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INDUSTRIAL

Mr. Mark Mateunas
Bureau of Hazardous Site Control
New York State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, NY 12233-7012

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

Date:
January 23, 2007

Contact:
David J. Ulm

Phone:
315.671.9210

Email:
David.Ulm@
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Our ref:
B0026003 #10

Dear Mr. Mateunas:

This *Biannual Process Control Monitoring Report* (Biannual Report) for the McKesson Envirosystems, Bear Street Site (the site), located at 400 Bear Street in Syracuse, New York, has been prepared by ARCADIS of New York, Inc. (ARCADIS BBL, formerly known as Blasland, Bouck & Lee, Inc.), on behalf of McKesson Corporation (McKesson). This Biannual Report describes the operation and maintenance (O&M) activities conducted and monitoring results obtained from January 2006 through June 2006. This Biannual Report has been prepared in accordance with the requirements of the New York State Department of Environmental Conservation- (NYSDEC-) approved *Site Operation and Maintenance Plan* (O&M Plan) (Blasland, Bouck & Lee, Inc. [BBL], Revised August 1999) and a December 29, 1999 letter from David J. Ulm of BBL (now known as ARCADIS BBL) to Michael J. Ryan, P.E., of the NYSDEC. The December 29, 1999 letter presents the long-term process control monitoring program and serves as an addendum to the O&M Plan. The O&M Plan and addendum are collectively referred to herein as the O&M Plan.

The site is divided into two operable units (OUs): OU No. 1 — Unsaturated Soil, and OU No. 2 — Saturated Soils and Groundwater. As a part of the NYSDEC-selected remedy for both of these OUs, there have been and continue to be ongoing O&M activities. Since completing the OU No. 1 remedial activities in 1994/1995 and commencing the OU No. 2 in-situ anaerobic bioremediation treatment activities in July 1998, details regarding the O&M activities and results of the process control monitoring program have been provided to the NYSDEC in biannual reports. A site description and history, along with a description of the remedial actions completed and the ongoing O&M activities are detailed in the previous biannual reports, including BBL's (now known as ARCADIS BBL) August 2001 Biannual Report for July 2000 through December 2000. That information has not changed and is therefore not repeated herein.

In the Biannual Report for the July 2005 to December 2005 reporting period (BBL, June 2006), modifications to the existing treatment activities were proposed for Areas 1, 2 and 3. The modifications were based on the slow rate of aniline anaerobic biodegradation and its continued elevated concentration in groundwater samples, as seen in the October 2005 groundwater sampling results. An in-situ aerobic bioremediation treatment program was proposed as an alternate approach to reduce residual aniline concentrations at each area. In July 2006, the NYSDEC verbally approved this modification, and BBL (now known as ARCADIS BBL) began its implementation in August 2006. This system modification was achieved by replacing the Revised Anaerobic Mineral Media (RAMM) and Suga-Lik® with an oxygen source and macronutrients. Further details regarding the modifications will be presented in the Biannual Report for the July 2006 to December 2006 reporting period.

During this reporting period (January 2006 through June 2006), no substantial system repairs were required and no unusual observations were made regarding system operations. The Area 3 in-situ anaerobic bioremediation treatment system has operated satisfactorily during this reporting period without interruption, and approximately 775,189 gallons of water were pumped from the withdrawal trench and introduced into the Area 3 infiltration trenches, as detailed herein.

The NYSDEC was notified of the June 2006 process control monitoring event (including hydraulic and constituents of concern [COC] monitoring) prior to commencing the monitoring activities. The revised Process Control Monitoring Program schedule is detailed in Table 1.

The information provided in this letter has been organized into the following sections:

- **I. RAMM and Suga-Lik® Introduction Activities** — Describes the RAMM and Suga-Lik® (Blackstrap Molasses) introduction activities conducted between January 2006 and June 2006.

- **II. Hydraulic Process Control Monitoring** — Describes the results of the hydraulic control monitoring activities conducted between January 2006 and June 2006.

- **III. COC Process Control and Biannual Groundwater Monitoring Program** — Describes the June 2006 results of the COC process control and biannual groundwater monitoring program, and summarizes the COC data obtained at the site from 1989 through June 2006.

- **IV. Conclusions** — Presents conclusions based on the results of the process control monitoring activities.

- **V. Recommendations** — Provides recommendations for the in-situ bioremediation treatment program and monitoring activities.

