.50	362.63	362.99	362.71	364.57	362.66	362.23	362.29	362.88	364.20
MW-24SR	375.55	366.49	365.21	364.83	366.26	364.73	365.81	364.79	365.32	365.81	366.60	365.63	365.09	364.84	365.48	365.39
MW-25S	373.39	365.26	363.32	362.87	364.84	362.88	363.97	362.89	363.34	363.30	364.10	363.17	362.81	362.61	363.48	364.08
PZ-4D	376.11	366.64	365.29	364.98	366.39	364.90	365.96	364.94	365.49	366.02	366.74	365.78	365.24	364.94	365.59	365.47
PZ-5D	375.58	366.87	365.49	365.19	366.69	365.09	366.21	365.14	365.01	366.09	366.99	366.02	365.48	365.16	365.84	365.67
PZ-A	373.94	365.62	363.11	362.72	364.83	362.96	363.56	362.95	362.28	362.35	362.68	362.53	363.24	362.54	362.68	364.78
PZ-B	373.92	365.85	363.12	362.62	365.03	362.87	363.64	362.83	362.96	362.22	363.24	362.47	362.14	362.35	362.64	364.77
PZ-C	374.85	367.14	365.85	365.30	367.15	365.16	366.71	365.23	366.37	367.11	367.88	366.6	366.10	365.41	366.76	365.75
PZ-D	375.12	367.68	365.98	365.40	367.29	365.28	366.81	365.40	366.57	367.17	368.20	366.87	366.39	365.65	367.07	365.87
PZ-E	374.12	368.13	365.16	364.07	366.58	364.14	366.82	364.20	364.25	364.16	364.83	364.18	363.67	363.35	364.38	365.12
PZ-F	377.06	368.32	366.18	365.76	367.99	365.50	367.41	365.69	366.72	367.10	368.10 ³	367.04	366.46	365.44	366.91	366.52
PZ-G	377.16	368.64	366.28	365.82	368.14	365.94	367.29	367.22	367.32	367.36	368.12	367.17	366.53	365.48	367.04	366.67
PZ-HR	376.99	368.31	366.23	365.74	368.00	365.48	367.41	365.63	366.65	367.15	368.00 ³	367.04	366.40	365.38	366.90	366.46
PZ-I	375.15	369.00	366.49	365.92	368.55	365.50	367.97	365.71	367.04	367.49	368.60	367.47	366.77	365.36	367.52	366.60
PZ-J	374.89	367.96	366.16	365.82	367.69	365.55	367.20	365.70	366.55	367.05	367.81	366.94	366.30	365.55	366.74	366.39
PZ-K	373.19	365.58	363.36	362.91	364.96	363.08	363.80	363.04	363.33	363.34	361.94	362.97	362.65	362.75	363.03	364.79
PZ-L	374.62	365.23	362.94	362.63	364.64	362.79	363.39	362.80	363.80	362.36	362.52	362.54	362.16	362.42	362.60	364.61
PZ-M	374.35	365.60	363.54	363.11	365.13	363.30	364.00	363.31	363.62	363.04	363.47	363.22	362.86	362.87	363.28	364.93
PZ-N	376.94 ²	367.51	365.76	365.26	367.05	365.09	366.63	365.17	366.22	367.01	367.79	366.62	366.06	365.33	366.72	365.67
PZ-O	375.36	365.42	363.22	362.82	365.01	362.91	363.94	362.93	363.35	362.90	363.57	362.94	362.61	362.52	363.14	364.50
PZ-P	376.89	368.30	366.31	365.83	368.06	365.58	367.51	365.75	366.76	367.26	368.08	367.15	366.49	365.45	366.93 ¹	366.57
PZ-Q	377.61	368.61	366.33	365.83	368.23	365.57	367.61	365.77	366.78	367.26	368.13	367.21	366.52	365.44	367.04	366.59
PZ-R	377.05	368.51	366.19	365.79	368.20	365.55	367.57	365.73	366.74	367.24	368.10	367.15	366.48	365.45	367.03	366.54
PZ-S	378.13	372.48	366.51	365.81	368.21	365.55	367.60	365.74	366.76	367.13	369.67 ³	367.48	366.51	365.45	367.34 ¹	366.58
PZ-T	376.25	368.04	366.24	365.84	367.89	365.52	367.37	365.66	366.63	367.12	367.94	367.00	366.32	365.41	366.86	366.42
PZ-U	375.35	367.99	366.07	365.80	367.75	365.52	367.25	365.66	366.52	367.05	367.83	366.92	366.29	365.44	366.77	366.38
PZ-V	375.78	367.97	366.17	365.78	367.78	365.48	367.24	365.64	366.52	367.04	367.81	366.93	366.28	365.40	366.77	366.37

Notes:

¹Data not used in potentiometric surface mapping of the shallow hydrogeologic unit sand layer.

²The reference elevation for PZ-N was 376.02 feet AMSL prior to November 16, 2000. The new reference elevation is 376.94 feet AMSL.

³Surface-water level measurements are obtained from the Barge Canal. The surface-water level is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal.

⁴Groundwater elevations reflect hydrogeologic conditions after the April 2013 shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems.

Abbreviations:

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

-- = Not Measured.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through July 2013
Monitoring Memo, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-3S	3/09	365.1	350.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	0.17 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA
	10/11			<10	<1.0	<1.0	<1.0	0.35 J	<1.0	<3.0	<5.0	<1.0	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	0.27 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.61 J	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
MW-4S	10/10	365.5	350.5	<10 [<10]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<3.0 [<3.0]	<5.0 [<5.0]	<1.0 [<1.0]	<500 J [<500 J]
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
MW-8SR ^B	3/09	362.7	352.7	6.5 J [5.8 J]	6.8 [6.8]	66 [63]	<1.0 [<1.0]	10 [10]	<1.0 [<1.0]	140 [140]	2,200 [1,800]	<12 [<12]	<500 [<500]
	6/09			NA	NA	NA	NA	NA	NA	NA	7,000	<50	NA
	9/09			<10 [8.3 J]	8.5 J [7.9]	44 J [38]	<1.0 [<1.0]	6.8 J [6.5]	<1.0 J [<1.0]	81 J [71]	4,000 [3,400]	<20 [<20]	<500 [<500]
	4/10			<10 [<10]	4.2 [3.5]	23 J [18]	<1.0 [<1.0]	4.6 [3.7]	<1.0 [<1.0]	41 [33]	370 J [720 J]	1.0 J [<5.0]	<500 [<500]
	10/10			<10	2.7	16	<1.0	2.0	<1.0	31	220	1.6	NA
	4/11			5.9 J [4.3 J]	3.2 [3.2]	10 [8.8]	<1.0 [<1.0]	2.8 [2.6]	<1.0 [<1.0]	32 [31]	57 J [64]	1.5 [1.6]	NA
	10/11			<10 [<10]	1.9 [2.0]	2.0 [2.1]	<1.0 [<1.0]	1.3 [1.3]	<1.0 [<1.0]	14 [15]	<5.0 [<5.0]	2.6 [<1.0]	NA
	4/12			8.7 J [6.7 J]	1.2 [1.7]	2.3 [3.3]	<0.18 [<0.18]	0.76 J [1.2]	<0.090 [<0.090]	9.5 [15]	<1.9 [<1.9]	2.4 [2.6]	NA
	10/12			<10 [<10]	0.69 J [0.70 J]	0.16 J [0.14 J]	<1.0 [<1.0]	0.36 J [0.39 J]	<1.0 [<1.0]	1.4 J [1.2 J]	<5.3 [<5.0]	2.3 [2.7]	NA
	4/13			<10 [<10]	1.1 [1.1]	0.32 J [0.28 J]	<1.0 [<1.0]	0.67 J [0.68 J]	<1.0 [<1.0]	7.7 [8.0]	<5.1 [<5.1]	1.7 [1.4]	NA
7/13	<10	5.1 J [8.7 J]	1.9 [1.8]	0.17 J [0.18 J]	<1.0 [<1.0]	1.0 [0.96J]	<1.0 [<1.0]	11 [9.4]	2.5 [2.5]	0.89 J [0.96 J]	<1000 [<1000]		
MW-9 ⁻ (Replaced by MW-9S)	3/09	365.6	356	<10	1.2	27	<1.0	2.5	<1.0	65	<5.0	4.2	<500
	9/09			<10	1.7	20	<1.0	2.2	<1.0	70	<5.0	4.1	730
	4/10			<10	0.86 J	26	<1.0	2.1	<1.0	69	<5.0	6.5	<500
	10/10			<10	1.3	11	<1.0	1.9	<1.0	45	<5.1	7.5	<500 J
	4/11			<10	0.91 J	29	<1.0	2.6	<1.0	89	<5.3	5.4	<500
	10/11			<10	1.2	4.2	<1.0	1.8	<1.0	41 J	<5.0	7.6	<500
	4/12			7.5 J	1.1	18	<0.18	1.5	<0.090	67	<1.9	6.3	<500
	10/12			<10	1.9 J	4.7	<1.0	3.2	<1.0	84	<5.0	3.9	NA
	4/13			12 J	0.95 J	19	<1.0	1.6	<1.0	62	<5.1	5.9	<1000
	7/13			<10	1.9	12	<1.0	2.0	<1.0	45	<1.0	2.0	<1000

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through July 2013
Monitoring Memo, McKesson EnviroSystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-17 ^b (Replaced by MW-17R)	3/09	365.7	356.1	<10	2.3	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	0.86 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	0.22 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	1.3	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500 J
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	<500
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	<1.0	<500
	4/12			<2.7	0.22 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	0.55 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.2	<1.2	<1000
MW-18	3/09	325.15	316.15	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	33	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.23 J	<1.0	<3.0 J	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	0.27 J	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	0.60 J	<1.0	<3.0	<4.8	<0.95	<1000
7/13	<10	<1.0	<1.0	<1.0	0.25 J	<1.0	<3.0	<1.0	<1.0	<1000			
MW-23S	3/09	364.1	354.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			3.7 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.31 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1000

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through July 2013
Monitoring Memo, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-23i	3/09	341.2	336.2	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	<1.0	<1.0	8.4	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.29 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<9.5	<1000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1000
MW-27	3/09	362.5	354.5	14 J	8.7	36	<1.0	9.4	<1.0	88	8,200 J	<50 J	<500
	6/09			NA	NA	NA	NA	NA	NA	7,400	<50	NA	
	9/09			10	6.2	5.9	<1.0	6.9	<1.0	23	2,100	<10	<500
	4/10			<10	4.5	6.1	<1.0	2.4	<1.0	10	1,300	<10	<500
	10/10			<10	2.7	1.4	<1.0	1.3	<1.0	3.4	220	2.5	NA
	4/11			3.9 J	3.1	5.1	<1.0	5.7	<1.0	9.1	1,000	<11	NA
	10/11			<10	2.1	2.2	<1.0	1.3	<1.0	3.1	36	2.7	NA
	4/12			<2.7	1.5	1.4	<0.18	0.45 J	<0.090	2.2 J	<1.9	2.7	NA
	10/12			<10	1.1	<1.0	<1.0	0.22 J	<1.0	<3.0	<5.0	2.2	NA
	4/13			<10	1.1	0.88 J	<1.0	0.34 J	<1.0	1.4 J	11	2.4	NA
	7/13			<10	2.0	<1.0	<1.0	0.60 J	<1.0	<3.0	1.5	1.1	<1000
MW-28	3/09	363.6	355.6	<10	3.5	0.8 J	<1.0	0.3 J	<1.0	1.1 J	18	<0.5	851
	9/09			<10	3.1	0.32 J	<1.0	0.25 J	<1.0	0.48 J	6.7	<1.0	<500
	4/10			<10	2.8	0.60 J	<1.0	0.23 J	<1.0	0.46 J	<5.0	0.49 J	<500
	10/10			<10	1.8	<1.0	<1.0	<1.0	<1.0	<3.0	2.4 J	0.60 J	<500 J
	4/11			4.3 J	2.3	<1.0	<1.0 B	0.11 J	<1.0	<3.0	3.9 J	0.75 J	<500
	10/11			<10	1.8	<1.0	<1.0	0.38 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	1.4	<0.10	<0.18	0.22 J	<0.090	<0.36	<1.8	0.48 J	<500
	10/12			<10	1.9	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.62 J	NA
	4/13			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.32 J	410 J
	7/13			<10	1.7	<1.0	<1.0	0.22 J	<1.0	<3.0	<1.0	0.35 J	<1000
MW-29	3/09	362.9	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.29 J	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA
	10/11			<10	<1.0	<1.0	<1.0	0.22 J	<1.0	<3.0 J	<5.0	0.22 J	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	7/13			<10	0.26 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through July 2013
Monitoring Memo, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-30	3/09	363.5	355.5	<10	0.8 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	0.78 J	<1.0	<1.0	0.17 J	<1.0	<3.0	21	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			<10 J	0.14 J	<1.0	37	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA	
	10/11			<10	<1.0	<1.0	<1.0	0.18 J	<1.0	<3.0 J	<5.0	<1.0	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	0.099 J	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA	
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	7/13			<10	0.20 J	<1.0	<1.0	<1.0	<3.0	<1.0	0.30 J	NA	
MW-31	3/09	363.7	355.4	9.4 J	8.3	<1.0	<1.0	0.6 J	<1.0	0.8 J	<5.0	2.3	<500
	9/09			<10	10	<1.0	<1.0	0.49 J	<1.0	2.0 J	<5.0	2.5	730
	4/10			<10	4.8	<1.0	<1.0	0.40 J	<1.0	1.3 J	<5.0	2.3	<500
	10/10			<10	6.9	<1.0	<1.0	0.50 J	<1.0	1.5 J	<5.3	3.5	<500 J
	4/11			<10	8.3	<1.0	<1.0	0.77 J	<1.0	2.5 J	<5.3	2.3	<500
	10/11			<10	5.7	<1.0	<1.0	0.62 J	<1.0	1.5 J	<5.0	3.5	<500
	4/12			6.5 J	6.8	0.16 J	<0.18	0.65 J	<0.090	2.7 J	<1.9	2.1	<500
	10/12			<10	6.3 J	0.16 J	<1.0	0.44 J	<1.0	2.3 J	<5.0	0.90 J	NA
	4/13			<10	12	0.21 J	<1.0	1.3	<1.0	5.6	<5.2	1.1	<1000
	7/13			<10	11	<1.0	<1.0	1.2	<1.0	5.1	0.72 J	1.6	<1000
MW-32	3/09	364	356	<10	0.5 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	1,200
	4/10			<10	0.23 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	0.89 J	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.87 J	<500 J
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	1.5	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.1	<500
	10/12			<10	<1.0 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.2	NA
	4/13			<10	0.098 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	0.91 J	<1000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.82 J	<1000
MW-33	3/09	344.1	356.1	<10	3.2	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.4	<500
	9/09			<10	2.6	<1.0	<1.0	0.20 J	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	1.6	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.0	<500
	10/10			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.7	NA
	4/11			<10	0.79 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.9	NA
	10/11			<10	0.58 J	<1.0	<1.0	0.12 J	<1.0	<3.0	<5.3	1.9	NA
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.3	NA
	10/12			<10	0.33 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.1	NA
	4/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8 J	2.1 J	NA
	7/13			<10	0.46 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.96 J	<1000

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through July 2013
Monitoring Memo, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-34	3/09	362.7	354.7	14	1.4	<1.0	<1.0	0.7 J	<1.0	1.5 J	12	2.0	<500
	9/09			24	<1.0	<1.0	<1.0	0.64 J	<1.0	1.7 J	<5.0	2.5	1,000
	4/10			50 J	0.82 J	<1.0	<1.0	0.42 J	<1.0	1.4 J	<5.0	2.4	<500
	10/10			20	1.0	<1.0	<1.0	0.44 J	<1.0	1.3 J	1.8 J	2.9	<500 J
	4/11			16	1.7	<1.0	<1.0	0.74 J	<1.0	2.0 J	10	2.7	<500
	10/11			350	1.2	<1.0	<1.0	0.71 J	<1.0	0.90 J	<5.6	2.5	<500
	4/12			37 J	1.3	<0.10	<0.18	0.59 J	<0.090	1.4 J	2.1 J	2.4	<500
	10/12			61	1.6	<1.0	<1.0	0.78 J	<1.0	2.2 J	<5.2	2.7	NA
	4/13			26 J	1.3	<1.0	<1.0	0.60 J	<1.0	2.3 J	<4.8	1.7	<1000
	7/13			32	1.3	<1.0	<1.0	0.66 J	<1.0	2.0 J	0.56 J	0.92 J	NA
MW-35	3/09	363	355	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			6.5 J	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	<1.0	1,100
	4/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500
	4/12			14 J	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<36 B	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	470 J
	7/13			4.2 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0 J	<1.0	<1000
MW-36 ^E (Replaced by MW-36R)	3/09	363.6	355.6	28	2.4	<1.0	<1.0	0.8 J	<1.0	2.8 J	150	2.8	<500
	6/09			NA	NA	NA	NA	NA	NA	NA	460	<5.0	NA
	9/09			21	3.1	<1.0	<1.0	0.96 J	<1.0	3.2	390	3.1	<500
	4/10			<10 J	3.3	0.26 J	<1.0	1.1	<1.0	5.4	77	2.6	<500
	10/10			12	3.9	0.28 J	<1.0	1.2	<1.0	4.8	620	<5.0	<500 J
	4/11			<10	4.3	<1.0	<1.0	0.95 J	<1.0	4.4	310	4.0	NA
	10/11			<10	1.8	<1.0	<1.0	0.66 J	<1.0	1.4 J	92	3.6	NA
	12/11			NA	NA	NA	NA	NA	NA	NA	120	NA	NA
	4/12			6.3 J	1.6	0.16 J	<0.18	0.45 J	<0.090	1.9 J	150	4.1	NA
	10/12			<10	1.5 J	<1.0	<1.0	0.54 J	<1.0	2.2 J	10	3.1	NA
	4/13			<10	1.8	0.14 J	<1.0	0.53 J	<1.0	2.9 J	150	4.0	NA
	7/13			<10	1.4	0.11 J	<1.0	0.46 J	<1.0	1.7 J	97	2.0	<1000
TW-01	3/09	365.1	355.4	<10	1.9	<1.0	<1.0	<1.0	<1.0	0.6 J	<5.0	<0.5	22,300
	9/09			2.9 J	<1.0	<1.0	<1.0	0.11 J	<1.0	<3.0	<5.0	1.1	970
	4/10			<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.3	<500 J
	4/11			<10	0.21 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0 J	<5.6	1.6	<500
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.7	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	1.9	NA
	4/13			<10	0.090 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.98 J	<1000
	7/13			<10	0.11 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	1.0	<1000

See Notes on Page 7.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through July 2013
Monitoring Memo, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)			Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom											
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)					50	1	5	5	5	5	5	5	1	NS
TW-02RR TM (Replaced by TW-02RRR)	3/09	363.3	353.3	<10 [<10]	5.0 [4.6]	1.5 [1.6]	<1.0 [<1.0]	1.0 [1.0 J]	<1.0 [<1.0]	4.2 [4.1]	2,000 [1,600]	<10 [<10]	<500 [<500]	
	6/09			NA	NA	NA	NA	NA	NA	2,800	<20	NA		
	9/09			<10 [<10]	4.3 [4.2]	1.2 [1.3]	<1.0 [<1.0]	0.79 J [0.81 J]	<1.0 [<1.0]	3.5 [3.6]	1,600 [1,500]	<10 [<10]	1,000 [1,200]	
	4/10			9.5 J [12 J]	4.1 [4.0]	1.2 [1.2]	<1.0 [<1.0]	0.78 J [0.75 J]	<1.0 [<1.0]	4.2 [4.0]	2,800 J [3,100 J]	<20 J [<20 J]	<500 [<500]	
	10/10			<10 [<10]	3.3 [3.0]	1.0 [0.91 J]	<1.0 [<1.0]	0.82 J [0.76 J]	<1.0 [<1.0]	3.6 [3.6]	760 [810]	<5.0 [2.2 J]	<500 J [<500 J]	
	4/11			<10 [<10]	2.1 [2.0]	1.2 [1.3]	<1.0 [<1.0]	0.74 J [0.75 J]	<1.0 [<1.0]	5.2 [5.3]	1.9 J [2.1 J]	3.4 [3.3]	<500 [<500]	
	10/11			<10 [<10]	1.2 [1.1]	0.67 J [0.69 J]	<1.0 [<1.0]	0.53 J [0.48 J]	<1.0 [<1.0]	1.5 J [1.4 J]	1,300 D [1,500 D]	5.5 [6.2]	<500 [<500]	
	12/11			NA	NA	NA	NA	NA	NA	1,400	NA	NA		
	4/12			15 J [13 J]	1.6 [1.5]	0.73 J [0.76 J]	<0.18 [<0.18]	0.51 J [0.48 J]	<0.090 [<0.090]	1.6 J [1.6 J]	1,400 J [1,600 J]	<2.2 J [<2.2 J]	<500 [<500]	
	10/12			<10 [<10]	1.1 J [0.98 J]	0.29 J [0.27 J]	<1.0 [<1.0]	0.26 J [0.27 J]	<1.0 [<1.0]	0.91 J [0.89 J]	<5.2 [3.2 J]	2.2 [1.9]	NA	
	4/13			<10 [<10]	1.4 [1.3]	0.60 J [0.64 J]	<1.0 [<1.0]	0.36 J [0.38 J]	<1.0 [<1.0]	1.5 J [1.5 J]	620 [700]	3.5 J [3.4 J]	<1000 [<1000]	
	7/13			<10 [<10]	0.91 J [0.91 J]	0.25 J [0.26 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 J [1.4 J]	0.72 J [0.70 J]	150 [170]	1.7 [1.8]	<1000 [<1000]	
PZ-4D	3/09	350.8	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500	
	4/10			<10	<1.0	<1.0	5.3 J	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA	
	4/12			<2.7	<0.080	<0.10	<0.18	0.23 J	<0.090	<0.36	<1.8	<0.21	NA	
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<0.95	NA	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA	
PZ-4S	3/09	362.79	357.88	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500	
	4/10			<10	<1.0	<1.0	17	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	6/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA	
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA	
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA	
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA	

See Notes on Page 7.

**Table 3. Summary of Groundwater Monitoring Data, Aerobic Bioremediation Treatment Program, March 2009 through April 2013
Periodic Review Report, 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. Detections exceeding New York State Department of Environmental Conservation (NYSDEC) Groundwater Standards (TOGS 1.1.1; NYSDEC 1998) are indicated by shading.
4. Duplicate sample results are presented in brackets (e.g., [14]).
5. The sampling event in June 2010 was an interim sampling event to check for the presence of methylene chloride.

Superscript Notes:

- ^A= Data presented is total xylenes (m- and p-xylenes and o-xylenes).
- ^B= Wells MW-8S and TW-02R were abandoned in August 2004 and replacement wells MW-8SR and TW-02RR were installed in August 2004.
- ^C= Well MW-9 was abandoned during OU1 soil remediation activities (1994).
- ^D= Well/piezometer MW-17 was abandoned November 1997 through January 1998.
- ^E= Wells/piezometers MW-36, PZ-5S, PZ-W, and TW-02RR were abandoned in November 2010. Replacement wells TW-02RRR (replaced TW-02RR) and MW-36R (replaced MW-36 and PZ-W) were installed in November 2010.

Abbreviations:

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

NA = compound was not analyzed for in the sample

NS = standard not available

TOGS = Technical and Operational Guidance Series

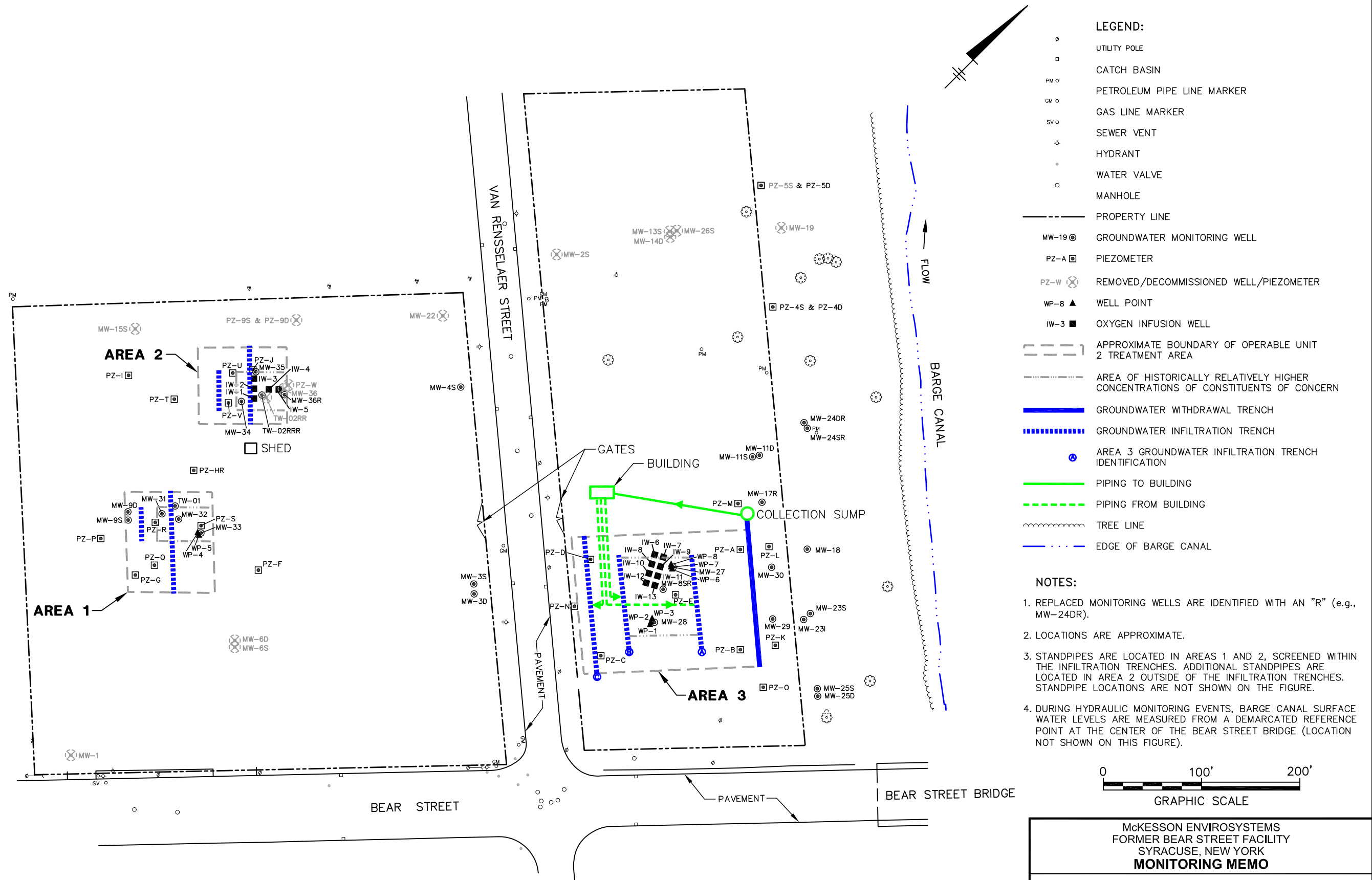
Analytical Qualifiers:

B = The compound was found in associated method blank.

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

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

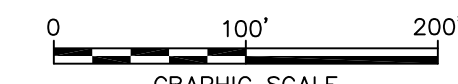
Figures

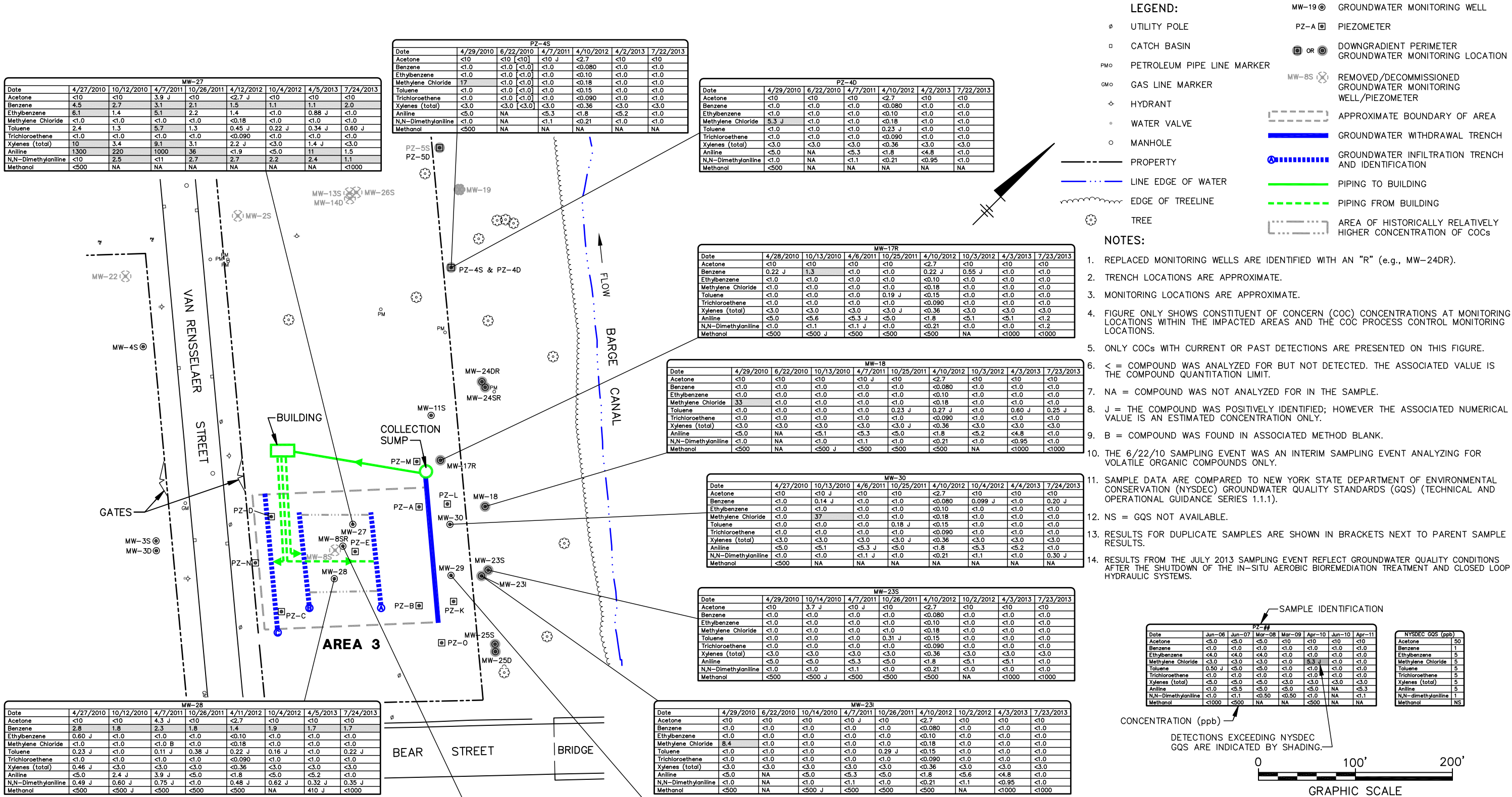


McKESON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
MONITORING MEMO

SITE PLAN









Mr. Payson Long
Remedial Bureau E
Section D
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, New York 12233-7013

Subject:

McKesson Envirosystems
Former Bear Street Facility
400 West Bear Street
Syracuse, New York
Site No. 7-34-020

Dear Mr. Long:

ARCADIS of New York, Inc. (ARCADIS) prepared this monitoring memo for the McKesson Envirosystems Former Bear Street Facility (the Site), on behalf of McKesson Corporation, to present the results of the second monitoring event conducted following shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems at the Site on April 10, 2013. The New York State Department of Environmental Conservation's (NYSDEC's) approval for shutdown of the Operable Unit No. 2 (OU2) remedial systems was documented in an April 11, 2013 letter from Mr. Payson Long (NYSDEC) to Ms. Jean Mescher (McKesson Corporation) and required implementation of a post-shutdown process control monitoring program to determine the continued effectiveness of the OU2 remedial action on the remaining contamination (NYSDEC 2013). The post-shutdown monitoring program is a continuation of the constituent of concern (COC) and hydraulic process control monitoring program that has been conducted at the Site since OU2 treatment activities commenced in 1998.

The main objective of the monitoring memos is to provide timely updates of groundwater conditions for monitoring events that do not coincide with the annual Periodic Review Report (PRR) required for the Site. This monitoring memo describes the groundwater monitoring activities and presents the results of second post-shutdown process control monitoring event, conducted in October 2013. Specifically, this monitoring memo describes/presents the following information:

- Goals of the Post-Shutdown Process Control Monitoring Program

Imagine the result

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Our ref:

B0026003.0002.00190 #2

- October 2013 Post-Shutdown Process Control Monitoring Activities
- October 2013 Monitoring Results
- Data Evaluation and Conclusions
- Proposed Next Steps

Goals of the Post-Shutdown Process Control Monitoring Program

The goals of the post-shutdown process control monitoring program are to determine the continued effectiveness of the OU2 remedial action and evaluate the need (if any) to re-start remedial processes. As outlined in the October 2013 PRR (ARCADIS 2013b), the remedial action will be considered to have “continued effectiveness” if COC concentrations meet the following conditions:

- Do not rebound substantially above the pre-shutdown COC concentrations based on an evaluation of the most up-to-date dataset;
- Continue to trend at asymptotic levels; and
- Do not migrate beyond the Site boundary above NYSDEC Class GA Groundwater Quality Standards (NYSDEC 1998), as determined by sampling from the sentinel and downgradient perimeter monitoring wells/piezometers.

Additionally, the post-shutdown process control monitoring program provides an evaluation of groundwater flow conditions following the April 2013 shutdown of the closed loop hydraulic system.

October 2013 Post-Shutdown Process Control Monitoring Activities

The second post-shutdown process control monitoring event consisted of hydraulic monitoring on October 17, 2013 and COC monitoring from October 21 through 25, 2013. Table 1 identifies each of the hydraulic and COC monitoring locations, which are shown on Figure 1.

The presence or absence of nonaqueous phase liquid (NAPL) was also assessed in the monitoring wells and piezometers included in the monitoring program, as well as the collection sump. NAPL was not identified in any of the monitoring wells, piezometers, or the collection sump.

Hydraulic Monitoring

During hydraulic monitoring, groundwater level measurements were obtained at monitoring wells and piezometers that are screened entirely within the sand layer of the shallow hydrogeologic unit and located in and around Areas 1, 2, and 3. Additionally, a groundwater level measurement was obtained within the collection sump and the Barge Canal surface-water elevation was obtained from measurements made from a reference point on the Bear Street Bridge, which passes over the canal.

COC Monitoring

The groundwater COCs for the Site are acetone, benzene, toluene, ethylbenzene, xylenes (total), methanol, trichloroethene, aniline, N,N-dimethylaniline, and methylene chloride. Groundwater samples were analyzed for the COCs by TestAmerica Laboratories, Inc. (TestAmerica) in Edison, New Jersey via Methods 8260B (volatile organic compounds) and 8270C (semi-volatile organic compounds), and in Amherst, New York via Method 8015B (methanol). TestAmerica is accredited pursuant to the New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) for these analyses. ARCADIS validated the laboratory analytical results using the Tier III full validation process. Copies of the validated analytical laboratory reports associated with the October 2013 monitoring event are presented in Attachment A.

October 2013 Monitoring Results*Hydraulic Monitoring Results*

Groundwater level measurements obtained during the October 17, 2013 hydraulic monitoring event, as well as those obtained since October 2006, are presented in Table 2. A potentiometric surface of the Site's shallow hydrogeologic unit using the October 17, 2013 data set is depicted on Figure 2. A comparison of the July and October 2013 potentiometric surface maps, generated during the first two post-shutdown process control monitoring events, demonstrates that hydraulic conditions have remained consistent following the April 2013 shutdown of the closed loop hydraulic system in Area 3.

When comparing the October 2013 potentiometric surface map to those maps generated (and presented in previous PRRs) using groundwater elevation data obtained prior to system shutdown, the following conclusions, as presented in the first monitoring memo (ARCADIS 2013c), remain true:

- The closed depression around the groundwater withdrawal trench is no longer present.
- The October 17, 2013 potentiometric surface of the shallow hydrogeologic unit sand layer is generally consistent with the potentiometric surface prior to the 1998 implementation of the closed loop hydraulic system in Area 3.

COC Monitoring Results

COC groundwater analytical results are summarized in Table 3 and shown on Figures 3 and 4. COC groundwater analytical results are compared to the NYSDEC Groundwater Quality Standards presented in the Technical and Operational Guidance Series 1.1.1 (NYSDEC 1998). The October 2013 COC results are consistent with those obtained in July 2013 following the April 2013 shutdown of the *in-situ* bioremediation treatment system, as well as those obtained prior to shutdown. The COC concentrations were mostly not detected or below their respective NYSDEC Class GA Groundwater Quality Standards in each area.

The analytical results for the October 2013 COC monitoring event are summarized below for each area (Areas 1, 2, and 3), as well as sentinel and downgradient perimeter monitoring locations.

Area 1

At 3 out of 5 monitoring locations in Area 1 (MW-32, MW-33, and TW-01), only one COC was detected at a concentration slightly exceeding its respective NYSDEC Groundwater Quality Standard. At the remaining two monitoring locations (MW-9S and MW-31), a maximum of four COCs (benzene, xylenes, N,N-dimethylaniline, and ethylbenzene) were detected at concentrations slightly exceeding their respective standards (see Table 3 and Figure 3).

Area 2

No COCs were detected at monitoring location MW-35. At the remaining three monitoring locations in Area 2 (MW-34, TW-02RRR, and MW-36R), a maximum of three COCs (benzene, aniline, and N,N-dimethylaniline) were detected at concentrations above their respective standards (see Table 3 and Figure 3).

Area 3

At two out of five monitoring locations in Area 3 (MW-29 and MW-30), all COC concentrations were non-detect or below their respective standards. At the remaining three monitoring locations (MW-27, MW-28, and MW-8SR), a maximum of two COCs (benzene and xylenes) were detected at concentrations that slightly exceeded their respective standards (see Table 3 and Figure 4).

Sentinel Wells

COCs were not detected at sentinel well MW-3S, located downgradient of Area 1 (Table 3 and Figure 3). Sentinel well MW-4S, located downgradient of Area 2, was not sampled during the October 2013 monitoring event since it is sampled every third monitoring event.

Downgradient Perimeter Wells/Piezometers

COCs were not detected in any of the downgradient perimeter monitoring locations (MW-17R, MW-18, MW-23I, MW-23S, and PZ-4D), except toluene at MW-18 (0.19 J parts per billion [ppb]; which is below the standard of 5 ppb) (Table 3 and Figure 4).

Data Evaluation and Conclusions

In order to evaluate the continued effectiveness of the OU2 remedial action and the need (if any) to re-start the remedial process, October 2013 data were incorporated into the historical groundwater dataset (1998 through October 2013) for technical analyses. The technical analyses performed were the same as those detailed in the January 2013 PRR (ARCADIS 2013a) and consisted of the following:

- Change in annual total COC molar concentration (i.e., concentration normalized by its molecular weight) over time.
- Statistical analyses that included first order decay functions and regression analyses between time (year) and percent COC reduction fitted to each Area's annual total COC molar concentration.

The data and results from these technical analyses demonstrate that the OU2 remedial action has continued effectiveness, showing that the remedy continues to: (1) be protective of public health and the environment, (2) comply with the OU2 Record of Decision (ROD) (NYSDEC 1997), and (3) meet remedial process closure requirements

in Section 6.4 of DER-10 (NYSDEC 2010a). The conclusions developed based on groundwater data obtained from 1998 through October 2013 are summarized below.

- COC concentrations detected in October 2013 did not substantially rebound above pre-shutdown COC concentrations.
- COC concentrations were mostly not detected or below their respective NYSDEC Class GA Groundwater Quality Standard in each Area during the October 2013 monitoring event.
- COC concentrations continue to trend at asymptotic levels for each area.
- COC concentrations have not migrated beyond the Site boundary above NYSDEC Groundwater Quality Standards. In October 2013, COCs were not detected in any of the sentinel or perimeter monitoring wells/piezometers (except toluene at 0.19 J ppb in MW-18).
- The remedy continues to achieve the bulk of reduction of groundwater contamination, as indicated by total COC molar concentrations exceeding 98.5 percent reduction in each area.

These conclusions confirm that groundwater quality conditions have not substantially changed since the shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems and fully demonstrate the continued effectiveness of the OU2 remedial action. Accordingly, there is no need to re-start the remedial processes.

Proposed Next Steps

As also outlined in the October 2013 PRR (ARCADIS 2013b), the post-shutdown process control monitoring program is proposed to be conducted for two years (2013 to 2015), consisting of quarterly monitoring during the first year and biannual monitoring during the second year. The third quarterly post-shutdown process control monitoring event is planned to occur the week of January 20, 2014 and will consist of hydraulic and COC monitoring similar to that conducted in October 2013. As detailed in Table 1, the January 2014 monitoring event will consist of measuring groundwater/surface-water elevations at the locations identified with an “H” and collecting groundwater samples from the monitoring wells/piezometers identified with a “C”, except for MW-4S which will continue to be included in the COC monitoring program every third monitoring event.

Following the January 2014 monitoring event, the data will be evaluated to determine the continued effectiveness of the remedial action. Similar to this monitoring memo, the January 2014 groundwater monitoring activities, results, and proposed next steps will be documented in a monitoring memo. That memo will be submitted to NYSDEC prior to the fourth quarterly post-shutdown process control monitoring event, which is planned to occur in April 2014.

If you have any questions or require additional information, please contact me at 315.671.9210.

Sincerely,

ARCADIS of New York, Inc.

David J. Ulm
Senior Vice President

AS/lar

Enclosures:

Tables

Table 1	Post-Shutdown Process Control Monitoring Wells and Piezometers
Table 2	Summary of Groundwater Level Measurements, October 2006 through October 2013
Table 3	Summary of Groundwater Monitoring Data, March 2009 through October 2013

Figures

Figure 1	Site Plan
Figure 2	Potentiometric Surface of the Shallow Hydrogeologic Unit Sand Layer October 17, 2013
Figure 3	Groundwater Monitoring Data Summary for April 2010 – October 2013, Areas 1 & 2
Figure 4	Groundwater Monitoring Data Summary for April 2010 – October 2013, Area 3

Attachment

Attachment A Validated Analytical Laboratory Reports

Copies:

Ms. Susan Edwards, NYSDEC (w/out Attachment A)
Mr. Harry Warner, NYSDEC (w/out Attachment A)
Mr. Richard Jones, NYSDOH (w/out Attachment A)
Margaret A. Sheen, Esq., NYSDEC (w/out Attachment A)
Ms. Jean Mescher, McKesson Corporation (w/out Attachment A)
Mr. Douglas Morrison, Bristol-Myers Squibb Company (w/out Attachment A)
Christopher Young, P.G., de maximis, inc. (w/out Attachment A)
Kevin Bernstein, Esq., Bond Schoeneck & King PLLC (w/out Attachment A)

References

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ARCADIS. 2013b. Periodic Review Report. McKesson EnviroSystems Former Bear Street Facility. October 1.

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Tables

Table 1. Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memo, McKesson EnviroSystems, Former Bear Street Facility, Syracuse, New York

Monitoring Location	Purpose of Monitoring
Sentinel	
MW-3S*	C
MW-4S*	C
Area 1	
TW-01	C
MW-9S	C
MW-31	C
MW-32	C
MW-33*	C
PZ-F	H
PZ-G	H
PZ-HR	H
PZ-P	H
PZ-Q	H
PZ-R	H
PZ-S	H
Area 2	
TW-02RRR	C
MW-34	C
MW-35	C
MW-36R*	C
PZ-I	H
PZ-J	H
PZ-T	H
PZ-U	H
PZ-V	H
Area 3	
MW-8SR*	C
MW-11S	H
MW-27*	C
MW-28	C
MW-29*	C
MW-30*	C
PZ-A	H
PZ-B	H
PZ-C	H
PZ-D	H
PZ-E	H
PZ-K	H
PZ-L	H
PZ-M	H
PZ-N	H
PZ-O	H
Collection Sump	H
Downgradient Perimeter	
MW-17R	C
MW-18	C
MW-23I	C
MW-23S	C, H
MW-24SR	H
MW-25S	H
PZ-4S*	C
PZ-4D*	C, H
PZ-5D	H
Barge Canal	H

See Notes on Page 2.

Table 1. Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memo, McKesson EnviroSystems, Former Bear Street Facility, Syracuse, New York

Notes:

1. The table lists the monitoring wells and piezometers that are part of the constituent of concern (COC) and/or hydraulic post-shutdown process control monitoring program.
2. Hydraulic monitoring involves obtaining groundwater level measurements from monitoring wells/piezometers identified in the table and surface-water level measurements from the Barge Canal. The surface-water level of the Barge Canal is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal. Groundwater elevation data are used to map potentiometric surface of the shallow hydrogeologic unit sand layer.
3. The COCs are acetone, benzene, ethylbenzene, methylene chloride, toluene, trichloroethene, xylenes, aniline, N,N-dimethylaniline, and methanol.
4. Monitoring well MW-4S and piezometer PZ-4S are included in the COC monitoring program every third and second monitoring event, respectively.

C = COC monitoring.

H = hydraulic monitoring.

* = New York State Department of Environmental Conservation approved the elimination of methanol analysis from the COC groundwater monitoring program (NYSDEC 2010b).

Table 2. Summary of Groundwater Level Measurements, October 2006 through October 2013
Monitoring Memo, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Location	Reference Elevation (feet AMSL)	10/30/06	6/6/07	11/12/07	3/24/08	8/25/08	3/23/09	9/14/09	4/26/10	10/11/10	4/4/11	10/24/11	4/9/2012	10/1/2012	4/1/2013	7/18/2013 ^d	10/17/2013 ^d
Barge Canal ¹	393.39	364.29	362.99	362.06	364.34	363.21	363.54	362.89	362.97	363.49	362.07	363.71	358.39	360.59	360.74	360.69	360.69
Collection Sump	372.81	363.18	362.26	361.86	363.81	362.14	362.20	362.18	362.18	360.72	359.90	361.33	360.95	361.70	361.24	364.71	364.84
MW-3S ¹	376.54	369.08	--	367.60	367.93	365.19	367.32	365.50	365.67	367.95	369.21	--	366.44	365.15	367.55	366.11	366.62
MW-11S	373.50	366.11	364.27	363.88	365.69	363.86	364.88	363.89	364.42	364.30	365.00	364.18	363.92	363.62	364.42	364.95	365.08
MW-18 ¹	372.57	363.82	362.63	362.32	363.51	362.26	363.16	362.22	362.67	362.87	363.82	--	362.57	362.32	362.85	362.74	363.54
MW-23I ¹	372.77	366.43	365.02	364.74	366.12	364.64	365.69	364.67	365.19	365.38	366.57	--	364.99	364.73	365.29	365.23	365.33
MW-23S	372.61	365.28	362.98	362.56	364.81	362.62	363.50	362.63	362.99	362.71	364.57	362.66	362.23	362.29	362.88	364.20	364.37
MW-24SR	375.55	366.49	365.21	364.83	366.26	364.73	365.81	364.79	365.32	365.81	366.60	365.63	365.09	364.84	365.48	365.39	365.46
MW-25S	373.39	365.26	363.32	362.87	364.84	362.88	363.97	362.89	363.34	363.30	364.10	363.17	362.81	362.61	363.48	364.08	364.23
PZ-4D	376.11	366.64	365.29	364.98	366.39	364.90	365.96	364.94	365.49	366.02	366.74	365.78	365.24	364.94	365.59	365.47	365.59
PZ-5D	375.58	366.87	365.49	365.19	366.69	365.09	366.21	365.14	365.01	366.09	366.99	366.02	365.48	365.16	365.84	365.67	365.81
PZ-A	373.94	365.62	363.11	362.72	364.83	362.96	363.56	362.95	362.28	362.35	362.68	362.53	363.24	362.54	362.68	364.78	364.92
PZ-B	373.92	365.85	363.12	362.62	365.03	362.87	363.64	362.83	362.96	362.22	363.24	362.47	362.14	362.35	362.64	364.77	364.88
PZ-C	374.85	367.14	365.85	365.30	367.15	365.16	366.71	365.23	366.37	367.11	367.88	366.6	366.10	365.41	366.76	365.75	365.84
PZ-D	375.12	367.68	365.98	365.40	367.29	365.28	366.81	365.40	366.57	367.17	368.20	366.87	366.39	365.65	367.07	365.87	365.97
PZ-E	374.12	368.13	365.16	364.07	366.58	364.14	366.82	364.20	364.25	364.16	364.83	364.18	363.67	363.35	364.38	365.12	365.22
PZ-F	377.06	368.32	366.18	365.76	367.99	365.50	367.41	365.69	366.72	367.10	368.10 ³	367.04	366.46	365.44	366.91	366.52	366.57
PZ-G	377.16	368.64	366.28	365.82	368.14	365.94	367.29	367.22	367.32	367.36	368.12	367.17	366.53	365.48	367.04	366.67	366.70
PZ-HR	376.99	368.31	366.23	365.74	368.00	365.48	367.41	365.63	366.65	367.15	368.00 ³	367.04	366.40	365.38	366.90	366.46	366.50
PZ-I	375.15	369.00	366.49	365.92	368.55	365.50	367.97	365.71	367.04	367.49	368.60	367.47	366.77	365.36	367.52	366.60	366.70
PZ-J	374.89	367.96	366.16	365.82	367.69	365.55	367.20	365.70	366.55	367.05	367.81	366.94	366.30	365.55	366.74	366.39	366.48
PZ-K	373.19	365.58	363.36	362.91	364.96	363.08	363.80	363.04	363.33	363.34	361.94	362.97	362.65	362.75	363.03	364.79	364.96
PZ-L	374.62	365.23	362.94	362.63	364.64	362.79	363.39	362.80	363.80	362.36	362.52	362.54	362.16	362.42	362.60	364.61	364.77
PZ-M	374.35	365.60	363.54	363.11	365.13	363.30	364.00	363.31	363.62	363.04	363.47	363.22	362.86	362.87	363.28	364.93	364.96
PZ-N	376.94 ²	367.51	365.76	365.26	367.05	365.09	366.63	365.17	366.22	367.01	367.79	366.62	366.06	365.33	366.72	365.67	365.81
PZ-O	375.36	365.42	363.22	362.82	365.01	362.91	363.94	362.93	363.35	362.90	363.57	362.94	362.61	362.52	363.14	364.50	364.64
PZ-P	376.89	368.30	366.31	365.83	368.06	365.58	367.51	365.75	366.76	367.26	368.08	367.15	366.49	365.45	366.93 ³	366.57	366.63
PZ-Q	377.61	368.61	366.33	365.83	368.23	365.57	367.61	365.77	366.78	367.26	368.13	367.21	366.52	365.44	367.04	366.59	366.65
PZ-R	377.05	368.51	366.19	365.79	368.20	365.55	367.57	365.73	366.74	367.24	368.10	367.15	366.48	365.45	367.03	366.54	366.59
PZ-S	378.13	372.48	366.51	365.81	368.21	365.55	367.60	365.74	366.76	367.13	369.67 ³	367.48	366.51	365.45	367.34 ¹	366.58	366.61
PZ-T	376.25	368.04	366.24	365.84	367.89	365.52	367.37	365.66	366.63	367.12	367.94	367.00	366.32	365.41	366.86	366.42	366.49
PZ-U	375.35	367.99	366.07	365.80	367.75	365.52	367.25	365.66	366.52	367.05	367.83	366.92	366.29	365.44	366.77	366.38	366.47
PZ-V	375.78	367.97	366.17	365.78	367.78	365.48	367.24	365.64	366.52	367.04	367.81	366.93	366.28	365.40	366.77	366.37	366.46

Notes:

¹Data not used in potentiometric surface mapping of the shallow hydrogeologic unit sand layer.

²The reference elevation for PZ-N was 376.02 feet AMSL prior to November 16, 2000. The new reference elevation is 376.94 feet AMSL.

³Surface-water level measurements are obtained from the Barge Canal. The surface-water level is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal.

⁴Groundwater elevations reflect hydrogeologic conditions after the April 2013 shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems.

Abbreviations:

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

-- = Not Measured.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through October 2013
Monitoring Memo, McKesson EnviroSystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol	
		Top	Bottom											
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS	
MW-3S	3/09	365.1	350.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500	
	9/09			<10	0.17 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA	
	10/11			<10	<1.0	<1.0	<1.0	0.35 J	<1.0	<3.0	<5.0	<1.0	NA	
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA	
	10/12			<10	0.27 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.61 J	NA	
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA	
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA	
MW-4S	10/10	365.5	350.5	<10 [<10]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<3.0 [<3.0]	<5.0 [<5.0]	<1.0 [<1.0]	<500 J [<500 J]	
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA	
MW-8SR ^B	3/09	362.7	352.7	6.5 J [5.8 J]	6.8 [6.8]	66 [63]	<1.0 [<1.0]	10 [10]	<1.0 [<1.0]	140 [140]	2,200 [1,800]	<12 [<12]	<500 [<500]	
	6/09			NA	NA	NA	NA	NA	NA	7,000	<50	NA	NA	
	9/09			<10 [8.3 J]	8.5 J [7.9]	44 J [38]	<1.0 [<1.0]	6.8 J [6.5]	<1.0 J [<1.0]	81 J [71]	4,000 [3,400]	<20 [<20]	<500 [<500]	
	4/10			<10 [<10]	4.2 [3.5]	23 J [18]	<1.0 [<1.0]	4.6 [3.7]	<1.0 [<1.0]	41 [33]	370 J [720 J]	1.0 J [<5.0]	<500 [<500]	
	10/10			<10	2.7	16	<1.0	2.0	<1.0	31	220	1.6	NA	NA
	4/11			5.9 J [4.3 J]	3.2 [3.2]	10 [8.8]	<1.0 [<1.0]	2.8 [2.6]	<1.0 [<1.0]	32 [31]	57 J [64]	1.5 [1.6]	NA	NA
	10/11			<10 [<10]	1.9 [2.0]	2.0 [2.1]	<1.0 [<1.0]	1.3 [1.3]	<1.0 [<1.0]	14 [15]	<5.0 [<5.0]	2.6 [<1.0]	NA	NA
	4/12			8.7 J [6.7 J]	1.2 [1.7]	2.3 [3.3]	<0.18 [<0.18]	0.76 J [1.2]	<0.090 [<0.090]	9.5 [15]	<1.9 [<1.9]	2.4 [2.6]	NA	NA
	10/12			<10 [<10]	0.69 J [0.70 J]	0.16 J [0.14 J]	<1.0 [<1.0]	0.36 J [0.39 J]	<1.0 [<1.0]	1.4 J [1.2 J]	<5.3 [<5.0]	2.3 [2.7]	NA	NA
	4/13			<10 [<10]	1.1 [1.1]	0.32 J [0.28 J]	<1.0 [<1.0]	0.67 J [0.68 J]	<1.0 [<1.0]	7.7 [8.0]	<5.1 [<5.1]	1.7 [1.4]	NA	NA
	7/13			5.1 J [8.7 J]	1.9 [1.8]	0.17 J [0.18 J]	<1.0 [<1.0]	1.0 [0.96J]	<1.0 [<1.0]	11 [9.4]	2.5 [2.5]	0.89 J [0.96 J]	<1000 [<1000]	NA
10/13	<10	2.9	0.21 J	<1.0	1.3	<1.0	13	2.6 J	0.83 J	NA	NA			
MW-9 ^C (Replaced by MW-9S)	3/09	365.6	356	<10	1.2	27	<1.0	2.5	<1.0	65	<5.0	4.2	<500	
	9/09			<10	1.7	20	<1.0	2.2	<1.0	70	<5.0	4.1	730	
	4/10			<10	0.86 J	26	<1.0	2.1	<1.0	69	<5.0	6.5	<500	
	10/10			<10	1.3	11	<1.0	1.9	<1.0	45	<5.1	7.5	<500 J	
	4/11			<10	0.91 J	29	<1.0	2.6	<1.0	89	<5.3	5.4	<500	
	10/11			<10	1.2	4.2	<1.0	1.8	<1.0	41 J	<5.0	7.6	<500	
	4/12			7.5 J	1.1	18	<0.18	1.5	<0.090	67	<1.9	6.3	<500	
	10/12			<10	1.9 J	4.7	<1.0	3.2	<1.0	84	<5.0	3.9	NA	
	4/13			12 J	0.95 J	19	<1.0	1.6	<1.0	62	<5.1	5.9	<1000	
	7/13			<10	1.9	12	<1.0	2.0	<1.0	45	<1.0	2.0	<1000	
	10/13			<5.0	2.9	10	<1.0	2.6	<1.0	60	<5.0	5.2	<500	
MW-17 ^D (Replaced by MW-17R)	3/09	365.7	356.1	<10	2.3	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500	
	9/09			<10 J	0.86 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	0.22 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			<10	1.3	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500 J	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	<500	
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	<1.0	<500	
	4/12			<2.7	0.22 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500	
	10/12			<10	0.55 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA	
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1000	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.2	<1.2	<1000	
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.4	<1.1	<500	

See Notes on Page 6.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through October 2013
Monitoring Memo, McKesson EnviroSystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-18	3/09	325.15	316.15	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	<1.0	<1.0	33	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.23 J	<1.0	<3.0 J	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	0.27 J	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	0.60 J	<1.0	<3.0	<4.8	<0.95	<1000
	7/13			<10	<1.0	<1.0	<1.0	0.25 J	<1.0	<3.0	<1.0	<1.0	<1000
	10/13			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0	<5.4	<1.1	<500
MW-23S	3/09	364.1	354.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			3.7 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.31 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	<500
	MW-23I			3/09	341.2	336.2	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
9/09		<10 J	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
4/10		<10	<1.0	<1.0			8.4	<1.0	<1.0	<3.0	<5.0	<1.0	<500
6/10		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	NA	NA	NA
10/10		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
4/11		<10 J	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
10/11		<10	<1.0	<1.0			<1.0	0.29 J	<1.0	<3.0	<5.0	<1.0	<500
4/12		<2.7	<0.080	<0.10			<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
10/12		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	NA
4/13		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<4.8	<9.5	<1000
7/13		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1000
10/13		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
MW-27	3/09	362.5	354.5	14 J	8.7	36	<1.0	9.4	<1.0	88	8,200 J	<50 J	<500
	6/09			NA	NA	NA	NA	NA	NA	NA	7,400	<50	NA
	9/09			10	6.2	5.9	<1.0	6.9	<1.0	23	2,100	<10	<500
	4/10			<10	4.5	6.1	<1.0	2.4	<1.0	10	1,300	<10	<500
	10/10			<10	2.7	1.4	<1.0	1.3	<1.0	3.4	220	2.5	NA
	4/11			3.9 J	3.1	5.1	<1.0	5.7	<1.0	9.1	1,000	<11	NA
	10/11			<10	2.1	2.2	<1.0	1.3	<1.0	3.1	36	2.7	NA
	4/12			<2.7	1.5	1.4	<0.18	0.45 J	<0.090	2.2 J	<1.9	2.7	NA
	10/12			<10	1.1	<1.0	<1.0	0.22 J	<1.0	<3.0	<5.0	2.2	NA
	4/13			<10	1.1	0.88 J	<1.0	0.34 J	<1.0	1.4 J	11	2.4	NA
	7/13			<10	2.0	<1.0	<1.0	0.60 J	<1.0	<3.0	1.5	1.1	<1000
	10/13			<10	2.6	<1.0	<1.0	0.75 J	<1.0	3.9	<5.0	0.73 J	NA

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through October 2013
Monitoring Memo, McKesson EnviroSystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-28	3/09	363.6	355.6	<10	3.5	0.8 J	<1.0	0.3 J	<1.0	1.1 J	18	<0.5	851
	9/09			<10	3.1	0.32 J	<1.0	0.25 J	<1.0	0.48 J	6.7	<1.0	<500
	4/10			<10	2.8	0.60 J	<1.0	0.23 J	<1.0	0.46 J	<5.0	0.49 J	<500
	10/10			<10	1.8	<1.0	<1.0	<1.0	<1.0	<3.0	2.4 J	0.60 J	<500 J
	4/11			4.3 J	2.3	<1.0	<1.0 B	0.11 J	<1.0	<3.0	3.9 J	0.75 J	<500
	10/11			<10	1.8	<1.0	<1.0	0.38 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	1.4	<0.10	<0.18	0.22 J	<0.090	<0.36	<1.8	0.48 J	<500
	10/12			<10	1.9	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.62 J	NA
	4/13			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.32 J	410 J
	7/13			<10	1.7	<1.0	<1.0	0.22 J	<1.0	<3.0	<1.0	0.35 J	<1000
10/13	<10	1.7	<1.0	<1.0	0.49 J	<1.0	0.68 J	<5.0	0.70 J	<500			
MW-29	3/09	362.9	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.29 J	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA
	10/11			<10	<1.0	<1.0	<1.0	0.22 J	<1.0	<3.0 J	<5.0	0.22 J	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	7/13			<10	0.26 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
10/13	<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA			
MW-30	3/09	363.5	355.5	<10	0.8 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	0.78 J	<1.0	<1.0	0.17 J	<1.0	<3.0	21	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10 J	0.14 J	<1.0	37	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA
	10/11			<10	<1.0	<1.0	<1.0	0.18 J	<1.0	<3.0 J	<5.0	<1.0	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	0.099 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	0.20 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.30 J	NA
10/13	<10	0.29 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.85 J	NA			
MW-31	3/09	363.7	355.4	9.4 J	8.3	<1.0	<1.0	0.6 J	<1.0	0.8 J	<5.0	2.3	<500
	9/09			<10	10	<1.0	<1.0	0.49 J	<1.0	2.0 J	<5.0	2.5	730
	4/10			<10	4.8	<1.0	<1.0	0.40 J	<1.0	1.3 J	<5.0	2.3	<500
	10/10			<10	6.9	<1.0	<1.0	0.50 J	<1.0	1.5 J	<5.3	3.5	<500 J
	4/11			<10	8.3	<1.0	<1.0	0.77 J	<1.0	2.5 J	<5.3	2.3	<500
	10/11			<10	5.7	<1.0	<1.0	0.62 J	<1.0	1.5 J	<5.0	3.5	<500
	4/12			6.5 J	6.8	0.16 J	<0.18	0.65 J	<0.090	2.7 J	<1.9	2.1	<500
	10/12			<10	6.3 J	0.16 J	<1.0	0.44 J	<1.0	2.3 J	<5.0	0.90 J	NA
	4/13			<10	12	0.21 J	<1.0	1.3	<1.0	5.6	<5.2	1.1	<1000
	7/13			<10	11	<1.0	<1.0	1.2	<1.0	5.1	0.72 J	1.6	<1000
10/13	<10	11	0.15 J	<1.0	1.4	<1.0	6.1	<5.2	2.2	<500			

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through October 2013
Monitoring Memo, McKesson EnviroSystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-32	3/09	364	356	<10	0.5 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	1,200	
	4/10			<10	0.23 J	<1.0	<1.0	<1.0	<3.0	<5.0	0.89 J	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.87 J	<500 J	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500	
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	1.5	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.1	<500
	10/12			<10	<1.0 J	<1.0	<1.0	<1.0	<3.0	<5.1	2.2	NA	
	4/13			<10	0.098 J	<1.0	<1.0	<1.0	<3.0	<5.1	0.91 J	<1000	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.82 J	<1000	
10/13	<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.2	<500				
MW-33	3/09	344.1	356.1	<10	3.2	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.4	<500
	9/09			<10	2.6	<1.0	<1.0	0.20 J	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	1.6	<1.0	<1.0	<1.0	<3.0	<5.0	2.0	<500	
	10/10			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.7	NA
	4/11			<10	0.79 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.9	NA
	10/11			<10	0.58 J	<1.0	<1.0	0.12 J	<1.0	<3.0	<5.3	1.9	NA
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.3	NA
	10/12			<10	0.33 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.1	NA
	4/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8 J	2.1 J	NA
	7/13			<10	0.46 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.96 J	<1000
10/13	<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	0.69 J	NA			
MW-34	3/09	362.7	354.7	14	1.4	<1.0	<1.0	0.7 J	<1.0	1.5 J	12	2.0	<500
	9/09			24	<1.0	<1.0	<1.0	0.64 J	<1.0	1.7 J	<5.0	2.5	1,000
	4/10			50 J	0.82 J	<1.0	<1.0	0.42 J	<1.0	1.4 J	<5.0	2.4	<500
	10/10			20	1.0	<1.0	<1.0	0.44 J	<1.0	1.3 J	1.8 J	2.9	<500 J
	4/11			16	1.7	<1.0	<1.0	0.74 J	<1.0	2.0 J	10	2.7	<500
	10/11			350	1.2	<1.0	<1.0	0.71 J	<1.0	0.90 J	<5.6	2.5	<500
	4/12			37 J	1.3	<0.10	<0.18	0.59 J	<0.090	1.4 J	2.1 J	2.4	<500
	10/12			61	1.6	<1.0	<1.0	0.78 J	<1.0	2.2 J	<5.2	2.7	NA
	4/13			26 J	1.3	<1.0	<1.0	0.60 J	<1.0	2.3 J	<4.8	1.7	<1000
	7/13			32	1.3	<1.0	<1.0	0.66 J	<1.0	2.0 J	0.56 J	0.92 J	NA
10/13	15	1.2	<1	<1.0	0.69 J	0.13 J	2.2 J	<5.0	1.3	<500			
MW-35	3/09	363	355	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			6.5 J	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	<1.0	1,100
	4/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500
	4/12			14 J	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<36 B	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	470 J
	7/13			4.2 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0 J	<1.0	<1000
10/13	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2 J	<1.0	<500			

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through October 2013
Monitoring Memo, McKesson EnviroSystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol			
		Top	Bottom													
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS			
MW-36 ^E (Replaced by MW-36R)	3/09	363.6	355.6	28	2.4	<1.0	<1.0	0.8 J	<1.0	2.8 J	150	2.8	<500			
	6/09			NA	NA	NA	NA	NA	460	<5.0	NA					
	9/09			21	3.1	<1.0	<1.0	0.96 J	<1.0	3.2	390	3.1	<500			
	4/10			<10 J	3.3	0.26 J	<1.0	1.1	<1.0	5.4	77	2.6	<500			
	10/10			12	3.9	0.28 J	<1.0	1.2	<1.0	4.8	620	<5.0	<500 J			
	4/11			<10	4.3	<1.0	<1.0	0.95 J	<1.0	4.4	310	4.0	NA			
	10/11			<10	1.8	<1.0	<1.0	0.66 J	<1.0	1.4 J	92	3.6	NA			
	12/11			NA	NA	NA	NA	NA	NA	120	NA	NA				
	4/12			6.3 J	1.6	0.16 J	<0.18	0.45 J	<0.090	1.9 J	150	4.1	NA			
	10/12			<10	1.5 J	<1.0	<1.0	0.54 J	<1.0	2.2 J	10	3.1	NA			
	4/13			<10	1.8	0.14 J	<1.0	0.53 J	<1.0	2.9 J	150	4.0	NA			
	7/13			<10	1.4	0.11 J	<1.0	0.46 J	<1.0	1.7 J	97	2.0	<1000			
	10/13			<10	1.3	<1.0	<1.0	0.45 J	<1.0	1.7 J	110	1.9	NA			
TW-01	3/09	365.1	355.4	<10	1.9	<1.0	<1.0	<1.0	<1.0	0.6 J	<5.0	<0.5	22,300			
	9/09			2.9 J	<1.0	<1.0	<1.0	0.11 J	<1.0	<3.0	<5.0	1.1	970			
	4/10			<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.0	<500			
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.3	<500 J			
	4/11			<10	0.21 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500			
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0 J	<5.6	1.6	<500			
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.7	<500			
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	1.9	NA			
	4/13			<10	0.090 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.98 J	<1000			
	7/13			<10	0.11 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	1.0	<1000			
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	<500			
	TW-02RR ^{BE} (Replaced by TW-02RRR)			3/09	363.3	353.3	<10 [<10]	5.0 [4.6]	1.5 [1.6]	<1.0 [<1.0]	1.0 [1.0 J]	<1.0 [<1.0]	4.2 [4.1]	2,000 [1,600]	<10 [<10]	<500 [<500]
				6/09			NA	NA	NA	NA	NA	NA	2,800	<20	NA	
9/09		<10 [<10]	4.3 [4.2]	1.2 [1.3]			<1.0 [<1.0]	0.79 J [0.81 J]	<1.0 [<1.0]	3.5 [3.6]	1,600 [1,500]	<10 [<10]	1,000 [1,200]			
4/10		9.5 J [12 J]	4.1 [4.0]	1.2 [1.2]			<1.0 [<1.0]	0.78 J [0.75 J]	<1.0 [<1.0]	4.2 [4.0]	2,800 J [3,100 J]	<20 J [<20 J]	<500 [<500]			
10/10		<10 [<10]	3.3 [3.0]	1.0 [0.91 J]			<1.0 [<1.0]	0.82 J [0.76 J]	<1.0 [<1.0]	3.6 [3.6]	760 [810]	<5.0 [2.2 J]	<500 J [<500 J]			
4/11		<10 [<10]	2.1 [2.0]	1.2 [1.3]			<1.0 [<1.0]	0.74 J [0.75 J]	<1.0 [<1.0]	5.2 [5.3]	1.9 J [2.1 J]	3.4 [3.3]	<500 [<500]			
10/11		<10 [<10]	1.2 [1.1]	0.67 J [0.69 J]			<1.0 [<1.0]	0.53 J [0.48 J]	<1.0 [<1.0]	1.5 J [1.4 J]	1,300 D [1,500 D]	5.5 [6.2]	<500 [<500]			
12/11		NA	NA	NA			NA	NA	NA	NA	1,400	NA	NA			
4/12		15 J [13 J]	1.6 [1.5]	0.73 J [0.76 J]			<0.18 [<0.18]	0.51 J [0.48 J]	<0.090 [<0.090]	1.6 J [1.6 J]	1,400 J [1,600 J]	<2.2 J [<2.2 J]	<500 [<500]			
10/12		<10 [<10]	1.1 J [0.98 J]	0.29 J [0.27 J]			<1.0 [<1.0]	0.26 J [0.27 J]	<1.0 [<1.0]	0.91 J [0.89 J]	<5.2 [3.2 J]	2.2 [1.9]	NA			
4/13		<10 [<10]	1.4 [1.3]	0.60 J [0.64 J]			<1.0 [<1.0]	0.36 J [0.38 J]	<1.0 [<1.0]	1.5 J [1.5 J]	620 [700]	3.5 J [3.4 J]	<1000 [<1000]			
7/13		<10 [<10]	0.91 J [0.91 J]	0.25 J [0.26 J]			<1.0 [<1.0]	<1.0 J [14 J]	0.72 J [0.70 J]	150 [170]	1.7 [1.8]	<1000 [<1000]				
10/13		<10 [<10]	0.60 J [0.60 J]	<1.0 [0.15 J]			<1.0 [<1.0]	0.20 J [0.17 J]	0.15 J [0.11 J]	<3.0 [<3.0]	90 [72]	2.1 [1.4]	<500 [<500]			
PZ-4D	3/09	350.8	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500			
	4/10			<10	<1.0	<1.0	5.3 J	<1.0	<1.0	<3.0	<5.0	<1.0	<500			
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA			
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA			
	4/12			<2.7	<0.080	<0.10	<0.18	0.23 J	<0.090	<0.36	<1.8	<0.21	NA			
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<0.95	NA			
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA			
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA			
PZ-4S	3/09	362.79	357.88	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500			
	4/10			<10	<1.0	<1.0	17	<1.0	<1.0	<3.0	<5.0	<1.0	<500			
	6/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA			
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA			
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA			
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA			
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA			

See Notes on Page 6.

Table 3. Summary of Groundwater Monitoring Data, Aerobic Bioremediation Treatment Program, March 2009 through October 2013
Monitoring Memo, 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. Detections exceeding New York State Department of Environmental Conservation (NYSDEC) Groundwater Standards (TOGS 1.1.1; NYSDEC 1998) are indicated by shading.
4. Duplicate sample results are presented in brackets (e.g., [14]).
5. The sampling event in June 2010 was an interim sampling event to check for the presence of methylene chloride.

Superscript Notes:

- ^A = Data presented is total xylenes (m- and p-xylenes and o-xylenes).
- ^B = Wells MW-8S and TW-02R were abandoned in August 2004 and replacement wells MW-8SR and TW-02RR were installed in August 2004.
- ^C = Well MW-9 was abandoned during OU1 soil remediation activities (1994).
- ^D = Well/piezometer MW-17 was abandoned November 1997 through January 1998.
- ^E = Wells/piezometers MW-36, PZ-5S, PZ-W, and TW-02RR were abandoned in November 2010. Replacement wells TW-02RRR (replaced TW-02RR) and MW-36R (replaced MW-36 and PZ-W) were installed in November 2010.

Abbreviations:

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

NA = compound was not analyzed for in the sample

NS = standard not available

TOGS = Technical and Operational Guidance Series

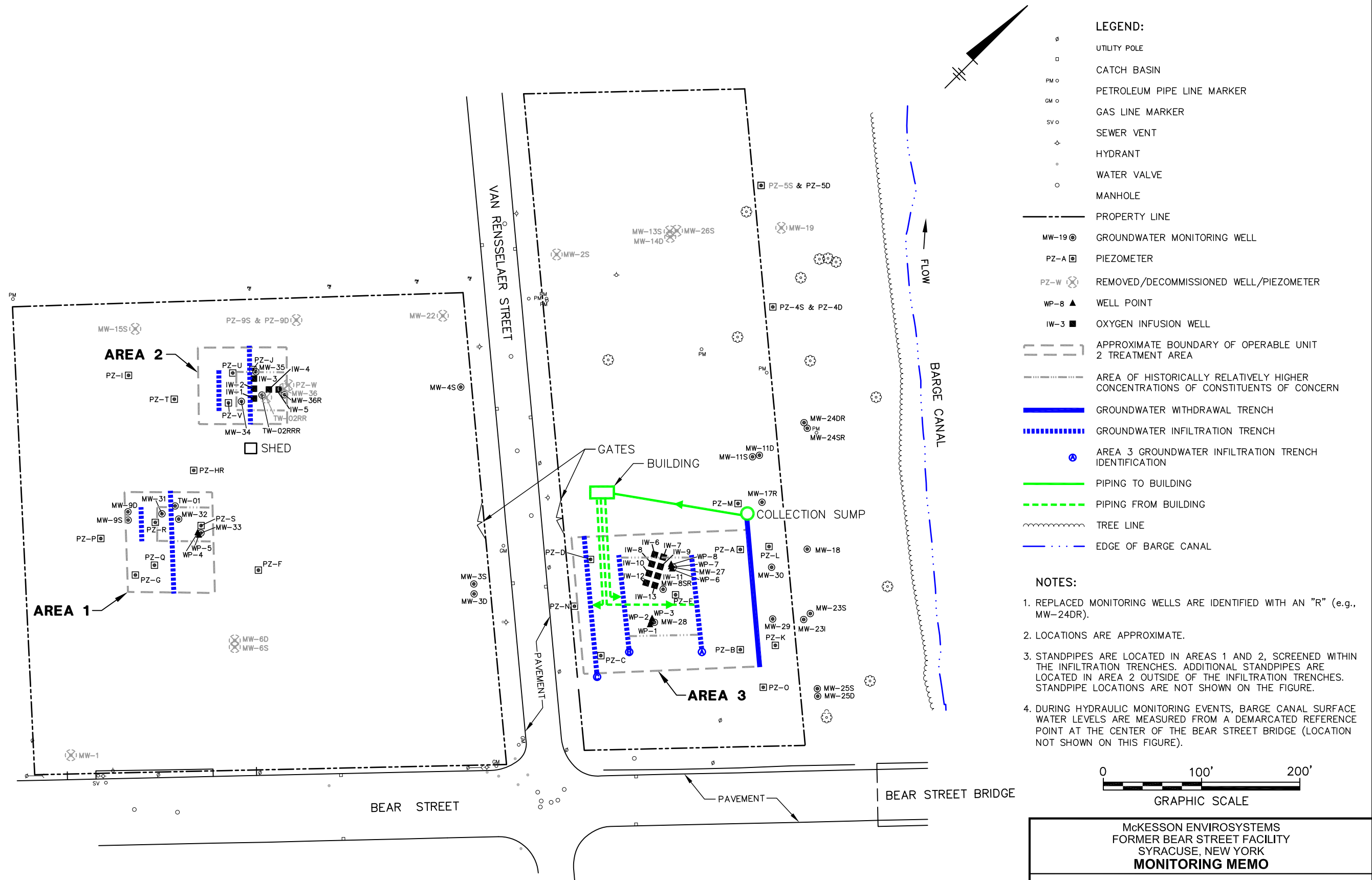
Analytical Qualifiers:

B = The compound was found in associated method blank.

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

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

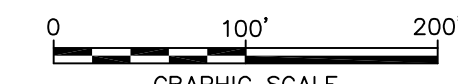
Figures



McKESSEON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
MONITORING MEMO

SITE PLAN





TW-02RRR										
Date	4/30/2010	10/14/2010	4/5/2011	10/27/2011	12/15/2011	4/12/2012	10/5/2012	4/8/2013	7/25/2013	10/24/13
Acetone	9.5 J [12 J]	<10 [10]	<10 [10]	<10 [10]	NA	15 J [13 J]	<10 [10]	<10 [10]	<10 [10]	<10 [10]
Benzene	4.1 [4.0]	3.3 [3.0]	2.1 [2.0]	1.2 [1.1]	NA	1.6 [1.5]	1.1 J [0.98 J]	1.4 [1.3]	0.91 J [0.91 J]	0.60 J [0.60 J]
Ethylbenzene	1.2 [1.2]	1.0 [0.91 J]	1.2 [1.3]	0.67 J [0.69 J]	NA	0.73 J [0.76 J]	0.28 J [0.27 J]	0.80 J [0.64 J]	0.25 J [0.26 J]	<1.0 [0.15 J]
Methylene Chloride	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	NA	<0.18 [0.18]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]
Toluene	0.78 J [0.75 J]	0.82 J [0.76 J]	0.74 J [0.75 J]	0.53 J [0.48 J]	NA	0.51 J [0.48 J]	0.26 J [0.27 J]	0.36 J [0.38 J]	<1.0 [1.0]	0.20 J [0.17 J]
Trichloroethene	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	NA	<0.090 [0.090]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	0.15 J [0.11 J]
Xylenes (total)	4.2 [4.0]	3.6 [3.6]	5.2 [5.3]	1.5 J [1.4 J]	NA	1.6 J [1.6 J]	0.91 J [0.89 J]	1.5 J [1.5 J]	0.72 J [0.70 J]	<3.0 [3.0]
Aniline	2800 J [3100 J]	760 [810]	1.9 J [2.1 J]	1300 D [1500 D]	1400	1400 J [1600 J]	<5.2 [3.2 J]	620 [700]	150 [170]	90 [72]
N,N-Dimethylaniline	<20 J [20 J]	<5.0 [2.2 J]	3.4 [3.3]	5.5 [6.2]	NA	<2.2 J [2.2 J]	2.2 [1.9]	3.5 J [3.4 J]	1.7 [1.8]	2.1 [1.4]
Methanol	<500 [500]	<500 J [500 J]	<500 [500]	<500 [500]	NA	<500 [500]	NA	<1000 [1000]	<1000 [1000]	<500 [500]

MW-35										
Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	4/11/2012	10/4/2012	4/4/2013	7/24/2013	10/23/13	
Acetone	<10 J	<10	<10	<10	14 J	<36 B	<10	4.2 J	<10	
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	
Toluene	<1.0	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0	<1.0	<1.0	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	
Aniline	<5.0	<5.0	<5.6	<5.1	<1.8	<5.0	<5.1	<1.0 J	<5.2 J	
N,N-Dimethylaniline	<1.0	<1.0	<1.1	<1.0	<0.21	<1.0	<1.0	<1.0	<1.0	
Methanol	<500	<500 J	<500	<500	<500	NA	470 J	<1000	<500	

MW-34										
Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	4/12/2012	10/4/2012	4/8/2013	7/26/2013	10/24/13	
Acetone	50 J	20	16	350	37 J	61	26 J	32	15	
Benzene	0.82 J	1	1.7	1.2	1.3	1.6	1.3	1.3	1.2	
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	
Toluene	0.42 J	0.44 J	0.74 J	0.71 J	0.59 J	0.78 J	0.60 J	0.66 J	0.59 J	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	0.13 J	
Xylenes (total)	1.4 J	1.3 J	2.0 J	0.90 J	1.4 J	2.2 J	2.3 J	2.0 J	2.2 J	
Aniline	<5.0	1.8 J	10	<5.6	2.1 J	<5.2	<4.8	0.56 J	<5.0	
N,N-Dimethylaniline	2.4	2.9	2.7	2.5	2.4	2.7	1.7	0.92 J	1.3	
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	NA	<500	

MW-36R										
Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	12/15/2011	4/12/2012	10/5/2012	4/8/2013	7/26/2013	10/24/13
Acetone	<10 J	12	<10	<10	NA	6.3 J	<10	<10	<10	<10
Benzene	3.3	3.9	4.3	1.8	NA	1.6	1.5 J	1.8	1.4	1.3
Ethylbenzene	0.26 J	0.28 J	<1.0	<1.0	NA	0.16 J	<1.0	0.14 J	0.11 J	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	NA	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	1.1	1.2	0.95 J	0.66 J	NA	0.45 J	0.54 J	0.53 J	0.46 J	0.45 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	NA	<0.090	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	5.4	4.8	4.4	1.4 J	NA	1.9 J	2.2 J	2.9 J	1.7 J	1.7 J
Aniline	77	620	310	92	120	150	10	150	97	110
N,N-Dimethylaniline	2.6	<5.0	4.0	3.6	NA	4.1	3.1	4.0	2.0	1.9
Methanol	<500	<500 J	NA	NA	NA	NA	NA	NA	<1000	NA

MW-4S			
Date	10/15/2010	4/11/2012	7/24/2013
Acetone	<10 [10]	<2.7	<10
Benzene	<1.0 [1.0]	<0.080	<1.0
Ethylbenzene	<1.0 [1.0]	<0.10	<1.0
Methylene Chloride	<1.0 [1.0]	<0.18	<1.0
Toluene	<1.0 [1.0]	<0.15	<1.0
Trichloroethene	<1.0 [1.0]	<0.090	<1.0
Xylenes (total)	<3.0 [3.0]	<0.36	<3.0
Aniline	<5.0 [5.0]	<1.8	<1.0
N,N-Dimethylaniline	<1.0 [1.0]	<0.21	<1.0
Methanol	<500 J [500 J]	NA	NA

TW-01										
Date	4/28/2010	10/12/2010	4/4/2011	10/25/2011	4/11/2012	10/4/2012	4/4/2013	7/25/2013	10/23/13	
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	
Benzene	0.32 J	<1.0	0.21 J	<1.0	0.11 J	<1.0	0.090 J	0.11 J	<1.0	
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	
Toluene	<1.0	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0	<1.0	<1.0	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	
Aniline	<5.0	<5.3	<5.3	<5.6	<1.8	<5.2	<5.2	<1.0	<5.0	
N,N-Dimethylaniline	1	1.3	<1.1	1.6	1.7	1.9	0.98 J	1.0	1.1	
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	

MW-3S										
Date	4/28/2010	10/12/2010	4/6/2011	10/27/2011	4/11/2012	10/4/2012	4/4/2013	7/24/2013	10/23/13	
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	0.27 J	<1.0	<1.0	<1.0	
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	
Toluene	<1.0	<1.0	<1.0	0.35 J	<0.15	<1.0	<1.0	<1.0	<1.0	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	
Aniline	<5.0	<5.2	<5.3 J	<5.0	<1.8	<5.0	<5.2	<1.0	<5.0	
N,N-Dimethylaniline	<1.0	<1.0	<1.1 J	<1.0	<0.21	<0.61 J	<1.0	<1.0	<1.0	
Methanol	<500	NA	NA	NA	NA	NA	NA	NA	NA	

MW-9S										
Date	4/28/2010	10/13/2010	4/5/2011	10/25/2011	4/12/2012	10/5/2012	4/8/2013	7/26/2013	10/25/2013	
Acetone	<10	<10	<10	<10	7.5 J	<10	12 J	<10	<5.0	
Benzene	0.86 J	1.3	0.91 J	1.2	1.1	1.9 J	0.95 J	1.9	2.9	
Ethylbenzene	26	11	29	4.2	18	4.7	19	12	10	
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	
Toluene	2.1	1.9	2.6	1.8	1.5	3.2	1.6	2.0	2.6	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	
Xylenes (total)	69	45	89	41 J	67	84	62	45	60	
Aniline	<5.0	<5.1	<5.3	<5.0	<1.9	<5.0	<5.1	<1.0	<5.0	
N,N-Dimethylaniline	6.5	7.5	5.4	7.6	6.3	3.9	5.9	2.0	5.2	
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	

MW-31										
Date	4/28/2010	10/13/2010	4/5/2011	10/25/2011	4/12/2012	10/5/2012	4/5/2013	7/25/2013	10/24/13	
Acetone	<10	<10	<10	<10	6.5 J	<10	<10	<10	<10	
Benzene	4.8	6.9	8.3	5.7	6.8	6.3 J	12	11	11	
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	0.16 J	0.16 J	0.21 J	<1.0	0.15 J	
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	
Toluene	0.40 J	0.50 J	0.77 J	0.62 J	0.65 J	0.44 J	1.3	1.2	1.4	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	
Xylenes (total)	1.3 J	1.5 J	2.5 J	1.5 J	2.7 J	2.3 J	5.6	5.1	6.1	
Aniline	<5.0	<5.3	<5.0	<1.9	<5.0	<5.2	0.72 J	<5.2	<5.2	
N,N-Dimethylaniline	2.3	3.5	2.3	3.5	2.1	0.90 J	1.1	1.6	2.2	
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	

MW-32										
Date	4/28/2010	10/12/2010	4/4/2011	10/25/2011	4/11/2012	10/5/2012	4/5/2013	7/25/2013	10/23/13	
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	
Benzene	0.23 J	<1.0	<1.0	<1.0	<0.080	<1.0 J	0.098 J	<1.0	<1.0	
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	
Toluene	<1.0	<1.0	<1.0	0.19 J	<0.15	<1.0	<1.0	<1.0	<1.0	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	
Aniline	<5.0	<5.0	<5.3	<5.3	<5.1	<5.1	<5.1	<5.1	<5.0	
N,N-Dimethylaniline	0.89 J	1.87 J	<5.0	<5.0	<5.0	2.2	0.91 J	0.82 J	1.21	
Methanol	<500 J	<500 J	<500	<500	<500	NA	<1000	<500	<500	

Date	4/27/2010	10/12/2010	4/7/2011	10/26/2011	4/12/2012	10/4/2012	4/5/2013	7/24/2013	10/23/13
Acetone	<10	<10	3.9 J	<10	<2.7 J	<10	<10	<10	<10
Benzene	4.5	2.7	3.1	2.1	1.5	1.1	1.1	2.0	2.6
Ethylbenzene	6.1	1.4	5.1	2.2	1.4	<1.0	0.88 J	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	2.4	1.3	5.7	1.3	0.45 J	0.22 J	0.34 J	0.60 J	0.75 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	10	3.4	9.1	3.1	2.2 J	<3.0	1.4 J	<3.0	3.9
Aniline	1300	220	1000	36	<1.9	<5.0	11	1.5	<5.0
N,N-Dimethylaniline	<10	2.5	<11	2.7	2.2	2.4	2.4	1.1	<5.0 J
Methanol	<500	NA	NA	NA	NA	NA	NA	<1000	NA

Date	4/29/2010	6/22/2010	4/7/2011	4/10/2012	4/2/2013	7/22/2013
Acetone	<10	<10	<10	<2.7	<10	<10
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0
Methylene Chloride	17	<1.0	<1.0	<0.18	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0
Aniline	<5.0	NA	<5.3	<1.8	<5.2	<1.0
N,N-Dimethylaniline	<1.0	NA	<1.1	<0.21	<1.0	<1.0
Methanol	<500	NA	NA	NA	NA	NA

Date	4/29/2010	6/22/2010	4/7/2011	4/10/2012	4/2/2013	7/22/2013	10/22/13
Acetone	<10	<10	<10	<2.7	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0
Methylene Chloride	5.3 J	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.23 J	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0
Aniline	<5.0	NA	<5.3	<1.8	<4.8	<1.0	<5.2
N,N-Dimethylaniline	<1.0	NA	<1.1	<0.21	<0.95	<1.0	<1.0
Methanol	<500	NA	NA	NA	NA	NA	NA

Date	4/28/2010	10/13/2010	4/6/2011	10/25/2011	4/10/2012	10/3/2012	4/3/2013	7/23/2013	10/22/13
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10
Benzene	0.22 J	1.3	<1.0	<1.0	0.22 J	0.55 J	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.19 J	<0.15	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.6	<5.3 J	<5.0	<1.8	<5.1	<5.1	<1.2	<5.4
N,N-Dimethylaniline	<1.0	<1.1	<1.1 J	<1.0	<0.21	<1.0	<1.0	<1.2	<1.1
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500

Date	4/29/2010	6/22/2010	10/13/2010	4/7/2011	10/25/2011	4/10/2012	10/3/2012	4/3/2013	7/23/2013	10/22/13
Acetone	<10	<10	<10	<10 J	<10	<2.7	<10	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	33	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	0.23 J	0.27 J	<1.0	0.60 J	0.25 J	0.19 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	NA	<5.1	<5.3	<5.0	<1.8	<5.2	<4.8	<1.0	<5.4
N,N-Dimethylaniline	<1.0	NA	<1.0	<1.1	<1.0	<0.21	<1.0	<0.95	<1.0	<1.1
Methanol	<500	NA	<500 J	<500	<500	<500	NA	<1000	<1000	<500

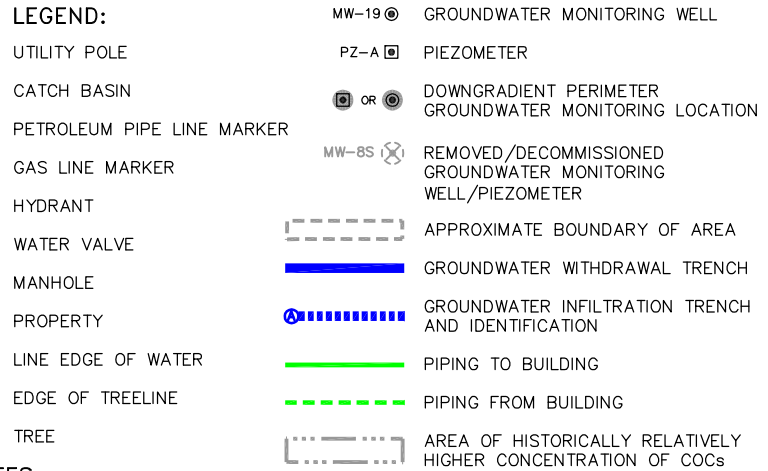
Date	4/27/2010	10/13/2010	4/6/2011	10/25/2011	4/10/2012	10/4/2012	4/4/2013	7/24/2013	10/22/13
Acetone	<10	<10 J	<10	<10	<2.7	<10	<10	<10	<10
Benzene	<1.0	0.14 J	<1.0	<1.0	<0.080	0.099 J	<1.0	0.20 J	0.29 J
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	37	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.18 J	<0.15	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.1	<5.3 J	<5.0	<1.8	<5.3	<5.2	<1.0	<5.2
N,N-Dimethylaniline	<1.0	<1.0	<1.1 J	<1.0	<0.21	<1.1	<1.0	0.30 J	0.85 J
Methanol	<500	NA	NA	NA	NA	NA	NA	NA	NA

Date	4/29/2010	10/14/2010	4/7/2011	10/26/2011	4/10/2012	10/2/2012	4/3/2013	7/23/2013	10/21/13
Acetone	<10	3.7 J	<10 J	<10	<2.7	<10	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.31 J	<0.15	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.0	<5.3	<5.0	<1.8	<5.1	<5.1	<1.0	<5.2
N,N-Dimethylaniline	<1.0	<1.0	<1.1	<1.0	<0.21	<1.0	<1.0	<1.0	<1.0
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500

Date	4/29/2010	6/22/2010	10/14/2010	4/7/2011	10/26/2011	4/10/2012	10/2/2012	4/3/2013	7/23/2013	10/21/13
Acetone	<10	<10	<10	<10 J	<10	<2.7	<10	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	8.4	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	0.29 J	<0.15	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	NA	<5.0	<5.3	<5.0	<1.8	<5.6	<4.8	<1.0	<5.0
N,N-Dimethylaniline	<1.0	NA	<1.0	<1.1	<1.0	<0.21	<1.1	<0.95	<1.0	<1.0
Methanol	<500	NA	<500 J	<500	<500	<500	NA	<1000	<1000	<500

Date	4/27/2010	10/12/2010	4/6/2011	11/11/2012	10/3/2012	4/5/2013	7/23/2013	10/22/13
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.22 J	<0.15	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0
Aniline	<5.0	<5.2	<5.3 J	<5.0	<1.8	<5.1	<1.0	<5.2
N,N-Dimethylaniline	<1.0	<1.0	<1.1 J	0.22 J	<0.21	<1.0	<1.0	<1.0
Methanol	<500	NA	NA	NA	NA	NA	NA	NA

Date	4/27/2010	10/12/2010	4/7/2011	10/26/2011	4/12/2012	10/4/2012	4/5/2013	7/25/2013	10/24/13
Acetone	<10	<10	<10	5.9 J [4.3 J]	<10	<10	<10	5.1 J [8.7 J]	<10
Benzene	4.2 [3.5]	2.7	3.2 [3.2]	1.9 [2.0]	1.2 [1.7]	0.69 J [0.70 J]	1.1 [1.1]	1.9 [1.8]	2.9
Ethylbenzene	23 J [18]	16	10 [8.8]	2.0 [2.1]	2.3 [3.3]	0.16 J [0.14 J]	0.32 J [0.28 J]	0.17 J [0.18 J]	0.21 J
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<0.18	<1.0	<1.0	<1.0
Toluene	4.6 [3.7]	2.0	2.8 [2.6]	1.3 [1.3]	0.76 J [1.2]	0.36 J [0.39 J]	0.67 J [0.68 J]	1.0 [0.96 J]	1.3
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<0.090	<1.0	<1.0	<1.0
Xylenes (total)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	370 J [720 J]	220	57 J [64]	14 [15]	9.5 [15]	1.4 J [1.2 J]	7.7 [8.0]	11 [9.4]	13
N,N-Dimethylaniline	1.0 J	<5.0	1.6	1.5 [1.6]	2.6	2.4	2.3	0.89 J [0.96 J]	0.83 J
Methanol	<500	<500	NA	NA	NA	NA	NA	<1000	<1000



NOTES:

- REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
- TRENCH LOCATIONS ARE APPROXIMATE.
- MONITORING LOCATIONS ARE APPROXIMATE.
- FIGURE ONLY SHOWS CONSTITUENT OF CONCERN (COC) CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE COC PROCESS CONTROL MONITORING LOCATIONS.
- ONLY COCs WITH CURRENT OR PAST DETECTIONS ARE PRESENTED ON THIS FIGURE.
- < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
- NA = COMPOUND WAS NOT ANALYZED FOR IN THE SAMPLE.
- J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
- B = COMPOUND WAS FOUND IN ASSOCIATED METHOD BLANK.
- THE 6/22/10 SAMPLING EVENT WAS AN INTERIM SAMPLING EVENT ANALYZING FOR VOLATILE ORGANIC COMPOUNDS ONLY.
- SAMPLE DATA ARE COMPARED TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) GROUNDWATER QUALITY STANDARDS (GQS) (TECHNICAL AND OPERATIONAL GUIDANCE SERIES 1.1.1).
- NS = GQS NOT AVAILABLE.
- RESULTS FOR DUPLICATE SAMPLES ARE SHOWN IN BRACKETS NEXT



Mr. Payson Long
Remedial Bureau E
Section D
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, New York 12233-7013

Subject:
McKesson EnviroSystems Site
400 West Bear Street
Syracuse, New York
Site No. 7-34-020

Dear Mr. Long:

ARCADIS of New York, Inc. (ARCADIS) has prepared this monitoring memorandum for the McKesson EnviroSystems Site (the Site) located at 400 West Bear Street in Syracuse, New York. ARCADIS prepared this memorandum on behalf of McKesson Corporation to describe the groundwater monitoring activities and present the results of the January 2014 monitoring event conducted at the Site in and around Areas 1, 2, and 3 (see Figure 1). This was the third monitoring event conducted after the shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems on April 10, 2013, and was conducted as part of a post-shutdown process control monitoring program.

