



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) 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] 2010a). Accordingly, this PRR provides the information necessary to document the basis for the Institutional Control/Engineering Control (IC/EC) Certification (Attachment A) for the July 31, 2013 through October 14, 2014 reporting period.

As identified in the previous PRR, 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.

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 (NYSDEC 1997), and (3) meet remedial process closure requirements in Section 6.4 of DER-10 (NYSDEC 2010a).

Imagine the result

ARCADIS of New York, Inc.
6723 Towpath Road
PO Box 66
Syracuse
New York 13214-0066
Tel 315 446 9120
Fax 315 671 9450
www.arcadis-us.com

ENVIRONMENT

Date:
November 12, 2014

Contact:
David J. Ulm

Phone:
315.671.9210

Email:
david.ulm@arcadis-us.com

Our ref:
B0026003.2014.00190 #2

In addition, as noted above, this PRR also includes the IC/EC Certification (Attachment A), as required by DER-10 (NYSDEC 2010a) and provided by NYSDEC on October 23, 2014 (NYSDEC 2014c). The annual Site-Wide Inspection Form, as required by the Site Management Plan (SMP; ARCADIS 2014c), is also included (Attachment B). The draft SMP was submitted to NYSDEC with the October 2013 PRR (ARCADIS 2013b). The final, signed SMP addressed NYSDEC comments provided on February 19, 2014 and was submitted to NYSDEC on July 31, 2014 (ARCADIS 2014c). The SMP supersedes the Site Operation & Maintenance Plan (Site O&M Plan; Blasland, Bouck & Lee, Inc. [BBL] 1999a) and modifications to the Site O&M Plan, and is and will continue to be used to manage remaining contamination at the Site until the Deed Restrictions are extinguished in accordance with Environmental Conservation Law Article 71, Title 36.

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 (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 O&M activities. The Record of Decision for OU1, signed in March 1994 (OU1 ROD; 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.

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 1 foot of clean fill material was installed over the treated soils to promote surface water runoff and limit infiltration of rain and surface water into the remediated areas (BBL 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 exceeds 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 six 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 semi-volatile 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 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[®] amendments.

- 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, four post-shutdown process control monitoring events have been conducted in accordance with the SMP and as summarized in the following section.

Section III - Post-Shutdown Process Control Monitoring and Evaluation

The four post-shutdown process control monitoring events conducted to date were quarterly events performed in July 2013, October 2013, January 2014, and April 2014 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 NYSDEC following each monitoring event (ARCADIS 2013c; ARCADIS 2014a, 2014b, 2014d; 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 and 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, four post-shutdown process control monitoring events have been conducted. The monitoring events were performed in July 2013, October 2013, January 2014, and April 2014 following the shutdown of the remedial systems in April 2013, and 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 the four post-shutdown monitoring events.

Detailed descriptions of hydraulic and COC monitoring activities and associated results from the four post-shutdown monitoring events were provided in the monitoring memoranda submitted to NYSDEC following each monitoring event (ARCADIS 2013c; ARCADIS 2014a, 2014b, 2014d; 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 the four monitoring events, groundwater samples collected 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.

Post-Shutdown Process Control Monitoring Results

Hydraulic Monitoring Results

Table 2 presents groundwater level measurements obtained during the four post-shutdown process control monitoring events, as well as those obtained since October 2006. Historical groundwater level measurements obtained from June 1998 (prior to 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, and April 2014 datasets, and were presented in the monitoring memoranda previously submitted to NYSDEC (ARCADIS 2013c; ARCADIS 2014a, 2014b, 2014d, 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 shutdown.

Concentrations for most of the COCs in each of the three areas were either 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 2014) and shown on Figures 4 and 5 (April 2010 to April 2014).

COCs were not detected at sentinel wells MW-3S and MW-4S, located downgradient of Area 1 (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 at MW-18 (July and October 2013) and an anomalous detection of methanol at MW-17R (April 2014) (see Table 3 and Figure 5). Toluene was detected below the NYSDEC Class GA Groundwater Quality Standard (5 ppb); and there is no NYSDEC Class GA Groundwater Quality Standard for methanol. Refer to the monitoring memoranda for event-specific COC monitoring results and the validated analytical laboratory reports (ARCADIS 2013c; ARCADIS 2014a, 2014b, 2014d). 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 and the need (if any) to re-start the remedial systems, 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; ARCADIS 2014a, 2014b, 2014d; see Attachment C) using the up-to-date process control monitoring data set 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.
- 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 2010a). The conclusions developed based on groundwater data obtained from 1998 through April 2014 are summarized below.

- COC concentrations detected during the four 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 four-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.

Section IV - Continued Effectiveness of Institutional and Engineering Controls

The ICs for the Site are in the form of deed restrictions. As identified in NYSDEC's September 12, 2011 letter, a deed restriction is necessary "to prevent the consumption of groundwater that does not meet drinking water standards" (NYSDEC 2011). Draft deed restrictions (Declaration of Covenant and Restrictions) establishing Site restrictions were included in the draft SMP submitted to NYSDEC with the October 2013 PRR (ARCADIS 2013b). In a September 23, 2014 email from Margaret A. Sheen, Esq. (NYSDEC 2014b), NYSDEC provided a deed restriction that is acceptable to the Department, and McKesson completed the deed restriction process as outlined in Section V.2a.b.7 of DER-33 (Institutional Controls: A Guide to Drafting and Recording Institutional Controls; NYSDEC 2010b). The deed restrictions, which were recorded with the Onondaga County Clerk on October 3, 2014 (Attachment E), require compliance with the SMP and any ICs placed on the Site.

In accordance with the SMP, a Site-wide inspection was performed on July 31, 2014, and the completed Site-Wide Inspection Form is provided in Attachment B. The results of the Site-wide inspection confirm the following:

- 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 DER to evaluate the remedy, including access to evaluate the continued maintenance of the fencing/access engineering control.

Attachment A contains the Institutional and Engineering Controls Certification, as required by the SMP and DER-10 (NYSDEC 2010a).

Section V - Next Steps

The following subsections describe the next steps, consistent with the SMP, which include: continued implementation of the post-shutdown process control monitoring program and NYSDEC reclassification of the Site.

Continued Implementation of the Post-Shutdown Process Control Monitoring Program

As identified in the SMP (ARCADIS 2014c), the post-shutdown process control monitoring program will be conducted for 2 years (2013 to 2015), consisting of quarterly monitoring during the first year and biannual monitoring during the second year. As also identified in the SMP, no further groundwater monitoring will occur unless the NYSDEC requests additional sampling events.

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 re-start the remedial systems (i.e., *in-situ* bioremediation treatment and closed loop hydraulic systems). The monitoring schedule and reporting requirements for the second year, as presented in the SMP, are summarized in the table below.

Post-Shutdown Process Control Monitoring Frequency	Deliverable	Reporting
Biannually (2014-2015)	Monitoring Memorandum	A Monitoring Memorandum will be submitted after the following post-shutdown process control monitoring events: Monitoring Year 2: October 2014 and April 2015
	PRR	A PRR will be submitted to NYSDEC upon request.

October 2014 Post-Shutdown Process Control Monitoring Event

As mentioned in the monitoring memo regarding the April 2014 event (ARCADIS 2014d), the first biannual post-shutdown process control monitoring event occurred in October 2014 and consisted of hydraulic and COC monitoring similar to that conducted during the four quarterly post-shutdown process control monitoring events. As detailed in Table 1, the October 2014 monitoring event consisted 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 using the same technical analyses as those detailed in the January 2013 PRR (ARCADIS 2013a) and the post-shutdown monitoring memoranda (ARCADIS 2013c; ARCADIS 2014a, 2014b, 2014d; see Attachment C). 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. The memorandum will be submitted to NYSDEC prior to the second biannual post-shutdown process control monitoring event, which is planned to occur in April 2015.

NYSDEC Reclassification of the Site

As identified above, NYSDEC provided a deed restriction that is acceptable to the Department in a September 23, 2014 email from Margaret A. Sheen, Esq. (NYSDEC 2014b), and McKesson completed the deed restriction process as outlined in Section V.2.a.b.7 of DER-33. The deed restrictions were recorded with the Onondaga County Clerk on October 3, 2014. NYSDEC reclassification of the Site to Class 4 Inactive Hazardous Waste Disposal Site (i.e., Site properly closed – requires continued management) is expected in the near future because the deed restrictions have been executed.

Section VI - Summary

The required Institutional and Engineering Controls Certification and Site Inspection Form are attached to this PRR.

Associated with this reporting period (July 31, 2013 through October 14, 2014) are four quarterly process control monitoring events. These monitoring events occurred in July 2013, October 2013, January 2014, and April 2014 following the NYSDEC-approved shutdown of the *in-situ* bioremediation treatment and closed loop hydraulic systems in April 2013. Descriptions of these events and the associated results were provided in the monitoring memoranda submitted to NYSDEC following each monitoring event (ARCADIS 2013c; ARCADIS 2014a, 2014b, 2014d; a copy of each memorandum [without the validated analytical laboratory reports] is provided in Attachment C). The four monitoring events are part of the post-shutdown process control monitoring program that was implemented to determine the continued effectiveness of the OU2 remedial action and to evaluate the need (if any) to re-start the remedial systems.

Hydraulic monitoring results from the four post-shutdown process control monitoring events indicate that 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 four monitoring events indicate that groundwater quality conditions are generally consistent with those prior to shutdown. Thus, 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 2010a). Accordingly, there is no need to re-start the remedial systems.

As one of the next steps, the first biannual post-shutdown process control monitoring event occurred the week of October 20, 2014. As detailed in the SMP, a description of the monitoring activities and associated results from the October 2014 monitoring event will be presented to NYSDEC in a monitoring memorandum, which will be submitted prior to the second biannual post-shutdown process control monitoring event planned for April 2015. The other next step is NYSDEC reclassification of the Site to Class 4 Inactive Hazardous Waste Disposal Site (i.e., Site properly closed – requires continued management) in the near future.

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

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	Oxygen Infusion System Layout Area 2
Figure 3	Oxygen Infusion System Layout Area 3
Figure 4	Groundwater Monitoring Data Summary for April 2010 – April 2014, Areas 1 & 2
Figure 5	Groundwater Monitoring Data Summary for April 2010 – April 2014, 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
Attachment E	Executed Deed Restrictions

Copies:

Ms. Susan Edwards, NYSDEC
Mr. Harry Warner, NYSDEC
Mr. Richard Jones, NYSDOH
Ms. Margaret Sheen, Esq.
Ms. Jean Mescher, McKesson Corporation
Mr. Douglas Morrison, Bristol-Myers Squibb Company
Mr. Christopher Young, P.G., de maximis, inc.
Mr. Kevin Bernstein, Esq.
Ms. Dawn Penniman, P.E., ARCADIS

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.

BBL. 1995. Remedial Design/Remedial Action Report Operable Unit No.1 – Unsaturated Soils. September 1995.

BBL. 1999a. Site Operation and Maintenance Plan. McKesson EnviroSystems Former Bear Street Facility. August.

BBL. 1999b. Letter from David Ulm, BBL, to Michael Ryan, P.E., NYSDEC. RE: Site Operation and Maintenance Plan Addendum. December 29.

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. 2010a. 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. 2010b. DER-33: Institutional Controls: A Guide to Drafting and Recording Institutional Controls. December 3. Available online at: http://www.dec.ny.gov/docs/remediation_hudson_pdf/der33.pdf

NYSDEC. 2011. Letter from Payson Long, NYSDEC, to Jean Mescher, McKesson Corporation. RE: Request for Deed Restrictions and a Site Management Plan as Part of the Periodic Review Report. September 12.

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

NYSDEC. 2014a. Email from Payson Long, NYSDEC, to Jean Mescher, McKesson Corporation. RE: Comments on Draft Site Management Plan. February 19, 2014.

NYSDEC. 2014b. Email from Margaret Sheen, Esq., NYSDEC, to Kevin Bernstein, Bond Schoeneck & King PLLC. RE: McKesson Deed Restriction. September 23, 2014.

NYSDEC. 2014c. Email from Payson Long, NYSDEC, to Dawn Penniman, ARCADIS. RE: Revised Institutional and Engineering Controls Certification Form. October 23, 2014.

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
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

Periodic Review Report
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 CO groundwater monitoring program (NYSDEC 2010b).

Table 2
Summary of Groundwater Level Measurements, October 2006 through April 2014

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
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 3.

Table 2
Summary of Groundwater Level Measurements, October 2006 through April 2014

Periodic Review Report
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

See Notes on Page 3.

Table 2
Summary of Groundwater Level Measurements, October 2006 through April 2014

Periodic Review Report
McKesson EnviroSystems Site
Syracuse, New York

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.

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

Periodic Review Report
McKesson Envirosystems Site
Syracuse, New York

		Screen Elev. (feet AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl- aniline	Methanol
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
	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

Periodic Review Report
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

See Notes on Page 8.

Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2014

Periodic Review Report
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-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	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

See Notes on Page 8.

Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2014

Periodic Review Report
McKesson Envirosystems Site
Syracuse, New York

		Screen Elev. (feet AMSL)											
Monitoring Well	Sampling Date	Top	Bottom	Acetone	Benzene	Ethylbenzene	Methylene Chloride	Toluene	Trichloroethene	Xylene ^A	Aniline	N,N-Dimethyl-aniline	Methanol
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

See Notes on Page 8.

Table 3
Summary of Groundwater Monitoring Data, March 2009 through April 2014

Periodic Review Report
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-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	<3.0	<1.0	0.82 J	<1,000	
	10/13			<10	<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	<3.0	<10	0.85 J	<500	
	4/14			<10	<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

Periodic Review Report
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	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
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

Periodic Review Report
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]	<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]	
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	
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	

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

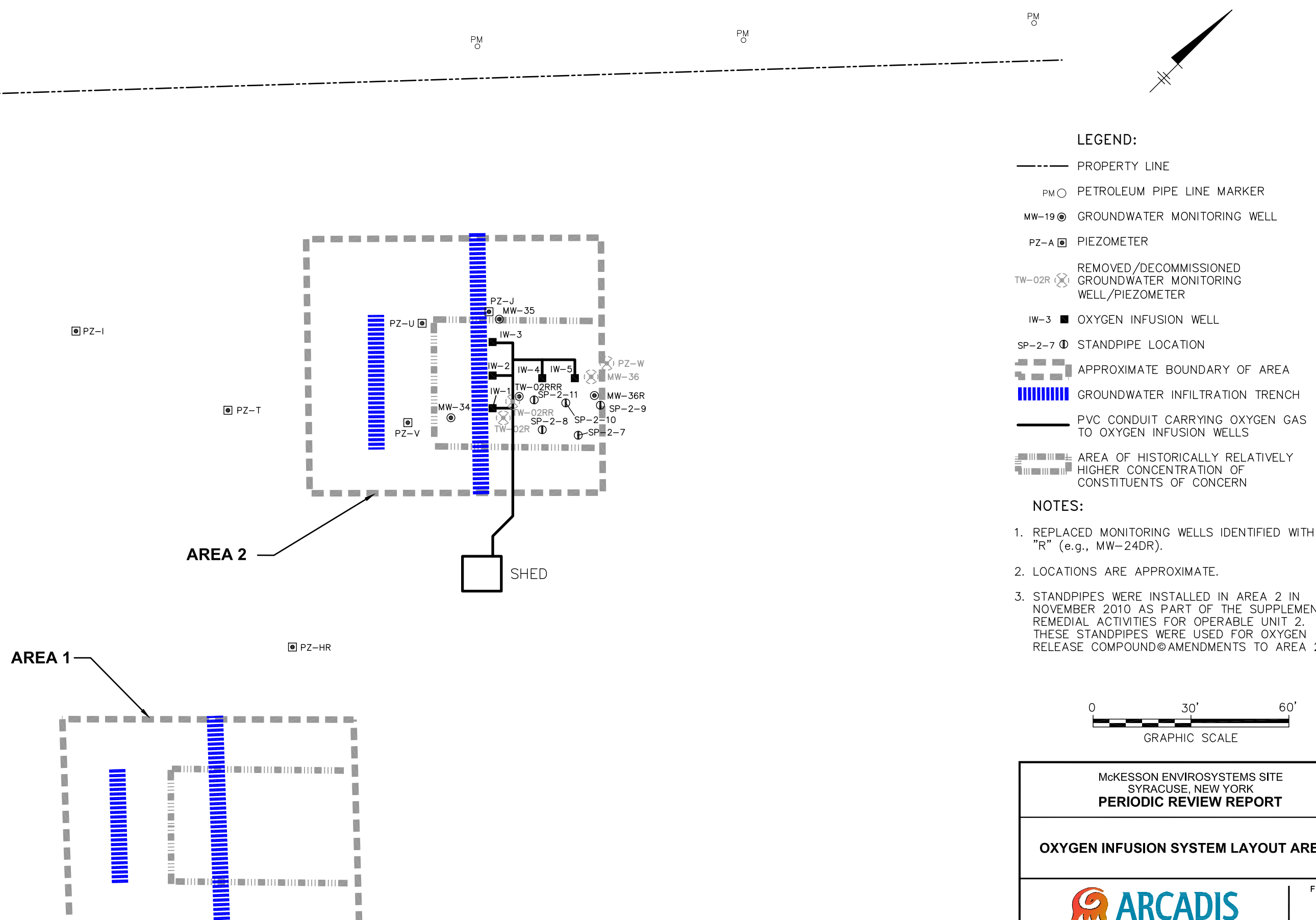
B = The compound was found in associated method blank.
D = Concentration is based on a diluted sample analysis.
J = The compound was positively identified; however, the numerical value is an estimated concentration only.
< = Compound was not detected at the listed quantitation limit.