I. RAMM and Suga-Lik® Introduction Activities

The RAMM and Suga-Lik® introduction activities listed below have been conducted from January 2006 through July 2006 (see Figure 1 for referenced locations):

- Continued to introduce approximately 100 gallons of RAMM-amended groundwater into each of the three areas on a monthly basis.

- Continued to add Suga-Lik® with RAMM into the two Area 1 infiltration trenches on a monthly basis, by manually filling each of the standpipes located in the infiltration trenches. Suga-Lik® has been added during these monthly RAMM introduction activities to provide an easily metabolized carbon source to further stimulate the growth of indigenous bacteria. Suga-Lik® provides electron donors, while RAMM provides nutrients and electron acceptors.

- Continued to introduce RAMM and Suga-Lik® on a monthly basis into three piezometers (PZ-G, PZ-Q and PZ-R) located within the shallow hydrogeologic unit of Area 1. RAMM and Suga-Lik® were added to the piezometers to better distribute a readily degradable carbon source that otherwise may not reach these areas if distributed through the infiltration trenches only.

- Continued to introduce RAMM on a monthly basis into piezometer PZ-S, well point WP-4 and well point WP-5 located downgradient of Area 1, near monitoring well MW-33.

- Continued to introduce RAMM and Suga-Lik® on a monthly basis into piezometer PZ-W located downgradient of Area 2, near monitoring well MW-36.

- Continued to introduce RAMM and Suga-Lik® on a monthly basis into six well points (WP-1, WP-2, WP-3, WP-6, WP-7 and WP-8) within Area 3, near monitoring wells MW-27 and MW-28.

Approximately 10 gallons of the RAMM/Suga-Lik® solution has been introduced into each of the aforementioned piezometers and well points, and approximately 100 gallons of RAMM and/or Suga-Lik® solution has been introduced into Areas 1, 2 and 3 on a monthly basis. The amount of Suga-Lik® added to the RAMM has been proportional to the levels of COCs detected, at the dilution ratio of approximately 1,000:1.

II. Hydraulic Process Control Monitoring

As part of the hydraulic process control monitoring activities, groundwater-level measurements were obtained at existing monitoring wells and at piezometers that are screened entirely within the sand layer of the shallow hydrogeologic unit and located in and around each of the three areas. Additionally, one groundwater-level measurement was obtained from a staff gauge located in the Barge Canal adjacent to the site. The hydraulic process control monitoring activities were conducted on June 5, 2006. Monitoring locations are shown on Figure 1.

Table 2 summarizes the groundwater-level measurements obtained during the June 2006 hydraulic monitoring event, as well as those obtained since June 1998 (immediately prior to commencing the in-situ anaerobic bioremediation treatment activities). Figure 2 depicts the potentiometric surface of the site's shallow hydrogeologic unit using the June 5, 2006 data set, which is consistent with previous hydraulic monitoring events. The results and corresponding conclusions of the hydraulic process control monitoring are summarized below:

- A closed-loop hydraulic cell continues to be maintained in Area 3, as shown on Figure 2.

- The groundwater withdrawal rate in Area 3 ranged from approximately 1.81 gallons per minute (gpm) to 4.47 gpm. These rates continue to induce a higher hydraulic gradient across the area of relatively higher concentrations of COCs within Area 3 (relative to baseline conditions), while maintaining hydraulic containment in Area 3.

- In Area 3, approximately 75 percent of the recovered groundwater continues to be introduced to the secondary infiltration trench "B" and the remaining 25 percent continues to be introduced to the secondary infiltration trench "A." This introduction of recovered groundwater into the secondary infiltration trenches increases the rate at which RAMM-amended groundwater moves through the area of relatively higher concentrations of COCs (between the secondary infiltration and recovery trenches). The withdrawal of groundwater continues to induce a hydraulic gradient in Area 3 from perimeter monitoring wells MW-23S, MW-25S and MW-17R toward the withdrawal trench.

- No discernable, long-term hydraulic effects were identified at or near Areas 1 and 2 as a result of introducing RAMM or RAMM/Suga-Lik® into these areas on a monthly basis.

- The hydraulic data obtained during the 7.5-year operating history of the treatment system in Area 3 has consistently indicated no discernable effect on the hydraulic gradient of the deep hydrogeologic unit.

- The weekly conductivity measurements of groundwater pumped from the withdrawal trench in Area 3 ranged from 1.55 millisiemens per centimeter (mS/cm) to 2.10 mS/cm, which is within the range of the conductivity levels measured prior to system operation (1 mS/cm to 4 mS/cm). These measurements are well below the measured conductivity of the deep unit, which is greater than the calibration range of the field instrument (10 mS/cm). These data indicate that operation of the Area 3 treatment system has not caused the freshwater/saltwater interface to upcone to the base of the withdrawal trench.