The New York State Department of Environmental Conservation (NYSDEC) approved the shutdown of the Operable Unit No. 2 (OU2) remedial systems in a letter dated April 11, 2013 (NYSDEC 2013). The letter required the implementation of a post-shutdown process control monitoring program to determine the continued effectiveness of the OU2 remedial action on the remaining contamination (NYSDEC 2013). The post-shutdown monitoring program is a continuation of the constituent of concern (COC) and hydraulic process control monitoring program that has been conducted at the Site since OU2 treatment activities commenced in 1998.

The main objective of this monitoring memorandum, in addition to the previous two memorandums in July 2013 and October 2013 (ARCADIS 2013c and 2014, respectively) is to provide timely updates of groundwater conditions for monitoring

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ENVIRONMENTAL

Date:
April 11, 2014

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Our ref:
B0026003.2014.00190 #2

Imagine the result

events that do not coincide with the annual Periodic Review Report (PRR) required for the Site. This monitoring memorandum provides information about the following:

- Goals of the post-shutdown process control monitoring program
- January 2014 post-shutdown process control monitoring activities
- January 2014 monitoring results
- Data evaluation and conclusions
- Proposed next steps

Goals of the Post-Shutdown Process Control Monitoring Program

The goals of the post-shutdown process control monitoring program are to determine the continued effectiveness of the OU2 remedial action and evaluate the need (if any) to re-start remedial processes. As outlined in the October 2013 PRR (ARCADIS 2013b), the remedial action will be considered to have “continued effectiveness” if COC concentrations meet the following conditions:

- Do not rebound substantially above the pre-shutdown COC concentrations based on an evaluation of the most up-to-date dataset;
- Continue to trend at asymptotic levels; and
- Do not migrate beyond the Site boundary above NYSDEC Class GA Groundwater Quality Standards (NYSDEC 1998), as determined by sampling from the sentinel and downgradient perimeter monitoring wells/piezometers.

Additionally, the post-shutdown process control monitoring program provides an evaluation of groundwater flow conditions following the April 2013 shutdown of the closed loop hydraulic system.

January 2014 Post-Shutdown Process Control Monitoring Activities

The third post-shutdown process control monitoring event consisted of hydraulic monitoring on January 17, 2014 and COC monitoring from January 20 through 24, 2014. Table 1 identifies each of the hydraulic and COC monitoring locations, which are shown on Figure 1. In addition, the presence or absence of nonaqueous phase liquid

(NAPL) was also assessed in the monitoring wells and piezometers included in the monitoring program, as well as the collection sump. During this monitoring event, NAPL was not observed in the monitoring wells, piezometers, or the collection sump.

Hydraulic Monitoring

During hydraulic monitoring, groundwater level measurements were obtained at monitoring wells and piezometers that are screened entirely within the sand layer of the shallow hydrogeologic unit and located in and around Areas 1, 2, and 3. Additionally, a groundwater level measurement was obtained within the collection sump, and the Barge Canal surface-water elevation was obtained from measurements taken from a reference point on the Bear Street Bridge, which passes over the canal.

COC Monitoring

The groundwater COCs for the Site are acetone, benzene, toluene, ethylbenzene, xylenes (total), methanol, trichloroethene, aniline, N,N-dimethylaniline, and methylene chloride. Groundwater samples were analyzed for the COCs by TestAmerica Laboratories, Inc. (TestAmerica) in Edison, New Jersey via U.S. Environmental Protection Agency (USEPA) Methods 8260C (volatile organic compounds) and USEPA 8270D (semivolatile organic compounds), and in Amherst, New York via Method USEPA 8015D (methanol). TestAmerica is accredited pursuant to the New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program for these analyses. ARCADIS validated the laboratory analytical results using the Tier III full validation process. Copies of the validated analytical laboratory reports associated with the January 2014 monitoring event are presented in Attachment A.

January 2014 Monitoring Results

Hydraulic Monitoring Results

Groundwater level measurements obtained during the January 17, 2014 hydraulic monitoring event, as well as those obtained since October 2006, are presented in Table 2. A potentiometric surface of the Site's shallow hydrogeologic unit using the January 17, 2014 dataset is depicted on Figure 2. A comparison of the July 2013, October 2013, and January 2014 potentiometric surface maps generated during the three post-shutdown process control monitoring events, demonstrates that hydraulic conditions have remained consistent following the April 2013 shutdown of the closed loop hydraulic system in Area 3.

When comparing the January 2014 potentiometric surface map to those maps generated (and presented in previous PRRs) using groundwater elevation data obtained prior to system shutdown, the following conclusions, as presented in the first monitoring memorandum (ARCADIS 2013c), remain true:

- The closed depression around the groundwater withdrawal trench is no longer present.
- The potentiometric surface of the shallow hydrogeologic unit sand layer following the April 2013 system shutdown is generally consistent with the potentiometric surface prior to the 1998 implementation of the closed loop hydraulic system in Area 3.

COC Monitoring Results

COC groundwater analytical results are summarized in Table 3 and shown on Figures 3 and 4. COC groundwater analytical results are compared to the NYSDEC Groundwater Quality Standards presented in the Technical and Operational Guidance Series 1.1.1 (NYSDEC 1998). The January 2014 COC results are consistent with those obtained in July and October 2013 following the April 2013 shutdown of the *in-situ* bioremediation treatment system, as well as those obtained prior to shutdown. Concentrations for most of the COCs were either not detected or were below their respective NYSDEC Class GA Groundwater Quality Standards in each area.

The analytical results for the January 2014 COC monitoring event are summarized below for each area (Areas 1, 2, and 3), as well as for sentinel and downgradient perimeter monitoring locations.

Area 1

At 2 out of 5 monitoring locations in Area 1 (MW-32 and TW-01), all COC concentrations were non-detect or below their respective NYSDEC Groundwater Quality Standard. At the remaining three monitoring locations (MW-9S, MW-31, MW-33), four COCs (benzene, xylenes, N,N-dimethylaniline, and ethylbenzene) were detected at concentrations slightly exceeding their respective standards (see Table 3 and Figure 3).

Area 2

No COCs were detected at monitoring location MW-35. At the remaining three monitoring locations in Area 2 (MW-34, TW-02RRR, and MW-36R), three COCs (benzene, aniline, and N,N-dimethylaniline) were detected at concentrations above their respective standards (see Table 3 and Figure 3).

Area 3

At three out of five monitoring locations in Area 3 (MW-27, MW-29 and MW-30), all COC concentrations were non-detect or below their respective standards. At the remaining two monitoring locations (MW-28 and MW-8SR), four COCs (benzene, xylenes, aniline, and N,N-dimethylaniline) were detected at concentrations that slightly exceeded their respective standards (see Table 3 and Figure 4).

Sentinel Wells

COCs were not detected at sentinel well MW-3S, located downgradient of Area 1 (Table 3 and Figure 3). Sentinel well MW-4S, located downgradient of Area 2, was not sampled during the January 2014 monitoring event because it is sampled every third monitoring event. MW-4S was last sampled in July 2013.

Downgradient Perimeter Wells/Piezometers

COCs were not detected in any of the downgradient perimeter monitoring locations (MW-17R, MW-18, MW-23I, MW-23S, PZ-4S, and PZ-4D; Table 3 and Figure 4).

Data Evaluation and Conclusions

To evaluate the continued effectiveness of the OU2 remedial action and the need (if any) to re-start the remedial process, January 2014 data were incorporated into the historical groundwater dataset (1998 through January 2014) for technical analyses. The technical analyses performed were the same as those detailed in the January 2013 PRR (ARCADIS 2013a) and are described in Attachment B. The technical analyses consisted of the following:

- Change in annual total COC molar concentration (i.e., concentration normalized by its molecular weight) over time.

- Statistical analyses that included first order decay functions and regression analyses between time (year) and percent COC reduction fitted to each area's annual total COC molar concentration.

The data and results from these technical analyses, as presented in Attachment B, demonstrate that the OU2 remedial action has continued effectiveness, showing that the remedy continues to: (1) be protective of public health and the environment, (2) comply with the OU2 Record of Decision (NYSDEC 1997), and (3) meet remedial process closure requirements in Section 6.4 of DER-10 (NYSDEC 2010a). The conclusions developed based on groundwater data obtained from 1998 through January 2014 are summarized below.

- COC concentrations detected in January 2014 did not substantially rebound above pre-shutdown COC concentrations.
- COC concentrations were mostly not detected or below their respective NYSDEC Class GA Groundwater Quality Standard in each Area during the January 2014 monitoring event.
- COC concentrations continue to trend at asymptotic levels for each area.
- COC concentrations have not migrated beyond the Site boundary above NYSDEC Groundwater Quality Standards. In January 2014, COCs were not detected in any of the sentinel or perimeter monitoring wells/piezometers.
- The remedy continues to achieve the bulk of reduction of groundwater contamination, as indicated by total COC molar concentrations exceeding 98.5 percent reduction in each area.

These conclusions confirm that groundwater quality conditions have not substantially changed since the shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems and fully demonstrate the continued effectiveness of the OU2 remedial action. Accordingly, there is no need to re-start the remedial processes.

Proposed Next Steps

As also outlined in the October 2013 PRR (ARCADIS 2013b), the post-shutdown process control monitoring program is proposed to be conducted for 2 years (2013 to 2015), consisting of quarterly monitoring during the first year and biannual monitoring during the second year. The fourth and final quarterly post-shutdown process control

monitoring event is planned to occur the week of April 14, 2014 and will consist of hydraulic and COC monitoring similar to that conducted in January 2014. As detailed in Table 1, the April 2014 monitoring event will consist of measuring groundwater/surface-water elevations at the locations identified with an "H" and collecting groundwater samples from the monitoring wells/piezometers identified with a "C", except for PZ-4S which will continue to be included in the COC monitoring program every second monitoring event.

Following the April 2014 monitoring event, the data will be evaluated to determine the continued effectiveness of the remedial action. The April 2014 groundwater monitoring activities and results, in addition to an overall evaluation of post-shutdown groundwater conditions and proposed next steps, will be documented in a PRR. This PRR will be submitted to NYSDEC prior to the first biannual post-shutdown process control monitoring event, which is planned to occur in October 2014.

If you have any questions or require additional information, please contact me at 315.671.9210.

Sincerely,

ARCADIS of New York, Inc.



David J. Ulm
Senior Vice President

AS/lar

Enclosures:

Tables

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- Figure 4 Groundwater Monitoring Data Summary for April 2010 – January 2014,
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Attachment

Attachment A Validated Analytical Laboratory Reports

Attachment B Statistical Analyses

Copies:

Ms. Susan Edwards, NYSDEC (w/out Attachment A)
Mr. Harry Warner, NYSDEC (w/out Attachment A)
Mr. Richard Jones, NYSDOH (w/out Attachment A)
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Ms. Jean Mescher, McKesson Corporation (w/out Attachment A)
Mr. Douglas Morrison, Bristol-Myers Squibb Company (w/out Attachment A)
Christopher Young, P.G., de maximis, inc. (w/out Attachment A)
Kevin Bernstein, Esq., Bond Schoeneck & King PLLC (w/out Attachment A)

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Tables

Table 1. Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memo, McKesson EnviroSystems Site, Syracuse, New York

Monitoring Location	Purpose of Monitoring
Sentinel	
MW-3S*	C
MW-4S*	C
Area 1	
TW-01	C
MW-9S	C
MW-31	C
MW-32	C
MW-33*	C
PZ-F	H
PZ-G	H
PZ-HR	H
PZ-P	H
PZ-Q	H
PZ-R	H
PZ-S	H
Area 2	
TW-02RRR	C
MW-34	C
MW-35	C
MW-36R*	C
PZ-I	H
PZ-J	H
PZ-T	H
PZ-U	H
PZ-V	H
Area 3	
MW-8SR*	C
MW-11S	H
MW-27*	C
MW-28	C
MW-29*	C
MW-30*	C
PZ-A	H
PZ-B	H
PZ-C	H
PZ-D	H
PZ-E	H
PZ-K	H
PZ-L	H
PZ-M	H
PZ-N	H
PZ-O	H
Collection Sump	H
Downgradient Perimeter	
MW-17R	C
MW-18	C
MW-23I	C
MW-23S	C, H
MW-24SR	H
MW-25S	H
PZ-4S*	C
PZ-4D*	C, H
PZ-5D	H
Barge Canal	H

See Notes on Page 2.

**Table 1. Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memo, McKesson EnviroSystems Site, Syracuse, New York**

Notes:

1. The table lists the monitoring wells and piezometers that are part of the constituent of concern (COC) and/or hydraulic post-shutdown process control monitoring program.
2. Hydraulic monitoring involves obtaining groundwater level measurements from monitoring wells/piezometers identified in the table and surface-water level measurements from the Barge Canal. The surface-water level of the Barge Canal is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal. Groundwater elevation data are used to map potentiometric surface of the shallow hydrogeologic unit sand layer.
3. The COCs are acetone, benzene, ethylbenzene, methylene chloride, toluene, trichloroethene, xylenes, aniline, N,N-dimethylaniline, and methanol.
4. Monitoring well MW-4S and piezometer PZ-4S are included in the COC monitoring program every third and second monitoring event, respectively.

C = COC monitoring.

H = hydraulic monitoring.

* = New York State Department of Environmental Conservation approved the elimination of methanol analysis from the COC groundwater monitoring program (NYSDEC 2010b).

Table 2. Summary of Groundwater Level Measurements, October 2006 through January 2014
Monitoring Memo, McKesson Envirosystems Site, Syracuse, New York

Location	Reference Elevation (feet AMSL)	10/30/06	6/6/07	11/12/07	3/24/08	8/25/08	3/23/09	9/14/09	4/26/10	10/11/10	4/4/11
Barge Canal ^A	393.39	364.29	362.99	362.06	364.34	363.21	363.54	362.89	362.97	363.49	362.07
Collection Sump	372.81	363.18	362.26	361.86	363.81	362.14	362.20	362.18	362.18	360.72	359.90
MW-3S ^B	376.54	369.08	--	367.60	367.93	365.19	367.32	365.50	365.67	367.95	369.21
MW-11S	373.50	366.11	364.27	363.88	365.69	363.86	364.88	363.89	364.42	364.30	365.00
MW-18 ^B	372.57	363.82	362.63	362.32	363.51	362.26	363.16	362.22	362.67	362.87	363.82
MW-23I ^B	372.77	366.43	365.02	364.74	366.12	364.64	365.69	364.67	365.19	365.38	366.57
MW-23S	372.61	365.28	362.98	362.56	364.81	362.62	363.50	362.63	362.99	362.71	364.57
MW-24SR	375.55	366.49	365.21	364.83	366.26	364.73	365.81	364.79	365.32	365.81	366.60
MW-25S	373.39	365.26	363.32	362.87	364.84	362.88	363.97	362.89	363.34	363.30	364.10
PZ-4D	376.11	366.64	365.29	364.98	366.39	364.90	365.96	364.94	365.49	366.02	366.74
PZ-5D	375.58	366.87	365.49	365.19	366.69	365.09	366.21	365.14	365.01	366.09	366.99
PZ-A	373.94	365.62	363.11	362.72	364.83	362.96	363.56	362.95	362.28	362.35	362.68
PZ-B	373.92	365.85	363.12	362.62	365.03	362.87	363.64	362.83	362.96	362.22	363.24
PZ-C	374.85	367.14	365.85	365.30	367.15	365.16	366.71	365.23	366.37	367.11	367.88
PZ-D	375.12	367.68	365.98	365.40	367.29	365.28	366.81	365.40	366.57	367.17	368.20
PZ-E	374.12	368.13	365.16	364.07	366.58	364.14	366.82	364.20	364.25	364.16	364.83
PZ-F	377.06	368.32	366.18	365.76	367.99	365.50	367.41	365.69	366.72	367.10	368.10 ^B
PZ-G	377.16	368.64	366.28	365.82	368.14	365.94	367.29	367.22	367.32	367.36	368.12
PZ-HR	376.99	368.31	366.23	365.74	368.00	365.48	367.41	365.63	366.65	367.15	368.00 ^B
PZ-I	375.15	369.00	366.49	365.92	368.55	365.50	367.97	365.71	367.04	367.49	368.60
PZ-J	374.89	367.96	366.16	365.82	367.69	365.55	367.20	365.70	366.55	367.05	367.81
PZ-K	373.19	365.58	363.36	362.91	364.96	363.08	363.80	363.04	363.33	363.34	361.94
PZ-L	374.62	365.23	362.94	362.63	364.64	362.79	363.39	362.80	363.80	362.36	362.52
PZ-M	374.35	365.60	363.54	363.11	365.13	363.30	364.00	363.31	363.62	363.04	363.47
PZ-N	376.94 ^C	367.51	365.76	365.26	367.05	365.09	366.63	365.17	366.22	367.01	367.79
PZ-O	375.36	365.42	363.22	362.82	365.01	362.91	363.94	362.93	363.35	362.90	363.57
PZ-P	376.89	368.30	366.31	365.83	368.06	365.58	367.51	365.75	366.76	367.26	368.08
PZ-Q	377.61	368.61	366.33	365.83	368.23	365.57	367.61	365.77	366.78	367.26	368.13
PZ-R	377.05	368.51	366.19	365.79	368.20	365.55	367.57	365.73	366.74	367.24	368.10
PZ-S	378.13	372.48	366.51	365.81	368.21	365.55	367.60	365.74	366.76	367.13	369.67 ^B
PZ-T	376.25	368.04	366.24	365.84	367.89	365.52	367.37	365.66	366.63	367.12	367.94
PZ-U	375.35	367.99	366.07	365.80	367.75	365.52	367.25	365.66	366.52	367.05	367.83
PZ-V	375.78	367.97	366.17	365.78	367.78	365.48	367.24	365.64	366.52	367.04	367.81

See Notes on Page 2.

Table 2. Summary of Groundwater Level Measurements, October 2006 through January 2014
Monitoring Memo, McKesson Envirosystems Site, Syracuse, New York

Location	Reference Elevation (feet AMSL)	10/24/11	4/9/2012	10/1/2012	4/1/2013	7/18/2013 ^D	10/17/2013 ^D	1/17/2014 ^D
Barge Canal ^A	393.39	363.71	358.39	360.59	360.74	360.69	360.69	361.38
Collection Sump	372.81	361.33	360.95	361.70	361.24	364.71	364.84	366.14
MW-3S ^B	376.54	--	366.44	365.15	367.55	366.11	366.62	367.83
MW-11S	373.50	364.18	363.92	363.62	364.42	364.95	365.08	366.08
MW-18 ^B	372.57	--	362.57	362.32	362.85	362.74	363.54	363.57
MW-23 ^B	372.77	--	364.99	364.73	365.29	365.23	365.33	366.02
MW-23S	372.61	362.66	362.23	362.29	362.88	364.20	364.37	365.30
MW-24SR	375.55	365.63	365.09	364.84	365.48	365.39	365.46	366.25
MW-25S	373.39	363.17	362.81	362.61	363.48	364.08	364.23	365.14
PZ-4D	376.11	365.78	365.24	364.94	365.59	365.47	365.59	366.34
PZ-5D	375.58	366.02	365.48	365.16	365.84	365.67	365.81	366.57
PZ-A	373.94	362.53	363.24	362.54	362.68	364.78	364.92	366.08
PZ-B	373.92	362.47	362.14	362.35	362.64	364.77	364.88	366.08
PZ-C	374.85	366.6	366.10	365.41	366.76	365.75	365.84	366.65
PZ-D	375.12	366.87	366.39	365.65	367.07	365.87	365.97	366.82
PZ-E	374.12	364.18	363.67	363.35	364.38	365.12	365.22	366.44
PZ-F	377.06	367.04	366.46	365.44	366.91	366.52	366.57	367.61
PZ-G	377.16	367.17	366.53	365.48	367.04	366.67	366.70	367.74
PZ-HR	376.99	367.04	366.40	365.38	366.90	366.46	366.50	367.61
PZ-I	375.15	367.47	366.77	365.36	367.52	366.60	366.70	368.20
PZ-J	374.89	366.94	366.30	365.55	366.74	366.39	366.48	367.50
PZ-K	373.19	362.97	362.65	362.75	363.03	364.79	364.96	365.97
PZ-L	374.62	362.54	362.16	362.42	362.60	364.61	364.77	365.90
PZ-M	374.35	363.22	362.86	362.87	363.28	364.93	364.96	366.18
PZ-N	376.94 ^C	366.62	366.06	365.33	366.72	365.67	365.81	366.57
PZ-O	375.36	362.94	362.61	362.52	363.14	364.50	364.64	365.72
PZ-P	376.89	367.15	366.49	365.45	366.93 ^B	366.57	366.63	367.69
PZ-Q	377.61	367.21	366.52	365.44	367.04	366.59	366.65	367.76
PZ-R	377.05	367.15	366.48	365.45	367.03	366.54	366.59	367.74
PZ-S	378.13	367.48	366.51	365.45	367.34 ^B	366.58	366.61	368.27
PZ-T	376.25	367.00	366.32	365.41	366.86	366.42	366.49	367.64
PZ-U	375.35	366.92	366.29	365.44	366.77	366.38	366.47	367.55
PZ-V	375.78	366.93	366.28	365.40	366.77	366.37	366.46	367.53

Notes:

^ASurface-water level measurements are obtained from the Barge Canal. The surface-water level is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal.

^BData not used in potentiometric surface mapping of the shallow hydrogeologic unit sand layer.

^CThe reference elevation for PZ-N was 376.02 feet AMSL prior to November 16, 2000. The new reference elevation is 376.94 feet AMSL.

^DGroundwater elevations reflect hydrogeologic conditions after the April 2013 shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems.

Abbreviations:

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

-- = Not Measured.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through January 2014
Monitoring Memo, McKesson EnviroSystems Site, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-3S	3/09	365.1	350.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	0.17 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA
	10/11			<10	<1.0	<1.0	<1.0	0.35 J	<1.0	<3.0	<5.0	<1.0	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	0.27 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.61 J	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
MW-4S	10/10	365.5	350.5	<10 [<10]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<3.0 [<3.0]	<5.0 [<5.0]	<1.0 [<1.0]	<500 J [<500 J]
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
MW-8SR ^B	3/09	362.7	352.7	6.5 J [5.8 J]	6.8 [6.8]	66 [63]	<1.0 [<1.0]	10 [10]	<1.0 [<1.0]	140 [140]	2,200 [1,800]	<12 [<12]	<500 [<500]
	6/09			NA	NA	NA	NA	NA	NA	NA	7,000	<50	NA
	9/09			<10 [8.3 J]	8.5 J [7.9]	44 J [38]	<1.0 [<1.0]	6.8 J [6.5]	<1.0 J [<1.0]	81 J [71]	4,000 [3,400]	<20 [<20]	<500 [<500]
	4/10			<10 [<10]	4.2 [3.5]	23 J [18]	<1.0 [<1.0]	4.6 [3.7]	<1.0 [<1.0]	41 [33]	370 J [720 J]	1.0 J [<5.0]	<500 [<500]
	10/10			<10	2.7	16	<1.0	2.0	<1.0	31	220	1.6	NA
	4/11			5.9 J [4.3 J]	3.2 [3.2]	10 [8.8]	<1.0 [<1.0]	2.8 [2.6]	<1.0 [<1.0]	32 [31]	57 J [64]	1.5 [1.6]	NA
	10/11			<10 [<10]	1.9 [2.0]	2.0 [2.1]	<1.0 [<1.0]	1.3 [1.3]	<1.0 [<1.0]	14 [15]	<5.0 [<5.0]	2.6 [<1.0]	NA
	4/12			8.7 J [6.7 J]	1.2 [1.7]	2.3 [3.3]	<0.18 [<0.18]	0.76 J [1.2]	<0.090 [<0.090]	9.5 [15]	<1.9 [<1.9]	2.4 [2.6]	NA
	10/12			<10 [<10]	0.69 J [0.70]	0.16 J [0.14 J]	<1.0 [<1.0]	0.36 J [0.39 J]	<1.0 [<1.0]	1.4 J [1.2 J]	<5.3 [<5.0]	2.3 [2.7]	NA
	4/13			<10 [<10]	1.1 [1.1]	0.32 J [0.28 J]	<1.0 [<1.0]	0.67 J [0.68 J]	<1.0 [<1.0]	7.7 [8.0]	<5.1 [<5.1]	1.7 [1.4]	NA
	7/13			5.1 J [8.7 J]	1.9 [1.8]	0.17 J [0.18 J]	<1.0 [<1.0]	1.0 [0.96J]	<1.0 [<1.0]	11 [9.4]	2.5 [2.5]	0.89 J [0.96 J]	<1000 [<1000]
	10/13			<10	2.9	0.21 J	<1.0	1.3	<1.0	13	2.6 J	0.83 J	NA
	1/14			<10 J [<10 J]	2.4 [2.6]	0.19 J [<1.0]	<1.0 [<1.0]	0.94 J [1.1]	<1.0 [<1.0]	11 [13]	5.1 J [<10]	2.0 [1.7]	NA
	MW-9 ^C (Replaced by MW-9S)			3/09	365.6	356	<10	1.2	27	<1.0	2.5	<1.0	65
9/09		<10	1.7	20			<1.0	2.2	<1.0	70	<5.0	4.1	730
4/10		<10	0.86 J	26			<1.0	2.1	<1.0	69	<5.0	6.5	<500
10/10		<10	1.3	11			<1.0	1.9	<1.0	45	<5.1	7.5	<500 J
4/11		<10	0.91 J	29			<1.0	2.6	<1.0	89	<5.3	5.4	<500
10/11		<10	1.2	4.2			<1.0	1.8	<1.0	41 J	<5.0	7.6	<500
4/12		7.5 J	1.1	18			<0.18	1.5	<0.090	67	<1.9	6.3	<500
10/12		<10	1.9 J	4.7			<1.0	3.2	<1.0	84	<5.0	3.9	NA
4/13		12 J	0.95 J	19			<1.0	1.6	<1.0	62	<5.1	5.9	<1000
7/13		<10	1.9	12			<1.0	2.0	<1.0	45	<1.0	2.0	<1000
10/13		<5.0	2.9	10			<1.0	2.6	<1.0	60	<5.0	5.2	<500
1/14		<10 J	1.1	13			<1.0	1.6	<1.0	54	<10	7.2	<500

See Notes on Page 7.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through January 2014
Monitoring Memo, McKesson EnviroSystems Site, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-17 ^D (Replaced by MW-17R)	3/09	365.7	356.1	<10	2.3	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	0.86 J	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	0.22 J	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			<10	1.3	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500 J	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	<500	
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	<1.0	<500
	4/12			<2.7	0.22 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	0.55 J	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA	
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1000	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<1.2	<1.2	<1000	
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.4	<1.1	<500	
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500	
	MW-18			3/09	325.15	316.15	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
9/09		<10 J	<1.0	<1.0			<1.0	<1.0	<3.0	<5.0	<1.0	<500	
4/10		<10	<1.0	<1.0			33	<1.0	<1.0	<3.0	<5.0	<1.0	<500
6/10		<10	<1.0	<1.0			<1.0	<1.0	<3.0	NA	NA	NA	
10/10		<10	<1.0	<1.0			<1.0	<1.0	<3.0	<5.1	<1.0	<500 J	
4/11		<10 J	<1.0	<1.0			<1.0	<1.0	<3.0	<5.3	<1.1	<500	
10/11		<10	<1.0	<1.0			<1.0	0.23 J	<1.0	<3.0 J	<5.0	<1.0	<500
4/12		<2.7	<0.080	<0.10			<0.18	0.27 J	<0.090	<0.36	<1.8	<0.21	<500
10/12		<10	<1.0	<1.0			<1.0	<1.0	<3.0	<5.2	<1.0	NA	
4/13		<10	<1.0	<1.0			<1.0	0.60 J	<1.0	<3.0	<4.8	<0.95	<1000
7/13		<10	<1.0	<1.0			<1.0	0.25 J	<1.0	<3.0	<1.0	<1.0	<1000
10/13		<10	<1.0	<1.0			<1.0	0.19 J	<1.0	<3.0	<5.4	<1.1	<500
1/14		<10 J	<1.0	<1.0			<1.0	<1.0	<3.0	<10	<1.0	<500	
MW-23S	3/09	364.1	354.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			3.7 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J	
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500	
	10/11			<10	<1.0	<1.0	<1.0	0.31 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA	
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1000	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1000	
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	<500	
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500	
	MW-23I			3/09	341.2	336.2	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
9/09		<10 J	<1.0	<1.0			<1.0	<1.0	<3.0	<5.0	<1.0	<500	
4/10		<10	<1.0	<1.0			8.4	<1.0	<1.0	<3.0	<5.0	<1.0	<500
6/10		<10	<1.0	<1.0			<1.0	<1.0	<3.0	NA	NA	NA	
10/10		<10	<1.0	<1.0			<1.0	<1.0	<3.0	<5.0	<1.0	<500 J	
4/11		<10 J	<1.0	<1.0			<1.0	<1.0	<3.0	<5.3	<1.1	<500	
10/11		<10	<1.0	<1.0			<1.0	0.29 J	<1.0	<3.0	<5.0	<1.0	<500
4/12		<2.7	<0.080	<0.10			<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
10/12		<10	<1.0	<1.0			<1.0	<1.0	<3.0	<5.6	<1.1	NA	
4/13		<10	<1.0	<1.0			<1.0	<1.0	<3.0	<4.8	<0.95	<1000	
7/13		<10	<1.0	<1.0			<1.0	<1.0	<3.0	<1.0	<1.0	<1000	
10/13		<10	<1.0	<1.0			<1.0	<1.0	<3.0	<5.0	<1.0	<500	
1/14		<10 J	<1.0	<1.0			<1.0	<1.0	<3.0	<10	<1.0	<500	

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through January 2014
Monitoring Memo, McKesson EnviroSystems Site, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol			
		Top	Bottom													
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS			
MW-27	3/09	362.5	354.5	14 J	8.7	36	<1.0	9.4	<1.0	88	8,200 J	<50 J	<500			
	6/09			NA	NA	NA	NA	NA	NA	7,400	<50	NA				
	9/09			10	6.2	5.9	<1.0	6.9	<1.0	23	2,100	<10	<500			
	4/10			<10	4.5	6.1	<1.0	2.4	<1.0	10	1,300	<10	<500			
	10/10			<10	2.7	1.4	<1.0	1.3	<1.0	3.4	220	2.5	NA			
	4/11			3.9 J	3.1	5.1	<1.0	5.7	<1.0	9.1	1,000	<11	NA			
	10/11			<10	2.1	2.2	<1.0	1.3	<1.0	3.1	36	2.7	NA			
	4/12			<2.7	1.5	1.4	<0.18	0.45 J	<0.090	2.2 J	<1.9	2.7	NA			
	10/12			<10	1.1	<1.0	<1.0	0.22 J	<1.0	<3.0	<5.0	2.2	NA			
	4/13			<10	1.1	0.88 J	<1.0	0.34 J	<1.0	1.4 J	11	2.4	NA			
	7/13			<10	2.0	<1.0	<1.0	0.60 J	<1.0	<3.0	1.5	1.1	<1000			
	10/13			<10	2.6	<1.0	<1.0	0.75 J	<1.0	3.9	<5.0	0.73 J	NA			
	1/14			<10 J	0.89 J	<1.0	<1.0	0.33 J	<1.0	0.22 J	<12	0.75 J	NA			
	MW-28			3/09	363.6	355.6	<10	3.5	0.8 J	<1.0	0.3 J	<1.0	1.1 J	18	<0.5	851
9/09		<10	3.1	0.32 J			<1.0	0.25 J	<1.0	0.48 J	6.7	<1.0	<500			
4/10		<10	2.8	0.60 J			<1.0	0.23 J	<1.0	0.46 J	<5.0	0.49 J	<500			
10/10		<10	1.8	<1.0			<1.0	<1.0	<1.0	<3.0	2.4 J	0.60 J	<500 J			
4/11		4.3 J	2.3	<1.0			<1.0 B	0.11 J	<1.0	<3.0	3.9 J	0.75 J	<500			
10/11		<10	1.8	<1.0			<1.0	0.38 J	<1.0	<3.0	<5.0	<1.0	<500			
4/12		<2.7	1.4	<0.10			<0.18	0.22 J	<0.090	<0.36	<1.8	0.48 J	<500			
10/12		<10	1.9	<1.0			<1.0	0.16 J	<1.0	<3.0	<5.0	0.62 J	NA			
4/13		<10	1.7	<1.0			<1.0	<1.0	<1.0	<3.0	<5.2	0.32 J	410 J			
7/13		<10	1.7	<1.0			<1.0	0.22 J	<1.0	<3.0	<1.0	0.35 J	<1000			
10/13		<10	1.7	<1.0			<1.0	0.49 J	<1.0	0.68 J	<5.0	0.70 J	<500			
1/14		<10 J	1.2	<1.0			<1.0	0.22 J	<1.0	<3.0	<10	0.75 J	<500			
MW-29		3/09	362.9	345.9			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
		9/09					<10	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.29 J	<500
	4/10	<10			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500			
	10/10	<10			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA			
	4/11	<10			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA			
	10/11	<10			<1.0	<1.0	<1.0	0.22 J	<1.0	<3.0 J	<5.0	0.22 J	NA			
	4/12	<2.7			<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA			
	10/12	<10			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA			
	4/13	<10			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA			
	7/13	<10			0.26 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA			
	10/13	<10			0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA			
	1/14	<10 J			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	<1.1	NA			
	MW-30	3/09			363.5	355.5	<10	0.8 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
		9/09					<10	0.78 J	<1.0	<1.0	0.17 J	<1.0	<3.0	21	<1.0	<500
4/10		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500			
10/10		<10 J	0.14 J	<1.0			37	<1.0	<1.0	<3.0	<5.1	<1.0	NA			
4/11		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA			
10/11		<10	<1.0	<1.0			<1.0	0.18 J	<1.0	<3.0 J	<5.0	<1.0	NA			
4/12		<2.7	<0.080	<0.10			<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA			
10/12		<10	0.099 J	<1.0			<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA			
4/13		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA			
7/13		<10	0.20 J	<1.0			<1.0	<1.0	<1.0	<3.0	<1.0	0.30 J	NA			
10/13		<10	0.29 J	<1.0			<1.0	<1.0	<1.0	<3.0	<5.2	0.85 J	NA			
1/14		<10 J	0.19 J	<1.0			<1.0	<1.0	<1.0	0.14 J	<11	<1.1	NA			

See Notes on Page 7.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through January 2014
Monitoring Memo, McKesson EnviroSystems Site, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-31	3/09	363.7	355.4	9.4 J	8.3	< 1.0	<1.0	0.6 J	<1.0	0.8 J	<5.0	2.3	<500
	9/09			<10	10	<1.0	<1.0	0.49 J	<1.0	2.0 J	<5.0	2.5	730
	4/10			<10	4.8	<1.0	<1.0	0.40 J	<1.0	1.3 J	<5.0	2.3	<500
	10/10			<10	6.9	<1.0	<1.0	0.50 J	<1.0	1.5 J	<5.3	3.5	<500 J
	4/11			<10	8.3	<1.0	<1.0	0.77 J	<1.0	2.5 J	<5.3	2.3	<500
	10/11			<10	5.7	<1.0	<1.0	0.62 J	<1.0	1.5 J	<5.0	3.5	<500
	4/12			6.5 J	6.8	0.16 J	<0.18	0.65 J	<0.090	2.7 J	<1.9	2.1	<500
	10/12			<10	6.3 J	0.16 J	<1.0	0.44 J	<1.0	2.3 J	<5.0	0.90 J	NA
	4/13			<10	12	0.21 J	<1.0	1.3	<1.0	5.6	<5.2	1.1	<1000
	7/13			<10	11	<1.0	<1.0	1.2	<1.0	5.1	0.72 J	1.6	<1000
	10/13			<10	11	0.15 J	<1.0	1.4	<1.0	6.1	<5.2	2.2	<500
	1/14			<10 J	8.2	<1.0	<1.0	1.2	<1.0	6.3	<10	2.2	NA
MW-32	3/09	364	356	<10	0.5 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	1,200	
	4/10			<10	0.23 J	<1.0	<1.0	<1.0	<3.0	<5.0	0.89 J	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.87 J	<500 J	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500	
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	1.5	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.1	<500
	10/12			<10	<1.0 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.2	NA
	4/13			<10	0.098 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	0.91 J	<1000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.82 J	<1000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.2	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.85 J	<500
MW-33	3/09	344.1	356.1	<10	3.2	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.4	<500
	9/09			<10	2.6	<1.0	<1.0	0.20 J	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	1.6	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.0	<500
	10/10			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.7	NA
	4/11			<10	0.79 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.9	NA
	10/11			<10	0.58 J	<1.0	<1.0	0.12 J	<1.0	<3.0	<5.3	1.9	NA
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.3	NA
	10/12			<10	0.33 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.1	NA
	4/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8 J	2.1 J	NA
	7/13			<10	0.46 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.96 J	<1000
	10/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	0.69 J	NA
	1/14			<10 J	0.69 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.7	NA
MW-34	3/09	362.7	354.7	14	1.4	<1.0	<1.0	0.7 J	<1.0	1.5 J	12	2.0	<500
	9/09			24	<1.0	<1.0	<1.0	0.64 J	<1.0	1.7 J	<5.0	2.5	1,000
	4/10			50 J	0.82 J	<1.0	<1.0	0.42 J	<1.0	1.4 J	<5.0	2.4	<500
	10/10			20	1.0	<1.0	<1.0	0.44 J	<1.0	1.3 J	1.8 J	2.9	<500 J
	4/11			16	1.7	<1.0	<1.0	0.74 J	<1.0	2.0 J	10	2.7	<500
	10/11			350	1.2	<1.0	<1.0	0.71 J	<1.0	0.90 J	<5.6	2.5	<500
	4/12			37 J	1.3	<0.10	<0.18	0.59 J	<0.090	1.4 J	2.1 J	2.4	<500
	10/12			61	1.6	<1.0	<1.0	0.78 J	<1.0	2.2 J	<5.2	2.7	NA
	4/13			26 J	1.3	<1.0	<1.0	0.60 J	<1.0	2.3 J	<4.8	1.7	<1000
	7/13			32	1.3	<1.0	<1.0	0.66 J	<1.0	2.0 J	0.56 J	0.92 J	NA
	10/13			15	1.2	<1	<1.0	0.69 J	0.13 J	2.2 J	<5.0	1.3	<500
	1/14			15 J	0.91 J	<1.0	<1.0	0.44 J	<1.0	1.3 J	<10	1.9	<500

See Notes on Page 7.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through January 2014
Monitoring Memo, McKesson EnviroSystems Site, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-35	3/09	363	355	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			6.5 J	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	<1.0	1,100
	4/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500
	4/12			14 J	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<36 B	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	470 J
	7/13			4.2 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0 J	<1.0	<1000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2 J	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<500
MW-36 ^E (Replaced by MW-36R)	3/09	363.6	355.6	28	2.4	<1.0	<1.0	0.8 J	<1.0	2.8 J	150	2.8	<500
	6/09			NA	NA	NA	NA	NA	NA	460	<5.0	NA	
	9/09			21	3.1	<1.0	<1.0	0.96 J	<1.0	3.2	390	3.1	<500
	4/10			<10 J	3.3	0.26 J	<1.0	1.1	<1.0	5.4	77	2.6	<500
	10/10			12	3.9	0.28 J	<1.0	1.2	<1.0	4.8	620	<5.0	<500 J
	4/11			<10	4.3	<1.0	<1.0	0.95 J	<1.0	4.4	310	4.0	NA
	10/11			<10	1.8	<1.0	<1.0	0.66 J	<1.0	1.4 J	92	3.6	NA
	12/11			NA	NA	NA	NA	NA	NA	120	NA	NA	
	4/12			6.3 J	1.6	0.16 J	<0.18	0.45 J	<0.090	1.9 J	150	4.1	NA
	10/12			<10	1.5 J	<1.0	<1.0	0.54 J	<1.0	2.2 J	10	3.1	NA
	4/13			<10	1.8	0.14 J	<1.0	0.53 J	<1.0	2.9 J	150	4.0	NA
	7/13			<10	1.4	0.11 J	<1.0	0.46 J	<1.0	1.7 J	97	2.0	<1000
	10/13			<10	1.3	<1.0	<1.0	0.45 J	<1.0	1.7 J	110	1.9	NA
	1/14			<10 J	1.2	<1.0	<1.0	0.42 J	<1.0	1.4 J	180	4.1	NA
TW-01	3/09	365.1	355.4	<10	1.9	<1.0	<1.0	<1.0	<1.0	0.6 J	<5.0	<0.5	22,300
	9/09			2.9 J	<1.0	<1.0	<1.0	0.11 J	<1.0	<3.0	<5.0	1.1	970
	4/10			<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.3	<500 J
	4/11			<10	0.21 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0 J	<5.6	1.6	<500
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.7	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	1.9	NA
	4/13			<10	0.090 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.98 J	<1000
	7/13			<10	0.11 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	1.0	<1000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.98 J	<500

See Notes on Page 7.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through January 2014
Monitoring Memo, McKesson EnviroSystems Site, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
TW-02RR ^{BE} (Replaced by TW-02RRR)	3/09	363.3	353.3	<10 [<10]	5.0 [4.6]	1.5 [1.6]	<1.0 [<1.0]	1.0 [1.0 J]	<1.0 [<1.0]	4.2 [4.1]	2,000 [1,600]	<10 [<10]	<500 [<500]
	6/09			NA	NA	NA	NA	NA	NA	2,800	<20	NA	
	9/09			<10 [<10]	4.3 [4.2]	1.2 [1.3]	<1.0 [<1.0]	0.79 J [0.81 J]	<1.0 [<1.0]	3.5 [3.6]	1,600 [1,500]	<10 [<10]	1,000 [1,200]
	4/10			9.5 J [12 J]	4.1 [4.0]	1.2 [1.2]	<1.0 [<1.0]	0.78 J [0.75 J]	<1.0 [<1.0]	4.2 [4.0]	2,800 J [3,100 J]	<20 J [<20 J]	<500 [<500]
	10/10			<10 [<10]	3.3 [3.0]	1.0 [0.91 J]	<1.0 [<1.0]	0.82 J [0.76 J]	<1.0 [<1.0]	3.6 [3.6]	760 [810]	<5.0 [2.2 J]	<500 J [<500 J]
	4/11			<10 [<10]	2.1 [2.0]	1.2 [1.3]	<1.0 [<1.0]	0.74 J [0.75 J]	<1.0 [<1.0]	5.2 [5.3]	1.9 J [2.1 J]	3.4 [3.3]	<500 [<500]
	10/11			<10 [<10]	1.2 [1.1]	0.67 J [0.69 J]	<1.0 [<1.0]	0.53 J [0.48 J]	<1.0 [<1.0]	1.5 J [1.4 J]	1,300 D [1,500 D]	5.5 [6.2]	<500 [<500]
	12/11			NA	NA	NA	NA	NA	NA	NA	1,400	NA	NA
	4/12			15 J [13 J]	1.6 [1.5]	0.73 J [0.76 J]	<0.18 [<0.18]	0.51 J [0.48 J]	<0.090 [<0.090]	1.6 J [1.6 J]	1,400 J [1,600 J]	<2.2 J [<2.2 J]	<500 [<500]
	10/12			<10 [<10]	1.1 J [0.98 J]	0.29 J [0.27 J]	<1.0 [<1.0]	0.26 J [0.27 J]	<1.0 [<1.0]	0.91 J [0.89 J]	<5.2 [3.2 J]	2.2 [1.9]	NA
	4/13			<10 [<10]	1.4 [1.3]	0.60 J [0.64 J]	<1.0 [<1.0]	0.36 J [0.38 J]	<1.0 [<1.0]	1.5 J [1.5 J]	620 [700]	3.5 J [3.4 J]	<1000 [<1000]
	7/13			<10 [<10]	0.91 J [0.91 J]	0.25 J [0.26 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 J [14 J]	0.72 J [0.70 J]	150 [170]	1.7 [1.8]	<1000 [<1000]
	10/13			<10 [<10]	0.60 J [0.60 J]	<1.0 [0.15 J]	<1.0 [<1.0]	0.20 J [0.17 J]	0.15 J [0.11 J]	<3.0 [<3.0]	90 [72]	2.1 [1.4]	<500 [<500]
	1/14			<10 J [<10 J]	1.1 [1.1]	0.27 J [0.33 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	0.69 J [0.77 J]	660 [750 D]	1.8 J [3.7]	<500 [<500]
PZ-4D	3/09	350.8	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	4/10			<10	<1.0	<1.0	5.3 J	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/12			<2.7	<0.080	<0.10	<0.18	0.23 J	<0.090	<0.36	<1.8	<0.21	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<0.95	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
PZ-4S	3/09	362.79	357.88	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	4/10			<10	<1.0	<1.0	17	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA

See Notes on Page 7.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through January 2014
Monitoring Memo, McKesson EnviroSystems Site, 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. Detections exceeding New York State Department of Environmental Conservation (NYSDEC) Groundwater Standards (TOGS 1.1.1; NYSDEC 1998) are indicated by shading.
4. Duplicate sample results are presented in brackets (e.g., [14]).
5. The sampling event in June 2010 was an interim sampling event to check for the presence of methylene chloride.
6. Results from the July 2013, October 2013, and January 2014 sampling events reflect groundwater quality conditions after the shutdown of the in-situ aerobic bioremediation treatment and closed loop hydraulic systems.

Superscript Notes:

- ^A= Data presented is total xylenes (m- and p-xylenes and o-xylenes).
- ^B= Wells MW-8S and TW-02R were abandoned in August 2004 and replacement wells MW-8SR and TW-02RR were installed in August 2004.
- ^C= Well MW-9 was abandoned during OU1 soil remediation activities (1994).
- ^D= Well/piezometer MW-17 was abandoned November 1997 through January 1998.
- ^E= Wells/piezometers MW-36, PZ-5S, PZ-W, and TW-02RR were abandoned in November 2010. Replacement wells TW-02RRR (replaced TW-02RR) and MW-36R (replaced MW-36 and PZ-W) were installed in November 2010.

Abbreviations:

AMSL = above mean sea level (National Geodetic Vertical Datum of 1929)
NA = compound was not analyzed for in the sample
NS = standard not available
TOGS = Technical and Operational Guidance Series

Analytical Qualifiers:

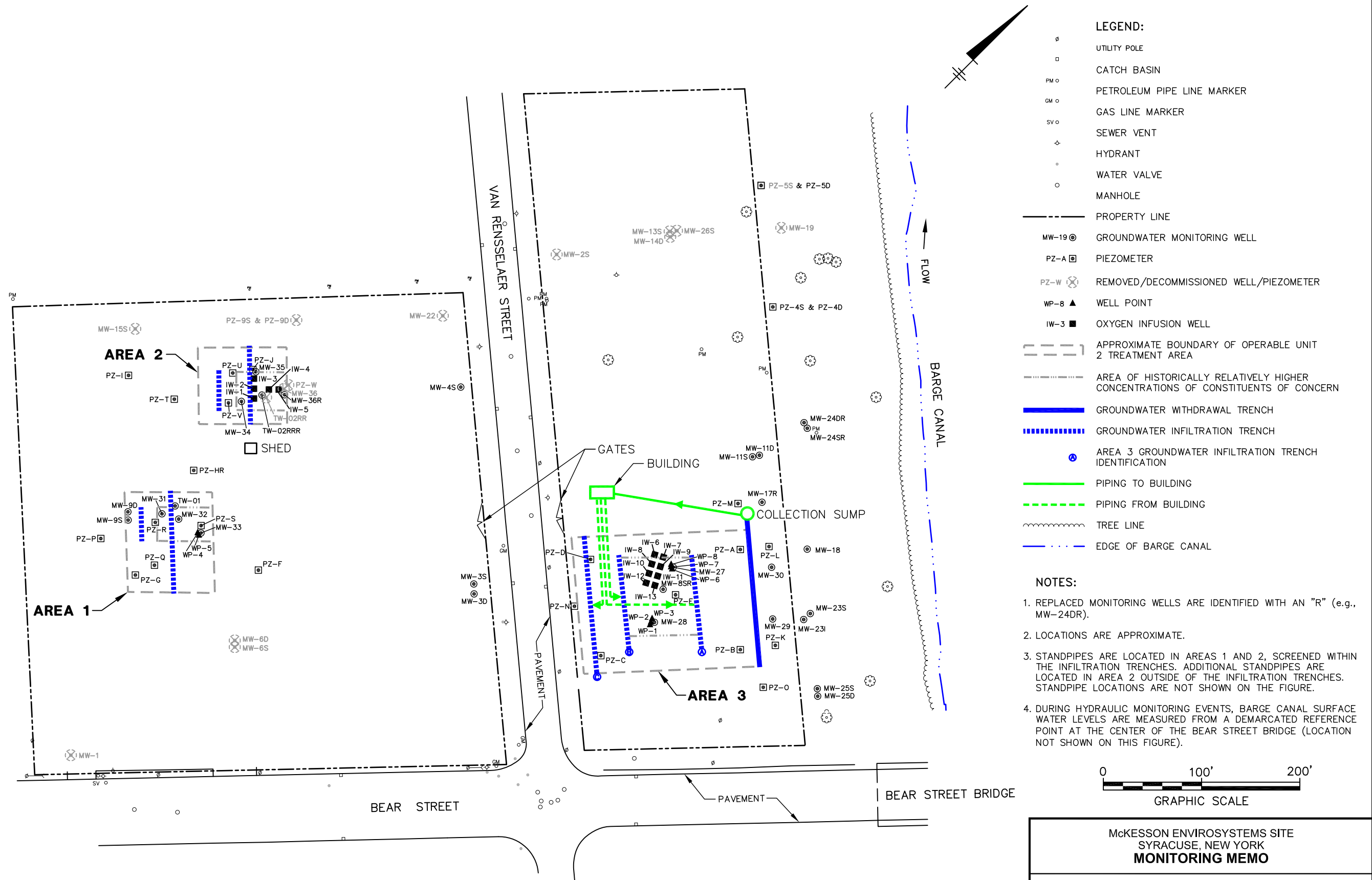
B = The compound was found in associated method blank.
D = Concentration is based on a diluted sample analysis.
J = The compound was positively identified; however, the numerical value is an estimated concentration only.
< = Compound was not detected at the listed quantitation limit.

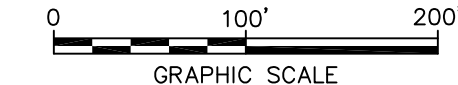
Figures

CITY: SYRACUS, NY DIV/GROUP: ENV/IM-DV DB: LAF, GMS, K. SARTORI, R. ALLEN LD: PIC: PM: B. BYRNES, TM: LVR: ON=OFF=REF [AREA-HIGHER, TREE] G:\ENVCAD\SYRACUSE\ACT1\B0026003\2014\00190\DWG\MONITOR\MEMO26003B13.DWG LAYOUT: 1.1 SAVER: 4/2/2014 10:07 AM ACADVER: 18.1 (LMS TECH) PAGES: 1/1 PLOT: 4/2/2014 10:08 AM BY: ALLEN, ROYCE

PROJECTNAME: --

IMAGES: 26003X01 26003X01 26003X01





NOTES:

- REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
- TRENCH LOCATIONS ARE APPROXIMATE.
- MONITORING LOCATIONS ARE APPROXIMATE.
- FIGURE ONLY SHOWS CONSTITUENT OF CONCERN (COC) CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE COC PROCESS CONTROL MONITORING LOCATIONS.
- ONLY COCs WITH CURRENT OR PAST DETECTIONS ARE PRESENTED ON THIS FIGURE.
- < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
- NA = COMPOUND WAS NOT ANALYZED FOR IN THE SAMPLE.
- J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
- D = CONCENTRATION IS BASED ON A DILUTED SAMPLE ANALYSIS.
- SAMPLE DATA ARE COMPARED TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION GROUNDWATER QUALITY STANDARDS (GQS) (TECHNICAL AND OPERATIONAL GUIDANCE SERIES 1.1.1).
- NS = GQS NOT AVAILABLE.
- RESULTS FOR DUPLICATE SAMPLES ARE SHOWN IN BRACKETS NEXT TO PARENT SAMPLE RESULTS.
- RESULTS FROM THE JULY 2013, OCTOBER 2013, AND JANUARY 2014 SAMPLING EVENTS REFLECT GROUNDWATER QUALITY CONDITIONS AFTER THE SHUTDOWN OF THE IN-SITU AEROBIC BIOREMEDIATION TREATMENT AND CLOSED LOOP HYDRAULIC SYSTEMS.

Date	4/28/2010	10/13/2010	4/5/2011	10/25/2011	4/12/2012	10/5/2012	4/8/2013	7/26/2013	10/25/2013	1/24/14
Acetone	<10	<10	<10	<10	7.5 J	<10	12 J	<10	<5.0	<10 J
Benzene	0.86 J	1.3	0.91 J	1.2	1.1	1.9 J	0.95 J	1.9	2.9	1.1
Ethylbenzene	26	11	29	4.2	18	4.7	19	12	10	13
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	2.1	1.9	2.6	1.8	1.5	3.2	1.6	2.0	2.6	1.6
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	69	45	89	41 J	67	84	62	45	60	54
Aniline	<5.0	<5.1	<5.3	<5.0	<1.9	<5.0	<5.1	<1.0	<5.0	<10
N,N-Dimethylaniline	6.5	7.5	5.4	7.6	6.3	3.9	5.9	2.0	5.2	7.2
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500

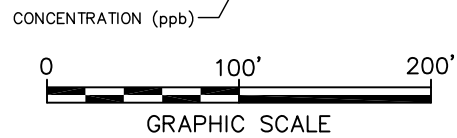
Date	4/28/2010	10/13/2010	4/5/2011	10/25/2011	4/12/2012	10/5/2012	4/8/2013	7/25/2013	10/24/13	1/24/14
Acetone	<10	<10	<10	<10	6.5 J	<10	<10	<10	<10	<10 J
Benzene	4.8	6.9	8.3	5.7	6.8	6.3 J	12	11	11	8.2
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	0.16 J	0.16 J	0.21 J	<1.0	0.15 J	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	0.40 J	0.50 J	0.77 J	0.62 J	0.44 J	1.3	1.2	1.4	1.2	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	1.5 J	2.5 J	1.5 J	2.7 J	2.3 J	5.8	5.1	6.1	6.3	
Aniline	<5.0	<5.3	<5.0	<1.9	<5.0	<5.2	0.72 J	<5.2	<10	
N,N-Dimethylaniline	2.3	3.5	2.3	3.5	2.1	0.90 J	1.1	1.6	2.2	2.2
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	NA

Date	4/28/2010	10/12/2010	4/4/2011	10/25/2011	4/11/2012	10/5/2012	4/4/2013	7/24/2013	10/23/13	1/23/14
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J
Benzene	0.23 J	<1.0	<1.0	<1.0	<0.080	<1.0 J	0.098 J	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	0.12 J	<0.15	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.1	<5.3	<5.3	<1.8	<5.1	<4.8 J	<1.0	<5.0	<10
N,N-Dimethylaniline	2.0	2.7	1.9	1.9	1.3	2.1 J	2.1 J	0.96 J	0.69 J	1.7
Methanol	<500	NA	NA	NA	NA	NA	NA	<1000	NA	NA

Date	4/28/2010	10/12/2010	4/5/2011	10/26/2011	4/11/2012	10/5/2012	4/4/2013	7/24/2013	10/23/13	1/23/14
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J
Benzene	1.6	1.7	0.79 J	0.58 J	0.11 J	0.33 J	1.1	0.46 J	1.1	0.69 J
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	0.12 J	<0.15	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.1	<5.3	<5.3	<1.8	<5.1	<4.8 J	<1.0	<5.0	<10
N,N-Dimethylaniline	2.0	2.7	1.9	1.9	1.3	2.1 J	2.1 J	0.96 J	0.69 J	1.7
Methanol	<500	NA	NA	NA	NA	NA	NA	<1000	NA	NA

Date	Sep-06	Nov-06	Jun-07
Acetone	NA	130 J	33
Benzene	NA	3.6	4.6
Ethylbenzene	NA	<4.0	0.80 J
Methylene Chloride	NA	<3.0	<3.0
Toluene	NA	1.2 J	1.4 J
Trichloroethene	NA	<1.0	<1.0
Xylenes (total)	NA	1.1 J	5
Aniline	3.5	420	1300
N,N-Dimethylaniline	1.2	1.7 J	<10
Methanol	NA	<500	<500

NYSDEC GQS (ppb)	
Acetone	50
Benzene	1
Ethylbenzene	5
Methylene Chloride	5
Toluene	5
Trichloroethene	5
Xylenes (total)	5
Aniline	5
N,N-dimethylaniline	1
Methanol	NS



McKESSON ENVIROSYSTEMS SITE
SYRACUSE, NEW YORK
MONITORING MEMO

GROUNDWATER MONITORING DATA SUMMARY
FOR APRIL 2010 - JANUARY 2014
AREAS 1 & 2

 FIGURE 3

Date	4/30/2010	10/14/2010	4/5/2011	10/27/2011	12/15/2011	4/12/2012	10/5/2012	4/8/2013	7/25/2013	10/24/13	1/24/2014
Acetone	9.5 J [12 J]	<10 [20]	<10 [20]	<10 [20]	NA	15 J [13 J]	<10 [10]	<10 [10]	<10 [10]	<10 [10]	<10 J [10 J]
Benzene	4.1 [4.0]	3.3 [3.0]	2.1 [2.0]	1.2 [1.1]	NA	1.6 [1.3]	1.1 J [0.98 J]	1.4 [1.3]	0.91 J [0.91 J]	0.60 J [0.60 J]	1.1 [1.1]
Ethylbenzene	1.2 [1.2]	1.0 [0.91 J]	1.2 [1.3]	0.67 J [0.69 J]	NA	0.73 J [0.76 J]	0.29 J [0.27 J]	0.60 J [0.64 J]	<1.0 [0.15 J]	<1.0 [0.33 J]	<1.0
Methylene Chloride	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	NA	<0.18 [0.18]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0
Toluene	0.78 J [0.75 J]	0.82 J [0.76 J]	0.74 J [0.75 J]	0.53 J [0.48 J]	NA	0.51 J [0.48 J]	0.26 J [0.27 J]	0.36 J [0.38 J]	<1.0 [1.0]	0.20 J [0.17 J]	<1.0
Trichloroethene	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	NA	<0.090 [0.090]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0
Xylenes (total)	4.2 [4.0]	3.6 [3.6]	5.2 [5.3]	1.5 J [1.4 J]	NA	1.6 J [1.6 J]	0.91 J [0.89 J]	1.5 J [1.5 J]	0.72 J [0.70 J]	<3.0 [3.0]	0.69 J [0.77 J]
Aniline	2800 J [3100 J]	760 [810]	1.9 J [2.1 J]	1300 D [1500 D]	1400	1400 J [1600 J]	<5.2 [3.2 J]	620 [700]	150 [170]	90 [72]	660 [750 D]
N,N-Dimethylaniline	<20 J [20 J]	<5.0 [2.2 J]	3.4 [3.3]	5.5 [6.2]	NA	<2.2 J [2.2 J]	2.2 [1.9]	3.5 J [3.4 J]	1.7 [1.8]	2.1 [1.4]	1.8 J [3.7]
Methanol	<500 [500]	<500 J [500 J]	<500 [500]	<500 [500]	NA	<500 [500]	NA	<1000 [1000]	<1000 [1000]	<500 [500]	<500 [500]

Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	4/11/2012	10/4/2012	4/4/2013	7/24/2013	10/23/13	1/23/2014
Acetone	<10 J	<10	<10	<10	14 J	<36 B	<10	4.2 J	<10	<10 J
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.0	<5.6	<5.1	<1.8	<5.0	<5.1	<1.0 J	<5.2 J	<10
N,N-Dimethylaniline	<1.0	<1.0	<1.1	<1.0	<0.21	<1.0	<1.0	<1.0	<1.0	<1.0
Methanol	<500	<500 J	<500	<500	<500	NA	470 J	<1000	<500	<500

Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	4/12/2012	10/4/2012	4/8/2013	7/26/2013	10/24/13	1/24/2014
Acetone	50 J	20	16	350	37 J	61	26 J	32	15	15 J
Benzene	0.82 J	1	1.7	1.2	1.3	1.6	1.3	1.3	1.2	0.91 J
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	0.42 J	0.44 J	0.74 J	0.71 J	0.59 J	0.78 J	0.60 J	0.66 J	0.69 J	0.44 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	0.13 J	<1.0
Xylenes (total)	1.4 J	1.3 J	2.0 J	0.90 J	1.4 J	2.2 J	2.3 J	2.0 J	2.2 J	1.3 J
Aniline	<5.0	1.8 J	10	<5.6	2.1 J	<5.2	<4.8	0.56 J	<5.0	<10
N,N-Dimethylaniline	2.4	2.9	2.7	2.5	2.4	2.7	1.7	0.92 J	1.3	1.9
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	NA	<500	<500

Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	12/15/2011	4/12/2012	10/5/2012	4/8/2013	7/26/2013	10/24/13	1/24/14
Acetone	<10 J	12	<10	<10	NA	6.3 J	<10	<10	<10	<10	<10 J
Benzene	3.3	3.9	4.3	1.8	NA	1.6 J	1.5 J	1.8	1.4	1.3	1.2
Ethylbenzene	0.26 J	0.28 J	<1.0	<1.0	NA	0.16 J	<1.0	0.14 J	0.11 J	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	NA	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	1.1	1.2	0.95 J	0.66 J	NA	0.45 J	0.54 J	0.53 J	0.46 J	0.45 J	0.42 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	NA	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	5.4	4.8	4.4	1.4 J	NA	1.9 J	2.2 J	2.9 J	1.7 J	1.7 J	1.4 J
Aniline	77	620	310	92	120	150	10	150	97	110	180
N,N-Dimethylaniline	2.6	<5.0	4.0	3.6	NA	4.1	3.1	4.0	2.0	1.9	4.1
Methanol	<500	<500 J	NA	NA	NA	NA	NA	NA	<1000	NA	NA

MW-4S			
Date	10/15/2010	4/11/2012	7/24/2013
Acetone	<10 [10]	<2.7	<10
Benzene	<1.0 [1.0]	<0.080	<1.0
Ethylbenzene	<1.0 [1.0]	<0.10	<1.0
Methylene Chloride	<1.0 [1.0]	<0.18	<1.0
Toluene	<1.0 [1.0]	<0.15	<1.0
Trichloroethene	<1.0 [1.0]	<0.090	<1.0
Xylenes (total)	<3.0 [3.0]	<0.36	<3.0
Aniline	<6.0 [5.0]	<1.8	<1.0
N,N-Dimethylaniline	<1.0 [1.0]	<0.21	<1.0
Methanol	<500 J	<500 J	NA NA

MW-27										
Date	4/27/2010	10/12/2010	4/7/2011	10/26/2011	4/12/2012	10/4/2012	4/5/2013	7/24/2013	10/23/13	1/23/2014
Acetone	<10	<10	3.9 J	<10	<2.7 J	<10	<10	<10	<10	<10 J
Benzene	4.5	2.7	3.1	2.1	1.5	1.1	1.1	2.0	2.6	0.89 J
Ethylbenzene	6.1	1.4	5.1	2.2	1.4	<1.0	0.88 J	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	2.4	1.3	5.7	1.3	0.45 J	0.22 J	0.34 J	0.60 J	0.75 J	0.33 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	10	3.4	9.1	3.1	2.2 J	<3.0	1.4 J	<3.0	3.9	0.22 J
Aniline	1300	220	1000	36	<1.9	<5.0	11	1.5	<5.0	<12
N,N-Dimethylaniline	<10	2.5	<11	2.7	2.2	2.4	1.1	0.73 J	0.75 J	<12
Methanol	<500	NA	NA	NA	NA	NA	NA	<1000	NA	NA

PZ-4S							
Date	4/29/2010	6/22/2010	4/7/2011	4/10/2012	4/2/2013	7/22/2013	1/20/2014
Acetone	<10	<10	<10	<2.7	<10	<10	<10 J
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0
Methylene Chloride	17	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0
Aniline	<5.0	NA	<5.3	<1.8	<5.2	<1.0	<10
N,N-Dimethylaniline	<1.0	NA	<1.1	<0.21	<1.0	<1.0	<1.0
Methanol	<500	NA	NA	NA	NA	NA	NA

PZ-4D								
Date	4/29/2010	6/22/2010	4/7/2011	4/10/2012	4/2/2013	7/22/2013	10/22/13	1/20/2014
Acetone	<10	<10	<10	<2.7	<10	<10	<10	<10 J
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	5.3 J	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.23 J	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0
Xylenes (Total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	NA	<5.3	<1.8	<4.8	<1.0	<5.2	<1.0 y
N,N-Dimethylaniline	<1.0	NA	<1.1	<0.21	<0.95	<1.0	<1.0	<1.0
Methanol	<500	NA	NA	NA	NA	NA	NA	NA

MW-17R										
Date	4/28/2010	10/13/2010	4/6/2011	10/25/2011	4/10/2012	10/3/2012	4/3/2013	7/23/2013	10/22/13	1/22/2014
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J
Benzene	0.22 J	1.3	<1.0	<1.0	0.22 J	0.55 J	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.19 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.6	<5.3 J	<5.0	<1.8	<5.1	<5.1	<1.2	<5.4	<10
N,N-Dimethylaniline	<1.0	<1.1	<1.1 J	<1.0	<0.21	<1.0	<1.0	<1.2	<1.1	<1.0
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500

MW-18										
Date	4/29/2010	6/22/2010	10/13/2010	4/7/2011	10/25/2011	4/10/2012	10/3/2012	4/3/2013	7/23/2013	10/22/13
Acetone	<10	<10	<10	<10 J	<10	<2.7	<10	<10	<10	<10 J
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	33	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	0.23 J	<0.27 J	<1.0	0.60 J	0.25 J	0.19 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	NA	<5.1	<5.3	<5.0	<1.8	<5.2	<4.8	<1.0	<5.4
N,N-Dimethylaniline	<1.0	NA	<1.1	<1.1	<1.0	<0.21	<1.0	<0.95	<1.0	<1.1
Methanol	<500	NA	<500 J	<500	<500	<500	NA	<1000	<1000	<500

MW-30										
Date	4/27/2010	10/13/2010	4/6/2011	10/25/2011	4/10/2012	10/4/2012	4/4/2013	7/24/2013	10/22/13	1/22/2014
Acetone	<10	<10 J	<10	<10	<2.7	<10	<10	<10	<10	<10 J
Benzene	<1.0	0.14 J	<1.0	<1.0	<0.080	0.099 J	<1.0	0.20 J	0.29 J	0.19 J
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	37	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.18 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	0.14 J
Aniline	<5.0	<5.1	<5.3 J	<5.0	<1.8	<5.3	<5.2	<1.0	<5.2	<11
N,N-Dimethylaniline	<1.0	<1.0	<1.1 J	<1.0	<0.21	<1.1	<1.0	0.30 J	0.85 J	<1.1
Methanol	<500	NA	NA	NA	NA	NA	NA	NA	NA	NA

MW-23S										
Date	4/29/2010	10/14/2010	4/7/2011	10/26/2011	4/10/2012	10/2/2012	4/3/2013	7/23/2013	10/21/13	1/20/2014
Acetone	<10	3.7 J	<10 J	<10	<2.7	<10	<10	<10	<10	<10 J
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.31 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.0	<5.3	<5.0	<1.8	<5.1	<5.1	<1.0	<5.2	<10
N,N-Dimethylaniline	<1.0	<1.0	<1.1	<1.0	<0.21	<1.0	<1.0	<1.0	<1.0	<1.0
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500

MW-23i										
Date	4/29/2010	6/22/2010	10/14/2010	4/7/2011	10/26/2011	4/10/2012	10/2/2012	4/3/2013	7/23/2013	10/21/13
Acetone	<10	<10	<10	<10 J	<10	<2.7	<10	<10	<10	<10 J
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	8.4	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	0.29 J	<0.15	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	NA	<5.0	<5.3	<5.0	<1.8	<5.6	<4.8	<1.0	<5.0
N,N-Dimethylaniline	<1.0	NA	<1.0	<1.1	<1.0	<0.21	<1.1	<0.95	<1.0	<1.0
Methanol	<500	NA	<500 J	<500	<500	<500	NA	<1000	<1000	<500

MW-28										
Date	4/27/2010	10/12/2010	4/6/2011	10/25/2011	4/11/2012	10/3/2012	4/5/2013	7/23/2013	10/22/13	1/22/2014
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	0.26 J	0.32 J	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.22 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.2	<5.3 J	<5.0	<1.8	<5.1	<5.1	<1.0	<5.2	<11
N,N-Dimethylaniline	<1.0	<1.0	<1.1 J	0.22 J	<0.21	<1.0	<1.0	<1.0	<1.0	<1.1
Methanol	<500	NA	NA	NA	NA	NA	NA	NA	NA	NA

MW-BSR										
	4/27/2010	10/12/2010	4/7/2011	10/26/2011	4/12/2012	10/4/2012	4/5/2013	7/25/2013	10/24/13	1/24/2014
Acetone	<10	<10	<10	5.9 J [4.3 J]	<10	<10	<10	5.1 J [8.7 J]	<10	<10 J [4.0 J]
Benzene	<4.2 [3.5]	<2.7	3.2 [3.2]	1.9 [2.0]	1.2 [1.7]	0.69 J [0.70 J]	1.1 [1.1]	1.9 [1.8]	2.9	2.4 [2.6]
Ethylbenzene	<2.3 [1.8]	<1.0	<1.0	<1.0	<1.0 [0.6 J]	0.1 [0.1]	0.28 J	0.1 [0.1]	0.18 J	0.2 J
Methylene Chloride	<1.0 [4.0]	<1.0	<1.0 [4.0]	<1.0	<0.15 [0.18]	<1.0 [4.0]	<1.0 [4.0]	<1.0 [4.0]	<1.0	<1.0 [4.0]
Toluene	<6.6 [3.7]	<2.0	2.8 [2.6]	1.3 [1.3]	0.76 J [1.2]	0.36 J [0.39 J]	0.67 J [0.68 J]	1.0 [0.96 J]	1.3	0.94 J [1.1]
Trichloroethene	<1.0 [4.0]	<1.0	<1.0 [4.0]	<1.0 [4.0]	<0.090 [0.090]	<1.0 [4.0]	<1.0 [4.0]	<1.0 [4.0]	<1.0	<1.0 [4.0]
XYlenes (total)	41 [33]	31	32 [31]	14 [15]	9.5 [15]	1.4 J [1.2 J]	7.7 [8.0]	11 [9.4]	13	11 [13]
Aniline	<750 J [720 J]	220	57 J [64]	<50 [45.0]	<1.9 [1.9]	<5.3 [4.5]	<5.1 [4.1]	2.5 [2.5]	2.6 J	5.5 [4.0]
1,4-Dimethylaniline	1.0 [4.0]	<5.0 [1.6]	1.6	1.5 [1.6]	2.2 [2.6]	2.3 [2.7]	2.1 [4.1]	2.3 [0.96 J]	2.0 [1.7]	2.0 [1.7]
Methanol	<500	<500	NA	NA	NA	NA	NA	<1000	<1000	NA



Attachment A

Validated Analytical Laboratory
Reports



Attachment B

Statistical Analyses

Attachment B. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Discussion of Statistical Results

To evaluate the continued effectiveness of the Operable Unit 2 (OU2) remedial action and the need (if any) to re-start the remedial process, technical analyses were performed to evaluate whether constituent of concern (COC) concentrations: (1) rebound substantially above the pre-shutdown COC concentrations based on an evaluation of the most up-to-date dataset, and (2) continue to trend at asymptotic levels. The technical analyses performed, as described below, are the same as those detailed in the January 2013 Periodic Review Report (PRR; ARCADIS 2013a) and have been updated to include groundwater data through January 2014.

Technical Analyses

To evaluate whether total COC molar concentrations have reached asymptotic conditions (where COC levels are no longer significantly decreasing or increasing), three different analyses were performed using each area's annual data from 1998 to January 2014.¹ The first analysis involved a calculation of overall percent removal of total COC molar concentrations (i.e., moles per liter) from 1998 to 2014. If the overall percent removal during the 17-year period was within 1 percent of complete (100 percent) removal, then it was implied that COC levels approached asymptotic conditions as removal cannot exceed 100 percent.

$$\frac{(\text{Initial Molar Concentration}) - (\text{2014 Molar Concentration})}{(\text{Initial Molar Concentration})} * 100 = \% \text{ reduction}$$

The second analysis used a first-order decay function $[C_t = C_0 * e^{kt}]$, where C_t = total COC molar concentration at time t , C_0 = total COC molar concentration in 2002, k = the decay coefficient, and t =

¹Total COC molar concentrations were calculated for each Area by converting COC concentrations (reported as µg/L) to molar concentrations (i.e., moles per liter), adding together the nine COC molar concentrations (excluding methanol) for each sampling date, and then averaging molar concentrations for the year. The basis for excluding methanol from the technical analyses was detailed in the January 2013 PRR and is presented below.

"Methanol values have been excluded from the analyses in order to accurately portray the temporal trends in COCs at the site. Methanol has a very high detection limit relative to the other COCs evaluated. The methanol detection limit was 1,000 micrograms per liter (µg/L) until 2006 when lowered to 500 µg/L. In the calculation for total COC molar COC concentrations, the use of half the detection limit for non-detects of methanol tends to misrepresent the total COC molar concentration present and confound interpretation of trends regarding COC concentrations.

In Area 1, this problem is most profound due to the low concentrations present compared to the other two Areas. Half the detection limit for methanol represents 17 percent of the initial molar concentration of all COCs present in 1998, and frequently represents more than 95 percent of the calculated COCs present. In Area 1, there have been only six detected methanol concentrations in 137 reported samples (95.6 percent non-detect); five of these six were during 2009, when sample contamination was suspected.

In Area 2, methanol was only detected seven times in 108 reported samples (93.5 percent non-detect), with three of the seven during the September 2009 sampling round when sample contamination was suspected.

In Area 3, there is stronger evidence that methanol was actually present at location MW-8SR in significant levels, as methanol was reported in the 11 samples taken prior to 2002. Since that time, only one of 17 reported samples has yielded detectable methanol concentrations at that location. At the other Area 3 locations, there were a total of three detections (including one in September 2009) in 50 samples."

Attachment B. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

number of years since 2002] of total COC molar concentrations from 2002 to 2014 to determine the decay rate, and half-life of COC concentrations in order to evaluate how rapidly COC levels decreased over time. If the COC levels exhibited statistically significant exponential decay over the 12-year period and the percentage of total COCs remaining was relatively small, then it was implied that COC concentrations approached asymptotic conditions.

$$\ln(C_t) = k * \ln(t) + b$$

$$C_t = e^{kt} * e^b$$

$$C_t = C_o * e^{kt}, \text{where } e^b = C_o$$

$$\text{Decay Rate} = (1 - e^k) * 100$$

$$\text{Half-Life (years)} = \ln(1/2)/k$$

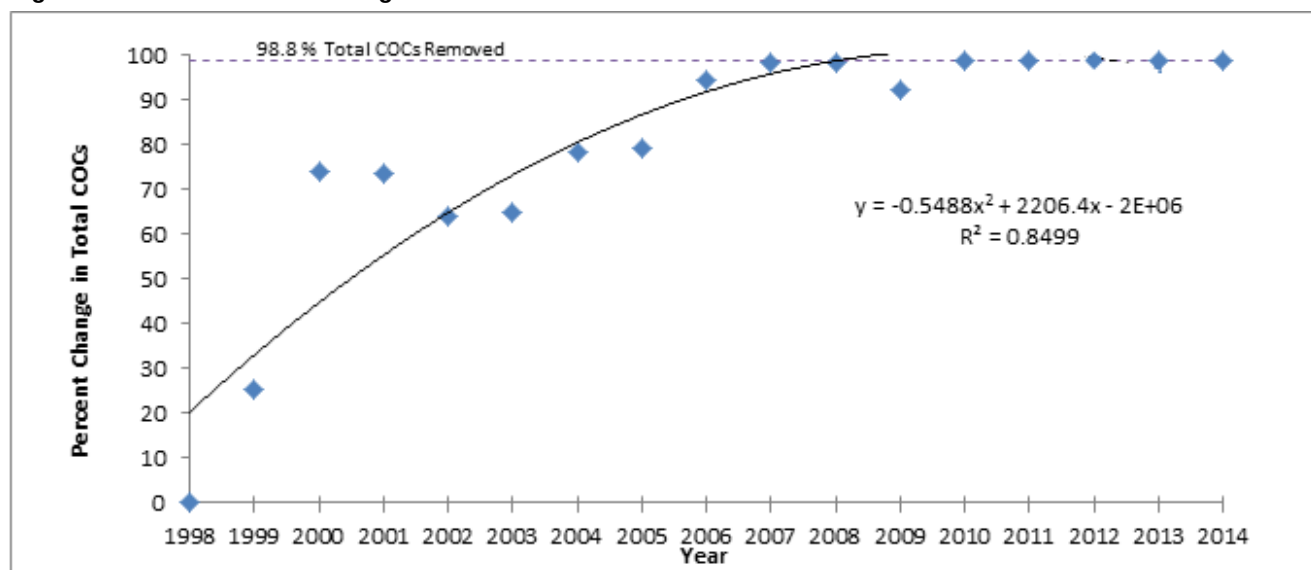
The third analysis involved a linear regression between time (year) and percent reduction in total COC molar concentrations from 2008 to 2014. If the slope of the COC concentrations did not significantly differ from zero, then the data indicate that the asymptote was effectively reached. The data and results of the analyses for each area are described below.

Area 1

Between 1998 and 2014, the overall percent reduction in COC levels in Area 1 (i.e., monitoring wells MW-9S, MW-31, MW-32, MW-33, and TW-01) was 98.8 percent, as shown on Figure B-1. As COC levels were within 1 percent of complete removal (based on two significant figures), the data indicate that COC levels approached asymptotic conditions by 2012 and continued through January 2014.

$$\frac{(2.9\text{E-}05 \text{ mol/L}) - (3.6\text{E-}07 \text{ mol/L})}{(2.9\text{E-}05 \text{ mol/L})} * 100 = 98.8\% \text{ reduction}$$

Figure B-1: Area 1 Percent Change in Total COCs



Attachment B. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

The decay relation [$C_t = 9.53E-06 * e^{-0.325t}$] for total COC molar concentrations from 2002 to 2014 indicates that total COC molar concentrations decreased relatively quickly and consistently over the 12-year period, as shown on Figure B-2. The decay coefficient (k) for total COC molar concentrations since 2002 is -0.325 (probability of occurrence [p] = 8.1E-05, confidence interval [α] = 0.05, correlation coefficient [r^2] = 0.77). This decay coefficient results in a half-life of 2.1 years and a statistically significant annual decay rate of 28 percent per year (95 percent confidence interval ranging from 19 to 36 percent per year). As COC molar concentrations exhibited statistically significant exponential decay with less than 1 percent of total COCs remaining in 2014, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through January 2014.