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



CITY:SYRACUSE,NY DIV:GROUP:ENV/IN/DOV DB:N.SMITHGALL,R.BASSETT,R.ALLEN PM:TM:D.PENNIMAN TR:C.SOBOL LYR:ON=OFF=REF.(FRZ)
G:\ENV\CAD\SYRACUSE\ACT\B0026003\2014\00190\DWG\IP-R-R-REPORT\26003B15.DWG LAYOUT:2 SAVED: 9/22/2014 2:02 PM ACADVER:18.1(S (LMS TECH) PAGES:20 PLOT: 9/22/2014 2:02 PM BY: ALLEN, ROYCE
XREFS: 26003XBL 26003X01
IMAGES: PROJECTNAME: --





CITY:SYRACUSE,N.Y. DIV:GROUP:ENV/IM/DV DB:N.SMITHGALL,P.LISTER,R.ALLEN PM/TW:D.SOBOL LVR:ONE*OFF=REF:FRZ) GAEV/CAD/SYRACUSE/AC1002/0003/2014/001/90/DWG/P-R-REPORT/26003C24.DWG LAYOUT:5 SAVED:9/22/2014 2:25 PM ACADVER:18.1(S LMS TECH) PAGES:50/50 PLOT:PLT/STY/STY:TABLE:PLT/FULL/CTB PLOTTED:9/22/2014 2:25 PM BY:ALLEN,ROYCE

PROJECTNAME: -- IMAGES: 26003X01 26003X02 26003X03 26003X04 26003X05 26003X06 26003X07 26003X08 26003X09 26003X10 26003X11 26003X12 26003X13 26003X14 26003X15 26003X16 26003X17 26003X18 26003X19 26003X20 26003X21 26003X22 26003X23 26003X24 26003X25 26003X26 26003X27 26003X28 26003X29 26003X30 26003X31 26003X32 26003X33 26003X34 26003X35 26003X36 26003X37 26003X38 26003X39 26003X40 26003X41 26003X42 26003X43 26003X44 26003X45 26003X46 26003X47 26003X48 26003X49 26003X50 26003X51 26003X52 26003X53 26003X54 26003X55 26003X56 26003X57 26003X58 26003X59 26003X60 26003X61 26003X62 26003X63 26003X64 26003X65 26003X66 26003X67 26003X68 26003X69 26003X70 26003X71 26003X72 26003X73 26003X74 26003X75 26003X76 26003X77 26003X78 26003X79 26003X80 26003X81 26003X82 26003X83 26003X84 26003X85 26003X86 26003X87 26003X88 26003X89 26003X90 26003X91 26003X92 26003X93 26003X94 26003X95 26003X96 26003X97 26003X98 26003X99 26003X100

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	<4.8	<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	<1.0	<1.0	<1.2	<1.1	<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	<1.0	0.18 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	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	3.7 J	<10 J	<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

MW-39											
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	<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
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<3.6	<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	<11	<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	<1.0



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: July 31, 2013 to October 14, 2014

- | | 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

ParcelOwnerInstitutional Control

029-300-380

MCKESSON CORP

Monitoring Plan
O&M PlanGround Water Use Restriction
Site Management Plan
IC/EC PlanSoil 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

ParcelEngineering Control

029-300-380

Groundwater Containment
Fencing/Access Control
Groundwater Containment
Fencing/Access Control

029-300-390

Fencing/Access Control
Groundwater Containment
Fencing/Access Control

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 engineering practices; and the information presented is accurate and complete.

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

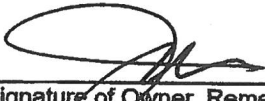
SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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 JEANA MESCHER at ONE POST ST. 34TH FL SAN FRANCISCO CA 94104
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

11/11/14
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

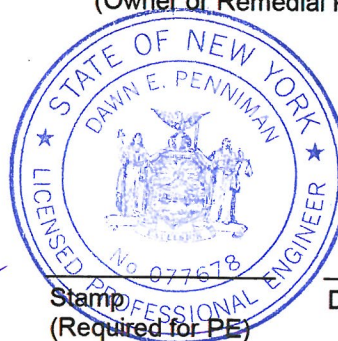
I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

Dawn Elaine Penniman at 6723 Towpath Rd., E. Syracuse,
print name print business address NY 13057

am certifying as a Professional Engineer for the Owner and 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)

11-12-14
Date

Note regarding Box 2 Question 7
McKesson EnviroSystems Site
Reporting Period: July 31, 2013 – October 14, 2014
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.



Attachment B

Site-Wide Inspection Form

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

Form Completed By: Tim Hensel

Date of Inspection: 7/31/14

Representing: ADCA Dis

Inspection Reporting Period: Aug 1 2013 - July 31, 2014

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: Tina Hensel
Representing: ADCMAS

Date of Inspection: July 31, 2014
Inspection Reporting Period: Aug. 1, 2013 - July 31, 2014

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 31, 2014)
☐ Health and Safety Plan (date of document July 31, 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 NOT CURRENTLY BEING OPERATED

** 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:

Imagine the result

ARCADIS of New York, Inc.
6723 Towpath Road
P O Box 66
Syracuse
New York 13214-0066
Tel 315 446 9120
Fax 315 449 0017
www.arcadis-us.com

ENVIRONMENTAL

Date:

October 18, 2013

Contact:

David J. Ulm

Phone:

315.671.9210

Email:

david.ulm@arcadis-us.com

Our ref:

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

Figures

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

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

ARCADIS. 2013b. Periodic Review Report. McKesson EnviroSystems Former Bear Street Facility. January 15.

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. 2010a. Letter from Payson Long, NYSDEC, to David Ulm, ARCADIS. RE: Requested Changes in Remedial Monitoring Program. September 23.

NYSDEC. 2010b. 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.

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

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
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	<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	
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

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
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

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
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

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
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
TW-01	4/13	365.1	355.4	<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
	3/09			<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.

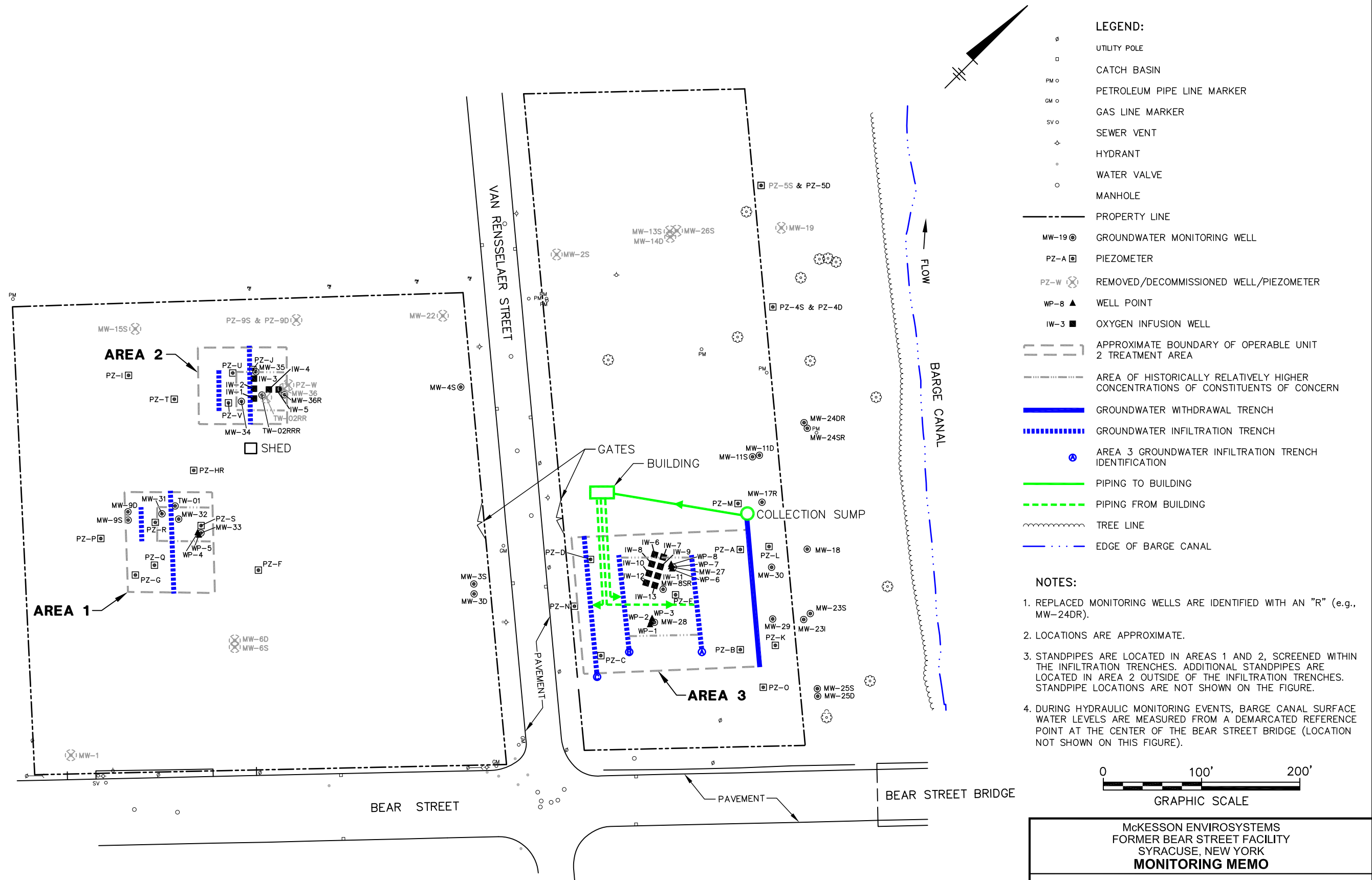
Figures

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\B002603\000200190\DWG\MONITOR\MEMO2603B13.DWG LAYOUT: 1.1 SAVER: 10/1/2013 9:11 AM ACADVER: 18.1S (LMS TECH) PAGES: 10/1/2013 9:11 AM BY: ALLEN, ROYCE

PROJECTNAME: --

IMAGES: --

REFS: 2603X01 2603X01 2603X01

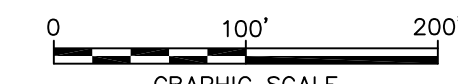


McKESSEON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
MONITORING MEMO

SITE PLAN



FIGURE
1



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	
Acetone	9.5 J [12 J]	<10	<10	<10	NA	15 J [13 J]	<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]	
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]	0.80 J [0.64 J]	0.28 J [0.28 J]	
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	NA	<0.18	<0.18	<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
Trichloroethene	<1.0	<1.0	<1.0	<1.0	NA	<0.090	<0.090	<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]	
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]	
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]	
Methanol	<500	<500	<500	<500	NA	<500	<500	<1000	<1000	<1000

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		
Acetone	<10 J	<10	<10	<10	14 J	<36 B	<10	4.2 J		
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	<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		
Toluene	<1.0	<1.0	<1.0	<1.0	<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	<0.36	<3.0	<3.0	<3.0		
Aniline	<5.0	<5.0	<5.6	<5.1	<1.8	<5.0	<5.1	<1.0 J		
N,N-Dimethylaniline	<1.0	<1.0	<1.0	<1.0	<0.21	<1.0	<1.0	<1.0		
Methanol	<500	<500 J	<500	<500	<500	NA	470 J	<1000		

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		
Acetone	50 J	20	16	350	37 J	61	26 J	32		
Benzene	0.82 J	1	1.7	1.2	1.3	1.6	1.3	1.3		
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	0.42 J	0.44 J	0.74 J	0.71 J	0.59 J	0.78 J	0.60 J	0.66 J		
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<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		
Aniline	<5.0	1.8 J	10	<5.6	2.1 J	<5.2	<4.8	0.56 J		
N,N-Dimethylaniline	2.4	2.9	2.7	2.5	2.4	2.7	1.7	0.92 J		
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	NA		

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	
Acetone	<10 J	12	<10	<10	NA	6.3 J	<10	<10	<10	
Benzene	3.3	3.9	4.3	1.8	NA	1.6 J	1.5 J	1.8	1.4	
Ethylbenzene	0.26 J	0.28 J	<1.0	<1.0	NA	0.16 J	<1.0	0.14 J	0.11 J	
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	NA	<0.18	<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	
Trichloroethene	<1.0	<1.0	<1.0	<1.0	NA	<0.090	<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	
Aniline	77	620	310	92	120	150	10	150	97	
N,N-Dimethylaniline	2.6	<5.0	4.0	3.6	NA	4.1	3.1	4.0	2.0	
Methanol	<500	<500 J	NA	NA	NA	NA	NA	NA	<1000	

MW-4S			
Date	10/15/2010	4/11/2012	7/24/2013
Acetone	<10	<10	<10
Benzene	<1.0	<1.0	<0.080
Ethylbenzene	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<0.18
Toluene	<1.0	<1.0	<0.15
Trichloroethene	<1.0	<1.0	<0.090
Xylenes (total)	<3.0	<3.0	<0.36
Aniline	<5.0	<5.0	<1.8
N,N-Dimethylaniline	<1.0	<1.0	<0.21
Methanol	<500 J	<500 J	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
Acetone	<10	<10	<10	<10	<2.7	<10	<10
Benzene	0.32 J	<1.0	0.21 J	<1.0	0.11 J	<1.0	0.090 J
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	<1.0	<0.15	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0
Aniline	<5.0	<5.3	<5.3	<5.6	<1.8	<5.2	<1.0
N,N-Dimethylaniline	1	1.3	<1.1	1.6	1.7	1.9	0.98 J
Methanol	<500	<500 J	<500	<500	<500	NA	<1000