III. COC Process Control and Biannual Groundwater Monitoring Program

The COC process control and biannual groundwater monitoring activities were conducted on June 5, 2006 through June 9, 2006, in accordance with the long-term COC process control monitoring program presented in the O&M Plan. In addition, the following groundwater quality parameters were also measured in the field during the June 2006 COC sampling event: temperature, conductivity, dissolved oxygen (DO) and oxidation/reduction potential (ORP). The existing monitoring wells and piezometers that were used to conduct the long-term process control monitoring program and a schedule for implementing this program are provided in Table 1. Monitoring locations are shown on Figure 1.

In accordance with the requirements of the NYSDEC-approved monitoring program, laboratory analytical results for the June 2006 samples were validated. Validated COC groundwater analytical results are summarized in Table 3 and shown on Figures 3 and 4. These figures also present the COC groundwater analytical results obtained during the biannual monitoring events conducted since October 2003, collectively presenting the results obtained after the first 5 years of implementing the in-situ anaerobic bioremediation treatment activities. The COC groundwater analytical results obtained prior to October 2003 are presented in Attachment A. Copies of the validated analytical laboratory reports associated with the June 2006 sampling event are presented in Attachment B. COC analytical results are summarized below for each of the three areas, and for the downgradient perimeter monitoring locations. The presence or absence of nonaqueous phase liquid (NAPL) was also assessed in existing monitoring wells and piezometers during the process control monitoring event. NAPL was not identified in any of the monitoring wells or piezometers used during the process control monitoring program.

Area 1

- As shown on Figure 3 and in Attachment A, the COC concentrations detected in groundwater samples collected from monitoring wells within Area 1 were generally low, ranging from not detected to concentrations just slightly greater than their respective NYSDEC Groundwater Quality Standard. These data (with the exception of aniline concentrations at MW-33) demonstrate a significant decrease in COC concentrations in Area 1 since commencement of the in-situ anaerobic bioremediation treatment activities (marked by the September 1998 sampling event). For example, the aniline concentration detected at MW-32 was 6,300 parts per billion (ppb) in September 1998, but aniline has not been detected above the NYSDEC Groundwater Quality Standard at this location since May 2003. Similarly, the aniline concentration detected at TW-01 in September 1998 was 4,400 ppb; however aniline has not been detected above the NYSDEC Groundwater Quality Standard of 5 ppb since October 2002.

- The aniline concentration detected in the groundwater sample collected from MW-33 in June 2006 was 370 ppb, compared to the aniline concentration detected in the preceding November 2005 sampling event (3,500 ppb). Suga-Lik® additions at locations near MW-33 were discontinued in April 2005 to further stimulate the biodegradation rate of aniline in the vicinity of this monitoring well. Aniline was not detected in the groundwater sample collected from the monitoring well located downgradient of MW-33 (i.e., MW-3S).

Area 2

- As shown on Figure 3 and in Attachment A, the COC concentrations detected in groundwater samples collected from monitoring wells within Area 2 were generally low, with the exception of the aniline concentration (10,000 ppb) detected in the groundwater sample collected from TW-02RR, which is an approximate 30 percent decrease from the preceding November 2005 sampling event (14,000 ppb). Further, the aniline concentration detected at TW-02RR in June 2006 (10,000 ppb) is approximately 88 percent lower than the concentrations previously detected prior to completing the August 2004 supplemental remedial activities in Area 2 (82,000 ppb). Since commencing the bioremediation treatment activities, COC concentrations at this location have significantly decreased: N,N-dimethylaniline and methylene chloride were not detected in June 2006 compared to detections of 61,000 ppb and 86,000 ppb, respectively in September 1998.

- In the June 2006 groundwater sample collected from monitoring well MW-36 (located downgradient of Area 2), the aniline concentration (76 ppb) was approximately 95 percent lower than the preceding November 2005 sampling event (1,600 ppb). No other COCs were detected in this sample at concentrations greater than their respective NYSDEC Groundwater Quality Standard, except for benzene and N,N-dimethylaniline, which were detected at 1.6 ppb and 1.9 ppb, respectively.

Area 3

- As presented on Figure 4 and in Attachment A, the concentrations of most COCs that were previously detected at Area 3 monitoring locations above their respective NYSDEC Groundwater Quality Standards have decreased or remained relatively constant since implementing the in-situ anaerobic bioremediation treatment activities.