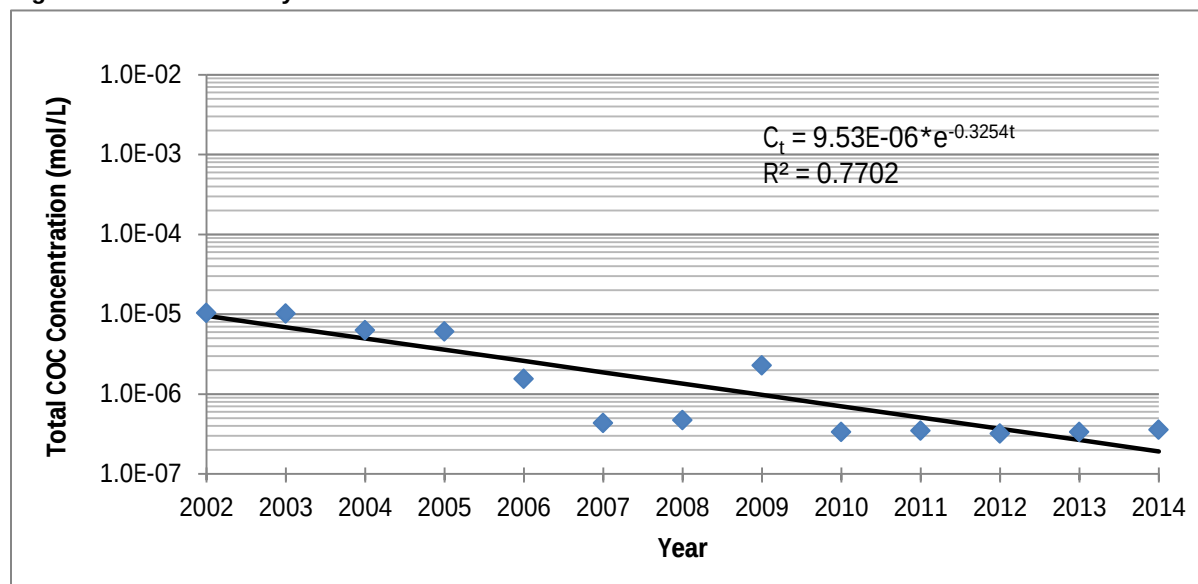
$$\ln(C_t) = -0.325 * \ln(t) + 639.89$$

$$C_t = 9.53E - 06 * e^{-0.325t}$$

$$\text{Decay Rate: } (1 - e^{-0.325}) * 100 = 28\%$$

$$\text{Half-Life: } \ln(1/2) / (-0.325) = 2.1 \text{ years}$$

Figure B-2: Area 1 Decay Function of Total COC Concentrations



A regression between time (2008 to 2014) and percent total COC reduction further support that COC concentrations in Area 1 approached asymptotic conditions of 100 percent removal. The computed non-significant mean slope of 0.52 percent COC reduction per year ($p = 0.31$, $\alpha = 0.05$, $r^2 = 0.20$), with the 95 percent confidence interval ranging from -0.67 to 1.7 percent per year, indicates that total COC molar concentrations in Area 1 most likely did not significantly decrease nor increase within the last 7 years, suggesting that COC levels effectively reached an asymptote by 2012 and continued through January 2014.

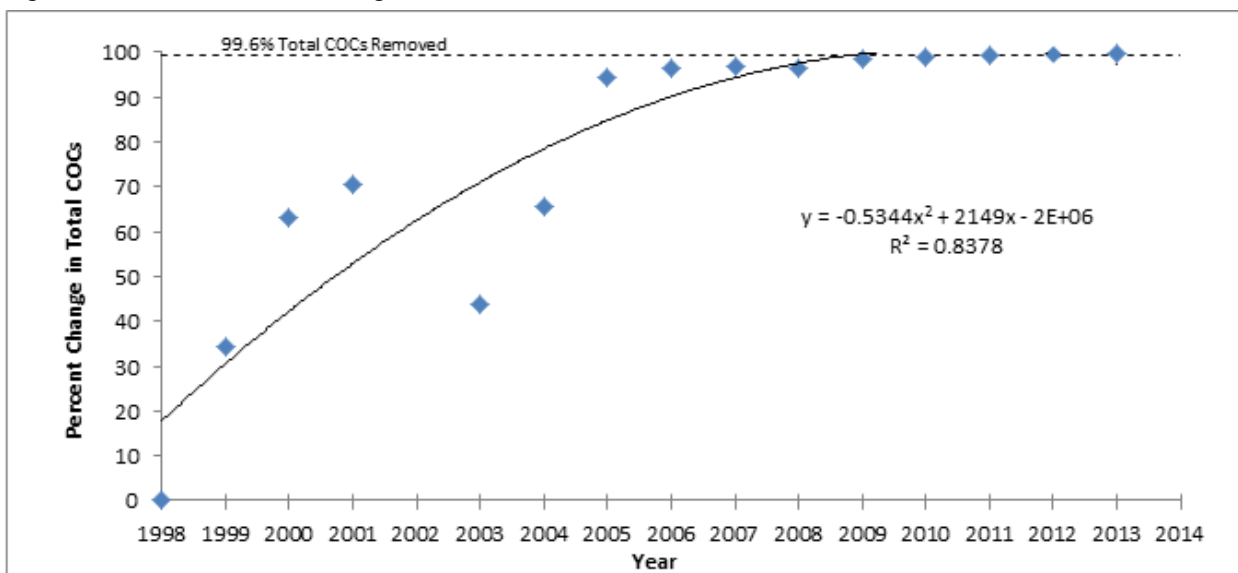
Attachment B. Statistical Analyses
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Area 2

The overall percent reduction in COC levels in Area 2 (i.e., monitoring wells MW-36R, TW-02RRR, MW-34, and MW-35) from 1998 to 2014 was 99.6 percent, as shown on Figure B-3. As COC levels were within 1 percent of complete removal, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through January 2014.

$$\frac{(6.1\text{E-}04 \text{ mol/L}) - (2.6\text{E-}06 \text{ mol/L})}{(6.1\text{E-}04 \text{ mol/L})} * 100 = 99.6\% \text{ reduction}$$

Figure B-3: Area 2 Percent Change in Total COCs



In Area 2, aniline contributions dominated the overall COC molar concentrations. The concentrations of constituents other than aniline quickly achieved 99 percent reduction or more in the first few years, while aniline data actually increased, reaching a maximum in 2002. At that time, aniline accounted for approximately 99.7 percent of the total COC molar concentration. Since 2002, Area 2 appears to be approaching asymptotic conditions of 100 percent removal, as noted by the decay function of total COC molar concentrations from 2002 to 2014, as shown on Figure B-4. Using a first-order decay relation [$C_t = 3.99\text{E-}04 * e^{-0.513t}$], the total molar concentration of total COCs has an estimated decay coefficient (k) of -0.513 ($p = 7.4\text{E-}07$, $\alpha = 0.05$, $r^2 = 0.90$) with a corresponding half-life of 1.4 years and a statistically significant annual decay rate of 40 percent per year (95 percent confidence interval ranging from 33 to 47 percent per year). After a 12-year period (2002 - 2014), 0.16 percent of the total COC molar concentration remained. As COC molar concentrations exhibited statistically significant exponential decay with less than 1 percent of total COCs remaining in 2014, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through January 2014.

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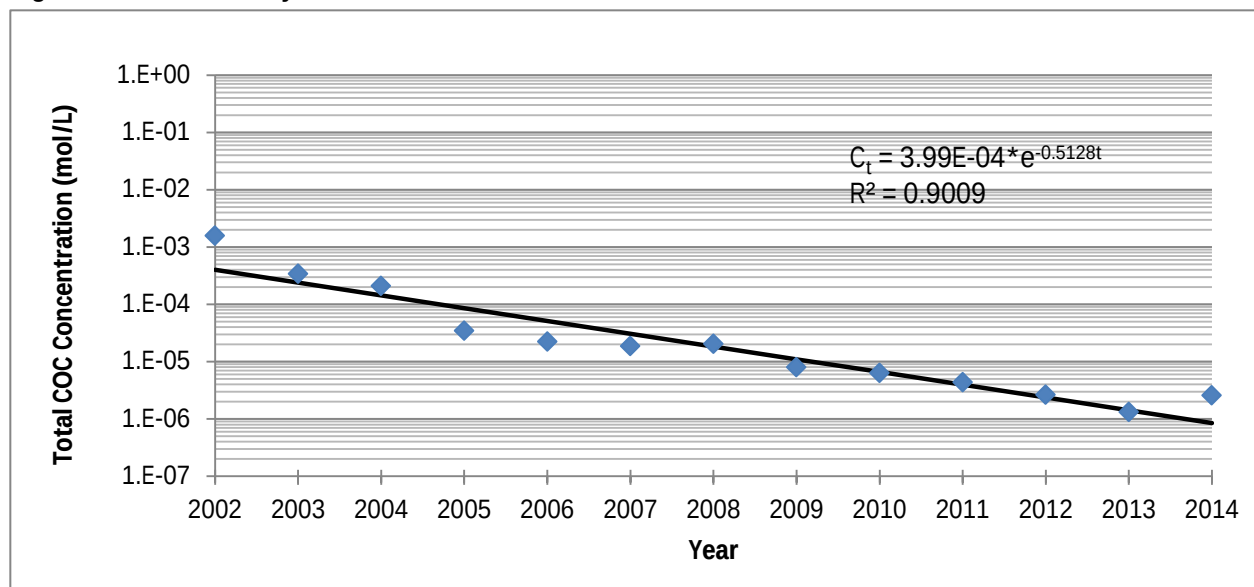
$$\ln(C_t) = -0.513 * \ln(t) + 1018.8$$

$$C_t = 3.99E-04 * e^{-0.513t}$$

$$\text{Decay Rate: } (1 - e^{-0.513}) * 100 = 40\%$$

$$\text{Half-Life: } \ln(1/2)/(-0.513) = 1.4 \text{ years}$$

Figure B-4: Area 2 Decay Function of Total COC Concentrations



The regression between time (2008 to 2014) and percent total COC reduction indicates a continuing slight positive statistically significant mean slope of 0.41 percent reduction per year ($p = 0.0021$, $\alpha = 0.05$, $r^2 = 0.69$), with the 95 percent confidence interval ranging from 0.0093 to 0.73 percent per year. Despite this minor increase in the percent reduction in total COC molar concentration, Area 2 appeared to be approaching asymptotic conditions by 2012 and continued to trend at asymptotic levels through January 2014, as noted by the lower end of the 95 percent confidence interval approaching zero percent COC reduction per year, the rapid decay rate, and the high degree of total COC removal within the last 5 years (>98.9 percent).

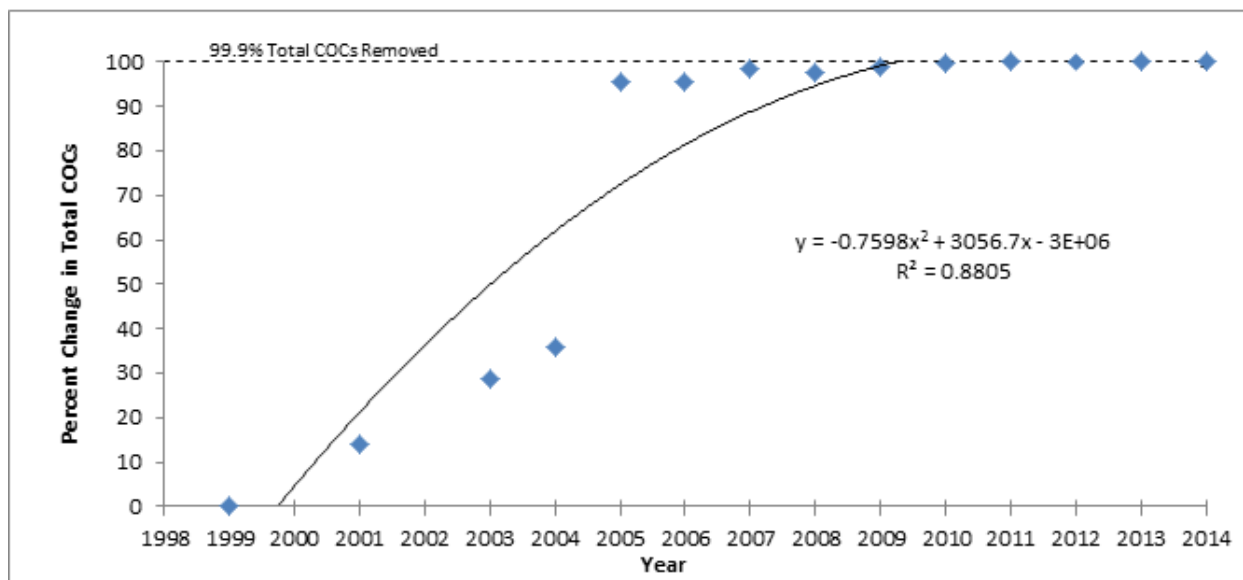
Attachment B. Statistical Analyses
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Area 3

The overall percent reduction in COC levels from 1999 to 2014 in Area 3 (i.e., monitoring wells MW-8SR, MW-27, and MW-28) was 99.9 percent, as shown on Figure B-5. As COC levels were within 1 percent of complete removal, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through 2014.

$$\frac{(4.1\text{E-}03 \text{ mol/L}) - (2.3\text{E-}07 \text{ mol/L})}{(4.1\text{E-}03 \text{ mol/L})} * 100 = 99.9\% \text{ reduction}$$

Figure B-5: Area 3 Percent Change in Total COCs



COC molar concentration data were erratic prior to 2002, when aniline, N,N-dimethylaniline, and methylene chloride were major contributors. N,N-dimethylaniline and methylene chloride were essentially gone (>99.9 percent removal) by 2005. The decay relation $[C_t = 7.19\text{E-}03 * e^{-0.917t}]$ for total COC molar concentrations from 2002 to 2014 supports that COC molar concentrations in Area 3 rapidly decreased over the 12-year period, effectively approaching asymptotic conditions of 100 percent removal by 2012 and continuing through January 2014, as shown on Figure B-6. The decay coefficient (k) for total COC molar concentrations is -0.917 ($p = 9.33\text{E-}09$, $\alpha = 0.05$, $r^2 = 0.96$), with a half-life is 0.76 years and a statistically significant annual decay rate of 60 percent per year (95 percent confidence interval ranging from 54 to 65 percent per year). After a 12-year period (2002 to 2014), 0.0047 percent of the total COC molar concentration remained. As COC molar concentrations exhibited statistically significant exponential decay, with less than 1 percent of total COCs remaining in 2014, the data indicate that COC levels approached asymptotic conditions in 2012 and continued through January 2014.

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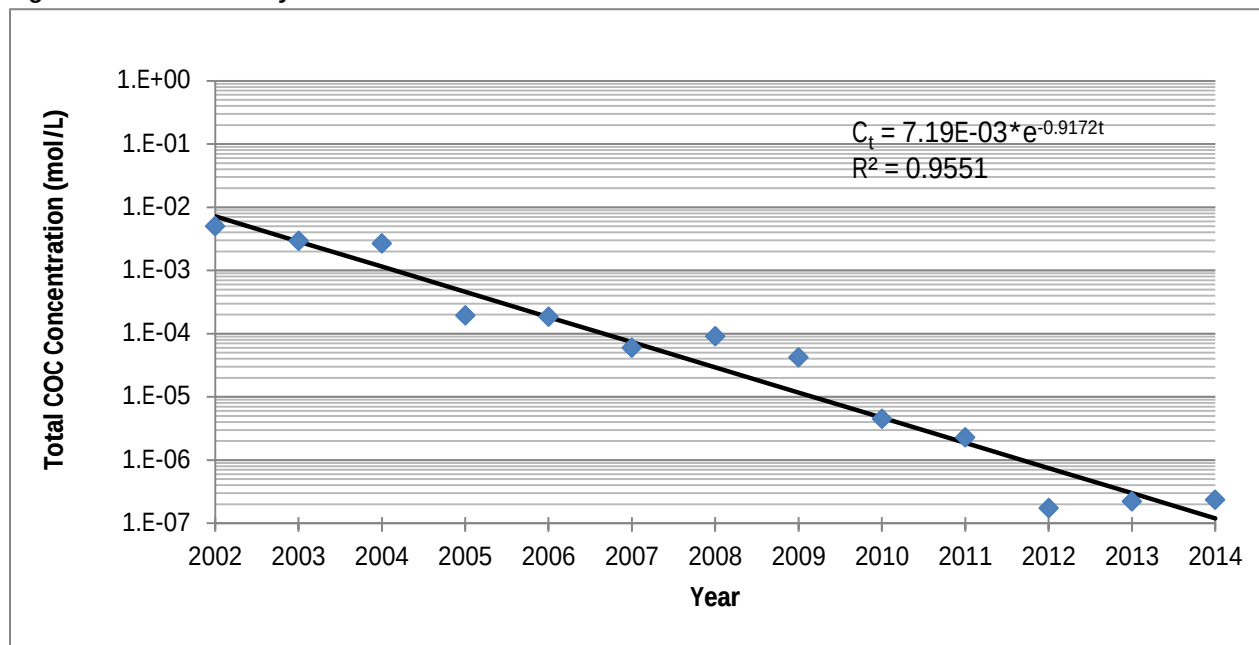
$$\ln(C_t) = -0.917 * \ln(t) + 1831.3$$

$$C_t = 7.19E-03 * e^{-0.917t}$$

$$\text{Decay Rate: } (1 - e^{-0.917}) * 100 = 60\%$$

$$\text{Half-Life: } \ln(1/2)/(-0.917) = 0.76 \text{ years}$$

Figure B-6: Area 3 Decay Function of Total COC Concentrations



The regression between time (2008 to 2014) and percent total COC reduction indicates a continuing slight positive statistically significant mean slope of 0.31 percent COC reduction per year ($p = 0.031$, $\alpha = 0.05$, $r^2 = 0.64$), with the 95 percent confidence interval ranging from 0.042 to 0.58 percent per year. Despite this minor increase in the percent reduction in total COC molar concentrations, Area 3 approached asymptotic conditions in 2012 and continued to trend at asymptotic levels through January 2014, as noted by the rapid decay rate and the high degree of COC removal within the last 5 years (>99.9 percent).



Mr. Payson Long
Remedial Bureau E
Section D
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, New York 12233-7013

Subject:
McKesson EnviroSystems Site
400 West Bear Street
Syracuse, New York
Site No. 7-34-020

Dear Mr. Long:

ARCADIS of New York, Inc. (ARCADIS) has prepared this monitoring memorandum for the McKesson EnviroSystems Site (the Site) located at 400 West Bear Street in Syracuse, New York. ARCADIS prepared this memorandum on behalf of McKesson Corporation to describe the groundwater monitoring activities and present the results of the April 2014 monitoring event conducted at the Site in and around Areas 1, 2, and 3 (see Figure 1). This was the fourth monitoring event conducted after the April 10, 2013 shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems, and was conducted as part of a post-shutdown process control monitoring program.

The New York State Department of Environmental Conservation (NYSDEC) approved the shutdown of the Operable Unit No. 2 (OU2) remedial system in a letter dated April 11, 2013 (NYSDEC 2013). The letter required implementation of a post-shutdown process control monitoring program to determine the continued effectiveness of the OU2 remedial action on the remaining contamination (NYSDEC 2013). The post-shutdown monitoring program is a continuation of the constituent of concern (COC) and hydraulic process control monitoring program that has been conducted at the Site since OU2 treatment activities commenced in 1998.

The main objective of this monitoring memorandum, consistent with the previous three memoranda for the monitoring events conducted in July 2013, October 2013, and January 2014 (ARCADIS 2013a, 2014a, and 2014b, respectively), is to provide timely updates of groundwater conditions for monitoring events performed at the Site. This monitoring memorandum provides information about the following:

Imagine the result

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ENVIRONMENTAL

Date:
September 11, 2014

Contact:
David J. Ulm

Phone:
315.671.9210

Email:
david.ulm@arcadis-us.com

Our ref:
B0026003.2014.00190 #2

- Goals of the post-shutdown process control monitoring program
- April 2014 post-shutdown process control monitoring activities
- April 2014 monitoring results
- Data evaluation and conclusions
- Proposed next steps

Goals of the Post-Shutdown Process Control Monitoring Program

The goals of the post-shutdown process control monitoring program are to determine the continued effectiveness of the OU2 remedial action and evaluate the need (if any) to restart remedial processes. As outlined in the October 2013 Periodic Review Report (PRR) (ARCADIS 2013b), the remedial action will be considered to have “continued effectiveness” if COC concentrations meet the following conditions:

- Do not rebound substantially above the pre-shutdown COC concentrations based on an evaluation of the most up-to-date dataset.
- Continue to trend at asymptotic levels.
- Do not migrate beyond the Site boundary above NYSDEC Class GA Groundwater Quality Standards (NYSDEC 1998), as determined by sampling from the sentinel and downgradient perimeter monitoring wells/piezometers.

Additionally, the post-shutdown process control monitoring program provides an evaluation of groundwater flow conditions following the April 2013 shutdown of the closed loop hydraulic system.

April 2014 Post-Shutdown Process Control Monitoring Activities

The fourth post-shutdown process control monitoring event consisted of hydraulic monitoring on April 14, 2014 and COC monitoring from April 14 through 18, 2014. Table 1 identifies each of the hydraulic and COC monitoring locations, which are shown on Figure 1. In addition, the presence or absence of non-aqueous phase liquid (NAPL) was assessed in the monitoring wells and piezometers included in the monitoring program, as well as the collection sump. During this monitoring event, NAPL was not observed in the monitoring wells, piezometers, or the collection sump.

Hydraulic Monitoring

During hydraulic monitoring, groundwater level measurements were obtained at monitoring wells and piezometers that are screened entirely within the sand layer of the shallow hydrogeologic unit and located in and around Areas 1, 2, and 3. Additionally, a groundwater level measurement was obtained within the collection sump, and the Barge Canal surface-water elevation was obtained from measurements taken from a reference point on the Bear Street Bridge, which passes over the canal.

COC Monitoring

The groundwater COCs for the Site are acetone, benzene, toluene, ethylbenzene, xylenes (total), methanol, trichloroethene, aniline, N,N-dimethylaniline, and methylene chloride. Groundwater samples were analyzed for the COCs by TestAmerica Laboratories, Inc. (TestAmerica) in Edison, New Jersey via U.S. Environmental Protection Agency (USEPA) Methods 8260C (volatile organic compounds) and 8270D (semivolatile organic compounds), and in Amherst, New York via Method USEPA 8015D (methanol). TestAmerica is accredited pursuant to the New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program for these analyses. ARCADIS validated the laboratory analytical results using the Tier III full validation process. Attachment A presents copies of the validated analytical laboratory reports associated with the April 2014 monitoring event.

April 2014 Monitoring Results

Hydraulic Monitoring Results

Table 2 presents groundwater level measurements obtained during the April 14, 2014 hydraulic monitoring event, as well as those obtained since October 2006. Figure 2 depicts a potentiometric surface of the Site's shallow hydrogeologic unit using the April 14, 2014 dataset. A comparison of the potentiometric surface maps generated during the four post-shutdown process control monitoring events, demonstrates that hydraulic conditions have remained consistent following the April 2013 shutdown of the closed loop hydraulic system in Area 3.

When comparing the April 2014 potentiometric surface map to those maps generated (and presented in previous PRRs) using groundwater elevation data obtained prior to system shutdown, the following conclusions, as presented in the first monitoring memorandum (ARCADIS 2013a), remain true:

- The closed depression around the groundwater withdrawal trench is no longer present.
- The potentiometric surface of the shallow hydrogeologic unit sand layer following the April 2013 system shutdown is generally consistent with the potentiometric surface prior to the 1998 implementation of the closed loop hydraulic system in Area 3.

COC Monitoring Results

COC groundwater analytical results are summarized in Table 3 and shown on Figures 3 and 4. COC groundwater analytical results are compared to the NYSDEC Groundwater Quality Standards presented in the Technical and Operational Guidance Series 1.1.1 (NYSDEC 1998). The April 2014 COC results are consistent with those obtained following the April 2013 shutdown of the in-situ bioremediation treatment system, as well as those obtained prior to shutdown. Concentrations for most of the COCs were either not detected or were below their respective NYSDEC Class GA Groundwater Quality Standards in each area.

The analytical results for the April 2014 COC monitoring event are summarized below for each area (Areas 1, 2, and 3), as well as for sentinel and downgradient perimeter monitoring locations.

Area 1

At the five monitoring locations in Area 1 (MW-9S, MW-31, MW-32, MW-33, and TW-01), four COCs (benzene, xylenes, N,N-dimethylaniline, and ethylbenzene) were detected at concentrations slightly exceeding their respective standards (see Table 3 and Figure 3).

Area 2

At the four monitoring locations in Area 2 (MW-34, MW-35, TW-02RRR, and MW-36R), four COCs (acetone, benzene, aniline, and N,N-dimethylaniline) were detected at concentrations above their respective standards (see Table 3 and Figure 3).

Area 3

At three out of the five monitoring locations in Area 3 (MW-27, MW-29, and MW-30), all COC concentrations were non-detect or below their respective standards. At the

remaining two monitoring locations (MW-28 and MW-8SR), four COCs (benzene, xylenes, aniline, and N,N-dimethylaniline) were detected at concentrations that slightly exceeded their respective standards (see Table 3 and Figure 4).

Sentinel Wells

COCs were not detected at sentinel wells MW-3S and MW-4S, located downgradient of Area 1 (Table 3 and Figure 3).

Downgradient Perimeter Wells/Piezometers

COCs were not detected in any of the downgradient perimeter/monitoring locations (MW-17R, MW-18, MW-23I, MW-23S, and PZ-4D), except methanol, which was detected at MW-17R (see Table 3 and Figure 4). This detection of methanol at MW-17R is considered anomalous. There is no NYSDEC Class GA Groundwater Quality Standard for methanol.

PZ-4S was not sampled during the April 2014 monitoring event because it is included in the COC monitoring program every second monitoring event. PZ-4S was last sampled in January 2014.

Data Evaluation and Conclusions

To evaluate the continued effectiveness of the OU2 remedial action and the need (if any) to restart the remedial process, April 2014 data were incorporated into the historical groundwater dataset (1998 through April 2014) for technical analyses. The technical analyses performed were the same as those detailed in the January 2013 PRR (ARCADIS 2013c) and are described in Attachment B. The technical analyses consisted of the following:

- Change in annual total COC molar concentration (i.e., concentration normalized by its molecular weight) over time.
- Statistical analyses that included first order decay functions and regression analyses between time (year) and percent COC reduction fitted to each area's annual total COC molar concentration.

The data and results from these technical analyses, as presented in Attachment B, demonstrate that the OU2 remedial action has continued effectiveness, showing that the remedy continues to: (1) be protective of public health and the environment, (2)

comply with the OU2 Record of Decision (NYSDEC 1997), and (3) meet remedial process closure requirements in Section 6.4 of Division of Environmental Remediation-10: Technical Guidance for Site Investigation and Remediation (NYSDEC 2010a). The conclusions developed based on groundwater data obtained from 1998 through April 2014 are summarized below:

- COC concentrations detected in April 2014 did not rebound above pre-shutdown COC concentrations.
- COC concentrations were mostly not detected or below their respective NYSDEC Class GA Groundwater Quality Standard in each Area during the April 2014 monitoring event.
- COC concentrations continue to trend at asymptotic levels for each area.
- COC concentrations have not migrated beyond the Site boundary above NYSDEC Groundwater Quality Standards.
- The remedy continues to achieve the bulk of reduction of groundwater contamination, as indicated by total COC molar concentrations exceeding 98.5 percent reduction in each area.

These conclusions confirm that groundwater quality conditions have not substantially changed since the shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems and fully demonstrate the continued effectiveness of the OU2 remedial action. Accordingly, there is no need to restart the remedial processes.

Proposed Next Steps

As also outlined in the October 2013 PRR (ARCADIS 2013b), the post-shutdown process control monitoring program is proposed to be conducted for 2 years (2013 to 2015), consisting of quarterly monitoring during the first year and biannual monitoring during the second year. The first year of quarterly monitoring has been completed, with results consistently demonstrating the continued effectiveness of the OU2 remedial action, indicating no need to restart the remedial processes (i.e., in-situ bioremediation treatment and closed loop hydraulic systems). The first biannual post-shutdown process control monitoring event is planned to occur in October 2014 and will consist of hydraulic and COC monitoring similar to that conducted in April 2014. As detailed in Table 1, the October 2014 monitoring event will consist of measuring groundwater/surface-water elevations at the locations identified with an "H" and

collecting groundwater samples from the monitoring wells/piezometers identified with a "C", except for MW-4S, which will continue to be included in the COC monitoring program every third monitoring event.

Following the October 2014 monitoring event, the data will be evaluated to determine the continued effectiveness of the remedial action. The October 2014 groundwater monitoring activities and results, in addition to an overall evaluation of post-shutdown groundwater conditions and proposed next steps, will be documented in a monitoring memorandum, which will be submitted to the NYSDEC prior to the second biannual post-shutdown process control monitoring event planned for April 2015.

If you have any questions or require additional information, please contact me at 315.671.9210.

Sincerely,

ARCADIS of New York, Inc.

A handwritten signature in blue ink, appearing to read "David Ulm".

David J. Ulm
Senior Vice President

AS/lar

Copies:

Ms. Susan Edwards, NYSDEC (w/out Attachment A)
Mr. Harry Warner, NYSDEC (w/out Attachment A)
Mr. Richard Jones, NYSDOH (w/out Attachment A)
Margaret A. Sheen, Esq., NYSDEC (w/out Attachment A)
Ms. Jean Mescher, McKesson Corporation (w/out Attachment A)
Mr. Douglas Morrison, Bristol-Myers Squibb Company (w/out Attachment A)
Christopher Young, P.G., de maximis, inc. (w/out Attachment A)
Kevin Bernstein, Esq., Bond Schoeneck & King PLLC (w/out Attachment A)

Enclosures:

Tables

Table 1	Post-Shutdown Process Control Monitoring Wells and Piezometers
Table 2	Summary of Groundwater Level Measurements, October 2006 through April 2014
Table 3	Summary of Groundwater Monitoring Data, March 2009 through April 2014

Figures

Figure 1	Site Plan
Figure 2	Potentiometric Surface of the Shallow Hydrogeologic Unit Sand Layer April 14, 2014
Figure 3	Groundwater Monitoring Data Summary for April 2010 – April 2014, Areas 1 & 2
Figure 4	Groundwater Monitoring Data Summary for April 2010 – April 2014, Area 3

Attachments

- Attachment A Validated Analytical Laboratory Reports
- Attachment B Statistical Analyses

References

- ARCADIS. 2013a. Monitoring Memo – July 2013 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. October 18.
- ARCADIS. 2013b. Periodic Review Report. McKesson EnviroSystems Former Bear Street Facility. October 1.
- ARCADIS. 2013c. Periodic Review Report. McKesson EnviroSystems Former Bear Street Facility. January 15.
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Tables

Table 1. Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Monitoring Location	Purpose of Monitoring
Sentinel	
MW-3S*	C
MW-4S*	C
Area 1	
TW-01	C
MW-9S	C
MW-31	C
MW-32	C
MW-33*	C
PZ-F	H
PZ-G	H
PZ-HR	H
PZ-P	H
PZ-Q	H
PZ-R	H
PZ-S	H
Area 2	
TW-02RRR	C
MW-34	C
MW-35	C
MW-36R*	C
PZ-I	H
PZ-J	H
PZ-T	H
PZ-U	H
PZ-V	H
Area 3	
MW-8SR*	C
MW-11S	H
MW-27*	C
MW-28	C
MW-29*	C
MW-30*	C
PZ-A	H
PZ-B	H
PZ-C	H
PZ-D	H
PZ-E	H
PZ-K	H
PZ-L	H
PZ-M	H
PZ-N	H
PZ-O	H
Collection Sump	H
Downgradient Perimeter	
MW-17R	C
MW-18	C
MW-23I	C
MW-23S	C, H
MW-24SR	H
MW-25S	H
PZ-4S*	C
PZ-4D*	C, H
PZ-5D	H
Barge Canal	H

See Notes on Page 2.

**Table 1. Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York**

Notes:

1. The table lists the monitoring wells and piezometers that are part of the constituent of concern (COC) and/or hydraulic post-shutdown process control monitoring program.
2. Hydraulic monitoring involves obtaining groundwater level measurements from monitoring wells/piezometers identified in the table and surface-water level measurements from the Barge Canal. The surface-water level of the Barge Canal is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal. Groundwater elevation data are used to map potentiometric surface of the shallow hydrogeologic unit sand layer.
3. The COCs are acetone, benzene, ethylbenzene, methylene chloride, toluene, trichloroethene, xylenes, aniline, N,N-dimethylaniline, and methanol.
4. Monitoring well MW-4S and piezometer PZ-4S are included in the COC monitoring program every third and second monitoring event, respectively.

C = COC monitoring.

H = hydraulic monitoring.

* = New York State Department of Environmental Conservation approved the elimination of methanol analysis from the COC groundwater monitoring program (NYSDEC 2010b).

Table 2. Summary of Groundwater Level Measurements, October 2006 through April 2014
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Location	Reference Elevation (feet AMSL)	10/30/06	6/6/07	11/12/07	3/24/08	8/25/08	3/23/09	9/14/09	4/26/10	10/11/10	4/4/11
Barge Canal ^A	393.39	364.29	362.99	362.06	364.34	363.21	363.54	362.89	362.97	363.49	362.07
Collection Sump	372.81	363.18	362.26	361.86	363.81	362.14	362.20	362.18	362.18	360.72	359.90
MW-3S ^B	376.54	369.08	--	367.60	367.93	365.19	367.32	365.50	365.67	367.95	369.21
MW-11S	373.50	366.11	364.27	363.88	365.69	363.86	364.88	363.89	364.42	364.30	365.00
MW-18 ^B	372.57	363.82	362.63	362.32	363.51	362.26	363.16	362.22	362.67	362.87	363.82
MW-23I ^B	372.77	366.43	365.02	364.74	366.12	364.64	365.69	364.67	365.19	365.38	366.57
MW-23S	372.61	365.28	362.98	362.56	364.81	362.62	363.50	362.63	362.99	362.71	364.57
MW-24SR	375.55	366.49	365.21	364.83	366.26	364.73	365.81	364.79	365.32	365.81	366.60
MW-25S	373.39	365.26	363.32	362.87	364.84	362.88	363.97	362.89	363.34	363.30	364.10
PZ-4D	376.11	366.64	365.29	364.98	366.39	364.90	365.96	364.94	365.49	366.02	366.74
PZ-5D	375.58	366.87	365.49	365.19	366.69	365.09	366.21	365.14	365.01	366.09	366.99
PZ-A	373.94	365.62	363.11	362.72	364.83	362.96	363.56	362.95	362.28	362.35	362.68
PZ-B	373.92	365.85	363.12	362.62	365.03	362.87	363.64	362.83	362.96	362.22	363.24
PZ-C	374.85	367.14	365.85	365.30	367.15	365.16	366.71	365.23	366.37	367.11	367.88
PZ-D	375.12	367.68	365.98	365.40	367.29	365.28	366.81	365.40	366.57	367.17	368.20
PZ-E	374.12	368.13	365.16	364.07	366.58	364.14	366.82	364.20	364.25	364.16	364.83
PZ-F	377.06	368.32	366.18	365.76	367.99	365.50	367.41	365.69	366.72	367.10	368.10 ^B
PZ-G	377.16	368.64	366.28	365.82	368.14	365.94	367.29	367.22	367.32	367.36	368.12
PZ-HR	376.99	368.31	366.23	365.74	368.00	365.48	367.41	365.63	366.65	367.15	368.00 ^B
PZ-I	375.15	369.00	366.49	365.92	368.55	365.50	367.97	365.71	367.04	367.49	368.60
PZ-J	374.89	367.96	366.16	365.82	367.69	365.55	367.20	365.70	366.55	367.05	367.81
PZ-K	373.19	365.58	363.36	362.91	364.96	363.08	363.80	363.04	363.33	363.34	361.94
PZ-L	374.62	365.23	362.94	362.63	364.64	362.79	363.39	362.80	363.80	362.36	362.52
PZ-M	374.35	365.60	363.54	363.11	365.13	363.30	364.00	363.31	363.62	363.04	363.47
PZ-N	376.94 ^C	367.51	365.76	365.26	367.05	365.09	366.63	365.17	366.22	367.01	367.79
PZ-O	375.36	365.42	363.22	362.82	365.01	362.91	363.94	362.93	363.35	362.90	363.57
PZ-P	376.89	368.30	366.31	365.83	368.06	365.58	367.51	365.75	366.76	367.26	368.08
PZ-Q	377.61	368.61	366.33	365.83	368.23	365.57	367.61	365.77	366.78	367.26	368.13
PZ-R	377.05	368.51	366.19	365.79	368.20	365.55	367.57	365.73	366.74	367.24	368.10
PZ-S	378.13	372.48	366.51	365.81	368.21	365.55	367.60	365.74	366.76	367.13	369.67 ^B
PZ-T	376.25	368.04	366.24	365.84	367.89	365.52	367.37	365.66	366.63	367.12	367.94
PZ-U	375.35	367.99	366.07	365.80	367.75	365.52	367.25	365.66	366.52	367.05	367.83
PZ-V	375.78	367.97	366.17	365.78	367.78	365.48	367.24	365.64	366.52	367.04	367.81

See Notes on Page 2.

Table 2. Summary of Groundwater Level Measurements, October 2006 through April 2014
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Location	Reference Elevation (feet AMSL)	10/24/11	4/9/2012	10/1/2012	4/1/2013	7/18/2013 ^D	10/17/2013 ^D	1/17/2014 ^D	4/14/2014 ^D
Barge Canal ^A	393.39	363.71	358.39	360.59	360.74	360.69	360.69	361.38	362.29
Collection Sump	372.81	361.33	360.95	361.70	361.24	364.71	364.84	366.14	366.92
MW-3S ^B	376.54	--	366.44	365.15	367.55	366.11	366.62	367.83	368.66
MW-11S	373.50	364.18	363.92	363.62	364.42	364.95	365.08	366.08	366.94
MW-18 ^B	372.57	--	362.57	362.32	362.85	362.74	363.54	363.57	364.50
MW-23I ^B	372.77	--	364.99	364.73	365.29	365.23	365.33	366.02	366.86
MW-23S	372.61	362.66	362.23	362.29	362.88	364.20	364.37	365.30	366.06
MW-24SR	375.55	365.63	365.09	364.84	365.48	365.39	365.46	366.25	367.09
MW-25S	373.39	363.17	362.81	362.61	363.48	364.08	364.23	365.14	365.89
PZ-4D	376.11	365.78	365.24	364.94	365.59	365.47	365.59	366.34	367.06
PZ-5D	375.58	366.02	365.48	365.16	365.84	365.67	365.81	366.57	367.42
PZ-A	373.94	362.53	363.24	362.54	362.68	364.78	364.92	366.08	366.87
PZ-B	373.92	362.47	362.14	362.35	362.64	364.77	364.88	366.08	366.86
PZ-C	374.85	366.6	366.10	365.41	366.76	365.75	365.84	366.65	367.50
PZ-D	375.12	366.87	366.39	365.65	367.07	365.87	365.97	366.82	367.66
PZ-E	374.12	364.18	363.67	363.35	364.38	365.12	365.22	366.44	367.22
PZ-F	377.06	367.04	366.46	365.44	366.91	366.52	366.57	367.61	368.66
PZ-G	377.16	367.17	366.53	365.48	367.04	366.67	366.70	367.74	368.74
PZ-HR	376.99	367.04	366.40	365.38	366.90	366.46	366.50	367.61	368.60
PZ-I	375.15	367.47	366.77	365.36	367.52	366.60	366.70	368.20	369.15
PZ-J	374.89	366.94	366.30	365.55	366.74	366.39	366.48	367.50	368.37
PZ-K	373.19	362.97	362.65	362.75	363.03	364.79	364.96	365.97	366.77
PZ-L	374.62	362.54	362.16	362.42	362.60	364.61	364.77	365.90	366.71
PZ-M	374.35	363.22	362.86	362.87	363.28	364.93	364.96	366.18	366.98
PZ-N	376.94 ^C	366.62	366.06	365.33	366.72	365.67	365.81	366.57	367.46
PZ-O	375.36	362.94	362.61	362.52	363.14	364.50	364.64	365.72	366.48
PZ-P	376.89	367.15	366.49	365.45	366.93 ^B	366.57	366.63	367.69	368.69
PZ-Q	377.61	367.21	366.52	365.44	367.04	366.59	366.65	367.76	368.80
PZ-R	377.05	367.15	366.48	365.45	367.03	366.54	366.59	367.74	368.75
PZ-S	378.13	367.48	366.51	365.45	367.34 ^B	366.58	366.61	368.27	369.73
PZ-T	376.25	367.00	366.32	365.41	366.86	366.42	366.49	367.64	368.55
PZ-U	375.35	366.92	366.29	365.44	366.77	366.38	366.47	367.55	368.42
PZ-V	375.78	366.93	366.28	365.40	366.77	366.37	366.46	367.53	368.44

Notes:

^ASurface-water level measurements are obtained from the Barge Canal. The surface-water level is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal.

^BData not used in potentiometric surface mapping of the shallow hydrogeologic unit sand layer.

^CThe reference elevation for PZ-N was 376.02 feet AMSL prior to November 16, 2000. The new reference elevation is 376.94 feet AMSL.

^DGroundwater elevations reflect hydrogeologic conditions after the April 2013 shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems.

Abbreviations:

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

-- = Not Measured.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through April 2014
Monitoring Memorandum, McKesson Envirosystems Site, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)			Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom											
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)					50	1	5	5	5	5	5	5	1	NS
MW-3S	3/09	365.1	350.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	0.17 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA	
	10/11			<10	<1.0	<1.0	<1.0	0.35 J	<1.0	<3.0	<5.0	<1.0	NA	
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA	
	10/12			<10	0.27 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.61 J	NA	
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA	
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA	
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA	
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA	
MW-4S	10/10	365.5	350.5	<10 [<10]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<3.0 [<3.0]	<5.0 [<5.0]	<1.0 [<1.0]	<500 J [<500 J]	
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA	
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA	
MW-8SR ^B	3/09	362.7	352.7	6.5 J [5.8 J]	6.8 [6.8]	66 [63]	<1.0 [<1.0]	10 [10]	<1.0 [<1.0]	140 [140]	2,200 [1,800]	<12 [<12]	<500 [<500]	
	6/09			NA	NA	NA	NA	NA	NA	NA	7,000	<50	NA	
	9/09			<10 [8.3 J]	8.5 J [7.9]	44 J [38]	<1.0 [<1.0]	6.8 J [6.5]	<1.0 J [<1.0]	81 J [71]	4,000 [3,400]	<20 [<20]	<500 [<500]	
	4/10			<10 [<10]	4.2 [3.5]	23 J [18]	<1.0 [<1.0]	4.6 [3.7]	<1.0 [<1.0]	41 [33]	370 J [720 J]	1.0 J [<5.0]	<500 [<500]	
	10/10			<10	2.7	16	<1.0	2.0	<1.0	31	220	1.6	NA	
	4/11			5.9 J [4.3 J]	3.2 [3.2]	10 [8.8]	<1.0 [<1.0]	2.8 [2.6]	<1.0 [<1.0]	32 [31]	57 J [64]	1.5 [1.6]	NA	
	10/11			<10 [<10]	1.9 [2.0]	2.0 [2.1]	<1.0 [<1.0]	1.3 [1.3]	<1.0 [<1.0]	14 [15]	<5.0 [<5.0]	2.6 [<1.0]	NA	
	4/12			8.7 J [6.7 J]	1.2 [1.7]	2.3 [3.3]	<0.18 [<0.18]	0.76 J [1.2]	<0.090 [<0.090]	9.5 [15]	<1.9 [<1.9]	2.4 [2.6]	NA	
	10/12			<10 [<10]	0.69 J [0.70 J]	0.16 J [0.14 J]	<1.0 [<1.0]	0.36 J [0.39 J]	<1.0 [<1.0]	1.4 J [1.2 J]	<5.3 [<5.0]	2.3 [2.7]	NA	
	4/13			<10 [<10]	1.1 [1.1]	0.32 J [0.28 J]	<1.0 [<1.0]	0.67 J [0.68 J]	<1.0 [<1.0]	7.7 [8.0]	<5.1 [<5.1]	1.7 [1.4]	NA	
	7/13			5.1 J [8.7 J]	1.9 [1.8]	0.17 J [0.18 J]	<1.0 [<1.0]	1.0 [0.96J]	<1.0 [<1.0]	11 [9.4]	2.5 [2.5]	0.89 J [0.96 J]	<1,000 [<1,000]	
	10/13			<10	2.9	0.21 J	<1.0	1.3	<1.0	13	2.6 J	0.83 J	NA	
	1/14			<10 J [<10 J]	2.4 [2.6]	0.19 J [<1.0]	<1.0 [<1.0]	0.94 J [1.1]	<1.0 [<1.0]	11 [13]	5.1 J [<10]	2.0 [1.7]	NA	
	4/14			<10 [<10]	3.2 [3.3]	0.25 J [0.27 J]	<1.0 [<1.0]	1.2 [1.1]	<1.0 [<1.0]	13 [13]	3.9 J [5.6 J]	1.4 [1.9]	NA	
MW-9 ^C (Replaced by MW-9S)	3/09	365.6	356	<10	1.2	27	<1.0	2.5	<1.0	65	<5.0	4.2	<500	
	9/09			<10	1.7	20	<1.0	2.2	<1.0	70	<5.0	4.1	730	
	4/10			<10	0.86 J	26	<1.0	2.1	<1.0	69	<5.0	6.5	<500	
	10/10			<10	1.3	11	<1.0	1.9	<1.0	45	<5.1	7.5	<500 J	
	4/11			<10	0.91 J	29	<1.0	2.6	<1.0	89	<5.3	5.4	<500	
	10/11			<10	1.2	4.2	<1.0	1.8	<1.0	41 J	<5.0	7.6	<500	
	4/12			7.5 J	1.1	18	<0.18	1.5	<0.090	67	<1.9	6.3	<500	
	10/12			<10	1.9 J	4.7	<1.0	3.2	<1.0	84	<5.0	3.9	NA	
	4/13			12 J	0.95 J	19	<1.0	1.6	<1.0	62	<5.1	5.9	<1,000	
	7/13			<10	1.9	12	<1.0	2.0	<1.0	45	<1.0	2.0	<1,000	
	10/13			<5.0	2.9	10	<1.0	2.6	<1.0	60	<5.0	5.2	<500	
	1/14			<10 J	1.1	13	<1.0	1.6	<1.0	54	<10	7.2	<500	
	4/14			<10	1.0	19	<1.0	2.2	<1.0	74	<10	5.7	<500	

See Notes on Page 8.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through April 2014
Monitoring Memorandum, McKesson Envirosystems Site, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-17 ^D (Replaced by MW-17R)	3/09	365.7	356.1	<10	2.3	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	0.86 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	0.22 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	1.3	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500 J
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	<500
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	<1.0	<500
	4/12			<2.7	0.22 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	0.55 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.2	<1.2	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.4	<1.1	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	2,700
MW-18	3/09	325.15	316.15	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	33	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.23 J	<1.0	<3.0 J	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	0.27 J	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	0.60 J	<1.0	<3.0	<4.8	<0.95	<1,000
	7/13			<10	<1.0	<1.0	<1.0	0.25 J	<1.0	<3.0	<1.0	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0	<5.4	<1.1	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
4/14	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500			
MW-23S	3/09	364.1	354.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			3.7 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.31 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through April 2014
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Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-23i	3/09	341.2	336.2	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	8.4	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.29 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<9.5	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
MW-27	3/09	362.5	354.5	14 J	8.7	36	<1.0	9.4	<1.0	88	8,200 J	<50 J	<500
	6/09			NA	NA	NA	NA	NA	NA	NA	7,400	<50	NA
	9/09			10	6.2	5.9	<1.0	6.9	<1.0	23	2,100	<10	<500
	4/10			<10	4.5	6.1	<1.0	2.4	<1.0	10	1,300	<10	<500
	10/10			<10	2.7	1.4	<1.0	1.3	<1.0	3.4	220	2.5	NA
	4/11			3.9 J	3.1	5.1	<1.0	5.7	<1.0	9.1	1,000	<11	NA
	10/11			<10	2.1	2.2	<1.0	1.3	<1.0	3.1	36	2.7	NA
	4/12			<2.7	1.5	1.4	<0.18	0.45 J	<0.090	2.2 J	<1.9	2.7	NA
	10/12			<10	1.1	<1.0	<1.0	0.22 J	<1.0	<3.0	<5.0	2.2	NA
	4/13			<10	1.1	0.88 J	<1.0	0.34 J	<1.0	1.4 J	11	2.4	NA
	7/13			<10	2.0	<1.0	<1.0	0.60 J	<1.0	<3.0	1.5	1.1	<1,000
	10/13			<10	2.6	<1.0	<1.0	0.75 J	<1.0	3.9	<5.0	0.73 J	NA
	1/14			<10 J	0.89 J	<1.0	<1.0	0.33 J	<1.0	0.22 J	<12	0.75 J	NA
	4/14			<10	1.0	<1.0	<1.0	0.41 J	<1.0	0.92 J	0.60 J	0.48 J	NA
MW-28	3/09	363.6	355.6	<10	3.5	0.8 J	<1.0	0.3 J	<1.0	1.1 J	18	<0.5	851
	9/09			<10	3.1	0.32 J	<1.0	0.25 J	<1.0	0.48 J	6.7	<1.0	<500
	4/10			<10	2.8	0.60 J	<1.0	0.23 J	<1.0	0.46 J	<5.0	0.49 J	<500
	10/10			<10	1.8	<1.0	<1.0	<1.0	<1.0	<3.0	2.4 J	0.60 J	<500 J
	4/11			4.3 J	2.3	<1.0	<1.0 B	0.11 J	<1.0	<3.0	3.9 J	0.75 J	<500
	10/11			<10	1.8	<1.0	<1.0	0.38 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	1.4	<0.10	<0.18	0.22 J	<0.090	<0.36	<1.8	0.48 J	<500
	10/12			<10	1.9	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.62 J	NA
	4/13			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.32 J	410 J
	7/13			<10	1.7	<1.0	<1.0	0.22 J	<1.0	<3.0	<1.0	0.35 J	<1,000
	10/13			<10	1.7	<1.0	<1.0	0.49 J	<1.0	0.68 J	<5.0	0.70 J	<500
	1/14			<10 J	1.2	<1.0	<1.0	0.22 J	<1.0	<3.0	<10	0.75 J	<500
	4/14			13	1.7	<1.0	<1.0	0.29 J	<1.0	<3.0	<10	0.72 J	<500

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through April 2014
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Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-29	3/09	362.9	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.29 J	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA
	10/11			<10	<1.0	<1.0	<1.0	0.22 J	<1.0	<3.0 J	<5.0	0.22 J	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	7/13			<10	0.26 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/13			<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	<1.1	NA
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
MW-30	3/09	363.5	355.5	<10	0.8 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	0.78 J	<1.0	<1.0	0.17 J	<1.0	<3.0	21	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10 J	0.14 J	<1.0	37	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA
	10/11			<10	<1.0	<1.0	<1.0	0.18 J	<1.0	<3.0 J	<5.0	<1.0	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	0.099 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	0.20 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.30 J	NA
	10/13			<10	0.29 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.85 J	NA
	1/14			<10 J	0.19 J	<1.0	<1.0	<1.0	<1.0	0.14 J	<11	<1.1	NA
	4/14			<10	0.37 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.43 J	NA
MW-31	3/09	363.7	355.4	9.4 J	8.3	<1.0	<1.0	0.6 J	<1.0	0.8 J	<5.0	2.3	<500
	9/09			<10	10	<1.0	<1.0	0.49 J	<1.0	2.0 J	<5.0	2.5	730
	4/10			<10	4.8	<1.0	<1.0	0.40 J	<1.0	1.3 J	<5.0	2.3	<500
	10/10			<10	6.9	<1.0	<1.0	0.50 J	<1.0	1.5 J	<5.3	3.5	<500 J
	4/11			<10	8.3	<1.0	<1.0	0.77 J	<1.0	2.5 J	<5.3	2.3	<500
	10/11			<10	5.7	<1.0	<1.0	0.62 J	<1.0	1.5 J	<5.0	3.5	<500
	4/12			6.5 J	6.8	0.16 J	<0.18	0.65 J	<0.090	2.7 J	<1.9	2.1	<500
	10/12			<10	6.3 J	0.16 J	<1.0	0.44 J	<1.0	2.3 J	<5.0	0.90 J	NA
	4/13			<10	12	0.21 J	<1.0	1.3	<1.0	5.6	<5.2	1.1	<1,000
	7/13			<10	11	<1.0	<1.0	1.2	<1.0	5.1	0.72 J	1.6	<1,000
	10/13			<10	11	0.15 J	<1.0	1.4	<1.0	6.1	<5.2	2.2	<500
	1/14			<10 J	8.2	<1.0	<1.0	1.2	<1.0	6.3	<10	2.2	NA
	4/14			<10	7.5	0.22 J	<1.0	0.93 J	<1.0	4.6	0.75 J	1.9	<500

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Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-32	3/09	364	356	<10	0.5 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	1,200	
	4/10			<10	0.23 J	<1.0	<1.0	<1.0	<3.0	<5.0	0.89 J	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.87 J	<500 J	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500	
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	1.5	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.1	<500
	10/12			<10	<1.0 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.2	NA
	4/13			<10	0.098 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	0.91 J	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.82 J	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.2	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.85 J	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.1	<500
MW-33	3/09	344.1	356.1	<10	3.2	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.4	<500
	9/09			<10	2.6	<1.0	<1.0	0.20 J	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	1.6	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.0	<500
	10/10			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.7	NA
	4/11			<10	0.79 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.9	NA
	10/11			<10	0.58 J	<1.0	<1.0	0.12 J	<1.0	<3.0	<5.3	1.9	NA
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.3	NA
	10/12			<10	0.33 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.1	NA
	4/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8 J	2.1 J	NA
	7/13			<10	0.46 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.96 J	<1,000
	10/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	0.69 J	NA
	1/14			<10 J	0.69 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.7	NA
	4/14			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	0.32 J	2.3	NA
MW-34	3/09	362.7	354.7	14	1.4	<1.0	<1.0	0.7 J	<1.0	1.5 J	12	2.0	<500
	9/09			24	<1.0	<1.0	<1.0	0.64 J	<1.0	1.7 J	<5.0	2.5	1,000
	4/10			50 J	0.82 J	<1.0	<1.0	0.42 J	<1.0	1.4 J	<5.0	2.4	<500
	10/10			20	1.0	<1.0	<1.0	0.44 J	<1.0	1.3 J	1.8 J	2.9	<500 J
	4/11			16	1.7	<1.0	<1.0	0.74 J	<1.0	2.0 J	10	2.7	<500
	10/11			350	1.2	<1.0	<1.0	0.71 J	<1.0	0.90 J	<5.6	2.5	<500
	4/12			37 J	1.3	<0.10	<0.18	0.59 J	<0.090	1.4 J	2.1 J	2.4	<500
	10/12			61	1.6	<1.0	<1.0	0.78 J	<1.0	2.2 J	<5.2	2.7	NA
	4/13			26 J	1.3	<1.0	<1.0	0.60 J	<1.0	2.3 J	<4.8	1.7	<1,000
	7/13			32	1.3	<1.0	<1.0	0.66 J	<1.0	2.0 J	0.56 J	0.92 J	NA
	10/13			15	1.2	<1	<1.0	0.69 J	0.13 J	2.2 J	<5.0	1.3	<500
	1/14			15 J	0.91 J	<1.0	<1.0	0.44 J	<1.0	1.3 J	<10	1.9	<500
	4/14			57	1.4	0.11 J	<1.0	0.62 J	<1.0	3.6	2.6 J	1.6	<500

See Notes on Page 8.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through April 2014
Monitoring Memorandum, McKesson Envirosystems Site, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-35	3/09	363	355	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			6.5 J	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	<1.0	1,100
	4/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500
	4/12			14 J	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<36 B	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	470 J
	7/13			4.2 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0 J	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2 J	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.6	<500
MW-36 ^E (Replaced by MW-36R)	3/09	363.6	355.6	28	2.4	<1.0	<1.0	0.8 J	<1.0	2.8 J	150	2.8	<500
	6/09			NA	NA	NA	NA	NA	NA	NA	460	<5.0	NA
	9/09			21	3.1	<1.0	<1.0	0.96 J	<1.0	3.2	390	3.1	<500
	4/10			<10 J	3.3	0.26 J	<1.0	1.1	<1.0	5.4	77	2.6	<500
	10/10			12	3.9	0.28 J	<1.0	1.2	<1.0	4.8	620	<5.0	<500 J
	4/11			<10	4.3	<1.0	<1.0	0.95 J	<1.0	4.4	310	4.0	NA
	10/11			<10	1.8	<1.0	<1.0	0.66 J	<1.0	1.4 J	92	3.6	NA
	12/11			NA	NA	NA	NA	NA	NA	NA	120	NA	NA
	4/12			6.3 J	1.6	0.16 J	<0.18	0.45 J	<0.090	1.9 J	150	4.1	NA
	10/12			<10	1.5 J	<1.0	<1.0	0.54 J	<1.0	2.2 J	10	3.1	NA
	4/13			<10	1.8	0.14 J	<1.0	0.53 J	<1.0	2.9 J	150	4.0	NA
	7/13			<10	1.4	0.11 J	<1.0	0.46 J	<1.0	1.7 J	97	2.0	<1,000
	10/13			<10	1.3	<1.0	<1.0	0.45 J	<1.0	1.7 J	110	1.9	NA
	1/14			<10 J	1.2	<1.0	<1.0	0.42 J	<1.0	1.4 J	180	4.1	NA
	4/14			5.5 J	1.1	0.12 J	<1.0	0.42 J	<1.0	1.6 J	140	3.4	NA
TW-01	3/09	365.1	355.4	<10	1.9	<1.0	<1.0	<1.0	<1.0	0.6 J	<5.0	<0.5	22,300
	9/09			2.9 J	<1.0	<1.0	<1.0	0.11 J	<1.0	<3.0	<5.0	1.1	970
	4/10			<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.3	<500 J
	4/11			<10	0.21 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0 J	<5.6	1.6	<500
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.7	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	1.9	NA
	4/13			<10	0.090 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.98 J	<1,000
	7/13			<10	0.11 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.98 J	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.3	<500

See Notes on Page 8.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through April 2014
Monitoring Memorandum, McKesson Envirosystems Site, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
TW-02RR ^{BE} (Replaced by TW-02RRR)	3/09	363.3	353.3	<10 [<10]	5.0 [4.6]	1.5 [1.6]	<1.0 [<1.0]	1.0 [1.0 J]	<1.0 [<1.0]	4.2 [4.1]	2,000 [1,600]	<10 [<10]	<500 [<500]
	6/09			NA	NA	NA	NA	NA	NA	NA	2,800	<20	NA
	9/09			<10 [<10]	4.3 [4.2]	1.2 [1.3]	<1.0 [<1.0]	0.79 J [0.81 J]	<1.0 [<1.0]	3.5 [3.6]	1,600 [1,500]	<10 [<10]	1,000 [1,200]
	4/10			9.5 J [12 J]	4.1 [4.0]	1.2 [1.2]	<1.0 [<1.0]	0.78 J [0.75 J]	<1.0 [<1.0]	4.2 [4.0]	2,800 J [3,100 J]	<20 J [<20 J]	<500 [<500]
	10/10			<10 [<10]	3.3 [3.0]	1.0 [0.91 J]	<1.0 [<1.0]	0.82 J [0.76 J]	<1.0 [<1.0]	3.6 [3.6]	760 [810]	<5.0 [2.2 J]	<500 J [<500 J]
	4/11			<10 [<10]	2.1 [2.0]	1.2 [1.3]	<1.0 [<1.0]	0.74 J [0.75 J]	<1.0 [<1.0]	5.2 [5.3]	1.9 J [2.1 J]	3.4 [3.3]	<500 [<500]
	10/11			<10 [<10]	1.2 [1.1]	0.67 J [0.69 J]	<1.0 [<1.0]	0.53 J [0.48 J]	<1.0 [<1.0]	1.5 J [1.4 J]	1,300 D [1,500 D]	5.5 [6.2]	<500 [<500]
	12/11			NA	NA	NA	NA	NA	NA	NA	1,400	NA	NA
	4/12			15 J [13 J]	1.6 [1.5]	0.73 J [0.76 J]	<0.18 [<0.18]	0.51 J [0.48 J]	<0.090 [<0.090]	1.6 J [1.6 J]	1,400 J [1,600 J]	<2.2 J [<2.2 J]	<500 [<500]
	10/12			<10 [<10]	1.1 J [0.98 J]	0.29 J [0.27 J]	<1.0 [<1.0]	0.26 J [0.27 J]	<1.0 [<1.0]	0.91 J [0.89 J]	<5.2 [3.2 J]	2.2 [1.9]	NA
	4/13			<10 [<10]	1.4 [1.3]	0.60 J [0.64 J]	<1.0 [<1.0]	0.36 J [0.38 J]	<1.0 [<1.0]	1.5 J [1.5 J]	620 [700]	3.5 J [3.4 J]	<1,000 [<1,000]
	7/13			<10 [<10]	0.91 J [0.91 J]	0.25 J [0.26 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 J [1.4 J]	0.72 J [0.70 J]	150 [170]	1.7 [1.8]	<1,000 [<1,000]
	10/13			<10 [<10]	0.60 J [0.60 J]	<1.0 [0.15 J]	<1.0 [<1.0]	0.20 J [0.17 J]	0.15 J [0.11 J]	<3.0 [<3.0]	90 [72]	2.1 [1.4]	<500 [<500]
	1/14			<10 J [<10 J]	1.1 [1.1]	0.27 J [0.33 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	0.69 J [0.77 J]	660 [750 D]	1.8 J [3.7]	<500 [<500]
	4/14			8.0 J [10]	1.2 [1.2]	0.51 J [0.44 J]	<1.0 [<1.0]	0.18 J [0.17 J]	<1.0 [<1.0]	1.0 J [0.96 J]	1,300 J [1,700 J]	2.8 J [3.5 J]	<500 [<500]
PZ-4D	3/09	350.8	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	5.3 J	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/12			<2.7	<0.080	<0.10	<0.18	0.23 J	<0.090	<0.36	<1.8	<0.21	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<0.95	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
PZ-4S	3/09	362.79	357.88	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	4/10			<10	<1.0	<1.0	17	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA

See Notes on Page 8.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through April 2014
Monitoring Memorandum, McKesson Envirosystems Site, 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. Detections exceeding NYSDEC Groundwater Standards (TOGS 1.1.1; NYSDEC 1998) are indicated by shading.
4. Duplicate sample results are presented in brackets (e.g., [14]).
5. The sampling event in June 2010 was an interim sampling event to check for the presence of methylene chloride.
6. Results from the July 2013, October 2013, January 2014, and April 2014 sampling events reflect groundwater quality conditions after the shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems.

Superscript Notes:

- ^A = Data presented is total xylenes (m- and p-xylenes and o-xylenes).
- ^B = Wells MW-8S and TW-02R were abandoned in August 2004 and replacement wells MW-8SR and TW-02RR were installed in August 2004.
- ^C = Well MW-9 was abandoned during OU1 soil remediation activities (1994).
- ^D = Well/piezometer MW-17 was abandoned November 1997 through January 1998.
- ^E = Wells/piezometers MW-36, PZ-5S, PZ-W, and TW-02RR were abandoned in November 2010. Replacement wells TW-02RRR (replaced TW-02RR) and MW-36R (replaced MW-36 and PZ-W) were installed in November 2010.

Abbreviations:

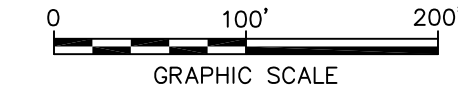
AMSL = above mean sea level (National Geodetic Vertical Datum of 1929)
 NA = compound was not analyzed for in the sample
 NS = standard not available
 NYSDEC = New York State Department of Environmental Conservation
 TOGS = Technical and Operational Guidance Series

Analytical Qualifiers:

B = The compound was found in associated method blank.
 D = Concentration is based on a diluted sample analysis.
 J = The compound was positively identified; however, the numerical value is an estimated concentration only.
 < = Compound was not detected at the listed quantitation limit.

NYSDEC. 1998. NYSDEC. 1998. Technical Operational Guidance Series 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June.
 Available online at: http://www.dec.ny.gov/docs/water_pdf/togs111.pdf

Figures

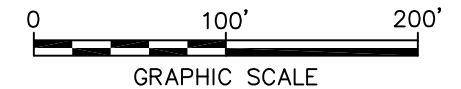




BARGE CANAL (362.29)

- _____ . . . _____

1. ONLY THE HYDRAULIC MONITORING LOCATIONS USED TO DRAW THIS MAP ARE SHOWN.
2. REPLACED MONITORING WELLS AND PIEZOMETERS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
3. ELEVATIONS REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
4. THE BARGE CANAL ELEVATION WAS MEASURED FROM A MARKED POINT ON THE BEAR STREET BRIDGE.
5. CONTOUR INTERVAL = 1.0 FOOT.



**POTENTIOMETRIC SURFACE OF THE
SHALLOW HYDROGEOLOGIC UNIT SAND LAYER
APRIL 14, 2014**



FIGURE 2

Date	4/27/2010	10/12/2010	4/7/2011	10/26/2011	4/12/2012	10/4/2012	4/5/2013	7/24/2013	10/23/13	1/23/2014	4/16/2014
Acetone	<10	<10	3.9 J	<10	<2.7 J	<10	<10	<10	<10	<10 J	<10
Benzene	4.5	2.7	3.1	2.1	1.5	1.1	2.0	2.6	0.89 J	1.0	1.0
Ethylbenzene	6.1	1.4	5.1	2.2	1.4	<1.0	0.88 J	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	2.4	1.3	5.7	1.3	0.45 J	0.22 J	0.34 J	0.60 J	0.75 J	0.33 J	0.41 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	10	3.4	9.1	3.1	2.2 J	<3.0	1.4 J	<3.0	3.9	0.22 J	0.92 J
Aniline	1300	220	1000	36	<1.9	<5.0	11	1.5	<5.0	<1.2	0.60 J
N,N-Dimethylaniline	<10	2.5	<11	2.7	2.7	2.2	2.4	1.1	0.73 J	0.75 J	0.48 J
Methanol	<500	NA	NA	NA	NA	NA	<1000	NA	NA	NA	NA

Date	4/29/2010	6/22/2010	4/7/2011	4/10/2012	4/2/2013	7/22/2013	1/20/2014
Acetone	<10	<10	<10	<2.7	<10	<10	<10 J
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0
Methylene Chloride	17	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0
Aniline	<5.0	NA	<5.3	<1.8	<5.2	<1.0	<1.0
N,N-Dimethylaniline	<1.0	NA	<1.1	<0.21	<1.0	<1.0	<1.0
Methanol	<500	NA	NA	NA	NA	NA	NA

Date	4/29/2010	6/22/2010	4/7/2011	4/10/2012	4/2/2013	7/22/2013	10/22/13	1/20/2014	4/16/2014
Acetone	<10	<10	<10	<2.7	<10	<10	<10	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	5.3 J	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.23 J	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	NA	<5.3	<1.8	<4.8	<1.0	<5.2	<1.0	<1.0
N,N-Dimethylaniline	<1.0	NA	<1.1	<0.21	<0.95	<1.0	<1.0	<1.0	<1.0
Methanol	<500	NA	NA	NA	NA	NA	NA	NA	NA

Date	4/28/2010	10/13/2010	4/6/2011	10/25/2011	4/10/2012	10/3/2012	4/3/2013	7/23/2013	10/22/13	1/22/2014	4/15/2014
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10
Benzene	0.22 J	1.3	<1.0	<1.0	0.22 J	0.55 J	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	0.19 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.6	<5.3 J	<5.0	<1.8	<5.1	<5.1	<1.2	<5.4	<1.0	<1.0
N,N-Dimethylaniline	<1.0	<1.1	<1.1 J	<1.0	<0.21	<1.0	<1.0	<1.2	<1.1	<1.0	<1.0
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	2700

Date	4/29/2010	6/22/2010	10/13/2010	4/7/2011	10/25/2011	4/10/2012	10/3/2012	4/3/2013	7/23/2013	10/22/13	1/20/2014	4/15/2014
Acetone	<10	<10	<10	<10 J	<10	<2.7	<10	<10	<10	<10	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	33	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	<0.23 J	0.27 J	<1.0	0.60 J	0.25 J	0.19 J	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	NA	<5.1	<5.3	<5.0	<1.8	<5.2	<4.8	<1.0	<5.4	<1.0	<1.0
N,N-Dimethylaniline	<1.0	NA	<1.0	<1.1	<1.0	<0.21	<1.0	<0.95	<1.0	<1.1	<1.0	<1.0
Methanol	<500	NA	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	<500

Date	4/27/2010	10/13/2010	4/6/2011	10/25/2011	4/10/2012	10/4/2012	4/4/2013	7/24/2013	10/22/13	1/22/2014	4/15/2014
Acetone	<10	<10 J	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10
Benzene	<1.0	0.14 J	<1.0	<1.0	<0.080	0.099 J	<1.0	0.20 J	0.29 J	0.19 J	0.37 J
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	37	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.18 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	0.14 J	<3.0
Aniline	<5.0	<5.1	<5.3 J	<5.0	<1.8	<5.3	<5.2	<1.0	<5.2	<1.1	<1.0
N,N-Dimethylaniline	<1.0	<1.0	<1.1 J	<1.0	<0.21	<1.1	<1.0	0.30 J	0.85 J	<1.1	0.43 J
Methanol	<500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Date	4/29/2010	10/14/2010	4/7/2011	10/26/2011	4/10/2012	10/2/2012	4/3/2013	7/23/2013	10/21/13	1/20/2014	4/14/2014
Acetone	<10	<10 J	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.31 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.0	<5.3	<5.0	<1.8	<5.1	<5.1	<1.0	<5.2	<1.0	<1.0
N,N-Dimethylaniline	<1.0	<1.0	<1.1	<1.0	<0.21	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	<500

Date	4/29/2010	6/22/2010	10/14/2010	4/7/2011	10/26/2011	4/10/2012	10/2/2012	4/3/2013	7/23/2013	10/21/13	1/20/2014	4/14/2014
Acetone	<10	<10	<10	<10 J	<10	<2.7	<10	<10	<10	<10	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	8.4	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	0.29 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	NA	<5.0	<5.3	<5.0	<1.8	<5.6	<4.8	<1.0	<5.0	<1.0	<1.0
N,N-Dimethylaniline	<1.0	NA	<1.0	<1.1	<1.0	<0.21	<1.1	<0.95	<1.0	<1.0	<1.0	<1.0
Methanol	<500	NA	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	<500

Date	4/27/2010	10/12/2010	4/6/2011	10/25/2011	4/11/2012	10/3/2012	4/5/2013	7/23/2013	10/22/13	1/22/2014	4/15/2014
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	0.26 J	0.32 J	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.22 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.2	<5.3 J	<5.0	<1.8	<5.1	<5.1	<1.0	<5.2	<1.1	<1.0
N,N-Dimethylaniline	<1.0	<1.0	<1.1 J	<1.0	<0.21	<1.0	<1.0	<1.0	<1.0	<1.1	<1.0
Methanol	<500	NA	<1.1 J	0.22 J	<0.21	<1.0	NA	NA	NA	NA	NA

Date



Attachment A

Validated Analytical Laboratory
Reports



Attachment B

Statistical Analyses

Attachment B. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Discussion of Statistical Results

To evaluate the continued effectiveness of the Operable Unit 2 (OU2) remedial action and the need (if any) to re-start the remedial process, technical analyses were performed to evaluate whether constituent of concern (COC) concentrations: (1) rebound substantially above the pre-shutdown COC concentrations based on an evaluation of the most up-to-date dataset, and (2) continue to trend at asymptotic levels. The technical analyses performed, as described below, are the same as those detailed in the January 2013 Periodic Review Report (PRR; ARCADIS 2013a) and have been updated to include groundwater data through April 2014.

Technical Analyses

To evaluate whether total COC molar concentrations have reached asymptotic conditions (where COC levels are no longer significantly decreasing or increasing), three different analyses were performed using each area's annual data from 1998 to April 2014.¹ The first analysis involved a calculation of overall percent removal of total COC molar concentrations (i.e., moles per liter) from 1998 to 2014. If the overall percent removal during the 17-year period was within 1 percent of complete (100 percent) removal, then it was implied that COC levels approached asymptotic conditions as removal cannot exceed 100 percent.

$$\frac{(\text{Initial Molar Concentration}) - (\text{2014 Molar Concentration})}{(\text{Initial Molar Concentration})} * 100 = \% \text{ reduction}$$

¹Total COC molar concentrations were calculated for each Area by converting COC concentrations (reported as µg/L) to molar concentrations (i.e., moles per liter), adding together the nine COC molar concentrations (excluding methanol) for each sampling date, and then averaging molar concentrations for the year. The basis for excluding methanol from the technical analyses was detailed in the January 2013 PRR and is presented below.

"Methanol values have been excluded from the analyses in order to accurately portray the temporal trends in COCs at the site. Methanol has a very high detection limit relative to the other COCs evaluated. The methanol detection limit was 1,000 micrograms per liter (µg/L) until 2006 when lowered to 500 µg/L. In the calculation for total COC molar COC concentrations, the use of half the detection limit for non-detects of methanol tends to misrepresent the total COC molar concentration present and confound interpretation of trends regarding COC concentrations.

In Area 1, this problem is most profound due to the low concentrations present compared to the other two Areas. Half the detection limit for methanol represents 17 percent of the initial molar concentration of all COCs present in 1998, and frequently represents more than 95 percent of the calculated COCs present. In Area 1, there have been only six detected methanol concentrations in 137 reported samples (95.6 percent non-detect); five of these six were during 2009, when sample contamination was suspected.

In Area 2, methanol was only detected seven times in 108 reported samples (93.5 percent non-detect), with three of the seven during the September 2009 sampling round when sample contamination was suspected.

In Area 3, there is stronger evidence that methanol was actually present at location MW-8SR in significant levels, as methanol was reported in the 11 samples taken prior to 2002. Since that time, only one of 17 reported samples has yielded detectable methanol concentrations at that location. At the other Area 3 locations, there were a total of three detections (including one in September 2009) in 50 samples."

Attachment B. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

The second analysis used a first-order decay function [$C_t = C_0 * e^{kt}$, where C_t = total COC molar concentration at time t , C_0 = total COC molar concentration in 2002, k = the decay coefficient, and t = number of years since 2002] of total COC molar concentrations from 2002 to 2014 to determine the decay rate, and half-life of COC concentrations in order to evaluate how rapidly COC levels decreased over time. If the COC levels exhibited statistically significant exponential decay over the 12-year period and the percentage of total COCs remaining was relatively small, then it was implied that COC concentrations approached asymptotic conditions.

$$\ln(C_t) = k * \ln(t) + b$$

$$C_t = e^{kt} * e^b$$

$$C_t = C_0 * e^{kt}, \text{ where } e^b = C_0$$

$$\text{Decay Rate} = (1 - e^k) * 100$$

$$\text{Half-Life (years)} = \ln(1/2)/k$$

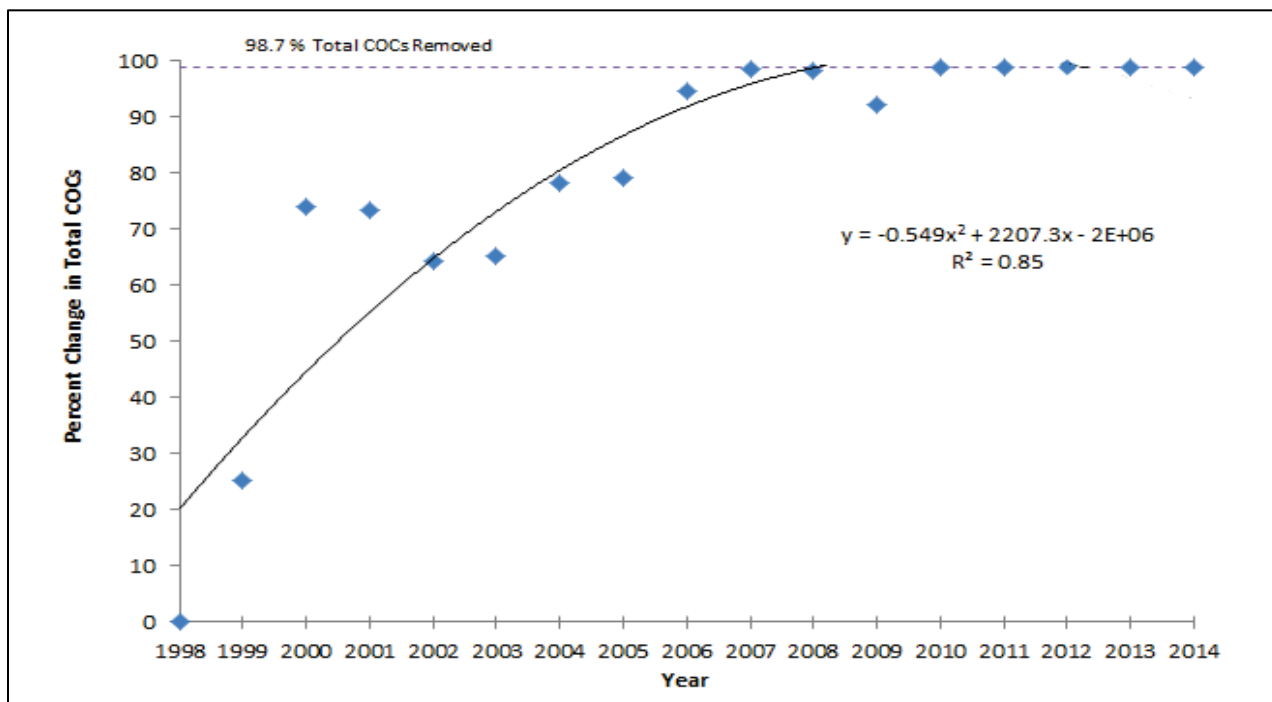
The third analysis involved a linear regression between time (year) and percent reduction in total COC molar concentrations from 2008 to 2014. If the slope of the COC concentrations did not significantly differ from zero, then the data indicate that the asymptote was effectively reached. The data and results of the analyses for each area are described below.

Area 1

Between 1998 and 2014, the overall percent reduction in COC levels in Area 1 (i.e., monitoring wells MW-9S, MW-31, MW-32, MW-33, and TW-01) was 98.7 percent, as shown on Figure B-1. As COC levels were within 1 percent of complete removal (based on two significant figures), the data indicate that COC levels approached asymptotic conditions by 2012 and continued through April 2014.

$$\frac{(2.9\text{E-}05 \text{ mol/L}) - (3.7\text{E-}07 \text{ mol/L})}{(2.9\text{E-}05 \text{ mol/L})} * 100 = 98.7\% \text{ reduction}$$

Figure B-1: Area 1 Percent Change in Total COCs



The decay relation $[C_t = 9.09E-06 * e^{-0.3243t}]$ for total COC molar concentrations from 2002 to 2014 indicates that total COC molar concentrations decreased relatively quickly and consistently over the 12-year period, as shown on Figure B-2. The decay coefficient (k) for total COC molar concentrations since 2002 is -0.3243 (probability of occurrence $[p] = 8.6E-05$, confidence interval $[\alpha] = 0.05$, correlation coefficient $[r^2] = 0.77$). This decay coefficient results in a half-life of 2.1 years and a statistically significant annual decay rate of 28 percent per year (95 percent confidence interval ranging from 19 to 36 percent per year). As COC molar concentrations exhibited statistically significant exponential decay with less than 1 percent of total COCs remaining in 2014, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through April 2014.

$$\ln(C_t) = -0.3243 * \ln(t) + 637.64$$

$$C_t = 9.09E - 06 * e^{-0.3243t}$$

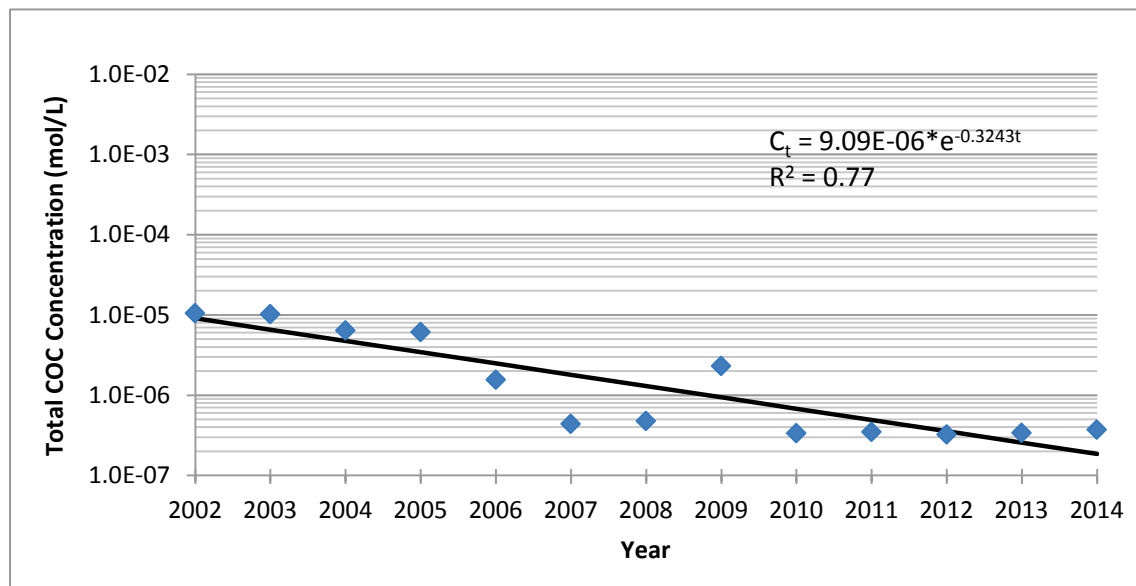
$$\text{Decay Rate: } (1 - e^{-0.3243}) * 100 = 28\%$$

$$\text{Half-Life: } \ln(1/2)/(-0.3243) = 2.1 \text{ years}$$

Attachment B. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Figure B-2: Area 1 Decay Function of Total COC Concentrations



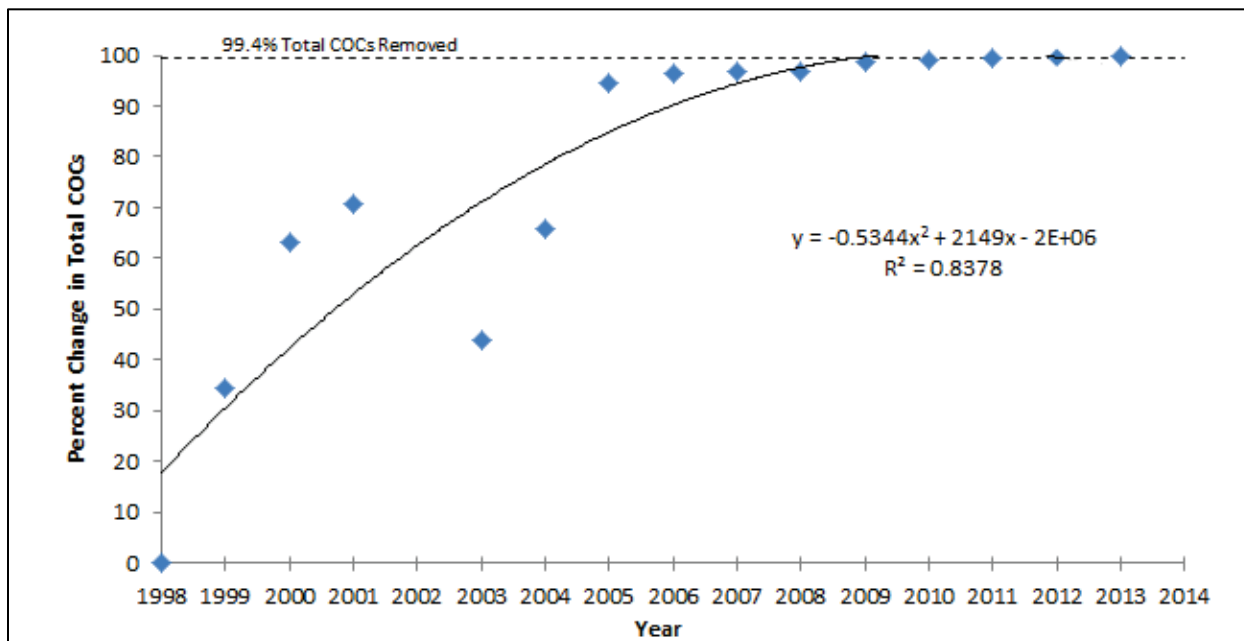
A regression between time (2008 to 2014) and percent total COC reduction further support that COC concentrations in Area 1 approached asymptotic conditions of 100 percent removal. The computed non-significant mean slope of 0.52 percent COC reduction per year ($p = 0.31$, $\alpha = 0.05$, $r^2 = 0.20$), with the 95 percent confidence interval ranging from -0.67 to 1.7 percent per year, indicates that total COC molar concentrations in Area 1 most likely did not significantly decrease nor increase within the last 7 years, suggesting that COC levels effectively reached an asymptote by 2012 and continued through April 2014.

Area 2

The overall percent reduction in COC levels in Area 2 (i.e., monitoring wells MW-36R, TW-02RRR, MW-34, and MW-35) from 1998 to 2014 was 99.4 percent, as shown on Figure B-3. As COC levels were within 1 percent of complete removal, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through April 2014.

$$\frac{(6.1E-04 \text{ mol/L}) - (3.7E-06 \text{ mol/L})}{(6.1E-04 \text{ mol/L})} * 100 = 99.4\% \text{ reduction}$$

Figure B-3: Area 2 Percent Change in Total COCs



In Area 2, aniline contributions dominated the overall COC molar concentrations. The concentrations of constituents other than aniline quickly achieved 99 percent reduction or more in the first few years, while aniline data actually increased, reaching a maximum in 2002. At that time, aniline accounted for approximately 99.7 percent of the total COC molar concentration. Since 2002, Area 2 appears to be approaching asymptotic conditions of 100 percent removal, as noted by the decay function of total COC molar concentrations from 2002 to 2014, as shown on Figure B-4. Using a first-order decay relation [$C_t = 4.01E-04 * e^{-0.5011t}$], the total molar concentration of total COCs has an estimated decay coefficient (k) of -0.5011 ($p = 1.9E-06$, $\alpha = 0.05$, $r^2 = 0.88$) with a corresponding half-life of 1.4 years and a statistically significant annual decay rate of 39 percent per year (95 percent confidence interval ranging from 32 to 46 percent per year). After a 12-year period (2002 - 2014), 0.23 percent of the total COC molar concentration remained. As COC molar concentrations exhibited statistically significant exponential decay with less than 1 percent of total COCs remaining in 2014, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through April 2014.

$$\ln(C_t) = -0.5011 * \ln(t) + 995.38$$

$$C_t = 4.01E - 04 * e^{-0.5011t}$$

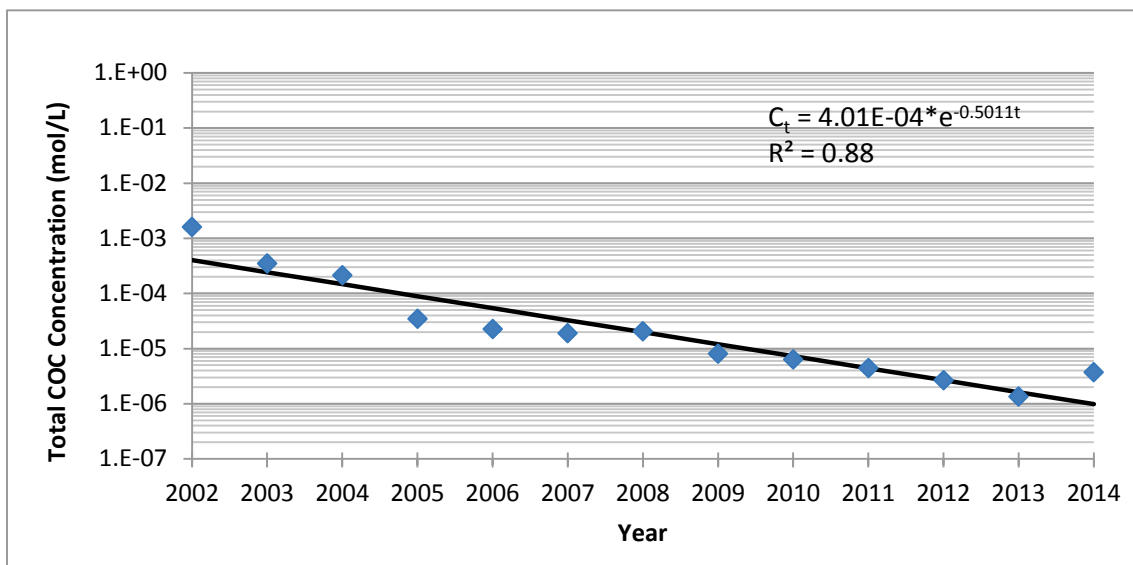
$$\text{Decay Rate: } (1 - e^{-0.5011}) * 100 = 39\%$$

$$\text{Half-Life: } \ln(1/2)/(-0.5011) = 1.4 \text{ years}$$

Attachment B. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Figure B-4: Area 2 Decay Function of Total COC Concentrations



The regression between time (2008 to 2014) and percent total COC reduction indicates a continuing slight positive statistically significant mean slope of 0.39 percent reduction per year ($p = 0.030$, $\alpha = 0.05$, $r^2 = 0.64$), with the 95 percent confidence interval ranging from 0.057 to 0.73 percent per year. Despite this minor increase in the percent reduction in total COC molar concentration, Area 2 appeared to be approaching asymptotic conditions by 2012 and continued to trend at asymptotic levels through April 2014, as noted by the lower end of the 95 percent confidence interval approaching zero percent COC reduction per year, the rapid decay rate, and the high degree of total COC removal within the last 5 years (>98.9 percent).