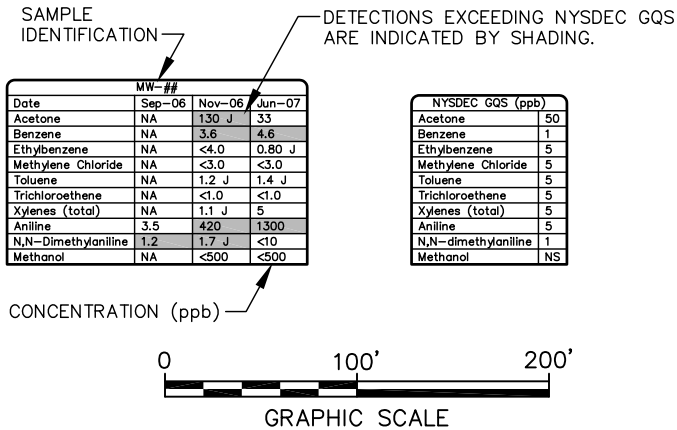
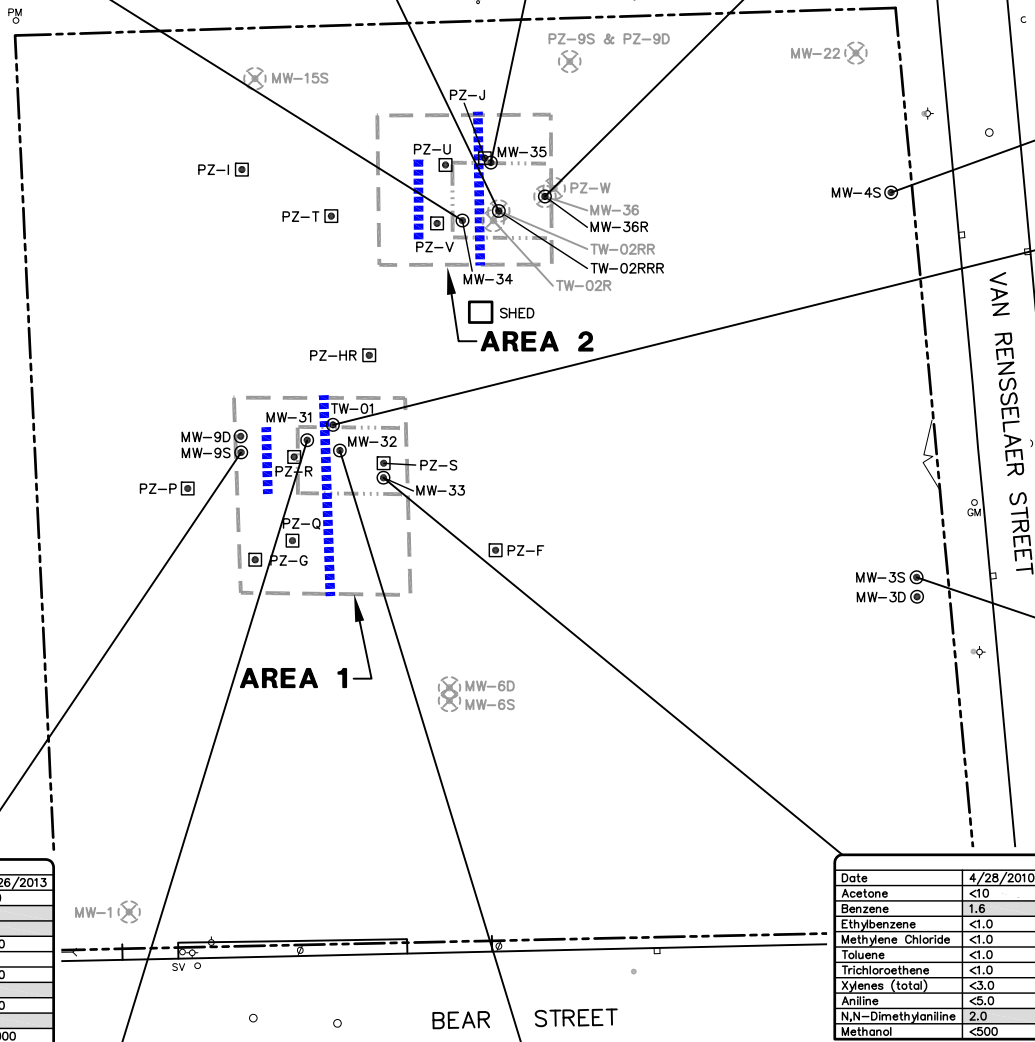
MW-3S							
Date	4/28/2010	10/12/2010	4/6/2011	10/27/2011	4/11/2012	10/4/2012	4/4/2013
Acetone	<10	<10	<10	<10	<2.7	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	0.27 J	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.35 J	<0.15	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0
Aniline	<5.0	<5.2	<5.3 J	<5.0	<1.8	<5.0	<1.0
N,N-Dimethylaniline	<1.0	<1.0	<1.1 J	<1.0	<0.21	<0.61 J	<1.0
Methanol	<500	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
Acetone	<10	<10	<10	<10	7.5 J	<10	12 J
Benzene	0.86 J	1.3	0.91 J	1.2	1.1	1.9 J	0.95 J
Ethylbenzene	26	11	29	4.2	18	4.7	19
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0
Toluene	2.1	1.9	2.6	1.8	1.5	3.2	1.6
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0
Xylenes (total)	69	45	89	41 J	67	84	62
Aniline	<5.0	<5.1	<5.3	<5.0	<1.9	<5.0	<5.1
N,N-Dimethylaniline	6.5	7.5	5.4	7.6	6.3	3.9	5.9
Methanol	<500	<500 J	<500	<500	<500	NA	<1000

MW-31							
Date	4/28/2010	10/13/2010	4/5/2011	10/25/2011	4/12/2012	10/5/2012	4/5/2013
Acetone	<10	<10	<10	<10	6.5 J	<10	<10
Benzene	4.8	6.9	8.3	5.7	6.8	6.3 J	12
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	0.16 J	0.16 J	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<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
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<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
Aniline	<5.0	<5.3	<5.3	<5.0	<1.9	<5.0	<5.2
N,N-Dimethylaniline	2.3	3.5	2.3	3.5	2.1	0.90 J	1.1
Methanol	<500	<500 J	<500	<500	<500	NA	<1000

MW-32							
Date	4/28/2010	10/12/2010	4/4/2011	10/25/2011	4/11/2012	10/5/2012	4/5/2013
Acetone	<10	<10	<10	<10	<2.7	<10	<10
Benzene	0.23 J	<1.0	<1.0	<1.0	<0.080	<1.0 J	0.098 J
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<0.18	<1.0	<1.0
Toluene	<1.0	<1.0	<1.0	0.19 J	<0.15	<1.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<1.0	<1.0
Xylenes (total)	<3.0	<3.0	<3.0	<3.0	<0.36	<3.0	<3.0
Aniline	<5.0	<5.2	<5.3	<5.0	<1.8	<5.1	<5.1
N,N-Dimethylaniline	0.89 J	0.87 J	<1.1	1.5	1.1	2.2	0.91 J
Methanol	<500	<500 J	<500	<500	<500	NA	<1000

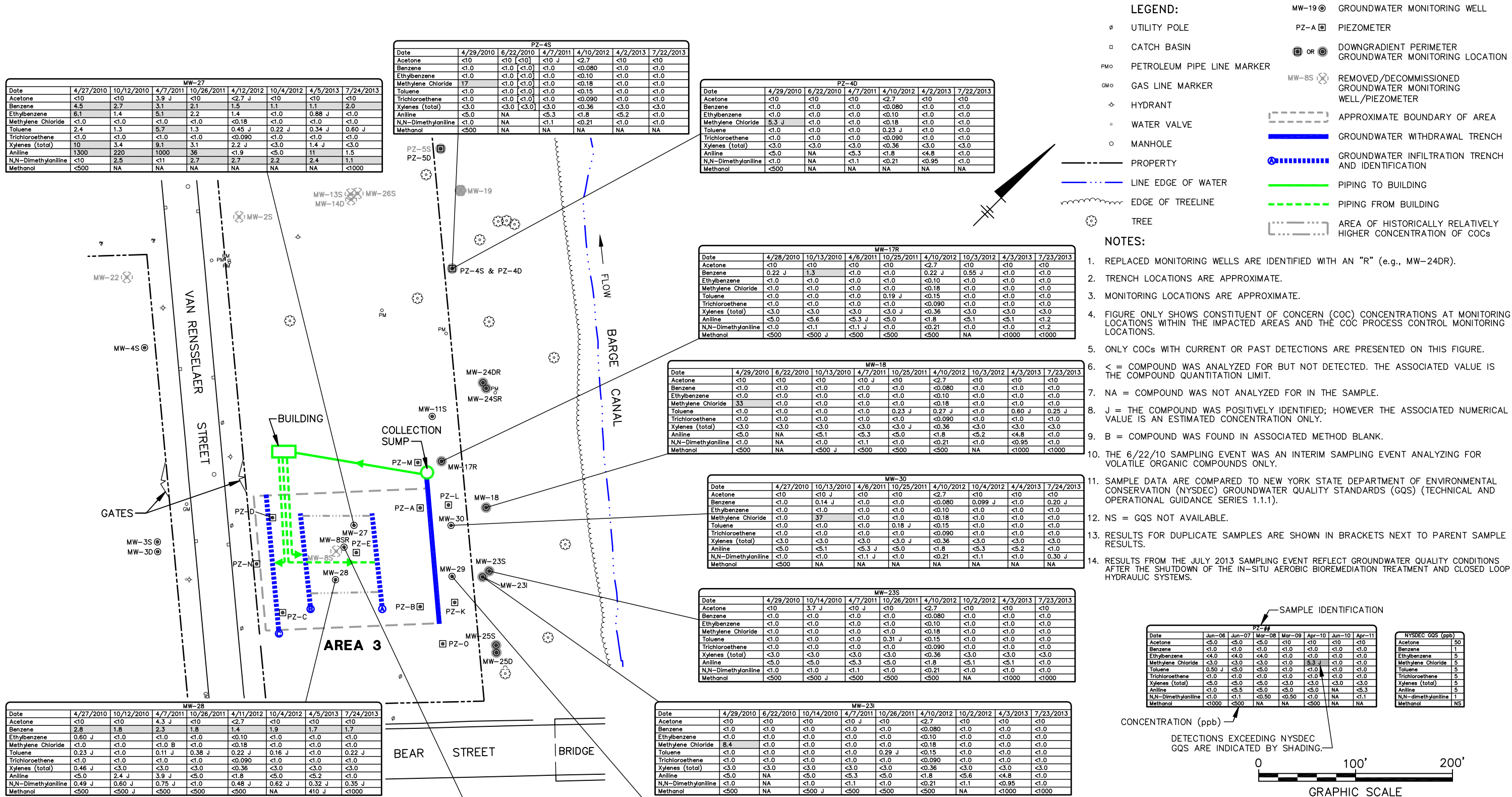
- NOTES:
- REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
 - TRENCH LOCATIONS ARE APPROXIMATE.
 - MONITORING LOCATIONS ARE APPROXIMATE.
 - FIGURE ONLY SHOWS CONSTITUENT OF CONCERN (COC) CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE COC PROCESS CONTROL 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.
 - 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 SAMPLING EVENT REFLECT GROUNDWATER QUALITY CONDITIONS AFTER THE SHUTDOWN OF THE IN-SITU AEROBIC BIOREMEDIATION TREATMENT AND CLOSED LOOP HYDRAULIC SYSTEMS.



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

**GROUNDWATER MONITORING DATA SUMMARY
FOR APRIL 2010 - JULY 2013
AREAS 1 & 2**







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

ARCADIS of New York, Inc.
6723 Towpath Road
P O Box 66
Syracuse
New York 13214-0066
Tel 315 446 9120
Fax 315 449 0017
www.arcadis-us.com

ENVIRONMENTAL

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

Date:
January 3, 2014

Contact:
David J. Ulm

Phone:
315.671.9210

Email:
david.ulm@arcadis-us.com

Our ref:
B0026003.0002.00190 #2

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

- 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

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 Memo – July 2013 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. October 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. 2010a. 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. 2010b. Letter from Payson Long, NYSDEC, to David Ulm, ARCADIS. RE: Requested Changes in Remedial Monitoring Program. September 23.

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

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 ^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	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]	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

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-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			

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-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			

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-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	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 [1.4 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

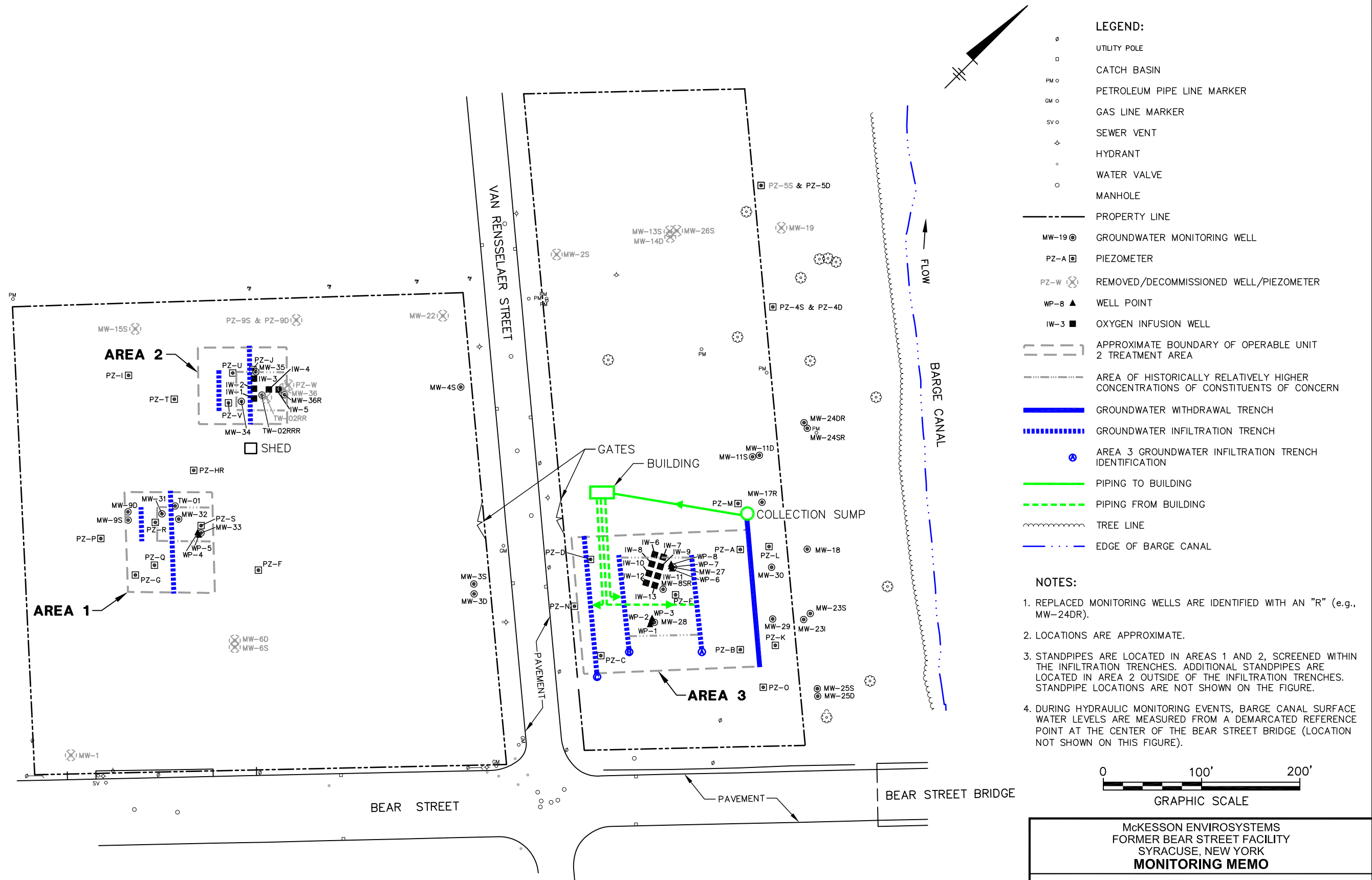
Analytical Qualifiers:

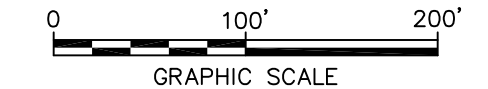
B = The compound was found in associated method blank.

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





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	NA	15 J [13 J]	<10	<10	<10
Benzene	4.1 [4.0]	3.3	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	NA	<0.18	<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	0.20 J [0.17 J]
Trichloroethene	<1.0	<1.0	<1.0	<1.0	NA	<0.090	<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
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]	NA	<2.2 J	<2.2 J	3.5 J [3.4 J]	1.7 [1.8]	2.1 [1.4]
Methanol	<500	<500	<500	<500	NA	<500	<500	<1000	<1000	<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	<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	<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	<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	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
Benzene	<1.0	<1.0	<0.080
Ethylbenzene	<1.0	<1.0	<0.10
Methylene Chloride	<1.0	<1.0	<0.18
Toluene	<1.0	<1.0	<0.15
Trichloroethene	<1.0	<1.0	<0.090
Xylenes (total)	<3.0	<3.0	<0.36
Aniline	<5.0	<5.0	<1.8
N,N-Dimethylaniline	<1.0	<1.0	<0.21
Methanol	<500	<500	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	<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	<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	<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	<5.0	<1.9	<5.0	<5.2	0.72 J	<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	<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	<2.0	<5.0	<5.0	<1.8	<5.1	<1.0	<5.0	<5.0	
N,N-Dimethylaniline	0.89 J	1.0	0.87 J	<5.0	<1.8	2.1	0.91 J	0.82 J	1.1	
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<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

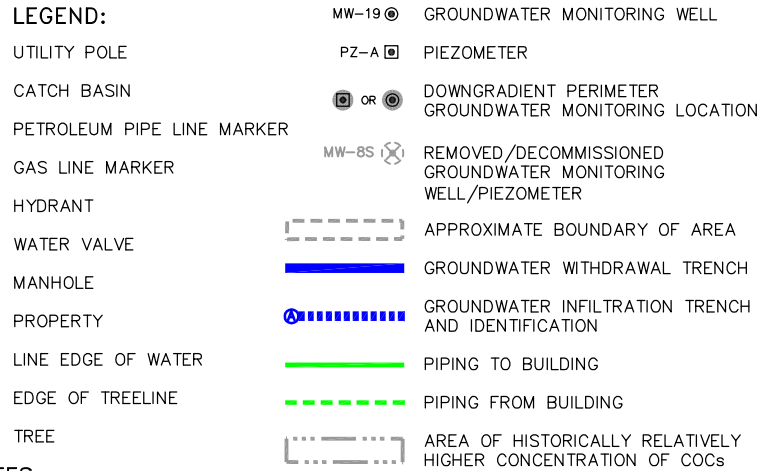
Date	4/27/2010	10/13/2010	4/6/2011	10/25/2011	4/10/2012	10/4/2012	4/4/2013	7/24/2013	10/22/13
Acetone	<10	<10 J	<10	<10	<2.7	<10	<10	<10	<10
Benzene	<1.0	0.14 J	<1.0	<1.0	<0.080	0.099 J	<1.0	0.20 J	0.29 J
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	<1.0	37	<1.0	<1.0	<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 TO PARENT SAMPLE RESULTS.
- RESULTS FROM THE JULY AND OCTOBER 2013 SAMPLING EVENTS REFLECT GROUNDWATER QUALITY CONDITIONS AFTER THE SHUTDOWN OF THE IN-SITU AEROBIC BIOREMEDIATION TREATMENT AND CLOSED LOOP HYDRAULIC SYSTEMS.
</



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

ARCADIS of New York, Inc.
6723 Towpath Road
P O Box 66
Syracuse
New York 13214-0066
Tel 315 446 9120
Fax 315 449 0017
www.arcadis-us.com

ENVIRONMENTAL

Date:
April 11, 2014

Contact:
David J. Ulm

Phone:
315.671.9210

Email:
david.ulm@arcadis-us.com

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

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

Figures

- Figure 1 Site Plan
- Figure 2 Potentiometric Surface of the Shallow Hydrogeologic Unit Sand Layer January 17, 2014
- Figure 3 Groundwater Monitoring Data Summary for April 2010 – January 2014, Areas 1 & 2
- Figure 4 Groundwater Monitoring Data Summary for April 2010 – January 2014, Area 3

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)
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

- 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 Memo – July 2013 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. October 18.
- ARCADIS. 2014. Monitoring Memo – October 2013 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. January 3.
- 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. 2010a. 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. 2010b. Letter from Payson Long, NYSDEC, to David Ulm, ARCADIS. RE: Requested Changes in Remedial Monitoring Program. September 23.
- NYSDEC. 2013. Letter from Payson Long, NYSDEC, to Jean Mescher, McKesson Corporation. RE: Discontinuation of Remedial Processes. April 11.