- The aniline concentration detected in the groundwater sample collected during June 2006 from monitoring well MW-27 (14,000 ppb) was lower than the previous detection of 37,000 ppb (November 2005). Other COCs detected in the groundwater sample collected from MW-27 in November 2005 were relatively low, consistent with previously detected concentrations.

- In the June 2006 groundwater sample collected from monitoring well MW-30 (located downgradient of Area 3), the aniline concentration (29 ppb) was lower than the aniline concentration detected during the preceding November 2005 sampling event (240 ppb). No other COCs were detected in this sample at concentrations greater than their respective NYSDEC Groundwater Quality Standard. Aniline was not detected in groundwater samples collected from MW-18, which is downgradient of MW-30.

- Monitoring well MW-8SR is located in the center of Area 3 and within the area that has been identified as containing relatively higher concentrations of COCs (see Figure 4). The June 2006 groundwater sample collected at MW-8SR had significantly lower COC concentrations compared to those detected prior to completing the August 2004 supplemental remedial activities conducted in Area 3: N,N-dimethylaniline and methylene chloride concentrations reduced from 5,300 ppb and 10,000 ppb, respectively, in June 2004 to nondetect in June 2006. The aniline concentration was 23,000 ppb in June 2006, a decrease from the 32,000 ppb detected in November 2005.

- Monitoring well MW-28 is also located within Area 3 and historically exhibited relatively higher concentrations of methylene chloride and aniline. However, methylene chloride concentrations at this location have been nondetect since October 2003. Similarly, aniline concentrations detected since the August 2004 supplemental remedial activities (640 ppb in November 2004, 630 ppb in June

2005, 380 ppb in November 2005 and 430 ppb in June 2006) are generally lower than historical concentrations detected at this location since commencing in-situ anaerobic bioremediation treatment activities.

Figure 2 of Attachment A presents the data for this well from September 2000 to May 2003. Other COCs have generally not been detected in groundwater samples collected from MW-28, or were detected at concentrations just slightly greater than their respective NYSDEC Groundwater Quality Standard.

Downgradient Perimeter Monitoring Locations

As presented on Figure 4, COCs were not detected above their respective NYSDEC Groundwater Quality Standards at any of the downgradient perimeter monitoring locations during June 2006.

IV. Conclusions

The process control monitoring data presented in this Biannual Report will continue to be used to monitor the effectiveness of the in-situ bioremediation treatment activities. The conclusions presented below are based on the process control monitoring data obtained to date:

- A closed loop hydraulic cell continues to be maintained in Area 3.
- Operation of the Area 3 treatment system has not caused the freshwater/ saltwater interface to upcone to the base of the withdrawal trench.
- COCs were not detected above the NYSDEC Groundwater Quality Standards at the perimeter sampling locations in June 2006, which is consistent with prior perimeter groundwater data, obtained in some cases since 1989.
- COC concentrations detected in the groundwater samples collected from Area 1 since the in-situ anaerobic bioremediation treatment activities began in 1998 demonstrate a significant decrease in COC concentrations since commencing

these activities. COC concentrations in this area were mostly nondetect. A few COCs (e.g., benzene, ethylbenzene, xylene) were present at concentrations slightly greater than their respective NYSDEC Groundwater Quality Standard.

- In the area immediately downgradient of Area 1, aniline has been detected in MW-33. The June 2006 aniline concentration was approximately 89 percent lower than the preceding November 2005 concentration. Additionally, the aniline concentration most recently observed in June 2006 is one of the lowest concentrations detected since initiating in-situ anaerobic bioremediation treatment activities.

- COC groundwater concentrations within Area 2 have been and continue to be relatively low, with the exception of aniline detected at monitoring location TW-02RR. After completing the August 2004 supplemental remedial activities, the aniline concentration detected at TW-02RR showed an approximate 89 percent decrease. Even though there was a 30 percent decrease in the aniline concentration from the preceding November 2005 sampling event, the June 2006 aniline concentration is higher than the concentrations detected in November 2004 (7,100 ppb) and June 2005 (8,400 ppb). A few COCs (e.g., benzene, xylene, N,N-dimethylaniline) were present at concentrations slightly greater than their respective NYSDEC Groundwater Quality Standard in June 2006.

- In the June 2006 groundwater sample collected downgradient of Area 2 (MW-36), the aniline concentration decreased approximately 95 percent from the preceding November 2005 concentration. The June 2006 aniline concentration at MW-36 is consistent with historical concentrations (excluding the anomalously high concentrations detected in June and November 2005) that indicated a general decreasing trend, and the majority of prior samples exhibited aniline concentrations at or below 100 ppb.