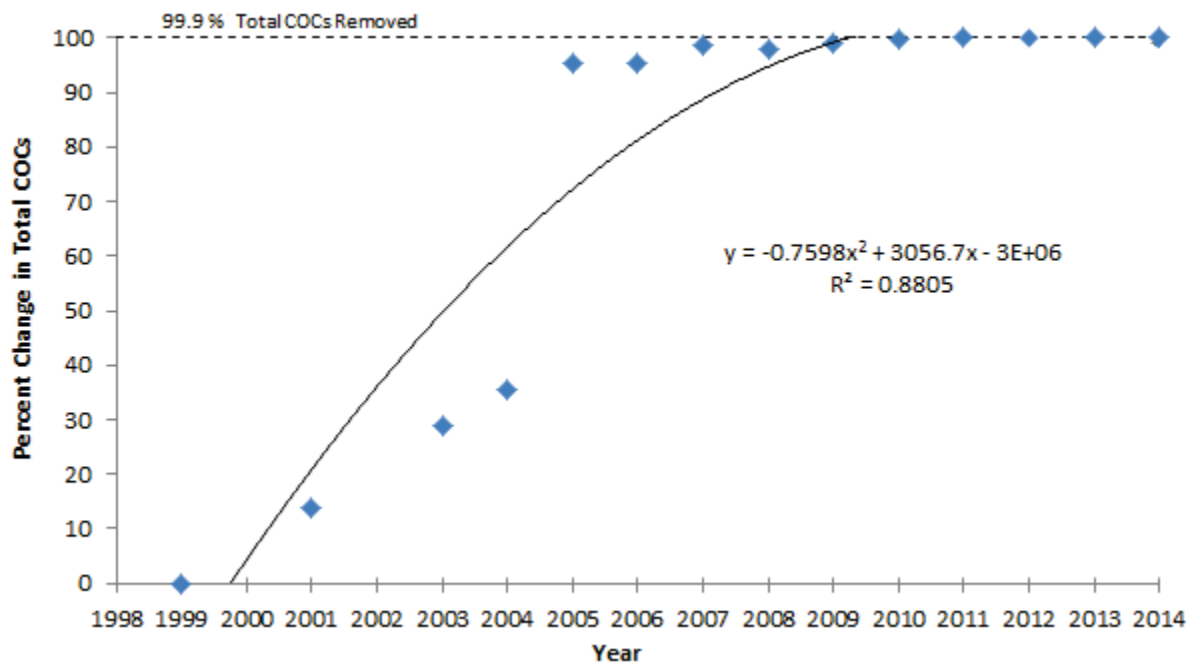
Area 3

The overall percent reduction in COC levels from 1999 to 2014 in Area 3 (i.e., monitoring wells MW-8SR, MW-27, and MW-28) was 99.9 percent, as shown on Figure B-5. As COC levels were within 1 percent of complete removal, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through 2014.

$$\frac{(4.1E-03 \text{ mol/L}) - (2.5E-07 \text{ mol/L})}{(4.1E-03 \text{ mol/L})} * 100 = 99.9\% \text{ reduction}$$

Attachment B. Statistical Analyses
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Figure B-5: Area 3 Percent Change in Total COCs



COC molar concentration data were erratic prior to 2002, when aniline, N,N-dimethylaniline, and methylene chloride were major contributors. N,N-dimethylaniline and methylene chloride were essentially gone (>99.9 percent removal) by 2005. The decay relation $[C_t = 7.68E-03 * e^{-0.9147t}]$ for total COC molar concentrations from 2002 to 2014 supports that COC molar concentrations in Area 3 rapidly decreased over the 12-year period, effectively approaching asymptotic conditions of 100 percent removal by 2012 and continuing through April 2014, as shown on Figure B-6. The decay coefficient (k) for total COC molar concentrations is -0.9147 ($p = 1.03E-08$, $\alpha = 0.05$, $r^2 = 0.95$), with a half-life is 0.76 years and a statistically significant annual decay rate of 60 percent per year (95 percent confidence interval ranging from 54 to 65 percent per year). After a 12-year period (2002 to 2014), 0.0051 percent of the total COC molar concentration remained. As COC molar concentrations exhibited statistically significant exponential decay, with less than 1 percent of total COCs remaining in 2014, the data indicate that COC levels approached asymptotic conditions in 2012 and continued through April 2014.

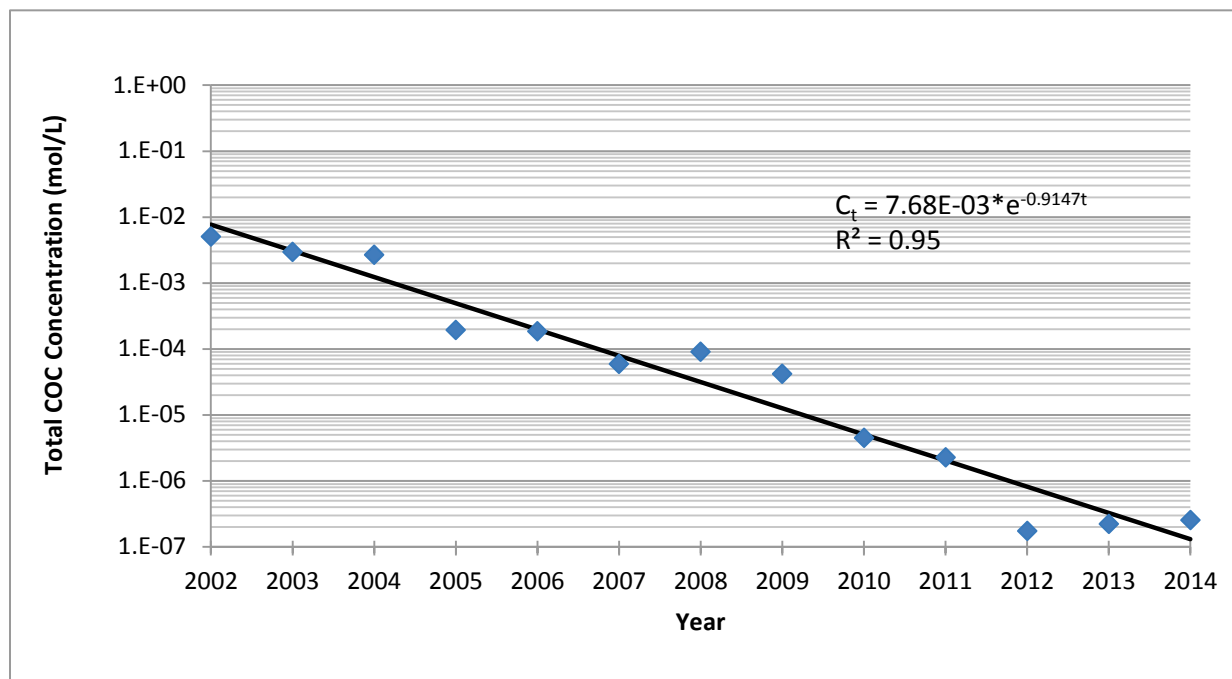
$$\ln(C_t) = -0.9147 * \ln(t) + 1826.4$$

$$C_t = 7.68E - 03 * e^{-0.9147t}$$

$$\text{Decay Rate: } (1 - e^{-0.9147}) * 100 = 60\%$$

$$\text{Half-Life: } \ln(1/2)/(-0.9147) = 0.76 \text{ years}$$

Figure B-6: Area 3 Decay Function of Total COC Concentrations



The regression between time (2008 to 2014) and percent total COC reduction indicates a continuing slight positive statistically significant mean slope of 0.31 percent COC reduction per year ($p = 0.031$, $\alpha = 0.05$, $r^2 = 0.64$), with the 95 percent confidence interval ranging from 0.042 to 0.58 percent per year. Despite this minor increase in the percent reduction in total COC molar concentrations, Area 3 approached asymptotic conditions in 2012 and continued to trend at asymptotic levels through April 2014, as noted by the rapid decay rate and the high degree of COC removal within the last 5 years (>99.9 percent).



Mr. Payson Long
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ENVIRONMENTAL

Subject:
McKesson EnviroSystems Site
400 West Bear Street
Syracuse, New York
Site No. 7-34-020

Date:
March 2, 2015

Dear Mr. Long:

Contact:
David J. Ulm

ARCADIS of New York, Inc. (ARCADIS) has prepared this monitoring memorandum for the McKesson EnviroSystems Site located at 400 West Bear Street in Syracuse, New York (Site). ARCADIS prepared this memorandum on behalf of McKesson Corporation to describe groundwater monitoring activities and present the results of the October 2014 monitoring event conducted at the Site in and around Areas 1, 2, and 3 (see Figure 1). This is the first biannual groundwater monitoring event conducted after one year of quarterly monitoring, following the April 10, 2013 shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems. This biannual monitoring event was conducted as part of a post-shutdown process control monitoring program.

Phone:
315.671.9210

Email:
david.ulm@arcadis-us.com

Our ref:
B0026003.2014.00190

The New York State Department of Environmental Conservation (NYSDEC) approved shutdown of the Operable Unit No. 2 (OU2) remedial system in a letter dated April 11, 2013 (NYSDEC 2013). The letter required implementation of a post-shutdown process control monitoring program to determine the continued effectiveness of the OU2 remedial action on the remaining contamination (NYSDEC 2013). The post-shutdown monitoring program is a continuation of the constituent of concern (COC) and hydraulic process control monitoring program that has been conducted at the Site since OU2 treatment activities commenced in 1998.

The main objective of this monitoring memorandum, consistent with the previous four memoranda for the quarterly monitoring events conducted since July 2013 (ARCADIS 2013a, 2014a, 2014b, and 2014c), is to provide timely updates of

Imagine the result

groundwater conditions for monitoring events performed at the Site. This monitoring memorandum provides information about the following:

- Goals of the post-shutdown process control monitoring program
- October 2014 post-shutdown process control monitoring activities
- October 2014 monitoring results
- Data evaluation and conclusions
- Proposed next steps

Goals of the Post-Shutdown Process Control Monitoring Program

The goals of the post-shutdown process control monitoring program are to determine the continued effectiveness of the OU2 remedial action and evaluate the need (if any) to restart remedial processes. As outlined in the October 2013 Periodic Review Report (PRR; ARCADIS 2013b), the remedial action will be considered to have “continued effectiveness” if COC concentrations meet the following conditions:

- Do not rebound substantially above the pre-shutdown COC concentrations based on an evaluation of the most up-to-date dataset.
- Continue to trend at asymptotic levels.
- Do not migrate beyond the Site boundary above NYSDEC Class GA Groundwater Quality Standards (NYSDEC 1998), as determined by sampling from the sentinel and downgradient perimeter monitoring wells/piezometers.

Additionally, the post-shutdown process control monitoring program provides an evaluation of groundwater flow conditions following the April 2013 shutdown of the closed loop hydraulic system.

October 2014 Post-Shutdown Process Control Monitoring Activities

The post-shutdown process control monitoring event consisted of hydraulic monitoring on October 20, 2014 and COC monitoring from October 21 through 23, 2014. In addition, as discussed during your January 14, 2015 telephone conversation with Dawn Penniman of ARCADIS, monitoring well MW-29 was resampled on December 3,

2014. The resampling was performed due to a detection of acetone attributed to polyvinyl chloride (PVC) primer/cleaner and cement used to repair the stick-up after a tree fell on it during a 2014 summer storm (additional details provided in the subsection entitled MW-29 Acetone Monitoring Results and Supplemental Field Activities on page 6). Table 1 identifies each of the hydraulic and COC monitoring locations, shown on Figure 1. In addition, the presence or absence of non-aqueous phase liquid (NAPL) was assessed in the monitoring wells and piezometers included in the monitoring program, as well as the collection sump. During this monitoring event, NAPL was not observed in the monitoring wells, piezometers, or the collection sump.

Hydraulic Monitoring

During hydraulic monitoring, groundwater level measurements were obtained at monitoring wells and piezometers that are screened entirely within the sand layer of the shallow hydrogeologic unit and located in and around Areas 1, 2, and 3. Additionally, a groundwater level measurement was obtained within the collection sump, and the Barge Canal surface-water elevation was obtained from measurements taken from a reference point on the Bear Street Bridge, which passes over the canal.

Constituent of Concern Monitoring

The groundwater COCs for the Site are acetone, benzene, toluene, ethylbenzene, xylenes (total), methanol, trichloroethene, aniline, N,N-dimethylaniline, and methylene chloride. TestAmerica Laboratories, Inc. (TestAmerica) in Edison, New Jersey analyzed the groundwater samples for COCs via U.S. Environmental Protection Agency (USEPA) Methods 8260C (volatile organic compounds [VOCs]) and 8270D (semivolatile organic compounds), and in Amherst, New York via Method USEPA 8015D (methanol). TestAmerica is accredited pursuant to the New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program for these analyses. ARCADIS validated laboratory analytical results using the Tier III full validation process. Attachment A presents copies of the validated analytical laboratory reports associated with the October 2014 monitoring event and the December 2014 MW-29 resampling event.

October 2014 Monitoring Results

Hydraulic Monitoring Results

Table 2 presents groundwater level measurements obtained during the October 20, 2014 hydraulic monitoring event, as well as those obtained since October 2006. Figure

2 depicts a potentiometric surface of the Site's shallow hydrogeologic unit using the October 20, 2014 dataset. A comparison of the potentiometric surface maps generated during the five post-shutdown process control monitoring events demonstrates that hydraulic conditions have remained consistent following the April 2013 shutdown of the closed loop hydraulic system in Area 3.

When comparing the October 2014 potentiometric surface map to those maps generated (and presented in previous PRRs and monitoring memoranda) using groundwater elevation data obtained prior to system shutdown, the following conclusions, as presented in the first monitoring memorandum (ARCADIS 2013a), remain true:

- The closed depression around the groundwater withdrawal trench is no longer present.
- The potentiometric surface of the shallow hydrogeologic unit sand layer following the April 2013 system shutdown is generally consistent with the potentiometric surface prior to the 1998 implementation of the closed loop hydraulic system in Area 3.

Constituent of Concern Monitoring Results

Table 3 summarizes COC groundwater analytical results, which are shown on Figures 3 and 4. COC groundwater analytical results are compared to the NYSDEC Groundwater Quality Standards presented in the Technical and Operational Guidance Series 1.1.1 (NYSDEC 1998). The October 2014 COC results are consistent with those obtained following the April 2013 shutdown of the in-situ bioremediation treatment system, as well as those obtained prior to shutdown. Concentrations for most of the COCs were either not detected or were below their respective NYSDEC Class GA Groundwater Quality Standards in each area. The detection of acetone at MW-29, related to repair of the PVC well stick-up, prompted resampling of this well in December 2014 and supplemental field activities, as discussed in the following subsection.

Analytical results for the October 2014 COC monitoring event are summarized below for each area (Areas 1, 2, and 3), as well as for sentinel and downgradient perimeter monitoring locations.

Area 1

At the five monitoring locations in Area 1 (MW-9S, MW-31, MW-32, MW-33, and TW-01), four COCs (benzene [MW-9S and MW-31 only], ethylbenzene [MW-9S only], xylenes [MW-9S only], and N,N-dimethylaniline) were detected at concentrations slightly exceeding their respective standards (see Table 3 and Figure 3).

Area 2

At three out of the four monitoring locations in Area 2 (MW-34, TW-02RRR, and MW-36R), three COCs (benzene [MW-34 and TW-02RRR only], aniline [MW-36R only], and N,N-dimethylaniline) were detected at concentrations above their respective standards. At MW-35, all COCs were non-detect (see Table 3 and Figure 3).

Area 3

At the five monitoring locations in Area 3 (MW-8SR, MW-27, MW-28, MW-29, and MW-30), a maximum of five COCs (acetone, benzene, total xylenes [MW-8SR only], aniline [MW-27 only], and N,N-dimethylaniline) were detected at concentrations that slightly exceeded their respective standards (see Table 3 and Figure 4). As previously mentioned, the acetone detection at MW-29 prompted resampling and supplemental field activities, as detailed below.

Sentinel Wells

COCs were not detected at sentinel well MW-3S, located downgradient of Area 1 (Table 3 and Figure 3). Sentinel well MW-4S is included in the COC monitoring program every third event; therefore, was not sampled during the October 2014 monitoring event. MW-4S was last sampled in April 2014.

Downgradient Perimeter Wells/Piezometers

COCs were not detected in the downgradient perimeter/monitoring locations (MW-17R, MW-18, MW-23I, MW-23S, PZ-4S, and PZ-4D; see Table 3 and Figure 4). At MW-17R, methanol was not detected, confirming that the detection of methanol at this well during the April 2014 monitoring event was anomalous.

*MW-29 Acetone Monitoring Results and Supplemental Field Activities*MW-29 October 2014 Acetone Monitoring Results

The October 2014 COC analytical results showed an elevated concentration of acetone at monitoring well MW-29 (790,000 parts per billion [ppb]), which is anomalous with historical analytical results for acetone in Area 3 and at well MW-29 (see Table 3 and Attachment B).

Prior to the October 2014 monitoring event:

- Acetone had not been detected in groundwater samples collected from Area 3 at concentrations greater than the NYSDEC Class GA Groundwater Quality Standard (50 ppb) since June 2007 (MW-8S at 58 ppb).
- Acetone had not been detected in groundwater samples collected from MW-29 at concentrations exceeding the NYSDEC Class GA Groundwater Quality Standard (50 ppb).
- Acetone had only been detected twice at MW-29, out the 34 times, since groundwater sampling commenced in 1998 (7 ppb in February 1999, and 5.4 ppb in November 2006).

Upon further investigation of the October 2014 analytical results for MW-29, tetrahydrofuran and 2-butanone (a.k.a. methyl ethyl ketone) were also present in the sample at concentrations of 950,000 ppb and 473,000 ppb, respectively. Cyclohexane was identified by the laboratory (TestAmerica) as a tentatively identified compound. As discussed previously, during a June 2014 summer storm, a tree fell on MW-29, and the PVC stick-up was repaired on June 26, 2014 using PVC primer/cleaner and cement, which contains these four constituents (see Attachment C which presents the Material Safety Data Sheets for the PVC primer/cleaner and cement). The elevated concentration of acetone at MW-29 is due to the PVC primer/cleaner and cement used to repair the well and is unrelated to the Site.

MW-29 Supplemental Field Activities

To address the situation, the glued PVC joint was removed and replaced with a manual coupling, and MW-29 was purged on four separate occasions prior to resampling for COC VOCs on December 3, 2014. The results of the resampling showed a significantly lower level of acetone (370 ppb) and the remaining COC VOCs were non-detect.

Analytical results from the MW-29 resampling event are presented on Figure 4 and in the copy of validated analytical laboratory report (Attachment A).

Data Evaluation and Conclusions

To evaluate the continued effectiveness of the OU2 remedial action and the need (if any) to restart the remedial process, October 2014 data were incorporated into the historical groundwater dataset (1998 through October 2014) for technical analyses. The technical analyses performed were the same as those detailed in the January 2013 PRR (ARCADIS 2013c) and described in Attachment D. The technical analyses consisted of the following:

- Change in annual total COC molar concentration (i.e., concentration normalized by its molecular weight) over time.
- Statistical analyses that included first order decay functions and regression analyses between time (year) and percent COC reduction fitted to each area's annual total COC molar concentration.

The data and results from these technical analyses, as presented in Attachment D, demonstrate that the OU2 remedial action has continued effectiveness, showing that the remedy continues to: (1) be protective of public health and the environment, (2) comply with the OU2 Record of Decision (NYSDEC 1997), and (3) meet remedial process closure requirements in Section 6.4 of Division of Environmental Remediation-10: Technical Guidance for Site Investigation and Remediation (NYSDEC 2010). The conclusions developed based on groundwater data obtained from 1998 through October 2014 are summarized below:

- COC concentrations detected in October 2014 did not rebound above pre-shutdown COC concentrations.
- COC concentrations were mostly not detected or below their respective NYSDEC Class GA Groundwater Quality Standard in each area during the October 2014 monitoring event. Elevated acetone concentrations detected at monitoring well MW-29 during the October and December 2014 monitoring events are not Site-related. These detections are related to repair of the PVC stick-up during the summer of 2014 that, as described above, was subsequently addressed in November/December 2014 by removing the glued PVC joint and purging the well on four separate occasions.

- COC concentrations continue to trend at asymptotic levels for each area.
- COC concentrations have not migrated beyond the Site boundary above NYSDEC Groundwater Quality Standards.
- The remedy continues to achieve the bulk of reduction of groundwater contamination, as indicated by total COC molar concentrations exceeding 98.5 percent reduction in each area.

These conclusions confirm that groundwater quality conditions have not substantially changed since the shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems and fully demonstrate the continued effectiveness of the OU2 remedial action. Accordingly, there is no need to restart the remedial processes.

Proposed Next Steps

As identified in the Site Management Plan (SMP) (ARCADIS 2014d), the post-shutdown process control monitoring program is to be conducted for 2 years (2013 to 2015), consisting of quarterly monitoring during the first year and biannual monitoring during the second year. The first year of quarterly monitoring, as well as the first biannual monitoring event have been completed, with results consistently demonstrating the continued effectiveness of the OU2 remedial action. Therefore, there is no need to restart the remedial processes (i.e., in-situ bioremediation treatment and closed loop hydraulic systems).

The second and final biannual post-shutdown process control monitoring event identified in the SMP is planned to occur during the week of April 6, 2015, and will consist of hydraulic and COC monitoring similar to that conducted in October 2014. As detailed in Table 1, the April 2015 monitoring event will consist of measuring groundwater/surface-water elevations at the locations identified with an "H" (hydraulic monitoring) and collecting groundwater samples from the monitoring wells/piezometers identified with a "C" (COC monitoring). Monitoring well MW-4S and piezometer PZ-4S will be included in the April 2015 COC monitoring program, as this is the last groundwater monitoring event identified in the SMP. Additionally, as discussed during your January 14, 2015 telephone conversation with Dawn Penniman, monitoring well MW-29 will remain in the COC monitoring program, recognizing that if an elevated concentration of acetone is detected, it is not Site-related.

Following the April 2015 monitoring event, the data will be evaluated to determine the continued effectiveness of the remedial action. The April 2015 groundwater monitoring activities and results, in addition to an overall evaluation of post-shutdown groundwater conditions and proposed next steps, will be documented in a monitoring memorandum, which will be submitted to the NYSDEC prior to the submittal of the annual PRR in November 2015.

If you have any questions or require additional information, please contact me at 315.671.9210.

Sincerely,

ARCADIS of New York, Inc.



David J. Ulm
Senior Vice President

AS/lar

Copies:

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Mr. Harry Warner, NYSDEC (w/out Attachment A)
Mr. Richard Jones, NYSDOH (w/out Attachment A)
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Enclosures:

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Table 1	Post-Shutdown Process Control Monitoring Wells and Piezometers
Table 2	Summary of Groundwater Level Measurements, October 2006 through October 2014
Table 3	Summary of Groundwater Monitoring Data, March 2009 through October 2014

Figures

- Figure 1 Site Plan
- Figure 2 Potentiometric Surface of the Shallow Hydrogeologic Unit Sand Layer
October 20, 2014
- Figure 3 Groundwater Monitoring Data Summary for April 2010 – October 2014
Areas 1 & 2
- Figure 4 Groundwater Monitoring Data Summary for April 2010 – October 2014
Area 3

Attachments

- Attachment A Validated Analytical Laboratory Reports
- Attachment B Summary of Historical Groundwater Monitoring Data – March 1988
through August 2008
- Attachment C Material Safety Data Sheets for the PVC Primer/Cleaner and Cement
- Attachment D Statistical Analyses

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Tables

Table 1. Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Monitoring Location	Purpose of Monitoring
Sentinel	
MW-3S*	C
MW-4S*	C
Area 1	
TW-01	C
MW-9S	C
MW-31	C
MW-32	C
MW-33*	C
PZ-F	H
PZ-G	H
PZ-HR	H
PZ-P	H
PZ-Q	H
PZ-R	H
PZ-S	H
Area 2	
TW-02RRR	C
MW-34	C
MW-35	C
MW-36R*	C
PZ-I	H
PZ-J	H
PZ-T	H
PZ-U	H
PZ-V	H
Area 3	
MW-8SR*	C
MW-11S	H
MW-27*	C
MW-28	C
MW-29*	C
MW-30*	C
PZ-A	H
PZ-B	H
PZ-C	H
PZ-D	H
PZ-E	H
PZ-K	H
PZ-L	H
PZ-M	H
PZ-N	H
PZ-O	H
Collection Sump	H
Downgradient Perimeter	
MW-17R	C
MW-18	C
MW-23I	C
MW-23S	C, H
MW-24SR	H
MW-25S	H
PZ-4S*	C
PZ-4D*	C, H
PZ-5D	H
Barge Canal	H

See Notes on Page 2.

Table 1. Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Notes:

1. The table lists the monitoring wells and piezometers that are part of the constituent of concern (COC) and/or hydraulic post-shutdown process control monitoring program.
2. Hydraulic monitoring involves obtaining groundwater level measurements from monitoring wells/piezometers identified in the table and surface-water level measurements from the Barge Canal. The surface-water level of the Barge Canal is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal. Groundwater elevation data are used to map potentiometric surface of the shallow hydrogeologic unit sand layer.
3. The COCs are acetone, benzene, toluene, ethylbenzene, xylenes (total), methanol, trichloroethene, aniline, N,N-dimethylaniline, and methylene chloride.
4. Monitoring well MW-4S and piezometer PZ-4S are included in the COC monitoring program every third and second monitoring event, respectively.

C = COC monitoring.

H = hydraulic monitoring.

* = New York State Department of Environmental Conservation approved the elimination of methanol analysis from the COC groundwater monitoring program (NYSDEC. 2010. Letter from Payson Long, NYSDEC, to David Ulm, ARCADIS. RE: Requested Changes in Remedial Monitoring Program. September 23.).

Table 2. Summary of Groundwater Level Measurements, October 2006 through October 2014
Monitoring Memorandum, McKesson Envirosystems Site, Syracuse, New York

Location	Reference Elevation (feet AMSL)	10/30/06	6/6/07	11/12/07	3/24/08	8/25/08	3/23/09	9/14/09	4/26/10	10/11/10	4/4/11
Barge Canal ^A	393.39	364.29	362.99	362.06	364.34	363.21	363.54	362.89	362.97	363.49	362.07
Collection Sump	372.81	363.18	362.26	361.86	363.81	362.14	362.20	362.18	362.18	360.72	359.90
MW-3S ^B	376.54	369.08	--	367.60	367.93	365.19	367.32	365.50	365.67	367.95	369.21
MW-11S	373.50	366.11	364.27	363.88	365.69	363.86	364.88	363.89	364.42	364.30	365.00
MW-18 ^B	372.57	363.82	362.63	362.32	363.51	362.26	363.16	362.22	362.67	362.87	363.82
MW-23I ^B	372.77	366.43	365.02	364.74	366.12	364.64	365.69	364.67	365.19	365.38	366.57
MW-23S	372.61	365.28	362.98	362.56	364.81	362.62	363.50	362.63	362.99	362.71	364.57
MW-24SR	375.55	366.49	365.21	364.83	366.26	364.73	365.81	364.79	365.32	365.81	366.60
MW-25S	373.39	365.26	363.32	362.87	364.84	362.88	363.97	362.89	363.34	363.30	364.10
PZ-4D	376.11	366.64	365.29	364.98	366.39	364.90	365.96	364.94	365.49	366.02	366.74
PZ-5D	375.58	366.87	365.49	365.19	366.69	365.09	366.21	365.14	365.01	366.09	366.99
PZ-A	373.94	365.62	363.11	362.72	364.83	362.96	363.56	362.95	362.28	362.35	362.68
PZ-B	373.92	365.85	363.12	362.62	365.03	362.87	363.64	362.83	362.96	362.22	363.24
PZ-C	374.85	367.14	365.85	365.30	367.15	365.16	366.71	365.23	366.37	367.11	367.88
PZ-D	375.12	367.68	365.98	365.40	367.29	365.28	366.81	365.40	366.57	367.17	368.20
PZ-E	374.12	368.13	365.16	364.07	366.58	364.14	366.82	364.20	364.25	364.16	364.83
PZ-F	377.06	368.32	366.18	365.76	367.99	365.50	367.41	365.69	366.72	367.10	368.10 ^B
PZ-G	377.16	368.64	366.28	365.82	368.14	365.94	367.29	367.22	367.32	367.36	368.12
PZ-HR	376.99	368.31	366.23	365.74	368.00	365.48	367.41	365.63	366.65	367.15	368.00 ^B
PZ-I	375.15	369.00	366.49	365.92	368.55	365.50	367.97	365.71	367.04	367.49	368.60
PZ-J	374.89	367.96	366.16	365.82	367.69	365.55	367.20	365.70	366.55	367.05	367.81
PZ-K	373.19	365.58	363.36	362.91	364.96	363.08	363.80	363.04	363.33	363.34	361.94
PZ-L	374.62	365.23	362.94	362.63	364.64	362.79	363.39	362.80	363.80	362.36	362.52
PZ-M	374.35	365.60	363.54	363.11	365.13	363.30	364.00	363.31	363.62	363.04	363.47
PZ-N	376.94 ^C	367.51	365.76	365.26	367.05	365.09	366.63	365.17	366.22	367.01	367.79
PZ-O	375.36	365.42	363.22	362.82	365.01	362.91	363.94	362.93	363.35	362.90	363.57
PZ-P	376.89	368.30	366.31	365.83	368.06	365.58	367.51	365.75	366.76	367.26	368.08
PZ-Q	377.61	368.61	366.33	365.83	368.23	365.57	367.61	365.77	366.78	367.26	368.13
PZ-R	377.05	368.51	366.19	365.79	368.20	365.55	367.57	365.73	366.74	367.24	368.10
PZ-S	378.13	372.48	366.51	365.81	368.21	365.55	367.60	365.74	366.76	367.13	369.67 ^B
PZ-T	376.25	368.04	366.24	365.84	367.89	365.52	367.37	365.66	366.63	367.12	367.94
PZ-U	375.35	367.99	366.07	365.80	367.75	365.52	367.25	365.66	366.52	367.05	367.83
PZ-V	375.78	367.97	366.17	365.78	367.78	365.48	367.24	365.64	366.52	367.04	367.81

See Notes on Page 2.

Table 2. Summary of Groundwater Level Measurements, October 2006 through October 2014
Monitoring Memorandum, McKesson Envirosystems Site, Syracuse, New York

Location	Reference Elevation (feet AMSL)	10/24/11	4/9/2012	10/1/2012	4/1/2013	7/18/2013 ^D	10/17/2013 ^D	1/17/2014 ^D	4/14/2014 ^D	10/20/2014 ^D
Barge Canal ^A	393.39	363.71	358.39	360.59	360.74	360.69	360.69	361.38	362.29	360.87
Collection Sump	372.81	361.33	360.95	361.70	361.24	364.71	364.84	366.14	366.92	364.73
MW-3S ^B	376.54	--	366.44	365.15	367.55	366.11	366.62	367.83	368.66	366.70
MW-11S	373.50	364.18	363.92	363.62	364.42	364.95	365.08	366.08	366.94	365.00
MW-18 ^B	372.57	--	362.57	362.32	362.85	362.74	363.54	363.57	364.50	365.00
MW-23I ^B	372.77	--	364.99	364.73	365.29	365.23	365.33	366.02	366.86	365.32
MW-23S	372.61	362.66	362.23	362.29	362.88	364.20	364.37	365.30	366.06	364.14
MW-24SR	375.55	365.63	365.09	364.84	365.48	365.39	365.46	366.25	367.09	365.40 ^E
MW-25S	373.39	363.17	362.81	362.61	363.48	364.08	364.23	365.14	365.89	364.22
PZ-4D	376.11	365.78	365.24	364.94	365.59	365.47	365.59	366.34	367.06	365.60
PZ-5D	375.58	366.02	365.48	365.16	365.84	365.67	365.81	366.57	367.42	365.78
PZ-A	373.94	362.53	363.24	362.54	362.68	364.78	364.92	366.08	366.87	364.84
PZ-B	373.92	362.47	362.14	362.35	362.64	364.77	364.88	366.08	366.86	364.79
PZ-C	374.85	366.6	366.10	365.41	366.76	365.75	365.84	366.65	367.50	365.78
PZ-D	375.12	366.87	366.39	365.65	367.07	365.87	365.97	366.82	367.66	365.90
PZ-E	374.12	364.18	363.67	363.35	364.38	365.12	365.22	366.44	367.22	365.21
PZ-F	377.06	367.04	366.46	365.44	366.91	366.52	366.57	367.61	368.66	366.51
PZ-G	377.16	367.17	366.53	365.48	367.04	366.67	366.70	367.74	368.74	366.54
PZ-HR	376.99	367.04	366.40	365.38	366.90	366.46	366.50	367.61	368.60	366.47
PZ-I	375.15	367.47	366.77	365.36	367.52	366.60	366.70	368.20	369.15	366.80
PZ-J	374.89	366.94	366.30	365.55	366.74	366.39	366.48	367.50	368.37	366.48
PZ-K	373.19	362.97	362.65	362.75	363.03	364.79	364.96	365.97	366.77	364.86
PZ-L	374.62	362.54	362.16	362.42	362.60	364.61	364.77	365.90	366.71	364.69
PZ-M	374.35	363.22	362.86	362.87	363.28	364.93	364.96	366.18	366.98	364.98
PZ-N	376.94 ^C	366.62	366.06	365.33	366.72	365.67	365.81	366.57	367.46	365.73
PZ-O	375.36	362.94	362.61	362.52	363.14	364.50	364.64	365.72	366.48	364.56
PZ-P	376.89	367.15	366.49	365.45	366.93 ^B	366.57	366.63	367.69	368.69	366.58
PZ-Q	377.61	367.21	366.52	365.44	367.04	366.59	366.65	367.76	368.80	366.56
PZ-R	377.05	367.15	366.48	365.45	367.03	366.54	366.59	367.74	368.75	366.55
PZ-S	378.13	367.48	366.51	365.45	367.34 ^B	366.58	366.61	368.27	369.73	366.76
PZ-T	376.25	367.00	366.32	365.41	366.86	366.42	366.49	367.64	368.55	366.50
PZ-U	375.35	366.92	366.29	365.44	366.77	366.38	366.47	367.55	368.42	366.45
PZ-V	375.78	366.93	366.28	365.40	366.77	366.37	366.46	367.53	368.44	366.43

Notes:

^ASurface-water level measurements are obtained from the Barge Canal. The surface-water level is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal.

^BData not used in potentiometric surface mapping of the shallow hydrogeologic unit sand layer.

^CThe reference elevation for PZ-N was 376.02 feet AMSL prior to November 16, 2000. The new reference elevation is 376.94 feet AMSL.

^DGroundwater elevations reflect hydrogeologic conditions after the April 2013 shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems.

^EMonitoring well MW-24SR was not accessible on October 20, 2014 and was monitored on October 21, 2014.

Abbreviations:

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

-- = Not Measured.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through October 2014
Monitoring Memorandum, McKesson Envirosystems Site, Syracuse, New York

Monitoring Well		Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
			Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)					50	1	5	5	5	5	5	5	1	NS
MW-3S	3/09	365.1	350.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	0.17 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA	
	10/11			<10	<1.0	<1.0	<1.0	0.35 J	<1.0	<3.0	<5.0	<1.0	NA	
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA	
	10/12			<10	0.27 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.61 J	NA	
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA	
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA	
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA	
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA	
	10/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA	
MW-4S	10/10	365.5	350.5	<10 [<10]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<3.0 [<3.0]	<5.0 [<5.0]	<1.0 [<1.0]	<500 J [<500 J]	
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA	
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA	
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA	
MW-8SR ^B	3/09	362.7	352.7	6.5 J [5.8 J]	6.8 [6.8]	66 [63]	<1.0 [<1.0]	10 [10]	<1.0 [<1.0]	140 [140]	2,200 [1,800]	<12 [<12]	<500 [<500]	
	6/09			NA	NA	NA	NA	NA	NA	NA	7,000	<50	NA	
	9/09			<10 [8.3 J]	8.5 J [7.9]	44 J [38]	<1.0 [<1.0]	6.8 J [6.5]	<1.0 J [<1.0]	81 J [71]	4,000 [3,400]	<20 [<20]	<500 [<500]	
	4/10			<10 [<10]	4.2 [3.5]	23 J [18]	<1.0 [<1.0]	4.6 [3.7]	<1.0 [<1.0]	41 [33]	370 J [720 J]	1.0 J [<5.0]	<500 [<500]	
	10/10			<10	2.7	16	<1.0	2.0	<1.0	31	220	1.6	NA	
	4/11			5.9 J [4.3 J]	3.2 [3.2]	10 [8.8]	<1.0 [<1.0]	2.8 [2.6]	<1.0 [<1.0]	32 [31]	57 J [64]	1.5 [1.6]	NA	
	10/11			<10 [<10]	1.9 [2.0]	2.0 [2.1]	<1.0 [<1.0]	1.3 [1.3]	<1.0 [<1.0]	14 [15]	<5.0 [<5.0]	2.6 [<1.0]	NA	
	4/12			8.7 J [6.7 J]	1.2 [1.7]	2.3 [3.3]	<0.18 [<0.18]	0.76 J [1.2]	<0.090 [<0.090]	9.5 [15]	<1.9 [<1.9]	2.4 [2.6]	NA	
	10/12			<10 [<10]	0.69 J [0.70]	0.16 J [0.14 J]	<1.0 [<1.0]	0.36 J [0.39 J]	<1.0 [<1.0]	1.4 J [1.2 J]	<5.3 [<5.0]	2.3 [2.7]	NA	
	4/13			<10 [<10]	1.1 [1.1]	0.32 J [0.28 J]	<1.0 [<1.0]	0.67 J [0.68 J]	<1.0 [<1.0]	7.7 [8.0]	<5.1 [<5.1]	1.7 [1.4]	NA	
	7/13			5.1 J [8.7 J]	1.9 [1.8]	0.17 J [0.18 J]	<1.0 [<1.0]	1.0 [0.96J]	<1.0 [<1.0]	11 [9.4]	2.5 [2.5]	0.89 J [0.96 J]	<1,000 [<1,000]	
	10/13			<10	2.9	0.21 J	<1.0	1.3	<1.0	13	2.6 J	0.83 J	NA	
	1/14			<10 J [<10 J]	2.4 [2.6]	0.19 J [<1.0]	<1.0 [<1.0]	0.94 J [1.1]	<1.0 [<1.0]	11 [13]	5.1 J [<10]	2.0 [1.7]	NA	
	4/14			<10 [<10]	3.2 [3.3]	0.25 J [0.27 J]	<1.0 [<1.0]	1.2 [1.1]	<1.0 [<1.0]	13 [13]	3.9 J [5.6 J]	1.4 [1.9]	NA	
10/14	18 J [38 J]	1.7 [1.9]	0.16 J [0.18 J]	0.27 J [<0.1]	1.2 [1.3]	<1.0 [<1.0]	5.9 [6.4]	3.1 J [2.3 J]	1.8 [1.3]	NA				
MW-9 ^C (Replaced by MW-9S)	3/09	365.6	356	<10	1.2	27	<1.0	2.5	<1.0	65	<5.0	4.2	<500	
	9/09			<10	1.7	20	<1.0	2.2	<1.0	70	<5.0	4.1	730	
	4/10			<10	0.86 J	26	<1.0	2.1	<1.0	69	<5.0	6.5	<500	
	10/10			<10	1.3	11	<1.0	1.9	<1.0	45	<5.1	7.5	<500 J	
	4/11			<10	0.91 J	29	<1.0	2.6	<1.0	89	<5.3	5.4	<500	
	10/11			<10	1.2	4.2	<1.0	1.8	<1.0	41 J	<5.0	7.6	<500	
	4/12			7.5 J	1.1	18	<0.18	1.5	<0.090	67	<1.9	6.3	<500	
	10/12			<10	1.9 J	4.7	<1.0	3.2	<1.0	84	<5.0	3.9	NA	
	4/13			12 J	0.95 J	19	<1.0	1.6	<1.0	62	<5.1	5.9	<1,000	
	7/13			<10	1.9	12	<1.0	2.0	<1.0	45	<1.0	2.0	<1,000	
	10/13			<5.0	2.9	10	<1.0	2.6	<1.0	60	<5.0	5.2	<500	
	1/14			<10 J	1.1	13	<1.0	1.6	<1.0	54	<10	7.2	<500	
	4/14			<10	1.0	19	<1.0	2.2	<1.0	74	<10	5.7	<500	
	10/14			<10 J	1.5	8.8	<1.0	2.2	0.82 J	72	<10	5.9	<500	

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through October 2014
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Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-17 ^D (Replaced by MW-17R)	3/09	365.7	356.1	<10	2.3	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	0.86 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	0.22 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	1.3	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500 J
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	<500
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	<1.0	<500
	4/12			<2.7	0.22 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	0.55 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.2	<1.2	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.4	<1.1	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	2,700
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
MW-18	3/09	325.15	316.15	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	33	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.23 J	<1.0	<3.0 J	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	0.27 J	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	0.60 J	<1.0	<3.0	<4.8	<0.95	<1,000
	7/13			<10	<1.0	<1.0	<1.0	0.25 J	<1.0	<3.0	<1.0	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0	<5.4	<1.1	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
10/14	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500			
MW-23S	3/09	364.1	354.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			3.7 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.31 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500 J

See Notes on Page 8.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through October 2014
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Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-231	3/09	341.2	336.2	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	8.4	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.29 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<9.5	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
MW-27	3/09	362.5	354.5	14 J	8.7	36	<1.0	9.4	<1.0	88	8,200 J	<50 J	<500
	6/09			NA	NA	NA	NA	NA	NA	NA	7,400	<50	NA
	9/09			10	6.2	5.9	<1.0	6.9	<1.0	23	2,100	<10	<500
	4/10			<10	4.5	6.1	<1.0	2.4	<1.0	10	1,300	<10	<500
	10/10			<10	2.7	1.4	<1.0	1.3	<1.0	3.4	220	2.5	NA
	4/11			3.9 J	3.1	5.1	<1.0	5.7	<1.0	9.1	1,000	<11	NA
	10/11			<10	2.1	2.2	<1.0	1.3	<1.0	3.1	36	2.7	NA
	4/12			<2.7	1.5	1.4	<0.18	0.45 J	<0.090	2.2 J	<1.9	2.7	NA
	10/12			<10	1.1	<1.0	<1.0	0.22 J	<1.0	<3.0	<5.0	2.2	NA
	4/13			<10	1.1	0.88 J	<1.0	0.34 J	<1.0	1.4 J	11	2.4	NA
	7/13			<10	2.0	<1.0	<1.0	0.60 J	<1.0	<3.0	1.5	1.1	<1,000
	10/13			<10	2.6	<1.0	<1.0	0.75 J	<1.0	3.9	<5.0	0.73 J	NA
	1/14			<10 J	0.89 J	<1.0	<1.0	0.33 J	<1.0	0.22 J	<12	0.75 J	NA
	4/14			<10	1.0	<1.0	<1.0	0.41 J	<1.0	0.92 J	0.60 J	0.48 J	NA
	10/14			<10	2.0	0.12 J	<1.0	1.2	<1.0	3.5	16	1.4	NA
MW-28	3/09	363.6	355.6	<10	3.5	0.8 J	<1.0	0.3 J	<1.0	1.1 J	18	<0.5	851
	9/09			<10	3.1	0.32 J	<1.0	0.25 J	<1.0	0.48 J	6.7	<1.0	<500
	4/10			<10	2.8	0.60 J	<1.0	0.23 J	<1.0	0.46 J	<5.0	0.49 J	<500
	10/10			<10	1.8	<1.0	<1.0	<1.0	<1.0	<3.0	2.4 J	0.60 J	<500 J
	4/11			4.3 J	2.3	<1.0	<1.0 B	0.11 J	<1.0	<3.0	3.9 J	0.75 J	<500
	10/11			<10	1.8	<1.0	<1.0	0.38 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	1.4	<0.10	<0.18	0.22 J	<0.090	<0.36	<1.8	0.48 J	<500
	10/12			<10	1.9	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.62 J	NA
	4/13			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.32 J	410 J
	7/13			<10	1.7	<1.0	<1.0	0.22 J	<1.0	<3.0	<1.0	0.35 J	<1,000
	10/13			<10	1.7	<1.0	<1.0	0.49 J	<1.0	0.68 J	<5.0	0.70 J	<500
	1/14			<10 J	1.2	<1.0	<1.0	0.22 J	<1.0	<3.0	<10	0.75 J	<500
	4/14			13	1.7	<1.0	<1.0	0.29 J	<1.0	<3.0	<10	0.72 J	<500
	10/14			51	1.3	<1.0	0.41 J	1.1	<1.0	0.90 J	1.2 J	1.3	<500

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through October 2014
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Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol	
		Top	Bottom											
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS	
MW-29	3/09	362.9	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500	
	9/09			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	0.16 J	<5.0	0.29 J	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA	
	10/11			<10	<1.0	<1.0	<1.0	0.22 J	<1.0	<3.0 J	<5.0	0.22 J	NA	
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA	
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA	
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA	
	7/13			<10	0.26 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA	
	10/13			<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	<1.1	NA	
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA	
	10/14 ^F			790,000 D	<500 D	<500 D	<500 D	<500 D	<1,500 D	<10	<1.0	NA		
	12/14 ^F			370 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA	
MW-30	3/09	363.5	355.5	<10	0.8 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500	
	9/09			<10	0.78 J	<1.0	<1.0	0.17 J	<1.0	<3.0	21	<1.0	<500	
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500		
	10/10			<10 J	0.14 J	<1.0	37	<1.0	<1.0	<3.0	<5.1	<1.0	NA	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA	
	10/11			<10	<1.0	<1.0	<1.0	0.18 J	<1.0	<3.0 J	<5.0	<1.0	NA	
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA	
	10/12			<10	0.099 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA	
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	7/13			<10	0.20 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.30 J	NA	
	10/13			<10	0.29 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.85 J	NA	
	1/14			<10 J	0.19 J	<1.0	<1.0	<1.0	<1.0	0.14 J	<11	<1.1	NA	
	4/14			<10	0.37 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.43 J	NA	
	10/14			<10	0.18 J	<1.0	<1.0	<1.0	<1.0	0.15 J	<10	1.5	NA	
	MW-31			3/09	363.7	355.4	9.4 J	8.3	<1.0	<1.0	0.6 J	<1.0	0.8 J	<5.0
9/09		<10	10	<1.0			<1.0	0.49 J	<1.0	2.0 J	<5.0	2.5	730	
4/10		<10	4.8	<1.0			<1.0	0.40 J	<1.0	1.3 J	<5.0	2.3	<500	
10/10		<10	6.9	<1.0			<1.0	0.50 J	<1.0	1.5 J	<5.3	3.5	<500 J	
4/11		<10	8.3	<1.0			<1.0	0.77 J	<1.0	2.5 J	<5.3	2.3	<500	
10/11		<10	5.7	<1.0			<1.0	0.62 J	<1.0	1.5 J	<5.0	3.5	<500	
4/12		6.5 J	6.8	0.16 J			<0.18	0.65 J	<0.090	2.7 J	<1.9	2.1	<500	
10/12		<10	6.3 J	0.16 J			<1.0	0.44 J	<1.0	2.3 J	<5.0	0.90 J	NA	
4/13		<10	12	0.21 J			<1.0	1.3	<1.0	5.6	<5.2	1.1	<1,000	
7/13		<10	11	<1.0			<1.0	1.2	<1.0	5.1	0.72 J	1.6	<1,000	
10/13		<10	11	0.15 J			<1.0	1.4	<1.0	6.1	<5.2	2.2	<500	
1/14		<10 J	8.2	<1.0			<1.0	1.2	<1.0	6.3	<10	2.2	NA	
4/14		<10	7.5	0.22 J			<1.0	0.93 J	<1.0	4.6	0.75 J	1.9	<500	
10/14		7.1 J	6.5	<1.0			<1.0	1.4	<1.0	4.5	1.1 J	2.2	<500	

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Table 3. Summary of Groundwater Monitoring Data, March 2009 through October 2014
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Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-32	3/09	364	356	<10	0.5 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	1,200	
	4/10			<10	0.23 J	<1.0	<1.0	<1.0	<3.0	<5.0	0.89 J	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.87 J	<500 J	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500	
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	1.5	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.1	<500
	10/12			<10	<1.0 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.2	NA
	4/13			<10	0.098 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	0.91 J	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.82 J	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.2	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.85 J	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.1	<500
	10/14			<10 J	0.10 J	<1.0	<1.0	0.20 J	<1.0	<3.0	<10	1.5	<500
MW-33	3/09	344.1	356.1	<10	3.2	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.4	<500
	9/09			<10	2.6	<1.0	<1.0	0.20 J	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	1.6	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.0	<500
	10/10			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.7	NA
	4/11			<10	0.79 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.9	NA
	10/11			<10	0.58 J	<1.0	<1.0	0.12 J	<1.0	<3.0	<5.3	1.9	NA
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.3	NA
	10/12			<10	0.33 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.1	NA
	4/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8 J	2.1 J	NA
	7/13			<10	0.46 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.96 J	<1,000
	10/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	0.69 J	NA
	1/14			<10 J	0.69 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.7	NA
	4/14			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	0.32 J	2.3	NA
	10/14			<10 J	0.45 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.3	NA
MW-34	3/09	362.7	354.7	14	1.4	<1.0	<1.0	0.7 J	<1.0	1.5 J	12	2.0	<500
	9/09			24	<1.0	<1.0	<1.0	0.64 J	<1.0	1.7 J	<5.0	2.5	1,000
	4/10			50 J	0.82 J	<1.0	<1.0	0.42 J	<1.0	1.4 J	<5.0	2.4	<500
	10/10			20	1.0	<1.0	<1.0	0.44 J	<1.0	1.3 J	1.8 J	2.9	<500 J
	4/11			16	1.7	<1.0	<1.0	0.74 J	<1.0	2.0 J	10	2.7	<500
	10/11			350	1.2	<1.0	<1.0	0.71 J	<1.0	0.90 J	<5.6	2.5	<500
	4/12			37 J	1.3	<0.10	<0.18	0.59 J	<0.090	1.4 J	2.1 J	2.4	<500
	10/12			61	1.6	<1.0	<1.0	0.78 J	<1.0	2.2 J	<5.2	2.7	NA
	4/13			26 J	1.3	<1.0	<1.0	0.60 J	<1.0	2.3 J	<4.8	1.7	<1,000
	7/13			32	1.3	<1.0	<1.0	0.66 J	<1.0	2.0 J	0.56 J	0.92 J	NA
	10/13			15	1.2	<1	<1.0	0.69 J	0.13 J	2.2 J	<5.0	1.3	<500
	1/14			15 J	0.91 J	<1.0	<1.0	0.44 J	<1.0	1.3 J	<10	1.9	<500
	4/14			57	1.4	0.11 J	<1.0	0.62 J	<1.0	3.6	2.6 J	1.6	<500
	10/14			31 J	1.4	<1.0	<1.0	0.75 J	<1.0	1.9 J	0.77 J	1.9	<500

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Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
MW-35	3/09	363	355	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			6.5 J	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	<1.0	1,100
	4/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500
	4/12			14 J	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<36 B	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	470 J
	7/13			4.2 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0 J	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2 J	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.6	<500
	10/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
MW-36 ^E (Replaced by MW-36R)	3/09	363.6	355.6	28	2.4	<1.0	<1.0	0.8 J	<1.0	2.8 J	150	2.8	<500
	6/09			NA	NA	NA	NA	NA	NA	460	<5.0	NA	
	9/09			21	3.1	<1.0	<1.0	0.96 J	<1.0	3.2	390	3.1	<500
	4/10			<10 J	3.3	0.26 J	<1.0	1.1	<1.0	5.4	77	2.6	<500
	10/10			12	3.9	0.28 J	<1.0	1.2	<1.0	4.8	620	<5.0	<500 J
	4/11			<10	4.3	<1.0	<1.0	0.95 J	<1.0	4.4	310	4.0	NA
	10/11			<10	1.8	<1.0	<1.0	0.66 J	<1.0	1.4 J	92	3.6	NA
	12/11			NA	NA	NA	NA	NA	NA	120	NA	NA	NA
	4/12			6.3 J	1.6	0.16 J	<0.18	0.45 J	<0.090	1.9 J	150	4.1	NA
	10/12			<10	1.5 J	<1.0	<1.0	0.54 J	<1.0	2.2 J	10	3.1	NA
	4/13			<10	1.8	0.14 J	<1.0	0.53 J	<1.0	2.9 J	150	4.0	NA
	7/13			<10	1.4	0.11 J	<1.0	0.46 J	<1.0	1.7 J	97	2.0	<1,000
	10/13			<10	1.3	<1.0	<1.0	0.45 J	<1.0	1.7 J	110	1.9	NA
	1/14			<10 J	1.2	<1.0	<1.0	0.42 J	<1.0	1.4 J	180	4.1	NA
	4/14			5.5 J	1.1	0.12 J	<1.0	0.42 J	<1.0	1.6 J	140	3.4	NA
	10/14			<10 J	0.62 J	<1.0	<1.0	0.32 J	<1.0	0.60 J	74	3.3	NA
TW-01	3/09	365.1	355.4	<10	1.9	<1.0	<1.0	<1.0	<1.0	0.6 J	<5.0	<0.5	22,300
	9/09			2.9 J	<1.0	<1.0	<1.0	0.11 J	<1.0	<3.0	<5.0	1.1	970
	4/10			<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.3	<500 J
	4/11			<10	0.21 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0 J	<5.6	1.6	<500
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.7	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	1.9	NA
	4/13			<10	0.090 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.98 J	<1,000
	7/13			<10	0.11 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.98 J	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.3	<500
	10/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	0.19 J	<10	1.4	<500

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Monitoring Well	Sampling Date	Screen Elev. (feet AMSL)											
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	NS
TW-02RR ^{BE} (Replaced by TW-02RRR)	3/09	363.3	353.3	<10 [<10]	5.0 [4.6]	1.5 [1.6]	<1.0 [<1.0]	1.0 [1.0 J]	<1.0 [<1.0]	4.2 [4.1]	2,000 [1,600]	<10 [<10]	<500 [<500]
	6/09			NA	NA	NA	NA	NA	NA	2,800	<20	NA	
	9/09			<10 [<10]	4.3 [4.2]	1.2 [1.3]	<1.0 [<1.0]	0.79 J [0.81 J]	<1.0 [<1.0]	3.5 [3.6]	1,600 [1,500]	<10 [<10]	1,000 [1,200]
	4/10			9.5 J [12 J]	4.1 [4.0]	1.2 [1.2]	<1.0 [<1.0]	0.78 J [0.75 J]	<1.0 [<1.0]	4.2 [4.0]	2,800 J [3,100 J]	<20 J [<20 J]	<500 [<500]
	10/10			<10 [<10]	3.3 [3.0]	1.0 [0.91 J]	<1.0 [<1.0]	0.82 J [0.76 J]	<1.0 [<1.0]	3.6 [3.6]	760 [810]	<5.0 [2.2 J]	<500 J [<500 J]
	4/11			<10 [<10]	2.1 [2.0]	1.2 [1.3]	<1.0 [<1.0]	0.74 J [0.75 J]	<1.0 [<1.0]	5.2 [5.3]	1.9 J [2.1 J]	3.4 [3.3]	<500 [<500]
	10/11			<10 [<10]	1.2 [1.1]	0.67 J [0.69 J]	<1.0 [<1.0]	0.53 J [0.48 J]	<1.0 [<1.0]	1.5 J [1.4 J]	1,300 D [1,500 D]	5.5 [6.2]	<500 [<500]
	12/11			NA	NA	NA	NA	NA	NA	NA	1,400	NA	NA
	4/12			15 J [13 J]	1.6 [1.5]	0.73 J [0.76 J]	<0.18 [<0.18]	0.51 J [0.48 J]	<0.090 [<0.090]	1.6 J [1.6 J]	1,400 J [1,600 J]	<2.2 J [<2.2 J]	<500 [<500]
	10/12			<10 [<10]	1.1 J [0.98 J]	0.29 J [0.27 J]	<1.0 [<1.0]	0.26 J [0.27 J]	<1.0 [<1.0]	0.91 J [0.89 J]	<5.2 [3.2 J]	2.2 [1.9]	NA
	4/13			<10 [<10]	1.4 [1.3]	0.60 J [0.64 J]	<1.0 [<1.0]	0.36 J [0.38 J]	<1.0 [<1.0]	1.5 J [1.5 J]	620 [700]	3.5 J [3.4 J]	<1,000 [<1,000]
	7/13			<10 [<10]	0.91 J [0.91 J]	0.25 J [0.26 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 J [1.4 J]	0.72 J [0.70 J]	150 [170]	1.7 [1.8]	<1,000 [<1,000]
	10/13			<10 [<10]	0.60 J [0.60 J]	<1.0 [0.15 J]	<1.0 [<1.0]	0.20 J [0.17 J]	0.15 J [0.11 J]	<3.0 [<3.0]	90 [72]	2.1 [1.4]	<500 [<500]
	1/14			<10 J [<10 J]	1.1 [1.1]	0.27 J [0.33 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	0.69 J [0.77 J]	660 [750 D]	1.8 J [3.7]	<500 [<500]
	4/14			8.0 J [10]	1.2 [1.2]	0.51 J [0.44 J]	<1.0 [<1.0]	0.18 J [0.17 J]	<1.0 [<1.0]	1.0 J [0.96 J]	1,300 J [1,700 J]	2.8 J [3.5 J]	<500 [<500]
	10/14			<10 J [<10 J]	1.3 [0.88 J]	0.18 J [0.12 J]	<1.0 [<1.0]	0.42 J [0.26 J]	<1.0 [<1.0]	1.2 J [0.46 J]	3.8 J [3.1 J]	2.8 [2.4]	<500 [<500]
PZ-4D	3/09	350.8	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	4/10			<10	<1.0	<1.0	5.3 J	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/12			<2.7	<0.080	<0.10	<0.18	0.23 J	<0.090	<0.36	<1.8	<0.21	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<0.95	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
PZ-4S	3/09	362.79	357.88	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	4/10			<10	<1.0	<1.0	17	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	<1.1	NA

See Notes on Page 8.

Table 3. Summary of Groundwater Monitoring Data, March 2009 through October 2014
Monitoring Memorandum, McKesson EnviroSystems Site, 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. Detections exceeding NYSDEC Groundwater Standards (TOGS 1.1.1; NYSDEC 1998) are indicated by shading.
4. Duplicate sample results are presented in brackets (e.g., [14]).
5. The sampling event in June 2010 was an interim sampling event to check for the presence of methylene chloride.
6. Results following the April 2013 sampling event reflect groundwater quality conditions after the shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems.

Superscript Notes:

- ^A= Data presented is total xylenes (m- and p-xylenes and o-xylenes).
- ^B= Wells MW-8S and TW-02R were abandoned in August 2004 and replacement wells MW-8SR and TW-02RR were installed in August 2004.
- ^C= Well MW-9 was abandoned during OU1 soil remediation activities (1994).
- ^D= Well/piezometer MW-17 was abandoned November 1997 through January 1998.
- ^E= Wells/piezometers MW-36, PZ-5S, PZ-W, and TW-02RR were abandoned in November 2010. Replacement wells TW-02RRR (replaced TW-02RR) and MW-36R (replaced MW-36 and PZ-W) were installed in November 2010.
- ^F= The detection of acetone at well MW-29 during the October 2014 sampling event is attributed to the repair of the PVC stick-up during the summer of 2014, and is not Site-related. Well MW-29 was resampled for volatile organic compounds on December 3, 2014 .

Abbreviations:

AMSL = above mean sea level (National Geodetic Vertical Datum of 1929)
 NA = compound was not analyzed for in the sample
 NS = standard not available
 NYSDEC = New York State Department of Environmental Conservation
 PVC = polyvinyl chloride
 TOGS = Technical and Operational Guidance Series

Analytical Qualifiers:

B = The compound was found in associated method blank.
 D = Concentration is based on a diluted sample analysis.
 J = The compound was positively identified; however, the numerical value is an estimated concentration only.
 < = Compound was not detected at the listed quantitation limit.

NYSDEC. 1998. Technical Operational Guidance Series 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June.
 Available online at: http://www.dec.ny.gov/docs/water_pdf/togs111.pdf

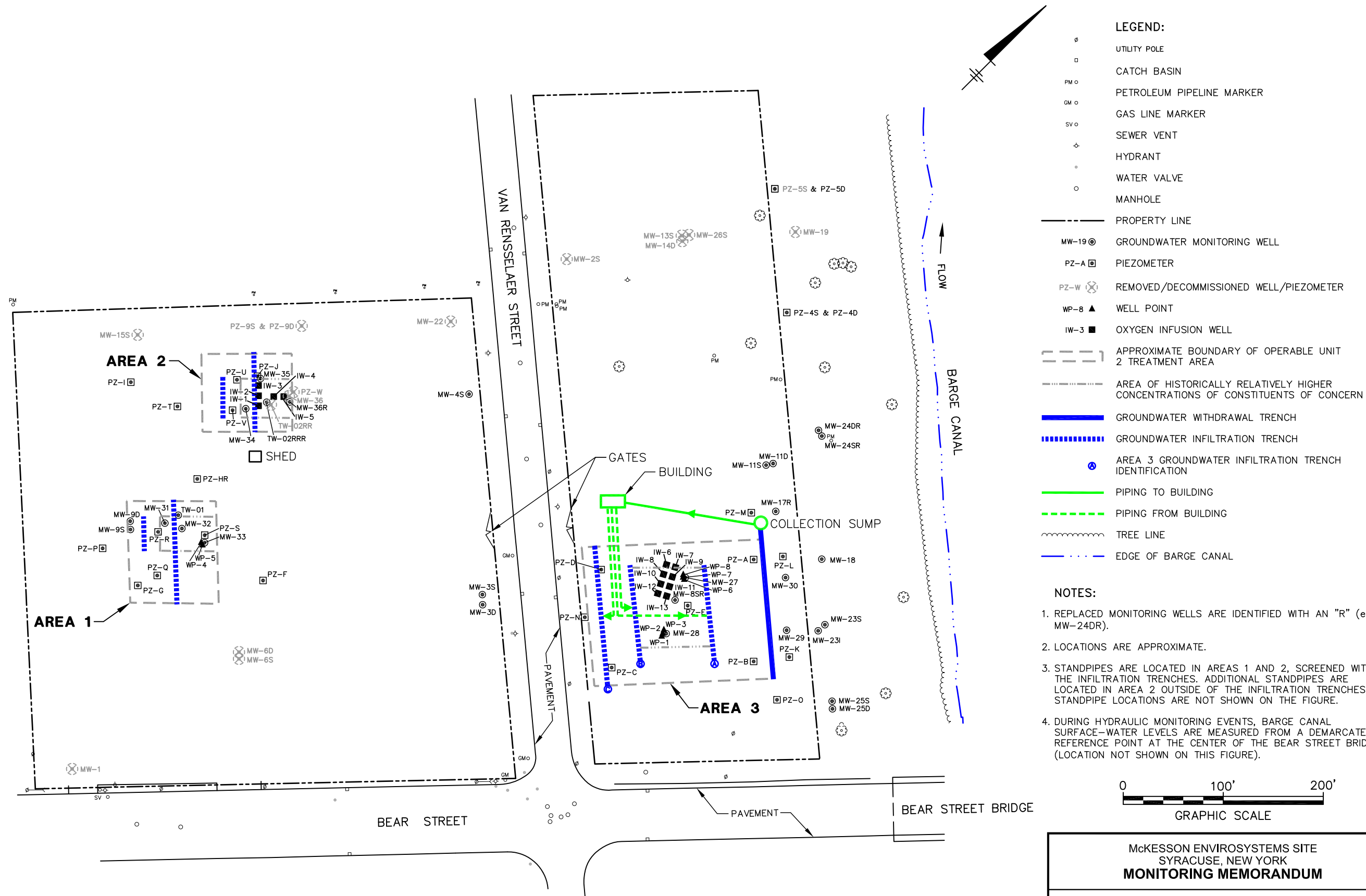
Figures

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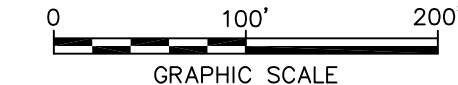


McKESSON ENVIROSYSTEMS SITE
SYRACUSE, NEW YORK
MONITORING MEMORANDUM

SITE PLAN



FIGURE
1



Date	4/30/2010	10/14/2010	4/5/2011	10/27/2011	12/15/2011	4/12/2012	10/5/2012	4/8/2013	7/25/2013	10/24/13	1/24/2014	4/17/2014	10/21/2014
Acetone	9.5 J [12 J]	<10	<10	<10	<10	NA	15 J [13 J]	<10	<10	<10	<10	8.0 J [10]	<10 J [10 J]
Benzene	4.1 [4.0]	3.3 [3.0]	2.1 [2.0]	1.2 [1.1]	1.2 [1.1]	NA	1.6 [1.5]	1.1 J [0.96 J]	1.4 [1.3]	0.91 J [0.91 J]	0.60 J [0.60 J]	1.1 [1.1]	1.3 [0.88 J]
Ethylbenzene	1.2 [1.2]	1.0 [0.91 J]	1.2 [1.3]	0.67 J [0.69 J]	NA	0.73 J [0.76 J]	0.29 J [0.27 J]	0.60 J [0.64 J]	<1.0 [0.15 J]	0.27 J [0.33 J]	0.51 J [0.44 J]	0.18 J [0.12 J]	<1.0
Methylene Chloride	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	NA	<0.18 [0.18]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]
Toluene	0.78 J [0.75 J]	0.82 J [0.76 J]	0.74 J [0.75 J]	0.53 J [0.48 J]	NA	0.51 J [0.48 J]	0.26 J [0.27 J]	0.36 J [0.38 J]	<1.0 [1.0]	0.20 J [0.17 J]	<1.0 [1.0]	0.42 J [0.26 J]	<1.0
Trichloroethene	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	NA	<0.090 [0.090]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]	0.15 J [0.11 J]	<1.0 [1.0]	<1.0 [1.0]	<1.0 [1.0]
Xylenes (total)	4.2 [4.0]	3.6 [3.6]	5.2 [5.3]	1.5 J [1.4 J]	NA	1.6 J [1.6 J]	0.91 J [0.89 J]	1.5 J [1.5 J]	0.72 J [0.70 J]	<3.0 [3.0]	0.69 J [0.77 J]	1.0 J [0.96 J]	1.2 J [0.46 J]
Aniline	2800 J [3100 J]	760 [810]	1.9 J [2.1 J]	1300 D [1500 D]	1400	1400 J [1600 J]	<5.2 [3.2 J]	620 [700]	150 [170]	90 [72]	660 [750 D]	1300 J [1700 J]	3.8 J [3.1 J]
N,N-Dimethylaniline	<2.0 J [2.0 J]	<5.0 [2.2 J]	3.4 [3.3]	5.5 [6.2]	NA	<2.2 J [2.2 J]	2.2 [1.9]	3.5 J [3.4 J]	1.7 [1.8]	2.1 [1.4]	1.8 J [3.5 J]	2.8 [2.4]	<5.0
Methanol	<500	<500	<500	<500	<500	NA	<500	<500	<500	<500	<500	<500	<500

Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	4/12/2012	10/4/2012	4/8/2013	7/26/2013	10/24/13	1/24/2014	4/17/2014	10/21/2014
Acetone	50 J	20	18	350	37 J	61	26 J	32	15	15 J	57	31 J
Benzene	0.82 J	1	1.7	1.2	1.3	1.6	1.3	1.3	1.2	0.91 J	1.4	1.4
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	0.11 J	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	0.42 J	0.44 J	0.74 J	0.71 J	0.59 J	0.78 J	0.60 J	0.66 J	0.69 J	0.44 J	0.62 J	0.75 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	0.13 J	<1.0	<1.0	<1.0
Xylenes (total)	1.4 J	1.3 J	2.0 J	0.90 J	1.4 J	2.2 J	2.3 J	2.0 J	2.3 J	1.3 J	3.6	1.9 J
Aniline	<5.0	1.8 J	10	<5.6	2.1 J	<5.2	<4.8	0.56 J	<5.0	<1.0	2.6 J	0.77 J
N,N-Dimethylaniline	2.4	2.9	2.7	2.5	2.4	2.7	1.7	0.92 J	1.3	1.9	1.6	1.9
Methanol	<500	<500	<500	<500	<500	NA	<1000	NA	<500	<500	<500	<500

NOTES:

- REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
- TRENCH LOCATIONS ARE APPROXIMATE.
- MONITORING LOCATIONS ARE APPROXIMATE.
- FIGURE ONLY SHOWS CONSTITUENT OF CONCERN (COC) CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE COC PROCESS CONTROL MONITORING LOCATIONS.
- ONLY COCs WITH CURRENT OR PAST DETECTIONS ARE PRESENTED ON THIS FIGURE.
- < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
- NA = COMPOUND WAS NOT ANALYZED FOR IN THE SAMPLE.
- J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER, THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
- D = CONCENTRATION IS BASED ON A DILUTED SAMPLE ANALYSIS.
- B = COMPOUND FOUND IN ASSOCIATED METHOD BLANK.
- SAMPLE DATA ARE COMPARED TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) GROUNDWATER QUALITY STANDARDS (GQS) (TECHNICAL AND OPERATIONAL GUIDANCE SERIES 1.1.1).
- NS = GQS NOT AVAILABLE.
- RESULTS FOR DUPLICATE SAMPLES ARE SHOWN IN BRACKETS NEXT TO PARENT SAMPLE RESULTS.
- ppb = PARTS PER BILLION.
- RESULTS FOLLOWING THE APRIL 2013 SAMPLING EVENT REFLECT GROUNDWATER QUALITY CONDITIONS AFTER SHUTDOWN OF THE IN-SITU AEROBIC BIOREMEDIATION TREATMENT AND CLOSED LOOP HYDRAULIC SYSTEMS.

Date	4/28/2010	10/13/2010	4/5/2011	10/25/2011	4/12/2012	10/5/2012	4/8/2013	7/26/2013	10/25/2013	1/24/14	4/18/2014	10/22/2014
Acetone	<10	<10	<10	<10	7.5 J	<10	12 J	<10	<5.0	<10 J	<10	<10 J
Benzene	0.86 J	1.3	0.91 J	1.2	1.1	1.9 J	0.95 J	1.9	2.9	1.1	1.0	1.5
Ethylbenzene	26	11	29	4.2	18	4.7	19	12	10	13	19	8.8
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	2.1	1.9	2.6	1.8	1.5	3.2	1.6	2.0	2.6	1.6	2.2	2.2
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.82 J
Xylenes (total)	69	45	89	41 J	67	84	62	45	60	54	74	72
Aniline	<5.0	<5.1	<5.3	<5.0	<1.9	<5.0	<5.1	<1.0	<5.0	<1.0	<1.0	<1.0
N,N-Dimethylaniline	6.5	7.5	5.4	7.6	6.3	3.9	5.9	2.0	5.2	7.2	5.7	5.9
Methanol	<500	<500	<500	<500	<500	NA	<1000	<1000	<500	<500	<500	<500

Date	4/28/2010	10/13/2010	4/5/2011	10/25/2011	4/12/2012	10/5/2012	4/8/2013	7/26/2013	10/24/13	1/24/14	4/17/2014	10/23/2014
Acetone	<10	<10	<10	<10	6.5 J	<10	<10	<10	<10	<10 J	<10	7.1 J
Benzene	4.8	6.9	8.3	5.7	6.8	6.3 J	12	11	11	8.2	7.5	6.5
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	0.16 J	0.16 J	0.21 J	<1.0	0.15 J	<1.0	0.22 J	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	0.40 J	0.50 J	0.77 J	0.62 J	0.85 J	0.44 J	1.3	1.2	1.4	1.2	0.93 J	1.4
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	1.3 J	1.5 J	2.5 J	1.5 J	2.7 J	1.5 J	2.3 J	4.6	6.1	6.3	4.6	4.5
Aniline	<5.0	<5.3	<5.0	<5.0	<5.0	<5.2	0.72 J	<5.2	<1.0	0.75 J	<5.0	<5.0
N,N-Dimethylaniline	2.3	3.5	2.3	3.5	2.1	0.90 J	1.1	1.6	2.2	2.2	1.9	2.2
Methanol	<500	<500	<500	<500	<500	NA	<1000	<1000	<500	NA	<500	<500

Date	4/28/2010	10/12/2010	4/4/2011	10/25/2011	4/11/2012	10/5/2012	4/5/2013	7/25/2013	10/23/13	1/23/14	4/17/2014	10/21/2014
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10	<10 J
Benzene	0.23 J	<1.0	<1.0	<1.0	<0.080	<1.0	0.098 J	<1.0	<1.0	<1.0	0.10 J	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.19 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.20 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.2	<5.3 J	<5.0	<1.8	<5.1	<4.8 J	<1.0	<5.0	<1.0	0.32 J	<1.0
N,N-Dimethylaniline	0.89 J	0.87 J	<1.1	1.5	1.1	2.2	0.91 J	0.82 J	1.2	0.85 J	1.1	1.5
Methanol	<500	<500	<500	<500	<500	NA	<1000	<1000	<500	<500	<500	<500

Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	4/11/2012	10/4/2012	4/4/2013	7/24/2013	10/23/13	1/23/2014	4/16/2014	10/21/2014
Acetone	<10 J	<10	<10	<10	14 J	<36 B	<10	4.2 J	<10	<10 J	<10 J	<10 J
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.0	<5.6	<5.1	<1.8	<5.0	<5.1	<1.0 J	<5.2 J	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<1.0	<1.0	<1.1	<1.0	<0.21	<1.0	<1.0	<1.0	<1.0	<1.0	1.6	<1.0
Methanol	<500	<500	<500	<500	<500	NA	470 J	<1000	<500	<500	<500	<500

Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	12/15/2011	4/12/2012	10/5/2012	4/8/2013	7/26/2013	10/24/13	1/24/14	4/17/2014	10/21/2014
Acetone	<10 J	12	<10	<10	NA	6.3 J	<10	<10	<10	<10	<10 J	5.5 J	<10 J
Benzene	3.3	3.9	4.3	1.8	NA	1.6 J	1.5 J	1.8	1.4	1.3	1.2	1.1	0.62 J
Ethylbenzene	0.26 J	0.28 J	<1.0	<1.0	NA	0.16 J	<1.0	0.14 J	0.11 J	<1.0	<1.0	0.12 J	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	NA	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	1.1	1.2	0.95 J	0.66 J	NA	0.45 J	0.54 J	0.53 J	0.46 J	0.45 J	0.42 J	0.42 J	0.32 J
Trichloroethene	<1.0	<1.0	<1.0	<1.0	NA	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	5.4	4.8	4.4	1.4 J	NA	1.9 J	2.2 J	2.9 J	1.7 J	1.7 J	1.4 J	1.6 J	0.60 J
Aniline	77	620	310	92	120	150	10	150	97	110	180	140	74
N,N-Dimethylaniline	2.6	<5.0	4.0	3.6	NA	4.1	3.1	4.0	2.0	1.9	4.1	3.4	3.3
Methanol	<500	<500 J	NA	NA	NA	NA	NA	NA	<1000	NA	NA	NA	NA





Attachment A

Validated Analytical Laboratory
Reports



Attachment B

Summary of Historical
Groundwater Monitoring Data –
March 1988 through August 2008

Attachment B
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

		Screen Elev. (ft. AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-1 ^K	3/88	370.3	355.3	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	7/99			0.7 JN	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			8 J	<10 J	3 J	<10 J	5.0 J	<1,000	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	10
	9/01			<10	<10	<10	<10	<10	<1,000 J	<10	<10	<10	<10
	4/02			<12	<5.0	<5.0	<5.0	<10	990 J	<5	<5	<5	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	2 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.2 J	<1.0	<3.0
	11/05			<1.3 J	<0.3	<0.4	<0.5	<0.5	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0 J	<1.0 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	<1.0 J	<3.0 J
	11/06			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0	<3.0
	6/07			<5	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			7.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
MW-2S	3/88	368.1	353.1	<1,000	1,900	110	610	2,800	<1,000	<10	<10	<10	<10
	1/89			<1,000	2,000	65	330	1,200	<1,000	<10	<11	<11	<10
	11/89			<1,000	1,800	<100	360	810	38,000	<100	<100	<100	<100
MW-3S	3/88	365.1	350.1	<100	<1	<1	<1	<1	<1,000	50	<10	<10	110
	1/89			<10,000	<100	120	<100	<100	<1,000	1,100	<11	5,570	4,700
	11/89			<10,000	<100	<100	<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	<1,000	<5.0	15	2.0 J	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	7/99			<10	1 J	0.7 J	<10	<10	<1,000	<10	9 J	<10	<10
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10	<10	<10
	9/00			<10 J	1 J	2 J	<10 J	<10 J	<1,000	<10 J	2 J	1 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	3 J	8 J	1 J	2 J	<1,000 J	<10	690 D (69) ^B	4 J	<10
	4/02			<12	<5	<5	<5	<10	370 J	<5.0	1.7 J	<5	<5

See Notes on Page 19.

Attachment B
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-3S (cont'd)	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
	6/04			6.0 J	<10	<10	<10	<20	<1,000	<10	0.8 J	<6	<10
	11/04			<25	<10	<10	<10	<20	150 J	<10	4 J	<5.0	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	15	<1.0	<3.0
	11/05			<1.3 J	<0.3	<0.4	<0.5	<0.4	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
8/08	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0			
MW-3D	8/95	343.8	339	<1,000	<25 D	<25 D	<25 D	<25 D	<1,000	<25 D	1 J	5 J	200 D
MW-4S	3/88	365.5	350.5	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	<11	19	280
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-5 ^C	3/88	363.3	348.3	<100	<1	<1	<1	<1	<1,000	<1	230	130	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	34	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	17	<10	<1
MW-6 ^D (Replaced by MW-6S)	1/89	365.5	355.9	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	11/89			<10	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
MW-7 ^B	1/89	367	357.4	<100	<1	<1	<1	2	<1,000	<1	<11	<11	100
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-8 ^B (Replaced by MW-8S) ^E	1/89	364.7	355.1	<1,000,000	<10,000	<10,000	<10,000	<10,000	430,000	<10,000	2,900	24,000	3,200,000
	11/89			470,000	<10,000	<10,000	<10,000	<10,000	300,000	<10,000	8,500	52,000	2,800,000
	11/91			<1,000,000	<10,000	<10,000	<10,000	<30,000	150,000	<10,000	8,000	33,000	1,600,000
	8/95			<1,000	<250,000D	<250,000D	<250,000D	<250,000D	22,000	60,000 JD	<25,000D	380,000 D	7,700,000 D
	9/98			<10,000 J	<10,000	<10,000	<10,000	<10,000	7,900	3,300 J	1,200 J	26,000 D	140,000
	2/99			<20,000	<20,000	<20,000	<20,000	<20,000	16,000JN	11,000 J	30,000 D	120,000 D	650,000 DB
	7/99			10 J	22 J	240 J	58 J	220 J	17,000	11,000 J	24,000	77,000	450,000 D
	3/00			<100,000	<100,000	<100,000	<100,000	<100,000	30,000 J	<100,000	62,000	270,000 D	1,300,000
	9/00			<50,000 J	<50,000 J	<50,000 J	<50,000 J	<50,000 J	14,000 J	9,200 J	42,000 J	59,000	540,000 BJ
	3/01			<50,000	<50,000	<50,000	<50,000	<50,000	53,000	11,000 J	90,000 D	120,000 D	990,000
	9/01			<400	<400	430	170 J	680	8,900 J	18,000 JD	21,000	29,000	440,000 BD
	4/02			2,100	50 J	410	100 J	400	<1,000	9,600 J	793,000 D	773,000 D	660,000 D
	10/02			120 J	23	310	73	267	<1,000	3,100	80,000	21,000 J	320,000
	5/03			<12	20 J	600 D	81	300	<1,000	6,700 D	79,000 D	29 J	910,000 D
	10/03			21	25	330 D	93	360	1,200 J	3,100 D	67,000 D	24,000 D	400,000 D
	6/04			<25	40	330 EJ	110	400	<1,000	5,900 D	56,000	51,000	1,200,000 D

See Notes on Page 19.

Attachment B
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-8SR ^B	11/04	362.7	352.7	<1,200	<500	100 DJ	<500	164 DJ	<1,000	<500	35,000 D	5,300 D	10,000 D
	6/05			81 J	13	100	53	180	<1,000	<1.0	30,000	<200	<3.0
	11/05			15 J	13	130	66	260	<1,000	<1.0	32,000	<260 J	<3.0
	6/06			48	15	120	79	260	<1,000	<1.0	23,000	<200	<3.0
	9/06			NA	NA	NA	NA	NA	NA	52,000 [51,000]	<520 [<520]	NA	
	11/06			28	16	100	84	270	<500	<1.0	28,000	<200	<3.0
	6/07			58	14	110	83	250	<500	<2.0	2,700	<22	<6.0
	8/07			NA	NA	NA	NA	NA	NA	17,000	<100	NA	
	11/07			<5.0 J	12	22	73	210	<500	<1.0	22,000 J	<100 J	<3.0
	3/08			<10 [9.6 J]	5.5 [5.7]	22 [22]	70 [68]	160 [160]	<500 [<500]	<2.0 [<2.0]	5,800 [5,200]	<25 [<50]	<6.0 [<6.0]
	8/08			8.2 J [<10]	11 [11]	24 [22]	70 [70]	190 [190]	<500 [<500]	<2.0 [<2.0]	32,000 [25,000]	<250 [<250]	<6.0 [<6.0]
MW-9 ^B (Replaced by MW-9S)	1/89	365.6	356	1,600	NA	64	130	270	<1,000	<10	660	1,200	1,500
	11/89			<1,000	48	25	60	60	<1,000	<10	670	150	<10
	11/91			<100	<10	9	19	30	<1,000	<1.0	95	18	<1
	8/95			<1,000	11 JD	26 JD	69 D	226 JD	<1,000	<50	50	28	110 D
	7/99			<10	4 J	2 J	9 J	18	<1,000	<10	<10	5.0 J	<10
	3/00			<10	2 J	2 J	11	21	<1,000 J	<10	2.0 J	9.0 J	<10
	9/00			<10 J	11 J	2 J	6.0 J	18 J	<1,000	<10 J	1.0 J	6.0 J	<10 J
	3/01			<10	1 J	3 J	17	61	<1,000	<10	2.0 J	11	<10
	9/01			<10	10	3 J	7.0 J	35	<1,000 J	<10	<10	10	<10
	4/02			<23	10	2 J	6	17 J	370 J	<5	9	43	<5
	10/02			16 J	38	40	2 J	15 J	<1,000	<10	<5.0	2.0 J	<10
	5/03			<12	11	<5	7	18	<1,000	<5.0	0.9 J	3.0 J	<5
	10/03			<12	2 J	<5	5	19	<1,000	<5.0	1.0 J	<5.0	<5
	6/04			14 J	6 J	2.0 J	8 J	19 J	<1,000	<10	<5.0	<5.0	<10
	11/04			<25	4 J	2 J	9 J	30 J	<1,000	<10	<5.0	<5.0	<10
	6/05			44 J	1.9	3.2 J	24	64	<1,000	<1.0	2.6	1.9	<3.0
	11/05			<1.3 J	3.5	3.8	11	33	<1,000	<0.4	1.4	6.1 J	<0.5
	6/06			<5.0 J	1.1 J	2.3 J	25 J	60 J	<1,000 J	<1.0 J	<1.1 J	3.8 J	<3.0 J
	11/06			<5.0	1.4	3.5 J	23	63	<500	<1.0	0.5 J	3.3 J	<3.0
	6/07			<5.0	1.4	3.3 J	42	110	<500	<1.0	<5.0	4.1	<3.0
	11/07			<5.0	0.9 J	2.0 J	11	58	<500 J	<1.0	1.7 J	8.6	<3.0
	3/08			<5.0 J	1.1	3.0 J	37	73	<500	1.2	0.7 J	6.8	<3.0
	8/08			24	3.7	3.3 J	21	72	<500	<1.0	<5.5	5.1	<3.0
MW-10 ^D (Replaced by MW-9D)	1/89	355.5	345.9	<1,000,000	<10,000	<10,000	<10,000	<10,000	210,000	<10,000	720	9,400	520,000
	11/89			<100,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	900	2,400	28,000
	11/91			<100	<1	3.0	2.0	<3.0	<1,000	<1	230	<10	41
	8/95			<1,000	<25 UD	<25 UD	<25 UD	<25 UD	<1,000	<25 UD	<5.0	<10	350 D
MW-11 ^D (Replaced MW-6D)	1/89	355.1	345.5	<100	<1	<1	<1	<1	8,400	<1	<12	<12	1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	230	<52	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10

See Notes on Page 19.