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	<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	<3.0	<5.0	<0.61 J	NA	
	4/13			<10	<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	<3.0	<1.0	<1.0	NA	
	10/13			<10	<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	<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	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]	<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	

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-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	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	<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
	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	1,400	NA	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.

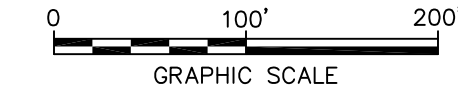
Abbreviations:

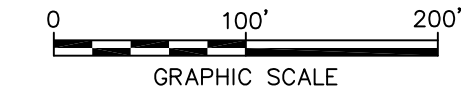
AMSL = above mean sea level (National Geodetic Vertical Datum of 1929)
NA = compound was not analyzed for in the sample
NS = standard not available
TOGS = Technical and Operational Guidance Series

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





McKESSON ENVIROSYSTEMS SITE
SYRACUSE, NEW YORK
MONITORING MEMO

**POTENTIOMETRIC SURFACE OF THE
SHALLOW HYDROGEOLOGIC UNIT SAND LAYER
JANUARY 17, 2014**



FIGURE
2

- 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	4/5/2013	7/25/2013	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	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	4/12/2012	10/4/2012	4/8/2013	7/26/2013	10/24/13	1/24/2014
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	4/11/2012	10/4/2012	4/4/2013	7/24/2013	10/23/13	1/23/2014
Acetone	<10 J	12	<10	<10	NA	6.3 J	<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
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	1.4 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

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

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	1/23/14
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J
Benzene	0.32 J	<1.0	0.21 J	<1.0	0.11 J	<1.0	0.090 J	0.11 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
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 J	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.3	<5.3	<5.3	<1.8	<5.2	<5.2	<1.0	<5.0	<10
N,N-Dimethylaniline	1	1.3	<1.1	1.6	1.7	1.9	0.98 J	1.0	1.1	0.98 J
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500

	MW-35									
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	1/22/14
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J
Benzene	<1.0	<1.0	<1.0	<1.0	<0.080	0.27 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	0.35 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	<0.36	<3.0	<3.0	<3.0	<3.0	<3.0
Aniline	<5.0	<5.2	<5.3 J	<5.0	<1.8	<5.0	<5.2	<1.0	<5.0	<10
N,N-Dimethylaniline	<1.0	<1.0	<1.1 J	<1.0	<0.21	<0.61 J	<1.0	<1.0	<1.0	<1.0
Methanol	<500	NA	NA	NA	NA	NA	NA	NA	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	2.2	2.4	1.1	0.73 J	0.75 J
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	<10 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	1/20/2014
Acetone	<10	<10	<10	<10 J	<10	<2.7	<10	<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	<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
Methylene Chloride	33	<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	0.23 J	0.27 J	<1.0	0.60 J	0.25 J	0.19 J	<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
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	NA	<5.1	<5.3	<5.0	<1.8	<5.2	<4.8	<1.0	<5.4	<10
N,N-Dimethylaniline	<1.0	NA	<1.0	<1.1	<1.0	<0.21	<1.0	<0.95	<1.0	<1.1	<1.0
Methanol	<500	NA	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<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	<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	1/20/2014
Acetone	<10	<10	<10	<10 J	<10	<2.7	<10	<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	<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
Methylene Chloride	8.4	<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	0.29 J	<0.15	<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
Xylenes (total)	<3.0	<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	<10
N,N-Dimethylaniline	<1.0	NA	<1.0	<1.1	<1.0	<0.21	<1.1	<0.95	<1.0	<1.0	<1.0
Methanol	<500	NA	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500

MW-BSR										
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	1/24/2014
Acetone	<10	<10	5.9 J [4.3 J]	<10	<10	8.7 J [6.7 J]	<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	2.4 [2.6]
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	0.19 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	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	0.94 J [1.1]
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<0.090	<0.090	<1.0	<1.0	<1.0	<1.0
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	370 J [720 J]	220	57 J [64]	<5.0	<5.0	<1.9	<1.9	<5.1	2.6 J	5.1 J [10]
N,N-Dimethylaniline	1.0 J [5.0]	1.6	1.5 [1.6]	2.6 [1.0]	2.4 [2.6]	2.3 [2.7]	1.7 [1.4]	0.89 J [0.96 J]	0.83 J	2.0 [1.7]
Methanol	<500	<500	NA	NA	NA	NA	NA	<200	<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.

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

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

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

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

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

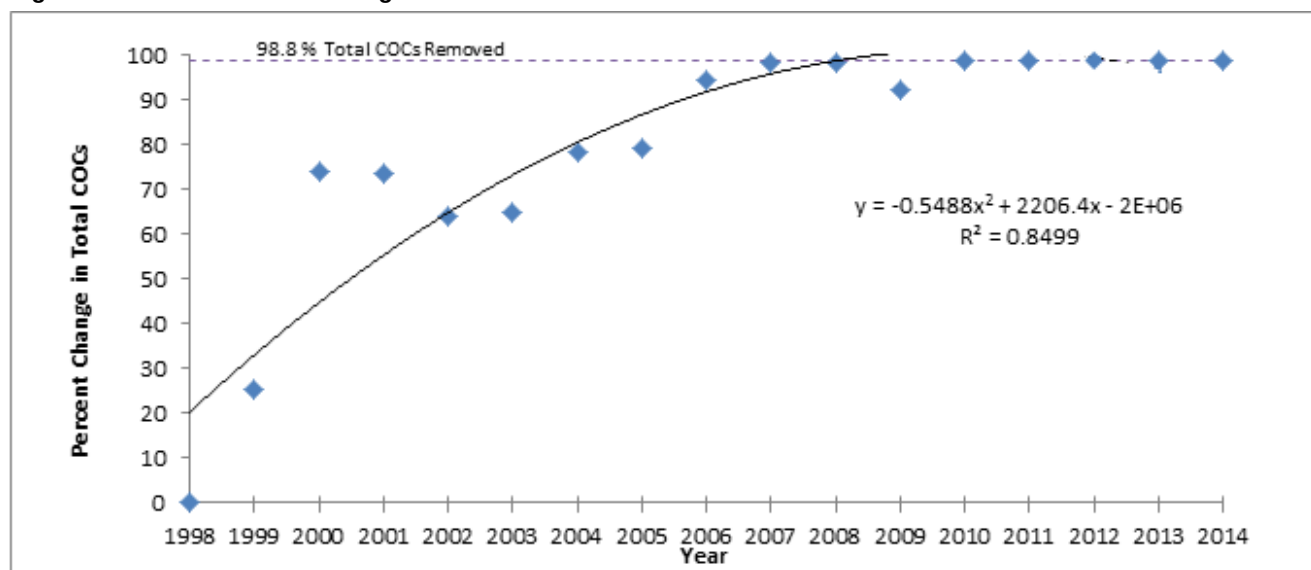
The third analysis involved a linear regression between time (year) and percent reduction in total COC molar concentrations from 2008 to 2014. If the slope of the COC concentrations did not significantly differ from zero, then the data indicate that the asymptote was effectively reached. The data and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

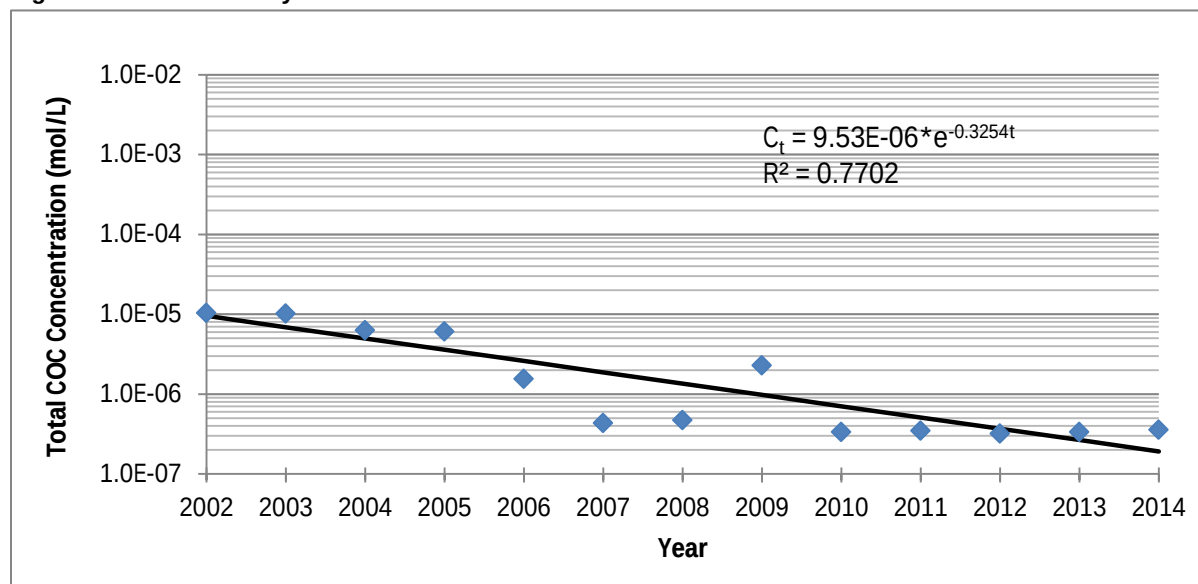
$$\ln(C_t) = -0.325 * \ln(t) + 639.89$$

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

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

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

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.

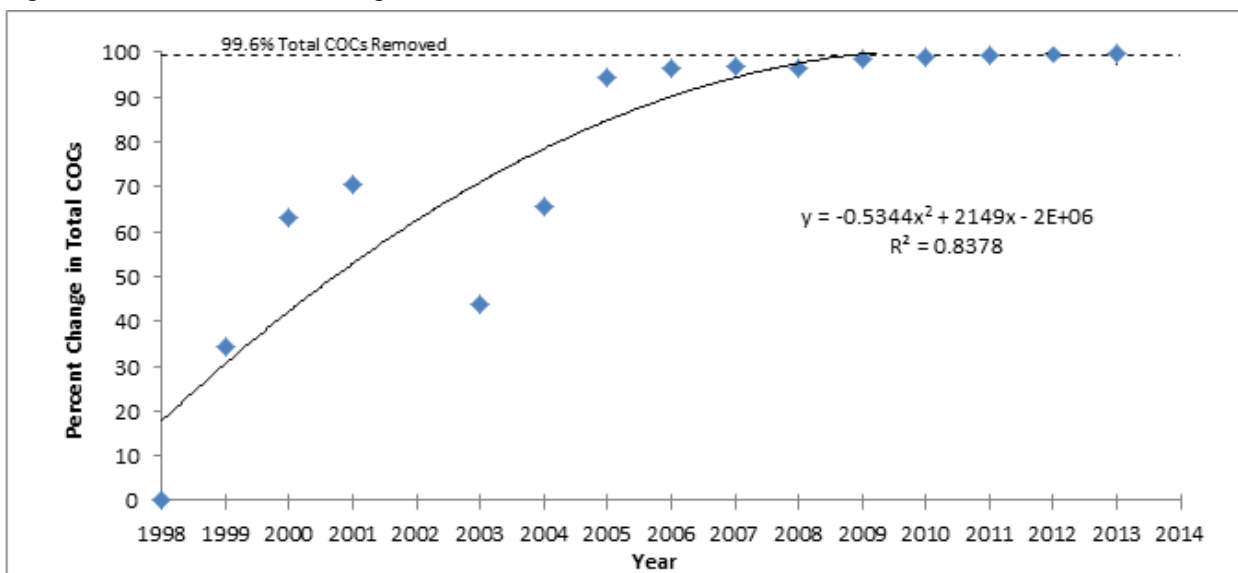
Attachment B. Statistical Analyses
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

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.

Attachment B. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

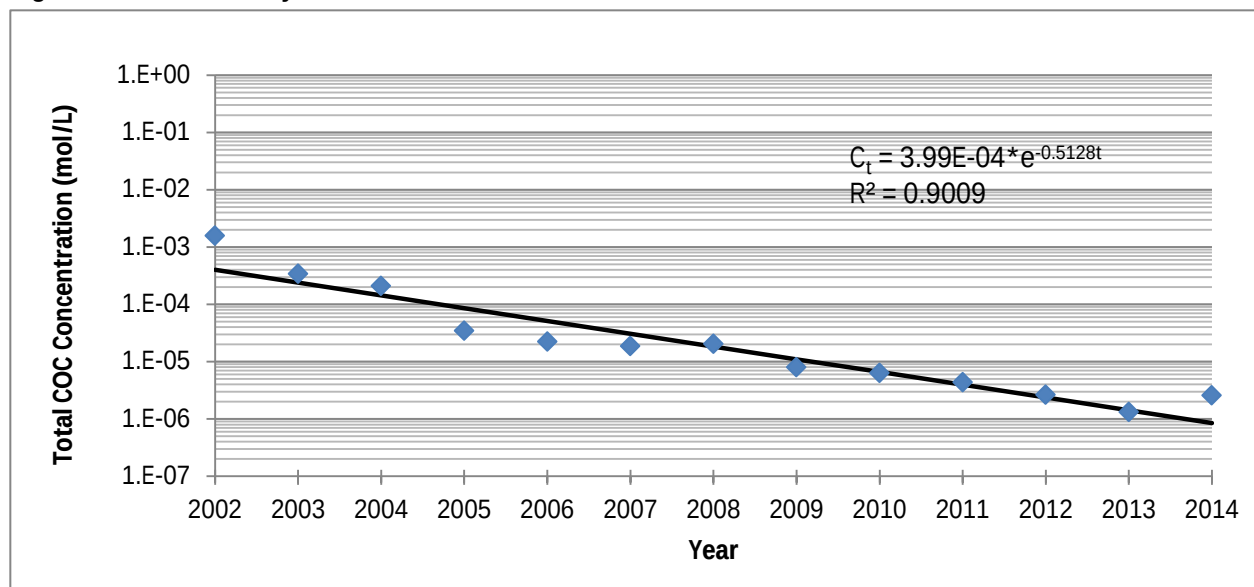
$$\ln(C_t) = -0.513 * \ln(t) + 1018.8$$

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

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

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

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).