- The concentrations of most COCs detected at Area 3 monitoring locations above their respective NYSDEC Groundwater Quality Standard have decreased or remained relatively the same since commencing the in-situ anaerobic bioremediation treatment activities in 1998, with the exception of MW-27 and MW-30. Both aniline and BTEX compounds (benzene, toluene, ethylbenzene and xylene) increased or remain elevated at MW-27, while only aniline increased at MW-30 (all other COCs at MW-30 remained below NYSDEC Groundwater Quality Standards).

- The COC concentrations measured at MW-8SR have decreased since commencing in-situ anaerobic bioremediation treatment activities: trichloroethene, N,N-dimethylaniline and methylene chloride, for example, have all reduced to nondetect. However, aniline concentrations are still elevated (e.g., 23,000 ppb in June 2006).

V. Recommendations

Given the slow rate of aniline anaerobic biodegradation and its continued elevated concentration in groundwater samples (especially within Areas 2 and 3), modifications to the existing treatment activities were proposed for Areas 1, 2 and 3 in the previous (July 2006) Biannual Report. As previously discussed, the NYSDEC verbally approved the modifications in July 2006. The modifications were implemented in August 2006 and are briefly summarized below.

An in-situ aerobic bioremediation treatment program was approved as an alternate approach to lower aniline concentrations at each area, and consists of replacing the RAMM and Suga-Lik® with an oxygen source and macronutrients. The oxygen source is dilute hydrogen peroxide (H_2O_2), and the macronutrients include nitrogen and phosphorus in the form of Miracle-Gro®. This modification is anticipated to change the environmental conditions in the shallow hydrogeologic unit, switching the reducing (anaerobic) conditions to oxidizing (aerobic) conditions. The potential for aerobic biodegradation of aniline at the site was established during the successful in-situ biodegradation of unsaturated soils performed in 1994/1995 and confirmed in the treatability study conducted in 1996. Under oxidizing conditions, the other COCs present at the site are also anticipated to continue to be degraded.

Starting on August 10, 2006, H_2O_2/nutrient-amended groundwater was injected into the infiltration trenches in Areas 1, 2 and 3 twice per week, for a total of 4 weeks, after which the H_2O_2/nutrient-amended groundwater was injected once per week for 2 months or until aerobic conditions were established. The H_2O_2/nutrient-amended groundwater injection process is consistent with the previous RAMM introduction activities at each area. H_2O_2 was added to the groundwater at a concentration of 100 mg/L, and nutrients were added at a carbon:nitrogen:phosphorus ratio of 50:25:10. Additionally, H_2O_2/nutrient-amended groundwater was introduced into piezometers in Area 1 (PZ-S), Area 2 (PZ-W) and Area 3 (PZ-E) to better distribute DO into the shallow hydrogeologic unit. DO levels have been measured in the field once per week, and will continue to be measured until aerobic conditions in groundwater are apparent (i.e., DO greater than 2 mg/L). The effectiveness of aerobic biodegradation and its continuous application will be assessed using the aniline and DO data collected from three sampling events: June 2006 biannual sampling event, September 2006 intermediate sampling event and October 2006 biannual sampling event.

The in-situ aerobic biodegradation treatment activities are being conducted in accordance with the site-specific Health and Safety Plan (BBL, 1999).

The next Biannual Report for the July 2006 to December 2006 reporting period will further describe activities conducted to implement the in-situ aerobic bioremediation treatment activities and any operational problems encountered. It will also provide data collected and assess the effectiveness of this new treatment approach.

As discussed in this Biannual Report and as summarized in Table 1, the monitoring activities conducted at the site are included in the Biannual Groundwater Monitoring Program and the revised Process Control Monitoring Program. The activities included in the Biannual Groundwater Monitoring Program will continue, and include the biannual collection of chemical and hydraulic data from downgradient perimeter wells/piezometers to determine whether or not groundwater that contains concentrations of COCs in excess of their respective NYSDEC Groundwater Quality Standard is migrating beyond the site boundary.

The second biannual sampling event of 2006 was conducted during the week of October 30, 2006. A summary of the O&M activities and results of the process control monitoring activities will continue to be presented to the NYSDEC on a biannual basis. Results of the Fall 2006 sampling will be discussed in the next report.

If you have any questions or require additional information, please do not hesitate to contact me at (315) 671-9210.

Sincerely,

ARCADIS of New York, Inc.