Attachment B
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-11S	12/94	359.9	354.9	<380	<10	<10	<10	<10	880	<10	<5	<10	<10
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<26
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
MW-11D	12/94	349.8	344.8	<310	<5	<5	<5	<5	2,100	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
MW-12D ^D (Replaced MW-8D) ^E	1/89	354.8	345.2	<100,000	<1,000	<1,000	<1,000	<1,000	12,000	<1,000	67	410	120,000
	11/89			69,000	<1,000	<1,000	<1,000	<1,000	39,000	<1,000	<1,000	4,900	360,000
	11/91			<1,000,000	<10,000	<10,000	<10,000	<30,000	<10,000	<10,000	750	5,800	220,000
	8/95			<1,000	450 JD	430 JD	430 JD	1,250 JD	<1,000	<1,300 D	30 D	230 D	<13,000 D
	8/96			13	<10	<10	<10	<10	<1,000	2.0 J	<5	<10	40
MW-13S	11/89	368.7	359.1	<100	3	<1	<1	<1	<1,000	<1.0	<52	<52	<1.0
	11/90			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/91			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/92			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
MW-14D ^C	1/89	359	349.4	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<10	<10	<1.0
MW-15S	1/89	370	360.25	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<52	<52	<1.0
MW-16D ^C	1/89	350.8	341.2	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<10	<10	<1.0
MW-17 ^C (Replaced by MW-17R)	11/90	365.7	356.1	<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/91			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/92			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<11
	10/95			NA	<5	<5	<5	<5	NA	2 J	NA	NA	<5
	8/96			11	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/99			<10	1 J	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00			<10	8 J	<10	<10	<10	<1,000 J	<10	<5.0	<10	<10
	9/00			<10 J	15 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	24 J	4 J	1 J
	3/01			<10	8 J	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	5 J	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	6	<5	<5	<10	620 J	<5	150 (<5) ^F	110 (<5) ^F	<5
	10/02			<25 J	14	<10	<10	<20	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	8	<5	<5	<5	<1,000	<5	<5	<5	<5
	11/03			<12	7	<5	<5	<10	<1,000	<5	<5	<5	<5

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		Top	Bottom											
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5	
MW-17 ^D (cont'd)	6/04			<25	5 J	<10	<10	<20	<1,000	<10	<5	<5	<10	
	11/04			--	--	--	--	200 J	--	<5	<5	--		
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0	
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0	
	6/06			<5.0	0.8 J	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0	
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0	
	6/07			<5.0	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0	
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0	
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
	8/08			2.3 J	1.8	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
MW-18	11/89	325.15	316.15	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5	
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10	
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	2/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10	
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10	
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J	
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	4/02			<10	<10	<10	<10	<20	720 J	<10	280 D (<5) ^F	200 D (<5) ^F	<10	
	10/02			6 J	<10	<10	<10	<10	<20	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<5	280 J	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	0.7 J	<5	<5	
	6/04			<25	<10	<10	<10	<20	<1,000	<10	R	R	<10	
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--	
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0	
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1 J	<3.0	
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<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 J	<3.0	
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3	
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
	8/08			5.5	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0	

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		Top	Bottom											
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5	
MW-19 ^K	11/89	318.45	309.45	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5	
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<12	
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5	
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	2/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	5 J	<11	
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10	<10	<10 J	
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10	
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J	
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5	
	10/02			<25 J	<10	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5	
	10/03			<11	<5	<5	<5	<10	<1,000	<5	51 J	16 J	<5	
	6/04			<25	<10	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<25	<10	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0	
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0	
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<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 J	<3.0	
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.5	<1.1	<3.0	
	11/07			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0	
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0	
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0	
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0	
MW-20 ^C	11/89	329.85	320.85	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
MW-21 ^C	11/89	323.65	314.65	<100	<5	<1	<1	<1	<1,000	<1	<10	<10	<1	
MW-22 ^L	11/89	368.55	359.55	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	10/10			<10	<1.0	<1.0	<1.0	<3.0	<500 J	<1.0	<5.0	<1.0	<1.0	
MW-23S	12/94	364.1	354.1	<10	<5	<5	<5	<5	<200	<5	<5	<10	<5	
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10	

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-23S (cont'd)	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/96			<10	<10	<10	<10	<10	<1,000	<10	7	<10	<10
	2/97			<10	<10	<10	<10	<10	<1,000	<10	11	<10	<10
	8/97			12	<10	<10	<10	<10	<1,000	<10	92	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	56 ^H	7 J	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	10	<10 J
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	2 J	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	2 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	2 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<62	<25	<25	<25	<50	380 J	<25	<5	<5	<25
	10/03			<12	<5	<5	<5	<10	<1,000	<5	60	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.2	<1.2	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
MW-23I	12/94	341.2	336.2	<10	<5.0	<5	<5.0	<5.0	<200	<5.0	<5.0	<10	<5
	8/95	<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10	<10	
	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	<11	<10	<10	
	9/98	<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10	<10	
	2/99	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J	<10 J	
	7/99	<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	<10	
	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 J	<10 J	
	3/01	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	<10	
	9/01	4 J	<10	<10	<10	2 J	<1,000	<10	<10	<10	<10	<10	
	4/02	<10	<5	<5	<5	<10	<1,000	<5	<5	<5	2 J	2 J	
	10/02	<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10	<10	
	5/03	<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5	<5	

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-23I (cont'd)	10/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	1 J	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0	0.6 J	<4.0	<5.0	<1,000	<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 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
MW-24S ^{CL} (Replaced by MW-24SR)	12/94	358.4	352.4	<10	<5	<5	<5	<5	<1,000	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	<10 J	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	6/02 ^F			NA	NA	NA	NA	NA	NA	NA	ND	ND	NA
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	16	<6	<5
	6/04 ^J			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
	9/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-24D ^{CL} (Replaced by MW-24DR)	12/94	334.4	341.2	<10	<5	<5	<5	<5	<1,000	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<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 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	6/02 ^F			NA	NA	NA	NA	NA	NA	NA	ND	ND	NA

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-24D ^{DL} (cont'd)	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	0.5 J	<5	<5
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5 J	<1	<5	<4	<5	<1,000	<1	<1	<1	<3
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1 J	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
	9/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-25S ^L	8/95	361.2	356.2	<1,000	<5	<5	<5	<5	<1,000	<5	<5	0.7 J	<10
	10/95			NA	<5	<5	<5	<5	NA	<5	<5	<10	<5
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	130	<10	<10 J
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	110 J	21 J	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	5 J	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	11/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<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
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<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
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.2	<0.5	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<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
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	MW-25D ^L			8/95	349.55	344.55	<1,000	<5	<5	<5	<5	<1,000	<5
10/95		NA	<5	<5			<5	NA	3 J	<5	<10	<5	
8/96		15	<10	<10			<10	<10	<1,000	<10	<5	<10	<10
8/97		<10	<10	<10			<10	<10	<1,000	<10	<5	<11	<10

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-25D ^L (cont'd)	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	3/01			<10	<10	<10	<10	<10	<1,000	<10	5 J	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<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
	6/07			12 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/09			<10	<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	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-26	12/96	365	355.3	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
MW-27	9/98	362.5	354.5	23	3 J	4 J	<10	3 J	<1,000	<10	340 DJ	<10	<10
	7/99			<10 J	4 J	2 J	3 J	8 J	<1,000	<10	740 D	<10	<10
	3/00			<10	6 J	<10	8 J	2 J	<1,000 J	<10	110 D	1 J	<10
	9/00			<10 J	4 J	<10 J	3 J	1 J	<1,000 J	<10 J	16 J	2 J	1 J
	3/01			<10	5 J	<10	5 J	2 J	<1,000	<10	260 D	2 J	<10
	9/01			<10	5 J	<10	2 J	<10	<1,000 J	<10	26	<10	<10
	4/02			<18	7	11	12	26	<1,000	<5	176,000 DJ	19 J	<5
	10/02			9 J	3 J	<10	<10	<20	<1,000	4 J	2,700 D	100 J	60 JN
	5/03			<12	8	11	23	51	<1,000	<5	15,000 DJ	11	43
	10/03			170	5	<5	<5	3 J	<1,000	<5	3,700 D	<5	240 D
	6/04			23 J	5 J	4 J	2 J	6 J	<1,000	<10	3,700 D	20 J	<10
	11/04			<120 (28)	<50 (4 J)	<50 (2 J)	<50 (<10)	<100 (<20)	<1,000	<50 (<10)	1,100 DJ	<5	310 (490 D)
	6/05			31 J	6.1	15	5.8	15	<1,000	<1.0	5,200	<23	<3.0
	11/05			35 J (37 J)	11 (12)	77 (78)	26 (26)	86 (88)	<1,000 (<1,000)	<1.0 (<1.0)	37,000 (38,000)	<270 J (<260 J)	<3.0 (<3.0)
	6/06			5.3 J (5.8 J)	9.5 J (8.9 J)	50 J (48 J)	25 J (25 J)	66 J (63 J)	<1,000 J (<1,000 J)	<1.0 J (<1.0 J)	14,000 J (12,000 J)	<100 J (<100 J)	<3.0 J (<3.0 J)
	9/06			NA	NA	NA	NA	NA	NA	NA	1,700	<10	NA
	11/06			31 [24]	14 [14]	71 [71]	42 [45]	91 [110]	<500 [<500]	<1.0 [<1.0]	33,000 [33,000]	<210 [<200]	<3.0 [<3.0]
	6/07			21	8.4	9.5	14	24	<500	<1.0	1,100	<10	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	<10 J [4,300 J]	<1.0 [<20]	NA
	11/07			<5.0 J [<5.0]	6.6 [5.9]	4.7 J [4.1 J]	8.6 [7.2]	24 [21]	<500 [<500]	<1.0 [<1.0]	3,000 J [3,800 J]	<25 J [<25 J]	<3.0 [<3.0]
	3/08			21	9.4	23	43	68	<500	<2.0	13,000	<100	<6.0
	8/08			3.8 J	5	2.2 J	1.8 J	10	<500	<1.0	2,400	<25	<3.0
MW-28	9/98	363.6	355.6	<5,000 J	<5,000	<5,000	<5,000	<5,000	2,200	<5,000	546 D ^H	54	64,000 J
	7/99			<500 J	<500	<500	<500	<500	<1,000	<500	1,100 D	40	39,000 D
	3/00			<10,000	<10,000	<10,000	<10,000	<10,000	<1,000 J	<10,000	1,300 D	30	130,000 J
	9/00			<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	540 DJ	<10	8,100 BJ
	3/01			<400	<400	<400	<400	<400	<1,000	<400	3,200 D	7 J	5,900 B
	9/01			<400	<400	<400	<400	<400	<1,000 J	<400	1,000 D	<10	4,700 B

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-28 (cont'd)	4/02	362.9	345.9	<49	8	6	9	10 J	<1,000	<5	33,400 D	57	4,600 D
	10/02			14 J	8 J	6 J	11	12 J	<1,000	<10	2,700 D	R	<10
	5/03			13	4 J	2 J	2 J	8 J	<1,000	<5	1,000 DJ	3 J	52
	10/03			24	11	6	12	13 J	<1,000	<5	1,900 D	<5	<5
	6/04			20 J	4 J	2 J	5 J	4 J	<1,000	<10	910 D	<5	<10
	11/04			<120 (<25)	<50 (4 J)	<50 (<10)	<50 (5 J)	<100 (3 J)	190 J	<50 (<10)	640 DJ	<5	<50 (<10)
	6/05			5.2 J	4.5	1.2 J	4.6	3.9 J	<1,000	<1.0	630	<5.0	<3.0
	11/05			6.8 J (7.8 J)	6.1 (5.8)	<5.0 (<5.0)	4.7 (4.7)	<5.0 (<5.0)	<1,000 (<1,000)	<1.0 (<1.0)	380 J (350 J)	<2.2 (<2.1)	<3.0 (<3.0)
	6/06			<5.0 J (<5.0 J)	6.0 J (6.3 J)	1.2 J (1.3 J)	5.3 J (5.4 J)	4.2 J (4.3 J)	<500 J (<1,000 J)	<1.0 J (<1.0 J)	430 J (530 J)	<2.1 J (<5.0 J)	<3.0 J (<3.0 J)
	9/06			NA	NA	NA	NA	NA	NA	NA	280	<2.2	NA
	11/06			12	8.2	1.4 J	5.6	4.4 J	<500	<1.0	1,000	<5.2	<3.0
	6/07			13	4.6	0.4 J	0.8 J	0.6 J	<500	<1.0	60	<1.0	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	40	<1.0	NA
	11/07			<5.0 J	4.5	0.5 J	1.4 J	0.8 J	<500	<1.0	29 J	<0.5 J	<3.0
	3/08			<5.0	4.0	0.5 J	1.6 J	1.3 J	<500	<1.0	81	0.9	<3.0
	8/08			<5.0	3.8	<5.0	<4.0	<5.0	<500	<1.0	0.7 J	<0.5	<3.0
MW-29	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	1 J	<1,000	<10	5 J	4 J	<10
	7/99			<10	<10	<10	<10	<10	<1,000	<10	2 J	4 J	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	450 D	6 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	24 J	4 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	30	4 J	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	7 J	2 J	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	3 J	9	<6
	10/02			<25 J	<10	<10	<10	<20	<1,000	<10	8	R	4 JN
	5/03			<12	<5	<5	<5	<10	<1,000	<5	19	1 J	<3
	10/03			<12	<5	<5	<5	<10	<1,000	<5	2 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	3 J	<5	<10
	11/04			<120	<50	<50	<50	<100	420 J	<50	<5	<5	<50
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/06			5.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	0.4 J	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	0.5 J	<500	<1.0	<5.5	<1.1	<3.0
	11/07			<5.0 J	<1.0	<5.0	<4.0	<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	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
MW-30	9/98	363.5	355.5	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	2/99			7 J	<10	<10	<10	<10	<1,000	<10	<10	2 J	<10
	7/99			<10	0.7 J	<10	<10	<10	<1,000	0.5 J	<10	1 J	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	18	2 J	4 J
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	9 J	2 J	2 J

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-30 (cont'd)	3/01			<10	<10	<10	<10	<10	<1,000	<10	8 J	2 J	<10
	9/01			4 J	2 J	<10	<10	<10	<1,000 J	<10	8 J	1 J	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	250	210	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	R	R	<10
	5/03			<62	<25	<25	<25	<50	<1,000	<25	18	0.6 J	8 J
	10/03			<12	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<120	<50	<50	<50	<100	<1,000	<50	<5	<5	<50
	6/05			<5.0 J	0.3 J	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	0.7 J	0.6 J	<4.0	0.5 J	<1,000	<1.0	240	<1.0 J	<3.0
	6/06			<5.0	0.6 J	0.4 J	<4.0	<5.0	<1,000	<1.0	29	<1.0	<3.0
	11/06			11	1.0	<5.0	<4.0	<5.0	<500	<1.0	200	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	30	<1.1	<3.0
	11/07			<5.0 J	0.8 J	<5.0	<4.0	<5.0	<500	<1.0	49	<0.5	<3.0
	3/08			<5.0	0.6 J	<5.0	<4.0	0.2 J	<500	<1.0	3.0 J	0.7	<3.0
8/08	<5.0	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	31	<0.5	<3.0			
MW-31	9/98	363.7	355.4	<10	12	<10	<10	<10	<1,000	<10	34	4 J	<10
	7/99			<10	16	<10	<10	<10	<1,000	<10	230 D	3 J	<10
	3/00			<10	16	<10	<10	<10	<1,000 J	<10	3 J	4 J	<10
	9/00			<10 J	12 J	<10 J	<10 J	<10 J	<1,000	<10 J	10	6 J	<10 J
	3/01			21	11	<10	<10	<10	<1,000	<10	<10	5 J	<10
	9/01			<10	14	<10	<10	<10	<1,000 J	<10	91 D	3 J	<10
	4/02			<14	9	<5	<5	<10	<1,000	<5	804 D	21	<5
	10/02			<25	11	<10	<10	<20	<1,000	<10	560 D	1 J	<10
	5/03			<12	9	<5	<5	<10	<1,000	<5	0.9 J	3 J	<5
	10/03			1,200 D	13	<5	<5	<5	<1,000	<5	88	<5	<5
	6/04			15 J	12	<10	<10	<20	<1,000	<10	3 J	<5	<10
	11/04			<25	9 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	11	<5.0	<4.0	1.3 J	<1,000	<1.0	3.2	2.7	<3.0
	11/05			<1.3 J	6.7	<0.4	<0.5	0.6	<1,000	<0.4	16	<1.0 J	<0.5
	6/06			<5.0 J	11 J	0.6 J	<4.0 J	1.7 J	<1,000 J	<1.0 J	<1.0 J	2.4 J	<3.0 J
	9/06			NA	NA	NA	NA	NA	NA	NA	1.6	3.4	NA
	11/06			R	6.9	<5.0	<4.0	<5.0	<500	<1.0	0.4 J	1.1 J	<3.0
	6/07			<5.0	14	0.7 J	<4.0	1.3 J	<500	<1.0	<5.0	2.0	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	0.5 J	2.7	NA
	11/07			<5.0 [<5.0]	12 [10]	<5.0 [0.4 J]	<4.0 [<4.0]	1.1 J [1.4 J]	<500 J [<500 J]	<1.0 [<1.0]	<5.0 [0.3 J]	2.3 [2.8]	<3.0 [<3.0]
	3/08			<5.0 J	2.0	<5.0	<4.0	<5.0	<500	<1.0	0.2 J	1.6	<3.0
	8/08			22	13	0.4 J	<1.0	2.2 J	<500	<1.0	<5.6	2.4	<3.0
	MW-32			9/98	364	356	<10	16	2 J	5 J	3 J	<1,000	<10
7/99		3 J	14	2 J			4 J	<10	<1,000	56	<10	3 J	<10
3/00		<10	5 J	<10			<10	<10	<1,000 J	<10	800 D	<10	<10

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		Screen Elev. (ft. AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-32 (cont'd)	9/00			<10 J	12 J	<10 J	<10 J	<10 J	<1,000	<10 J	4,500 D	<10	<10 J
	3/01			<10	5 J	<10	<10	<10	<1,000	<10	1,900 D	2 J	<10
	9/01			<10	10	<10	<10	<10	<1,000 J	<10	1,100 D	2 J	<10
	4/02			<15	4 J	<5	<5	<10	<1,000	<5	4,620 D	11	<5
	10/02			<25	4 J	<10	<10	<20	<1,000	<10	50	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	0.6 J	0.7 J	<5
	10/03			20	2 J	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			6 J	1 J	<10	<10	<20	<1,000	<10	1 J	<5	<10
	11/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.4 J	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	<1.0 J	<3.0 J
	11/06			R	<1.0	0.8 J	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.1 J	0.8	<3.0
	3/08			<5.0 J	0.8 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	0.8	<3.0
	8/08			5.8	0.3 J	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
MW-33	9/98	344.1	356.1	<10	<10	<10	<10	<10	<1,000	<10	9 J	6 J	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	120	6 J	<10
	7/99			5 J	2 J	0.7 J	<10	<10	<1,000	<10	150	8 J	<23
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	51	7 J	11
	9/00			45 J	4 J	1 J	<10 J	<10 J	<1,000	<10 J	540 D	23	330 DJ
	3/01			17 J	<20	<20	<20	<20	<1,000	<20	1,300 D	16	370 B
	9/01			21	5 J	<10	<10	<10	<1,000 J	<10	1,900 D	12	<18
	4/02			<18	3 J	<5	<5	<10	<1,000	<5	2,780 D	21	19
	10/02			11 J	4 J	<10	<10	<20	<1,000	<10	290 D	3 J	4 J
	5/03			88	13	<5	<5	<10	<1,000	<5	2,000	35 J	2,800 D
	10/03			22	2 J	<5	<5	<10	<1,000	<5	1,900 D	<6	<5
	6/04			9 J	12 J	<10 J	<10 J	<20 J	<1,000	<10 J	2,700 D	5 J	<10 J
	11/04			--	--	--	--	--	<1,000	--	2,700 D	5 J	--
	6/05			<5.0 J	11	1.0 J	<4.0	<5.0	<1,000	<1.0	1,800	<10	<3.0
	11/05			<5.0 J	16	1.8 J	<4.0	<5.0	<1,000	<1.0	3,500	<25 J	<3.0
	6/06			<5.0 J	6.7 J	0.7 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	370 J	3.5 J	<3.0 J
	9/06			NA	NA	NA	NA	NA	NA	NA	940	8.0	NA
	11/06			17 J	8.6	0.7 J	<4.0	<5.0	<500	<1.0	84	2.9 J	<3.0
	6/07			<5.0	5.7	0.4 J	<4.0	<5.0	<500	<1.0	46	2.6	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	46	4.2	NA
	11/07			<5.0	4.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.1 J	3.5	<3.0
	3/08			<5.0 J	4.1	<5.0	<4.0	<5.0	<500	<1.0	<5.0	4.1	<3.0
	8/08			<5.0	3.2	<5.0	<4.0	<5.0	<500	<1.0	<5.9	2.8	<3.0

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		Screen Elev. (ft. AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-34	9/98	362.7	354.7	<10	<10	<10	<10	<10	<1,000	<10	83	<10	<10
	7/99			2 J	0.9 J	1 J	<10	<10	<1,000	<10	380 D	2 J	<10
	3/00			<10 J	1 J	2 J	<10	<10	<1,000 J	<10	200 D	3 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	320 D	4 J	<10 J
	3/01			<10	<10	2 J	<10	2 J	<1,000	<10	700 D	5 J	<10
	9/01			7 J	2 J	2 J	<10	2 J	<1,000 J	<10	76	3 J	<10
	4/02			<32	<5	<5	<5	<10	<1,000	<5	640 D	15	<5
	10/02			37 J	<10	<10	<10	<20	<1,000	<10	380 DJ	2 J	<10
	5/03			16	<5	<5	<5	<10	<1,000	<5	140	3 J	<5
	10/03			9 J	<5	<5	<5	<10	<1,000	<5	18	<5	<5
	6/04			24 J	<10	<10	<10	<20	<1,000	<10	30	<5	<10
	11/04			<25	<10	<10	<10	<20	180 J	<10	14	<5	<10
	6/05			5.6 J	0.7 J	0.9 J	<4.0	1.2 J	<1,000	0.4 J	16	2.5	<3.0
	11/05			20 J	<0.3	0.9	<0.5	1.1	<1,000	<0.4	12	2 J	<0.5
	6/06			6.4	0.6 J	0.5 J	<4.0	<5.0	<1,000	<1.0	16	2.3	<3.0
	11/06			49 J	<1.0	0.6 J	<4.0	0.6 J	<500	<1.0	9.9	1.2 J	<3.0
	6/07			22	0.9 J	0.5 J	<4.0	0.6 J	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	0.8 J	0.6 J	<4.0	1.1 J	<500 J	<1.0	0.3 J	1.5	<3.0
	3/08			16	1.0 J	0.5 J	<4.0	1.1 J	<500	<1.0	24	1.3	<3.0
	8/08			12	0.8 J	0.5 J	<4.0	1.1 J	<500	<1.0	0.6 J	1.6	<3.0
MW-35	9/98	363	355	<10	<10	<10	<10	<10	<1,000	<10	6 J	5 J	<10
	7/99			<10	0.7 J	<10	<10	<10	<1,000	<10	3 J	4 J	<10
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10	3 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	4/02			<13	<5	<5	<5	<10	<1,000	<5	3 J	4 J	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	2 J	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	1,000	<100	<5
	10/03			5 J	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	30	4 J	<10
	11/04			<25	<10	<10	<10	<20	240 J	<10	82	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.4 J	<1.0	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	1.1	<1.0 J	<3.0
	6/07			13	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			5.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	1.1 J	<0.5	<3.0
MW-36 ^E	9/98	363.6	355.6	<10	<10	<10	<10	<10	<1,000	<10	290 D	6 J	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	860 D	4 J	<10
	7/99			8 J	0.8 J	<10	<10	<10	<1,000	<10	250	<10	<10
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	60	7 J	<10
	9/00			5 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	8 J	6 J	<5
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-36 ^E (cont'd)	9/01			54	<10	<10	<10	<10	<1,000 J	<10	350 D	5 J	<10
	4/02			<20	<5	<5	<5	<10	<1,000	<5	9	41	<5
	10/02			12 J	<10	<10	<10	<20	<1,000	<10	2 J	2 J	<10
	5/03			9 J	<5	<5	<5	<10	<1,000	<5	67	4 J	<5
	10/03			580 D	<5	<5	<5	<10	<1,000	<5	100	<5	<5
	6/04			22 J	<10 J	<10 J	<10 J	<20 J	<1,000	<10 J	33	7	<10 J
	11/04			13 J	<10	<10	<10	<20	<1,000	<10	22	<5	<10
	6/05			24 J	2.1	<5.0	<4.0	1.0 J	<1,000	<1.0	1,200	<5.4	<3.0
	11/05			77 J	3.6	2.0 J	0.6 J	2.8 J	<1,000	<1.0	1,600	<10 J	<3.0
	6/06			25	1.6	0.7 J	<4.0	1.2 J	<1,000	<1.0	76	1.9	<3.0
	9/06			NA	NA	NA	NA	NA	NA	NA	3.5	1.2	NA
	11/06			130 J	3.6	1.2 J	<4.0	1.1 J	<500	<1.0	420	1.7 J	<3.0
	6/07			33	4.6	1.4 J	0.8 J	5.0	<500	<1.0	1,300	<10	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	740	<5.0	NA
	11/07			10	4.5	1.7 J	0.9 J	5.3	<500 J	<1.0	480 J	3.4 J	<3.0
	3/08			8.0 J	4.2	1.5 J	0.8 J	5.5	<500	<1.0	130	3.0	<3.0
	8/08			27	3.7	1.4 J	0.6 J	5.7	<500	<1.0	4.5 J	3.2	<3.0
TW-01	12/96	365.1	355.4	<10	82	4 J	6 J	4 J	<1,000	<10	2,090 D	13	4 J
	9/98			<10	15	<10	4 J	<10	<1,000	<10	4,400 DEJ	4 J	<10
	2/99			<10	24	2 J	2 J	2 J	<1,000	<10	9,000 D	5 J	<10
	7/99			<10	16	1 J	3 J	<10	<1,000	<10	4,400 D	4 J	<10
	3/00			<10	16	<10	<10	<10	<1,000 J	<10	280 D	4 J	<10
	9/00			<10 J	11 J	<10 J	<10 J	<10 J	<1,000	<10 J	15	2 J	<10 J
	3/01			<10	5 J	<10	<10	<10	<1,000	<10	<10	3 J	<10
	9/01			<10	10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	4/02			<14	3 J	<5	<5	<10	<1,000	<5	8	13	<5
	10/02			<25	7 J	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	7	<5	<5	<10	<1,000	<5	<5	1 J	<5
	10/03			<12	6	<5	<5	<10	<1,000	<5	0.6 J	<5	<5
	6/04			6 J	3 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<25	2 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	1.8	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<1.3 J	1.9	<0.4	<0.5	<0.4	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0 J	1 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	0.8 J	<3.0 J
	11/06			R	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			7.8	0.5 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.2 J	1.1	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	1.0	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
TW-02 ^C (Replaced by TW-02R) ^E	12/96	363.3	353.3	53	10	77	16	65	<1,000	585 D	15,900 JD	3,920 D	42,449 D
	9/98			<500 J	<500 J	<500 J	<500 J	53,000	5,000	300 J	38,000 D	61,000 D	86,000 D
	2/99			<1,000	<1,000	190 J	<1,000	150 J	14,000JN	<1,000	83,000 D	7,900	14,000 B
	7/99			630	37	240 J	31	150	<1,000	55	100,000 D	3,500 J	9,700 D
	3/00			<1,000 J	<1,000	160 J	<1,000	240 J	<1,000 J	<1,000	64,000 D	3,900	13,000
	9/00			190 J	28 J	95 J	35 J	160 J	<1,000	6 J	79,000	<10,000	390 J
	3/01			81	19	68	28	130	<1,000	<10	67,000 D	650 J	400 D

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McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride	
		Top	Bottom											
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5	
TW-02 ^C (cont'd)	9/01			57	25	70	31	140	<1,000 J	<20	63,000 D	32	48 B	
	4/02			240	19	65	23	96	<1,000	<5	1,090,000 D	<5,300	14	
	10/02			110 J	15	19	23	65	<1,000	<10	80,000 D	10 J	<10	
	5/03			240	30	130	49	226	<1,000	<5	160,000 D	230	97	
	10/03			68	28	75 J	<5	<10	<1,000	2 J	92,000 D	<260	91	
	6/04			140 J	19 J	39 J	31 J	111 J	<1,000	<10 J	82,000	<5,200	4 J	
TW-02RR ^{BE}	11/04	363.3	353.3	18 J	4 J	8 J	4 J	16 J	<1,000	<10	7,100 D	<5	<10	
	6/05			7.2 J	3.6	2.1 J	3.6 J	9.6	<1,000	0.3 J	8,400	<50	<3.0	
	11/05			26 J	6	4.1	3.6	11	<1,000	<0.4	14,000	<110 J	<0.5	
	6/06			16	4.4	1.3 J	2.7 J	6.7	<1,000	<1.0	10,000	<100	<3.0	
	9/06			NA	NA	NA	NA	NA	NA	NA	7,600	<52	NA	
	11/06			78 J	4.9	1.4 J	2.2 J	6.2	<500	<1.0	2,100	<10 J	<3.0	
	6/07			17	5.5	1.3 J	4.0	8.8	<500	<1.0	6,800	<100	<3.0	
	8/07			NA	NA	NA	NA	NA	NA	NA	4,000 J	<20	NA	
	11/07			5.5	5.8	1.2 J	3.0 J	7.6	<500 J	<1.0	3,700	<25	<3.0	
	3/08			6.4 [5.2]	4.5 J [2.3 J]	1.3 J [0.7 J]	3.8 J [1.9 J]	10 [4.8 J]	<500 [<500]	<1.0 [<1.0]	7,500 [5,400]	<50 [<50]	<3.0 [<3.0]	
	8/08			9.0 [9.6]	4.4 [4.6]	1.0 J [1.1 J]	2.3 J [2.4 J]	6.7 [7.0]	<500 [<500]	<1.0 [<1.0]	9,600 [7,000]	<71 [<56]	<3.0 [<3.0]	
	PZ-4D	11/89	350.8	345.9	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
		11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
11/91				<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
11/92				<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
8/95				<1,000	<5	<5	<5	<5	<1,000	<5	<5	0.8 J	<5	
10/95				NA	<5	<5	<5	<5	NA	<5	<5	<10	<5	
8/96				<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
8/97				<10	<10	<10	<10	<10	<1,000	<10	<6	<12	<10	
2/99				<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J	
3/00				<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10	
3/01				<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
4/02				<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5	
5/03				<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5	
6/04				<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10	
6/05				<5.0 J	<1.0	<5.0	<4.0	<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	<1,000	<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	
3/08				<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
PZ-4S	11/89	362.79	357.88	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	11/90			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	11/91			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	11/92			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<18	
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5	
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	<10 J	<10 J	
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10	

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Attachment B
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
PZ-4S (cont'd)	3/01	353.5	348.6	<10	<10	<10	<10	<10	<1,000	<10	<10	3 J	<10
	4/02			<14	<5	<5	<5	<10	<1,000	<5	8 (<5) ^F	<5 (<5) ^F	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/06			<5.0	<1.0	0.6 J	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.5	<1.1	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
PZ-5D ^F	11/89	353.5	348.6	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<12
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<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 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	46	<5	<5
	6/04 ^J			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<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 J	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.1	<0.5	<3.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	PZ-5S ^{KL}			11/89	361.42	356.52	<100	<1	<1	<1	<1	<1,000	<1
12/94		<10	<5	<5			<5	<5	<200	<5	<5	<10	<5
2/96		<1,000	<10	<10			<10	<10	<1,000	<10	<5	<10	<10
2/97		5 J	<10	<10			<10	<10	<1,000	<10	<5	<10	<10
9/98		<10	<10	<10			<10	<10	<1,000	<10	<5 ^H	<10	<12
6/99		<10 J	<10	<10			<10	<10	<1,000	<10	<10 J	<10 J	<10 J
7/99		<10 J	<10 J	<10 J			<10 J	<10 J	<1,000 J	<10 J	<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 J
9/01		7 J	<10	<10			<10	<10	<1,000	<10	<10	<10	<10
10/02		<25 J	<10	<10			<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
10/03		<12	<5	<5			<5	<10	<1,000	<5	<5	<5	<5
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
11/05		<5.0 J	<1.0	<5.0			<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
11/06		R	<1.0	<5.0			<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
11/07		<5.0 J	<1.0	<5.0			<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
8/08		<5.0	<1.0	<5.0			<4.0	<5.0	<500	<1.0	<5.3	<0.5	<3.0
9/09		<10 J	<1.0	<1.0			<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
PZ-8S ^I	9/98	362.6	357.7	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	

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Monitoring Memorandum
McKesson EnviroSystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
PZ-11D ^U	11/89	352.09	347.19	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-11S ^U	11/89	359.09	354.19	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-12D ^U	11/89	350	345.1	<100	<1	<1	<1	<1	<1,000	<1	<53	<53	<1
	11/90			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<1	3	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
PZ-12S ^U	11/89	360	355.1	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<3	<1,000	<1	<10	<10	<1	
	11/91			<100	<1	<1	<1	<3	6	<1	<10	<10	5
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
PZ-13D ^C	11/89	349.4	344.4	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-13S ^C	11/89	359.5	354.5	<100	<1	2	<1	2	<1,000	<1	<11	<11	<1

See Notes on Page 19.

Attachment B

Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Monitoring Memorandum

McKesson EnviroSystems Site

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. Detections exceeding New York State Department of Environmental Conservation (NYSDEC) Groundwater Standards (Part 700) are indicated by shading.
4. Replacement wells for MW-6, MW-8, MW-9, MW-10, MW-11 and MW-12D were installed 8/95.
5. Replacement wells for MW-17, MW-24S, MW-24D and TW-02 were installed 11/97 - 12/97.
6. 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 milligrams per liter. Because methanol was not detected in the original sample, the duplicate results were determined, based on the results of the data validation process, to be unacceptable. Furthermore, methanol has not been previously detected in groundwater samples collected from this monitoring well. Accordingly, the detection of methanol appears to be the result of a laboratory error and not representative of actual groundwater quality in the vicinity of monitoring well MW-23S.
7. N,N-dimethylaniline data for 10/02 sampling event for MW-1, MW-3S, MW-28, MW-29, MW-32, MW-35 and TW-01 were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. Aniline and N,N-dimethylaniline data for 10/02 sampling event for MW-30 were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. These wells and piezometers are not perimeter monitoring locations and were not resampled.
8. Aniline and N,N-dimethylaniline results of nondetect for the 6/04 sampling event at MW-18 were rejected due to the deviation from a surrogate recovery that was below 10%. This well was not resampled.
9. 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-17R, MW-18, MW-23I, MW-23S, MW-24DR, MW-24SR, MW-25, MW-33, PZ-5D and PZ-5S. In addition, the initial VOC results were also irretrievable due to laboratory equipment failure for monitoring locations MW-27, MW-28, MW-29 and MW-30; however, results for subsequent dilutions of these groundwater samples were valid, but the detection limits were high. The duplicate sample VOC results for MW-27 and MW-28 have lower detection limits and are presented in parentheses. These wells were not resampled.

Superscript Notes:

- ^A = Data presented is 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.
- ^B = Because aniline was detected at monitoring well MW-3S at a concentration of 690 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.
- ^C = Wells/piezometers MW-5, MW-14D, MW-16D, MW-17, MW-20, MW-21, MW-24S, MW-24D, TW-02, PZ-13S, and PZ-13D were abandoned 11/97 - 1/98.
- ^D = Wells/piezometers MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12D, PZ-11D, PZ-11S, PZ-12D, and PZ-12S were abandoned during OU No.1 soil remediation activities (1994).
- ^E = Wells MW-8S, MW-8D, and TW-02R were abandoned in 8/04 and replacement wells MW-8SR and TW-02RR were installed in 8/04.
- ^F = MW-17R, MW-18, and PZ-4S wells/piezometers were 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.
- ^G = MW-17R, MW-18, MW-19, MW-23S, MW-23I, 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 10/02 results were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. These wells and piezometers are perimeter monitoring locations.
- ^H = MW-18, MW-19, MW-23I, MW-23S, MW-24DR, MW-24SR, MW-28, PZ-5S and PZ-5D wells/piezometers were resampled for aniline during 12/98, because the 9/98 results were rejected due to laboratory error.
- ^I = Piezometer PZ-8S was decommissioned 8/00.
- ^J = 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.
- ^K = Wells/piezometers MW-1, MW-19, and PZ-5S were abandoned 11/10.
- ^L = Wells/piezometers, MW-22, MW-24S, MW-24D, MW-25S, MW-25D, PZ-5S and PZ-5D were eliminated from the groundwater monitoring program after the 10/10 sampling event; therefore all data for these locations are presented in this table.

Abbreviations:

AMSL = Above mean sea level (NGVD of 1929).

NA = Parameter not analyzed for.

ND = Not detected.

NS = Standard not available.

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.

E = The compound was quantitated above the calibration range.

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.

B = The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

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

U = Undetected.

R = The sample results were rejected.

-- = Sample results are not available. (See Note 9.)

See Notes on Page 19.

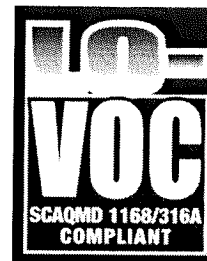
3/2/2015

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Attachment C

Material Safety Data Sheets for
the PVC Primer/Cleaner and
Cement



Material Name: P-4 PVC CEMENT

***** Section 1 - Product and Company Identification *****

MSDS #1100E

Part Numbers: Clear - 018050, 018096, 018116, 018135, 018355, 018051, 018097, 018117, 018136, 018394, 018052, 018099, 018118, 018138, 018729, 018053, 018100, 018120, 018139, 018886, 018076, 018101, 018121, 018140, 018887, 018077, 018102, 018122, 018141, 018888, 018078, 018103, 018124, 018143, 0907 205, 018079, 018105, 018125, 018144, 0907 210, 018080, 018106, 018126, 018145, 401354, 018081, 018107, 018127, 018146, 424972, 018082, 018109, 018128, 018147, B15942, 018083, 018110, 018129, 018148, B15942A, 018086, 018111, 018130, 018149, B15942B, 018092, 018112, 018131, 018154, B15942C, 018094, 018114, 018132, 018155, PV018088, 018095, 018115, 018134, 018271, PV018089

Manufacturer Information

William H. Harvey Company
4334 South 67th Street
Omaha, NE 68117

Phone: 402-331-1175

For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.

***** Section 2 - Hazards Identification *****

GHS Classification:

Flammable Liquids - Category 2
Acute Toxicity Oral - Category 4
Acute Toxicity Dermal - Category 4
Acute Toxicity Inhalation - Category 4
Eye Damage/Irritation - Category 2A
Carcinogenicity - Category 2
Specific Target Organ Toxicity Single Exposure - Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor.
Harmful if swallowed.

Material Name: P-4 PVC CEMENT

Harmful in contact with skin.
Harmful if inhaled.
Causes serious eye irritation.
Contains a chemical classified by the US EPA as a suspected possible carcinogen.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames and hot surfaces. - No smoking.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/eye protection/face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/gas/mist/vapors.
Use only outdoors or in a well-ventilated area.

Response

If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
If swallowed: Call a poison center or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
If exposed or concerned Get medical advice/attention.
In case of fire: Use dry chemical, CO₂, or foam to extinguish fire.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
109-99-9	Tetrahydrofuran	20-40
78-93-3	Methyl ethyl ketone	15-35
108-94-1	Cyclohexanone	10-20
67-64-1	Acetone	10-20
9002-86-2	PVC (Chloroethylene, polymer)	10-18

Material Name: P-4 PVC CEMENT

***** Section 4 - First Aid Measures *****

First Aid: Eyes

If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

First Aid: Skin

Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

First Aid: Inhalation

If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

***** Section 5 - Fire Fighting Measures *****

General Fire Hazards

See Section 9 for Flammability Properties.

Highly flammable liquid and vapor. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

Hazardous Combustion Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Extinguishing Media

Use dry chemical, CO₂, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.

Unsuitable Extinguishing Media

None.

Fire Fighting Equipment/Instructions

Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

***** Section 6 - Accidental Release Measures *****

Recovery and Neutralization

Stop leak if it can be done without risk.

Materials and Methods for Clean-Up

Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent such as sand, earth or other noncombusting material. Put absorbent material in covered, labeled metal containers.

Emergency Measures

Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment

Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high.

Material Name: P-4 PVC CEMENT

Environmental Precautions

Prevent liquid from entering watercourses, sewers and natural waterways.

Prevention of Secondary Hazards

None

*** * * Section 7 - Handling and Storage * * ***

Handling Procedures

Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use. Other: "Empty" containers retain product residue and can be hazardous. Follow all SDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Storage Procedures

Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

Incompatibilities

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

*** * * Section 8 - Exposure Controls / Personal Protection * * ***

Component Exposure Limits

Tetrahydrofuran (109-99-9)

ACGIH: 50 ppm TWA
100 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 200 ppm TWA; 590 mg/m³ TWA
NIOSH: 200 ppm TWA; 590 mg/m³ TWA
250 ppm STEL; 735 mg/m³ STEL

Methyl ethyl ketone (78-93-3)

ACGIH: 200 ppm TWA
300 ppm STEL
OSHA: 200 ppm TWA; 590 mg/m³ TWA
NIOSH: 200 ppm TWA; 590 mg/m³ TWA
300 ppm STEL; 885 mg/m³ STEL

Acetone (67-64-1)

ACGIH: 500 ppm TWA
750 ppm STEL
OSHA: 1000 ppm TWA; 2400 mg/m³ TWA
NIOSH: 250 ppm TWA; 590 mg/m³ TWA

Material Name: P-4 PVC CEMENT

Cyclohexanone (108-94-1)

ACGIH: 20 ppm TWA

50 ppm STEL

Skin - potential significant contribution to overall exposure by the cutaneous route

OSHA: 50 ppm TWA; 200 mg/m3 TWA

NIOSH: 25 ppm TWA; 100 mg/m3 TWA

Potential for dermal absorption

PVC (Chloroethylene, polymer) (9002-86-2)

ACGIH: 1 mg/m3 TWA (respirable fraction)

Engineering Measures

Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Personal Protective Equipment: Respiratory

For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Personal Protective Equipment: Hands

Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Personal Protective Equipment: Eyes

Safety glasses with side shields or safety goggles.

Personal Protective Equipment: Skin and Body

No additional protective equipment needed.

*** Section 9 - Physical & Chemical Properties ***

Appearance:	Clear	Odor:	Ether-like
Physical State:	Liquid	pH:	NA
Vapor Pressure:	145 mmHg @ 20°C	Vapor Density:	2.5
Boiling Point:	151°F (66°C)	Melting Point:	NA
Solubility (H2O):	Negligible	Specific Gravity:	0.90 +/- 0.02 @ 20°C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0	VOC:	84-88%
Octanol/H2O Coeff.:	ND	Flash Point:	14-23°F (-10 to -5°C)
Flash Point Method:	CCCFP	Upper Flammability Limit (UFL):	11.8
Lower Flammability Limit (LFL):	1.8	Burning Rate:	ND
Auto Ignition:	ND		

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Material Name: P-4 PVC CEMENT

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid heat, sparks, flames and other sources of ignition.

Incompatible Products

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

Hazardous Decomposition Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

***** Section 11 - Toxicological Information *****

Acute Toxicity

Component Analysis - LD50/LC50

Tetrahydrofuran (109-99-9)

Inhalation LC50 Rat 53.9 mg/L 4 h; Inhalation LC50 Rat 180 mg/L 1 h; Oral LD50 Rat 1650 mg/kg

Methyl ethyl ketone (78-93-3)

Inhalation LC50 Mouse 32 g/m³ 4 h; Oral LD50 Rat 2737 mg/kg; Dermal LD50 Rabbit 6480 mg/kg

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Cyclohexanone (108-94-1)

Inhalation LC50 Rat 10.7 mg/L 4 h; Inhalation LC50 Rat 8000 ppm 4 h; Oral LD50 Rat 800 mg/kg; Dermal LD50 Rabbit 948 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

Potential Health Effects: Ingestion

Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

Potential Health Effects: Inhalation

Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Material Name: P-4 PVC CEMENT

Carcinogenicity

A: General Product Information

In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

B: Component Carcinogenicity

Tetrahydrofuran (109-99-9)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Acetone (67-64-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Cyclohexanone (108-94-1)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

PVC (Chloroethylene, polymer) (9002-86-2)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

Reproductive Toxicity

Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Specified Target Organ General Toxicity: Single Exposure

May cause respiratory irritation. Inhalation of high concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

*** * * Section 12 - Ecological Information * * ***

Ecotoxicity

A: General Product Information

This product is not expected to be toxic to aquatic organisms.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Tetrahydrofuran (109-99-9)

Test & Species

96 Hr LC50 Pimephales promelas

1970-2360 mg/L

[flow-through]

96 Hr LC50 Pimephales promelas

2700-3600 mg/L

[static]

Conditions

Material Name: P-4 PVC CEMENT

24 Hr EC50 Daphnia magna 5930 mg/L

Methyl ethyl ketone (78-93-3)

Test & Species

Conditions

96 Hr LC50 Pimephales promelas	3130-3320 mg/L [flow-through]
48 Hr EC50 Daphnia magna	>520 mg/L
48 Hr EC50 Daphnia magna	5091 mg/L
48 Hr EC50 Daphnia magna	4025 - 6440 mg/L [Static]

Acetone (67-64-1)

Test & Species

Conditions

96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]
96 Hr LC50 Lepomis macrochirus	8300 mg/L
48 Hr EC50 Daphnia magna	10294 - 17704 mg/L [Static]
48 Hr EC50 Daphnia magna	12600 - 12700 mg/L

Cyclohexanone (108-94-1)

Test & Species

Conditions

96 Hr LC50 Pimephales promelas	481-578 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	8.9 mg/L
96 Hr EC50 Chlorella vulgaris	20 mg/L
24 Hr EC50 Daphnia magna	800 mg/L

Persistence/Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility in Soil

No information available for the product.

***** Section 13 - Disposal Considerations *****

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

***** Section 14 - Transportation Information *****

DOT Information

For Greater than 1 liter (0.3 gal):

Shipping Name: Adhesives

UN #: 1133 Hazard Class: 3 Packing Group: II

Required Label(s): Flammable Liquid

Material Name: P-4 PVC CEMENT**For Less than 1 liter (0.3 gal):****Shipping Name:** Consumer Commodity, ORM-D**IMDG Information****For Greater than 1 liter (0.3 gal):****Shipping Name:** Adhesives**UN #: 1133 Hazard Class: 3 Packing Group: II****Required Label(s):** Flammable Liquid**For Less than 1 liter (0.3 gal):****Shipping Name:** Adhesives**UN #: 1133 Hazard Class: 3 Packing Group: II****Required Label(s):** None (Limited Quantities are expected from labeling)*** * * Section 15 - Regulatory Information * * *****Regulatory Information****US Federal Regulations****Component Analysis**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Tetrahydrofuran (109-99-9)

CERCLA: 1000 lb final RQ; 454 kg final RQ

Methyl ethyl ketone (78-93-3)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Acetone (67-64-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Cyclohexanone (108-94-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

State Regulations**Component Analysis - State**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Tetrahydrofuran	109-99-9	Yes	Yes	Yes	Yes	Yes	No
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes	No
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes	No
Cyclohexanone	108-94-1	Yes	Yes	Yes	Yes	Yes	No
PVC (Chloroethylene, polymer)	9002-86-2	No	No	No	Yes	No	No

Material Name: P-4 PVC CEMENT**Component Analysis - WHMIS IDL**

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Tetrahydrofuran	109-99-9	1 %
Methyl ethyl ketone	78-93-3	1 %
Acetone	67-64-1	1 %
Cyclohexanone	108-94-1	0.1 %

Additional Regulatory Information**A: General Product Information**

This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. The use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 will minimize exposure to these chemicals.

B: Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Tetrahydrofuran	109-99-9	Yes	DSL	EINECS
Methyl ethyl ketone	78-93-3	Yes	DSL	EINECS
Acetone	67-64-1	Yes	DSL	EINECS
Cyclohexanone	108-94-1	Yes	DSL	EINECS
PVC (Chloroethylene, polymer)	9002-86-2	Yes	DSL	ELINCS

*** * * Section 16 - Other Information * * *****Key/Legend**

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

NFPA and HMIS:

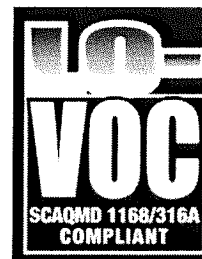
NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None

HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly do not make warranties, nor assume any liability for its use.

End of Sheet



Material Name: PURPLE PRIMER/CLEANER

*** Section 1 - Product and Company Identification ***

MSDS #1401E

Part Numbers: 019150

Manufacturer Information

William H. Harvey Company
4334 South 67th Street
Omaha, NE 68117

Phone: 402-331-1175

For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1- 703-527-3887.

*** Section 2 - Hazards Identification ***

GHS Classification:

Flammable Liquids - Category 2
Acute Toxicity Oral - Category 4
Acute Toxicity Dermal - Category 4
Acute Toxicity Inhalation - Category 4
Eye Damage/Irritation - Category 2A
Carcinogenicity - Category 2
Specific Target Organ Toxicity Single Exposure - Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor.
Harmful if swallowed.
Harmful in contact with skin.
Harmful if inhaled.
Causes serious eye irritation.
Contains a chemical classified by the US EPA as a suspected possible carcinogen.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Material Name: PURPLE PRIMER/CLEANER

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames and hot surfaces. - No smoking.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/eye protection/face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/gas/mist/vapors.
Use only outdoors or in a well-ventilated area.

Response

If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
If swallowed: Call a poison center or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
If exposed or concerned: Get medical advice/attention.
In case of fire: Use dry chemical, CO2, or foam to extinguish fire.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

***** Section 3 - Composition / Information on Ingredients *****

CAS #	Component	Percent
67-64-1	Acetone	
78-93-3	Methyl ethyl ketone	60-90
108-94-1	Cyclohexanone	10-20
109-99-9	Tetrahydrofuran	3-10
		0-10

***** Section 4 - First Aid Measures *****

First Aid: Eyes

If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

First Aid: Skin

Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.

Material Name: PURPLE PRIMER/CLEANER

First Aid: Ingestion

DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

First Aid: Inhalation

If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

***** Section 5 - Fire Fighting Measures *****

General Fire Hazards

See Section 9 for Flammability Properties.

Highly flammable liquid and vapor. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

Hazardous Combustion Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Extinguishing Media

Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.

Unsuitable Extinguishing Media

None.

Fire Fighting Equipment/Instructions

Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

***** Section 6 - Accidental Release Measures *****

Recovery and Neutralization

Stop leak if it can be done without risk.

Materials and Methods for Clean-Up

Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent such as sand, earth or other noncombusting material. Put absorbent material in covered, labeled metal containers.

Emergency Measures

Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment

Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high.

Environmental Precautions

Prevent liquid from entering watercourses, sewers and natural waterways.

Prevention of Secondary Hazards

None

Material Name: PURPLE PRIMER/CLEANER

* * * **Section 7 - Handling and Storage** * * *

Handling Procedures

Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use. "Empty" containers retain product residue and can be hazardous. Follow all SDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Storage Procedures

Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

Incompatibilities

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

* * * **Section 8 - Exposure Controls / Personal Protection** * * *

Component Exposure Limits

Acetone (67-64-1)

ACGIH: 500 ppm TWA
750 ppm STEL
OSHA: 1000 ppm TWA; 2400 mg/m³ TWA
NIOSH: 250 ppm TWA; 590 mg/m³ TWA

Methyl ethyl ketone (78-93-3)

ACGIH: 200 ppm TWA
300 ppm STEL
OSHA: 200 ppm TWA; 590 mg/m³ TWA
NIOSH: 200 ppm TWA; 590 mg/m³ TWA
300 ppm STEL; 885 mg/m³ STEL

Cyclohexanone (108-94-1)

ACGIH: 20 ppm TWA
50 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 50 ppm TWA; 200 mg/m³ TWA
NIOSH: 25 ppm TWA; 100 mg/m³ TWA
Potential for dermal absorption

Tetrahydrofuran (109-99-9)

ACGIH: 50 ppm TWA
100 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 200 ppm TWA; 590 mg/m³ TWA
NIOSH: 200 ppm TWA; 590 mg/m³ TWA
250 ppm STEL; 735 mg/m³ STEL

Material Name: PURPLE PRIMER/CLEANER

Engineering Measures

Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Personal Protective Equipment: Respiratory

For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Personal Protective Equipment: Hands

Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Personal Protective Equipment: Eyes

Safety glasses with side shields or safety goggles.

Personal Protective Equipment: Skin and Body

No additional protective equipment needed.

*** Section 9 - Physical & Chemical Properties ***

Appearance:	Purple	Odor:	Ether-like
Physical State:	Liquid	pH:	NA
Vapor Pressure:	145 mmHg @ 20°C	Vapor Density:	2.5
Boiling Point:	151°F (66°C)	Melting Point:	NA
Solubility (H2O):	Negligible	Specific Gravity:	0.81 +/- 0.02 @ 20°C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0	VOC:	99.96%
Octanol/H2O Coeff.:	ND	Flash Point:	14-23°F (-10 to -5°C)
Flash Point Method:	CCCFP	Upper Flammability Limit (UFL):	11.8
Lower Flammability Limit (LFL):	1.8	Burning Rate:	ND
Auto Ignition:	ND		

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid heat, sparks, flames and other sources of ignition.

Incompatible Products

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

Hazardous Decomposition Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Material Name: PURPLE PRIMER/CLEANER

* * * **Section 11 - Toxicological Information** * * *

Acute Toxicity

Component Analysis - LD50/LC50

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Methyl ethyl ketone (78-93-3)

Inhalation LC50 Mouse 32 g/m³ 4 h; Oral LD50 Rat 2737 mg/kg; Dermal LD50 Rabbit 6480 mg/kg

Cyclohexanone (108-94-1)

Inhalation LC50 Rat 10.7 mg/L 4 h; Inhalation LC50 Rat 8000 ppm 4 h; Oral LD50 Rat 800 mg/kg; Dermal LD50 Rabbit 948 mg/kg

Tetrahydrofuran (109-99-9)

Inhalation LC50 Rat 53.9 mg/L 4 h; Inhalation LC50 Rat 180 mg/L 1 h; Oral LD50 Rat 1650 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

Potential Health Effects: Ingestion

Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

Potential Health Effects: Inhalation

Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Carcinogenicity

A: General Product Information

In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

Material Name: PURPLE PRIMER/CLEANER

B: Component Carcinogenicity

Acetone (67-64-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Cyclohexanone (108-94-1)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Tetrahydrofuran (109-99-9)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Reproductive Toxicity

Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Specified Target Organ General Toxicity: Single Exposure

May cause respiratory irritation. Inhalation of high concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

***** Section 12 - Ecological Information *****

Ecotoxicity

A: General Product Information

This product is not expected to be toxic to aquatic organisms.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Acetone (67-64-1)

Test & Species

Conditions

96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L
	[static]
96 Hr LC50 Lepomis macrochirus	8300 mg/L
48 Hr EC50 Daphnia magna	10294 - 17704 mg/L
	[Static]
48 Hr EC50 Daphnia magna	12600 - 12700 mg/L

Methyl ethyl ketone (78-93-3)

Test & Species

Conditions

96 Hr LC50 Pimephales promelas	3130-3320 mg/L
	[flow-through]
48 Hr EC50 Daphnia magna	>520 mg/L
48 Hr EC50 Daphnia magna	5091 mg/L
48 Hr EC50 Daphnia magna	4025 - 6440 mg/L
	[Static]

Material Name: PURPLE PRIMER/CLEANER

Cyclohexanone (108-94-1)

Test & Species

96 Hr LC50 Pimephales promelas	481-578 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	8.9 mg/L
96 Hr EC50 Chlorella vulgaris	20 mg/L
24 Hr EC50 Daphnia magna	800 mg/L

Conditions

Tetrahydrofuran (109-99-9)

Test & Species

96 Hr LC50 Pimephales promelas	1970-2360 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	2700-3600 mg/L [static]
24 Hr EC50 Daphnia magna	5930 mg/L

Conditions

Persistence/Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility in Soil

No information available for the product.

***** Section 13 - Disposal Considerations *****

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

***** Section 14 - Transportation Information *****

DOT Information

For Greater than 1 liter (0.3 gal):

Shipping Name: Flammable Liquid, n.o.s (Methyl Ethyl Ketone, Acetone)

UN #: 1993 Hazard Class: 3 Packing Group: II

Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):

Shipping Name: Consumer Commodity, ORM-D

IMDG Information

For Greater than 1 liter (0.3 gal):

Shipping Name: Flammable Liquid, n.o.s (Methyl Ethyl Ketone, Acetone)

UN #: 1993 Hazard Class: 3 Packing Group: II

Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):

Shipping Name: Flammable Liquid, n.o.s (Limited Quantity)

UN #: 1993 Hazard Class: 3 Packing Group: II

Material Name: PURPLE PRIMER/CLEANER

Required Label(s): None (Limited Quantities are expected from labeling)

***** Section 15 - Regulatory Information *****

Regulatory Information

US Federal Regulations

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Acetone (67-64-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Methyl ethyl ketone (78-93-3)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Cyclohexanone (108-94-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Tetrahydrofuran (109-99-9)

CERCLA: 1000 lb final RQ; 454 kg final RQ

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes	No
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes	No
Cyclohexanone	108-94-1	Yes	Yes	Yes	Yes	Yes	No
Tetrahydrofuran	109-99-9	Yes	Yes	Yes	Yes	Yes	No

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Acetone	67-64-1	1 %
Methyl ethyl ketone	78-93-3	1 %
Cyclohexanone	108-94-1	0.1 %
Tetrahydrofuran	109-99-9	1 %

Additional Regulatory Information

A: General Product Information

This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. The use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 will minimize exposure to these chemicals.

Material Name: PURPLE PRIMER/CLEANER

B: Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Acetone	67-64-1	Yes	DSL	EINECS
Methyl ethyl ketone	78-93-3	Yes	DSL	EINECS
Cyclohexanone	108-94-1	Yes	DSL	EINECS
Tetrahydrofuran	109-99-9	Yes	DSL	EINECS

***** Section 16 - Other Information *****

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None

HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly do not make warranties, nor assume any liability for its use.

End of Sheet



Attachment D

Statistical Analyses

Attachment D. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Discussion of Statistical Results

To evaluate the continued effectiveness of the Operable Unit 2 (OU2) remedial action and the need (if any) to re-start the remedial process, technical analyses were performed to evaluate whether constituent of concern (COC) concentrations: (1) rebound substantially above the pre-shutdown COC concentrations based on an evaluation of the most up-to-date dataset, and (2) continue to trend at asymptotic levels. The technical analyses performed, as described below, are the same as those detailed in the January 2013 Periodic Review Report (PRR; ARCADIS 2013a) and have been updated to include groundwater data through October 2014.

Technical Analyses

To evaluate whether total COC molar concentrations have reached asymptotic conditions (where COC levels are no longer significantly decreasing or increasing), three different analyses were performed using each area's annual data from 1998 to October 2014.¹ The first analysis involved a calculation of overall percent removal of total COC molar concentrations (i.e., moles per liter) from 1998 to 2014. If the overall percent removal during the 17-year period was within 1 percent of complete (100 percent) removal, then it was implied that COC levels approached asymptotic conditions as removal cannot exceed 100 percent.

$$\frac{(\text{Initial Molar Concentration}) - (\text{2014 Molar Concentration})}{(\text{Initial Molar Concentration})} * 100 = \% \text{ reduction}$$

¹Total COC molar concentrations were calculated for each Area by converting COC concentrations (reported as µg/L) to molar concentrations (i.e., moles per liter), adding together the nine COC molar concentrations (excluding methanol) for each sampling date, and then averaging molar concentrations for the year. The basis for excluding methanol from the technical analyses was detailed in the January 2013 PRR and is presented below.

"Methanol values have been excluded from the analyses in order to accurately portray the temporal trends in COCs at the site. Methanol has a very high detection limit relative to the other COCs evaluated. The methanol detection limit was 1,000 micrograms per liter (µg/L) until 2006 when lowered to 500 µg/L. In the calculation for total COC molar COC concentrations, the use of half the detection limit for non-detects of methanol tends to misrepresent the total COC molar concentration present and confound interpretation of trends regarding COC concentrations.

In Area 1, this problem is most profound due to the low concentrations present compared to the other two Areas. Half the detection limit for methanol represents 17 percent of the initial molar concentration of all COCs present in 1998, and frequently represents more than 95 percent of the calculated COCs present. In Area 1, there have been only six detected methanol concentrations in 137 reported samples (95.6 percent non-detect); five of these six were during 2009, when sample contamination was suspected.

In Area 2, methanol was only detected seven times in 108 reported samples (93.5 percent non-detect), with three of the seven during the September 2009 sampling round when sample contamination was suspected.

In Area 3, there is stronger evidence that methanol was actually present at location MW-8SR in significant levels, as methanol was reported in the 11 samples taken prior to 2002. Since that time, only one of 17 reported samples has yielded detectable methanol concentrations at that location. At the other Area 3 locations, there were a total of three detections (including one in September 2009) in 50 samples."

Attachment D. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

The second analysis used a first-order decay function [$C_t = C_0 * e^{kt}$, where C_t = total COC molar concentration at time t , C_0 = total COC molar concentration in 2002, k = the decay coefficient, and t = number of years since 2002] of total COC molar concentrations from 2002 to 2014 to determine the decay rate and half-life of COC concentrations in order to evaluate how rapidly COC levels decreased over time. If the COC levels exhibited statistically significant exponential decay over the 12-year period and the percentage of total COCs remaining was relatively small, then it was implied that COC concentrations approached asymptotic conditions.

$$\ln(C_t) = k * \ln(t) + b$$

$$C_t = e^{kt} * e^b$$

$$C_t = C_0 * e^{kt}, \text{ where } e^b = C_0$$

$$\text{Decay Rate} = (1 - e^k) * 100$$

$$\text{Half-Life (years)} = \ln(1/2)/k$$

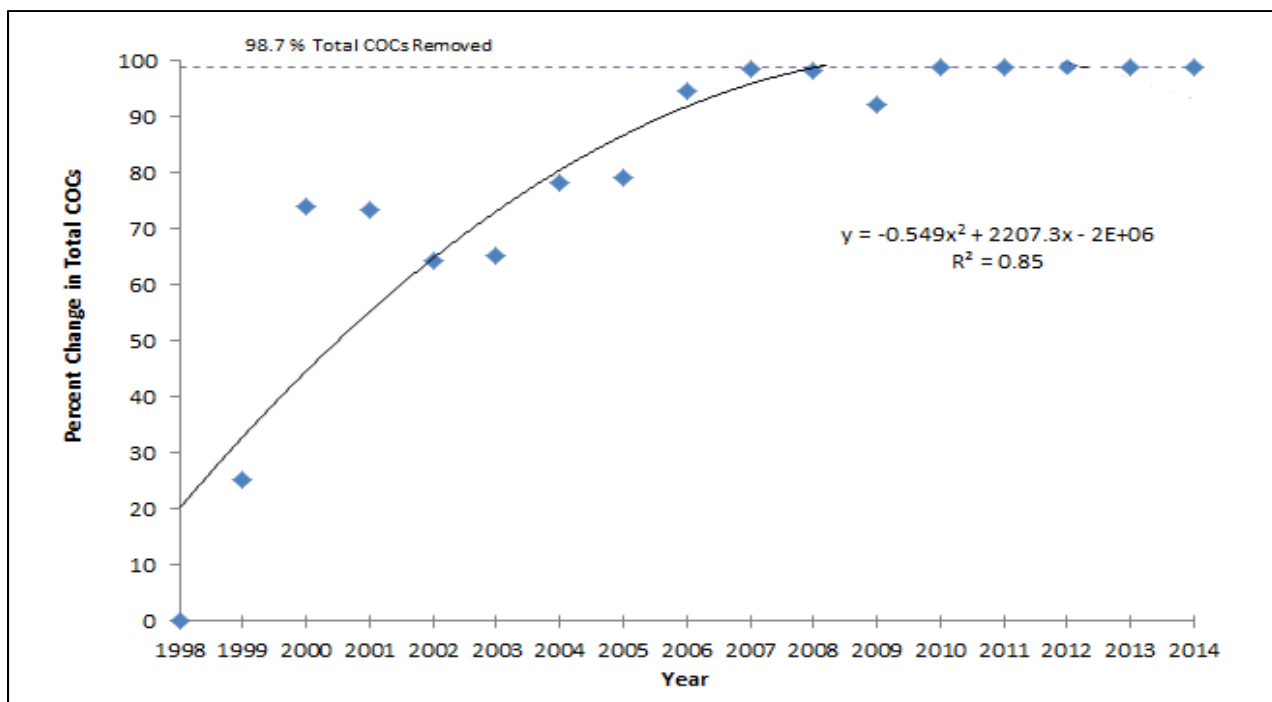
The third analysis involved a linear regression between time (year) and percent reduction in total COC molar concentrations from 2008 to 2014. If the slope of the COC concentrations did not significantly differ from zero, then the data indicate that the asymptote was effectively reached. The data and results of the analyses for each area are described below.

Area 1

Between 1998 and 2014, the overall percent reduction in COC levels in Area 1 (i.e., monitoring wells MW-9S, MW-31, MW-32, MW-33, and TW-01) was 98.7 percent, as shown on Figure D-1. As COC levels were within 1 percent of complete removal (based on two significant figures), the data indicate that COC levels approached asymptotic conditions by 2012 and continued through October 2014.

$$\frac{(2.9\text{E-}05 \text{ mol/L}) - (3.7\text{E-}07 \text{ mol/L})}{(2.9\text{E-}05 \text{ mol/L})} * 100 = 98.7\% \text{ reduction}$$

Figure D-1: Area 1 Percent Change in Total COCs



The decay relation $[C_t = 8.06E-06 * e^{-0.3243t}]$ for total COC molar concentrations from 2002 to 2014 indicates that total COC molar concentrations decreased relatively quickly and consistently over the 12-year period, as shown on Figure D-2. The decay coefficient (k) for total COC molar concentrations since 2002 is -0.3243 (probability of occurrence $[p] = 8.7E-05$, confidence interval $[a] = 0.05$, correlation coefficient $[r^2] = 0.77$). This decay coefficient results in a half-life of 2.1 years and a statistically significant annual decay rate of 28 percent per year (95 percent confidence interval ranging from 19 to 36 percent per year). As COC molar concentrations exhibited statistically significant exponential decay with less than 1 percent of total COCs remaining in 2014, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through October 2014.

$$\ln(C_t) = -0.3243 * \ln(t) + 637.52$$

$$C_t = 8.06E - 06 * e^{-0.3243t}$$

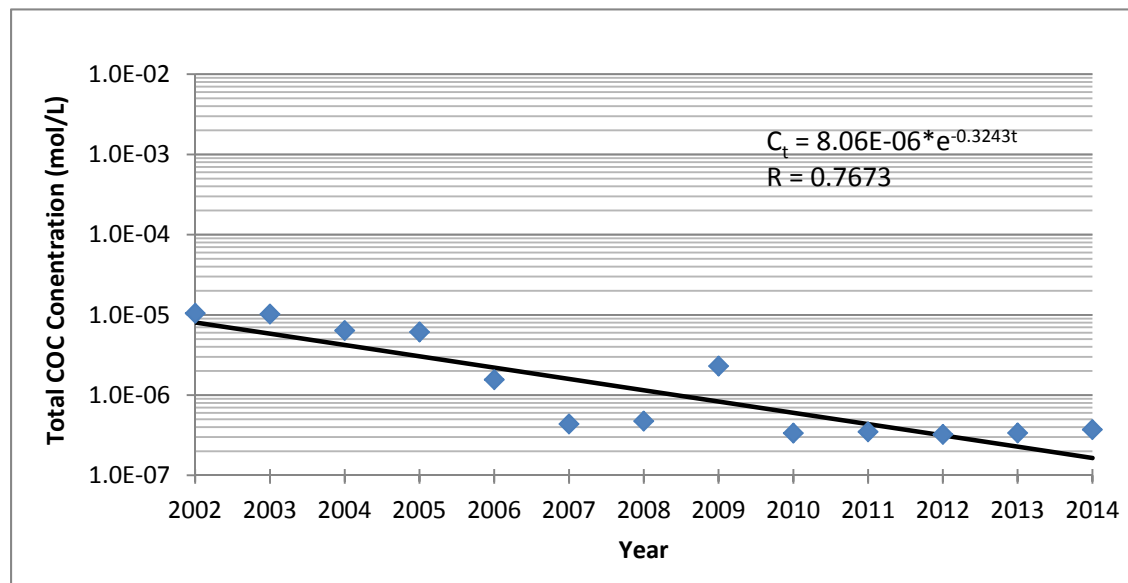
$$\text{Decay Rate: } (1 - e^{-0.3243}) * 100 = 28\%$$

$$\text{Half-Life: } \ln(1/2)/(-0.3243) = 2.1 \text{ years}$$

Attachment D. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Figure D-2: Area 1 Decay Function of Total COC Concentrations



A regression between time (2008 to 2014) and percent total COC reduction further support that COC concentrations in Area 1 approached asymptotic conditions of 100 percent removal. The computed non-significant mean slope of 0.52 percent COC reduction per year ($p = 0.32$, $\alpha = 0.05$, $r^2 = 0.20$), with the 95 percent confidence interval ranging from -0.67 to 1.7 percent per year, indicates that total COC molar concentrations in Area 1 most likely did not significantly decrease nor increase within the last 7 years, suggesting that COC levels effectively reached an asymptote by 2012 and continued through October 2014.

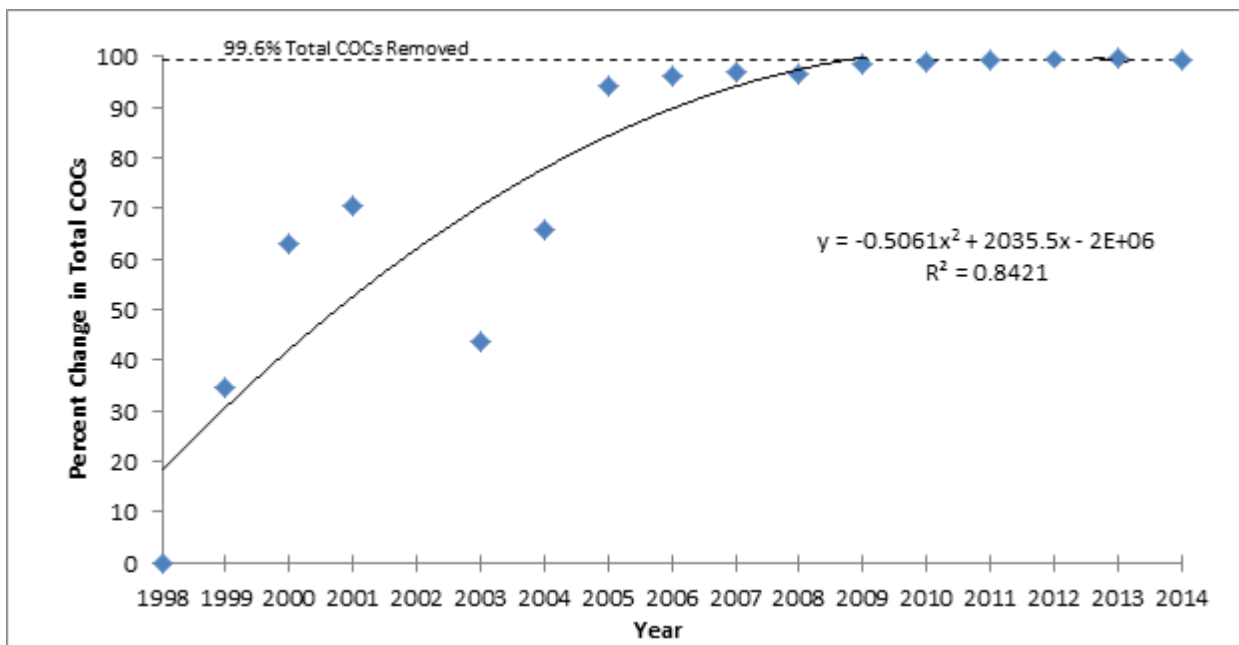
Area 2

The overall percent reduction in COC levels in Area 2 (i.e., monitoring wells MW-36R, TW-02RRR, MW-34, and MW-35) from 1998 to 2014 was 99.6 percent, as shown on Figure D-3. As COC levels were within 1 percent of complete removal, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through October 2014.

$$\frac{(6.1E-04 \text{ mol/L}) - (2.6E-06 \text{ mol/L})}{(6.1E-04 \text{ mol/L})} * 100 = 99.6\% \text{ reduction}$$

Attachment D. Statistical Analyses
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Figure D-3: Area 2 Percent Change in Total COCs



In Area 2, aniline contributions dominated the overall COC molar concentrations. The concentrations of constituents other than aniline quickly achieved 99 percent reduction or more in the first few years, while aniline data actually increased, reaching a maximum in 2002. At that time, aniline accounted for approximately 99.7 percent of the total COC molar concentration. Since 2002, Area 2 appears to be approaching asymptotic conditions of 100 percent removal, as noted by the decay function of total COC molar concentrations from 2002 to 2014, as shown on Figure D-4. Using a first-order decay relation [$C_t = 4.00E-04 * e^{-0.5124t}$], the total molar concentration of total COCs has an estimated decay coefficient (k) of -0.5124 ($p = 7.6E-07$, $\alpha = 0.05$, $r^2 = 0.90$) with a corresponding half-life of 1.4 years and a statistically significant annual decay rate of 40 percent per year (95 percent confidence interval ranging from 33 to 47 percent per year). After a 12-year period (2002 - 2014), 0.17 percent of the total COC molar concentration remained. As COC molar concentrations exhibited statistically significant exponential decay with less than 1 percent of total COCs remaining in 2014, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through October 2014.

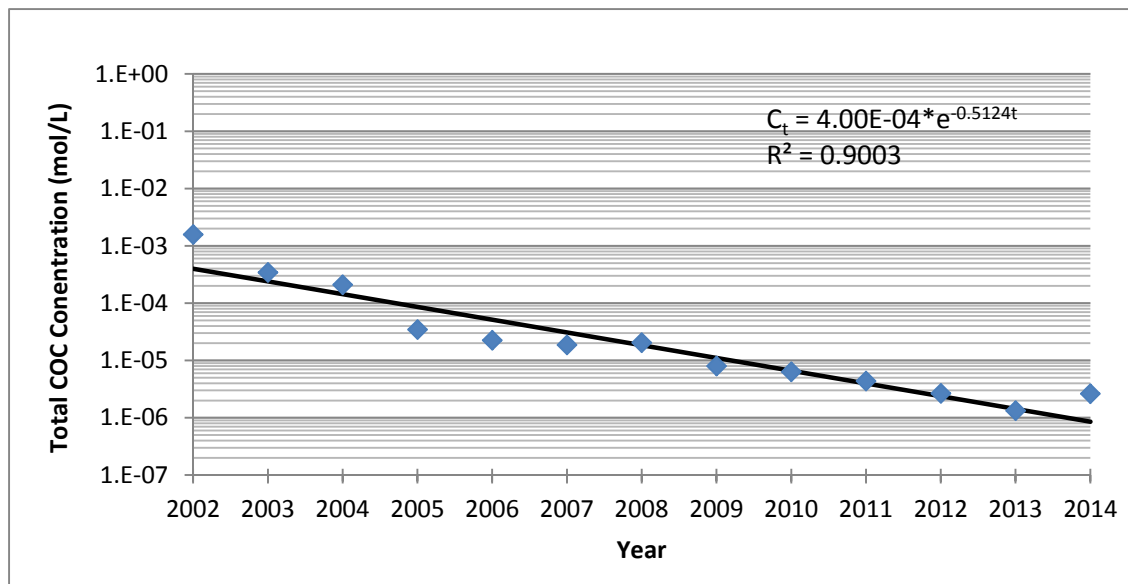
$$\ln(C_t) = -0.5124 * \ln(t) + 1018$$

$$C_t = 4.00E - 04 * e^{-0.5124t}$$

$$\text{Decay Rate: } (1 - e^{-0.5124}) * 100 = 40\%$$

$$\text{Half-Life: } \ln(1/2)/(-0.5124) = 1.4 \text{ years}$$

Figure D-4: Area 2 Decay Function of Total COC Concentrations



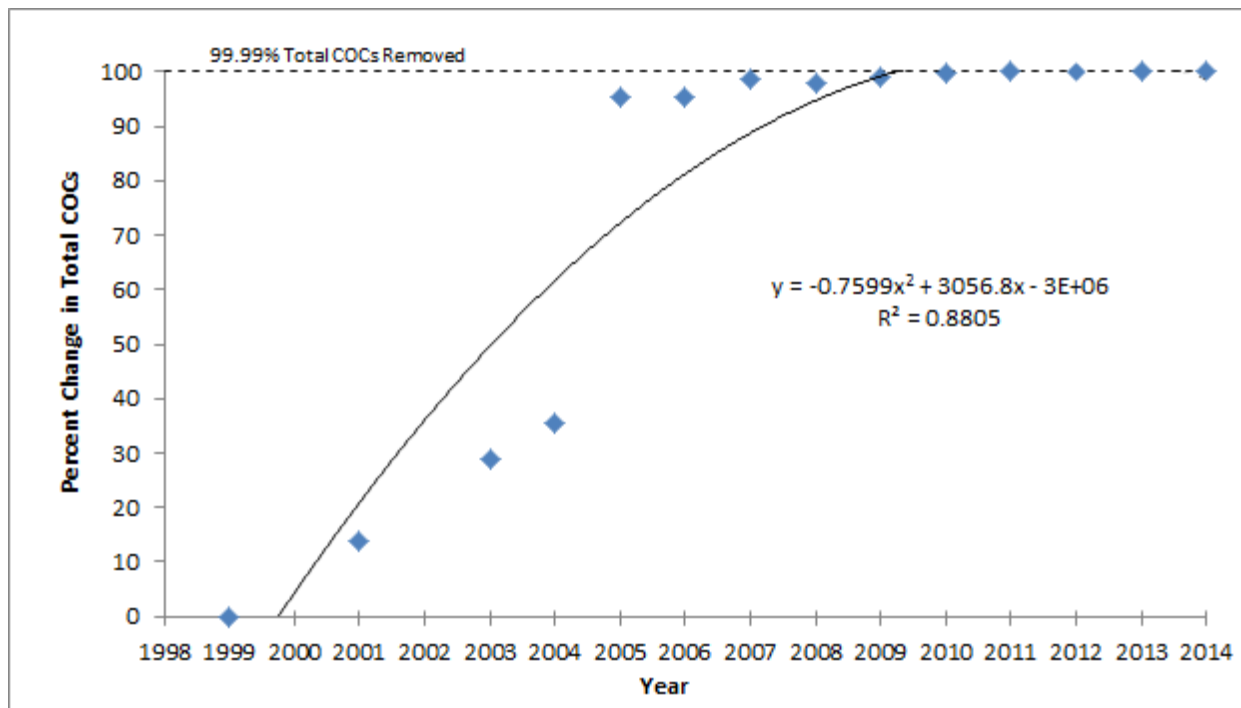
The regression between time (2008 to 2014) and percent total COC reduction indicates a continuing slight positive statistically significant mean slope of 0.41 percent reduction per year ($p = 0.021$, $\alpha = 0.05$, $r^2 = 0.69$), with the 95 percent confidence interval ranging from 0.092 to 0.73 percent per year. Despite this minor increase in the percent reduction in total COC molar concentration, Area 2 appeared to be approaching asymptotic conditions by 2012 and continued to trend at asymptotic levels through October 2014, as noted by the lower end of the 95 percent confidence interval approaching zero percent COC reduction per year, the rapid decay rate, and the high degree of total COC removal within the last 5 years (>98.9 percent).

Area 3

The overall percent reduction in COC levels from 1999 to 2014 in Area 3 (i.e., monitoring wells MW-8SR, MW-27, and MW-28) was 99.9 percent, as shown on Figure D-5. As COC levels were within 1 percent of complete removal, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through October 2014.

$$\frac{(4.1\text{E-}03 \text{ mol/L}) - (3.8\text{E-}07 \text{ mol/L})}{(4.1\text{E-}03 \text{ mol/L})} * 100 = 99.9\% \text{ reduction}$$

Figure D-5: Area 3 Percent Change in Total COCs



COC molar concentration data were erratic prior to 2002, when aniline, N,N-dimethylaniline, and methylene chloride were major contributors. N,N-dimethylaniline and methylene chloride were essentially gone (>99.9 percent removal) by 2005. The decay relation $[C_t = 7.43E-03 * e^{-0.901t}]$ for total COC molar concentrations from 2002 to 2014 supports that COC molar concentrations in Area 3 rapidly decreased over the 12-year period, effectively approaching asymptotic conditions of 100 percent removal by 2012 and continuing through October 2014, as shown on Figure D-6. The decay coefficient (k) for total COC molar concentrations is -0.901 ($p = 1.92E-08$, $\alpha = 0.05$, $r^2 = 0.95$), with a half-life is 0.77 years and a statistically significant annual decay rate of 60 percent per year (95 percent confidence interval ranging from 53 to 65 percent per year). After a 12-year period (2002 to 2014), 0.0077 percent of the total COC molar concentration remained. As COC molar concentrations exhibited statistically significant exponential decay, with less than 1 percent of total COCs remaining in 2014, the data indicate that COC levels approached asymptotic conditions in 2012 and continued through October 2014.

$$\ln(C_t) = -0.901 * \ln(t) + 1799$$

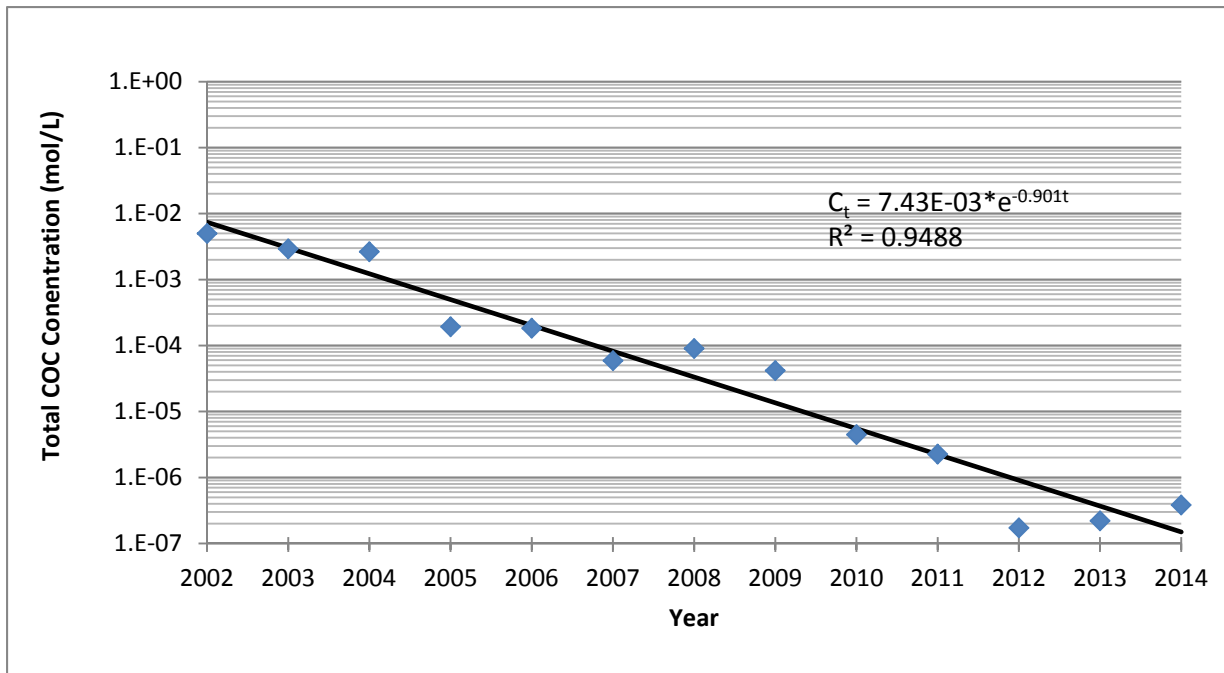
$$C_t = 7.43E - 03 * e^{-0.901t}$$

$$\text{Decay Rate: } (1 - e^{-0.901}) * 100 = 60\%$$

$$\text{Half-Life: } \ln(1/2)/(-0.901) = 0.77 \text{ years}$$

Attachment D. Statistical Analyses
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Figure D-6: Area 3 Decay Function of Total COC Concentrations



The regression between time (2008 to 2014) and percent total COC reduction indicates a continuing slight positive statistically significant mean slope of 0.31 percent COC reduction per year ($p = 0.031$, $\alpha = 0.05$, $r^2 = 0.64$), with the 95 percent confidence interval ranging from 0.042 to 0.58 percent per year. Despite this minor increase in the percent reduction in total COC molar concentrations, Area 3 approached asymptotic conditions in 2012 and continued to trend at asymptotic levels through October 2014, as noted by the rapid decay rate and the high degree of COC removal within the last 5 years (>99.9 percent).



Mr. Payson Long
Remedial Bureau E
Section D
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, New York 12233-7017

Subject:

McKesson EnviroSystems Site
400 West Bear Street
Syracuse, New York
Site No. 7-34-020

Dear Mr. Long:

ARCADIS of New York, Inc. (ARCADIS) has prepared this monitoring memorandum for the McKesson EnviroSystems Site located at 400 West Bear Street in Syracuse, New York (Site). ARCADIS prepared this memorandum on behalf of McKesson Corporation to describe groundwater monitoring activities and present the results of the April 2015 monitoring event conducted at the Site in and around Areas 1, 2, and 3 (Figure 1). This is the second biannual groundwater monitoring event conducted after 1 year of quarterly monitoring, following the April 10, 2013 shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems. This biannual monitoring event was conducted as part of a post-shutdown process control monitoring program.

The New York State Department of Environmental Conservation (NYSDEC) approved shutdown of the Operable Unit No. 2 (OU2) remedial system in a letter dated April 11, 2013 (NYSDEC 2013). The letter required implementation of a post-shutdown process control monitoring program to determine the continued effectiveness of the OU2 remedial action on the remaining contamination (NYSDEC 2013). The post-shutdown monitoring program is a continuation of the constituent of concern (COC) and hydraulic process control monitoring program that has been conducted at the Site since OU2 treatment activities commenced in 1998.

The main objective of this monitoring memorandum, consistent with the previous five memoranda for the quarterly and biannual monitoring events conducted since July 2013 (ARCADIS 2013a, 2014a, 2014b, 2014c, and 2015), is to provide timely updates of groundwater conditions for monitoring events performed at the Site. This monitoring memorandum provides information about the following:

Imagine the result

ARCADIS of New York, Inc.
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Syracuse
New York 13214-0066
Tel 315 446 9120
Fax 315 449 0017
www.arcadis-us.com

ENVIRONMENTAL

Date:

June 11, 2015

Contact:

Dawn E. Penniman

Phone:

315.671.9229

Email:

Dawn.Penniman@arcadis.com

Our ref:

B0026003.2015.00190

- Goals of the post-shutdown process control monitoring program
- April 2015 post-shutdown process control monitoring activities
- April 2015 monitoring results
- Data evaluation and conclusions
- Proposed next steps

Goals of the Post-Shutdown Process Control Monitoring Program

The goals of the post-shutdown process control monitoring program are to determine the continued effectiveness of the OU2 remedial action and evaluate the need (if any) to restart remedial processes. As outlined in the October 2013 Periodic Review Report (PRR; ARCADIS 2013b), the remedial action will be considered to have “continued effectiveness” if COC concentrations meet the following conditions:

- Do not rebound substantially above the pre-shutdown COC concentrations based on an evaluation of the most up-to-date dataset.
- Continue to trend at asymptotic levels.
- Do not migrate beyond the Site boundary above NYSDEC Class GA Groundwater Quality Standards (NYSDEC 1998), as determined by sampling from the sentinel and downgradient perimeter monitoring wells/piezometers.

Additionally, the post-shutdown process control monitoring program provides an evaluation of groundwater flow conditions following the April 2013 shutdown of the closed loop hydraulic system.