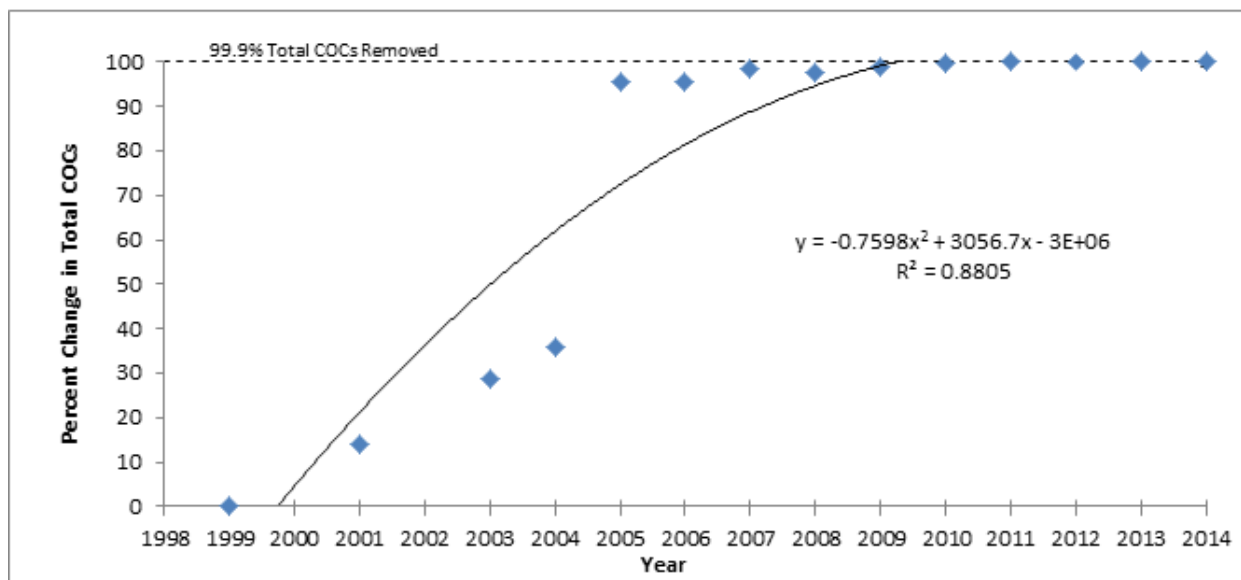
Attachment B. Statistical Analyses
Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

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.

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

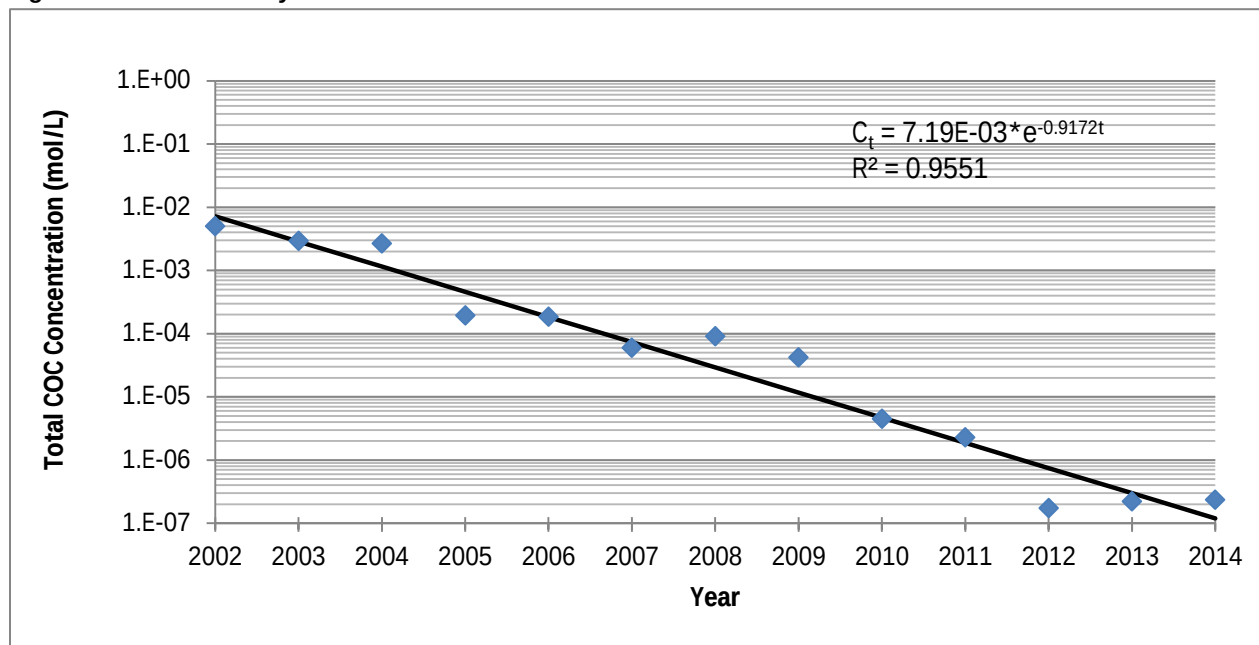
$$\ln(C_t) = -0.917 * \ln(t) + 1831.3$$

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

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

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

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

ARCADIS of New York, Inc.
6723 Towpath Road
P O Box 66
Syracuse
New York 13214-0066
Tel 315 446 9120
Fax 315 449 0017
www.arcadis-us.com

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.
- ARCADIS. 2014a. Monitoring Memo – October 2013 Monitoring Event. McKesson EnviroSystems Former Bear Street Facility. January 3.
- ARCADIS. 2014b. Monitoring Memo – January 2014 Monitoring Event. McKesson EnviroSystems Site. April 11.

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. 2010a. 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. 2010b. Letter from Payson Long, NYSDEC, to David Ulm, ARCADIS. RE: Requested Changes in Remedial Monitoring Program. September 23.

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

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	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

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-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 J	
	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	<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	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

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)											
		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

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-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	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.

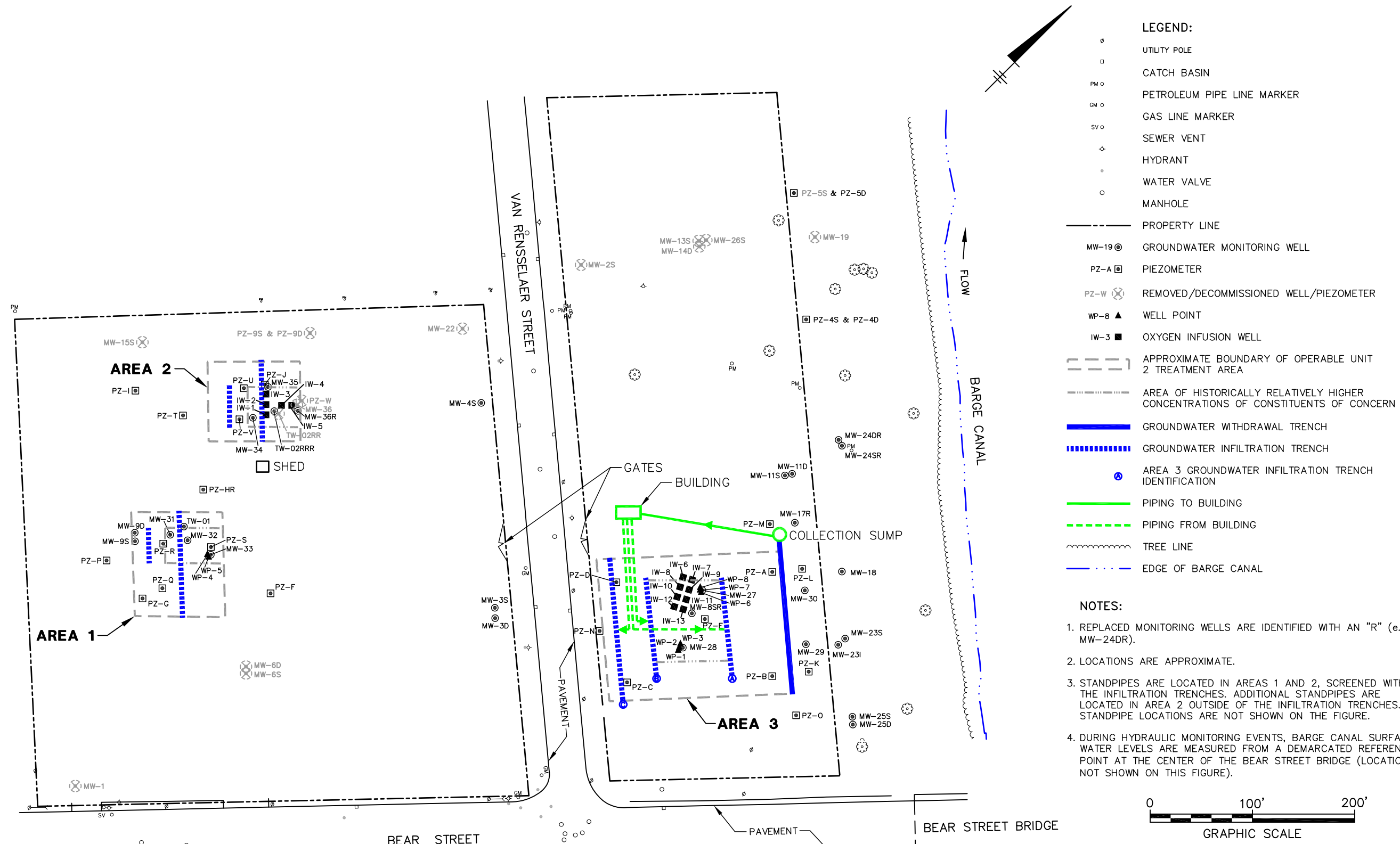
NYSDEC. 1998. NYSDEC. 1998. Technical Operational Guidance Series 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June.
 Available online at: http://www.dec.ny.gov/docs/water_pdf/togs111.pdf

Figures

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\ACT\B002603\2014\00190\DWG\MONITOR\MEMO2603B13.DWG LAYOUT: 1.1 SAVER: 7/7/2014 3:41 PM ACADVER: 18.1.5 (LMS TECH) PAGES: 1 OF 1 PLOTSETUP: --- PLOTSTYLETABLE: PLT\FULLCTB PLOTTED: 7/7/2014 3:41 PM BY: ALLEN, ROYCE

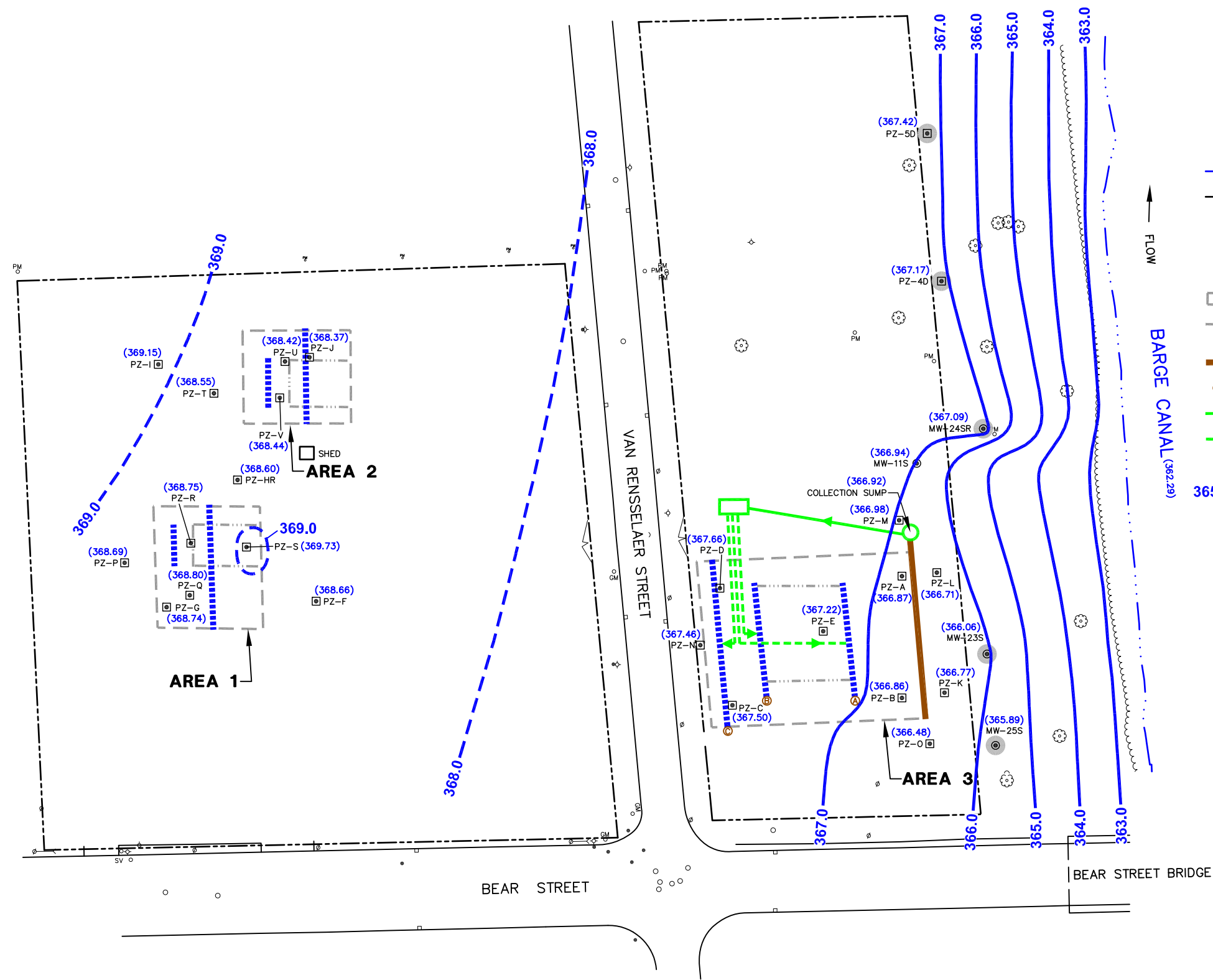
PROJECTNAME: --

IMAGES: 26003X01 26003X01 26003X01



McKESSON ENVIROSYSTEMS SITE SYRACUSE, NEW YORK MONITORING MEMORANDUM	
SITE PLAN	
	FIGURE 1

CITY: SYRACUSE, N.Y. DIV/GROUP: ENV/IM+DV DR: N. SMITHGALL, R. BASSETT, R. ALLEN PM/TM: D. PENNIMAN TR: C. SOBOLEW LVR: ON=OFF=REF
G:\ENV\CAD\SYRACUSE\ACT1\B0026003\2014\1000\10\DWG\MONITOR-MEMO\26003\W08.DWG LAYOUT: 2 SAVED: 7/7/2014 4:11 PM ACADVER: 18.1S (LMS TECH) PAGES: 2 PLOT: PLT=FULL CTB PLOTTED: 7/7/2014 4:12 PM BY: ALLEN, ROYCE
XREFS: 26003\X01 26003\X01 26003\X01
IMAGES: PROJECTNAME: --



LEGEND:

- UTILITY POLE
- CATCH BASIN
- PETROLEUM PIPE LINE MARKER
- GAS LINE MARKER
- SEWER VENT
- HYDRANT
- WATER VALVE
- MANHOLE
- EDGE OF BARGE CANAL
- PROPERTY LINE
- GROUNDWATER MONITORING WELL
- DOWNGRADIENT PERIMETER GROUNDWATER MONITORING LOCATION
- PIEZOMETER
- APPROXIMATE BOUNDARY OF AREA
- AREA OF HISTORICALLY RELATIVELY HIGHER CONCENTRATIONS OF CONSTITUENTS OF CONCERN
- GROUNDWATER WITHDRAWAL TRENCH
- GROUNDWATER INFILTRATION TRENCH AND IDENTIFICATION
- PIPING TO BUILDING
- PIPING FROM BUILDING
- GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (AMSL)
- GROUNDWATER ELEVATION CONTOUR (FEET AMSL) DASHED WHERE INFERRED

NOTES:

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

McKESSON ENVIROSYSTEMS SITE
SYRACUSE, NEW YORK
MONITORING MEMORANDUM

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

ARCADIS

FIGURE
2

CITY: SYRACUSE, NY DIV/PROJECT: ENV/IMADY DB: N. SMITHGALL, R. BASSETT, R. ALLEN PM/TM: D. PENNIMAN TR: C. SOBOLEW LVR: ON=OFF=REF
G:\ENVI\DATA\SYRACUSE\AC1001\90\DWG\MONITORING\MEMO26003C21.DWG LAYOUT: 3 SAVED: 7/17/2014 11:14 AM ACADVER: 18.1 (LMS TECH) PAGES: 1 OF 1 PLOTTED: 7/17/2014 11:14 AM BY: ALLEN, ROYCE