David J. Ulm
Senior Vice President

Attachments

Copies:
Mr. Jim Burke, P.E., New York State Department of Environmental Conservation (w/out Attachment B)
Mr. Gerald J. Rider, Jr., New York State Department of Environmental Conservation (w/out Attachment B)
Mr. Chris Mannes, New York State Department of Environmental Conservation (w/out Attachment B)
Ms. Henriette Hamel, R.S., New York State Department of Health (w/out Attachment B)
Ms. Jean A. Mescher, McKesson Corporation (w/out Attachment B)
Mr. Christopher R. Young, P.G., de maximis, inc. (w/out Attachment B)

TABLES

Table 1. Revised Long-Term Hydraulic and COC Process Control Monitoring Schedule
2006 Biannual Process Control Monitoring Report
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

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

See Notes on Page 2.

Table 1. Revised Long-Term Hydraulic and COC Process Control Monitoring Schedule
2006 Biannual Process Control Monitoring Report
McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Location	**Annual Sampling Schedule**	
	First Sampling Event	**Second Sampling Event**
PZ-C	H	H
PZ-D	H	H
PZ-E	H	H
PZ-K	H	H
PZ-L	H	H
PZ-M	H	H
PZ-N	H	H
PZ-O	H	H
MW-11S	H	H
MW-11D	H	H
Downgradient Perimeter Monitoring Locations		
MW-17R	C	C
MW-18	C, H	C, H
MW-19	C, H	C, H
MW-23I	C, H	C, H
MW-23S	C, H	C, H
MW-24SR	H	C, H
MW-24DR	H	C, H
MW-25S	C, H	C, H
MW-25D	C, H	H
PZ-4S	C	
PZ-4D	C, H	H
PZ-5S		C
PZ-5D	H	C, H

Notes:

1. H = Hydraulic Monitoring (Groundwater Level Measurements).
2. C = Monitoring for the Chemicals of Concern (COCs).
3. The hydraulic monitoring identified in this table will be conducted on a semi-annual basis. The hydraulic monitoring also includes measuring the conductivity of groundwater recovered from Area 3 from a sampling port located before the equalization tank.
4. Field groundwater parameters including pH, temperature, conductivity, dissolved oxygen (DO), and oxidation/reduction potential (ORP) are measured during each COC sampling event.
5. Each of the monitoring wells and piezometers used for hydraulic and COC monitoring during the semi-annual monitoring event are checked for the presence (if any) of non-aqueous phase liquid (NAPL).
6. Based on the results obtained, the scope and/or the frequency for the hydraulic and/or COC components of the long-term process control monitoring program, as detailed herein, may be modified. Any modifications would be made in consultation with the New York State Department of Environmental Conservation (NYSDEC).
7. This table is based on the NYSDEC-approved *Operation and Maintenance (O&M) Plan* (BBL, Revised August 1999), including the NYSDEC-approved December 29, 1999 Addendum with the modifications detailed in the October 2004 *Biannual Process Control Monitoring Report*.