April 2015 Post-Shutdown Process Control Monitoring Activities

The post-shutdown process control monitoring event consisted of hydraulic monitoring on March 30, 2015 and COC monitoring from March 31 through April 3, 2015. Table 1 identifies each of the hydraulic and COC monitoring locations, shown on Figure 1. Hydraulic monitoring was also conducted on May 14, 2015 to confirm field conditions; monitoring well MW-4S and piezometer PZ-4S were included in the April 2015 COC monitoring program, as this is the last groundwater monitoring event identified in the Site Management Plan (SMP; ARCADIS 2014d). In addition, the presence or absence of non-aqueous phase liquid (NAPL) was assessed in the monitoring wells and

piezometers included in the monitoring program, as well as the collection sump. During this monitoring event, NAPL was not observed in the monitoring wells, piezometers, or the collection sump.

Hydraulic Monitoring

During hydraulic monitoring, groundwater level measurements were obtained at monitoring wells and piezometers that are screened entirely within the sand layer of the shallow hydrogeologic unit and located in and around Areas 1, 2, and 3. Additionally, the Barge Canal surface-water elevation was obtained from measurements taken from a reference point on the Bear Street Bridge, which passes over the canal.

Constituent of Concern Monitoring

The groundwater COCs for the Site are acetone, benzene, toluene, ethylbenzene, xylenes (total), methanol, trichloroethene, aniline, N,N-dimethylaniline, and methylene chloride. TestAmerica Laboratories, Inc. (TestAmerica) in Edison, New Jersey analyzed the groundwater samples for COCs via U.S. Environmental Protection Agency (USEPA) Methods 8260C (volatile organic compounds) and 8270D (semivolatile organic compounds), and TestAmerica in Amherst, New York via Method USEPA 8015D (methanol). TestAmerica is accredited pursuant to the New York State Department of Health Environmental Laboratory Accreditation Program for these analyses. ARCADIS validated laboratory analytical results using the Tier III full validation process. Attachment A presents copies of the validated analytical laboratory reports associated with the April 2015 monitoring event.

April 2015 Monitoring Results

Hydraulic Monitoring Results

Table 2 presents groundwater level measurements obtained during the March 30 and May 14, 2015 hydraulic monitoring event, as well as those obtained since October 2006. Figure 2 depicts a potentiometric surface of the Site's shallow hydrogeologic unit using the March 30, 2015 dataset, which shows slight groundwater mounding in some areas caused by saturated conditions at the Site from recent snow melt. This groundwater mounding is not present on the May 14, 2015 potentiometric surface map (Figure 3). A comparison of the potentiometric surface maps generated during the six post-shutdown process control monitoring events demonstrates that hydraulic conditions have remained consistent following the April 2013 shutdown of the closed loop hydraulic system in Area 3.

When comparing recent (attached) potentiometric surface maps to those maps generated (and presented in previous PRRs and monitoring memoranda) using groundwater elevation data obtained prior to system shutdown, the following conclusions, as presented in the first monitoring memorandum (ARCADIS 2013a), remain true:

- The closed depression around the groundwater withdrawal trench is no longer present.
- The potentiometric surface of the shallow hydrogeologic unit sand layer following the April 2013 system shutdown is generally consistent with the potentiometric surface prior to the 1998 implementation of the closed loop hydraulic system in Area 3.

Constituent of Concern Monitoring Results

Table 3 summarizes COC groundwater analytical results (March 2009 through April 2015), which are shown on Figures 4 (Areas 1 and 2) and 5 (Area 3). A summary of historical groundwater monitoring data (March 1988 through August 2008) is provided in Attachment B. COC groundwater analytical results are compared to the NYSDEC Groundwater Quality Standards presented in the Technical and Operational Guidance Series 1.1.1.1 (NYSDEC 1998). The April 2015 COC results are consistent with those obtained following the April 2013 shutdown of the in-situ bioremediation treatment system, as well as those obtained prior to shutdown. Concentrations for most of the COCs were either not detected or were below their respective NYSDEC Class GA Groundwater Quality Standards in each area.

Analytical results for the April 2015 COC monitoring event are summarized below for each area (Areas 1, 2, and 3), as well as for sentinel and downgradient perimeter monitoring locations.

Area 1

At the five monitoring locations in Area 1 (MW-9S, MW-31, MW-32, MW-33, and TW-01), four COCs (benzene [MW-9S and MW-31 only], ethylbenzene [MW-9S only], xylenes [MW-9S and MW-31 only], and N,N-dimethylaniline) were detected at concentrations slightly exceeding their respective standards (Table 3 and Figure 4).

Area 2

At three out of the four monitoring locations in Area 2 (MW-34, TW-02RRR, and MW-36R), three COCs (benzene [MW-34 and TW-02RRR only], aniline [MW-36R and TW-02RRR only], and N,N-dimethylaniline) were detected at concentrations above their respective standards. At MW-35, all COCs were non-detect or below the NYSDEC groundwater quality standards (Table 3 and Figure 4).

Area 3

At four out of the five monitoring locations in Area 3 (MW-8SR, MW-27, MW-28, and MW-30), a maximum of four COCs (benzene [MW-8SR, MW-27, and MW-28 only], total xylenes [MW-8SR and MW-27 only], aniline [MW-27 only], and N,N-dimethylaniline [MW-8SR, MW-28, and MW-30 only]) were detected at concentrations that slightly exceeded their respective standards (Table 3 and Figure 5). At MW-29, all COCs were non-detect or below the NYSDEC groundwater quality standards, including acetone (12 parts per billion [ppb]), confirming that the elevated detection of acetone at this well during the October 2014 monitoring event was attributed to polyvinyl chloride primer/cleaner and cement that were used on June 26, 2014 to repair the stick-up damaged by a tree that fell during a summer storm.

Sentinel Wells

COCs were not detected at sentinel wells MW-3S or MW-4S, located downgradient of Area 1 (Table 3 and Figure 4).

Downgradient Perimeter Wells/Piezometers

COCs were not detected in the downgradient perimeter/monitoring locations (MW-17R, MW-18, MW-23I, MW-23S, PZ-4S, and PZ-4D; Table 3 and Figure 5).

Data Evaluation and Conclusions

To evaluate the continued effectiveness of the OU2 remedial action and the need (if any) to restart the remedial process, the April 2015 data were incorporated into the historical groundwater dataset (1998 through April 2015) for technical analyses. The technical analyses performed were the same as those detailed in the January 2013 PRR (ARCADIS 2013c) and described in Attachment C. The technical analyses consisted of the following:

- Change in annual total COC molar concentration (i.e., concentration normalized by its molecular weight) over time.
- Statistical analyses that included first order decay functions and regression analyses between time (year) and percent COC reduction fitted to each area's annual total COC molar concentration.

The data and results from these technical analyses, as presented in Attachment C, demonstrate that the OU2 remedial action has continued effectiveness, showing that the remedy continues to: (1) be protective of public health and the environment, (2) comply with the OU2 Record of Decision (NYSDEC 1997), and (3) meet remedial process closure requirements in Section 6.4 of Division of Environmental Remediation-10 (DER-10): Technical Guidance for Site Investigation and Remediation (NYSDEC 2010). The conclusions developed based on groundwater data obtained from 1998 through April 2015 are summarized below:

- COC concentrations detected in April 2015 did not rebound above pre-shutdown COC concentrations.
- COC concentrations were mostly not detected or below their respective NYSDEC Class GA Groundwater Quality Standard in each area during the April 2015 monitoring event.
- COC concentrations continue to trend at asymptotic levels for each area.
- COC concentrations have not migrated beyond the Site boundary above NYSDEC Groundwater Quality Standards. N,N-dimethylaniline has, however, been detected at concentrations slightly exceeding the NYSDEC Groundwater Quality Standard of 1 ppb in one (MW-30) of the two monitoring (MW-29 and MW-30) wells located in Area 3, between the downgradient perimeter wells and the groundwater withdrawal trench (Figure 5). The N,N-dimethylaniline concentrations detected in MW-30 (2 ppb or less) are similar to those detected elsewhere within Area 3, where the highest N,N-dimethylaniline concentration detected during the April 2015 sampling event was 2.7 ppb in the duplicate sample collected from MW-8SR. No other Site-related COCs have been detected at concentrations exceeding the NYSDEC Class GA Groundwater Quality Standards in the two monitoring wells (MW-29 and MW-30) located between the downgradient perimeter wells and the groundwater withdrawal trench. The concentrations in Area 3 continue to trend at asymptotic levels, as noted by the rapid decay rate and the high degree of COC removal within the last 6 years (greater than 99.9% removal since 1999).

- The remedy continues to achieve the bulk of reduction of groundwater contamination, as indicated by total COC molar concentrations exceeding 98.5% reduction in each area.

These conclusions confirm that groundwater quality conditions have not substantially changed since the shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems and fully demonstrate the continued effectiveness of the OU2 remedial action. Accordingly, there is no need to restart the remedial processes.

As identified in the SMP (ARCADIS 2014d), the post-shutdown process control monitoring program was conducted for 2 years (2013 to 2015) to determine the continued effectiveness of the OU2 remedial action and evaluate the need (if any) to restart remedial processes. As the groundwater monitoring identified in the SMP has been completed and the goals of the post-shutdown process control monitoring program have been met, no further groundwater monitoring is needed and the OU2 remedial activities for Areas 1, 2, and 3 are considered complete.

Proposed Next Steps

As OU2 remedial and monitoring activities are considered complete, the proposed next steps focus on proceeding with site closeout and delisting of the Site from the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites, in accordance with the site closure guidelines outlined in DER-10 Section 6.4(a) (NYSDEC 2010) and 6 New York Codes, Rules, and Regulations (NYCRR) Part 375-2.7(e), respectively. The NYSDEC Record of Decision for OU-2 stated that the Site will be considered for delisting from the Registry upon completion of the remediation, as demonstrated by the monitoring programs (NYSDEC 1997).

As generally outlined in the January 2013 PRR (ARCADIS 2013c) and the SMP, the following steps are proposed for demobilization and site closeout:

- NYSDEC reclassifies the Site from Class 2 to Class 4, upon NYSDEC's approval of the SMP.
- Submit a formal proposal to the NYSDEC in the next PRR to closeout and delist the Site, including a request to remove the existing engineering controls identified in the SMP from the Site.
- Provide a deconstruction work plan with the next PRR that will describe the procedures and methods to dismantle and remove the treatment systems in Areas

1, 2, and 3, remove the existing abovegrade structures (e.g., sheds), properly decommission monitoring wells/piezometers, abandon above grade piping and the collection sump, and transport and dispose generated waste in accordance with applicable rules and regulations.

- Obtain a Certificate of Completion (or similar site closure document) from the NYSDEC.
- Record the notice of the Certificate of Completion (if issued) in the recording office for Onondaga County within 30 days of issuance by the NYSDEC.
- Petition NYSDEC in accordance with 6NYCRR Part 375-2.7(e) to delist the Site.
- NYSDEC delists the Site from the Registry of Inactive Hazardous Waste Disposal Sites. Upon delisting, the only institutional controls that will remain in effect are the land use restrictions and groundwater use restrictions, as stated in the Deed Restrictions (6NYCRR Part 375-2.7(e); NYSDEC 2006).
- Amend the NYSDEC-approved SMP to support the environmental easement-required land and groundwater use restrictions, with periodic certifications of these institutional controls. This is consistent with 6 NYCRR Part 375-2.7(e).

The next PRR is due to the NYSDEC on November 13, 2015 (NYSDEC 2014). Consistent with the SMP Monitoring Plan, no additional data beyond what is presented herein is anticipated to be presented in that PRR. ARCADIS, on behalf of McKesson Corporation, requests an earlier due date for the PRR (and accordingly, earlier receipt from NYSDEC of an updated certification form) to facilitate timely closure and future redevelopment of the Site.

As you may be aware, the Site is located within the heart of the Syracuse Inner Harbor area, which is currently undergoing significant redevelopment, as described in the selected news articles provided in Attachment D. Due to the high momentum for redevelopment in this area, including construction (to begin by fall 2015) of apartment buildings on Van Rensselaer Street near the Site (diagram included in Attachment D), McKesson would like to capitalize (to the extent possible) on opportunities afforded by the Inner Harbor redevelopment.

We appreciate the NYSDEC's efforts to move this project forward to completion and are glad to arrange a meeting to discuss next steps. I will call you in the next few weeks to follow-up and, as always, if you have any questions or require additional information, please do not hesitate to contact me at 315.671.9229.

Sincerely,

ARCADIS of New York, Inc.



Dawn E. Penniman, P.E.
Certified Project Manager I

AS/lar

Copies:

Ms. Susan Edwards, NYSDEC (w/out Attachment A)
Mr. Harry Warner, NYSDEC (w/out Attachment A)
Mr. Richard Jones, NYSDOH (w/out Attachment A)
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Mr. James Fleer, McKesson Corporation (w/out Attachment A)
Mr. Douglas Morrison, Bristol-Myers Squibb Company (w/out Attachment A)
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Enclosures:

Tables

Table 1	Post-Shutdown Process Control Monitoring Wells and Piezometers
Table 2	Summary of Groundwater Level Measurements, October 2006 through May 2015
Table 3	Summary of Groundwater Monitoring Data, March 2009 through April 2015

Figures

Figure 1	Site Plan
Figure 2	Potentiometric Surface of the Shallow Hydrogeologic Unit Sand Layer March 30, 2015
Figure 3	Potentiometric Surface of the Shallow Hydrogeologic Unit Sand Layer May 14, 2015
Figure 4	Groundwater Monitoring Data Summary for October 2010 – April 2015 Areas 1 & 2
Figure 5	Groundwater Monitoring Data Summary for October 2010 – April 2015 Area 3

Attachments

- Attachment A Validated Analytical Laboratory Reports
- Attachment B Summary of Historical Groundwater Monitoring Data – March 1988 through August 2008
- Attachment C Statistical Analyses
- Attachment D Redevelopment in the Syracuse Inner Harbor

References

- ARCADIS. 2013a. Monitoring Memorandum – July 2013 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. October 18.
- ARCADIS. 2013b. October 2013 Periodic Review Report. McKesson EnviroSystems Former Bear Street Facility. October 1.
- ARCADIS. 2013c. January 2013 Periodic Review Report. McKesson EnviroSystems Former Bear Street Facility. January 15.
- ARCADIS. 2014a. Monitoring Memorandum – October 2013 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. January 3.
- ARCADIS. 2014b. Monitoring Memorandum – January 2014 Monitoring Event. McKesson EnviroSystems Site. April 11.
- ARCADIS. 2014c. Monitoring Memorandum – April 2014 Monitoring Event. McKesson EnviroSystems Site. September 11.
- ARCADIS. 2014d. Site Management Plan. NYSDEC Site Number: 7-34-020. McKesson EnviroSystems Site. July 31.
- ARCADIS. 2015. Monitoring Memorandum – October 2014 Monitoring Event. McKesson EnviroSystems Site. March 2.
- NYSDEC. 1997. Record of Decision for McKesson EnviroSystems Inactive Hazardous Waste Disposal Site, OU2. March 19.
- NYSDEC. 1998. Technical Operational Guidance Series 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June. Available online at: http://www.dec.ny.gov/docs/water_pdf/togs111.pdf

NYSDEC. 2006. 6 NYCRR Part 375: Environmental Remediation Programs, Subparts 375-1 to 375-4 & 375-6. December 14. Available online at: http://www.dec.ny.gov/docs/remediation_hudson_pdf/part375.pdf

NYSDEC. 2010. Division of Environmental Remediation-10: Technical Guidance for Site Investigation and Remediation (DER-10). May 3. Available online at: http://www.dec.ny.gov/docs/remediation_hudson_pdf/der10.pdf

NYSDEC. 2013. Letter from Payson Long, NYSDEC, to Jean Mescher, McKesson Corporation. RE: Discontinuation of Remedial Processes. April 11.

NYSDEC. 2014. Letter from Payson Long, NYSDEC, to Jean Mescher, McKesson Corporation. RE: Site Management Periodic Review Report Response Letter. December 2.

NYSDEC. 2015. *Classifications for "Registry" Sites*. Website. Last accessed on May 22, 2015. Available online at: <http://www.dec.ny.gov/chemical/8663.html>.

Tables

Table 1
Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Monitoring Location	Purpose of Monitoring
Sentinel	
MW-3S*	C
MW-4S*	C
Area 1	
TW-01	C
MW-9S	C
MW-31	C
MW-32	C
MW-33*	C
PZ-F	H
PZ-G	H
PZ-HR	H
PZ-P	H
PZ-Q	H
PZ-R	H
PZ-S	H
Area 2	
TW-02RRR	C
MW-34	C
MW-35	C
MW-36R*	C
PZ-I	H
PZ-J	H
PZ-T	H
PZ-U	H
PZ-V	H
Area 3	
MW-8SR*	C
MW-11S	H
MW-27*	C
MW-28	C
MW-29*	C
MW-30*	C
PZ-A	H
PZ-B	H
PZ-C	H
PZ-D	H
PZ-E	H
PZ-K	H

See notes on page 2.

Table 1
Post-Shutdown Process Control Monitoring Wells and Piezometers
Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Monitoring Location	Purpose of Monitoring
Area 3 (cont'd)	
PZ-L	H
PZ-M	H
PZ-N	H
PZ-O	H
Downgradient Perimeter	
MW-17R	C
MW-18	C
MW-23I	C
MW-23S	C, H
MW-24SR	H
MW-25S	H
PZ-4S*	C
PZ-4D*	C, H
PZ-5D	H
Barge Canal	H

Notes:

1. The table lists monitoring wells and piezometers that are part of the constituent of concern (COC) and/or hydraulic post-shutdown process control monitoring program.
2. Hydraulic monitoring involves obtaining groundwater level measurements from monitoring wells/piezometers identified in the table and surface-water level measurements from the Barge Canal. The surface-water level of the Barge Canal is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal. Groundwater elevation data are used to map potentiometric surface of the shallow hydrogeologic unit sand layer.
3. The COCs are acetone, benzene, toluene, ethylbenzene, xylenes (total), methanol, trichloroethene, aniline, N,N-dimethylaniline, and methylene chloride.
4. Monitoring well MW-4S and piezometer PZ-4S have been included in the COC monitoring program every third and second monitoring event, respectively; however, both were included in the April 2015 COC monitoring program (the last groundwater monitoring event identified in the July 31, 2014 Site Management Plan prepared by ARCADIS).

C = COC monitoring.

H = hydraulic monitoring.

* = New York State Department of Environmental Conservation-approved the elimination of methanol analysis from the COC groundwater monitoring program (NYSDEC. 2010. Letter from Payson Long, NYSDEC, to David Ulm, ARCADIS. RE: Requested Changes in Remedial Monitoring Program. September 23.).

Table 2
Summary of Groundwater Level Measurements, October 2006 through May 2015
Monitoring Memorandum
McKesson EnviroSystems Site
Syracuse, New York

Location	Reference Elevation (feet amsl)	10/30/06	6/6/07	11/12/07	3/24/08	8/25/08	3/23/09	9/14/09	4/26/10	10/11/10	4/4/11	10/24/11
Barge Canal ^A	393.39	364.29	362.99	362.06	364.34	363.21	363.54	362.89	362.97	363.49	362.07	363.71
Collection Sump ^B	372.81	363.18	362.26	361.86	363.81	362.14	362.20	362.18	362.18	360.72	359.90	361.33
MW-3S ^B	376.54	369.08	--	367.60	367.93	365.19	367.32	365.50	365.67	367.95	369.21	--
MW-11S	373.50	366.11	364.27	363.88	365.69	363.86	364.88	363.89	364.42	364.30	365.00	364.18
MW-18 ^B	372.57	363.82	362.63	362.32	363.51	362.26	363.16	362.22	362.67	362.87	363.82	--
MW-23I ^B	372.77	366.43	365.02	364.74	366.12	364.64	365.69	364.67	365.19	365.38	366.57	--
MW-23S	372.61	365.28	362.98	362.56	364.81	362.62	363.50	362.63	362.99	362.71	364.57	362.66
MW-24SR	375.55	366.49	365.21	364.83	366.26	364.73	365.81	364.79	365.32	365.81	366.60	365.63
MW-25S	373.39	365.26	363.32	362.87	364.84	362.88	363.97	362.89	363.34	363.30	364.10	363.17
PZ-4D	376.11	366.64	365.29	364.98	366.39	364.90	365.96	364.94	365.49	366.02	366.74	365.78
PZ-5D	375.58	366.87	365.49	365.19	366.69	365.09	366.21	365.14	365.01	366.09	366.99	366.02
PZ-A	373.94	365.62	363.11	362.72	364.83	362.96	363.56	362.95	362.28	362.35	362.68	362.53
PZ-B	373.92	365.85	363.12	362.62	365.03	362.87	363.64	362.83	362.96	362.22	363.24	362.47
PZ-C	374.85	367.14	365.85	365.30	367.15	365.16	366.71	365.23	366.37	367.11	367.88	366.6
PZ-D	375.12	367.68	365.98	365.40	367.29	365.28	366.81	365.40	366.57	367.17	368.20	366.87
PZ-E	374.12	368.13	365.16	364.07	366.58	364.14	366.82	364.20	364.25	364.16	364.83	364.18
PZ-F	377.06	368.32	366.18	365.76	367.99	365.50	367.41	365.69	366.72	367.10	368.10 ^B	367.04
PZ-G	377.16	368.64	366.28	365.82	368.14	365.94	367.29	367.22	367.32	367.36	368.12	367.17
PZ-HR	376.99	368.31	366.23	365.74	368.00	365.48	367.41	365.63	366.65	367.15	368.00 ^B	367.04
PZ-I	375.15	369.00	366.49	365.92	368.55	365.50	367.97	365.71	367.04	367.49	368.60	367.47
PZ-J	374.89	367.96	366.16	365.82	367.69	365.55	367.20	365.70	366.55	367.05	367.81	366.94
PZ-K	373.19	365.58	363.36	362.91	364.96	363.08	363.80	363.04	363.33	363.34	361.94	362.97
PZ-L	374.62	365.23	362.94	362.63	364.64	362.79	363.39	362.80	363.80	362.36	362.52	362.54
PZ-M	374.35	365.60	363.54	363.11	365.13	363.30	364.00	363.31	363.62	363.04	363.47	363.22
PZ-N	376.94 ^C	367.51	365.76	365.26	367.05	365.09	366.63	365.17	366.22	367.01	367.79	366.62
PZ-O	375.36	365.42	363.22	362.82	365.01	362.91	363.94	362.93	363.35	362.90	363.57	362.94
PZ-P	376.89	368.30	366.31	365.83	368.06	365.58	367.51	365.75	366.76	367.26	368.08	367.15
PZ-Q	377.61	368.61	366.33	365.83	368.23	365.57	367.61	365.77	366.78	367.26	368.13	367.21
PZ-R	377.05	368.51	366.19	365.79	368.20	365.55	367.57	365.73	366.74	367.24	368.10	367.15
PZ-S	378.13	372.48	366.51	365.81	368.21	365.55	367.60	365.74	366.76	367.13	369.67 ^B	367.48
PZ-T	376.25	368.04	366.24	365.84	367.89	365.52	367.37	365.66	366.63	367.12	367.94	367.00
PZ-U	375.35	367.99	366.07	365.80	367.75	365.52	367.25	365.66	366.52	367.05	367.83	366.92
PZ-V	375.78	367.97	366.17	365.78	367.78	365.48	367.24	365.64	366.52	367.04	367.81	366.93

See notes on page 3.

Table 2
Summary of Groundwater Level Measurements, October 2006 through May 2015
Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Location	Reference Elevation (feet amsl)	4/9/2012	10/1/2012	4/1/2013	7/18/2013 ^D	10/17/2013 ^D	1/17/2014 ^D	4/14/2014 ^D	10/20/2014 ^D	3/30/2015 ^D	5/14/2015 ^{D,F}
Barge Canal ^A	393.39	358.39	360.59	360.74	360.69	360.69	361.38	362.29	360.87	361.21	361.27
Collection Sump ^B	372.81	360.95	361.70	361.24	364.71	364.84	366.14	366.92	364.73	368.31 ^B	--
MW-3S ^B	376.54	366.44	365.15	367.55	366.11	366.62	367.83	368.66	366.70	368.67	--
MW-11S	373.50	363.92	363.62	364.42	364.95	365.08	366.08	366.94	365.00	366.95	365.64
MW-18 ^B	372.57	362.57	362.32	362.85	362.74	363.54	363.57	364.50	365.00	363.84	--
MW-23I ^B	372.77	364.99	364.73	365.29	365.23	365.33	366.02	366.86	365.32	359.26	--
MW-23S	372.61	362.23	362.29	362.88	364.20	364.37	365.30	366.06	364.14	366.95	364.91
MW-24SR	375.55	365.09	364.84	365.48	365.39	365.46	366.25	367.09	365.40 ^E	366.48	366.07
MW-25S	373.39	362.81	362.61	363.48	364.08	364.23	365.14	365.89	364.22	366.09	364.42
PZ-4D	376.11	365.24	364.94	365.59	365.47	365.59	366.34	367.06	365.60	366.51	366.13
PZ-5D	375.58	365.48	365.16	365.84	365.67	365.81	366.57	367.42	365.78	366.78	366.33
PZ-A	373.94	363.24	362.54	362.68	364.78	364.92	366.08	366.87	364.84	367.79	365.39
PZ-B	373.92	362.14	362.35	362.64	364.77	364.88	366.08	366.86	364.79	368.01	365.32
PZ-C	374.85	366.10	365.41	366.76	365.75	365.84	366.65	367.50	365.78	367.16	366.26
PZ-D	375.12	366.39	365.65	367.07	365.87	365.97	366.82	367.66	365.90	367.31	366.39
PZ-E	374.12	363.67	363.35	364.38	365.12	365.22	366.44	367.22	365.21	368.66	365.64
PZ-F	377.06	366.46	365.44	366.91	366.52	366.57	367.61	368.66	366.51	368.33	366.96
PZ-G	377.16	366.53	365.48	367.04	366.67	366.70	367.74	368.74	366.54	368.39	366.99
PZ-HR	376.99	366.40	365.38	366.90	366.46	366.50	367.61	368.60	366.47	368.32	366.95
PZ-I	375.15	366.77	365.36	367.52	366.60	366.70	368.20	369.15	366.80	368.94	367.29
PZ-J	374.89	366.30	365.55	366.74	366.39	366.48	367.50	368.37	366.48	368.06	366.98
PZ-K	373.19	362.65	362.75	363.03	364.79	364.96	365.97	366.77	364.86	367.18	365.43
PZ-L	374.62	362.16	362.42	362.60	364.61	364.77	365.90	366.71	364.69	367.51	365.24
PZ-M	374.35	362.86	362.87	363.28	364.93	364.96	366.18	366.98	364.98	367.54	365.56
PZ-N	376.94 ^C	366.06	365.33	366.72	365.67	365.81	366.57	367.46	365.73	367.14	366.20
PZ-O	375.36	362.61	362.52	363.14	364.50	364.64	365.72	366.48	364.56	366.56	365.16
PZ-P	376.89	366.49	365.45	366.93 ^B	366.57	366.63	367.69	368.69	366.58	368.34	367.04
PZ-Q	377.61	366.52	365.44	367.04	366.59	366.65	367.76	368.80	366.56	368.46	367.04
PZ-R	377.05	366.48	365.45	367.03	366.54	366.59	367.74	368.75	366.55	368.43	367.02
PZ-S	378.13	366.51	365.45	367.34 ^B	366.58	366.61	368.27	369.73	366.76	369.01	367.14
PZ-T	376.25	366.32	365.41	366.86	366.42	366.49	367.64	368.55	366.50	368.20	366.97
PZ-U	375.35	366.29	365.44	366.77	366.38	366.47	367.55	368.42	366.45	368.13	366.96
PZ-V	375.78	366.28	365.40	366.77	366.37	366.46	367.53	368.44	366.43	368.18	366.93

See notes on page 3.

Table 2
Summary of Groundwater Level Measurements, October 2006 through May 2015
Monitoring Memorandum
McKesson EnviroSystems Site
Syracuse, New York

Superscript Notes:

- ^A = Surface-water level measurements are obtained from the Barge Canal. The surface-water level is measured from a demarcated reference point on the Bear Street Bridge, which crosses over the canal.
- ^B = Data not used in potentiometric surface mapping of the shallow hydrogeologic unit sand layer.
- ^C = The reference elevation for PZ-N was 376.02 feet amsl prior to November 16, 2000. The new reference elevation is 376.94 feet amsl.
- ^D = Groundwater elevations reflect hydrogeologic conditions after the April 2013 shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems.
- ^E = Monitoring well MW-24SR was not accessible on October 20, 2014 and was monitored on October 21, 2014.
- ^F = A second round of hydraulic gauging was performed on May 14, 2015 due to groundwater mounding observed in Area 3 during the March 30, 2015 gauging event. The groundwater mounding was caused by saturated conditions at the Site from recent snow melt.

Abbreviations:

-- = not measured

amsl = above mean sea level (National Geodetic Vertical Datum of 1929)

See notes on page 3.

Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2015
Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	50 ⁶
MW-3S	3/09	365.1	350.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	0.17 J	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA	
	10/11			<10	<1.0	<1.0	<1.0	0.35 J	<1.0	<3.0	<5.0	<1.0	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	0.27 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.61 J	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
MW-4S	10/10	365.5	350.5	<10 [<10]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<3.0 [<3.0]	<5.0 [<5.0]	<1.0 [<1.0]	<500 J [<500 J]
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
MW-8SR ^B	3/09	362.7	352.7	6.5 J [5.8 J]	6.8 [6.8]	66 [63]	<1.0 [<1.0]	10 [10]	<1.0 [<1.0]	140 [140]	2,200 [1,800]	<12 [<12]	<500 [<500]
	6/09			NA	NA	NA	NA	NA	NA	NA	7,000	<50	NA
	9/09			<10 [8.3 J]	8.5 J [7.9]	44 J [38]	<1.0 [<1.0]	6.8 J [6.5]	<1.0 J [<1.0]	81 J [71]	4,000 [3,400]	<20 [<20]	<500 [<500]
	4/10			<10 [<10]	4.2 [3.5]	23 J [18]	<1.0 [<1.0]	4.6 [3.7]	<1.0 [<1.0]	41 [33]	370 J [720 J]	1.0 J [<5.0]	<500 [<500]
	10/10			<10	2.7	16	<1.0	2.0	<1.0	31	220	1.6	NA
	4/11			5.9 J [4.3 J]	3.2 [3.2]	10 [8.8]	<1.0 [<1.0]	2.8 [2.6]	<1.0 [<1.0]	32 [31]	57 J [64]	1.5 [1.6]	NA
	10/11			<10 [<10]	1.9 [2.0]	2.0 [2.1]	<1.0 [<1.0]	1.3 [1.3]	<1.0 [<1.0]	14 [15]	<5.0 [<5.0]	2.6 [<1.0]	NA
	4/12			8.7 J [6.7 J]	1.2 [1.7]	2.3 [3.3]	<0.18 [<0.18]	0.76 J [1.2]	<0.090 [<0.090]	9.5 [15]	<1.9 [<1.9]	2.4 [2.6]	NA
	10/12			<10 [<10]	0.69 J [0.70]	0.16 J [0.14 J]	<1.0 [<1.0]	0.36 J [0.39 J]	<1.0 [<1.0]	1.4 J [1.2 J]	<5.3 [<5.0]	2.3 [2.7]	NA
	4/13			<10 [<10]	1.1 [1.1]	0.32 J [0.28 J]	<1.0 [<1.0]	0.67 J [0.68 J]	<1.0 [<1.0]	7.7 [8.0]	<5.1 [<5.1]	1.7 [1.4]	NA
	7/13			5.1 J [8.7 J]	1.9 [1.8]	0.17 J [0.18 J]	<1.0 [<1.0]	1.0 [0.96 J]	<1.0 [<1.0]	11 [9.4]	2.5 [2.5]	0.89 J [0.96 J]	<1,000 [<1,000]
	10/13			<10	2.9	0.21 J	<1.0	1.3	<1.0	13	2.6 J	0.83 J	NA
	1/14			<10 J [<10 J]	2.4 [2.6]	0.19 J [<1.0]	<1.0 [<1.0]	0.94 J [1.1]	<1.0 [<1.0]	11 [13]	5.1 J [<1.0]	2.0 [1.7]	NA
	4/14			<10 [<10]	3.2 [3.3]	0.25 J [0.27 J]	<1.0 [<1.0]	1.2 [1.1]	<1.0 [<1.0]	13 [13]	3.9 J [5.6 J]	1.4 [1.9]	NA
	10/14			18 J [38 J]	1.7 [1.9]	0.16 J [0.18 J]	0.27 J [<0.1]	1.2 [1.3]	<1.0 [<1.0]	5.9 [6.4]	3.1 J [2.3 J]	1.8 [1.3]	NA
4/15	15 [8.4 J]	3.5 [3.7]	<1.0 [0.36 J]	<1.0 [<1.0]	1.3 [1.2]	<1.0 [<1.0]	19 [18]	2.7 J [3.6 J]	2.6 [2.7]	NA			
MW-9 ^C (Replaced by MW-9S)	3/09	365.6	356	<10	1.2	27	<1.0	2.5	<1.0	65	<5.0	4.2	<500
	9/09			<10	1.7	20	<1.0	2.2	<1.0	70	<5.0	4.1	730
	4/10			<10	0.86 J	26	<1.0	2.1	<1.0	69	<5.0	6.5	<500
	10/10			<10	1.3	11	<1.0	1.9	<1.0	45	<5.1	7.5	<500 J
	4/11			<10	0.91 J	29	<1.0	2.6	<1.0	89	<5.3	5.4	<500
	10/11			<10	1.2	4.2	<1.0	1.8	<1.0	41 J	<5.0	7.6	<500
	4/12			7.5 J	1.1	18	<0.18	1.5	<0.090	67	<1.9	6.3	<500
	10/12			<10	1.9 J	4.7	<1.0	3.2	<1.0	84	<5.0	3.9	NA
	4/13			12 J	0.95 J	19	<1.0	1.6	<1.0	62	<5.1	5.9	<1,000
	7/13			<10	1.9	12	<1.0	2.0	<1.0	45	<1.0	2.0	<1,000
	10/13			<5.0	2.9	10	<1.0	2.6	<1.0	60	<5.0	5.2	<500
	1/14			<10 J	1.1	13	<1.0	1.6	<1.0	54	<1.0	7.2	<500
	4/14			<10	1.0	19	<1.0	2.2	<1.0	74	<1.0	5.7	<500
	10/14			<10 J	1.5	8.8	<1.0	2.2	0.82 J	72	<1.0	5.9	<500
	4/15			<10	1.4	22	<1.0	2.5	<1.0	79	<1.1	6.5	<500

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Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	1	50 ⁶	
MW-17 ^D (Replaced by MW-17R)	3/09	365.7	356.1	<10	2.3	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	0.86 J	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	0.22 J	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	10/10			<10	1.3	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500 J	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	<500	
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	<1.0	<500
	4/12			<2.7	0.22 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	0.55 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.2	<1.2	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.4	<1.1	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	2,700
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	MW-18			3/09	325.15	316.15	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
9/09		<10 J	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
4/10		<10	<1.0	<1.0			33	<1.0	<1.0	<3.0	<5.0	<1.0	<500
6/10		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	NA	NA	NA
10/10		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500 J
4/11		<10 J	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
10/11		<10	<1.0	<1.0			<1.0	0.23 J	<1.0	<3.0 J	<5.0	<1.0	<500
4/12		<2.7	<0.080	<0.10			<0.18	0.27 J	<0.090	<0.36	<1.8	<0.21	<500
10/12		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
4/13		<10	<1.0	<1.0			<1.0	0.60 J	<1.0	<3.0	<4.8	<0.95	<1,000
7/13		<10	<1.0	<1.0			<1.0	0.25 J	<1.0	<3.0	<1.0	<1.0	<1,000
10/13		<10	<1.0	<1.0			<1.0	0.19 J	<1.0	<3.0	<5.4	<1.1	<500
1/14		<10 J	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
4/14		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
10/14		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
4/15		<10	<1.0	<1.0			<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
MW-23S	3/09	364.1	354.1	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			3.7 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.31 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500 J
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500

See Notes on Page 8.

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Syracuse, New York

Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	50 ⁶
MW-23I	3/09	341.2	336.2	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500	
	4/10			<10	<1.0	<1.0	8.4	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	0.29 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<9.5	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
MW-27	3/09	362.5	354.5	14 J	8.7	36	<1.0	9.4	<1.0	88	8,200 J	<50 J	<500
	6/09			NA	NA	NA	NA	NA	NA	7,400	<50	NA	
	9/09			10	6.2	5.9	<1.0	6.9	<1.0	23	2,100	<10	<500
	4/10			<10	4.5	6.1	<1.0	2.4	<1.0	10	1,300	<10	<500
	10/10			<10	2.7	1.4	<1.0	1.3	<1.0	3.4	220	2.5	NA
	4/11			3.9 J	3.1	5.1	<1.0	5.7	<1.0	9.1	1,000	<11	NA
	10/11			<10	2.1	2.2	<1.0	1.3	<1.0	3.1	36	2.7	NA
	4/12			<2.7	1.5	1.4	<0.18	0.45 J	<0.090	2.2 J	<1.9	2.7	NA
	10/12			<10	1.1	<1.0	<1.0	0.22 J	<1.0	<3.0	<5.0	2.2	NA
	4/13			<10	1.1	0.88 J	<1.0	0.34 J	<1.0	1.4 J	11	2.4	NA
	7/13			<10	2.0	<1.0	<1.0	0.60 J	<1.0	<3.0	1.5	1.1	<1,000
	10/13			<10	2.6	<1.0	<1.0	0.75 J	<1.0	3.9	<5.0	0.73 J	NA
	1/14			<10 J	0.89 J	<1.0	<1.0	0.33 J	<1.0	0.22 J	<12	0.75 J	NA
	4/14			<10	1.0	<1.0	<1.0	0.41 J	<1.0	0.92 J	0.60 J	0.48 J	NA
	10/14			<10	2.0	0.12 J	<1.0	1.2	<1.0	3.5	16	1.4	NA
	4/15			<10	2.4	0.98 J	<1.0	1.9	<1.0	9.5	20	1.0 J	NA
MW-28	3/09	363.6	355.6	<10	3.5	0.8 J	<1.0	0.3 J	<1.0	1.1 J	18	<0.5	851
	9/09			<10	3.1	0.32 J	<1.0	0.25 J	<1.0	0.48 J	6.7	<1.0	<500
	4/10			<10	2.8	0.60 J	<1.0	0.23 J	<1.0	0.46 J	<5.0	0.49 J	<500
	10/10			<10	1.8	<1.0	<1.0	<1.0	<1.0	<3.0	2.4 J	0.60 J	<500 J
	4/11			4.3 J	2.3	<1.0	<1.0 B	0.11 J	<1.0	<3.0	3.9 J	0.75 J	<500
	10/11			<10	1.8	<1.0	<1.0	0.38 J	<1.0	<3.0	<5.0	<1.0	<500
	4/12			<2.7	1.4	<0.10	<0.18	0.22 J	<0.090	<0.36	<1.8	0.48 J	<500
	10/12			<10	1.9	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.62 J	NA
	4/13			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.32 J	410 J
	7/13			<10	1.7	<1.0	<1.0	0.22 J	<1.0	<3.0	<1.0	0.35 J	<1,000
	10/13			<10	1.7	<1.0	<1.0	0.49 J	<1.0	0.68 J	<5.0	0.70 J	<500
	1/14			<10 J	1.2	<1.0	<1.0	0.22 J	<1.0	<3.0	<10	0.75 J	<500
	4/14			13	1.7	<1.0	<1.0	0.29 J	<1.0	<3.0	<10	0.72 J	<500
	10/14			51	1.3	<1.0	0.41 J	1.1	<1.0	0.90 J	1.2 J	1.3	<500
	4/15			7.6 J	1.6	<1.0	<1.0	0.39 J	<1.0	0.75 J	1.2 J	1.3	<500

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Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	50 ⁶
MW-29	3/09	362.9	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	0.29 J	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA
	10/11			<10	<1.0	<1.0	<1.0	0.22 J	<1.0	<3.0 J	<5.0	0.22 J	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	7/13			<10	0.26 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/13			<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	<1.1	NA
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	10/14 ^F			790,000 D	<500 D	<500 D	<500 D	<500 D	<500 D	<1,500 D	<10	<1.0	NA
	12/14 ^F			370 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/15			12	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<12	0.66 J	NA
MW-30	3/09	363.5	355.5	<10	0.8 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	0.78 J	<1.0	<1.0	0.17 J	<1.0	<3.0	21	<1.0	<500
	4/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10 J	0.14 J	<1.0	37	<1.0	<1.0	<3.0	<5.1	<1.0	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3 J	<1.1 J	NA
	10/11			<10	<1.0	<1.0	<1.0	0.18 J	<1.0	<3.0 J	<5.0	<1.0	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	10/12			<10	0.099 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	0.20 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.30 J	NA
	10/13			<10	0.29 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.85 J	NA
	1/14			<10 J	0.19 J	<1.0	<1.0	<1.0	<1.0	0.14 J	<11	<1.1	NA
	4/14			<10	0.37 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.43 J	NA
	10/14			<10	0.18 J	<1.0	<1.0	<1.0	<1.0	0.15 J	<10	1.5	NA
	4/15			<10	0.24 J	<1.0	<1.0	<1.0	<1.0	<3.0	<11	2.0	NA
	MW-31			3/09	363.7	355.4	9.4 J	8.3	<1.0	<1.0	0.6 J	<1.0	0.8 J
9/09		<10	10	<1.0			<1.0	0.49 J	<1.0	2.0 J	<5.0	2.5	730
4/10		<10	4.8	<1.0			<1.0	0.40 J	<1.0	1.3 J	<5.0	2.3	<500
10/10		<10	6.9	<1.0			<1.0	0.50 J	<1.0	1.5 J	<5.3	3.5	<500 J
4/11		<10	8.3	<1.0			<1.0	0.77 J	<1.0	2.5 J	<5.3	2.3	<500
10/11		<10	5.7	<1.0			<1.0	0.62 J	<1.0	1.5 J	<5.0	3.5	<500
4/12		6.5 J	6.8	0.16 J			<0.18	0.65 J	<0.090	2.7 J	<1.9	2.1	<500
10/12		<10	6.3 J	0.16 J			<1.0	0.44 J	<1.0	2.3 J	<5.0	0.90 J	NA
4/13		<10	12	0.21 J			<1.0	1.3	<1.0	5.6	<5.2	1.1	<1,000
7/13		<10	11	<1.0			<1.0	1.2	<1.0	5.1	0.72 J	1.6	<1,000
10/13		<10	11	0.15 J			<1.0	1.4	<1.0	6.1	<5.2	2.2	<500
1/14		<10 J	8.2	<1.0			<1.0	1.2	<1.0	6.3	<10	2.2	NA
4/14		<10	7.5	0.22 J			<1.0	0.93 J	<1.0	4.6	0.75 J	1.9	<500
10/14		7.1 J	6.5	<1.0			<1.0	1.4	<1.0	4.5	1.1 J	2.2	<500
3/15		<10 J	9.1	<1.0			<1.0	1.3	<1.0	8.9	0.52 J	1.6	<500

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Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	50 ⁶
MW-32	3/09	364	356	<10	0.5 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	1,200	
	4/10			<10	0.23 J	<1.0	<1.0	<1.0	<3.0	<5.0	0.89 J	<500	
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.87 J	<500 J	
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500	
	10/11			<10	<1.0	<1.0	<1.0	0.19 J	<1.0	<3.0 J	<5.0	1.5	<500
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.1	<500
	10/12			<10	<1.0 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.2	NA
	4/13			<10	0.098 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	0.91 J	<1,000
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.82 J	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.2	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.85 J	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.1	<500
	10/14			<10 J	0.10 J	<1.0	<1.0	0.20 J	<1.0	<3.0	<10	1.5	<500
	3/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	1.1	<500
MW-33	3/09	344.1	356.1	<10	3.2	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.4	<500
	9/09			<10	2.6	<1.0	<1.0	0.20 J	<1.0	<3.0	<5.0	<1.0	<500
	4/10			<10	1.6	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	2.0	<500
	10/10			<10	1.7	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.7	NA
	4/11			<10	0.79 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.9	NA
	10/11			<10	0.58 J	<1.0	<1.0	0.12 J	<1.0	<3.0	<5.3	1.9	NA
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.3	NA
	10/12			<10	0.33 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	2.1	NA
	4/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8 J	2.1 J	NA
	7/13			<10	0.46 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	0.96 J	<1,000
	10/13			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	0.69 J	NA
	1/14			<10 J	0.69 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.7	NA
	4/14			<10	1.1	<1.0	<1.0	<1.0	<1.0	<3.0	0.32 J	2.3	NA
	10/14			<10 J	0.45 J	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.3	NA
	4/15			<10	0.57 J	<1.0	<1.0	<1.0	<1.0	<3.0	<11	2.2	NA
MW-34	3/09	362.7	354.7	14	1.4	<1.0	<1.0	0.7 J	<1.0	1.5 J	12	2.0	<500
	9/09			24	<1.0	<1.0	<1.0	0.64 J	<1.0	1.7 J	<5.0	2.5	1,000
	4/10			50 J	0.82 J	<1.0	<1.0	0.42 J	<1.0	1.4 J	<5.0	2.4	<500
	10/10			20	1.0	<1.0	<1.0	0.44 J	<1.0	1.3 J	1.8 J	2.9	<500 J
	4/11			16	1.7	<1.0	<1.0	0.74 J	<1.0	2.0 J	10	2.7	<500
	10/11			350	1.2	<1.0	<1.0	0.71 J	<1.0	0.90 J	<5.6	2.5	<500
	4/12			37 J	1.3	<0.10	<0.18	0.59 J	<0.090	1.4 J	2.1 J	2.4	<500
	10/12			61	1.6	<1.0	<1.0	0.78 J	<1.0	2.2 J	<5.2	2.7	NA
	4/13			26 J	1.3	<1.0	<1.0	0.60 J	<1.0	2.3 J	<4.8	1.7	<1,000
	7/13			32	1.3	<1.0	<1.0	0.66 J	<1.0	2.0 J	0.56 J	0.92 J	NA
	10/13			15	1.2	<1	<1.0	0.69 J	0.13 J	2.2 J	<5.0	1.3	<500
	1/14			15 J	0.91 J	<1.0	<1.0	0.44 J	<1.0	1.3 J	<10	1.9	<500
	4/14			57	1.4	0.11 J	<1.0	0.62 J	<1.0	3.6	2.6 J	1.6	<500
	10/14			31 J	1.4	<1.0	<1.0	0.75 J	<1.0	1.9 J	0.77 J	1.9	<500
	3/15			32	1.5	<1.0	<1.0	0.94 J	<1.0	3.3	<10	2.7	<500

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Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	1	50 ⁶	
MW-35	3/09	363	355	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	9/09			6.5 J	<1.0	<1.0	<1.0	0.16 J	<1.0	<3.0	<5.0	<1.0	1,100
	4/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	<500 J
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.6	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	<500
	4/12			14 J	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	<500
	10/12			<36 B	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<1.0	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.1	<1.0	470 J
	7/13			4.2 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0 J	<1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2 J	<1.0	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.6	<500
	10/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	<500
	4/15			<10	<1.0	<1.0	<1.0	0.44 J	<1.0	<3.0	<10	<1.0	<500
MW-36 ^E (Replaced by MW-36R)	3/09	363.6	355.6	28	2.4	<1.0	<1.0	0.8 J	<1.0	2.8 J	150	2.8	<500
	6/09			NA	NA	NA	NA	NA	NA	460	<5.0	NA	
	9/09			21	3.1	<1.0	<1.0	0.96 J	<1.0	3.2	390	3.1	<500
	4/10			<10 J	3.3	0.26 J	<1.0	1.1	<1.0	5.4	77	2.6	<500
	10/10			12	3.9	0.28 J	<1.0	1.2	<1.0	4.8	620	<5.0	<500 J
	4/11			<10	4.3	<1.0	<1.0	0.95 J	<1.0	4.4	310	4.0	NA
	10/11			<10	1.8	<1.0	<1.0	0.66 J	<1.0	1.4 J	92	3.6	NA
	12/11			NA	NA	NA	NA	NA	NA	120	NA	NA	
	4/12			6.3 J	1.6	0.16 J	<0.18	0.45 J	<0.090	1.9 J	150	4.1	NA
	10/12			<10	1.5 J	<1.0	<1.0	0.54 J	<1.0	2.2 J	10	3.1	NA
	4/13			<10	1.8	0.14 J	<1.0	0.53 J	<1.0	2.9 J	150	4.0	NA
	7/13			<10	1.4	0.11 J	<1.0	0.46 J	<1.0	1.7 J	97	2.0	<1,000
	10/13			<10	1.3	<1.0	<1.0	0.45 J	<1.0	1.7 J	110	1.9	NA
	1/14			<10 J	1.2	<1.0	<1.0	0.42 J	<1.0	1.4 J	180	4.1	NA
	4/14			5.5 J	1.1	0.12 J	<1.0	0.42 J	<1.0	1.6 J	140	3.4	NA
TW-01	10/14	<10 J	0.62 J	<1.0	<1.0	0.32 J	<1.0	0.60 J	74	3.3	NA		
	3/15	<10	0.85 J	<1.0	<1.0	0.42 J	<1.0	0.88 J	25	3.8	NA		
	3/09	365.1	355.4	<10	1.9	<1.0	<1.0	<1.0	<1.0	0.6 J	<5.0	<0.5	22,300
	9/09			2.9 J	<1.0	<1.0	<1.0	0.11 J	<1.0	<3.0	<5.0	1.1	970
	4/10			<10	0.32 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.0	<500
	10/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	1.3	<500 J
	4/11			<10	0.21 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	<500
	10/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0 J	<5.6	1.6	<500
	4/12			<2.7	0.11 J	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	1.7	<500
	10/12			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	1.9	NA
	4/13			<10	0.090 J	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	0.98 J	<1,000
	7/13			<10	0.11 J	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	1.0	<1,000
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	1.1	<500
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	0.98 J	<500
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	1.3	<500
10/14	<10 J			<1.0	<1.0	<1.0	<1.0	<1.0	0.19 J	<10	1.4	<500	
3/15	<10 J			<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	1.1	<500	

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Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2015
Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elevation (feet amsl)		Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
		Top	Bottom										
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	5	5	5	1	50 ^G
TW-02RR ^{B,E} (Replaced by TW-02RRR)	3/09	363.3	353.3	<10 [<10]	5.0 [4.6]	1.5 [1.6]	<1.0 [<1.0]	1.0 [1.0 J]	<1.0 [<1.0]	4.2 [4.1]	2,000 [1,600]	<10 [<10]	<500 [<500]
	6/09			NA	NA	NA	NA	NA	NA	NA	2,800	<20	NA
	9/09			<10 [<10]	4.3 [4.2]	1.2 [1.3]	<1.0 [<1.0]	0.79 J [0.81 J]	<1.0 [<1.0]	3.5 [3.6]	1,600 [1,500]	<10 [<10]	1,000 [1,200]
	4/10			9.5 J [12 J]	4.1 [4.0]	1.2 [1.2]	<1.0 [<1.0]	0.78 J [0.75 J]	<1.0 [<1.0]	4.2 [4.0]	2,800 J [3,100 J]	<20 J [<20 J]	<500 [<500]
	10/10			<10 [<10]	3.3 [3.0]	1.0 [0.91 J]	<1.0 [<1.0]	0.82 J [0.76 J]	<1.0 [<1.0]	3.6 [3.6]	760 [810]	<5.0 [2.2 J]	<500 J [<500 J]
	4/11			<10 [<10]	2.1 [2.0]	1.2 [1.3]	<1.0 [<1.0]	0.74 J [0.75 J]	<1.0 [<1.0]	5.2 [5.3]	1.9 J [2.1 J]	3.4 [3.3]	<500 [<500]
	10/11			<10 [<10]	1.2 [1.1]	0.67 J [0.69 J]	<1.0 [<1.0]	0.53 J [0.48 J]	<1.0 [<1.0]	1.5 J [1.4 J]	1,300 D [1,500 D]	5.5 [6.2]	<500 [<500]
	12/11			NA	NA	NA	NA	NA	NA	NA	1,400	NA	NA
	4/12			15 J [13 J]	1.6 [1.5]	0.73 J [0.76 J]	<0.18 [<0.18]	0.51 J [0.48 J]	<0.090 [<0.090]	1.6 J [1.6 J]	1,400 J [1,600 J]	<2.2 J [<2.2 J]	<500 [<500]
	10/12			<10 [<10]	1.1 J [0.98 J]	0.29 J [0.27 J]	<1.0 [<1.0]	0.26 J [0.27 J]	<1.0 [<1.0]	0.91 J [0.89 J]	<5.2 [3.2 J]	2.2 [1.9]	NA
	4/13			<10 [<10]	1.4 [1.3]	0.60 J [0.64 J]	<1.0 [<1.0]	0.36 J [0.38 J]	<1.0 [<1.0]	1.5 J [1.5 J]	620 [700]	3.5 J [3.4 J]	<1,000 [<1,000]
	7/13			<10 [<10]	0.91 J [0.91 J]	0.25 J [0.26 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 J [14 J]	0.72 J [0.70 J]	150 [170]	1.7 [1.8]	<1,000 [<1,000]
	10/13			<10 [<10]	0.60 J [0.60 J]	<1.0 [0.15 J]	<1.0 [<1.0]	0.20 J [0.17 J]	0.15 J [0.11 J]	<3.0 [<3.0]	90 [72]	2.1 [1.4]	<500 [<500]
	1/14			<10 J [<10 J]	1.1 [1.1]	0.27 J [0.33 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	0.69 J [0.77 J]	660 [750 D]	1.8 J [3.7]	<500 [<500]
	4/14			8.0 J [10]	1.2 [1.2]	0.51 J [0.44 J]	<1.0 [<1.0]	0.18 J [0.17 J]	<1.0 [<1.0]	1.0 J [0.96 J]	1,300 J [1,700 J]	2.8 J [3.5 J]	<500 [<500]
	10/14			<10 J [<10 J]	1.3 [0.88 J]	0.18 J [0.12 J]	<1.0 [<1.0]	0.42 J [0.26 J]	<1.0 [<1.0]	1.2 J [0.46 J]	3.8 J [3.1 J]	2.8 [2.4]	<500 [<500]
	3/15			<10 [<10]	1.1 [0.99 J]	0.31 J [0.43 J]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	0.81 J [0.75 J]	170 [150]	2.2 [1.7]	<500 [<500]
PZ-4D	3/09	350.8	345.9	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	4/10			<10	<1.0	<1.0	5.3 J	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/11			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/12			<2.7	<0.080	<0.10	<0.18	0.23 J	<0.090	<0.36	<1.8	<0.21	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<4.8	<0.95	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	10/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	4/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
PZ-4S	3/09	362.79	357.88	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.0	<0.5	<500
	4/10			<10	<1.0	<1.0	17	<1.0	<1.0	<3.0	<5.0	<1.0	<500
	6/10			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	NA	NA
	4/11			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.3	<1.1	NA
	4/12			<2.7	<0.080	<0.10	<0.18	<0.15	<0.090	<0.36	<1.8	<0.21	NA
	4/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<5.2	<1.0	NA
	7/13			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	NA
	1/14			<10 J	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10	<1.0	NA
	10/14			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<11	<1.1	NA
	4/15			<10	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	<10 J	<1.0 J	NA

See Notes on Page 8.

Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2015
Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

General Notes:

1. Concentrations are presented in micrograms per liter, which is equivalent to parts per billion (ppb).
2. Compounds detected are indicated by bold-faced type.
3. Detections exceeding NYSDEC Groundwater Standards (TOGS 1.1.1; NYSDEC 1998) are indicated by shading.
4. Duplicate sample results are presented in brackets (e.g., [14]).
5. The sampling event in June 2010 was an interim sampling event to check for the presence of methylene chloride.
6. Results following the April 2013 sampling event reflect groundwater quality conditions after the shutdown of the in-situ bioremediation treatment and closed loop hydraulic systems.

Superscript Notes:

- ^A = Data presented is total xylenes (m- and p-xylenes and o-xylenes).
- ^B = Wells MW-8S and TW-02R were abandoned in August 2004 and replacement wells MW-8SR and TW-02RR were installed in August 2004.
- ^C = Well MW-9 was abandoned during Operable Unit No. 1 soil remediation activities (1994).
- ^D = Well/piezometer MW-17 was abandoned from November 1997 through January 1998.
- ^E = Wells/piezometers MW-36, PZ-5S, PZ-W, and TW-02RR were abandoned in November 2010. Replacement wells TW-02RRR (replaced TW-02RR) and MW-36R (replaced MW-36 and PZ-W) were installed in November 2010.
- ^F = Detections of acetone at well MW-29 since the October 2014 sampling event are attributed to the repair of the PVC stick-up on June 26, 2014, and are not site-related.
- ^G = Methanol has a New York State Department of Health drinking water standard of 50 ppb. This standard (i.e., maximum contaminant level) is for an "unspecified organic contaminant" (NYCRR Title 10, Part 5, Subpart 5-1).

Abbreviations:

amsl = above mean sea level (National Geodetic Vertical Datum of 1929)
NA = compound was not analyzed for in the sample
NYCRR = New York State Codes, Rules, and Regulations
NYSDEC = New York State Department of Environmental Conservation
PVC = polyvinyl chloride
TOGS = Technical and Operational Guidance Series

Analytical Qualifiers:

B = The compound was found in associated method blank.
D = Concentration is based on a diluted sample analysis.
J = The compound was positively identified; however, the numerical value is an estimated concentration only.
< = Compound was not detected at the listed quantitation limit.

Reference:

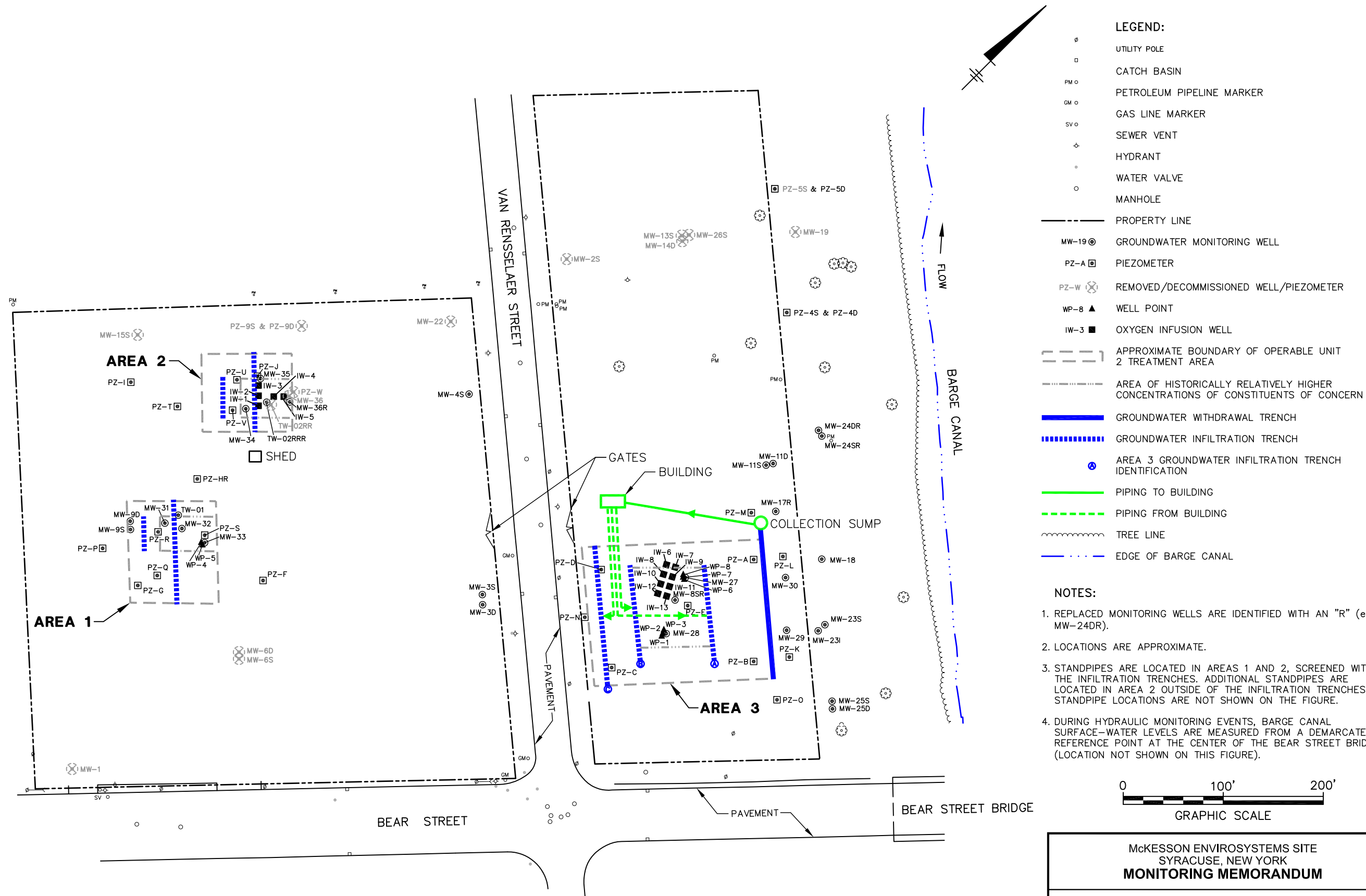
NYSDEC. 1998. Technical Operational Guidance Series 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June.
Available online at: http://www.dec.ny.gov/docs/water_pdf/togs111.pdf

Figures

CITY: SYRACUS, NY DIV/GROUP: ENV/IM-DV DB: LAF, GMS, K. SARTORI, R. ALLEN LD: PIC: PM: B. BYRNES, TM: LVR: ON=OFF=REF [AREA-HIGHER, TREE] G:\ENV\CAD\SYRACUSE\ACT1\B002603\2014\00190\DWG\MONITOR\MEMO2603B13.DWG LAYOUT: 1.1 SAVER: 2/10/2015 10:16 AM ACADVER: 18.1S (LMS TECH) PAGES: 1/1 PLOTSETUP: --- PLOTSTYLETABLE: PLT\FULLCTB PLOTTED: 2/10/2015 10:16 AM BY: ALLEN, ROYCE

XREFS: 26003X01 26003XBL

IMAGES: PROJECTNAME: ---



McKESSON ENVIROSYSTEMS SITE
SYRACUSE, NEW YORK
MONITORING MEMORANDUM

SITE PLAN

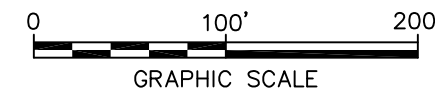


FIGURE
1



- NOTES:

1. GROUNDWATER ELEVATIONS REFLECT HYDROGEOLOGIC CONDITIONS AFTER THE APRIL 2013 SHUTDOWN OF THE IN-SITU BIOREMEDIATION TREATMENT AND CLOSED LOOP HYDRAULIC SYSTEMS.
2. ONLY THE HYDRAULIC MONITORING LOCATIONS USED TO DRAW THIS MAP ARE SHOWN.
3. REPLACED MONITORING WELLS AND PIEZOMETERS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
4. ELEVATIONS REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
5. THE BARGE CANAL ELEVATION WAS MEASURED FROM A MARKED POINT ON THE BEAR STREET BRIDGE.
6. CONTOUR INTERVAL = 1.0 FOOT.

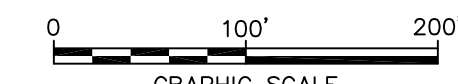


McKESSON ENVIROSYSTEMS SITE
SYRACUSE, NEW YORK
MONITORING MEMORANDUM

POTENTIOMETRIC SURFACE OF THE
SHALLOW HYDROGEOLOGIC UNIT SAND LAYER
MARCH 30, 2015



FIGURE
2



CITY: SYRACUSE, N.Y. DIV/GROUP: ENV/IMADY DB: N. SMITHGALL, R. BASSETT, R. ALLEN PM/TM: D. PENNIMAN TR: C. SOBOL LYR: ON#-OFF#-REF
GAEVACD/SYRACUSE/ACT18002903/2015/01/90/MONITOR-MEMO/2600327.DWG LAYOUT: 4 - SAVED: 5/26/2015 1:57 PM ACADVER: 19.15 (LMS TECH) PAGES: 19
PROJECT NAME: --- PLOT STYLE TABLE: PLT-FULL-QTB PLOTTED: 5/26/2015 1:58 PM BY: ALLEN, ROYCE

TW-02RRR																						
Date	10/14/2010	4/5/2011	10/27/2011	12/15/2011	4/12/2012	10/5/2012	4/8/2013	7/25/2013	10/24/13	1/24/2014	4/17/2014	10/21/2014	3/31/2015									
Acetone	<10	<10	<10	<10	NA	15 J [13 J]	<10	<10	<10	<10	8.0 J [10 J]	<10	<10									
Benzene	3.3	[3.0]	2.1	[2.0]	1.2	[1.1]	0.98 J	0.91 J	[0.86 J]	0.91 J	0.60 J	1.2	[1.1]	0.99 J								
Ethylbenzene	1.0	[0.91 J]	1.2	[1.1]	0.67 J	[0.69 J]	NA	0.73 J [0.76 J]	0.29 J [0.27 J]	0.69 J [0.64 J]	0.25 J [0.26 J]	0.41 J [0.15 J]	0.51 J [0.44 J]	0.31 J [0.43 J]								
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	NA	<0.18	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0								
Toluene	0.82 J	[0.76 J]	0.74 J	[0.75 J]	0.53 J	[0.48 J]	NA	0.51 J [0.48 J]	0.26 J [0.27 J]	0.36 J [0.38 J]	<1.0	<1.0	0.18 J [0.17 J]	0.42 J [0.26 J]	<1.0	<1.0						
Trichloroethene	<1.0	<1.0	<1.0	<1.0	NA	<0.090	<0.090	<1.0	<1.0	<1.0	<1.0	0.15 J [0.11 J]	<1.0	<1.0	<1.0	<1.0						
Xylenes (total)	3.6	[3.6]	5.2	[5.3]	1.5 J	[1.4 J]	NA	1.6 J [1.6 J]	0.91 J [0.89 J]	1.5 J [1.5 J]	<1.0	<1.0	0.69 J [0.77 J]	1.0 J [0.98 J]	1.2 J [0.46 J]	0.81 J [0.75 J]						
Aniline	760	[810]	1.9 J	[2.1 J]	1300 D	[1500 D]	1400	1400 J [1600 J]	<5.2	[3.2 J]	620	[700]	150	[170]	3.8	[3.3 J]	170	[150]				
N,N-Dimethylaniline	<5.0	[2.2 J]	3.4	[3.3]	5.5	[6.2]	NA	<2.2 J	<2.2 J	2.2	[1.9]	3.5 J [3.4 J]	1.7	[1.8]	2.1	[1.4]	1.8 J [3.7]	2.8 J [3.5 J]	2.8	[2.4]	2.2	[1.7]
Methanol	<500 J	<500 J	<500	<500	<500	<500	NA	<1000	<1000	<1000	<1000	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500

Date	10/14/2010	4/5/2011	10/26/2011	4/11/2012	10/4/2012	4/4/2013	7/24/2013	10/23/13	1/23/2014	4/16/2014	10/21/2014	4/1/2015
Acetone	<10	<10	<10	14 J	<36 B	<10	4.2 J	<10	<10 J	<10 J	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.44 J
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.6	<5.1	<1.8	<5.0	<5.1	<1.0 J	<5.2 J	<1.0	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<5.0	<1.1	<1.0	<0.21	<1.0	<1.0	<1.0	<1.0	<1.0	1.6	<1.0	<1.0
Methanol	<500 J	<500	<500	<500	NA	470 J	<1000	<500	<500	<500	<500	<500

Date	10/14/2010	4/5/2011	10/26/2011	4/12/2012	10/4/2012	4/8/2013	7/26/2013	10/24/13	1/24/2014	4/17/2014	10/21/2014	3/31/2015
Acetone	20	17	350	37 J	61	1.3	1.3	1.2	0.91 J	1.4	1.4	32
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	0.44 J	0.74 J	0.71 J	0.59 J	0.78 J	0.60 J	0.66 J	0.69 J	0.44 J	0.62 J	0.75 J	0.94 J
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	0.13 J	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	1.3 J	2.0 J	0.90 J	1.4 J	2.2 J	2.3 J	2.0 J	2.2 J	1.3 J	3.6	1.9 J	3.3
Aniline	1.8 J	10	<5.6	2.1 J	<5.2	<4.8	0.56 J	<5.0	<1.0	2.6 J	0.77 J	<1.0
N,N-Dimethylaniline	2.9	2.7	2.5	2.4	2.7	1.7	0.92 J	1.3	1.9	1.6	1.9	2.7
Methanol	<500 J	<500	<500	<500	NA	<1000	NA	<500	<500	<500	<500	<500

Date	10/14/2010	4/5/2011	10/26/2011	12/15/2011	4/12/2012	10/5/2012	4/8/2013	7/26/2013	10/24/13	1/24/14	4/17/2014	10/21/2014	3/31/2015
Acetone	12	<10	<10	NA	6.3 J	<10	<10	<10	<10	<10 J	5.5 J	<10 J	<10
Benzene	3.9	4.3	1.8	NA	1.6	1.5 J	1.8	1.4	1.3	1.2	1.1	0.62 J	0.85 J
Ethylbenzene	0.28 J	<1.0	<1.0	NA	0.16 J	<1.0	0.14 J	0.11 J	<1.0	<1.0	0.12 J	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	NA	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	1.2	0.95 J	0.66 J	NA	0.45 J	0.54 J	0.53 J	0.46 J	0.45 J	0.42 J	0.42 J	0.32 J	0.42 J
Trichloroethene	<1.0	<1.0	<1.0	NA	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	4.8	4.4	1.4 J	NA	1.9 J	2.2 J	2.9 J	1.7 J	1.7 J	1.4 J	1.6 J	0.60 J	0.88 J
Aniline	620	310	92	120	150	10	150	97	110	180	140	74	25
N,N-Dimethylaniline	<5.0	4.0	3.6	NA	4.1	3.1	4.0	2.0	1.9	4.1	3.4	3.3	3.8
Methanol	<500 J	NA	NA	NA	NA	NA	NA	<1000	NA	NA	NA	NA	NA

Date	4/11/2012	7/24/2013	4/16/2014	4/1/2015
Acetone	<2.7	<10	<10	<10
Benzene	<0.080	<1.0	<1.0	<1.0
Ethylbenzene	<0.10	<1.0	<1.0	<1.0
Methylene Chloride	<0.18	<1.0	<1.0	<1.0
Toluene	<0.15	<1.0	<1.0	<1.0
Trichloroethene	<0.090	<1.0	<1.0	<1.0
Xylenes (total)	<0.36	<3.0	<3.0	<3.0
Aniline	<1.8	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<0.21	<1.0	<1.0	<1.0
Methanol	NA	NA	NA	NA

Date	10/12/2010	4/4/2011	10/25/2011	4/11/2012	10/4/2012	4/4/2013	7/25/2013	10/23/13	1/23/14	4/17/2014	10/22/2014	3/31/2015
Acetone	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10	<10 J	<10 J
Benzene	<1.0	0.21 J	<1.0	0.11 J	<1.0	0.090 J	0.11 J	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.3	<5.3	<5.6	<1.8	<5.2	<5.2	<1.0	<5.0	<1.0	<1.0	<1.0	<1.1
N,N-Dimethylaniline	1.3	<1.1	1.6	1.7	1.9	0.98 J	1.0	1.1	0.98 J	1.3	1.4	1.1
Methanol	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	<500	<500	<500

Date	10/12/2010	4/6/2011	10/27/2011	4/11/2012	10/4/2012	4/4/2013	7/24/2013	10/23/13	1/22/14	4/15/2014	10/21/2014	4/2/2015
Acetone	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<0.080	0.27 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	0.35 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.2	<5.3	<5.3	<1.8	<5.0	<5.2	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<1.0	<1.1 J	<1.0	<0.21	<0.61 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methanol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Date	10/12/2010	4/5/2011	10/26/2011	4/11/2012	10/5/2012	4/4/2013	7/24/2013	10/23/13	1/23/14	4/17/2014	10/22/2014	4/1/2015
Acetone	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10	<10 J	<10
Benzene	1.7	0.79 J	0.58 J	0.11 J	0.33 J	1.1	0.46 J	1.1	0.69 J	1.1	0.45 J	0.57 J
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	0.12 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.1	<5.3	<5.3	<1.8	<5.1	<4.8 J	<1.0	<5.0	<1.0	0.32 J	<1.0	<1.1
N,N-Dimethylaniline	2.7	1.9	1.9	1.3	2.1 J	2.1 J	0.96 J	0.69 J	1.7	2.3	1.3	2.2
Methanol	NA	NA	NA	NA	NA	NA	<1000	NA	NA	NA	NA	NA

	MW-32											
Date	10/12/2010	4/4/2011	10/25/2011	4/11/2012	10/5/2012	4/5/2013	7/25/2013	10/23/13	1/23/14	4/17/2014	10/21/2014	3/31/2015
Acetone	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0 J	0.098 J	<1.0	<1.0	<1.0	<1.0	<1.0 J	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	0.19 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.20 J	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.2	<5.0	<5.0	<1.8	<5.1	<5.1	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
N,N-Dimethylaniline	0.87 J	1.1	1.1	1.5	2.2	0.91 J	0.82 J	1.1	0.85 J	1.1	1.1	1.1
Methanol	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	<500	<500	<500

CITY:SYRACUSE,N.Y. DIV:GROUP/ENV/MDV DB:N.SMITHGALL,P.LISTER,R.ALLEN PM/TW:D.PENNINGMAN TR:C.SOBOL LVR:ONE"OFF=REF.FRZ)
G:\ENV\CAD\SYRACUSE\ACCT\B0026003\2015\01\90\MONITOR\MEMO\26003\28.DWG LAYOUT:5. SAVED: 5/26/2015 2:06 PM ACADVER:19.1S (LMS TECH) PAGES:10 PLOT:5/26/2015 2:06 PM BY:ALLEN ROYCE

PROJECT NAME: --
IMAGES: 26003X01
26003X01
26003X01

Date	10/12/2010	4/7/2011	10/26/2011	4/12/2012	10/4/2012	4/5/2013	7/24/2013	10/23/13	1/23/2014	4/16/2014	10/23/2014	4/1/2015
Acetone	<10	3.9 J	<10	<2.7 J	<10	<10	<10	<10	<10 J	<10	<10	<10
Benzene	2.7	3.1	2.1	1.5	1.1	1.1	2.0	2.6	0.89 J	1.0	2.0	2.4
Ethylbenzene	1.4	5.1	2.2	1.4	<1.0	0.88 J	<1.0	<1.0	<1.0	<1.0	0.12 J	0.98 J
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	1.3	5.7	1.3	0.45 J	0.22 J	0.34 J	0.60 J	0.75 J	0.33 J	0.41 J	1.2	1.9
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	3.4	9.1	3.1	2.2 J	<3.0	1.4 J	<3.0	3.9	0.22 J	0.92 J	3.5	9.5
Aniline	220	1000	36	<1.9	<5.0	11	1.5	<5.0	<12	0.60 J	16	20
N,N-Dimethylaniline	2.5	<11	2.7	2.2	2.4	1.1	0.73 J	0.75 J	0.48 J	1.4	1.0 J	1.0 J
Methanol	NA	NA	NA	NA	NA	NA	<1000	NA	NA	NA	NA	NA

Date	6/22/2010	4/7/2011	4/10/2012	4/2/2013	7/22/2013	1/20/2014	10/23/2014	4/1/2015
Acetone	<10	<10	<2.7	<10	<10	<10 J	<10	<10
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	NA	<5.3	<1.8	<5.2	<1.0	<1.0	<1.1	<10 J
N,N-Dimethylaniline	NA	<1.1	<0.21	<1.0	<1.0	<1.0	<1.1	<10 J
Methanol	NA	NA	NA	NA	NA	NA	NA	NA

Date	6/22/2010	4/7/2011	4/10/2012	4/2/2013	7/22/2013	10/22/13	1/20/2014	4/16/2014	10/22/2014	4/2/2015
Acetone	<10	<10	<2.7	<10	<10	<10	<10 J	<10	<10	<10
Benzene	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	0.23 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	NA	<5.3	<1.8	<5.2	<1.0	<5.2	<1.0	<1.0	<1.0	<1.0
N,N-Dimethylaniline	NA	<1.1	<0.21	<1.0	<1.0	<1.0	<1.1	<1.0	<1.0	<1.0
Methanol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Date	10/13/2010	4/6/2011	10/25/2011	4/10/2012	10/3/2012	4/3/2013	7/23/2013	10/22/13	1/22/2014	4/15/2014	10/23/2014	4/2/2015
Acetone	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10	<10	<10
Benzene	1.3	<1.0	<1.0	0.22 J	0.55 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	0.19 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.6	<5.3 J	<5.0	<1.8	<5.1	<5.0	<1.2	<5.4	<1.0	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<1.1	<1.1 J	<1.0	<0.21	<1.0	<1.0	<1.2	<1.1	<1.0	<1.0	<1.0	<1.0
Methanol	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	<500	<500	<500

Date	10/13/2010	4/7/2011	10/25/2011	4/10/2012	10/3/2012	7/23/2013	10/22/13	1/20/2014	4/15/2014	10/22/2014	4/3/2015
Acetone	<10	<10 J	<10	<2.7	<10	<10	<10	<10 J	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	0.23 J	0.27 J	<1.0	0.60 J	0.25 J	0.19 J	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	NA	<5.3	<5.0	<1.8	<5.2	<4.8	<1.0	<5.4	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<1.0	<1.1	<1.0	<0.21	<1.0	<0.95	<1.0	<1.1	<1.0	<1.0	<1.0
Methanol	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	<500	<500

Date	10/13/2010	4/6/2011	10/25/2011	4/10/2012	10/4/2012	4/4/2013	7/24/2013	10/22/13	1/22/2014	4/15/2014	10/23/2014	4/2/2015
Acetone	<10 J	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10	<10	<10
Benzene	0.14 J	<1.0	<1.0	<0.080	0.099 J	<1.0	0.20 J	0.29 J	0.19 J	0.37 J	0.18 J	0.24 J
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	37	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	0.14 J	<3.0	0.15 J	<3.0
Aniline	<5.1	<5.3 J	<5.0	<1.8	<5.3	<5.2	<1.0	<5.2	<1.1	<1.0	<1.0	<1.1
N,N-Dimethylaniline	<1.0	<1.1 J	<1.0	<0.21	<1.1	<1.0	0.30 J	0.85 J	<1.1	0.43 J	1.5	2.0
Methanol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Date	10/14/2010	4/7/2011	10/26/2011	4/10/2012	10/2/2012	4/3/2013	7/23/2013	10/21/13	1/20/2014	4/14/2014	10/22/2014	4/3/2015
Acetone	3.7 J	<10 J	<10	<2.7	<10	<10	<10	<10	<10 J	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	0.31 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.3	<5.0	<1.8	<5.1	<5.1	<1.0	<5.2	<1.0	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<1.0	<1.1	<1.0	<0.21	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methanol	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	<500	<500	<500

Date	10/14/2010	4/7/2011	10/26/2011	4/10/2012	10/2/2012	4/3/2013	7/23/2013	10/21/13	1/20/2014	4/14/2014	10/22/2014	4/3/2015
Acetone	<10	<10 J	<10	<2.7	<10	<10	<10	<10	<10 J	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<1.0	<1.0	0.29 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	NA	<5.3	<5.0	<1.8	<5.6	<4.8	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<1.0	<1.1	<1.0	<0.21	<1.1	<0.96	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methanol	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	<500	<500	<500

	MW-29												
Date	10/12/2010	4/6/2011	10/25/2011	4/11/2012	10/3/2012	4/5/2013	7/23/2013	10/22/13	1/22/2014	4/15/2014	10/23/2014	12/3/2014	4/2/2015
Acetone	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10	790000 D	370 J	12
Benzene	<1.0	<1.0	<1.0	<0.080	<1.0	<1.0	0.26 J	0.32 J	<1.0	<1.0	<500 D	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<500 D	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<500 D	<1.0	<1.0
Toluene	<1.0	<1.0	0.22 J	<0.15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<500 D	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<500 D	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1500 D	<3.0	<3.0
Aniline	<5.2	<5.3 J	<5.0	<1.8	<1.0	<1.0	<1.0	<1.0	<1.1	<1.0	<1.0	<1.0	<1.1
N,N-Dimethylaniline	<1.0	<1.1 J	0.22 J	<0.21	<1.0	<1.0	<1.0	<1.0	<1.1	<1.0	<1.0	<1.0	0.66 J
Methanol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA



Attachment A

Validated Analytical Laboratory
Reports



Attachment B

Summary of Historical
Groundwater Monitoring Data –
March 1988 through August 2008

Attachment B
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

		Screen Elev. (ft. AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)													
MW-1 ^K	3/88	370.3	355.3	50	1	5	5	5	NS	5	5	1	5
	<100			<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	1/89			<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	7/99			0.7 JN	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			8 J	<10 J	3 J	<10 J	5.0 J	<1,000	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	10
	9/01			<10	<10	<10	<10	<10	<1,000 J	<10	<10	<10	<10
	4/02			<12	<5.0	<5.0	<5.0	<10	990 J	<5	<5	<5	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	2 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.2 J	<1.0	<3.0
	11/05			<1.3 J	<0.3	<0.4	<0.5	<0.5	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0 J	<1.0 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	<1.0 J	<3.0 J
	11/06			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0	<3.0
	6/07			<5	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
8/08	7.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0			
MW-2S	3/88	368.1	353.1	<1,000	1,900	110	610	2,800	<1,000	<10	<10	<10	<10
	1/89			<1,000	2,000	65	330	1,200	<1,000	<10	<11	<11	<10
	11/89			<1,000	1,800	<100	360	810	38,000	<100	<100	<100	<100
MW-3S	3/88	365.1	350.1	<100	<1	<1	<1	<1	<1,000	50	<10	<10	110
	1/89			<10,000	<100	120	<100	<100	<1,000	1,100	<11	5,570	4,700
	11/89			<10,000	<100	<100	<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	<1,000	<5.0	15	2.0 J	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	7/99			<10	1 J	0.7 J	<10	<10	<1,000	<10	9 J	<10	<10
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10	<10	<10
	9/00			<10 J	1 J	2 J	<10 J	<10 J	<1,000	<10 J	2 J	1 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	3 J	8 J	1 J	2 J	<1,000 J	<10	690 D (69) ^B	4 J	<10
	4/02			<12	<5	<5	<5	<10	370 J	<5.0	1.7 J	<5	<5

See Notes on Page 19.

Attachment B
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-3S (cont'd)	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
	6/04			6.0 J	<10	<10	<10	<20	<1,000	<10	0.8 J	<6	<10
	11/04			<25	<10	<10	<10	<20	150 J	<10	4 J	<5.0	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	15	<1.0	<3.0
	11/05			<1.3 J	<0.3	<0.4	<0.5	<0.4	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/06			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<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	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
8/08	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0			
MW-3D	8/95	343.8	339	<1,000	<25 D	<25 D	<25 D	<25 D	<1,000	<25 D	1 J	5 J	200 D
MW-4S	3/88	365.5	350.5	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	<11	19	280
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-5 ^c	3/88	363.3	348.3	<100	<1	<1	<1	<1	<1,000	<1	230	130	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	34	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	17	<10	<1
MW-6 ^D (Replaced by MW-6S)	1/89	365.5	355.9	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	11/89			<10	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
MW-7 ^D	1/89	367	357.4	<100	<1	<1	<1	2	<1,000	<1	<11	<11	100
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-8 ^D (Replaced by MW-8S) ^E	1/89	364.7	355.1	<1,000,000	<10,000	<10,000	<10,000	<10,000	430,000	<10,000	2,900	24,000	3,200,000
	11/89			470,000	<10,000	<10,000	<10,000	<10,000	300,000	<10,000	8,500	52,000	2,800,000
	11/91			<1,000,000	<10,000	<10,000	<10,000	<30,000	150,000	<10,000	8,000	33,000	1,600,000
	8/95			<1,000	<250,000D	<250,000D	<250,000D	<250,000D	22,000	60,000 JD	<25,000D	380,000 D	7,700,000 D
	9/98			<10,000 J	<10,000	<10,000	<10,000	<10,000	7,900	3,300 J	1,200 J	26,000 D	140,000
	2/99			<20,000	<20,000	<20,000	<20,000	<20,000	16,000JN	11,000 J	30,000 D	120,000 D	650,000 DB
	7/99			10 J	22 J	240 J	58 J	220 J	17,000	11,000 J	24,000	77,000	450,000 D
	3/00			<100,000	<100,000	<100,000	<100,000	<100,000	30,000 J	<100,000	62,000	270,000 D	1,300,000
	9/00			<50,000 J	<50,000 J	<50,000 J	<50,000 J	<50,000 J	14,000 J	9,200 J	42,000 J	59,000	540,000 BJ
	3/01			<50,000	<50,000	<50,000	<50,000	<50,000	53,000	11,000 J	90,000 D	120,000 D	990,000
	9/01			<400	<400	430	170 J	680	8,900 J	18,000 JD	21,000	29,000	440,000 BD
	4/02			2,100	50 J	410	100 J	400	<1,000	9,600 J	793,000 D	773,000 D	660,000 D
	10/02			120 J	23	310	73	267	<1,000	3,100	80,000	21,000 J	320,000
	5/03			<12	20 J	600 D	81	300	<1,000	6,700 D	79,000 D	29 J	910,000 D
	10/03			21	25	330 D	93	360	1,200 J	3,100 D	67,000 D	24,000 D	400,000 D
	6/04			<25	40	330 EJ	110	400	<1,000	5,900 D	56,000	51,000	1,200,000 D

See Notes on Page 19.

Attachment B
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-8SR ^B	11/04	362.7	352.7	<1,200	<500	100 DJ	<500	164 DJ	<1,000	<500	35,000 D	5,300 D	10,000 D
	6/05			81 J	13	100	53	180	<1,000	<1.0	30,000	<200	<3.0
	11/05			15 J	13	130	66	260	<1,000	<1.0	32,000	<260 J	<3.0
	6/06			48	15	120	79	260	<1,000	<1.0	23,000	<200	<3.0
	9/06			NA	NA	NA	NA	NA	NA	NA	52,000 [51,000]	<520 [<520]	NA
	11/06			28	16	100	84	270	<500	<1.0	28,000	<200	<3.0
	6/07			58	14	110	83	250	<500	<2.0	2,700	<22	<6.0
	8/07			NA	NA	NA	NA	NA	NA	NA	17,000	<100	NA
	11/07			<5.0 J	12	22	73	210	<500	<1.0	22,000 J	<100 J	<3.0
	3/08			<10 [9.6 J]	5.5 [5.7]	22 [22]	70 [68]	160 [160]	<500 [<500]	<2.0 [<2.0]	5,800 [5,200]	<25 [<50]	<6.0 [<6.0]
	8/08			8.2 J [<10]	11 [11]	24 [22]	70 [70]	190 [190]	<500 [<500]	<2.0 [<2.0]	32,000 [25,000]	<250 [<250]	<6.0 [<6.0]
MW-9 ^D (Replaced by MW-9S)	1/89	365.6	356	1,600	NA	64	130	270	<1,000	<10	660	1,200	1,500
	11/89			<1,000	48	25	60	60	<1,000	<10	670	150	<10
	11/91			<100	<10	9	19	30	<1,000	<1.0	95	18	<1
	8/95			<1,000	11 JD	26 JD	69 D	226 JD	<1,000	<50	50	28	110 D
	7/99			<10	4 J	2 J	9 J	18	<1,000	<10	<10	5.0 J	<10
	3/00			<10	2 J	2 J	11	21	<1,000 J	<10	2.0 J	9.0 J	<10
	9/00			<10 J	11 J	2 J	6.0 J	18 J	<1,000	<10 J	1.0 J	6.0 J	<10 J
	3/01			<10	1 J	3 J	17	61	<1,000	<10	2.0 J	11	<10
	9/01			<10	10	3 J	7.0 J	35	<1,000 J	<10	<10	10	<10
	4/02			<23	10	2 J	6	17 J	370 J	<5	9	43	<5
	10/02			16 J	38	40	2 J	15 J	<1,000	<10	<5.0	2.0 J	<10
	5/03			<12	11	<5	7	18	<1,000	<5.0	0.9 J	3.0 J	<5
	10/03			<12	2 J	<5	5	19	<1,000	<5.0	1.0 J	<5.0	<5
	6/04			14 J	6 J	2.0 J	8 J	19 J	<1,000	<10	<5.0	<5.0	<10
	11/04			<25	4 J	2 J	9 J	30 J	<1,000	<10	<5.0	<5.0	<10
	6/05			44 J	1.9	3.2 J	24	64	<1,000	<1.0	2.6	1.9	<3.0
	11/05			<1.3 J	3.5	3.8	11	33	<1,000	<0.4	1.4	6.1 J	<0.5
	6/06			<5.0 J	1.1 J	2.3 J	25 J	60 J	<1,000 J	<1.0 J	<1.1 J	3.8 J	<3.0 J
	11/06			<5.0	1.4	3.5 J	23	63	<500	<1.0	0.5 J	3.3 J	<3.0
	6/07			<5.0	1.4	3.3 J	42	110	<500	<1.0	<5.0	4.1	<3.0
	11/07			<5.0	0.9 J	2.0 J	11	58	<500 J	<1.0	1.7 J	8.6	<3.0
	3/08			<5.0 J	1.1	3.0 J	37	73	<500	1.2	0.7 J	6.8	<3.0
	8/08			24	3.7	3.3 J	21	72	<500	<1.0	<5.5	5.1	<3.0
MW-10 ^D (Replaced by MW-9D)	1/89	355.5	345.9	<1,000,000	<10,000	<10,000	<10,000	<10,000	210,000	<10,000	720	9,400	520,000
	11/89			<100,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	900	2,400	28,000
	11/91			<100	<1	3.0	2.0	<3.0	<1,000	<1	230	<10	41
	8/95			<1,000	<25 UD	<25 UD	<25 UD	<25 UD	<1,000	<25 UD	<5.0	<10	350 D
MW-11 ^D (Replaced MW-6D)	1/89	355.1	345.5	<100	<1	<1	<1	<1	8,400	<1	<12	<12	1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	230	<52	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10

See Notes on Page 19.