TW-02RRR												
Date	4/30/2010	10/14/2010	4/5/2011	10/27/2011	12/15/2011	10/5/2012	4/8/2013	7/25/2013	10/24/2013	1/24/2014	4/17/2014	
Acetone	9.5 J [12 J]	<10	<10	<10	NA	15 J [13 J]	<10	<10	<10	<10 J [10 J]	8.0 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 [0.96 J]	1.4 [1.3]	0.91 J [0.91 J]	0.60 J [0.60 J]	1.2 [1.2]	
Ethylbenzene	1.2 [1.2]	1.0 [0.91 J]	1.2 [1.3]	0.87 J [0.89 J]	NA	0.73 J [0.76 J]	0.29 J [0.27 J]	0.60 J [0.64 J]	<10	0.15 J [0.15 J]	0.27 J [0.33 J]	0.51 J [0.44 J]
Methylene Chloride	<10	<10	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10
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]	<10	0.20 J [0.17 J]	0.18 J [0.17 J]	<10
Trichloroethene	<10	<10	<10	<10	NA	<0.090	<0.090	<10	<10	<10	<10	<10
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]	0.69 J [0.77 J]	1.0 J [0.96 J]	<10
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]
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]	2.8 J [3.5 J]
Methanol	<500	<500	<500	<500	NA	<500	<500	<1000	<1000	<500	<500	<500

MW-35												
Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	12/15/2011	10/4/2012	4/4/2013	7/24/2013	10/23/2013	1/23/2014	4/16/2014	
Acetone	<10 J	<10	<10	<10	14 J	<36 B	<10	4.2 J	<10	<10 J	<10 J	
Benzene	<10	<10	<10	<10	<0.080	<10	<10	<10	<10	<10	<10	
Ethylbenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Methylene Chloride	<10	<10	<10	<10	<0.18	<10	<10	<10	<10	<10	<10	
Toluene	<10	<10	<10	<10	<0.15	<10	<10	<10	<10	<10	<10	
Trichloroethene	<10	<10	<10	<10	<0.090	<10	<10	<10	<10	<10	<10	
Xylenes (total)	<30	<30	<30	<30	<36	<30	<30	<30	<30	<30	<30	
Aniline	<50	<50	<56	<51	<18	<50	<51	<10 J	<5.2 J	<10	<10	
N,N-Dimethylaniline	<10	<10	<11	<10	<0.21	<10	<10	<10	<10	<10	<10	
Methanol	<500	<500 J	<500	<500	<500	NA	470 J	<1000	<500	<500	<500	

MW-34												
Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	12/15/2011	10/4/2012	4/8/2013	7/26/2013	10/24/2013	1/24/2014	4/17/2014	
Acetone	50 J	20	18	350	37 J	61	26 J	32	15	15 J	57	
Benzene	0.82 J	1	1.7	1.2	1.3	1.6	1.3	1.3	1.2	0.91 J	1.4	
Ethylbenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	0.11 J	
Methylene Chloride	<10	<10	<10	<10	<0.18	<10	<10	<10	<10	<10	<10	
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	
Trichloroethene	<10	<10	<10	<10	<0.090	<10	<10	<10	0.13 J	<10	<10	
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	3.6	
Aniline	<50	1.8 J	10	<5.6	2.1 J	<5.2	<4.8	0.56 J	<5.0	<10	2.6 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	
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	NA	<500	<500	<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	1/24/14	4/17/2014	
Acetone	<10 J	12	<10	<10	NA	6.3 J	<10	<10	<10	<10	<10 J	5.5 J	
Benzene	3.3	3.9	4.3	1.8	NA	1.6	1.5 J	1.8	1.4	1.3	1.2	1.1	
Ethylbenzene	0.26 J	0.28 J	<10	<10	NA	0.16 J	<10	0.14 J	0.11 J	<10	<10	0.12 J	
Methylene Chloride	<10	<10	<10	<10	NA	<0.18	<10	<10	<10	<10	<10	<10	
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	
Trichloroethene	<10	<10	<10	<10	NA	<0.090	<10	<10	<10	<10	<10	<10	
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	
Aniline	77	620	310	92	120	150	10	150	97	110	180	140	
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	
Methanol	<500	<500 J	NA	NA	NA	NA	NA	NA	<1000	NA	NA	NA	

MW-4S					
Date	4/30/2010	10/14/2010	4/5/2011	10/26/2011	4/16/2014
Acetone	<10	<10	<10	<2.7	<10
Benzene	<10	<10	<0.080	<10	<10
Ethylbenzene	<10	<10	<0.10	<10	<10
Methylene Chloride	<10	<10	<0.18	<10	<10
Toluene	<10	<10	<0.15	<10	<10
Trichloroethene	<10	<10	<0.090	<10	<10
Xylenes (total)	<30	<30	<0.36	<30	<30
Aniline	<50	<50	<1.8	<10	<10
N,N-Dimethylaniline	<10	<10	<0.21	<10	<10
Methanol	<500	<500 J	NA	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	10/23/2013	1/23/2014	4/17/2014	
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10	
Benzene	0.32 J	<10	0.21 J	<10	0.11 J	<10	0.090 J	0.11 J	<10	<10	<10	
Ethylbenzene	<10	<10	<10	<10	<0.10	<10	<10	<10	<10	<10	<10	
Methylene Chloride	<10	<10	<10	<10	<0.18	<10	<10	<10	<10	<10	<10	
Toluene	<10	<10	<10	<10	<0.15	<10	<10	<10	<10	<10	<10	
Trichloroethene	<10	<10	<10	<10	<0.090	<10	<10	<10	<10	<10	<10	
Xylenes (total)	<30	<30	<30	<30	<0.36	<30	<30	<30	<30	<30	<30	
Aniline	<50	<5.3	<5.3	<5.3	<1.8	<5.2	<5.2	<10	<5.0	<10	<10	
N,N-Dimethylaniline	1.3	<11	1.6	1.7	1.9	0.98 J	1.0	1.1	0.98 J	1.3		
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<500	<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	10/23/2013	1/22/2014	4/15/2014	
Acetone	<10	<10	<10	<10	<2.7	<10	<10	<10	<10	<10 J	<10	
Benzene	<10	<10	<10	<10	<0.080	0.27 J	<10	<10	<10	<10	<10	
Ethylbenzene	<10	<10	<10	<10	<0.10	<10	<10	<10	<10	<10	<10	
Methylene Chloride	<10	<10	<10	<10	<0.18	<10	<10	<10	<10	<10	<10	
Toluene	<10	<10	<10	0.35 J	<10	<10	<10	<10	<10	<10	<10	
Trichloroethene	<10	<10	<10	<10	<0.090	<10	<10	<10	<10	<10	<10	
Xylenes (total)	<30	<30	<30	<30	<0.36	<30	<30	<30	<30	<30	<30	
Aniline	<50	<5.2	<5.3	<5.0	<1.8	<5.0	<5.2	<10	<5.0	<10	<10	
N,N-Dimethylaniline	<10	<10	<1.1 J	<10	<0.21	<0.61 J	<10	<10	<10	<10	<10	
Methanol	<500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

- 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 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, JANUARY 2014, AND APRIL 2014 SAMPLING EVENTS REFLECT GROUNDWATER QUALITY CONDITIONS AFTER THE SHUTDOWN OF THE IN-SITU AEROBIC BIOREMEDIATION TREATMENT AND CLOSED LOOP HYDRAULIC SYSTEMS.

- LEGEND:
- UTILITY POLE
 - CATCH BASIN
 - PETROLEUM PIPE LINE MARKER
 - GAS LINE MARKER
 - SEWER VENT
 - HYDRANT
 - WATER VALVE
 - MANHOLE
 - PROPERTY LINE
 - GROUNDWATER MONITORING WELL
 - PIEZOMETER
 - REMOVED/DECOMMISSIONED GROUNDWATER MONITORING WELL/PIEZOMETER
 - APPROXIMATE BOUNDARY OF AREA
 - GROUNDWATER INFILTRATION TRENCH
 - AREA OF HISTORICALLY RELATIVELY HIGHER CONCENTRATION OF COCs

MW-9S												
Date	4/28/2010	10/13/2010	4/5/2011	10/25/2011	10/5/2012	4/8/2013	7/26/2013	10/25/2013	1/24/2014	4/18/2014		
Acetone	<10	<10	<10	<10	7.5 J	<10	12 J	<10	<5.0	<10 J	<10	
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	
Ethylbenzene	26	11	29	4.2	18	4.7	19	12	10	13	19	
Methylene Chloride	<10	<10	<10	<10	<0.18	<10	<10	<10	<10	<10	<10	
Toluene	2.1	1.9	2.6	1.8	1.5	3.2	1.6	2.0	2.6	1.6	2.2	
Trichloroethene	<10	<10	<10	<10	<0.090	<10	<10	<10	<10	<10	<10	
Xylenes (total)	69	45	89	41 J	67	84	62	45	60	54	74	
Aniline	<50	<5.3	<5.0	<1.9	<5.0	<5.1	<10	<5.0	<10	<10	<10	
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	
Methanol	<500	<500 J	<500	<500	<500	NA	<1000	<1000	<500	<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	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	<4.8	<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	<1.0	<1.0	<1.2	<1.1	<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	<1.0	0.23 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	<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 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

MW-39											
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	<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
Xylenes (total)	<3.0	<3.0	<3.0	<3.0 J	<3.6	<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	<11	<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	<1.0



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

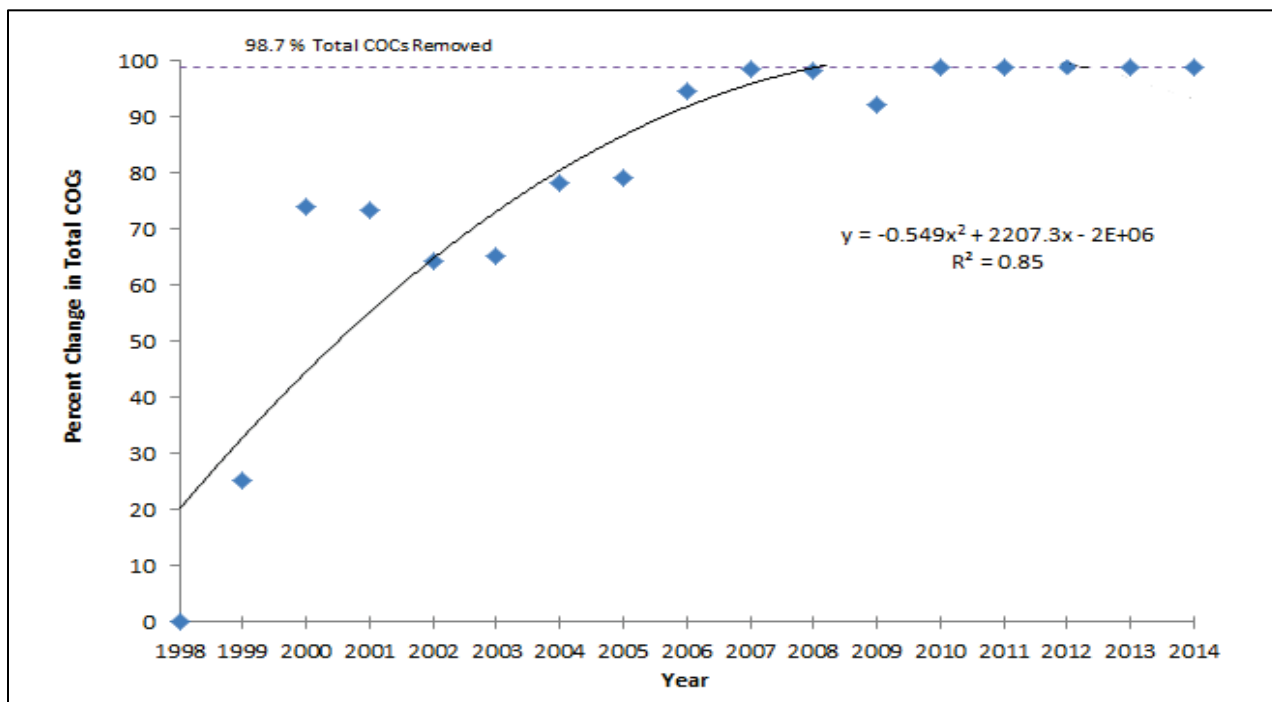
Between 1998 and 2014, the overall percent reduction in COC levels in Area 1 (i.e., monitoring wells MW-9S, MW-31, MW-32, MW-33, and TW-01) was 98.7 percent, as shown on Figure B-1. As COC levels were within 1 percent of complete removal (based on two significant figures), the data indicate that COC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

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

Attachment B. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

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.

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

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

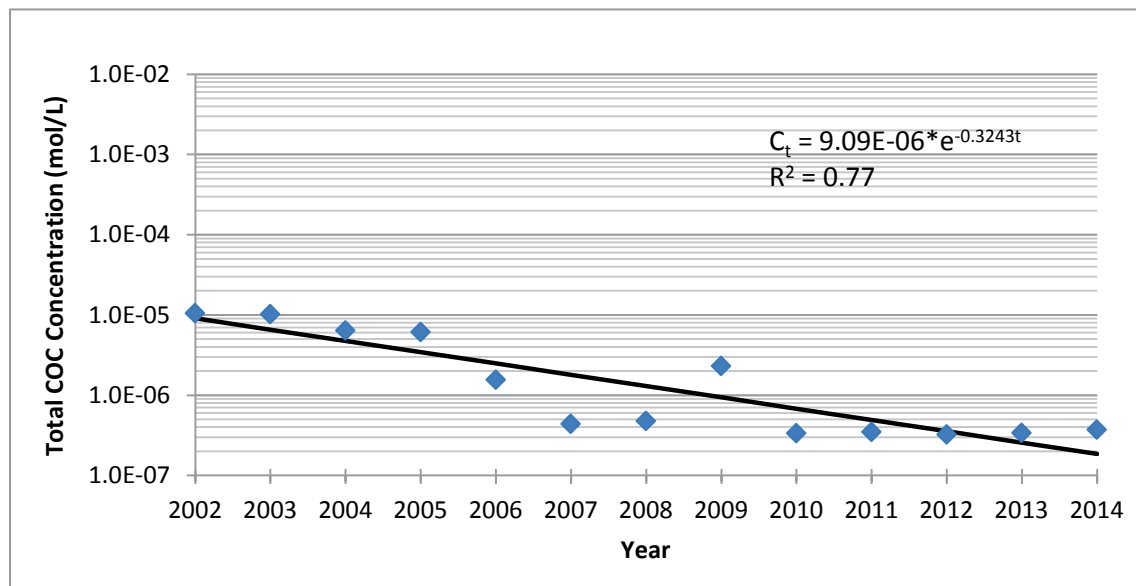
$$\text{Decay Rate: } (1 - e^{-0.3243}) * 100 = 28\%$$

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

Attachment B. Statistical Analyses

Monitoring Memorandum, McKesson EnviroSystems Site, Syracuse, New York

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



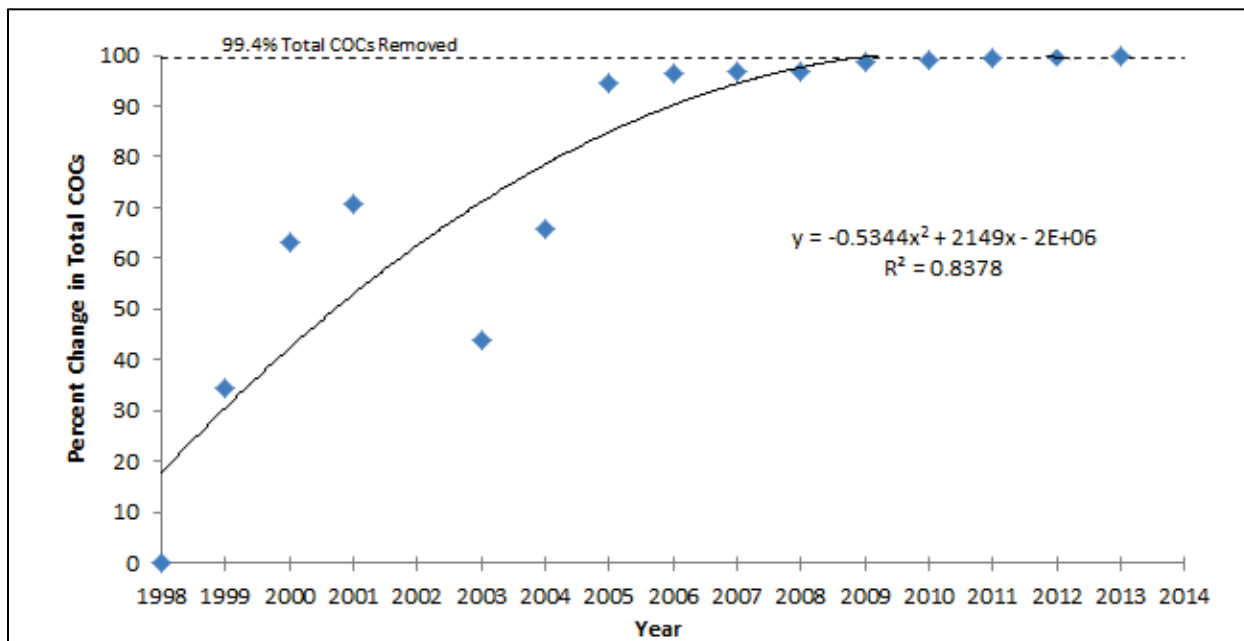
A regression between time (2008 to 2014) and percent total COC reduction further support that COC concentrations in Area 1 approached asymptotic conditions of 100 percent removal. The computed non-significant mean slope of 0.52 percent COC reduction per year ($p = 0.31$, $\alpha = 0.05$, $r^2 = 0.20$), 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.