Table 2. Summary of Select Groundwater Level Measurements, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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	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
Canal	393.39*	362.91	363.37	363.72	363.08	363.08	362.94		362.78	362.94			362.84	363.27		363.14	362.21	363.11		
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	361.75	363.09	361.93	361.73	363.17
MW-3S	376.54	365.93	366.26	367.82	366.20			365.29							365.25	365.67	366.81	365.67	365.25	
MW-3D	375.56	365.63	365.87	366.16			364.97	364.85						365.08	365.00	365.04		365.04	364.91	365.41
MW-6D	377.07	365.75	366.01	366.29										365.25	365.15	365.23	365.36	365.23	365.06	365.62
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	364.86		364.88	364.74	365.22
MW-9D	376.76**	365.78					365.14	365.10						365.25	365.16	365.22	365.36	365.26	365.08	365.65
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	364.73		364.73	364.57	365.02
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	363.69	364.27	363.79	363.61	364.50
MW-18	372.57	362.64													361.90	361.93	362.05	362.05	361.84	362.18
MW-19	376.00	362.42													361.78	361.84	361.98	361.87	361.89	362.15
MW-23I	372.77	365.04	365.34	365.72			364.34		364.45	364.16			364.43	364.43	364.34	364.36		364.47	364.26	364.69
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	362.52	363.35	362.66	362.46	363.64
MW-24DR	375.14	365.41													364.63	364.67	364.81	364.69	364.54	364.96
MW-24SR	375.55	365.15	365.32	365.66	364.91	364.45	364.27		364.20				364.36	364.47	364.37	364.44	364.66	364.50	364.33	364.87
MW-25D	373.67	365.43													364.74	364.76		364.77	364.64	365.07
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	362.87	363.48	362.96	362.79	363.89
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	364.73	364.87	364.72	364.55	365.02
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	364.93	365.09	364.94	364.78	365.28
PZ-8D	375.83	365.90	366.11	366.35			365.25	365.13	365.83					365.35	365.27	365.33	365.48	365.33	365.19	365.78
PZ-9D	377.29	365.73					365.47	365.28						365.12	365.03	365.08	365.24		364.94	365.50
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	362.60	364.04	362.72	362.56	363.81
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	362.51	364.27	362.62	363.45	363.91
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	365.52	365.97	365.18	365.02	365.79
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	365.53	366.06	365.25	365.12	365.79
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	363.53	366.41	363.57	363.52	364.93
PZ-F	377.06	366.17					365.56	365.50						365.37	365.27	365.52	365.73	365.62	365.27	366.36
PZ-G	377.16	366.21					365.66	365.60						365.46	365.36	365.60	365.76	365.71	365.44	366.44
PZ-HR	376.99	366.16					365.54							365.44	365.34	365.54	365.84	365.60	365.39	366.34
PZ-I	375.15	366.56					365.86	365.64						365.88	365.57	365.90	366.59	366.05	365.76	366.93
PZ-J	374.89	366.15					365.53	365.40						365.53	365.39	365.55	365.93	365.59	365.47	366.21
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	362.66	363.70	362.78	362.58	363.87
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	362.51	363.59	362.65	362.45	363.69
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	363.01	364.07	363.13	362.94	364.06
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	365.56	366.09	365.31	365.12	365.87
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	362.75	363.74	362.87	362.68	364.01
PZ-P	376.89	366.25					365.65	365.60						365.52	365.39	365.61	365.78	365.73	365.44	366.43
PZ-Q	377.61	366.23					365.64	365.57						365.45	365.35	365.59	365.70	365.71	365.42	366.44
PZ-R	377.05	366.23		366.94			365.65	365.57						365.50	365.38	365.61	365.81	365.67	365.47	366.46
PZ-S	378.13	366.19					365.57	365.52						365.43	365.35	365.57	365.94	365.65	365.40	366.39
PZ-T	376.25	366.14					365.54	365.43						365.52	365.38	365.58	365.96	365.64	365.47	366.34
PZ-U	375.35	365.99		366.81			365.50	365.33						365.37	365.30	365.49	365.91	365.55	365.40	366.17
PZ-V	375.78	366.07					365.48	365.35						365.43	365.29	365.47	365.90	365.52	365.37	366.20
PZ-W	375.78	366.07					365.46	365.31						365.41	365.28	365.44	365.78	365.53	365.33	366.15

See Notes on Page 3.

Table 2. Summary of Select Groundwater Level Measurements, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, Syracuse, New York