Attachment B
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Monitoring Memorandum
McKesson Envirosystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-11S	12/94	359.9	354.9	<380	<10	<10	<10	<10	880	<10	<5	<10	<10
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<26
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
MW-11D	12/94	349.8	344.8	<310	<5	<5	<5	<5	2,100	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
MW-12D ^D (Replaced MW-8D) ^E	1/89	354.8	345.2	<100,000	<1,000	<1,000	<1,000	<1,000	12,000	<1,000	67	410	120,000
	11/89			69,000	<1,000	<1,000	<1,000	<1,000	39,000	<1,000	<1,000	4,900	360,000
	11/91			<1,000,000	<10,000	<10,000	<10,000	<30,000	<10,000	<10,000	750	5,800	220,000
	8/95			<1,000	450 JD	430 JD	430 JD	1,250 JD	<1,000	<1,300 D	30 D	230 D	<13,000 D
	8/96			13	<10	<10	<10	<10	<1,000	2.0 J	<5	<10	40
MW-13S	11/89	368.7	359.1	<100	3	<1	<1	<1	<1,000	<1.0	<52	<52	<1.0
	11/90			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/91			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/92			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
MW-14D ^C	1/89	359	349.4	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<10	<10	<1.0
MW-15S	1/89	370	360.25	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<52	<52	<1.0
MW-16D ^C	1/89	350.8	341.2	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<10	<10	<1.0
MW-17 ^C (Replaced by MW-17R)	11/90	365.7	356.1	<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/91			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/92			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<11
	10/95			NA	<5	<5	<5	<5	NA	2 J	NA	NA	<5
	8/96			11	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/99			<10	1 J	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00			<10	8 J	<10	<10	<10	<1,000 J	<10	<5.0	<10	<10
	9/00			<10 J	15 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	24 J	4 J	1 J
	3/01			<10	8 J	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	5 J	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	6	<5	<5	<10	620 J	<5	150 (<5) ^F	110 (<5) ^F	<5
	10/02			<25 J	14	<10	<10	<20	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	8	<5	<5	<5	<1,000	<5	<5	<5	<5
	11/03			<12	7	<5	<5	<10	<1,000	<5	<5	<5	<5

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		Top	Bottom											
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5	
MW-17 ^D (cont'd)	6/04			<25	5 J	<10	<10	<20	<1,000	<10	<5	<5	<10	
	11/04			--	--	--	--	200 J	--	<5	<5	--		
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0	
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0	
	6/06			<5.0	0.8 J	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0	
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0	
	6/07			<5.0	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0	
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0	
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
8/08			2.3 J	1.8	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0		
MW-18	11/89	325.15	316.15	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5	
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10	
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	2/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10	
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10	
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J	
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	4/02			<10	<10	<10	<10	<20	720 J	<10	280 D (<5) ^F	200 D (<5) ^F	<10	
	10/02			6 J	<10	<10	<10	<10	<20	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<5	280 J	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	0.7 J	<5	<5	
	6/04			<25	<10	<10	<10	<20	<1,000	<10	R	R	<10	
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--	
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0	
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1 J	<3.0	
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<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 J	<3.0	
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3	
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
	8/08			5.5	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0	

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		Top	Bottom											
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5	
MW-19 ^K	11/89	318.45	309.45	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5	
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<12	
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5	
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	2/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	5 J	<11	
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10	<10	<10 J	
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10	
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J	
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5	
	10/02			<25 J	<10	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5	
	10/03			<11	<5	<5	<5	<10	<1,000	<5	51 J	16 J	<5	
	6/04			<25	<10	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<25	<10	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0	
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0	
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<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 J	<3.0	
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.5	<1.1	<3.0	
	11/07			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0	
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0	
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0	
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0	
MW-20 ^C	11/89	329.85	320.85	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1	
MW-21 ^C	11/89	323.65	314.65	<100	<5	<1	<1	<1	<1,000	<1	<10	<10	<1	
MW-22 ^L	11/89	368.55	359.55	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	10/10			<10	<1.0	<1.0	<1.0	<3.0	<500 J	<1.0	<5.0	<1.0	<1.0	
MW-23S	12/94	364.1	354.1	<10	<5	<5	<5	<5	<200	<5	<5	<10	<5	
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10	

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-23S (cont'd)	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/96			<10	<10	<10	<10	<10	<1,000	<10	7	<10	<10
	2/97			<10	<10	<10	<10	<10	<1,000	<10	11	<10	<10
	8/97			12	<10	<10	<10	<10	<1,000	<10	92	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	56 ^H	7 J	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	10	<10 J
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	2 J	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	2 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	2 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<62	<25	<25	<25	<50	380 J	<25	<5	<5	<25
	10/03			<12	<5	<5	<5	<10	<1,000	<5	60	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.2	<1.2	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
MW-23I	12/94	341.2	336.2	<10	<5.0	<5	<5.0	<5.0	<200	<5.0	<5.0	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<11	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			4 J	<10	<10	<10	2 J	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	2 J
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-23I (cont'd)	10/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	1 J	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0	0.6 J	<4.0	<5.0	<1,000	<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 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
MW-24S ^{CL} (Replaced by MW-24SR)	12/94	358.4	352.4	<10	<5	<5	<5	<5	<1,000	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	<10 J	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	6/02 ^F			NA	NA	NA	NA	NA	NA	NA	ND	ND	NA
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	16	<6	<5
	6/04 ^J			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
	9/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-24D ^{CL} (Replaced by MW-24DR)	12/94	334.4	341.2	<10	<5	<5	<5	<5	<1,000	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<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 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	6/02 ^F			NA	NA	NA	NA	NA	NA	NA	ND	ND	NA

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-24D ^{DL} (cont'd)	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	0.5 J	<5	<5
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5 J	<1	<5	<4	<5	<1,000	<1	<1	<1	<3
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1 J	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
	9/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-25S ^L	8/95	361.2	356.2	<1,000	<5	<5	<5	<5	<1,000	<5	<5	0.7 J	<10
	10/95			NA	<5	<5	<5	<5	NA	<5	<5	<10	<5
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	130	<10	<10 J
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	110 J	21 J	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	5 J	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	11/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<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
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<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
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.2	<0.5	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<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
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	MW-25D ^L			8/95	349.55	344.55	<1,000	<5	<5	<5	<5	<1,000	<5
10/95		NA	<5	<5			<5	<5	NA	3 J	<5	<10	<5
8/96		15	<10	<10			<10	<10	<1,000	<10	<5	<10	<10
8/97		<10	<10	<10			<10	<10	<1,000	<10	<5	<11	<10

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-25D ^L (cont'd)	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	3/01			<10	<10	<10	<10	<10	<1,000	<10	5 J	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<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
	6/07			12 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/09			<10	<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	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-26	12/96	365	355.3	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
MW-27	9/98	362.5	354.5	23	3 J	4 J	<10	3 J	<1,000	<10	340 DJ	<10	<10
	7/99			<10 J	4 J	2 J	3 J	8 J	<1,000	<10	740 D	<10	<10
	3/00			<10	6 J	<10	8 J	2 J	<1,000 J	<10	110 D	1 J	<10
	9/00			<10 J	4 J	<10 J	3 J	1 J	<1,000 J	<10 J	16 J	2 J	1 J
	3/01			<10	5 J	<10	5 J	2 J	<1,000	<10	260 D	2 J	<10
	9/01			<10	5 J	<10	2 J	<10	<1,000 J	<10	26	<10	<10
	4/02			<18	7	11	12	26	<1,000	<5	176,000 DJ	19 J	<5
	10/02			9 J	3 J	<10	<10	<20	<1,000	4 J	2,700 D	100 J	60 JN
	5/03			<12	8	11	23	51	<1,000	<5	15,000 DJ	11	43
	10/03			170	5	<5	<5	3 J	<1,000	<5	3,700 D	<5	240 D
	6/04			23 J	5 J	4 J	2 J	6 J	<1,000	<10	3,700 D	20 J	<10
	11/04			<120 (28)	<50 (4 J)	<50 (2 J)	<50 (<10)	<100 (<20)	<1,000	<50 (<10)	1,100 DJ	<5	310 (490 D)
	6/05			31 J	6.1	15	5.8	15	<1,000	<1.0	5,200	<23	<3.0
	11/05			35 J (37 J)	11 (12)	77 (78)	26 (26)	86 (88)	<1,000 (<1,000)	<1.0 (<1.0)	37,000 (38,000)	<270 J (<260 J)	<3.0 (<3.0)
	6/06			5.3 J (5.8 J)	9.5 J (8.9 J)	50 J (48 J)	25 J (25 J)	66 J (63 J)	<1,000 J (<1,000 J)	<1.0 J (<1.0 J)	14,000 J (12,000 J)	<100 J (<100 J)	<3.0 J (<3.0 J)
	9/06			NA	NA	NA	NA	NA	NA	NA	1,700	<10	NA
	11/06			31 [24]	14 [14]	71 [71]	42 [45]	91 [110]	<500 [<500]	<1.0 [<1.0]	33,000 [33,000]	<210 [<200]	<3.0 [<3.0]
	6/07			21	8.4	9.5	14	24	<500	<1.0	1,100	<10	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	<10 J [4,300 J]	<1.0 [<20]	NA
	11/07			<5.0 J [<5.0]	6.6 [5.9]	4.7 J [4.1 J]	8.6 [7.2]	24 [21]	<500 [<500]	<1.0 [<1.0]	3,000 J [3,800 J]	<25 J [<25 J]	<3.0 [<3.0]
	3/08			21	9.4	23	43	68	<500	<2.0	13,000	<100	<6.0
	8/08			3.8 J	5	2.2 J	1.8 J	10	<500	<1.0	2,400	<25	<3.0
MW-28	9/98	363.6	355.6	<5,000 J	<5,000	<5,000	<5,000	<5,000	2,200	<5,000	546 D ^H	54	64,000 J
	7/99			<500 J	<500	<500	<500	<500	<1,000	<500	1,100 D	40	39,000 D
	3/00			<10,000	<10,000	<10,000	<10,000	<10,000	<1,000 J	<10,000	1,300 D	30	130,000 J
	9/00			<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	540 DJ	<10	8,100 BJ
	3/01			<400	<400	<400	<400	<400	<1,000	<400	3,200 D	7 J	5,900 B
	9/01			<400	<400	<400	<400	<400	<1,000 J	<400	1,000 D	<10	4,700 B

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-28 (cont'd)	4/02	362.9	345.9	<49	8	6	9	10 J	<1,000	<5	33,400 D	57	4,600 D
	10/02			14 J	8 J	6 J	11	12 J	<1,000	<10	2,700 D	R	<10
	5/03			13	4 J	2 J	2 J	8 J	<1,000	<5	1,000 DJ	3 J	52
	10/03			24	11	6	12	13 J	<1,000	<5	1,900 D	<5	<5
	6/04			20 J	4 J	2 J	5 J	4 J	<1,000	<10	910 D	<5	<10
	11/04			<120 (<25)	<50 (4 J)	<50 (<10)	<50 (5 J)	<100 (3 J)	190 J	<50 (<10)	640 DJ	<5	<50 (<10)
	6/05			5.2 J	4.5	1.2 J	4.6	3.9 J	<1,000	<1.0	630	<5.0	<3.0
	11/05			6.8 J (7.8 J)	6.1 (5.8)	<5.0 (<5.0)	4.7 (4.7)	<5.0 (<5.0)	<1,000 (<1,000)	<1.0 (<1.0)	380 J (350 J)	<2.2 (<2.1)	<3.0 (<3.0)
	6/06			<5.0 J (<5.0 J)	6.0 J (6.3 J)	1.2 J (1.3 J)	5.3 J (5.4 J)	4.2 J (4.3 J)	<500 J (<1,000 J)	<1.0 J (<1.0 J)	430 J (530 J)	<2.1 J (<5.0 J)	<3.0 J (<3.0 J)
	9/06			NA	NA	NA	NA	NA	NA	NA	280	<2.2	NA
	11/06			12	8.2	1.4 J	5.6	4.4 J	<500	<1.0	1,000	<5.2	<3.0
	6/07			13	4.6	0.4 J	0.8 J	0.6 J	<500	<1.0	60	<1.0	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	40	<1.0	NA
	11/07			<5.0 J	4.5	0.5 J	1.4 J	0.8 J	<500	<1.0	29 J	<0.5 J	<3.0
	3/08			<5.0	4.0	0.5 J	1.6 J	1.3 J	<500	<1.0	81	0.9	<3.0
	8/08			<5.0	3.8	<5.0	<4.0	<5.0	<500	<1.0	0.7 J	<0.5	<3.0
MW-29	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	1 J	<1,000	<10	5 J	4 J	<10
	7/99			<10	<10	<10	<10	<10	<1,000	<10	2 J	4 J	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	450 D	6 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	24 J	4 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	30	4 J	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	7 J	2 J	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	3 J	9	<6
	10/02			<25 J	<10	<10	<10	<20	<1,000	<10	8	R	4 JN
	5/03			<12	<5	<5	<5	<10	<1,000	<5	19	1 J	<3
	10/03			<12	<5	<5	<5	<10	<1,000	<5	2 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	3 J	<5	<10
	11/04			<120	<50	<50	<50	<100	420 J	<50	<5	<5	<50
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/06			5.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	0.4 J	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	0.5 J	<500	<1.0	<5.5	<1.1	<3.0
	11/07			<5.0 J	<1.0	<5.0	<4.0	<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	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
MW-30	9/98	363.5	355.5	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	2/99			7 J	<10	<10	<10	<10	<1,000	<10	<10	2 J	<10
	7/99			<10	0.7 J	<10	<10	<10	<1,000	0.5 J	<10	1 J	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	18	2 J	4 J
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	9 J	2 J	2 J

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-30 (cont'd)	3/01			<10	<10	<10	<10	<10	<1,000	<10	8 J	2 J	<10
	9/01			4 J	2 J	<10	<10	<10	<1,000 J	<10	8 J	1 J	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	250	210	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	R	R	<10
	5/03			<62	<25	<25	<25	<50	<1,000	<25	18	0.6 J	8 J
	10/03			<12	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<120	<50	<50	<50	<100	<1,000	<50	<5	<5	<50
	6/05			<5.0 J	0.3 J	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	0.7 J	0.6 J	<4.0	0.5 J	<1,000	<1.0	240	<1.0 J	<3.0
	6/06			<5.0	0.6 J	0.4 J	<4.0	<5.0	<1,000	<1.0	29	<1.0	<3.0
	11/06			11	1.0	<5.0	<4.0	<5.0	<500	<1.0	200	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	30	<1.1	<3.0
	11/07			<5.0 J	0.8 J	<5.0	<4.0	<5.0	<500	<1.0	49	<0.5	<3.0
	3/08			<5.0	0.6 J	<5.0	<4.0	0.2 J	<500	<1.0	3.0 J	0.7	<3.0
8/08	<5.0	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	31	<0.5	<3.0			
MW-31	9/98	363.7	355.4	<10	12	<10	<10	<10	<1,000	<10	34	4 J	<10
	7/99			<10	16	<10	<10	<10	<1,000	<10	230 D	3 J	<10
	3/00			<10	16	<10	<10	<10	<1,000 J	<10	3 J	4 J	<10
	9/00			<10 J	12 J	<10 J	<10 J	<10 J	<1,000	<10 J	10	6 J	<10 J
	3/01			21	11	<10	<10	<10	<1,000	<10	<10	5 J	<10
	9/01			<10	14	<10	<10	<10	<1,000 J	<10	91 D	3 J	<10
	4/02			<14	9	<5	<5	<10	<1,000	<5	804 D	21	<5
	10/02			<25	11	<10	<10	<20	<1,000	<10	560 D	1 J	<10
	5/03			<12	9	<5	<5	<10	<1,000	<5	0.9 J	3 J	<5
	10/03			1,200 D	13	<5	<5	<5	<1,000	<5	88	<5	<5
	6/04			15 J	12	<10	<10	<20	<1,000	<10	3 J	<5	<10
	11/04			<25	9 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	11	<5.0	<4.0	1.3 J	<1,000	<1.0	3.2	2.7	<3.0
	11/05			<1.3 J	6.7	<0.4	<0.5	0.6	<1,000	<0.4	16	<1.0 J	<0.5
	6/06			<5.0 J	11 J	0.6 J	<4.0 J	1.7 J	<1,000 J	<1.0 J	<1.0 J	2.4 J	<3.0 J
	9/06			NA	NA	NA	NA	NA	NA	NA	1.6	3.4	NA
	11/06			R	6.9	<5.0	<4.0	<5.0	<500	<1.0	0.4 J	1.1 J	<3.0
	6/07			<5.0	14	0.7 J	<4.0	1.3 J	<500	<1.0	<5.0	2.0	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	0.5 J	2.7	NA
	11/07			<5.0 [<5.0]	12 [10]	<5.0 [0.4 J]	<4.0 [<4.0]	1.1 J [1.4 J]	<500 J [<500 J]	<1.0 [<1.0]	<5.0 [0.3 J]	2.3 [2.8]	<3.0 [<3.0]
	3/08			<5.0 J	2.0	<5.0	<4.0	<5.0	<500	<1.0	0.2 J	1.6	<3.0
	8/08			22	13	0.4 J	<1.0	2.2 J	<500	<1.0	<5.6	2.4	<3.0
	MW-32			9/98	364	356	<10	16	2 J	5 J	3 J	<1,000	<10
7/99		3 J	14	2 J			4 J	<10	<1,000	56	<10	3 J	<10
3/00		<10	5 J	<10			<10	<10	<1,000 J	<10	800 D	<10	<10

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-32 (cont'd)	9/00			<10 J	12 J	<10 J	<10 J	<10 J	<1,000	<10 J	4,500 D	<10	<10 J
	3/01			<10	5 J	<10	<10	<10	<1,000	<10	1,900 D	2 J	<10
	9/01			<10	10	<10	<10	<10	<1,000 J	<10	1,100 D	2 J	<10
	4/02			<15	4 J	<5	<5	<10	<1,000	<5	4,620 D	11	<5
	10/02			<25	4 J	<10	<10	<20	<1,000	<10	50	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	0.6 J	0.7 J	<5
	10/03			20	2 J	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			6 J	1 J	<10	<10	<20	<1,000	<10	1 J	<5	<10
	11/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.4 J	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	<1.0 J	<3.0 J
	11/06			R	<1.0	0.8 J	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.1 J	0.8	<3.0
	3/08			<5.0 J	0.8 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	0.8	<3.0
	8/08			5.8	0.3 J	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
MW-33	9/98	344.1	356.1	<10	<10	<10	<10	<10	<1,000	<10	9 J	6 J	<10
	2/99	<10	<10	<10	<10	<10	<1,000	<10	120	6 J	<10		
	7/99	5 J	2 J	0.7 J	<10	<10	<1,000	<10	150	8 J	<23		
	3/00	<10 J	<10	<10	<10	<10	<1,000 J	<10	51	7 J	11		
	9/00	45 J	4 J	1 J	<10 J	<10 J	<1,000	<10 J	540 D	23	330 DJ		
	3/01	17 J	<20	<20	<20	<20	<1,000	<20	1,300 D	16	370 B		
	9/01	21	5 J	<10	<10	<10	<1,000 J	<10	1,900 D	12	<18		
	4/02	<18	3 J	<5	<5	<10	<1,000	<5	2,780 D	21	19		
	10/02	11 J	4 J	<10	<10	<20	<1,000	<10	290 D	3 J	4 J		
	5/03	88	13	<5	<5	<10	<1,000	<5	2,000	35 J	2,800 D		
	10/03	22	2 J	<5	<5	<10	<1,000	<5	1,900 D	<6	<5		
	6/04	9 J	12 J	<10 J	<10 J	<20 J	<1,000	<10 J	2,700 D	5 J	<10 J		
	11/04	--	--	--	--	--	<1,000	--	2,700 D	5 J	--		
	6/05	<5.0 J	11	1.0 J	<4.0	<5.0	<1,000	<1.0	1,800	<10	<3.0		
	11/05	<5.0 J	16	1.8 J	<4.0	<5.0	<1,000	<1.0	3,500	<25 J	<3.0		
	6/06	<5.0 J	6.7 J	0.7 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	370 J	3.5 J	<3.0 J		
	9/06	NA	NA	NA	NA	NA	NA	NA	940	8.0	NA		
	11/06	17 J	8.6	0.7 J	<4.0	<5.0	<500	<1.0	84	2.9 J	<3.0		
	6/07	<5.0	5.7	0.4 J	<4.0	<5.0	<500	<1.0	46	2.6	<3.0		
	8/07	NA	NA	NA	NA	NA	NA	NA	46	4.2	NA		
	11/07	<5.0	4.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.1 J	3.5	<3.0		
	3/08	<5.0 J	4.1	<5.0	<4.0	<5.0	<500	<1.0	<5.0	4.1	<3.0		
	8/08	<5.0	3.2	<5.0	<4.0	<5.0	<500	<1.0	<5.9	2.8	<3.0		

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-34	9/98	362.7	354.7	<10	<10	<10	<10	<10	<1,000	<10	83	<10	<10
	7/99			2 J	0.9 J	1 J	<10	<10	<1,000	<10	380 D	2 J	<10
	3/00			<10 J	1 J	2 J	<10	<10	<1,000 J	<10	200 D	3 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	320 D	4 J	<10 J
	3/01			<10	<10	2 J	<10	2 J	<1,000	<10	700 D	5 J	<10
	9/01			7 J	2 J	2 J	<10	2 J	<1,000 J	<10	76	3 J	<10
	4/02			<32	<5	<5	<5	<10	<1,000	<5	640 D	15	<5
	10/02			37 J	<10	<10	<10	<20	<1,000	<10	380 DJ	2 J	<10
	5/03			16	<5	<5	<5	<10	<1,000	<5	140	3 J	<5
	10/03			9 J	<5	<5	<5	<10	<1,000	<5	18	<5	<5
	6/04			24 J	<10	<10	<10	<20	<1,000	<10	30	<5	<10
	11/04			<25	<10	<10	<10	<20	180 J	<10	14	<5	<10
	6/05			5.6 J	0.7 J	0.9 J	<4.0	1.2 J	<1,000	0.4 J	16	2.5	<3.0
	11/05			20 J	<0.3	0.9	<0.5	1.1	<1,000	<0.4	12	2 J	<0.5
	6/06			6.4	0.6 J	0.5 J	<4.0	<5.0	<1,000	<1.0	16	2.3	<3.0
	11/06			49 J	<1.0	0.6 J	<4.0	0.6 J	<500	<1.0	9.9	1.2 J	<3.0
	6/07			22	0.9 J	0.5 J	<4.0	0.6 J	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	0.8 J	0.6 J	<4.0	1.1 J	<500 J	<1.0	0.3 J	1.5	<3.0
	3/08			16	1.0 J	0.5 J	<4.0	1.1 J	<500	<1.0	24	1.3	<3.0
	8/08			12	0.8 J	0.5 J	<4.0	1.1 J	<500	<1.0	0.6 J	1.6	<3.0
MW-35	9/98	363	355	<10	<10	<10	<10	<10	<1,000	<10	6 J	5 J	<10
	7/99			<10	0.7 J	<10	<10	<10	<1,000	<10	3 J	4 J	<10
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10	3 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	4/02			<13	<5	<5	<5	<10	<1,000	<5	3 J	4 J	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	2 J	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	1,000	<100	<5
	10/03			5 J	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	30	4 J	<10
	11/04			<25	<10	<10	<10	<20	240 J	<10	82	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.4 J	<1.0	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	1.1	<1.0 J	<3.0
	6/07			13	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			5.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	1.1 J	<0.5	<3.0
MW-36 ^E	9/98	363.6	355.6	<10	<10	<10	<10	<10	<1,000	<10	290 D	6 J	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	860 D	4 J	<10
	7/99			8 J	0.8 J	<10	<10	<10	<1,000	<10	250	<10	<10
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	60	7 J	<10
	9/00			5 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	8 J	6 J	<5
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10

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		Screen Elev. (ft. AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-36 ^E (cont'd)	9/01			54	<10	<10	<10	<10	<1,000 J	<10	350 D	5 J	<10
	4/02			<20	<5	<5	<5	<10	<1,000	<5	9	41	<5
	10/02			12 J	<10	<10	<10	<20	<1,000	<10	2 J	2 J	<10
	5/03			9 J	<5	<5	<5	<10	<1,000	<5	67	4 J	<5
	10/03			580 D	<5	<5	<5	<10	<1,000	<5	100	<5	<5
	6/04			22 J	<10 J	<10 J	<10 J	<20 J	<1,000	<10 J	33	7	<10 J
	11/04			13 J	<10	<10	<10	<20	<1,000	<10	22	<5	<10
	6/05			24 J	2.1	<5.0	<4.0	1.0 J	<1,000	<1.0	1,200	<5.4	<3.0
	11/05			77 J	3.6	2.0 J	0.6 J	2.8 J	<1,000	<1.0	1,600	<10 J	<3.0
	6/06			25	1.6	0.7 J	<4.0	1.2 J	<1,000	<1.0	76	1.9	<3.0
	9/06			NA	NA	NA	NA	NA	NA	NA	3.5	1.2	NA
	11/06			130 J	3.6	1.2 J	<4.0	1.1 J	<500	<1.0	420	1.7 J	<3.0
	6/07			33	4.6	1.4 J	0.8 J	5.0	<500	<1.0	1,300	<10	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	740	<5.0	NA
	11/07			10	4.5	1.7 J	0.9 J	5.3	<500 J	<1.0	480 J	3.4 J	<3.0
	3/08			8.0 J	4.2	1.5 J	0.8 J	5.5	<500	<1.0	130	3.0	<3.0
	8/08			27	3.7	1.4 J	0.6 J	5.7	<500	<1.0	4.5 J	3.2	<3.0
TW-01	12/96	365.1	355.4	<10	82	4 J	6 J	4 J	<1,000	<10	2,090 D	13	4 J
	9/98			<10	15	<10	4 J	<10	<1,000	<10	4,400 DEJ	4 J	<10
	2/99			<10	24	2 J	2 J	2 J	<1,000	<10	9,000 D	5 J	<10
	7/99			<10	16	1 J	3 J	<10	<1,000	<10	4,400 D	4 J	<10
	3/00			<10	16	<10	<10	<10	<1,000 J	<10	280 D	4 J	<10
	9/00			<10 J	11 J	<10 J	<10 J	<10 J	<1,000	<10 J	15	2 J	<10 J
	3/01			<10	5 J	<10	<10	<10	<1,000	<10	<10	3 J	<10
	9/01			<10	10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	4/02			<14	3 J	<5	<5	<10	<1,000	<5	8	13	<5
	10/02			<25	7 J	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	7	<5	<5	<10	<1,000	<5	<5	1 J	<5
	10/03			<12	6	<5	<5	<10	<1,000	<5	0.6 J	<5	<5
	6/04			6 J	3 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<25	2 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	1.8	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<1.3 J	1.9	<0.4	<0.5	<0.4	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0 J	1 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	0.8 J	<3.0 J
	11/06			R	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			7.8	0.5 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.2 J	1.1	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	1.0	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
TW-02 ^C (Replaced by TW-02R) ^E	12/96	363.3	353.3	53	10	77	16	65	<1,000	585 D	15,900 JD	3,920 D	42,449 D
	9/98			<500 J	<500 J	<500 J	<500 J	53,000	5,000	300 J	38,000 D	61,000 D	86,000 D
	2/99			<1,000	<1,000	190 J	<1,000	150 J	14,000JN	<1,000	83,000 D	7,900	14,000 B
	7/99			630	37	240 J	31	150	<1,000	55	100,000 D	3,500 J	9,700 D
	3/00			<1,000 J	<1,000	160 J	<1,000	240 J	<1,000 J	<1,000	64,000 D	3,900	13,000
	9/00			190 J	28 J	95 J	35 J	160 J	<1,000	6 J	79,000	<10,000	390 J
	3/01			81	19	68	28	130	<1,000	<10	67,000 D	650 J	400 D

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride			
		Top	Bottom													
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5			
TW-02 ^C (cont'd)	9/01			57	25	70	31	140	<1,000 J	<20	63,000 D	32	48 B			
	4/02			240	19	65	23	96	<1,000	<5	1,090,000 D	<5,300	14			
	10/02			110 J	15	19	23	65	<1,000	<10	80,000 D	10 J	<10			
	5/03			240	30	130	49	226	<1,000	<5	160,000 D	230	97			
	10/03			68	28	75 J	<5	<10	<1,000	2 J	92,000 D	<260	91			
	6/04			140 J	19 J	39 J	31 J	111 J	<1,000	<10 J	82,000	<5,200	4 J			
TW-02RR ^{BE}	11/04	363.3	353.3	18 J	4 J	8 J	4 J	16 J	<1,000	<10	7,100 D	<5	<10			
	6/05			7.2 J	3.6	2.1 J	3.6 J	9.6	<1,000	0.3 J	8,400	<50	<3.0			
	11/05			26 J	6	4.1	3.6	11	<1,000	<0.4	14,000	<110 J	<0.5			
	6/06			16	4.4	1.3 J	2.7 J	6.7	<1,000	<1.0	10,000	<100	<3.0			
	9/06			NA	NA	NA	NA	NA	NA	NA	7,600	<52	NA			
	11/06			78 J	4.9	1.4 J	2.2 J	6.2	<500	<1.0	2,100	<10 J	<3.0			
	6/07			17	5.5	1.3 J	4.0	8.8	<500	<1.0	6,800	<100	<3.0			
	8/07			NA	NA	NA	NA	NA	NA	NA	4,000 J	<20	NA			
	11/07			5.5	5.8	1.2 J	3.0 J	7.6	<500 J	<1.0	3,700	<25	<3.0			
	3/08			6.4 [5.2]	4.5 J [2.3 J]	1.3 J [0.7 J]	3.8 J [1.9 J]	10 [4.8 J]	<500 [<500]	<1.0 [<1.0]	7,500 [5,400]	<50 [<50]	<3.0 [<3.0]			
	8/08			9.0 [9.6]	4.4 [4.6]	1.0 J [1.1 J]	2.3 J [2.4 J]	6.7 [7.0]	<500 [<500]	<1.0 [<1.0]	9,600 [7,000]	<71 [<56]	<3.0 [<3.0]			
	PZ-4D			11/89	350.8	345.9	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
				11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
11/91		<100	<1	<1			<1	<3	<1,000	<1	<10	<10	<1			
11/92		<100	<1	<1			<1	<3	<1,000	<1	<10	<10	<1			
8/95		<1,000	<5	<5			<5	<5	<1,000	<5	<5	0.8 J	<5			
10/95		NA	<5	<5			<5	<5	NA	<5	<5	<10	<5			
8/96		<10	<10	<10			<10	<10	<1,000	<10	<5	<10	<10			
8/97		<10	<10	<10			<10	<10	<1,000	<10	<6	<12	<10			
2/99		<10	<10	<10			<10	<10	<1,000	<10	<10	<10	<10 J			
3/00		<10	<10	<10			<10	<10	<1,000 J	<10	<5	<10	<10			
3/01		<10	<10	<10			<10	<10	<1,000	<10	<10	<10	<10			
4/02		<10	<5	<5			<5	<10	<1,000	<5	<5	<5	<5			
5/03		<12	<5	<5			<5	<5	<1,000	<5	<5	<5	<5			
6/04		<25	<10	<10			<10	<20	<1,000	<10	<5	<5	<10			
6/05		<5.0 J	<1.0	<5.0			<4.0	<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	<1,000	<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			
3/08		<5.0	<1.0	<5.0			<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0			
PZ-4S	11/89	362.79	357.88	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1			
	11/90			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1			
	11/91			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1			
	11/92			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1			
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<18			
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5			
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10			
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10			
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10			
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	<10 J	<10 J			
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10			

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Monitoring Memorandum
McKesson Envirosystems Site
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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1 J	5
PZ-4S (cont'd)	3/01	353.5	348.6	<10	<10	<10	<10	<10	<1,000	<10	<10	3 J	<10
	4/02			<14	<5	<5	<5	<10	<1,000	<5	8 (<5) ^F	<5 (<5) ^F	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/06			<5.0	<1.0	0.6 J	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.5	<1.1	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
PZ-5D ^L	11/89	361.42	356.52	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<12
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<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 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	46	<5	<5
	6/04 ^J			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<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 J	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.1	<0.5	<3.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
PZ-5S ^{KL}	11/89	362.6	357.7	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			5 J	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<12
	6/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10 J	<10 J	<10 J
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<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 J
	9/01			7 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	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
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.3	<0.5	<3.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
PZ-8S ^I	9/98	362.6	357.7	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
PZ-11D ^U	11/89	352.09	347.19	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-11S ^U	11/89	359.09	354.19	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-12D ^U	11/89	350	345.1	<100	<1	<1	<1	<1	<1,000	<1	<53	<53	<1
	11/90			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<1	3	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
PZ-12S ^U	11/89	360	355.1	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<3	<1,000	<1	<10	<10	<1	
	11/91			<100	<1	<1	<1	<3	6	<1	<10	<10	5
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
PZ-13D ^C	11/89	349.4	344.4	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-13S ^C	11/89	359.5	354.5	<100	<1	2	<1	2	<1,000	<1	<11	<11	<1

See Notes on Page 19.

Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

Syracuse, New York

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. Detections exceeding New York State Department of Environmental Conservation (NYSDEC) Groundwater Standards (Part 700) are indicated by shading.
4. Replacement wells for MW-6, MW-8, MW-9, MW-10, MW-11 and MW-12D were installed 8/95.
5. Replacement wells for MW-17, MW-24S, MW-24D and TW-02 were installed 11/97 - 12/97.
6. 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 milligrams per liter. Because methanol was not detected in the original sample, the duplicate results were determined, based on the results of the data validation process, to be unacceptable. Furthermore, methanol has not been previously detected in groundwater samples collected from this monitoring well. Accordingly, the detection of methanol appears to be the result of a laboratory error and not representative of actual groundwater quality in the vicinity of monitoring well MW-23S.
7. N,N-dimethylaniline data for 10/02 sampling event for MW-1, MW-3S, MW-28, MW-29, MW-32, MW-35 and TW-01 were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. Aniline and N,N-dimethylaniline data for 10/02 sampling event for MW-30 were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. These wells and piezometers are not perimeter monitoring locations and were not resampled.
8. Aniline and N,N-dimethylaniline results of nondetect for the 6/04 sampling event at MW-18 were rejected due to the deviation from a surrogate recovery that was below 10%. This well was not resampled.
9. 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-17R, MW-18, MW-23I, MW-23S, MW-24DR, MW-24SR, MW-25, MW-33, PZ-5D and PZ-5S. In addition, the initial VOC results were also irretrievable due to laboratory equipment failure for monitoring locations MW-27, MW-28, MW-29 and MW-30; however, results for subsequent dilutions of these groundwater samples were valid, but the detection limits were high. The duplicate sample VOC results for MW-27 and MW-28 have lower detection limits and are presented in parentheses. These wells were not resampled.

Data presented is total xylenes (m- and p-xylenes and xylenes). For the 1995 data, the listed quantitation limit applies to the analyses conducted for m- and p-xylenes and o-xylenes.

^B = Because aniline was detected at monitoring well MW-3S at a concentration of 690 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.

^C = Wells/piezometers MW-5, MW-14D, MW-16D, MW-17, MW-20, MW-21, MW-24S, MW-24D, TW-02, PZ-13S, and PZ-13D were abandoned 11/97 - 1/98.

^D = Wells/piezometers MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12D, PZ-11D, PZ-11S, PZ-12D, and PZ-12S were abandoned during OU No.1 soil remediation activities (1994).

^E = Wells MW-8S, MW-8D, and TW-02R were abandoned in 8/04 and replacement wells MW-8SR and TW-02RR were installed in 8/04.

^F = MW-17R, MW-18, and PZ-4S wells/piezometers were 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.

^G = MW-17R, MW-18, MW-19, MW-23S, MW-23I, 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 10/02 results were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. These wells and piezometers are perimeter monitoring locations.

^H = MW-18, MW-19, MW-23I, MW-23S, MW24DR, MW-24SR, MW-28, PZ-5S and PZ-5D wells/piezometers were resampled for aniline during 12/98, because the 9/98 results were rejected due to laboratory error.

^I = Piezometer PZ-8S was decommissioned 8/00.

^J = 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.

^K = Wells/piezometers MW-1, MW-19, and PZ-5S were abandoned 11/10.

^L = Wells/piezometers, MW-22, MW-24S, MW-24D, MW-25S, MW-25D, PZ-5S and PZ-5D were eliminated from the groundwater monitoring program after the 10/10 sampling event; therefore all data for these locations are presented in this table.

NS = Standard not available.

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.
E = The compound was quantitated above the calibration range.
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.
B = The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
< = Compound was not detected at the listed quantitation limit.
U = Undetected.
R = The sample results were rejected.
-- = Sample results are not available. (See Note 9.)



Attachment C

Statistical Analyses

Attachment C. Statistical Analyses
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York
Discussion of Statistical Results

To evaluate the continued effectiveness of the Operable Unit No. 2 (OU2) remedial action and the need (if any) to restart the remedial process, technical analyses were performed to evaluate whether constituent of concern (COC) concentrations: (1) rebound substantially above the pre-shutdown COC concentrations based on an evaluation of the most up-to-date dataset and (2) continue to trend at asymptotic levels. The technical analyses performed, as described below, are the same as those detailed in the January 2013 Periodic Review Report (PRR; ARCADIS 2013) and have been updated to include groundwater data through April 2015.

Technical Analyses

To evaluate whether total COC molar concentrations have reached asymptotic conditions (where COC levels are no longer significantly decreasing or increasing), three different analyses were performed using each area's annual data from 1998 to April 2015.¹ The first analysis involved a calculation of overall percent removal of total COC molar concentrations (i.e., moles per liter) from 1998 to 2015. If the overall percent removal during the 18-year period was within 1% of complete (100%) removal, then it was implied that COC levels approached asymptotic conditions as removal cannot exceed 100%.

$$\frac{(\text{Initial Molar Concentration}) - (\text{2015 Molar Concentration})}{(\text{Initial Molar Concentration})} * 100 = \% \text{ reduction}$$

The second analysis used a first-order decay function [$C_t = C_0 * e^{kt}$, where C_t = total COC molar concentration at time t , C_0 = total COC molar concentration in 2002, k = the decay coefficient, and t = number of years since 2002] of total COC molar concentrations from 2002 to 2015 to determine the decay rate and half-life of COC concentrations to evaluate how rapidly COC levels decreased over time.

¹Total COC molar concentrations were calculated for each area by converting COC concentrations (reported as micrograms per liter [µg/L]) to molar concentrations (i.e., moles per liter), adding together the nine COC molar concentrations (excluding methanol) for each sampling date, and then averaging molar concentrations for the year. The basis for excluding methanol from the technical analyses was detailed in the January 2013 PRR and is presented below.

"Methanol values have been excluded from the analyses in order to accurately portray the temporal trends in COCs at the site. Methanol has a very high detection limit relative to the other COCs evaluated. The methanol detection limit was 1,000 micrograms per liter (µg/L) until 2006 when lowered to 500 µg/L. In the calculation for total COC molar COC concentrations, the use of half the detection limit for non-detects of methanol tends to misrepresent the total COC molar concentration present and confound interpretation of trends regarding COC concentrations.

In Area 1, this problem is most profound due to the low concentrations present compared to the other two Areas. Half the detection limit for methanol represents 17 percent of the initial molar concentration of all COCs present in 1998, and frequently represents more than 95 percent of the calculated COCs present. In Area 1, there have been only six detected methanol concentrations in 137 reported samples (95.6 percent non-detect); five of these six were during 2009, when sample contamination was suspected.

In Area 2, methanol was only detected seven times in 108 reported samples (93.5 percent non-detect), with three of the seven during the September 2009 sampling round when sample contamination was suspected.

In Area 3, there is stronger evidence that methanol was actually present at location MW-8SR in significant levels, as methanol was reported in the 11 samples taken prior to 2002. Since that time, only one of 17 reported samples has yielded detectable methanol concentrations at that location. At the other Area 3 locations, there were a total of three detections (including one in September 2009) in 50 samples."

Attachment C. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

If the COC levels exhibited statistically significant exponential decay over the 13-year period and the percentage of total COCs remaining was relatively small, then it was implied that COC concentrations approached asymptotic conditions.

$$\ln(C_t) = k * \ln(t) + b$$

$$C_t = e^{kt} * e^b$$

$$C_t = C_o * e^{kt}, \text{ where } e^b = C_o$$

$$\text{Decay Rate} = (1 - e^k) * 100$$

$$\text{Half-Life (years)} = \ln(1/2)/k$$

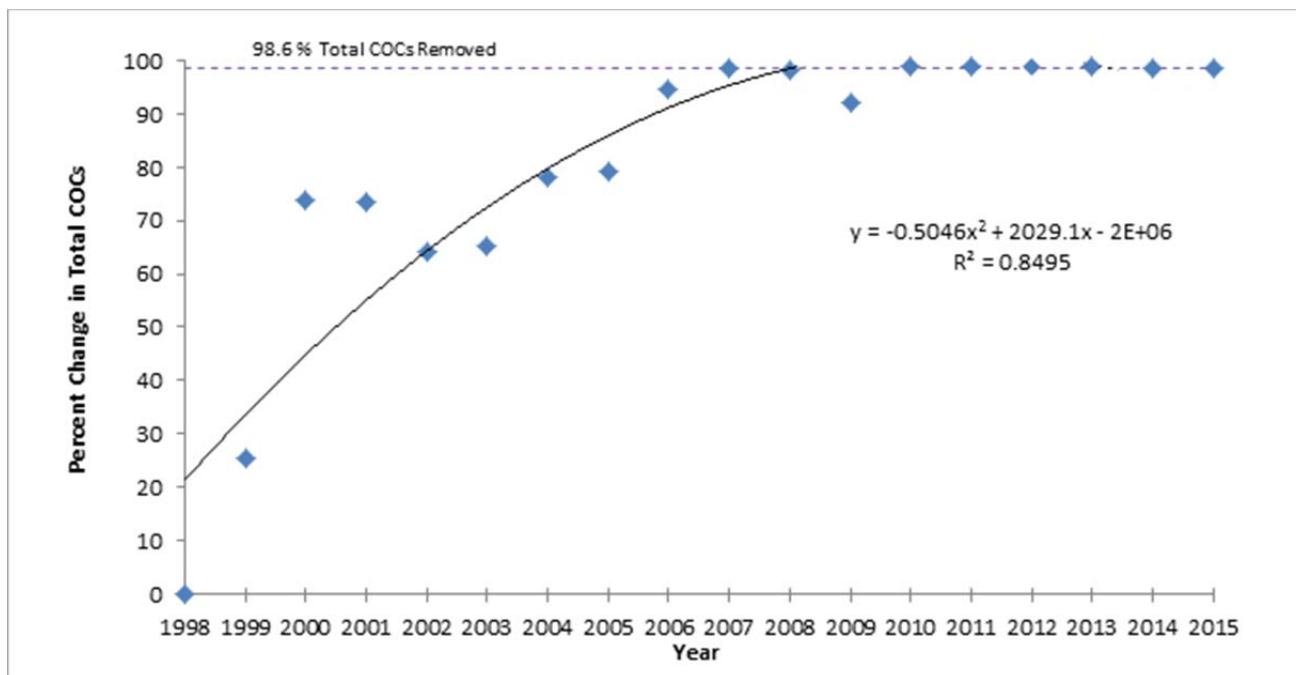
The third analysis involved a linear regression between time (year) and percent reduction in total COC molar concentrations from 2008 to 2015. If the slope of the COC concentrations did not significantly differ from zero, then the data indicate that the asymptote was effectively reached. The data and results of the analyses for each area are described below.

Area 1

Between 1998 and 2015, the overall percent reduction in COC levels in Area 1 (i.e., monitoring wells MW-9S, MW-31, MW-32, MW-33, and TW-01) was 98.6%, as shown on Figure C-1. As COC levels were within 1% of complete removal (based on two significant figures), the data indicate that COC levels approached asymptotic conditions by 2012 and continued through April 2015.

$$\frac{(2.9\text{E-}05 \text{ mol/L}) - (4.3\text{E-}07 \text{ mol/L})}{(2.9\text{E-}05 \text{ mol/L})} * 100 = 98.6\% \text{ reduction}$$

Figure C-1: Area 1 Percent Change in Total COCs



The decay relation $[C_t = 7.14E-06 * e^{-0.2897t}]$ for total COC molar concentrations from 2002 to 2015 indicates that total COC molar concentrations decreased relatively quickly and consistently over the 13-year period, as shown on Figure C-2. The decay coefficient (k) for total COC molar concentrations since 2002 is -0.2897 (probability of occurrence [p] = 9.0E-05, confidence interval [α] = 0.05, correlation coefficient [r²] = 0.73). This decay coefficient results in a half-life of 2.4 years and a statistically significant annual decay rate of 25% per year (95% confidence interval ranging from 16 to 33% per year). As COC molar concentrations exhibited statistically significant exponential decay with less than 1% of total COCs remaining in 2015, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through April 2015.

$$\ln(C_t) = -0.2897 * \ln(t) + 568.13$$

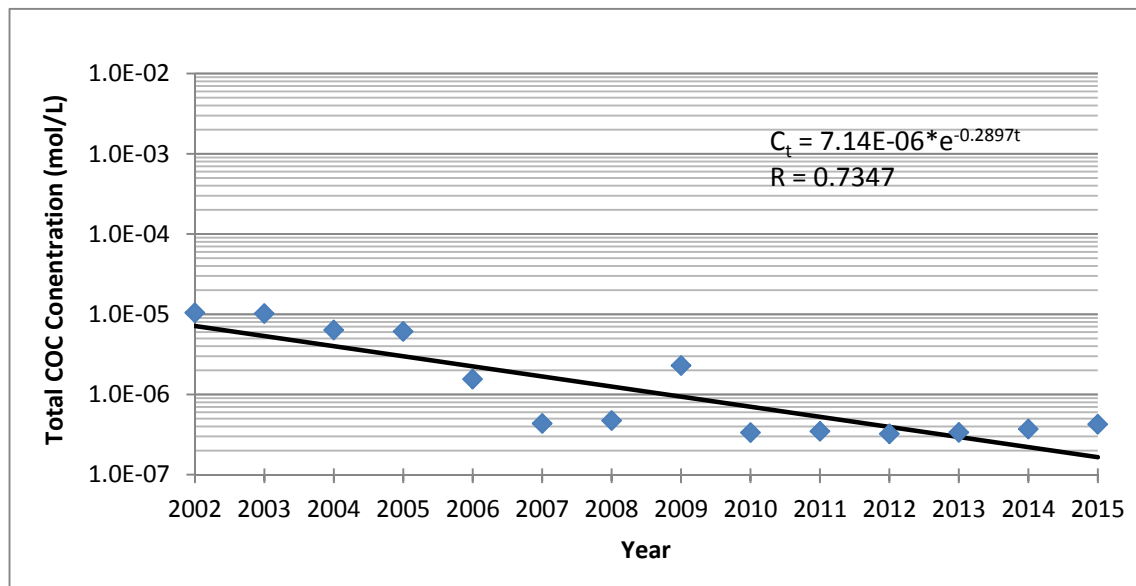
$$C_t = 7.14E - 06 * e^{-0.2897t}$$

$$\text{Decay Rate: } (1 - e^{-0.2897}) * 100 = 25\%$$

$$\text{Half-Life: } \ln(1/2)/(-0.2897) = 2.4 \text{ years}$$

Attachment C. Statistical Analyses
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Figure C-2: Area 1 Decay Function of Total COC Concentrations



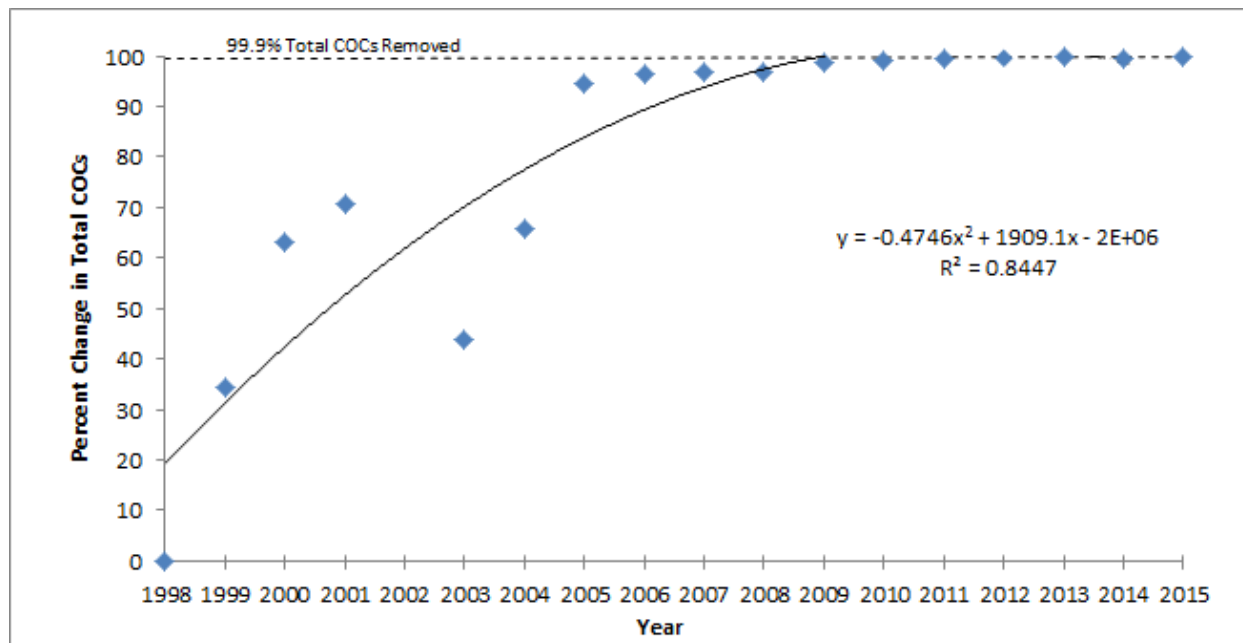
A regression between time (2008 to 2015) and percent total COC reduction further support that COC concentrations in Area 1 approached asymptotic conditions of 100% removal. The computed non-significant mean slope of 0.40% COC reduction per year ($p = 0.29$, $\alpha = 0.05$, $r^2 = 0.18$), with the 95% confidence interval ranging from -0.45 to 1.3% per year, indicates that total COC molar concentrations in Area 1 most likely did not significantly decrease nor increase within the last 8 years, suggesting that COC levels effectively reached an asymptote by 2012 and continued through April 2015.

Area 2

The overall percent reduction in COC levels in Area 2 (i.e., monitoring wells MW-36R, TW-02RRR, MW-34, and MW-35) from 1998 to 2015 was 99.9%, as shown on Figure C-3. As COC levels were within 1% of complete removal, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through April 2015.

$$\frac{(6.1\text{E-}04 \text{ mol/L}) - (7.9\text{E-}07 \text{ mol/L})}{(6.1\text{E-}04 \text{ mol/L})} * 100 = 99.9\% \text{ reduction}$$

Figure C-3: Area 2 Percent Change in Total COCs



In Area 2, aniline contributions dominated the overall COC molar concentrations. The concentrations of constituents other than aniline quickly achieved 99% reduction or more in the first few years, while aniline data actually increased, reaching a maximum in 2002. At that time, aniline accounted for approximately 99.7% of the total COC molar concentration. Since 2002, Area 2 appears to be approaching asymptotic conditions of 100% removal, as noted by the decay function of total COC molar concentrations from 2002 to 2015, as shown on Figure C-4. Using a first-order decay relation [$C_t = 4.25E-04 * e^{-0.5017t}$], the total molar concentration of total COCs has an estimated decay coefficient (k) of -0.5017 ($p = 9.5E-08$, $\alpha = 0.05$, $r^2 = 0.91$), with a corresponding half-life of 1.4 years and a statistically significant annual decay rate of 40% per year (95% confidence interval ranging from 33 to 45% per year). After a 13-year period (2002 to 2015), 0.13% of the total COC molar concentration remained. As COC molar concentrations exhibited statistically significant exponential decay with less than 1% of total COCs remaining in 2015, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through April 2015.

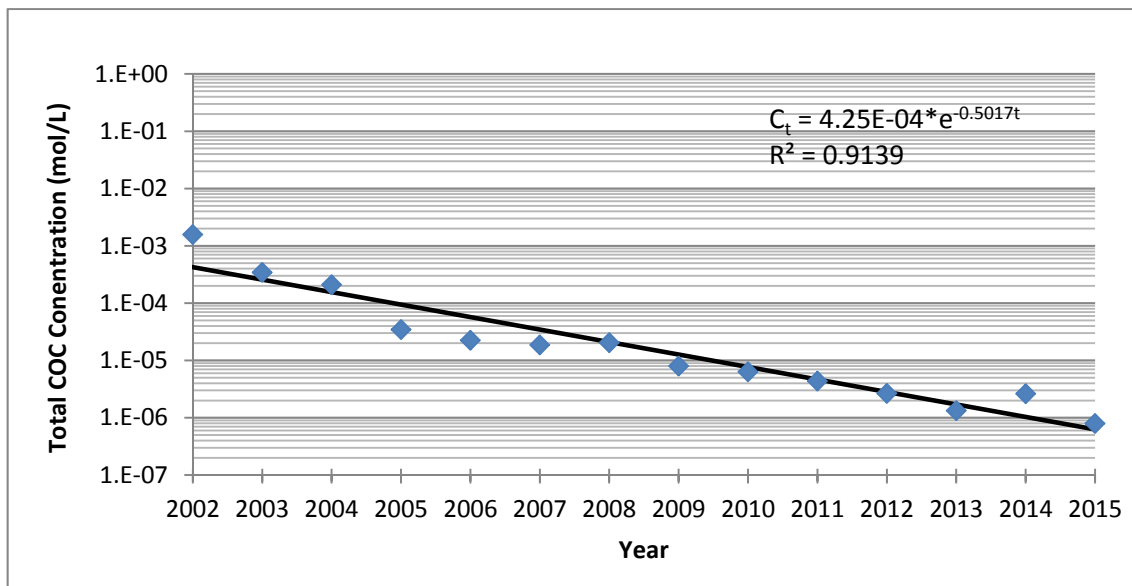
$$\ln(C_t) = -0.5017 * \ln(t) + 996.64$$

$$C_t = 4.25E - 04 * e^{-0.5017t}$$

$$\text{Decay Rate: } (1 - e^{-0.5017}) * 100 = 40\%$$

$$\text{Half-Life: } \ln(1/2)/(-0.5017) = 1.4 \text{ years}$$

Figure C-4: Area 2 Decay Function of Total COC Concentrations



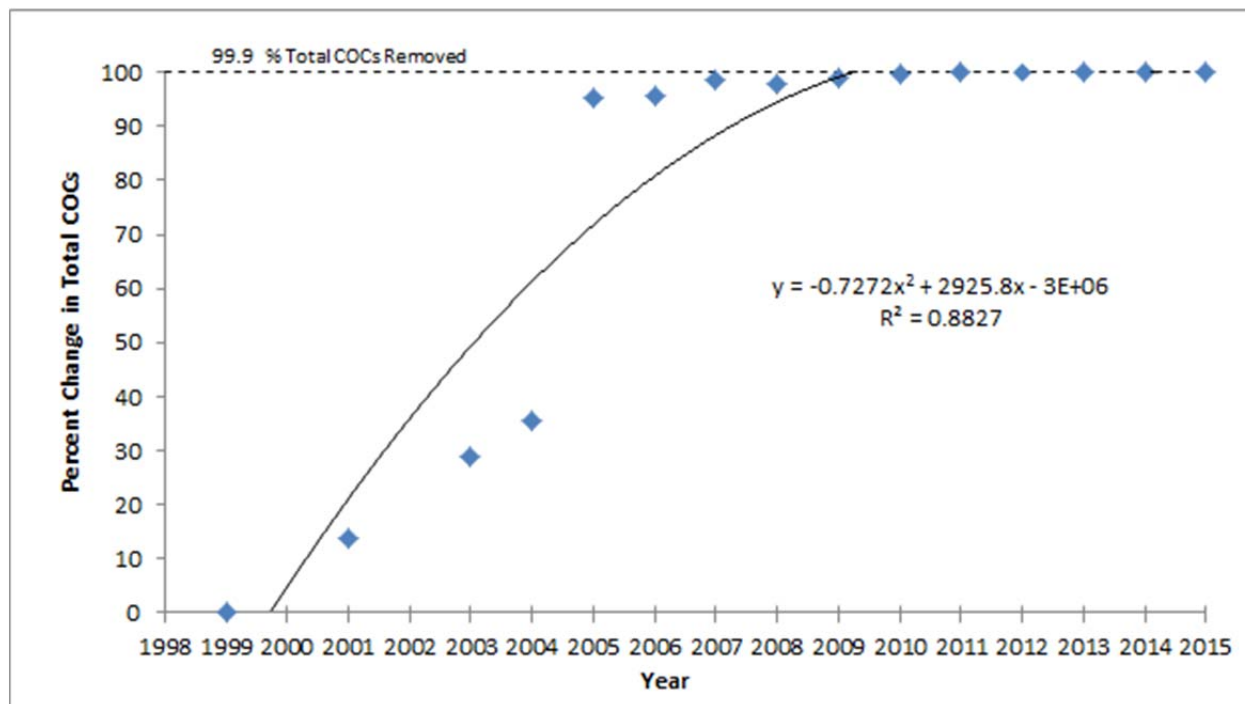
The regression between time (2008 to 2015) and percent total COC reduction indicates a continuing slight positive statistically significant mean slope of 0.35% reduction per year ($p = 0.012$, $\alpha = 0.05$, $r^2 = 0.68$), with the 95% confidence interval ranging from 0.11 to 0.59 percent per year. Despite this minor increase in the percent reduction in total COC molar concentration, Area 2 appeared to be approaching asymptotic conditions by 2012 and continued to trend at asymptotic levels through April 2015, as noted by the lower end of the 95% confidence interval approaching 0% COC reduction per year, the rapid decay rate, and the high degree of total COC removal within the last 6 years (greater than 98.9%).

Area 3

The overall percent reduction in COC levels from 1999 to 2015 in Area 3 (i.e., monitoring wells MW-8SR, MW-27, and MW-28) was 99.9%, as shown on Figure C-5. As COC levels were within 1% of complete removal, the data indicate that COC levels approached asymptotic conditions by 2012 and continued through April 2015.

$$\frac{(4.1\text{E-}03 \text{ mol/L}) - (3.9\text{E-}07 \text{ mol/L})}{(4.1\text{E-}03 \text{ mol/L})} * 100 = 99.9\% \text{ reduction}$$

Figure C-5: Area 3 Percent Change in Total COCs



COC molar concentration data were erratic prior to 2002, when aniline, N,N-dimethylaniline, and methylene chloride were major contributors. N,N-dimethylaniline and methylene chloride were essentially gone (greater than 99.9% removal) by 2005. The decay relation $[C_t = 5.55E-03 * e^{-0.8471t}]$ for total COC molar concentrations from 2002 to 2015 supports that COC molar concentrations in Area 3 rapidly decreased over the 13-year period, effectively approaching asymptotic conditions of 100% removal by 2012 and continuing through April 2015, as shown on Figure C-6. The decay coefficient (k) for total COC molar concentrations is -0.8471 ($p = 1.2E-08$, $\alpha = 0.05$, $r^2 = 0.94$), with a half-life of 0.82 years and a statistically significant annual decay rate of 57% per year (95% confidence interval ranging from 51 to 63% per year). After a 13-year period (2002 to 2015), 0.0078% of the total COC molar concentration remained. As COC molar concentrations exhibited statistically significant exponential decay, with less than 1% of total COCs remaining in 2015, the data indicate that COC levels approached asymptotic conditions in 2012 and continued through April 2015.

$$\ln(C_t) = -0.8471 * \ln(t) + 1690.7$$

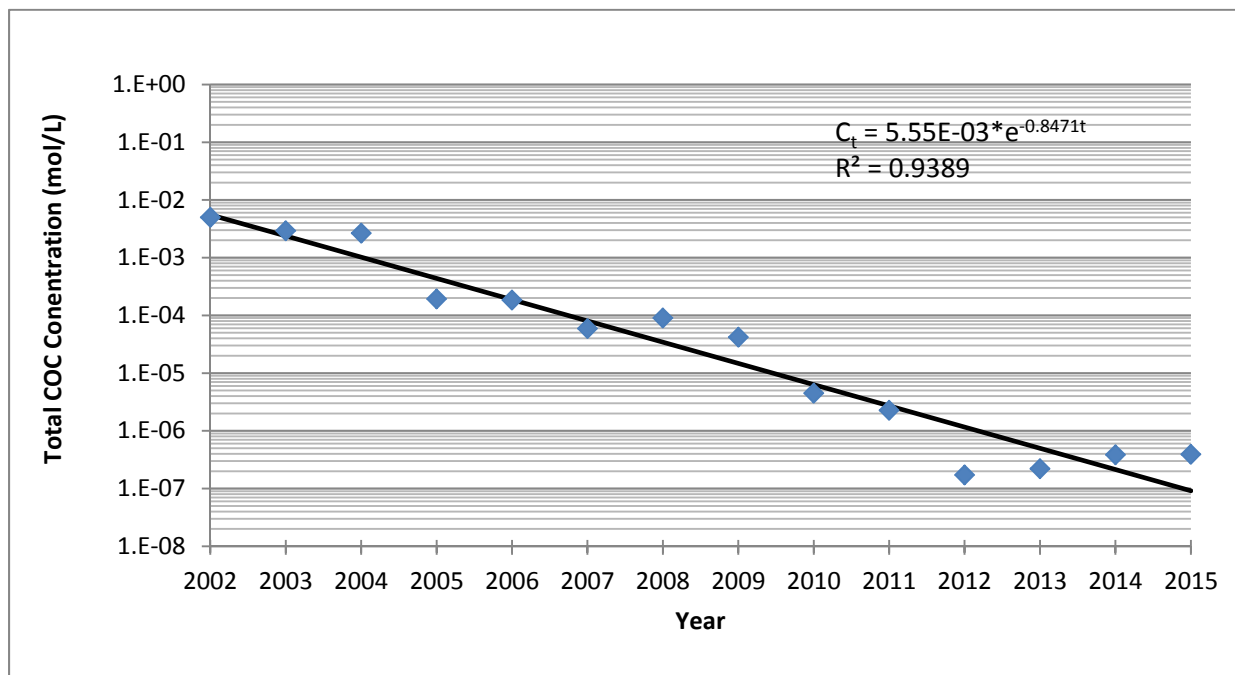
$$C_t = 5.55E - 03 * e^{-0.8471t}$$

$$\text{Decay Rate: } (1 - e^{-0.8471}) * 100 = 57\%$$

$$\text{Half-Life: } \ln(1/2)/(-0.8471) = 0.82 \text{ years}$$

Attachment C. Statistical Analyses
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

Figure C-6: Area 3 Decay Function of Total COC Concentrations



The regression between time (2008 to 2015) and percent total COC reduction indicates a continuing slight positive statistically significant mean slope of 0.25% COC reduction per year ($p = 0.029$, $\alpha = 0.05$, $r^2 = 0.58$), with the 95% confidence interval ranging from 0.036 to 0.46% per year. Despite this minor increase in the percent reduction in total COC molar concentrations, Area 3 approached asymptotic conditions in 2012 and continued to trend at asymptotic levels through April 2015, as noted by the rapid decay rate and the high degree of COC removal within the last 6 years (greater than 99.9%).

References:

ARCADIS. 2013. January 2013 Periodic Review Report. McKesson EnviroSystems Former Bear Street Facility. January 15.



Attachment D

Redevelopment in the Syracuse
Inner Harbor



Inside: Sunday
Conversation has
advice for grads. **D-2**

BUSINESS

DESIGN

TWEAKS



This rendering shows a fourth-story pedestrian terrace and an entrance to a courtyard for refuse and delivery vehicles.

By Rick Moriarty
rmoriarty@syracuse.com

COR Development Co. has made design changes and expects to begin construction on the first apartments at the Syracuse Inner Harbor by early fall.

The Fayetteville-based development company has decided not to build a two-level basement parking garage under the apartment complex and will instead build a parking lot on the west side of Van Rensselaer Street to serve tenants of the apartments.

Maggie Truax, a spokeswoman for COR, said testing showed that subsurface conditions would not support below-grade parking.

COR also has decided to build two 54-unit apartment buildings, connected by fourth-floor pedestrian terraces on the north and south sides, instead of building a single 108-unit building. Truax said the change will allow motor vehicles to enter the courtyard between the buildings for deliveries and trash pickup.

"It's a more effective and practical use of the space," she said.

The buildings will have four stories, with retail

space on the first floor and apartments on the upper three floors.

Construction is scheduled to begin at the end of the summer or early in the fall and will take about 18 months to complete, she said.

The Syracuse Planning Commission approved both design changes last week. COR is planning to build an identical set of 108 units to the north of the first building. The start of construction of the second group of apartments will depend on how long it takes to lease the first ones, Truax said.

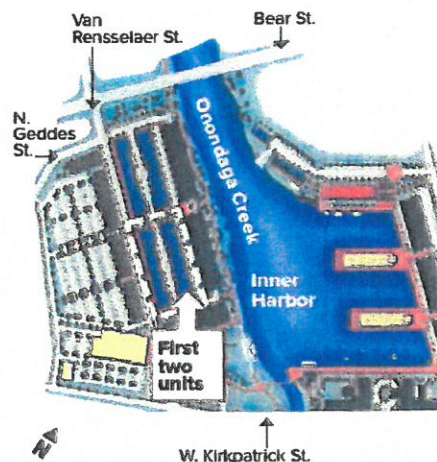
Rents for the units have not been announced.

COR began construction on a 134-room Aloft Hotel on the south bank of the harbor last summer but ran into some delays over the winter. A spring 2016 opening is expected.

The harbor is a former state Barge Canal terminal that the city would like to see redeveloped into a residential, commercial and recreational attraction similar to the Baltimore Inner Harbor.

Contact Rick Moriarty at 470-3148 or by email.

City OKs changes to Inner Harbor apartment project; construction to start in fall



This diagram shows the location of the first two of four 54-unit apartment buildings planned by COR Development for the west bank of the Syracuse Inner Harbor. (Submitted Image)



Read more: Local, Inner Harbor, Syracuse City Council, COR Development, Pollution, Creekwalk, Onondaga Lake, Land Transfer, Cleanup

es send print

Inner Harbor development gets OK from Syracuse Council

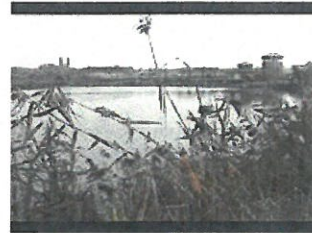
by Jim Kenyon

Posted: 06.18.2012 at 4:11 PM



The Syracuse City Council has approved a plan to turn over 28 acres of the "inner harbor" for private development.

Earlier this year, the City heard from a number of developers interested in transforming the harbor which is on the southern end of Onondaga Lake. COR Development won the contest with its \$350 million vision which includes a complex of housing and commercial development, a hotel and a satellite campus for OCC. Steve Aiello of COR Development told reporters, "I'm just excited. I think it's a great project for the city. We're excited to take it on."



Over the decades, the State of New York, which used to own the inner harbor, dumped tons of contaminated material which was dredged from the bottom of the marina onto land next to what is now a picturesque creekwalk. As part of the project, COR will clean out about 217 thousand yards of contaminated soil at a cost of \$9.7 million.

Councilor Pat Hogan who was on the committee which selected COR for the inner harbor has no doubt the pollution will be properly addressed, "I'm confident they're going to take care of it. Obviously they're going to end up with it... so it behooves them to take care of it."

Councilors also wanted assurances the public would still have access to the inner harbor which has become a popular spot for concerts and nature walks. "To me public access is key... all that is a really good piece of property. people who live in the City of Syracuse should have an opportunity to use it and take full benefit." said Councilor Jean Kessner.

Aiello assured lawmakers that the public will still have access to the inner harbor along with some new public features including a marina and boathouse.

ATTACHMENT D

**Table 1 Summary of Historical Groundwater Level Measurements,
June 1998 through June 2006**

**Table 2 Summary of Historical Groundwater Monitoring Data,
March 1988 through August 2008**

Figures 1-7 Groundwater Monitoring Data Summaries



Table 1
Summary of Historical Groundwater Level Measurements, June 1998 through June 2006

2014 Periodic Review Report
McKesson EnviroSystems Site
Syracuse, New York

Location	Reference Elevation (feet AMSL)	6/10/98 Static	6/22/98	7/6/98	7/20/98 Week 1	7/27/98 Week 2	8/5/98 Week 3	8/10/98 (morning) Week 4	8/10/98 (afternoon) Week 4	8/11/98 (morning) Week 4	8/11/98 (afternoon) Week 4	8/12/98 (morning) Week 4	8/12/98 (afternoon) Week 4	10/16/98 Week 13	11/17/98 Week 18
Canal	393.39*	362.91	363.37	363.72	363.08	363.08	362.94		362.78	362.94			362.84	363.27	
Collection Sump	372.81	364.33	363.08	363.68	362.50	361.31	361.83	361.89	362.14	361.00	361.71	361.95	362.31	362.01	361.48
MW-3S	376.54	365.93	366.26	367.82	366.20			365.29							365.25
MW-3D	375.56	365.63	365.87	366.16			364.97	364.85						365.08	365.00
MW-6D	377.07	365.75	366.01	366.29										365.25	365.15
MW-8D	374.68	365.51	365.74	366.05			364.80		364.67	364.79	364.88	364.87	364.87	364.93	364.83
MW-9D	376.76**	365.78					365.14	365.10						365.25	365.16
MW-11D	373.68	365.46	365.67	365.29			364.62	364.49	364.50	364.62		364.69	364.67	364.77	364.68
MW-11S	373.50	364.88	364.62	365.11	364.12	363.70	363.58	363.52	363.58	363.73		363.69	363.74	363.74	363.69
MW-18	372.57	362.64													361.90
MW-19	376.00	362.42													361.78
MW-23I	372.77	365.04	365.34	365.72			364.34		364.45	364.16			364.43	364.43	364.34
MW-23S	372.61	363.99	363.43	364.04	362.92	362.50	362.41		362.40	362.66		362.54	362.67	362.68	362.56
MW-24DR	375.14	365.41													364.63
MW-24SR	375.55	365.15	365.32	365.66	364.91	364.45	364.27		364.20				364.36	364.47	364.37
MW-25D	373.67	365.43													364.74
MW-25S	373.39	363.91	363.64	364.14	363.21	362.95	362.75		362.75			362.89	362.96	363.01	362.89
PZ-4D	376.11	365.46	365.73	366.01	365.21	364.83	364.63		364.54	364.67	364.75	364.74	364.70	364.80	364.69
PZ-5D	375.58	365.66	365.91	366.18	365.36	365.07	364.84		364.76	364.88	364.94	364.93	364.91	364.99	364.89
PZ-8D	375.83	365.90	366.11	366.35			365.25	365.13	365.83					365.35	365.27
PZ-9D	377.29	365.73					365.47	365.28						365.12	365.03
PZ-A	373.94	364.49	363.69	364.28	363.13	362.58	362.56	362.62	362.76	363.39	362.82	362.64	363.02	362.75	362.56
PZ-B	373.92	364.49	363.60	364.21	363.02	362.62	362.50	363.26	362.71	363.00	362.97	362.59	363.01	362.67	362.54
PZ-C	374.85	365.69	366.29	367.02	365.93	365.97	365.47	365.38	365.30	365.54	365.99	365.53	365.54	365.56	365.52
PZ-D	375.12	365.78	366.25	366.99	365.99	365.91	365.53	365.37	365.30	365.53	366.06	365.58	365.67	365.59	365.55
PZ-E	374.12	364.75	364.25	364.86	363.73	364.00	363.41	363.61	363.54	364.22	364.67	364.67	364.08	363.57	363.67
PZ-F	377.06	366.17					365.56	365.50						365.37	365.27
PZ-G	377.16	366.21					365.66	365.60						365.46	365.36
PZ-HR	376.99	366.16					365.54							365.44	365.34
PZ-I	375.15	366.56					365.86	365.64						365.88	365.57
PZ-J	374.89	366.15					365.53	365.40						365.53	365.39
PZ-K	373.19	364.53	363.78	364.35	363.27	362.69	362.69	362.71	362.75	362.92	362.80	362.78	362.98	362.82	362.66
PZ-L	374.62	364.25	363.59	364.18	363.04	362.42	362.48	362.44		362.88	362.63	362.57	362.84	362.65	362.40
PZ-M	374.35	364.70	364.09	364.64	363.52	362.96	362.96	362.96	363.09	363.29	363.15	363.05	363.30	363.12	362.93
PZ-N	376.94***	365.79	366.37	367.06	365.99	365.91	365.53	365.39	365.33	365.55	365.97	365.58	365.59	365.59	365.55
PZ-O	375.36	364.29	363.68	364.29	363.21	362.84	362.72	362.87	362.78	363.05	362.97	362.80	363.03	362.81	362.74
PZ-P	376.89	366.25					365.65	365.60						365.52	365.39
PZ-Q	377.61	366.23					365.64	365.57						365.45	365.35
PZ-R	377.05	366.23		366.94			365.65	365.57						365.50	365.38
PZ-S	378.13	366.19					365.57	365.52						365.43	365.35
PZ-T	376.25	366.14					365.54	365.43						365.52	365.38
PZ-U	375.35	365.99		366.81			365.50	365.33						365.37	365.30
PZ-V	375.78	366.07					365.48	365.35						365.43	365.29
PZ-W	375.78	366.07					365.46	365.31						365.41	365.28

See Notes on Page 4.

Table 1
Summary of Historical Groundwater Level Measurements, June 1998 through June 2006

2014 Periodic Review Report
McKesson Envirosystems Site
Syracuse, New York

Location	Reference Elevation (feet AMSL)	12/16/98 Week 22	12/22/98 Week 23	1/6/99 Week 25	1/13/99 Week 26	4/14/99 Week 39	6/3/99 Week 46	7/13/99 Week 52	3/27/00	6/1/00	9/18/00	11/14/00	3/19/01	9/24/01	4/15/02
Canal	393.39*	363.14	362.21	363.11			363.22	362.78	363.73	363.75	362.75^	363.24	363.01	362.96	364.59
Collection Sump	372.81	361.75	363.09	361.93	361.73	363.17	362.45	361.87	362.99	361.48	361.69	361.66	361.59	362.04	362.27
MW-3S	376.54	365.67	366.81	365.67	365.25		365.26		357.10						367.70
MW-3D	375.56	365.04		365.04	364.91	365.41	364.92	364.57	355.64	365.57	364.81	355.16	365.40	364.54	364.16
MW-6D	377.07	365.23	365.36	365.23	365.06	365.62	365.12	364.79	365.85	365.77	364.97	365.34	365.64	364.75	364.22
MW-8D	374.68	364.86		364.88	364.74	365.22	364.77	364.35	365.42	365.36	364.62	364.94	365.18	364.34	364.13
MW-9D	376.76**	365.22	365.36	365.26	365.08	365.65	365.17	364.83	365.88	365.80	365.01	365.36	365.68	364.76	364.05
MW-11D	373.68	364.73		364.73	364.57	365.02	364.60	364.18	365.24	365.18	364.46	364.81	364.96	364.18	364.07
MW-11S	373.50	363.69	364.27	363.79	363.61	364.50	363.88	363.39	364.72	364.35	363.55	363.86	364.48	363.33	363.57
MW-18	372.57	361.93	362.05	362.05	361.84	362.18	361.79	361.38	362.43	361.77	361.71	362.08	362.17	361.50	361.65
MW-19	376.00	361.84	361.98	361.87	361.89	362.15	361.80	361.46	362.58	361.88	361.90	362.25	362.44	361.82	361.83
MW-23I	372.77	364.36		364.47	364.26	364.69	364.28	363.83	364.99	364.93	364.25	364.58	364.73	363.99	363.99
MW-23S	372.61	362.52	363.35	362.66	362.46	363.64	362.94	362.42	363.85	363.17	362.64	362.87	363.59	362.36	363.97
MW-24DR	375.14	364.67	364.81	364.69	364.54	364.96	364.49	364.09	365.19	364.60	364.39	364.77	364.91	364.16	364.06
MW-24SR	375.55	364.44	364.66	364.50	364.33	364.87	364.41	363.95	365.12	365.55	364.30	364.60	364.86	364.05	364.00
MW-25D	373.67	364.76		364.77	364.64	365.07	364.64	364.20	365.28	365.20	364.51	364.84	364.97	364.22	364.19
MW-25S	373.39	362.87	363.48	362.96	362.79	363.89	363.20	364.75	364.12	363.69	362.94	363.23	364.14	362.61	364.39
PZ-4D	376.11	364.73	364.87	364.72	364.55	365.02	364.60	364.22	365.28	365.21	364.49	364.82	365.03	364.22	364.06
PZ-5D	375.58	364.93	365.09	364.94	364.78	365.28	364.86	364.47	365.57	365.48	364.71	365.10	365.36	364.46	364.12
PZ-8D	375.83	365.33	365.48	365.33	365.19	365.78	365.08	365.00							
PZ-9D	377.29	365.08	365.24		364.94	365.50	365.04	364.68	365.70	365.72	364.87	365.16	365.55	364.60	363.75
PZ-A	373.94	362.60	364.04	362.72	362.56	363.81	363.12	362.61	363.95	363.15	362.75	362.91	363.56	362.58	363.92
PZ-B	373.92	362.51	364.27	362.62	363.45	363.91	363.19	362.67	364.08	363.32	362.79	362.94	363.94	362.55	364.44
PZ-C	374.85	365.52	365.97	365.18	365.02	365.79	365.10	364.75	366.04	366.04	365.03	365.35	366.39	364.54	365.68
PZ-D	375.12	365.53	366.06	365.25	365.12	365.79	365.18	364.89	366.09	366.10	365.10	365.46	366.36	364.65	365.58
PZ-E	374.12	363.53	366.41	363.57	363.52	364.93	364.20	363.81	365.16	365.03	363.92	364.40	365.90	363.49	366.51
PZ-F	377.06	365.52	365.73	365.62	365.27	366.36	365.53	365.11	366.89	366.72	365.27	365.70	367.06	364.93	365.50
PZ-G	377.16	365.60	365.76	365.71	365.44	366.44	365.61	365.17	366.89	366.80	365.36	365.75	367.11	364.93	365.39
PZ-HR	376.99	365.54	365.84	365.60	365.39	366.34	365.55	365.11	366.80	366.68	365.33	365.66	367.02	364.91	365.39
PZ-I	375.15	365.90	366.59	366.05	365.76	366.93	365.79	365.23	367.30	367.23	365.55	366.08	367.81	364.91	366.29
PZ-J	374.89	365.55	365.93	365.59	365.47	366.21	365.53	365.14	366.55	366.50	365.32	365.64	366.69	364.96	365.10
PZ-K	373.19	362.66	363.70	362.78	362.58	363.87	363.13	362.59	363.97	363.19	362.69	362.86	363.53	362.49	363.82
PZ-L	374.62	362.51	363.59	362.65	362.45	363.69	363.00	362.47	363.84	363.03	362.61	362.68	363.42	362.47	363.44
PZ-M	374.35	363.01	364.07	363.13	362.94	364.06	363.40	362.90	364.22	363.54	363.05	363.24	363.86	362.90	363.93
PZ-N	376.94***	365.56	366.09	365.31	365.12	365.87	365.19	364.87	366.17	366.12	NM	365.35	366.43	364.47	366.60
PZ-O	375.36	362.75	363.74	362.87	362.68	364.01	363.25	362.73	364.22	363.57	362.86	363.06	364.22	362.64	364.47
PZ-P	376.89	365.61	365.78	365.73	365.44	366.43	365.59	365.18	366.85	366.73	365.34	365.77	367.02	364.93	365.31
PZ-Q	377.61	365.59	365.70	365.71	365.42	366.44	365.60	365.16	366.93	366.78	365.26	365.76	367.21	364.89	366.11
PZ-R	377.05	365.61	365.81	365.67	365.47	366.46	365.61	365.20	366.89	366.81	365.37	365.72	367.21	364.93	365.40
PZ-S	378.13	365.57	365.94	365.65	365.40	366.39	365.56	365.15	366.84	366.73	365.32	365.71	367.12	364.90	365.27
PZ-T	376.25	365.58	365.96	365.64	365.47	366.34	365.53	365.10	366.71	366.65	365.29	375.70	366.90	364.90	365.34
PZ-U	375.35	365.49	365.91	365.55	365.40	366.17	365.46	365.08	366.55	366.49	365.22	365.60	366.75	364.85	365.18
PZ-V	375.78	365.47	365.90	365.52	365.37	366.20	365.44	365.06	366.54	366.50	365.25	365.58	366.76	364.83	365.30
PZ-W	375.78	365.44	365.78	365.53	365.33	366.15	365.41	365.02	366.49	366.41	365.20	365.59	366.63	364.85	365.05

See Notes on Page 4.

Table 1
Summary of Historical Groundwater Level Measurements, June 1998 through June 2006

2014 Periodic Review Report
McKesson EnviroSystems Site
Syracuse, New York

Location	Reference Elevation (feet AMSL)	6/3/02	6/18/02	10/7/02	1/20/03	5/5/03	10/27/03	6/14/04	11/1/04	6/6/05	10/31/05	6/5/06
Canal	393.39*	363.64	364.17	362.19	^^	363.34	363.34	363.39	363.39	364.39^^^	363.84	363.69
Collection Sump	372.81	361.50	361.42	362.05	361.90	361.91	361.86	362.11	362.00	361.49	362.96	361.70
MW-3S	376.54	366.26	367.50	364.26	366.27	366.38	366.98	366.65	365.54	365.82	368.11	368.19
MW-3D	375.56	364.55	365.10	363.92	365.10	365.53	365.05	365.59	365.27	365.36	366.25	366.07
MW-6D	377.07	364.62	365.21	364.07	365.31	365.75	365.24	365.80	365.46	365.59	366.45	366.29
MW-8D	374.68	364.51	365.01	363.82	^^	365.30	364.83	365.39				
MW-9D	376.76**	364.47	365.10	364.00	365.31	365.79	365.26	365.85	365.51	365.64	366.47	366.34
MW-11D	373.68	364.44	364.92	363.73	364.81	365.17	364.75	365.26	364.93	364.00	365.94	365.78
MW-11S	373.50	363.89	364.33	363.09	364.15	364.38	363.89	364.34	363.98	364.12	365.06	365.04
MW-18	372.57	362.09	362.50	361.37	362.26	362.69	362.26	362.62	362.29	362.37	363.17	363.07
MW-19	376.00	362.11	362.57	361.51	362.52	361.91	362.46	362.89	362.59	362.69	363.50	363.38
MW-23I	372.77	364.34	364.80	363.62	364.60	365.01	364.56	364.99	364.67	364.77	365.66	365.47
MW-23S	372.61	363.38	363.68	362.50	362.26	363.31	362.81	363.04	362.77	362.80	364.05	363.80
MW-24DR	375.14	364.43	364.90	363.71	364.75	365.13	364.69	365.19	364.86	364.94	365.90	365.74
MW-24SR	375.55	364.40	364.86	363.64	364.69	365.03	364.62	365.12	364.78	364.88	365.81	365.66
MW-25D	373.67	364.57	365.02	363.82	364.82	365.24	364.74	365.26	364.93	365.00	364.49	365.77
MW-25S	373.39	363.83	364.21	362.74	363.61	363.67	363.19	363.49	363.08	363.14	365.63	364.13
PZ-4D	376.11	364.43	364.94	363.73	364.81	365.23	364.78	365.28	364.96	365.07	365.96	365.85
PZ-5D	375.58	364.47	365.03	363.81	365.05	365.49	365.02	365.53	365.20	365.29	365.19	365.98
PZ-8D	375.83											
PZ-9D	377.29	364.14	364.79	363.71	365.08	365.64	365.09	365.68	365.35	365.48	366.33	366.19
PZ-A	373.94	363.05	363.22	362.59	^^	363.40	363.57	363.18	362.89	362.96	364.20	364.14
PZ-B	373.92	363.24	363.40	362.65	363.39	363.47	363.89	363.21	362.92	362.92	364.32	364.32
PZ-C	374.85	365.38	366.26	364.19	365.65	365.76	365.44	366.07	365.50	365.65	366.65	366.45
PZ-D	375.12	365.41	366.21	364.21	365.65	365.84	365.53	366.11	365.62	365.75	366.75	366.57
PZ-E	374.12	364.63	364.77	363.47	364.94	365.00	366.92	364.58	364.07	364.47	365.25	366.51
PZ-F	377.06	365.51	366.29	364.29	366.25	366.41	365.46	366.65	365.75	366.13	367.59	367.16
PZ-G	377.16	365.53	366.22	364.36	366.35	366.46	365.43	366.68	365.81	366.14	367.76	366.97
PZ-HR	376.99	365.46	366.19	364.24	366.22	366.41	365.50	366.62	365.81	366.12	367.56	367.14
PZ-I	375.15	366.16	367.05	364.22	366.58	366.90	365.97	367.01	365.26	366.41	368.02	367.82
PZ-J	374.89	365.18	365.89	364.21	365.96	366.73	365.61	366.45	365.86	366.07	367.29	367.04
PZ-K	373.19	363.19	363.48	362.56	363.25	363.36	363.12	363.13	362.84	362.97	364.21	364.01
PZ-L	374.62	362.96	363.26	362.53	363.42	363.25	363.06	363.04	362.79	362.91	364.02	363.89
PZ-M	374.35	363.37	363.62	362.82	363.60	363.77	363.66	363.61	363.31	363.45	364.53	364.40
PZ-N	376.94***	365.29	366.13	364.09	365.54	365.74	364.48	365.95	365.47	365.53	366.56	366.41
PZ-O	375.36	363.63	363.98	362.75	363.61	363.53	363.36	363.43	363.04	363.13	364.36	364.26
PZ-P	376.89	365.48	366.19	364.25	366.25	366.45	365.53	366.65	365.87	366.20	367.63	367.19
PZ-Q	377.61	365.70	366.41	364.41	366.40	366.55	365.38	366.77	365.85	366.21	367.80	367.16
PZ-R	377.05	365.58	366.31	364.31	366.34	366.46	365.31	366.72	365.85	366.17	367.73	367.15
PZ-S	378.13	365.53	366.29	364.31	366.29	366.42	365.42	367.18	367.10	366.31	367.83	367.20
PZ-T	376.25	365.37	366.10	364.20	366.16	366.38	365.74	366.54	365.85	366.13	367.48	367.15
PZ-U	375.35	365.23	365.96	364.18	366.00	365.83	365.66	366.43	365.82	366.05	367.33	367.07
PZ-V	375.78	365.24	365.97	364.15	365.98	366.71	365.84	366.44	365.76	365.99	367.33	367.06
PZ-W	375.78	365.12	365.86	364.09	365.88	366.18	365.49	366.36	365.72	365.98	367.21	366.94

See Notes on Page 4.