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

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

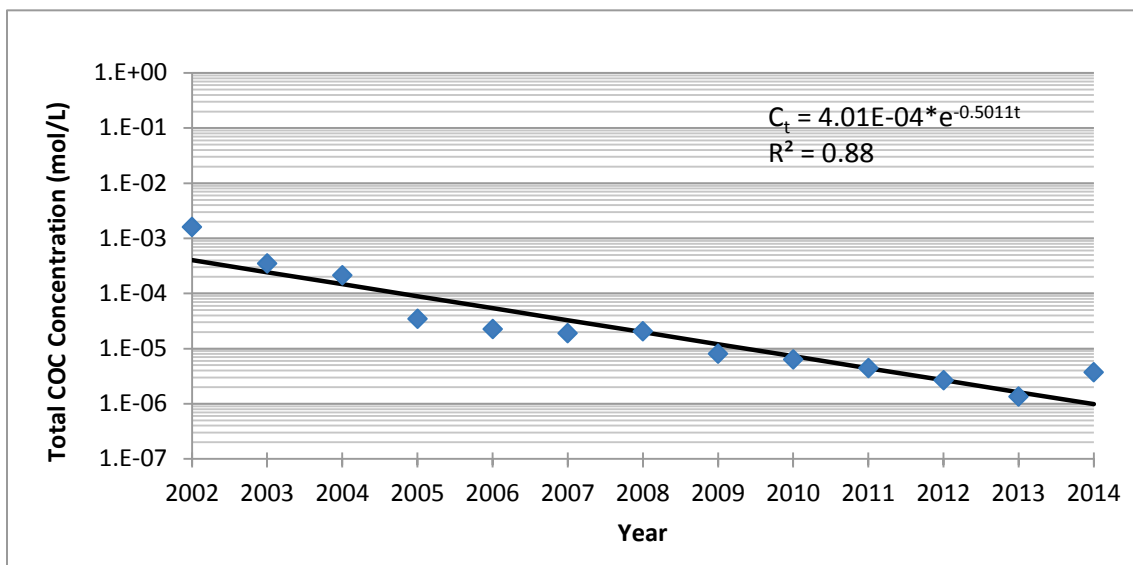
$$\text{Decay Rate: } (1 - e^{-0.5011}) * 100 = 39\%$$

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

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).

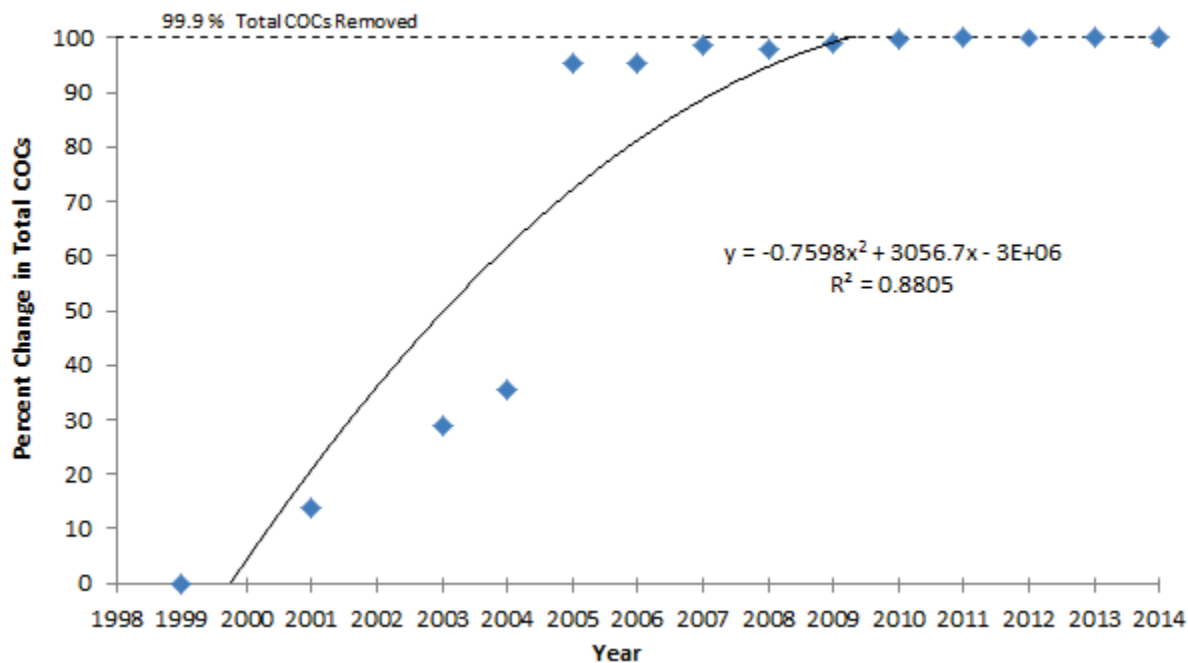
Area 3

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.

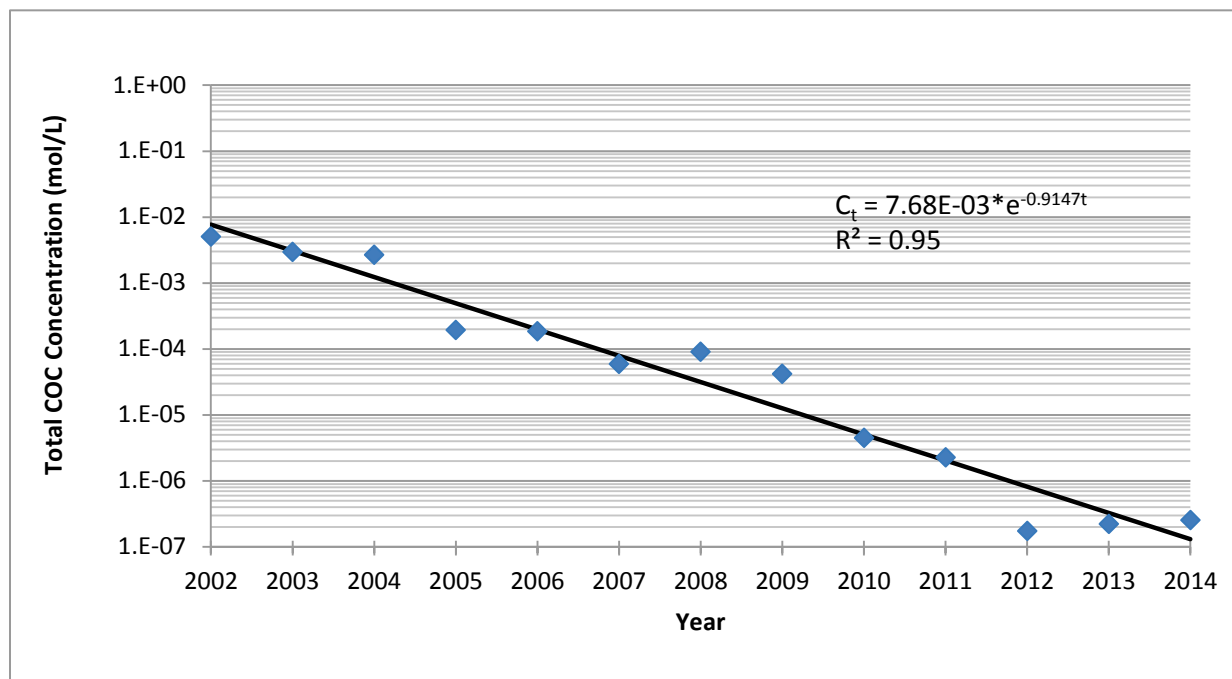
$$\ln(C_t) = -0.9147 * \ln(t) + 1826.4$$

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

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

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

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).



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

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-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.

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-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

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-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

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-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	<20	<1,000	<10	<5	<5	<10	
	11/04			<25	<10	<10	<10	<20	<1,000	<10	<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 ^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	

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)														
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 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	2 J	<10 J	
	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	

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

		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

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-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

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-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

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-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	

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-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	6,300 D	4 J	<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

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-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

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

		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

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

		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

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

		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
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

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

		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 J	5
PZ-4S (cont'd)	3/01			<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	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	

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
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 irrefutable 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.)

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	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	<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	1 J
Methylene Chloride	4 J	<10	<10	<10	<10	<10 J	<10	<5	<10	<5	<5
Acetone	<10	<10	<10	<10	<10	<10 J	<10	<14	<25	<12	<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	<1,000 J	370 J	<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

MW-36										
Date	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	<10	8 J	<10 J	5 J	<10	54	<20	12 J	9 J
Benzene	<10	<10	0.8 J	<10 J	<10 J	<10	<10	<5	<10	<5
Aniline	290 D	860 D	250	60	8 J	<10	350 D	9	2 J	67
N,N-dimethylaniline	6 J	4 J	<10	7 J	6 J	<10	5 J	41	2 J	4 J
Methylene Chloride	<10	<10	<10	<10	2 J	<10	<10	<5	<10	<5

- 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

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	2 J	4 J	R	<100
Acetone	<10	<10	<10 J	<10 J	<10	<10	<13	<25	<12

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
 - 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
 - TW-02R ○ REMOVED GROUNDWATER MONITORING WELL
 - APPROXIMATE BOUNDARY OF AREA
 - GROUNDWATER INFILTRATION TRENCH

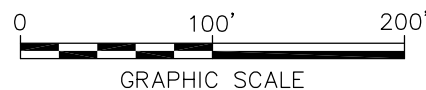
SAMPLE IDENTIFICATION

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

CONCENTRATION (ppb) — DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.

NOTES:

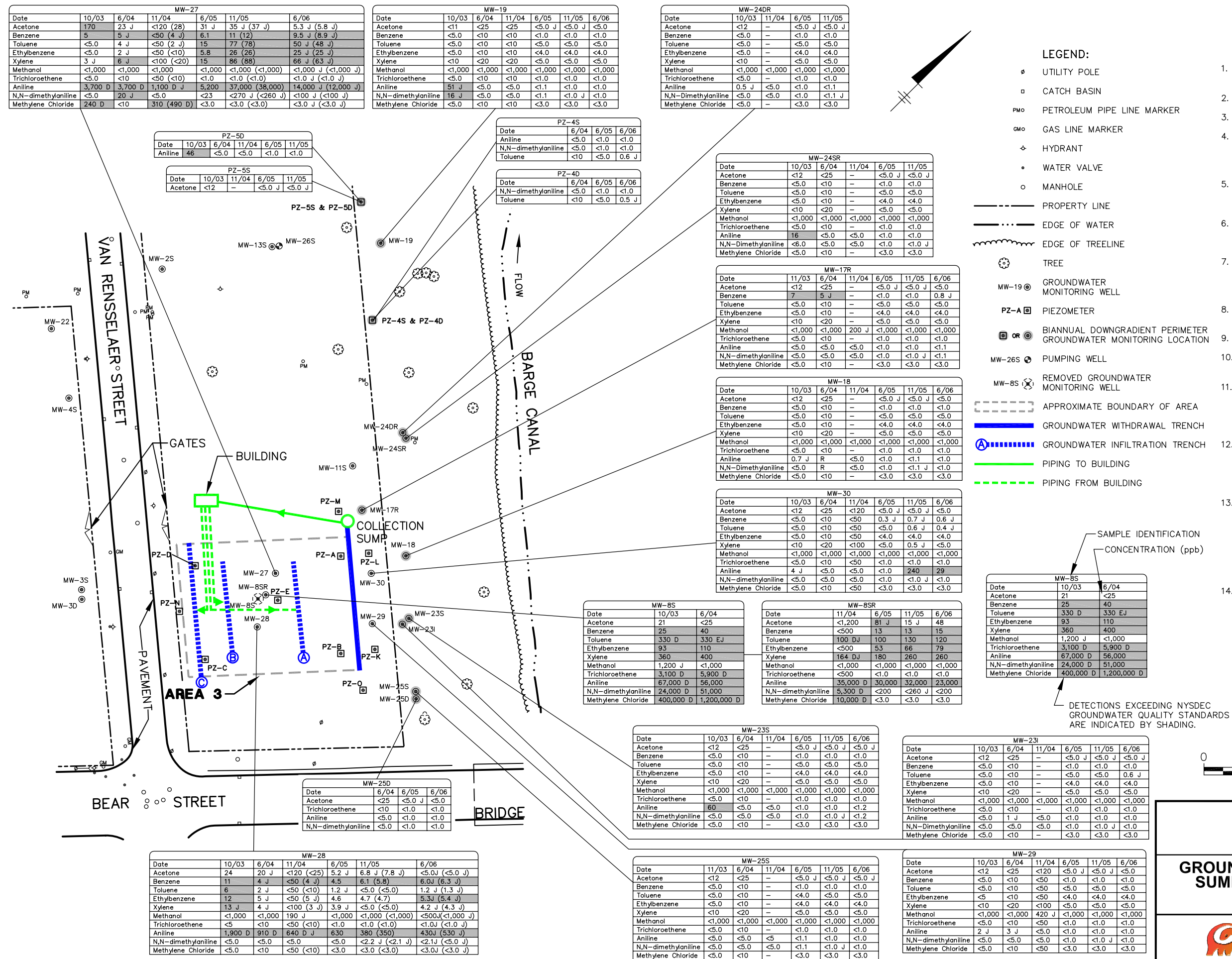
- REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
- TRENCH LOCATIONS ARE APPROXIMATE.
- MONITORING LOCATIONS ARE APPROXIMATE.
- FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
- ONLY COC 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.



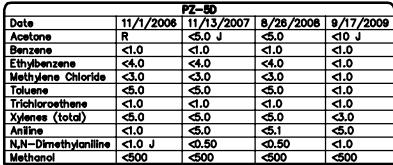
McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
PERIODIC REVIEW REPORT

GROUNDWATER MONITORING DATA
SUMMARY FOR OCTOBER 2003 -
JUNE 2006 AREAS 1 & 2





- 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 HAVE BEEN DETECTED ARE PRESENTED ON THIS FIGURE (SEE ATTACHMENT A FIGURE 2).
- < = 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.
- E = THE COMPOUND WAS QUANTITATED ABOVE THE CALIBRATION RANGE.
- 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.
- 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.
- 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.
- 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 PARENTHESSES.



MW-240R				
Date	11/1/2006	11/14/2007	8/26/2008	9/15/2009
Acetone	R	<5.0	<5.0	<1.0
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
Trichloroethane	<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	<5.0	<6.0	<1.0
Methanol	<50	<500	<500	<500

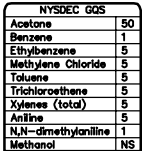
MW-240R				
Date	11/1/2006	11/14/2007	8/26/2008	9/16/2009
Acetone	R	<5.0	<5.0	<1.0
Benzene	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<1.0
Toluene	<5.0	<5.0	<5.0	<1.0
Trichloroethene	<1.0	<1.0	<1.0	<1.0
Xylenes (total)	<5.0	<5.0	<5.0	<3.0
Aniline	<1.0	<5.0	<5.7	<5.0
N,N-Dimethylaniline	<1.0 J	<0.50	<0.60	<1.0
Methanol	<500	<500	<500	<500

[illegible]

	MW-250			
Date	6/7/2007	3/27/2008	3/25/2009	4/29/2010
Acetone	12 J	<5.0	<1.0	<1.0
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
Trichloroethane	<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 |  | MW-19 | GROUNDWATER MONITORING WELL |
|  | CATCH BASIN |  | PZ-A | PIEZOMETER |
|  | PETROLEUM PIPE LINE MARKER |  | OR | BIANNUAL DOWNGRADE PERIMETER |
|  | GAS LINE MARKER |  | | GROUNDWATER MONITORING LOCATION |
|  | HYDRANT |  | MW-26S | PUMPING WELL |
|  | WATER VALVE |  | MW-8S | REMOVED/DECOMMISSIONED
GROUNDWATER MONITORING
WELL/PIEZOMETER |
|  | MANHOLE |  | | APPROXIMATE BOUNDARY OF AREA |
|  | PROPERTY |  | | GROUNDWATER WITHDRAWAL TRENCH |
|  | LINE EDGE OF WATER |  | | GROUNDWATER INFILTRATION TRENCH
AND IDENTIFICATION |
|  | EDGE OF TREELINE |  | | PIPING TO BUILDING |
|  | TREE |  | | PIPING FROM BUILDING |

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 FIGURES 2 AND 4).
6. < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
7. NA = COMPOUND WAS NOT ANALYZED FOR IN THE SAMPLE.
8. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
9. R = THE SAMPLE RESULT WAS REJECTED.
10. B = COMPOUND WAS FOUND IN ASSOCIATED METHOD BLANK.
11. 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.
12. 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).
13. NS - STANDARD NOT AVAILABLE.