Table 1
Summary of Historical Groundwater Level Measurements, June 1998 through June 2006

2014 Periodic Review Report
McKesson EnviroSystems Site
Syracuse, New York

Notes:

1. Weeks 1, 2, 3, 4, 13, 18, 22, 23, 25, 26, 39, 46 and 52 are weeks after the initial introduction of Revised Anaerobic Mineral Media (RAMM) into the three impacted areas.
2. 8/10, 8/11, and 8/12/98 water level measurements were taken during the initial discrete RAMM injection event.
3. AMSL = above mean sea level (NGVD of 1929)
4. The groundwater level in PZ-8D was not measured on 3/27/00 and 6/1/00 because this piezometer was damaged and subsequently decommissioned on August 30, 2000.
5. ^ = The canal water-level measurement for the third quarter of the first year of the long-term process control monitoring program was obtained on September 29, 2000.
6. * = The reference elevation for canal gauging point was 363.06 feet AMSL prior to 11/16/00. The canal gauging point was re-marked and re-surveyed 11/16/00. The new reference elevation is 393.39 feet AMSL.
7. NM = The groundwater level in PZ-N was not measured on 9/18/00 because this piezometer was damaged. This piezometer was repaired and subsequently resurveyed on 11/16/00. The new reference elevation for PZ-N is 376.94 feet AMSL.
8. 376.76** = The reference elevation for MW-9D as of 9/19/01.
9. *** = The reference elevation for PZ-N was 376.02 feet AMSL prior to 11/16/00 and, as noted above, the new reference elevation is 376.94 feet AMSL.
10. ^^ = Due to frigid weather conditions, the groundwater level in PZ-A and MW-8D could not be measured on 1/20/03, because the locks were frozen. The canal water level for the 1/03 resampling event could not be measured due to strong winds and ice on the water surface.
11. Monitoring location MW-8D was decommissioned on August 3, 2004.
12. The canal water level measurement for the 2005 second quarter long-term process control monitoring program was obtained on November 1, 2005.
13. ^^ = The water level measurement of the canal collected during the first 2005 monitoring was not measured from the correct measuring point. The spring 2005 measurement was taken approximately 3 feet higher than the surveyed measuring point. This value reflects the corrected canal water level for the spring 2005 monitoring event.

Table 2
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

2014 Periodic Review Report
McKesson EnviroSystems Site
Syracuse, New York

		Screen Elev. (ft. AMSL)												
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride	
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5	
MW-1 ^K	3/88	370.3	355.3	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1	
	1/89			<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1	
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	<10
	7/99			0.7 JN	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10	<10
	9/00			8 J	<10 J	3 J	<10 J	5.0 J	<1,000	<10 J	<10 J	<10	<10 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	10
	9/01			<10	<10	<10	<10	<10	<1,000 J	<10	<10	<10	<10	<10
	4/02			<12	<5.0	<5.0	<5.0	<10	990 J	<5	<5	<5	<5	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5	R	<10	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5	<5
	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	<5	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.2 J	<1.0	<3.0	<3.0
	11/05			<1.3 J	<0.3	<0.4	<0.5	<0.5	<1,000	<0.4	<1.0	<1.0 J	<0.5	<0.5
	6/06			<5.0 J	<1.0 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	<1.0 J	<3.0 J	<3.0 J
	11/06			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0	<3.0	<3.0
	6/07			<5	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	<3.0
	8/08			7.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0	<3.0
MW-2S	3/88	368.1	353.1	<1,000	1,900	110	610	2,800	<1,000	<10	<10	<10	<10	
	1/89			<1,000	2,000	65	330	1,200	<1,000	<10	<11	<11	<10	
	11/89			<1,000	1,800	<100	360	810	38,000	<100	<100	<100	<100	
MW-3S	3/88	365.1	350.1	<100	<1	<1	<1	<1	<1,000	50	<10	<10	110	
	1/89			<10,000	<100	120	<100	<100	<1,000	1,100	<11	5,570	4,700	
	11/89			<10,000	<100	<100	<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	<1,000	<5.0	15	2.0 J	<10	
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	7/99			<10	1 J	0.7 J	<10	<10	<1,000	<10	9 J	<10	<10	
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10	<10	<10	
	9/00			<10 J	1 J	2 J	<10 J	<10 J	<1,000	<10 J	2 J	1 J	<10 J	
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	9/01			<10	3 J	8 J	1 J	2 J	<1,000 J	<10	690 D (69) ^B	4 J	<10	
	4/02			<12	<5	<5	<5	<10	370 J	<5.0	1.7 J	<5	<5	

See Notes on Page 19.

Table 2
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

2014 Periodic Review Report
McKesson EnviroSystems Site
Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-3S (cont'd)	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
	6/04			6.0 J	<10	<10	<10	<20	<1,000	<10	0.8 J	<6	<10
	11/04			<25	<10	<10	<10	<20	150 J	<10	4 J	<5.0	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	15	<1.0	<3.0
	11/05			<1.3 J	<0.3	<0.4	<0.5	<0.4	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/06			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<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	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
8/08	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0			
MW-3D	8/95	343.8	339	<1,000	<25 D	<25 D	<25 D	<25 D	<1,000	<25 D	1 J	5 J	200 D
MW-4S	3/88	365.5	350.5	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	<11	19	280
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-5 ^c	3/88	363.3	348.3	<100	<1	<1	<1	<1	<1,000	<1	230	130	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	34	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	17	<10	<1
MW-6 ^b (Replaced by MW-6S)	1/89	365.5	355.9	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	11/89			<10	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
MW-7 ^b	1/89	367	357.4	<100	<1	<1	<1	2	<1,000	<1	<11	<11	100
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-8 ^b (Replaced by MW-8S) ^E	1/89	364.7	355.1	<1,000,000	<10,000	<10,000	<10,000	<10,000	430,000	<10,000	2,900	24,000	3,200,000
	11/89			470,000	<10,000	<10,000	<10,000	<10,000	300,000	<10,000	8,500	52,000	2,800,000
	11/91			<1,000,000	<10,000	<10,000	<10,000	<30,000	150,000	<10,000	8,000	33,000	1,600,000
	8/95			<1,000	<250,000D	<250,000D	<250,000D	<250,000D	22,000	60,000 JD	<25,000D	380,000 D	7,700,000 D
	9/98			<10,000 J	<10,000	<10,000	<10,000	<10,000	7,900	3,300 J	1,200 J	26,000 D	140,000
	2/99			<20,000	<20,000	<20,000	<20,000	<20,000	16,000JN	11,000 J	30,000 D	120,000 D	650,000 DB
	7/99			10 J	22 J	240 J	58 J	220 J	17,000	11,000 J	24,000	77,000	450,000 D
	3/00			<100,000	<100,000	<100,000	<100,000	<100,000	30,000 J	<100,000	62,000	270,000 D	1,300,000
	9/00			<50,000 J	<50,000 J	<50,000 J	<50,000 J	<50,000 J	14,000 J	9,200 J	42,000 J	59,000	540,000 BJ
	3/01			<50,000	<50,000	<50,000	<50,000	<50,000	53,000	11,000 J	90,000 D	120,000 D	990,000
	9/01			<400	<400	430	170 J	680	8,900 J	18,000 JD	21,000	29,000	440,000 BD
	4/02			2,100	50 J	410	100 J	400	<1,000	9,600 J	793,000 D	773,000 D	660,000 D
	10/02			120 J	23	310	73	267	<1,000	3,100	80,000	21,000 J	320,000
	5/03			<12	20 J	600 D	81	300	<1,000	6,700 D	79,000 D	29 J	910,000 D
	10/03			21	25	330 D	93	360	1,200 J	3,100 D	67,000 D	24,000 D	400,000 D
6/04			<25	40	330 EJ	110	400	<1,000	5,900 D	56,000	51,000	1,200,000 D	

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-8SR ^B	11/04	362.7	352.7	<1,200	<500	100 DJ	<500	164 DJ	<1,000	<500	35,000 D	5,300 D	10,000 D
	6/05			81 J	13	100	53	180	<1,000	<1.0	30,000	<200	<3.0
	11/05			15 J	13	130	66	260	<1,000	<1.0	32,000	<260 J	<3.0
	6/06			48	15	120	79	260	<1,000	<1.0	23,000	<200	<3.0
	9/06			NA	NA	NA	NA	NA	NA	NA	52,000 [51,000]	<520 [<520]	NA
	11/06			28	16	100	84	270	<500	<1.0	28,000	<200	<3.0
	6/07			58	14	110	83	250	<500	<2.0	2,700	<22	<6.0
	8/07			NA	NA	NA	NA	NA	NA	NA	17,000	<100	NA
	11/07			<5.0 J	12	22	73	210	<500	<1.0	22,000 J	<100 J	<3.0
	3/08			<10 [9.6 J]	5.5 [5.7]	22 [22]	70 [68]	160 [160]	<500 [<500]	<2.0 [<2.0]	5,800 [5,200]	<25 [<50]	<6.0 [<6.0]
	8/08			8.2 J [<10]	11 [11]	24 [22]	70 [70]	190 [190]	<500 [<500]	<2.0 [<2.0]	32,000 [25,000]	<250 [<250]	<6.0 [<6.0]
MW-9 ^D (Replaced by MW-9S)	1/89	365.6	356	1,600	NA	64	130	270	<1,000	<10	660	1,200	1,500
	11/89			<1,000	48	25	60	60	<1,000	<10	670	150	<10
	11/91			<100	<10	9	19	30	<1,000	<1.0	95	18	<1
	8/95			<1,000	11 JD	26 JD	69 D	226 JD	<1,000	<50	50	28	110 D
	7/99			<10	4 J	2 J	9 J	18	<1,000	<10	<10	5.0 J	<10
	3/00			<10	2 J	2 J	11	21	<1,000 J	<10	2.0 J	9.0 J	<10
	9/00			<10 J	11 J	2 J	6.0 J	18 J	<1,000	<10 J	1.0 J	6.0 J	<10 J
	3/01			<10	1 J	3 J	17	61	<1,000	<10	2.0 J	11	<10
	9/01			<10	10	3 J	7.0 J	35	<1,000 J	<10	<10	10	<10
	4/02			<23	10	2 J	6	17 J	370 J	<5	9	43	<5
	10/02			16 J	38	40	2 J	15 J	<1,000	<10	<5.0	2.0 J	<10
	5/03			<12	11	<5	7	18	<1,000	<5.0	0.9 J	3.0 J	<5
	10/03			<12	2 J	<5	5	19	<1,000	<5.0	1.0 J	<5.0	<5
	6/04			14 J	6 J	2.0 J	8 J	19 J	<1,000	<10	<5.0	<5.0	<10
	11/04			<25	4 J	2 J	9 J	30 J	<1,000	<10	<5.0	<5.0	<10
	6/05			44 J	1.9	3.2 J	24	64	<1,000	<1.0	2.6	1.9	<3.0
	11/05			<1.3 J	3.5	3.8	11	33	<1,000	<0.4	1.4	6.1 J	<0.5
	6/06			<5.0 J	1.1 J	2.3 J	25 J	60 J	<1,000 J	<1.0 J	<1.1 J	3.8 J	<3.0 J
	11/06			<5.0	1.4	3.5 J	23	63	<500	<1.0	0.5 J	3.3 J	<3.0
	6/07			<5.0	1.4	3.3 J	42	110	<500	<1.0	<5.0	4.1	<3.0
	11/07			<5.0	0.9 J	2.0 J	11	58	<500 J	<1.0	1.7 J	8.6	<3.0
	3/08			<5.0 J	1.1	3.0 J	37	73	<500	1.2	0.7 J	6.8	<3.0
	8/08			24	3.7	3.3 J	21	72	<500	<1.0	<5.5	5.1	<3.0
MW-10 ^D (Replaced by MW-9D)	1/89	355.5	345.9	<1,000,000	<10,000	<10,000	<10,000	<10,000	210,000	<10,000	720	9,400	520,000
	11/89			<100,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	900	2,400	28,000
	11/91			<100	<1	3.0	2.0	<3.0	<1,000	<1	230	<10	41
	8/95			<1,000	<25 UD	<25 UD	<25 UD	<25 UD	<1,000	<25 UD	<5.0	<10	350 D
MW-11 ^D (Replaced MW-6D)	1/89	355.1	345.5	<100	<1	<1	<1	<1	8,400	<1	<12	<12	1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	230	<52	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-11S	12/94	359.9	354.9	<380	<10	<10	<10	<10	880	<10	<5	<10	<10
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<26
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
MW-11D	12/94	349.8	344.8	<310	<5	<5	<5	<5	2,100	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
MW-12D ^D (Replaced MW-8D) ^E	1/89	354.8	345.2	<100,000	<1,000	<1,000	<1,000	<1,000	12,000	<1,000	67	410	120,000
	11/89			69,000	<1,000	<1,000	<1,000	<1,000	39,000	<1,000	<1,000	4,900	360,000
	11/91			<1,000,000	<10,000	<10,000	<10,000	<30,000	<10,000	<10,000	750	5,800	220,000
	8/95			<1,000	450 JD	430 JD	430 JD	1,250 JD	<1,000	<1,300 D	30 D	230 D	<13,000 D
	8/96			13	<10	<10	<10	<10	<1,000	2.0 J	<5	<10	40
MW-13S	11/89	368.7	359.1	<100	3	<1	<1	<1	<1,000	<1.0	<52	<52	<1.0
	11/90			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/91			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/92			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
MW-14D ^C	1/89	359	349.4	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<10	<10	<1.0
MW-15S	1/89	370	360.25	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<52	<52	<1.0
MW-16D ^C	1/89	350.8	341.2	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<10	<10	<1.0
MW-17 ^C (Replaced by MW-17R)	11/90	365.7	356.1	<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/91			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/92			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<11
	10/95			NA	<5	<5	<5	<5	NA	2 J	NA	NA	<5
	8/96			11	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/99			<10	1 J	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00			<10	8 J	<10	<10	<10	<1,000 J	<10	<5.0	<10	<10
	9/00			<10 J	15 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	24 J	4 J	1 J
	3/01			<10	8 J	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	5 J	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	6	<5	<5	<10	620 J	<5	150 (<5) ^F	110 (<5) ^F	<5
	10/02			<25 J	14	<10	<10	<20	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	8	<5	<5	<5	<1,000	<5	<5	<5	<5
	11/03			<12	7	<5	<5	<10	<1,000	<5	<5	<5	<5

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-17 ^D (cont'd)	6/04			<25	5 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	200 J	--	<5	<5	--	
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0	0.8 J	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
8/08			2.3 J	1.8	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
MW-18	11/89	325.15	316.15	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<10	<10	<10	<20	720 J	<10	280 D (<5) ^F	200 D (<5) ^F	<10
	10/02			6 J	<10	<10	<10	<20	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	280 J	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	0.7 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	R	R	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1 J	<3.0
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<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 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			5.5	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0

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		Screen Elev. (ft. AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-19 ^K	11/89	318.45	309.45	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<12
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	5 J	<11
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10	<10	<10 J
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	10/03			<11	<5	<5	<5	<10	<1,000	<5	51 J	16 J	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<25	<10	<10	<10	<20	<1,000	<10	<10	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<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 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.5	<1.1	<3.0
	11/07			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-20 ^L	11/89	329.85	320.85	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
MW-21 ^L	11/89	323.65	314.65	<100	<5	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-22 ^L	11/89	368.55	359.55	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	10/10			<10	<1.0	<1.0	<1.0	<3.0	<500 J	<1.0	<5.0	<1.0	<1.0
MW-23S	12/94	364.1	354.1	<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride	
		Top	Bottom											
NYSDEC Groundwater Quality Standards (Part 700)														
MW-23S (cont'd)	2/96			50	1	5	5	5	NS	5	5	1	5	
	8/96			<1,000	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<10	<10	<10	<10	<10	<10	<1,000	<10	7	<10	<10
	8/97			<10	<10	<10	<10	<10	<10	<1,000	<10	11	<10	<10
	9/98			12	<10	<10	<10	<10	<1,000	<10	92	<10	<10	
	2/99			<10	<10	<10	<10	<10	<1,000	<10	56 ^H	7 J	<10	
	6/99			<10	<10	<10	<10	<10	<1,000	<10	<10	10	<10 J	
	7/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	2 J	<10 J	
	3/00			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	9/00			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5	
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10	
	5/03			<62	<25	<25	<25	<50	380 J	<25	<5	<5	<25	
	10/03			<12	<5	<5	<5	<10	<1,000	<5	60	<5	<5	
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10	
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--	
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0	
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0	
	6/06			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.2	<1.2	<3.0	
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0	
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0	
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0	
MW-23I	12/94	341.2	336.2	<10	<5.0	<5	<5.0	<5.0	<200	<5.0	<5.0	<10	<5	
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10	
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	2/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10	
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<11	<10	
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10	
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J	
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10	
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J	
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	9/01			4 J	<10	<10	<10	2 J	<1,000	<10	<10	<10	<10	
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	2 J	
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10	
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5	

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		Screen Elev. (ft. AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-23I (cont'd)	10/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	1 J	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0	0.6 J	<4.0	<5.0	<1,000	<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 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
MW-24S ^{CL} (Replaced by MW-24SR)	12/94	358.4	352.4	<10	<5	<5	<5	<5	<1,000	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	<10 J	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	6/02 ^F			NA	NA	NA	NA	NA	NA	NA	ND	ND	NA
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	16	<6	<5
	6/04 ^J			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<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
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
	9/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-24D ^{CL} (Replaced by MW-24DR)	12/94	334.4	341.2	<10	<5	<5	<5	<5	<1,000	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<10
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<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 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	6/02 ^F			NA	NA	NA	NA	NA	NA	NA	ND	ND	NA

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-24D ^{DL} (cont'd)	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	0.5 J	<5	<5
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5 J	<1	<5	<4	<5	<1,000	<1	<1	<1	<3
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1 J	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
	9/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-25S ^L	8/95	361.2	356.2	<1,000	<5	<5	<5	<5	<1,000	<5	<5	0.7 J	<10
	10/95			NA	<5	<5	<5	<5	NA	<5	<5	<10	<5
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	130	<10	<10 J
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	110 J	21 J	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	5 J	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	11/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<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
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<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
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.2	<0.5	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<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
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	MW-25D ^L			8/95	349.55	344.55	<1,000	<5	<5	<5	<5	<1,000	<5
10/95		NA	<5	<5			<5	<5	NA	3 J	<5	<10	<5
8/96		15	<10	<10			<10	<10	<1,000	<10	<5	<10	<10
8/97		<10	<10	<10			<10	<10	<1,000	<10	<5	<11	<10

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		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-25D ^L (cont'd)	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	3/01			<10	<10	<10	<10	<10	<1,000	<10	5 J	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<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
	6/07			12 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/09			<10	<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	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-26	12/96	365	355.3	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
MW-27	9/98	362.5	354.5	23	3 J	4 J	<10	3 J	<1,000	<10	340 DJ	<10	<10
	7/99			<10 J	4 J	2 J	3 J	8 J	<1,000	<10	740 D	<10	<10
	3/00			<10	6 J	<10	8 J	2 J	<1,000 J	<10	110 D	1 J	<10
	9/00			<10 J	4 J	<10 J	3 J	1 J	<1,000 J	<10 J	16 J	2 J	1 J
	3/01			<10	5 J	<10	5 J	2 J	<1,000	<10	260 D	2 J	<10
	9/01			<10	5 J	<10	2 J	<10	<1,000 J	<10	26	<10	<10
	4/02			<18	7	11	12	26	<1,000	<5	176,000 DJ	19 J	<5
	10/02			9 J	3 J	<10	<10	<20	<1,000	4 J	2,700 D	100 J	60 JN
	5/03			<12	8	11	23	51	<1,000	<5	15,000 DJ	11	43
	10/03			170	5	<5	<5	3 J	<1,000	<5	3,700 D	<5	240 D
	6/04			23 J	5 J	4 J	2 J	6 J	<1,000	<10	3,700 D	20 J	<10
	11/04			<120 (28)	<50 (4 J)	<50 (2 J)	<50 (<10)	<100 (<20)	<1,000	<50 (<10)	1,100 DJ	<5	310 (490 D)
	6/05			31 J	6.1	15	5.8	15	<1,000	<1.0	5,200	<23	<3.0
	11/05			35 J (37 J)	11 (12)	77 (78)	26 (26)	86 (88)	<1,000 (<1,000)	<1.0 (<1.0)	37,000 (38,000)	<270 J (<260 J)	<3.0 (<3.0)
	6/06			5.3 J (5.8 J)	9.5 J (8.9 J)	50 J (48 J)	25 J (25 J)	66 J (63 J)	<1,000 J (<1,000 J)	<1.0 J (<1.0 J)	14,000 J (12,000 J)	<100 J (<100 J)	<3.0 J (<3.0 J)
	9/06			NA	NA	NA	NA	NA	NA	NA	1,700	<10	NA
	11/06			31 [24]	14 [14]	71 [71]	42 [45]	91 [110]	<500 [<500]	<1.0 [<1.0]	33,000 [33,000]	<210 [<200]	<3.0 [<3.0]
	6/07			21	8.4	9.5	14	24	<500	<1.0	1,100	<10	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	<10 J [4,300 J]	<1.0 [<20]	NA
	11/07			<5.0 J [<5.0]	6.6 [5.9]	4.7 J [4.1 J]	8.6 [7.2]	24 [21]	<500 [<500]	<1.0 [<1.0]	3,000 J [3,800 J]	<25 J [<25 J]	<3.0 [<3.0]
	3/08			21	9.4	23	43	68	<500	<2.0	13,000	<100	<6.0
	8/08			3.8 J	5	2.2 J	1.8 J	10	<500	<1.0	2,400	<25	<3.0
MW-28	9/98	363.6	355.6	<5,000 J	<5,000	<5,000	<5,000	<5,000	2,200	<5,000	546 D ^H	54	64,000 J
	7/99			<500 J	<500	<500	<500	<500	<1,000	<500	1,100 D	40	39,000 D
	3/00			<10,000	<10,000	<10,000	<10,000	<10,000	<1,000 J	<10,000	1,300 D	30	130,000 J
	9/00			<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	540 DJ	<10	8,100 BJ
	3/01			<400	<400	<400	<400	<400	<1,000	<400	3,200 D	7 J	5,900 B
	9/01			<400	<400	<400	<400	<400	<1,000 J	<400	1,000 D	<10	4,700 B

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		Screen Elev. (ft. AMSL)												
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride	
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5	
MW-28 (cont'd)	4/02			<49	8	6	9	10 J	<1,000	<5	33,400 D	57	4,600 D	
	10/02			14 J	8 J	6 J	11	12 J	<1,000	<10	2,700 D	R	<10	
	5/03			13	4 J	2 J	2 J	8 J	<1,000	<5	1,000 DJ	3 J	52	
	10/03			24	11	6	12	13 J	<1,000	<5	1,900 D	<5	<5	
	6/04			20 J	4 J	2 J	5 J	4 J	<1,000	<10	910 D	<5	<10	
	11/04			<120 (<25)	<50 (4 J)	<50 (<10)	<50 (5 J)	<100 (3 J)	190 J	<50 (<10)	640 DJ	<5	<50 (<10)	
	6/05			5.2 J	4.5	1.2 J	4.6	3.9 J	<1,000	<1.0	630	<5.0	<3.0	
	11/05			6.8 J (7.8 J)	6.1 (5.8)	<5.0 (<5.0)	4.7 (4.7)	<5.0 (<5.0)	<1,000 (<1,000)	<1.0 (<1.0)	380 J (350 J)	<2.2 (<2.1)	<3.0 (<3.0)	
	6/06			<5.0 J (<5.0 J)	6.0 J (6.3 J)	1.2 J (1.3 J)	5.3 J (5.4 J)	4.2 J (4.3 J)	<500 J (<1,000 J)	<1.0 J (<1.0 J)	430 J (530 J)	<2.1 J (<5.0 J)	<3.0 J (<3.0 J)	
	9/06			NA	NA	NA	NA	NA	NA	NA	280	<2.2	NA	
	11/06			12	8.2	1.4 J	5.6	4.4 J	<500	<1.0	1,000	<5.2	<3.0	
	6/07			13	4.6	0.4 J	0.8 J	0.6 J	<500	<1.0	60	<1.0	<3.0	
	8/07			NA	NA	NA	NA	NA	NA	NA	40	<1.0	NA	
	11/07			<5.0 J	4.5	0.5 J	1.4 J	0.8 J	<500	<1.0	29 J	<0.5 J	<3.0	
	3/08			<5.0	4.0	0.5 J	1.6 J	1.3 J	<500	<1.0	81	0.9	<3.0	
	8/08			<5.0	3.8	<5.0	<4.0	<5.0	<500	<1.0	0.7 J	<0.5	<3.0	
MW-29	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	1 J	<1,000	<10	5 J	4 J	<10	
	7/99			<10	<10	<10	<10	<10	<1,000	<10	2 J	4 J	<10	
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	450 D	6 J	<10	
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	24 J	4 J	<10 J	
	3/01			<10	<10	<10	<10	<10	<1,000	<10	30	4 J	<10	
	9/01			<10	<10	<10	<10	<10	<1,000	<10	7 J	2 J	<10	
	4/02			<10	<5	<5	<5	<10	<1,000	<5	3 J	9	<6	
	10/02			<25 J	<10	<10	<10	<20	<1,000	<10	8	R	4 JN	
	5/03			<12	<5	<5	<5	<10	<1,000	<5	19	1 J	<3	
	10/03			<12	<5	<5	<5	<10	<1,000	<5	2 J	<5	<5	
	6/04			<25	<10	<10	<10	<20	<1,000	<10	3 J	<5	<10	
	11/04			<120	<50	<50	<50	<100	420 J	<50	<5	<5	<50	
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0	
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0	
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0	
	11/06			5.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	0.4 J	<1.0	<3.0	
	6/07			<5.0	<1.0	<5.0	<4.0	0.5 J	<500	<1.0	<5.5	<1.1	<3.0	
	11/07			<5.0 J	<1.0	<5.0	<4.0	<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	<500	<1.0	<5.0	<0.5	<3.0	
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0	
MW-30	9/98	363.5	355.5	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10	
	2/99			7 J	<10	<10	<10	<10	<1,000	<10	<10	2 J	<10	
	7/99			<10	0.7 J	<10	<10	<10	<1,000	0.5 J	<10	1 J	<10	
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	18	2 J	4 J	
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	9 J	2 J	2 J	

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-30 (cont'd)	3/01			<10	<10	<10	<10	<10	<1,000	<10	8 J	2 J	<10
	9/01			4 J	2 J	<10	<10	<10	<1,000 J	<10	8 J	1 J	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	250	210	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	R	R	<10
	5/03			<62	<25	<25	<25	<50	<1,000	<25	18	0.6 J	8 J
	10/03			<12	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<120	<50	<50	<50	<100	<1,000	<50	<5	<5	<50
	6/05			<5.0 J	0.3 J	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	0.7 J	0.6 J	<4.0	0.5 J	<1,000	<1.0	240	<1.0 J	<3.0
	6/06			<5.0	0.6 J	0.4 J	<4.0	<5.0	<1,000	<1.0	29	<1.0	<3.0
	11/06			11	1.0	<5.0	<4.0	<5.0	<500	<1.0	200	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	30	<1.1	<3.0
	11/07			<5.0 J	0.8 J	<5.0	<4.0	<5.0	<500	<1.0	49	<0.5	<3.0
	3/08			<5.0	0.6 J	<5.0	<4.0	0.2 J	<500	<1.0	3.0 J	0.7	<3.0
8/08	<5.0	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	31	<0.5	<3.0			
MW-31	9/98	363.7	355.4	<10	12	<10	<10	<10	<1,000	<10	34	4 J	<10
	7/99			<10	16	<10	<10	<10	<1,000	<10	230 D	3 J	<10
	3/00			<10	16	<10	<10	<10	<1,000 J	<10	3 J	4 J	<10
	9/00			<10 J	12 J	<10 J	<10 J	<10 J	<1,000	<10 J	10	6 J	<10 J
	3/01			21	11	<10	<10	<10	<1,000	<10	<10	5 J	<10
	9/01			<10	14	<10	<10	<10	<1,000 J	<10	91 D	3 J	<10
	4/02			<14	9	<5	<5	<10	<1,000	<5	804 D	21	<5
	10/02			<25	11	<10	<10	<20	<1,000	<10	560 D	1 J	<10
	5/03			<12	9	<5	<5	<10	<1,000	<5	0.9 J	3 J	<5
	10/03			1,200 D	13	<5	<5	<5	<1,000	<5	88	<5	<5
	6/04			15 J	12	<10	<10	<20	<1,000	<10	3 J	<5	<10
	11/04			<25	9 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	11	<5.0	<4.0	1.3 J	<1,000	<1.0	3.2	2.7	<3.0
	11/05			<1.3 J	6.7	<0.4	<0.5	0.6	<1,000	<0.4	16	<1.0 J	<0.5
	6/06			<5.0 J	11 J	0.6 J	<4.0 J	1.7 J	<1,000 J	<1.0 J	<1.0 J	2.4 J	<3.0 J
	9/06			NA	NA	NA	NA	NA	NA	NA	1.6	3.4	NA
	11/06			R	6.9	<5.0	<4.0	<5.0	<500	<1.0	0.4 J	1.1 J	<3.0
	6/07			<5.0	14	0.7 J	<4.0	1.3 J	<500	<1.0	<5.0	2.0	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	0.5 J	2.7	NA
	11/07			<5.0 [<5.0]	12 [10]	<5.0 [0.4 J]	<4.0 [<4.0]	1.1 J [1.4 J]	<500 J [<500 J]	<1.0 [<1.0]	<5.0 [0.3 J]	2.3 [2.8]	<3.0 [<3.0]
	3/08			<5.0 J	2.0	<5.0	<4.0	<5.0	<500	<1.0	0.2 J	1.6	<3.0
	8/08			22	13	0.4 J	<1.0	2.2 J	<500	<1.0	<5.6	2.4	<3.0
	MW-32			9/98	364	356	<10	16	2 J	5 J	3 J	<1,000	<10
7/99		3 J	14	2 J			4 J	<10	<1,000	56	<10	3 J	<10
3/00		<10	5 J	<10			<10	<10	<1,000 J	<10	800 D	<10	<10

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-32 (cont'd)	9/00			<10 J	12 J	<10 J	<10 J	<10 J	<1,000	<10 J	4,500 D	<10	<10 J
	3/01			<10	5 J	<10	<10	<10	<1,000	<10	1,900 D	2 J	<10
	9/01			<10	10	<10	<10	<10	<1,000 J	<10	1,100 D	2 J	<10
	4/02			<15	4 J	<5	<5	<10	<1,000	<5	4,620 D	11	<5
	10/02			<25	4 J	<10	<10	<20	<1,000	<10	50	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	0.6 J	0.7 J	<5
	10/03			20	2 J	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			6 J	1 J	<10	<10	<20	<1,000	<10	1 J	<5	<10
	11/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.4 J	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	<1.0 J	<3.0 J
	11/06			R	<1.0	0.8 J	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.1 J	0.8	<3.0
	3/08			<5.0 J	0.8 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	0.8	<3.0
	8/08			5.8	0.3 J	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
MW-33	9/98	344.1	356.1	<10	<10	<10	<10	<10	<1,000	<10	9 J	6 J	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	120	6 J	<10
	7/99			5 J	2 J	0.7 J	<10	<10	<1,000	<10	150	8 J	<23
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	51	7 J	11
	9/00			45 J	4 J	1 J	<10 J	<10 J	<1,000	<10 J	540 D	23	330 DJ
	3/01			17 J	<20	<20	<20	<20	<1,000	<20	1,300 D	16	370 B
	9/01			21	5 J	<10	<10	<10	<1,000 J	<10	1,900 D	12	<18
	4/02			<18	3 J	<5	<5	<10	<1,000	<5	2,780 D	21	19
	10/02			11 J	4 J	<10	<10	<20	<1,000	<10	290 D	3 J	4 J
	5/03			88	13	<5	<5	<10	<1,000	<5	2,000	35 J	2,800 D
	10/03			22	2 J	<5	<5	<10	<1,000	<5	1,900 D	<6	<5
	6/04			9 J	12 J	<10 J	<10 J	<20 J	<1,000	<10 J	2,700 D	5 J	<10 J
	11/04			--	--	--	--	--	<1,000	--	2,700 D	5 J	--
	6/05			<5.0 J	11	1.0 J	<4.0	<5.0	<1,000	<1.0	1,800	<10	<3.0
	11/05			<5.0 J	16	1.8 J	<4.0	<5.0	<1,000	<1.0	3,500	<25 J	<3.0
	6/06			<5.0 J	6.7 J	0.7 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	370 J	3.5 J	<3.0 J
	9/06			NA	NA	NA	NA	NA	NA	NA	940	8.0	NA
	11/06			17 J	8.6	0.7 J	<4.0	<5.0	<500	<1.0	84	2.9 J	<3.0
	6/07			<5.0	5.7	0.4 J	<4.0	<5.0	<500	<1.0	46	2.6	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	46	4.2	NA
	11/07			<5.0	4.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.1 J	3.5	<3.0
	3/08			<5.0 J	4.1	<5.0	<4.0	<5.0	<500	<1.0	<5.0	4.1	<3.0
	8/08			<5.0	3.2	<5.0	<4.0	<5.0	<500	<1.0	<5.9	2.8	<3.0

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		Screen Elev. (ft. AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-34	9/98	362.7	354.7	<10	<10	<10	<10	<10	<1,000	<10	83	<10	<10
	7/99			2 J	0.9 J	1 J	<10	<10	<1,000	<10	380 D	2 J	<10
	3/00			<10 J	1 J	2 J	<10	<10	<1,000 J	<10	200 D	3 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	320 D	4 J	<10 J
	3/01			<10	<10	2 J	<10	2 J	<1,000	<10	700 D	5 J	<10
	9/01			7 J	2 J	2 J	<10	2 J	<1,000 J	<10	76	3 J	<10
	4/02			<32	<5	<5	<5	<10	<1,000	<5	640 D	15	<5
	10/02			37 J	<10	<10	<10	<20	<1,000	<10	380 DJ	2 J	<10
	5/03			16	<5	<5	<5	<10	<1,000	<5	140	3 J	<5
	10/03			9 J	<5	<5	<5	<10	<1,000	<5	18	<5	<5
	6/04			24 J	<10	<10	<10	<20	<1,000	<10	30	<5	<10
	11/04			<25	<10	<10	<10	<20	180 J	<10	14	<5	<10
	6/05			5.6 J	0.7 J	0.9 J	<4.0	1.2 J	<1,000	0.4 J	16	2.5	<3.0
	11/05			20 J	<0.3	0.9	<0.5	1.1	<1,000	<0.4	12	2 J	<0.5
	6/06			6.4	0.6 J	0.5 J	<4.0	<5.0	<1,000	<1.0	16	2.3	<3.0
	11/06			49 J	<1.0	0.6 J	<4.0	0.6 J	<500	<1.0	9.9	1.2 J	<3.0
	6/07			22	0.9 J	0.5 J	<4.0	0.6 J	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	0.8 J	0.6 J	<4.0	1.1 J	<500 J	<1.0	0.3 J	1.5	<3.0
	3/08			16	1.0 J	0.5 J	<4.0	1.1 J	<500	<1.0	24	1.3	<3.0
	8/08			12	0.8 J	0.5 J	<4.0	1.1 J	<500	<1.0	0.6 J	1.6	<3.0
MW-35	9/98	363	355	<10	<10	<10	<10	<10	<1,000	<10	6 J	5 J	<10
	7/99			<10	0.7 J	<10	<10	<10	<1,000	<10	3 J	4 J	<10
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10	3 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	4/02			<13	<5	<5	<5	<10	<1,000	<5	3 J	4 J	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	2 J	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	1,000	<100	<5
	10/03			5 J	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	30	4 J	<10
	11/04			<25	<10	<10	<10	<20	240 J	<10	82	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.4 J	<1.0	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	1.1	<1.0 J	<3.0
	6/07			13	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			5.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	1.1 J	<0.5	<3.0
MW-36 ^E	9/98	363.6	355.6	<10	<10	<10	<10	<10	<1,000	<10	290 D	6 J	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	860 D	4 J	<10
	7/99			8 J	0.8 J	<10	<10	<10	<1,000	<10	250	<10	<10
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	60	7 J	<10
	9/00			5 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	8 J	6 J	<5
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10

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Table 2
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

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McKesson Envirosystems Site
Syracuse, New York

		Screen Elev. (ft. AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
MW-36 ^E (cont'd)	9/01			54	<10	<10	<10	<10	<1,000 J	<10	350 D	5 J	<10
	4/02			<20	<5	<5	<5	<10	<1,000	<5	9	41	<5
	10/02			12 J	<10	<10	<10	<20	<1,000	<10	2 J	2 J	<10
	5/03			9 J	<5	<5	<5	<10	<1,000	<5	67	4 J	<5
	10/03			580 D	<5	<5	<5	<10	<1,000	<5	100	<5	<5
	6/04			22 J	<10 J	<10 J	<10 J	<20 J	<1,000	<10 J	33	7	<10 J
	11/04			13 J	<10	<10	<10	<20	<1,000	<10	22	<5	<10
	6/05			24 J	2.1	<5.0	<4.0	1.0 J	<1,000	<1.0	1,200	<5.4	<3.0
	11/05			77 J	3.6	2.0 J	0.6 J	2.8 J	<1,000	<1.0	1,600	<10 J	<3.0
	6/06			25	1.6	0.7 J	<4.0	1.2 J	<1,000	<1.0	76	1.9	<3.0
	9/06			NA	NA	NA	NA	NA	NA	NA	3.5	1.2	NA
	11/06			130 J	3.6	1.2 J	<4.0	1.1 J	<500	<1.0	420	1.7 J	<3.0
	6/07			33	4.6	1.4 J	0.8 J	5.0	<500	<1.0	1,300	<10	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	740	<5.0	NA
	11/07			10	4.5	1.7 J	0.9 J	5.3	<500 J	<1.0	480 J	3.4 J	<3.0
	3/08			8.0 J	4.2	1.5 J	0.8 J	5.5	<500	<1.0	130	3.0	<3.0
	8/08			27	3.7	1.4 J	0.6 J	5.7	<500	<1.0	4.5 J	3.2	<3.0
TW-01	12/96	365.1	355.4	<10	82	4 J	6 J	4 J	<1,000	<10	2,090 D	13	4 J
	9/98			<10	15	<10	4 J	<10	<1,000	<10	4,400 DEJ	4 J	<10
	2/99			<10	24	2 J	2 J	2 J	<1,000	<10	9,000 D	5 J	<10
	7/99			<10	16	1 J	3 J	<10	<1,000	<10	4,400 D	4 J	<10
	3/00			<10	16	<10	<10	<10	<1,000 J	<10	280 D	4 J	<10
	9/00			<10 J	11 J	<10 J	<10 J	<10 J	<1,000	<10 J	15	2 J	<10 J
	3/01			<10	5 J	<10	<10	<10	<1,000	<10	<10	3 J	<10
	9/01			<10	10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	4/02			<14	3 J	<5	<5	<10	<1,000	<5	8	13	<5
	10/02			<25	7 J	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	7	<5	<5	<10	<1,000	<5	<5	1 J	<5
	10/03			<12	6	<5	<5	<10	<1,000	<5	0.6 J	<5	<5
	6/04			6 J	3 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<25	2 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	1.8	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<1.3 J	1.9	<0.4	<0.5	<0.4	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0 J	1 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	0.8 J	<3.0 J
	11/06			R	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			7.8	0.5 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.2 J	1.1	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	1.0	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
TW-02 ^C (Replaced by TW-02R) ^E	12/96	363.3	353.3	53	10	77	16	65	<1,000	585 D	15,900 JD	3,920 D	42,449 D
	9/98			<500 J	<500 J	<500 J	<500 J	53,000	5,000	300 J	38,000 D	61,000 D	86,000 D
	2/99			<1,000	<1,000	190 J	<1,000	150 J	14,000JN	<1,000	83,000 D	7,900	14,000 B
	7/99			630	37	240 J	31	150	<1,000	55	100,000 D	3,500 J	9,700 D
	3/00			<1,000 J	<1,000	160 J	<1,000	240 J	<1,000 J	<1,000	64,000 D	3,900	13,000
	9/00			190 J	28 J	95 J	35 J	160 J	<1,000	6 J	79,000	<10,000	390 J
	3/01			81	19	68	28	130	<1,000	<10	67,000 D	650 J	400 D

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Table 2
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

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McKesson Envirosystems Site
Syracuse, New York

		Screen Elev. (ft. AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
TW-02 ^C (cont'd)	9/01			57	25	70	31	140	<1,000 J	<20	63,000 D	32	48 B
	4/02			240	19	65	23	96	<1,000	<5	1,090,000 D	<5,300	14
	10/02			110 J	15	19	23	65	<1,000	<10	80,000 D	10 J	<10
	5/03			240	30	130	49	226	<1,000	<5	160,000 D	230	97
	10/03			68	28	75 J	<5	<10	<1,000	2 J	92,000 D	<260	91
	6/04			140 J	19 J	39 J	31 J	111 J	<1,000	<10 J	82,000	<5,200	4 J
TW-02RR ^{DE}	11/04	363.3	353.3	18 J	4 J	8 J	4 J	16 J	<1,000	<10	7,100 D	<5	<10
	6/05			7.2 J	3.6	2.1 J	3.6 J	9.6	<1,000	0.3 J	8,400	<50	<3.0
	11/05			26 J	6	4.1	3.6	11	<1,000	<0.4	14,000	<110 J	<0.5
	6/06			16	4.4	1.3 J	2.7 J	6.7	<1,000	<1.0	10,000	<100	<3.0
	9/06			NA	NA	NA	NA	NA	NA	NA	7,600	<52	NA
	11/06			78 J	4.9	1.4 J	2.2 J	6.2	<500	<1.0	2,100	<10 J	<3.0
	6/07			17	5.5	1.3 J	4.0	8.8	<500	<1.0	6,800	<100	<3.0
	8/07			NA	NA	NA	NA	NA	NA	NA	4,000 J	<20	NA
	11/07			5.5	5.8	1.2 J	3.0 J	7.6	<500 J	<1.0	3,700	<25	<3.0
	3/08			6.4 [5.2]	4.5 J [2.3 J]	1.3 J [0.7 J]	3.8 J [1.9 J]	10 [4.8 J]	<500 [<500]	<1.0 [<1.0]	7,500 [5,400]	<50 [<50]	<3.0 [<3.0]
	8/08			9.0 [9.6]	4.4 [4.6]	1.0 J [1.1 J]	2.3 J [2.4 J]	6.7 [7.0]	<500 [<500]	<1.0 [<1.0]	9,600 [7,000]	<71 [<56]	<3.0 [<3.0]
PZ-4D	11/89	350.8	345.9	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	0.8 J	<5
	10/95			NA	<5	<5	<5	<5	NA	<5	<5	<10	<5
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<6	<12	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<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	<1,000	<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
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
PZ-4S	11/89	362.79	357.88	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<18
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	<10 J	<10 J
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10

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Table 2
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McKesson EnviroSystems Site
Syracuse, New York

		Screen Elev. (ft. AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Toluene	Ethyl- benzene	Xylene ^A	Methanol	Trichloro- ethene	Aniline	N,N-Dimethyl- aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	3 J	5
PZ-4S (cont'd)	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10		<10
	4/02			<14	<5	<5	<5	<10	<1,000	<5	8 (<5) ^F	<5 (<5) ^F	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/06			<5.0	<1.0	0.6 J	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.5	<1.1	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
PZ-5D ^L	11/89	353.5	348.6	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5 ^H	<10	<12
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<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 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	46	<5	<5
	6/04 ^J			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<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 J	<3.0
	11/06			R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.1	<0.5	<3.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	PZ-5S ^{KL}			11/89	361.42	356.52	<100	<1	<1	<1	<1	<1,000	<1
12/94		<10	<5	<5			<5	<5	<200	<5	<5	<10	<5
2/96		<1,000	<10	<10			<10	<10	<1,000	<10	<5	<10	<10
2/97		5 J	<10	<10			<10	<10	<1,000	<10	<5	<10	<10
9/98		<10	<10	<10			<10	<10	<1,000	<10	<5 ^H	<10	<12
6/99		<10 J	<10	<10			<10	<10	<1,000	<10	<10 J	<10 J	<10 J
7/99		<10 J	<10 J	<10 J			<10 J	<10 J	<1,000 J	<10 J	<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 J
9/01		<10	<10	<10			<10	<10	<1,000	<10	<10	<10	<10
10/02		<25 J	<10	<10			<10	<20 J	<1,000	<10	<5 ^G	<5 ^G	<10
10/03		<12	<5	<5			<5	<10	<1,000	<5	<5	<5	<5
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
11/05		<5.0 J	<1.0	<5.0			<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
11/06		R	<1.0	<5.0			<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
11/07		<5.0 J	<1.0	<5.0			<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
8/08		<5.0	<1.0	<5.0			<4.0	<5.0	<500	<1.0	<5.3	<0.5	<3.0
9/09		<10 J	<1.0	<1.0			<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
PZ-8S ^I	9/98	362.6	357.7	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	

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Table 2
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**2014 Periodic Review Report
McKesson EnviroSystems Site
Syracuse, New York**

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL)		Acetone	Benzene	Toluene	Ethyl-benzene	Xylene ^A	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
		Top	Bottom										
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NS	5	5	1	5
PZ-11D ^U	11/89	352.09	347.19	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-11S ^U	11/89	359.09	354.19	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-12D ^U	11/89	350	345.1	<100	<1	<1	<1	<1	<1,000	<1	<53	<53	<1
	11/90			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<1	3	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
PZ-12S ^U	11/89	360	355.1	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	6	<1	<10	<10	5
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
PZ-13D ^C	11/89	349.4	344.4	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-13S ^C	11/89	359.5	354.5	<100	<1	2	<1	2	<1,000	<1	<11	<11	<1

See Notes on Page 19.

Table 2
Summary of Historical Groundwater Monitoring Data, March 1988 through August 2008

2014 Periodic Review Report
McKesson Envirosystems Site
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. Detections exceeding New York State Department of Environmental Conservation (NYSDEC) Groundwater Standards (Part 700) are indicated by shading.
4. Replacement wells for MW-6, MW-8, MW-9, MW-10, MW-11 and MW-12D were installed 8/95.
5. Replacement wells for MW-17, MW-24S, MW-24D and TW-02 were installed 11/97 - 12/97.
6. 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 milligrams per liter. Because methanol was not detected in the original sample, the duplicate results were determined, based on the results of the data validation process, to be unacceptable. Furthermore, methanol has not been previously detected in groundwater samples collected from this monitoring well. Accordingly, the detection of methanol appears to be the result of a laboratory error and not representative of actual groundwater quality in the vicinity of monitoring well MW-23S.
7. N,N-dimethylaniline data for 10/02 sampling event for MW-1, MW-3S, MW-28, MW-29, MW-32, MW-35 and TW-01 were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. Aniline and N,N-dimethylaniline data for 10/02 sampling event for MW-30 were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. These wells and piezometers are not perimeter monitoring locations and were not resampled.
8. Aniline and N,N-dimethylaniline results of nondetect for the 6/04 sampling event at MW-18 were rejected due to the deviation from a surrogate recovery that was below 10%. This well was not resampled.
9. 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-17R, MW-18, MW-23I, MW-23S, MW-24DR, MW-24SR, MW-25, MW-33, PZ-5D and PZ-5S. In addition, the initial VOC results were also irretrievable due to laboratory equipment failure for monitoring locations MW-27, MW-28, MW-29 and MW-30; however, results for subsequent dilutions of these groundwater samples were valid, but the detection limits were high. The duplicate sample VOC results for MW-27 and MW-28 have lower detection limits and are presented in parentheses. These wells were not resampled.

Superscript Notes:

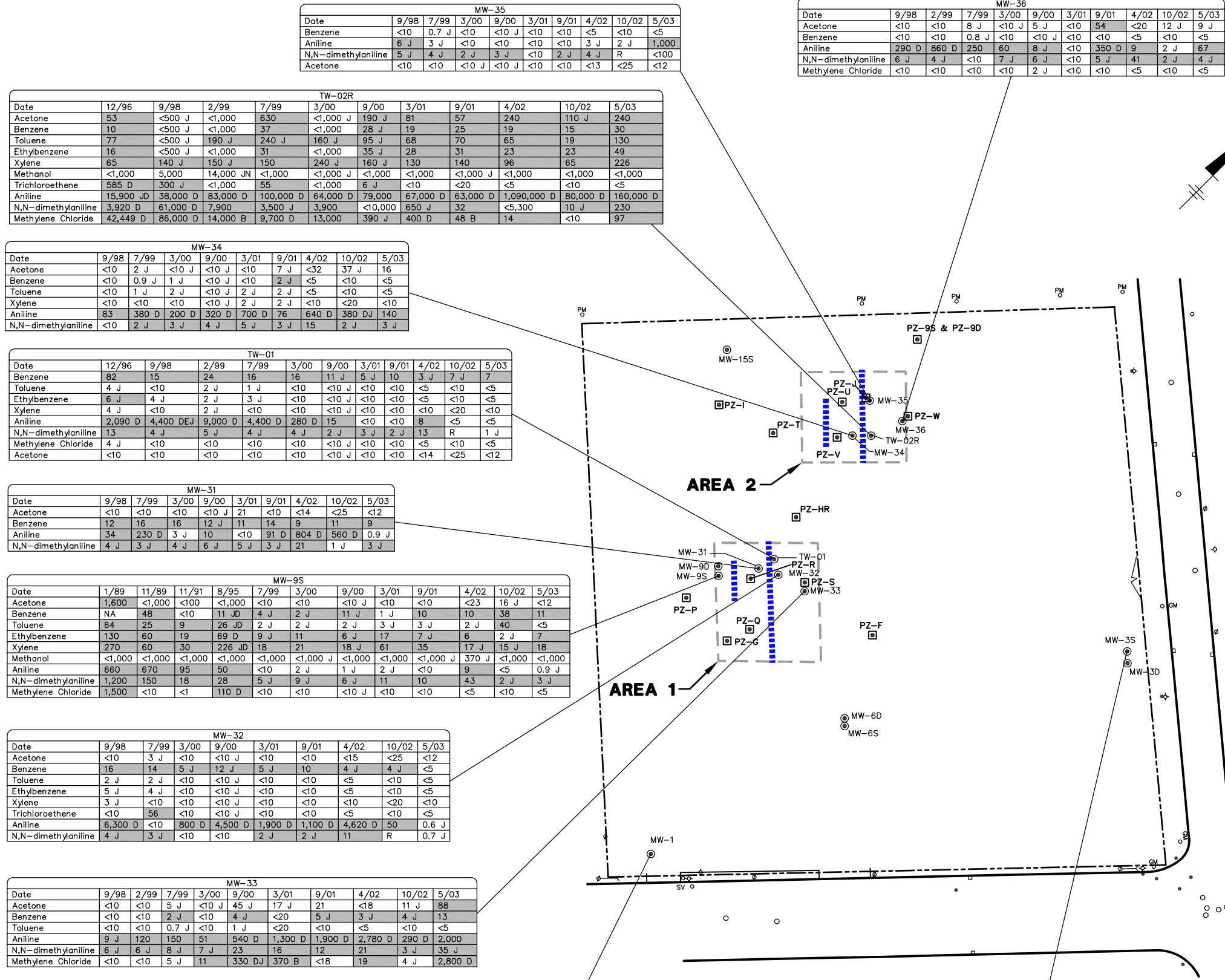
- ^A = Data presented is total xylenes (m- and p-xylenes and o-xylenes). For the 1995 data, the listed quantitation limit applies to the analyses conducted for m- and p-xylenes and o-xylenes.
- ^B = Because aniline was detected at monitoring well MW-3S at a concentration of 690 ug/l during the September 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.
- ^C = Wells/piezometers MW-5, MW-14D, MW-16D, MW-17, MW-20, MW-21, MW-24S, MW-24D, TW-02, PZ-13S, and PZ-13D were abandoned 11/97 - 1/98.
- ^D = Wells/piezometers MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12D, PZ-11D, PZ-11S, PZ-12D, and PZ-12S were abandoned during OU No.1 soil remediation activities (1994).
- ^E = Wells MW-8S, MW-8D, and TW-02R were abandoned in 8/04 and replacement wells MW-8SR and TW-02RR were installed in 8/04.
- ^F = MW-17R, MW-18, and PZ-4S wells/piezometers were 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.
- ^G = MW-17R, MW-18, MW-19, MW-23S, MW-23I, 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 10/02 results were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. These wells and piezometers are perimeter monitoring locations.
- ^H = MW-18, MW-19, MW-23I, MW-23S, MW-24DR, MW-24SR, MW-28, PZ-5S and PZ-5D wells/piezometers were resampled for aniline during 12/98, because the 9/98 results were rejected due to laboratory error.
- ^I = Piezometer PZ-8S was decommissioned 8/00.
- ^J = 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.
- ^K = Wells/piezometers MW-1, MW-19, and PZ-5S were abandoned 11/10.
- ^L = Wells/piezometers, MW-22, MW-24S, MW-24D, MW-25S, MW-25D, PZ-5S and PZ-5D were eliminated from the groundwater monitoring program after the 10/10 sampling event; therefore all data for these locations are presented in this table.

Abbreviations:

AMSL = Above mean sea level (NGVD of 1929).
 NA = Parameter not analyzed for.
 ND = Not detected.
 NS = Standard not available.

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.
- E = The compound was quantitated above the calibration range.
- 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.
- B = The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- < = Compound was not detected at the listed quantitation limit.
- U = Undetected.
- R = The sample results were rejected.
- = Sample results are not available. (See Note 9.)

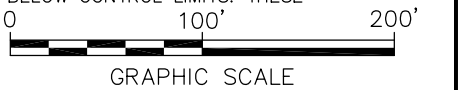


LEGEND:

- Ø UTILITY POLE
- CATCH BASIN
- PM ○ PETROLEUM PIPE LINE MARKER
- GM ○ GAS LINE MARKER
- SV ○ SEWER VENT
- ✧ HYDRANT
- WATER VALVE
- MANHOLE
- PROPERTY LINE
- MW-19 ○ GROUNDWATER MONITORING WELL
- PZ-A □ PIEZOMETER
- APPROXIMATE BOUNDARY OF AREA
- GROUNDWATER INFILTRATION TRENCH

NOTES:

- REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
- TRENCH LOCATIONS ARE APPROXIMATE.
- MONITORING LOCATIONS ARE APPROXIMATE.
- FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
- ONLY DETECTED COCs ARE PRESENTED ON THIS FIGURE.
- < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
- J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
- D = CONCENTRATION IS BASED ON DILUTED SAMPLE ANALYSIS.
- E = IDENTIFIES COMPOUNDS WHOSE CONCENTRATIONS EXCEED THE CALIBRATION RANGE OF THE INSTRUMENTS.
- R = THE SAMPLE RESULT WAS REJECTED.
- B = THE COMPOUND HAS BEEN FOUND IN THE SAMPLE AS WELL AS IN ITS ASSOCIATED BLANK; ITS PRESENCE IN THE SAMPLE MAY BE SUSPECT.
- N = THIS ANALYSIS INDICATES THE PRESENCE OF A COMPOUND FOR WHICH THERE IS PRESUMPTIVE EVIDENCE TO MAKE AN TENTATIVE IDENTIFICATION.
- DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.
- *= MW-3S WAS RESAMPLED ON 11/8/01 DUE TO ANILINE DETECTION DURING 9/2001 SAMPLING EVENT AT A CONCENTRATION OF 690 PPB. ANILINE WAS DETECTED ON 11/8/01 AT A CONCENTRATION OF 69 PPB.
- THE 10/02 SAMPLING EVENT N,N-DIMETHYLANILINE DATA FOR MW-1, MW-3S, MW-32, MW-35, AND TW-01 WERE REJECTED DUE TO MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RECOVERIES BELOW CONTROL LIMITS. THESE MONITORING WELLS WERE NOT RESAMPLED.



MW-35										
Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03	
Benzene	<10	0.7 J	<10	<10 J	<10	<10	<5	<10	<5	
Aniline	6 J	3 J	<10	<10	<10	<10	3 J	2 J	1,000	
N,N-dimethylaniline	5 J	4 J	2 J	3 J	<10	<10	2 J	4 J	R	<100
Acetone	<10	<10	<10 J	<10 J	<10	<10	<13	<25	<12	

TW-02R											
Date	12/96	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	53	<500 J	<1,000	630	<1,000 J	190 J	81	57	240	110 J	240
Benzene	10	<500 J	<1,000	37	<1,000	28 J	19	25	19	15	30
Toluene	77	<500 J	190 J	240 J	160 J	95 J	68	70	65	19	130
Ethylbenzene	16	<500 J	<1,000	31	<1,000	35 J	28	31	23	23	49
Xylene	65	140 J	150 J	150	240 J	160 J	130	140	96	65	226
Methanol	<1,000	5,000	14,000 JN	<1,000	<1,000 J	<1,000	<1,000	<1,000 J	<1,000	<1,000	<1,000
Trichloroethene	585 D	300 J	<1,000	55	<1,000	6 J	<10	<20	<5	<10	<5
Aniline	15,900 JD	38,000 D	83,000 D	100,000 D	64,000 D	79,000	67,000 D	63,000 D	1,090,000 D	80,000 D	160,000 D
N,N-dimethylaniline	3,920 D	61,000 D	7,900	3,500 J	3,900	<10,000	650 J	32	<5,300	10 J	230
Methylene Chloride	42,449 D	86,000 D	14,000 B	9,700 D	13,000	390 J	400 D	48 B	14	<10	97

MW-34										
Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03	
Acetone	<10	2 J	<10 J	<10 J	<10	7 J	<32	37 J	16	
Benzene	<10	0.9 J	1 J	<10 J	<10	2 J	<5	<10	<5	
Toluene	<10	1 J	2 J	<10 J	2 J	2 J	<5	<10	<5	
Xylene	<10	<10	<10	<10 J	2 J	2 J	<10	<20	<10	
Aniline	83	380 D	200 D	320 D	700 D	76	640 D	380 DJ	140	
N,N-dimethylaniline	<10	2 J	3 J	4 J	5 J	3 J	15	2 J	3 J	

TW-01											
Date	12/96	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Benzene	82	15	24	16	16	11 J	5 J	10	3 J	7 J	7
Toluene	4 J	<10	2 J	1 J	<10	<10 J	<10	<5	<10	<5	<5
Ethylbenzene	6 J	4 J	2 J	3 J	<10	<10 J	<10	<5	<10	<5	<5
Xylene	4 J	<10	2 J	<10	<10	<10 J	<10	<10	<20	<10	<10
Aniline	2,090 D	4,400 DEJ	9,000 D	4,400 D	280 D	15	<10	<10	8	<5	<5
N,N-dimethylaniline	13	4 J	5 J	4 J	4 J	2 J	3 J	2 J	13	R	1 J
Methylene Chloride	4 J	<10	<10	<10	<10	<10 J	<10	<10	<5	<10	<5
Acetone	<10	<10	<10	<10	<10	<10 J	<10	<10	<14	<25	<12

MW-31										
Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03	
Acetone	<10	<10	<10	<10 J	21	<10	<14	<25	<12	
Benzene	12	16	16	12 J	11	14	9	11	9	
Aniline	34	230 D	3 J	10	<10	91 D	804 D	560 D	0.9 J	
N,N-dimethylaniline	4 J	3 J	4 J	6 J	5 J	3 J	21	1 J	3 J	

MW-9S												
Date	1/89	11/89	11/91	8/95	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	1,600	<1,000	<100	<1,000	<10	<10	<10 J	<10	<10	<23	16 J	<12
Benzene	NA	48	<10	11 JD	4 J	2 J	11 J	1 J	10	10	38	11
Toluene	64	25	9	26 JD	2 J	2 J	2 J	3 J	3 J	2 J	40	<5
Ethylbenzene	130	60	19	69 D	9 J	11	6 J	17	7 J	6	2 J	7
Xylene	270	60	30	226 JD	18	21	18 J	61	35	17 J	15 J	18
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J	<1,000	<1,000 J	370 J	<1,000	<1,000	<1,000
Aniline	660	670	95	50	<10	2 J	1 J	2 J	<10	9	<5	0.9 J
N,N-dimethylaniline	1,200	150	18	28	5 J	9 J	6 J	11	10	43	2 J	3 J
Methylene Chloride	1,500	<10	<1	110 D	<10	<10	<10 J	<10	<10	<5	<10	<5

MW-32										
Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03	
Acetone	<10	3 J	<10	<10 J	<10	<10	<15	<25	<12	
Benzene	16	14	5 J	12 J	5 J	10	4 J	4 J	<5	
Toluene	2 J	2 J	<10	<10 J	<10	<10	<5	<10	<5	
Ethylbenzene	5 J	4 J	<10	<10 J	<10	<10	<5	<10	<5	
Xylene	3 J	<10	<10	<10 J	<10	<10	<10	<20	<10	
Trichloroethene	<10	56	<10	<10 J	<10	<10	<5	<10	<5	
Aniline	6,300 D	<10	800 D	4,500 D	1,900 D	1,100 D	4,620 D	50	0.6 J	
N,N-dimethylaniline	4 J	3 J	<10	<10	2 J	2 J	11	R	0.7 J	

MW-33										
Date	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	<10	5 J	<10 J	45 J	17 J	21	<18	11 J	88
Benzene	<10	<10	2 J	<10	4 J	<20	5 J	3 J	4 J	13
Toluene	<10	<10	0.7 J	<10	1 J	<20	<10	<5	<10	<5
Aniline	9 J	120	150	51	540 D	1,300 D	1,900 D	2,780 D	290 D	2,000
N,N-dimethylaniline	6 J	6 J	8 J	7 J	23	16	12	21	3 J	35 J
Methylene Chloride	<10	<10	5 J	11	330 DJ	370 B	<18	19	4 J	2,800 D

MW-1																
Date	3/88	1/89	11/89	11/90	11/91	11/92	8/95	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<100	<100	<100	<100	<100	<100	<1,000	<10	0.7 JN	<10	8 J	<10	<10	<12	<25	<12
Toluene	<1	<1	<1	<1	<1	<1	<5	<10	<10	<10	3 J	<10	<10	<5	<10	<5
Xylene	<1	<1	<1	<3	<3	<3	<5	<10	<10	<10	5 J	<10	<10	<10	<20	<10
Methylene Chloride	<1	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10 J	10	<10	<5	<10	<5
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J	<1,000	<1,000	<1,000 J	990 J	<1,000	<1,000
Aniline	<10	<11	<10	<10	<10	<10	<5	<10	<10	<5	<10 J	<10	<10	<5	<5	<5

TW-02R			
Date	10/03	6/04	
Acetone	68	140 J	
Benzene	28	19 J	
Toluene	75 J	39 J	
Ethylbenzene	<5	31 J	
Xylene	<10	111 J	
Methanol	<1,000	<1,000	
Trichloroethene	2 J	<10 J	
Aniline	92,000 D	82,000	
N,N-dimethylaniline	<260	<5,200	
Methylene Chloride	91	4 J	

TW-02RR			
Date	11/04	6/05	11/05
Acetone	18 J	7.2 J	26 J
Benzene	4 J	3.6	6
Toluene	8 J	2.1 J	4.1
Ethylbenzene	4 J	3.6 J	3.6
Xylene	16 J	9.6	11
Methanol	<1,000	<1,000	<1,000
Trichloroethene	<10	0.3 J	<0.4
Aniline	7,100 D	8,400	14,000
N,N-dimethylaniline	<50	<50	<110 J
Methylene Chloride	<10	<3.0	<0.5

MW-35			
Date	10/03	6/04	11/04
Acetone	5 J	<25	<25
Benzene	<5.0	<10	<10
Toluene	<5.0	<10	<10
Ethylbenzene	<5.0	<10	<10
Xylene	<10	<20	<20
Methanol	<1000	<1000	240 J
Trichloroethene	<5.0	<10	<10
Aniline	4 J	30	82
N,N-dimethylaniline	<5.0	4 J	<5.0
Methylene Chloride	<5.0	<10	<10

MW-36			
Date	10/03	6/04	11/04
Acetone	580 D	22 J	13 J
Benzene	<5.0	<10 J	<10
Toluene	<5.0	<10 J	<10
Ethylbenzene	<5.0	<10 J	<10
Xylene	<10	<20 J	<20
Methanol	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10 J	<10
Aniline	100	33	22
N,N-dimethylaniline	<5.0	7	<5.0
Methylene Chloride	<5.0	<10 J	<10

MW-34			
Date	10/03	6/04	11/04
Acetone	9 J	24 J	<25
Benzene	<5.0	<10	<10
Toluene	<5.0	<10	<10
Ethylbenzene	<5	<10	<10
Xylene	<10	<20	<20
Methanol	<1000	<1000	180 J
Trichloroethene	<5.0	<10	<10
Aniline	18	30	14
N,N-dimethylaniline	<5.0	<5.0	<5.0
Methylene Chloride	<5.0	<10	<10

TW-01			
Date	10/03	6/04	11/04
Acetone	<12	6 J	<25
Benzene	6	3 J	2 J
Toluene	<5.0	<10	<10
Ethylbenzene	<5.0	<10	<10
Xylene	<10	<20	<20
Methanol	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10
Aniline	0.6 J	<5.0	<5.0
N,N-dimethylaniline	<5.0	<5.0	<5.0
Methylene Chloride	<5.0	<10	<10

MW-31			
Date	10/03	6/04	11/04
Acetone	1,200 D	15 J	<25
Benzene	13	12	9 J
Toluene	<5.0	<10	<10
Ethylbenzene	<5.0	<10	<10
Xylene	<5.0	<20	<20
Methanol	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10
Aniline	88	3 J	<5.0
N,N-dimethylaniline	<5.0	<5.0	<5.0
Methylene Chloride	<5.0	<10	<10

MW-9S			
Date	10/03	6/04	11/04
Acetone	<12	14 J	<25
Benzene	2 J	6 J	4 J
Toluene	<5	2 J	2 J
Ethylbenzene	5	8 J	9 J
Xylene	19	19 J	30 J
Methanol	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10
Aniline	1 J	<5.0	<5.0
N,N-dimethylaniline	<5.0	<5.0	<5.0
Methylene Chloride	<5.0	<10	<10

MW-32			
Date	10/03	6/04	11/04
Acetone	20	6 J	<25
Benzene	2 J	1 J	<10
Toluene	<5.0	<10	<10
Ethylbenzene	<5.0	<10	<10
Xylene	<10	<20	<20
Methanol	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10
Aniline	<5.0	1 J	<5.0
N,N-dimethylaniline	<5.0	<5.0	<5.0
Methylene Chloride	<5.0	<10	<10

MW-1			
Date	10/03	8/04	11/04
Acetone	<12	<25	—
Benzene	<5.0	<10	—
Toluene	<5.0	<10	—
Ethylbenzene	<5.0	<10	—
Xylene	<10	<20	—
Methanol	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10
Aniline	2 J	<5.0	<5.0
N,N-Dimethylaniline	<5.0	<5.0	<5.0
Methylene Chloride	<5.0	<10	—

MW-33			
Date	10/03	6/04	11/04
Acetone	22	9 J	—
Benzene	2 J	12 J	—
Toluene	<5.0	<10 J	—
Ethylbenzene	<5.0	<10 J	—
Xylene	<10	<20 J	—
Methanol	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10 J	—
Aniline	1,900 D	2,700 D	2,700 D
N,N-dimethylaniline	<6.0	5 J	5 J
Methylene Chloride	<5.0	<10 J	—

MW-3S			
Date	10/03	6/04	11/04
Acetone	<12	6 J	<25
Benzene	<5.0	<10	<10
Toluene	<5.0	<10	<10
Ethylbenzene	<5.0	<10	<10
Xylene	<10	<20	<20
Methanol	<1,000	<1,000	150 J
Trichloroethene	<5.0	<10	<10
Aniline	4 J	0.8 J	4 J
N,N-dimethylaniline	<5.0	<6.0	<5.0
Methylene Chloride	<5.0	<10	<10

LEGEND:			
Ø	UTILITY POLE	---	PROPERTY LINE
▣	CATCH BASIN	MW-19	GROUNDWATER MONITORING WELL
PM	PETROLEUM PIPE LINE MARKER	PZ-A	PIEZOMETER
GM	GAS LINE MARKER	TW-02R	REMOVED GROUNDWATER MONITORING WELL
sv	SEWER VENT	---	APPROXIMATE BOUNDARY OF AREA
⋈	HYDRANT		GROUNDWATER INFILTRATION TRENCH
•	WATER VALVE		
○	MANHOLE		

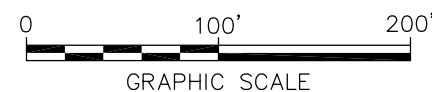
SAMPLE IDENTIFICATION			
Date	10/03	6/04	11/04
Acetone	5 J	<25	<25
Benzene	<5.0	<10	<10
Toluene	<5.0	<10	<10
Ethylbenzene	<5.0	<10	<10
Xylene	<10	<20	<20
Methanol	<1000	<1000	240 J
Trichloroethene	<5.0	<10	<10
Aniline	4 J	30	82
N,N-dimethylaniline	<5.0	4 J	<5.0
Methylene Chloride	<5.0	<10	<10

CONCENTRATION (ppb)

DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.

NOTES:

- REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
- TRENCH LOCATIONS ARE APPROXIMATE.
- MONITORING LOCATIONS ARE APPROXIMATE.
- FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
- ONLY COC CONCENTRATIONS DETECTED OR THAT HAVE BEEN DETECTED ARE PRESENTED ON THIS FIGURE (SEE ATTACHMENT A FIGURE 1).
- < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
- J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
- D = CONCENTRATION IS BASED ON DILUTED SAMPLE ANALYSIS.
- R = THE SAMPLE RESULT WAS REJECTED.
- DURING THE AUGUST 2004 SUPPLEMENTAL REMEDIAL ACTIVITIES, MONITORING WELL TW-02R WAS REMOVED AND TW-02RR WAS CONSTRUCTED OUTSIDE THE SOIL REMOVAL AREA IN THE VICINITY OF TW-02R.
- THE 11/04 SAMPLING EVENT VOLATILE ORGANIC COMPOUND (VOC) DATA FOR MW-33 AND MW-1 WERE INADVERTENTLY LOST DUE TO LABORATORY EQUIPMENT FAILURE. AS DETAINED IN THE BIENNIAL REPORT, THESE MONITORING WELLS WERE NOT RESAMPLED.



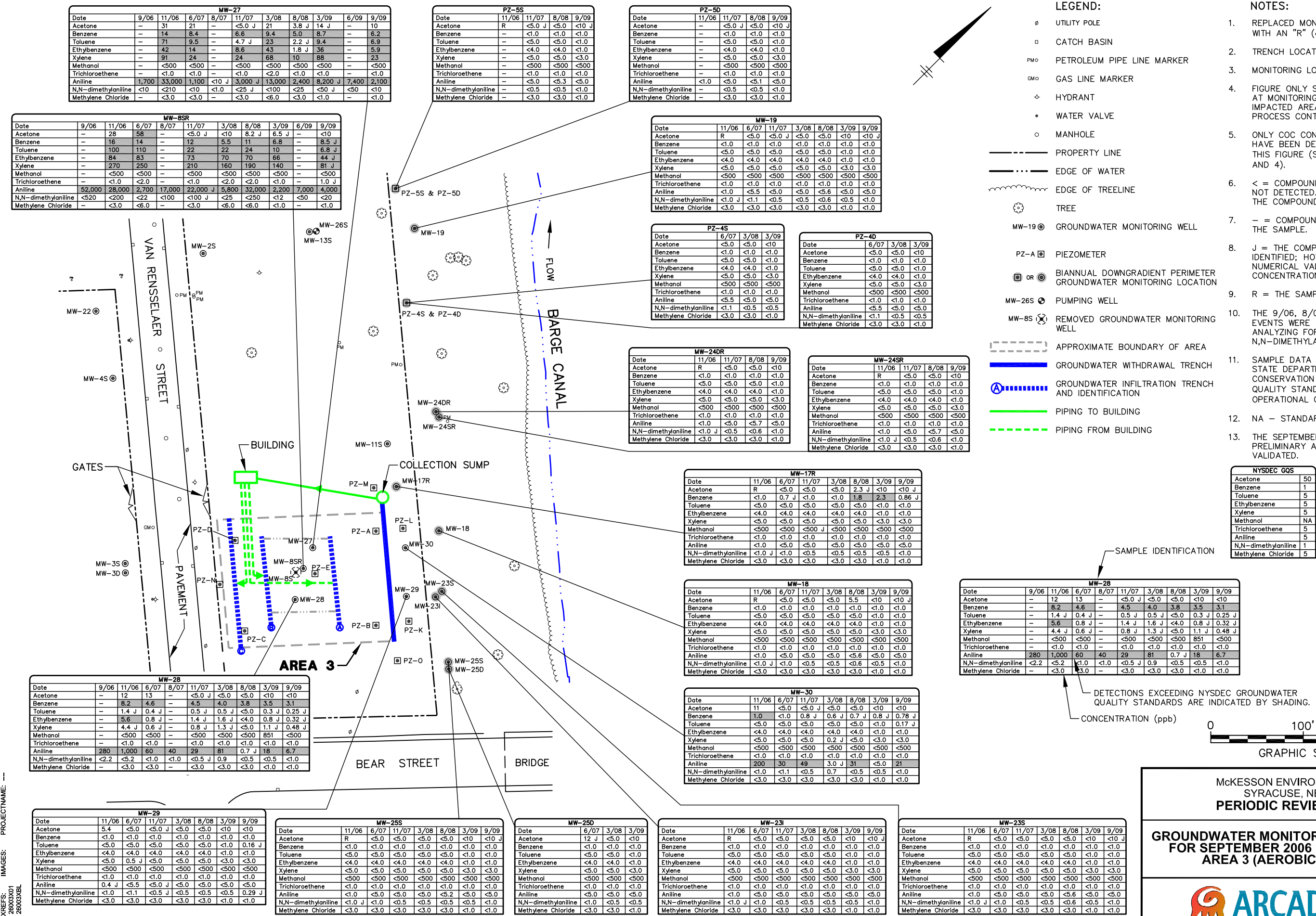
McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
PERIODIC REVIEW REPORT

GROUNDWATER MONITORING DATA SUMMARY FOR OCTOBER 2003 - JUNE 2006 AREAS 1 & 2

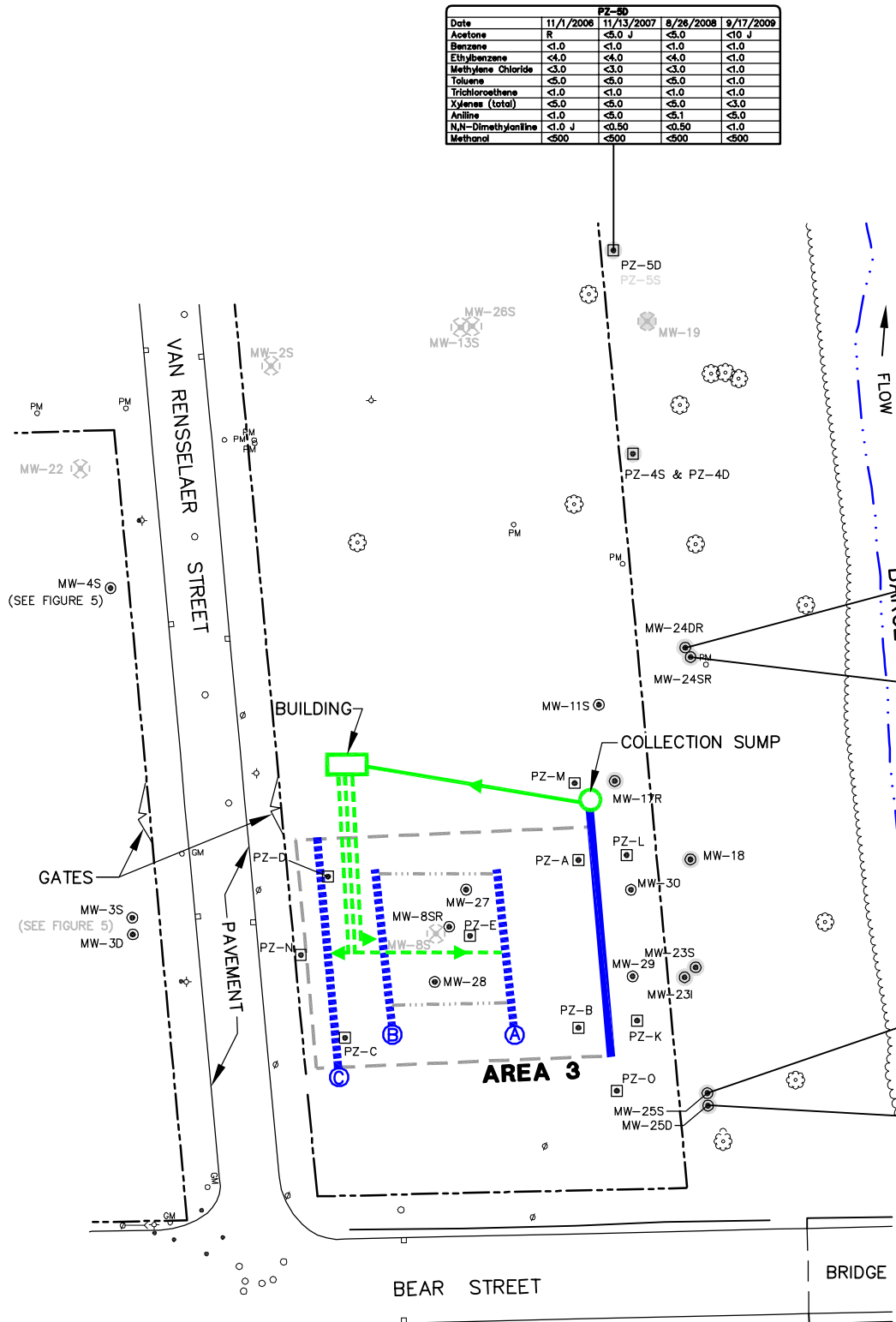


FIGURE
4

- ## NOTES:
1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
 2. TRENCH LOCATIONS ARE APPROXIMATE.
 3. MONITORING LOCATIONS ARE APPROXIMATE.
 4. FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
 5. ONLY COC CONCENTRATIONS DETECTED OR HAVE BEEN DETECTED ARE PRESENTED ON THIS FIGURE (SEE ATTACHMENT A FIGURE 2).
 6. $< =$ COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
 7. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
 8. D = CONCENTRATION IS BASED ON DILUTED SAMPLE ANALYSIS.
 9. R = THE SAMPLE RESULT WAS REJECTED.
 10. E = THE COMPOUND WAS QUANTITATED ABOVE THE CALIBRATION RANGE.
 11. THE 6/04 SAMPLING EVENT ANILINE AND N,N-DIMETHYLANILINE DATA FOR MW-18 WERE REJECTED DUE TO THE DEVIATION FROM A SURROGATE RECOVERY BELOW 10 PERCENT. THIS MONITORING WELL WAS NOT RESAMPLED.
 12. DURING THE AUGUST 2004 SUPPLEMENTAL REMEDIAL ACTIVITIES, MONITORING WELL MW-8S WAS REMOVED AND MW-8SR WAS CONSTRUCTED DOWNGRADIENT OF THE SOIL REMOVAL AREA IN THE VICINITY OF MW-8S.
 13. THE 11/04 SAMPLING EVENT VOLATILE ORGANIC COMPOUND (VOC) DATA FOR MW-17R, MW-18, MW-23I, MW-23S, MW-24DR, MW-24SR, MW-25S, PZ-5D, AND PZ-5S WERE INADVERTENTLY LOST DUE TO LABORATORY EQUIPMENT FAILURE. AS DETAILED IN THE BIENNIAL REPORT, THESE MONITORING WELLS WERE NOT RESAMPLED.
 14. THE 11/04 SAMPLING EVENT VOC INITIAL DATA FOR MW-27, MW-28, MW-29, AND MW-30 WERE INADVERTENTLY LOST DUE TO LABORATORY EQUIPMENT FAILURE. HOWEVER, VALID DATA WAS OBTAINED FROM SUBSEQUENT DILUTIONS OF THESE SAMPLES, RESULTING IN HIGHER DETECTION LIMITS. THE VOC RESULTS OBTAINED FROM THE DUPLICATE SAMPLES COLLECTED AT MW-27 AND MW-28 HAVE LOWER DETECTION LIMITS AND ARE PRESENTED ON THIS FIGURE IN PARENTHESES.



CITY: SYRACUSE, N.Y. DIV/GRP: ENV/CAD-141 DB: N.S.MITHGALL, L. FORAKER, W.JONES LD: PIC: D. ULM PM: D. PENNIMAN TM: D. PENNIMAN LTR: ONE*OFF=REF
G: ENV/CAD/SYRACUSE/ACT1B00260030000001900D/G0CT201126003C05.DWG LAYOUT: 75/SAVED: 12/13/2011 2:07 PM ACADVER: 18.05 (LMS TECH) PAGES/SETUP: ---PLOT/STYLE/TABLE: PLT/FULL/CTB/PLOTTED: 12/13/2011 2:09 PM BY: POSENAUER, LISA
XREFS: 26003X01 26003X00



PZ-40				
Date	11/1/2006	11/13/2007	8/26/2008	9/17/2009
Acetone	R	<5.0 J	<5.0	<10 J
Benzene	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<1.0
Toluene	<5.0	<5.0	<5.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<5.0	<5.0	<5.0	<3.0
Aniline	<1.0	<5.0	<5.1	<5.0
N,N-Dimethylaniline	<1.0 J	<0.50	<0.50	<1.0
Methanol	<500	<500	<500	<500

MW-24DR				
Date	11/1/2006	11/14/2007	8/26/2008	9/18/2009
Acetone	R	<5.0	<5.0	<10
Benzene	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<1.0
Toluene	<5.0	<5.0	<5.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<5.0	<5.0	<5.0	<3.0
Aniline	<1.0	<5.0	<5.7	<5.0
N,N-Dimethylaniline	<1.0 J	<0.50	<0.60	<1.0
Methanol	<500	<500	<500	<500

MW-24SR				
Date	11/1/2006	11/14/2007	8/26/2008	9/18/2009
Acetone	R	<5.0	<5.0	<10
Benzene	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<1.0
Toluene	<5.0	<5.0	<5.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<5.0	<5.0	<5.0	<3.0
Aniline	<1.0	<5.0	<5.7	<5.0
N,N-Dimethylaniline	<1.0 J	<0.50	<0.60	<1.0
Methanol	<500	<500	<500	<500

MW-25S									
Date	11/1/2006	6/7/2007	11/14/2007	3/27/2008	8/26/2008	3/25/2009	9/17/2009	4/29/2010	
Acetone	R	<5.0	<5.0	<5.0	<5.0	<10	<10 J	<10	
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0	
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0	
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Xylenes (total)	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0	
Aniline	<1.0	<5.0	<5.0	<5.0	<5.2	<5.0	<5.0	<5.0	
N,N-Dimethylaniline	<1.0 J	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	
Methanol	<500	<500	<500	<500	<500	<500	<500	<500	

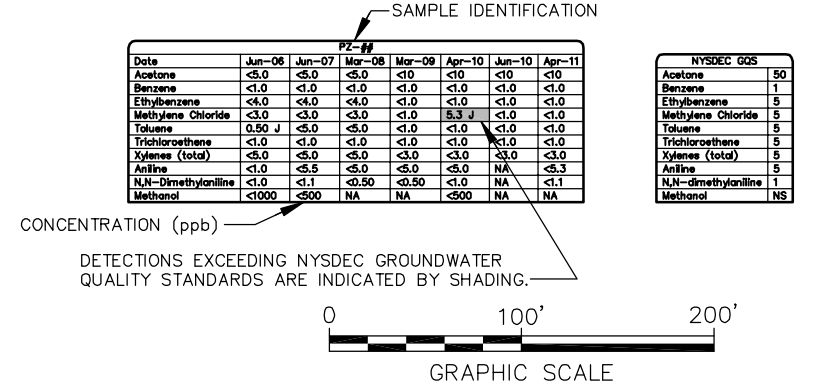
MW-25D				
Date	6/7/2007	3/27/2008	3/25/2009	4/29/2010
Acetone	12 J	<5.0	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<1.0	<1.0
Methylene Chloride	<3.0	<3.0	<1.0	<1.0
Toluene	<5.0	<5.0	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<5.0	<5.0	<3.0	<3.0
Aniline	<5.0	<5.0	<5.0	<5.0
N,N-Dimethylaniline	<1.0	<0.50	<0.50	<1.0
Methanol	<500	<500	<500	<500

LEGEND:

- UTILITY POLE
- CATCH BASIN
- PETROLEUM PIPE LINE MARKER
- GAS LINE MARKER
- HYDRANT
- WATER VALVE
- MANHOLE
- PROPERTY
- LINE EDGE OF WATER
- EDGE OF TREELINE
- TREE
- MW-19 GROUNDWATER MONITORING WELL
- PZ-A PIEZOMETER
- BIANNUAL DOWNGRADIENT PERIMETER GROUNDWATER MONITORING LOCATION
- MW-26S PUMPING WELL
- MW-BS REMOVED/DECOMMISSIONED GROUNDWATER MONITORING WELL/PIEZOMETER
- APPROXIMATE BOUNDARY OF AREA
- GROUNDWATER WITHDRAWAL TRENCH
- GROUNDWATER INFILTRATION TRENCH AND IDENTIFICATION
- PIPING TO BUILDING
- PIPING FROM BUILDING

NOTES:

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- < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
- NA = COMPOUND WAS NOT ANALYZED FOR IN THE SAMPLE.
- J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
- R = THE SAMPLE RESULT WAS REJECTED.
- B = COMPOUND WAS FOUND IN ASSOCIATED METHOD BLANK.
- THE 9/06, 8/07 AND 6/09 SAMPLING EVENTS WERE INTERIM SAMPLING EVENTS, ANALYZING FOR ANILINE & N,N-DIMETHYLANILINE ONLY. THE 6/10 SAMPLING EVENT WAS AN INTERIM SAMPLING EVENT ANALYZING FOR VOLATILE ORGANIC COMPOUNDS ONLY.
- SAMPLE DATA ARE COMPARED TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) GROUNDWATER QUALITY STANDARDS (GQS) (TECHNICAL AND OPERATIONAL GUIDANCE SERIES 1.1.1).
- NS - STANDARD NOT AVAILABLE.



McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
PERIODIC REVIEW REPORT

GROUNDWATER MONITORING DATA SUMMARY
FOR SEPTEMBER 2006 - AUGUST 2009 FOR
ELIMINATED MONITORING WELLS

FIGURE
7