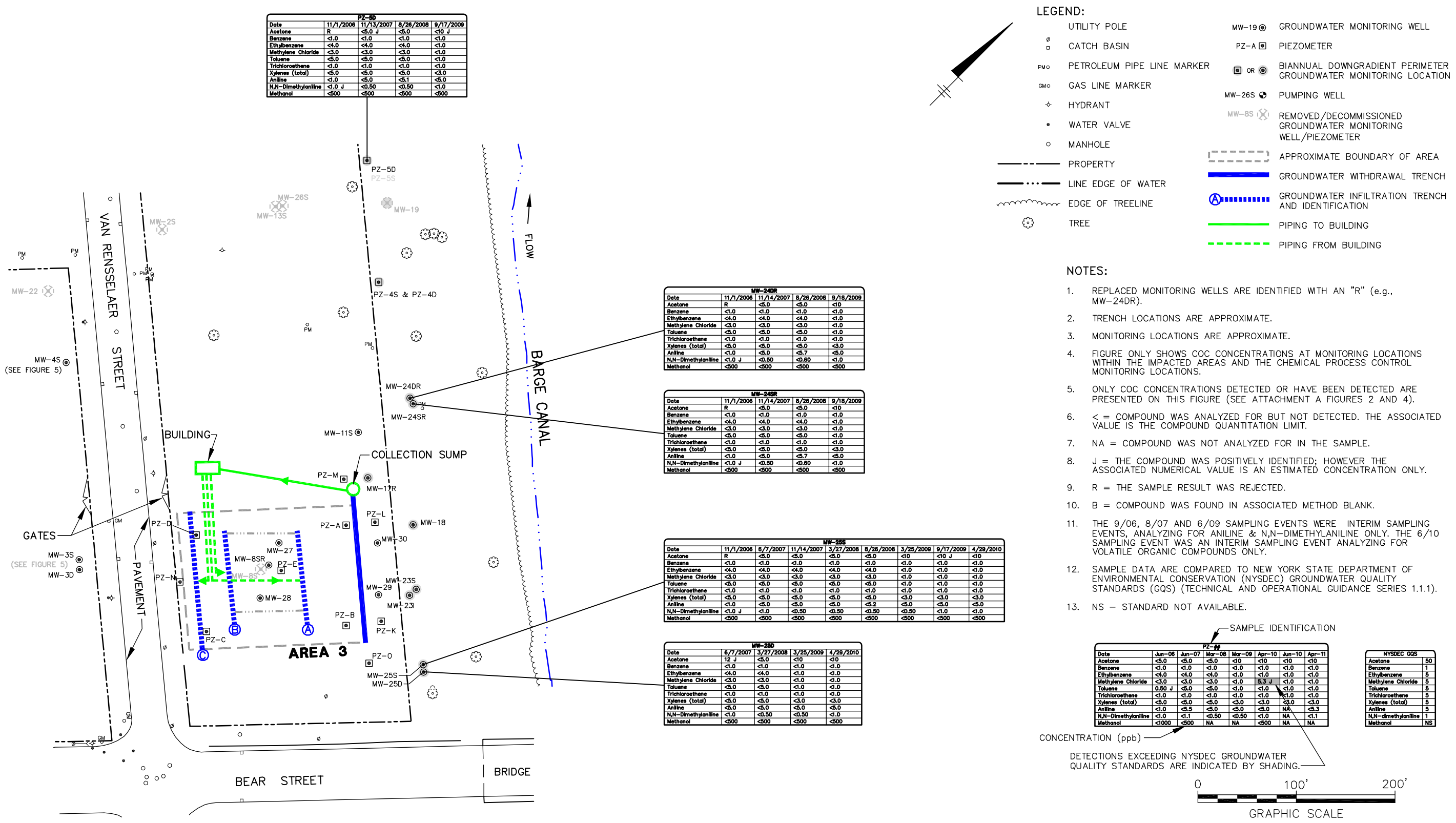


McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
PERIODIC REVIEW REPORT

**GROUNDWATER MONITORING DATA SUMMARY
FOR SEPTEMBER 2006 - AUGUST 2009
AREA 3 (AEROBIC TREATMENT)**



CITY: SYRACUSE, N.Y. DIV/GROUP: ENVCAD-141 DB: N.S.MITHGALL, L. FORAKER, W.JONES LD: PIC: D. ULM PM: D. PENNIMAN TM: D. PENNIMAN LYN: ONE+OFF=REF
G: ENVCAD/SYRACUSE/ACT1800260030000001900D/G/OCT2011126003C05.DWG LAYOUT: 75/SAVED: 12/13/2011 2:07 PM ACADVER: 18.05 (LMS TECH) PAGES/SETUP: ---PLOTSTYLETABLE: PLT/FULLCTB PLOTTED: 12/13/2011 2:09 PM BY: POSENAUER, LISA
XREFS: 26003X01 26003X00



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

ARCADIS

FIGURE
7



Attachment E

Executed Deed Restrictions

11:27 10/03/14 3308514 CP DB-5298P-682
11:29 10/03/14 3308514 CP DB-5298P-682
11:30 10/03/14 3308714 CP DB-5298P-690
11:30 10/03/14 3308714 CP DB-5298P-690
11:30 10/03/14 3308714 CP DB-5298P-690

ONONDAGA COUNTY CLERK
401 MONTGOMERY ST.
SYRACUSE NY 13202
PHONE: 435-2227

RECEIPT #: 1172210 DATE: 10/03/14 11:31

FROM: BOND CP
Instrument #: 3308514
NAME: MCKESSON CORPORATION

CD#	DESCRIPTION	AMOUNT
24	RMI	20.00
01	TAX TRANSFER	0.00
11	RECORD DEEDS	60.50

Total \$80.50
Instrument #: 3308714

NAME: MCKESSON CORPORATION
CD# DESCRIPTION

AMOUNT

24	RMI	20.00
01	TAX TRANSFER	0.00
11	RECORD DEEDS	60.50

Total \$80.50

Receipt Total \$161.00

CHECK 161.00

Total Paid 161.00

Change 0.00

DECLARATION of COVENANTS and RESTRICTIONS

THIS COVENANT is made the 29th day of September, 2014, by McKesson Corporation, a corporation organized and existing under the laws of the State of Delaware and having an office for the transaction of business at One Post Street, San Francisco, CA 94104.

WHEREAS, McKesson Envirosystems (Inland Site) is the subject of an Order on Consent executed by McKesson Corporation as part of the New York State Department of Environmental Conservation's (the "Department's") State Superfund Program, namely that parcel of real property located on 800 Van Rensselaer Street in the City of Syracuse, County of Onondaga, State of New York, which is part of lands conveyed by SP Ventures, Inc. to McKesson Corporation by deeds dated December 27, 1995 and recorded in the Onondaga County Clerk's Office in Liber 4063, Pages 0250-0259, and being more particularly described in Appendix "A," attached to this declaration and made a part hereof, and hereinafter referred to as "the Property"; and

WHEREAS, the Department approved a remedy to eliminate or mitigate all significant threats to the environment presented by the contamination disposed at the Property and such remedy requires that the Property be subject to restrictive covenants.

NOW, THEREFORE, McKesson Corporation, for itself and its successors and/or assigns, covenants that:

First, the Property subject to this Declaration of Covenants and Restrictions is as shown on a map attached to this declaration as Appendix "B" and made a part hereof.

Second, unless prior written approval by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, where groundwater contamination remains at the Property subject to the provisions of the Site Management Plan ("SMP"), there shall be no construction, use or occupancy of the Property that results in the disturbance or excavation of the Property which threatens the integrity of the engineering controls or which results in unacceptable human exposure to contaminated groundwater. The SMP may be obtained from the New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233.

Third, the owner of the Property shall not disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of engineering controls required for the Remedy, which are described in the SMP, unless in each instance the owner first obtains a written waiver of such prohibition from the Department or Relevant Agency.

Fourth, the owner of the Property shall prohibit the Property from ever being used for purposes other than for Restricted Residential, Commercial or Industrial use without the express written waiver of such prohibition by the Department or Relevant Agency.

Fifth, use of the groundwater underlying the Property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Onondaga County Department of Health to render it safe for use as drinking water or for industrial purposes, as appropriate, and the user must first notify and obtain written approval to do so from the Department or Relevant Agency.

Sixth, the owner of the Property shall provide a periodic certification, prepared and submitted by professional engineer or environmental professional acceptable to the Department or Relevant Agency, which will certify that the institutional and engineering controls put in place are unchanged from the previous certification, comply with the SMP, and have not been impaired.

Seventh, the owner of the Property shall continue in full force and effect any institutional and engineering controls required for the Remedy and maintain such controls, unless the owner first obtains permission to discontinue such controls from the Department or Relevant Agency, in compliance with the approved SMP, which is incorporated and made enforceable hereto, subject to modifications as approved by the Department or Relevant Agency.

Eighth, this Declaration is and shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the Property, and shall provide that the owner and its successors and assigns consent to enforcement by the Department or Relevant Agency of the prohibitions and restrictions that the Order on Consent requires to be recorded, and hereby covenant not to contest the authority of the Department or Relevant Agency to seek enforcement.

Ninth, any deed of conveyance of the Property, or any portion thereof, shall recite, unless the Department or Relevant Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below.

By: Willie C. Bogan

Name: Willie C. Bogan

Title: Secretary

Date: September 29, 2014

STATE OF CALIFORNIA)

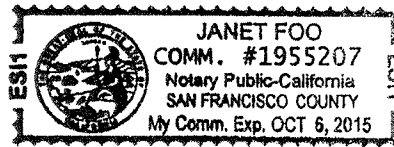
) s.s.:

COUNTY OF San Francisco)

On the 29th day of September, in the year 2014, before me, the undersigned, personally appeared Willie Clyde Bogan, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (~~are~~) subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.



Notary Public State of California



APPENDIX "A"

Current Surveyor's Modern Description

#800 Van Rensselaer Street – Tax Map #116.-01-09

McKesson Corporation – Book 4063 of Deeds, Page 250 & cont.

ALL THAT TRACT OR PARCEL OF LAND situate in the City of Syracuse, County of Onondaga and State of New York, and being more particularly bounded and described as follows:

BEGINNING AT A POINT of the intersection of the Northerly line of Van Rensselaer Street and the Westerly line of West Bear Street;

RUNNING THENCE N 50°26'30" W, along said Northerly line of Van Rensselaer Street, a distance of 671.25 feet to a point;

THENCE N 43°36'09" W, a distance of 225 feet to a point;

THENCE S 50°26'30" E, a distance of 671.12 feet to a point in said Westerly line of Bear Street;

THENCE S 43°34'10" W, along said Westerly line, a distance of 225 feet TO THE POINT OF BEGINNING, containing 3.458± Acres of land.

SUBJECT TO an unrecorded 10 foot wide Easement, dated August 2, 1948 to Socony-Vacuum Oil Company running in an Easterly direction across the Westerly portion of the above-described parcel.

ALSO, SUBJECT TO a permanent Drainage Easement to the New York State Department of Public Works, recorded in the Onondaga County Clerk's Office on February 8, 1961 in Book 2033 of Deeds, Page 33.

ALSO, SUBJECT TO any other easement and/or restrictions of record.

Copy 1
7 Acre Pasture Lot 4
15 Acre Marsh Lot 41
Setback

APPENDIX "B"

DECLARATION of COVENANTS and RESTRICTIONS

THIS COVENANT is made the 30th day of September, 2014, by McKesson Corporation, a corporation organized and existing under the laws of the State of Delaware and having an office for the transaction of business at One Post Street, San Francisco, CA 94104.

WHEREAS, McKesson EnviroSystems (Inland Site) is the subject of an Order on Consent executed by McKesson Corporation as part of the New York State Department of Environmental Conservation's (the "Department's") State Superfund Program, namely that parcel of real property located on 801 Van Rensselaer Street in the City of Syracuse, County of Onondaga, State of New York, which is part of lands conveyed by SP Ventures, Inc. to McKesson Corporation by deeds dated December 27, 1995 and recorded in the Onondaga County Clerk's Office in Liber 4063, Pages 0250-0259, and being more particularly described in Appendix "A," attached to this declaration and made a part hereof, and hereinafter referred to as "the Property"; and

WHEREAS, the Department approved a remedy to eliminate or mitigate all significant threats to the environment presented by the contamination disposed at the Property and such remedy requires that the Property be subject to restrictive covenants.

NOW, THEREFORE, McKesson Corporation, for itself and its successors and/or assigns, covenants that:

First, the Property subject to this Declaration of Covenants and Restrictions is as shown on a map attached to this declaration as Appendix "B" and made a part hereof.

Second, unless prior written approval by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, where groundwater contamination remains at the Property subject to the provisions of the Site Management Plan ("SMP"), there shall be no construction, use or occupancy of the Property that results in the disturbance or excavation of the Property which threatens the integrity of the engineering controls or which results in unacceptable human exposure to contaminated groundwater. The SMP may be obtained from the New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233.

Third, the owner of the Property shall not disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of engineering controls required for the Remedy, which are described in the SMP, unless in each instance the owner first obtains a written waiver of such prohibition from the Department or Relevant Agency.

Fourth, the owner of the Property shall prohibit the Property from ever being used for purposes other than for Restricted Residential, Commercial or Industrial use without the express written waiver of such prohibition by the Department or Relevant Agency.

Fifth, use of the groundwater underlying the Property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Onondaga County Department of Health to render it safe for use as drinking water or for industrial purposes, as appropriate, and the user must first notify and obtain written approval to do so from the Department or Relevant Agency.

Sixth, the owner of the Property shall provide a periodic certification, prepared and submitted by professional engineer or environmental professional acceptable to the Department or Relevant Agency, which will certify that the institutional and engineering controls put in place are unchanged from the previous certification, comply with the SMP, and have not been impaired.

Seventh, the owner of the Property shall continue in full force and effect any institutional and engineering controls required for the Remedy and maintain such controls, unless the owner first obtains permission to discontinue such controls from the Department or Relevant Agency, in compliance with the approved SMP, which is incorporated and made enforceable hereto, subject to modifications as approved by the Department or Relevant Agency.

Eighth, this Declaration is and shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the Property, and shall provide that the owner and its successors and assigns consent to enforcement by the Department or Relevant Agency of the prohibitions and restrictions that the Order on Consent requires to be recorded, and hereby covenant not to contest the authority of the Department or Relevant Agency to seek enforcement.

Ninth, any deed of conveyance of the Property, or any portion thereof, shall recite, unless the Department or Relevant Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below.

By: 

Name: Willie C. Bogan

Title: Secretary

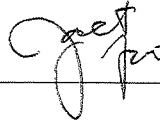
Date: September 30, 2014

STATE OF CALIFORNIA)

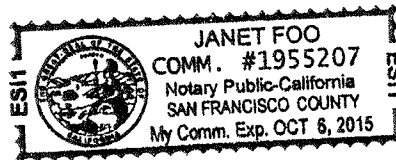
) s.s.:

COUNTY OF SAN FRANCISCO)

On the 30th day of September, in the year 2014, before me, the undersigned, personally appeared Willie Clyde Bogan, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.



Notary Public State of California



APPENDIX "A"

Current Surveyor's Modern Description

#801 Van Rensselaer Street – Tax Map #115.-03-07.1

McKesson Corporation – Book 4063 of Deeds, Page 250 & cont.

ALL THAT TRACT OR PARCEL OF LAND situate in the City of Syracuse, County of Onondaga and State of New York, and being more particularly bounded and described as follows:

BEGINNING AT A POINT of the intersection of the Southerly line of Van Rensselaer Street and the Westerly line of West Bear Street;

RUNNING THENCE S 43°34'10" W, along said Westerly line of West Bear Street, a distance of 480.31 feet to a point;

THENCE N 47°53'35" W, a distance of 476.91 feet to a point;

THENCE N 43°00'48" E, a distance of 458.76 feet to a point in said Southerly line of Van Rensselaer Street;

THENCE S 50°26'30" E, along said Southerly line, a distance of 482.39 feet TO THE POINT OF BEGINNING, containing 5.164± Acres of land.

SUBJECT TO any easements and/or restrictions of record.

(Syracuse) Bk. 410 911
FL 315 / Ave Pasture
Lots 4, 5
Cape Cod Tr. / NW

APPENDIX "B"