Location	Reference Elevation (feet AMSL)	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	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*	363.22	362.78	363.73	363.75	362.75^	363.24	363.01	362.96	364.59	363.64	364.17	362.19	^^	363.34	363.34	363.39	363.39	364.39^^^	363.84	363.69
Collection Sump	372.81	362.45	361.87	362.99	361.48	361.69	361.66	361.59	362.04	362.27	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	365.26		357.10						367.70	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	364.92	364.57	355.64	365.57	364.81	355.16	365.40	364.54	364.16	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	365.12	364.79	365.85	365.77	364.97	365.34	365.64	364.75	364.22	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	364.77	364.35	365.42	365.36	364.62	364.94	365.18	364.34	364.13	364.51	365.01	363.82	^^	365.30	364.83	365.39				
MW-9D	376.76**	365.17	364.83	365.88	365.80	365.01	365.36	365.68	364.76	364.05	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	364.60	364.18	365.24	365.18	364.46	364.81	364.96	364.18	364.07	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	363.88	363.39	364.72	364.35	363.55	363.86	364.48	363.33	363.57	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	361.79	361.38	362.43	361.77	361.71	362.08	362.17	361.50	361.65	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	361.80	361.46	362.58	361.88	361.90	362.25	362.44	361.82	361.83	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	364.28	363.83	364.99	364.93	364.25	364.58	364.73	363.99	363.99	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	362.94	362.42	363.85	363.17	362.64	362.87	363.59	362.36	363.97	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	364.49	364.09	365.19	364.60	364.39	364.77	364.91	364.16	364.06	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	364.41	363.95	365.12	365.55	364.30	364.60	364.86	364.05	364.00	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	364.64	364.20	365.28	365.20	364.51	364.84	364.97	364.22	364.19	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	363.20	364.75	364.12	363.69	362.94	363.23	364.14	362.61	364.39	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	364.60	364.22	365.28	365.21	364.49	364.82	365.03	364.22	364.06	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	364.86	364.47	365.57	365.48	364.71	365.10	365.36	364.46	364.12	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	365.08	365.00																		
PZ-9D	377.29	365.04	364.68	365.70	365.72	364.87	365.16	365.55	364.60	363.75	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	363.12	362.61	363.95	363.15	362.75	362.91	363.56	362.58	363.92	363.05	363.22	362.59	^^	363.40	363.57	363.18	362.89	362.96	364.20	364.14
PZ-B	373.92	363.19	362.67	364.08	363.32	362.79	362.94	363.94	362.55	364.44	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	365.10	364.75	366.04	366.04	365.03	365.35	366.39	364.54	365.68	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	365.18	364.89	366.09	366.10	365.10	365.46	366.36	364.65	365.58	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	364.20	363.81	365.16	365.03	363.92	364.40	365.90	363.49	366.51	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	365.53	365.11	366.89	366.72	365.27	365.70	367.06	364.93	365.50	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	365.61	365.17	366.89	366.80	365.36	365.75	367.11	364.93	365.39	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	365.55	365.11	366.80	366.68	365.33	365.66	367.02	364.91	365.39	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	365.79	365.23	367.30	367.23	365.55	366.08	367.81	364.91	366.29	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	365.53	365.14	366.55	366.50	365.32	365.64	366.69	364.96	365.10	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	363.13	362.59	363.97	363.19	362.69	362.86	363.53	362.49	363.82	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	363.00	362.47	363.84	363.03	362.61	362.68	363.42	362.47	363.44	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	363.40	362.90	364.22	363.54	363.05	363.24	363.86	362.90	363.93	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***	365.19	364.87	366.17	366.12	NM	365.35	366.43	364.47	366.60	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	363.25	362.73	364.22	363.57	362.86	363.06	364.22	362.64	364.47	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	365.59	365.18	366.85	366.73	365.34	365.77	367.02	364.93	365.31	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	365.60	365.16	366.93	366.78	365.26	365.76	367.21	364.89	366.11	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	365.61	365.20	366.89	366.81	365.37	365.72	367.21	364.93	365.40	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	365.56	365.15	366.84	366.73	365.32	365.71	367.12	364.90	365.27	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	365.53	365.10	366.71	366.65	365.29	375.70	366.90	364.90	365.34	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	365.46	365.08	366.55	366.49	365.22	365.60	366.75	364.85	365.18	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	365.44	365.06	366.54	366.50	365.25	365.58	366.76	364.83	365.30	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	365.41	365.02	366.49	366.41	365.20	365.59	366.63	364.85	365.05	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 3.

Table 2. Summary of Select Groundwater Level Measurements, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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. ** = Monitoring well MW-9D inner PVC pipe was reduced (cut) by 1½ inches on 9/19/01. The reference elevation prior to 9/19/01 was 376.88 feet AMSL. The new reference elevation for MW-9D is 376.76 feet AMSL.
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 waterlevel 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 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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	NA	5	5	1	5
MW-1	3/88	370.3	355.3	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	7/99			**0.7 JN**	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			**8 J**	<10 J	**3 J**	<10 J	**5 J**	<1,000	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	**10**
	9/01			<10	<10	<10	<10	<10	<1,000 J	<10	<10	<10	<10
	4/02			<12	<5	<5	<5	<10	**990 J**	<5	<5	<5	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	**2 J**	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	**0.2 J**	<1.0	<3.0
	11/05			<1.3 J	<0.3	<0.4	<0.5	<0.5	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0 J	<1.0 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	<1.0 J	<3.0 J
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	**31**	<1,000	<10	**790**	**170**	<10
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	**15**	**2 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	**1.7 J**	<5	<5

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Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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	NA	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 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	<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
MW-3D	8/95	343.8	339	<1,000	<25 D	<25 D	<25 D	<25 D	<1,000	<25 D	1 J	**5 J**	**200 D**
MW-4S	3/88	365.5	350.5	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	<11	**19**	**280**
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-5[C]	3/88	363.3	348.3	<100	<1	<1	<1	<1	<1,000	<1	**230**	**130**	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	**34**	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	**17**	<10	<1
MW-6[D] (Replaced by MW-6S)	1/89	365.5	355.9	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	11/89			<10	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
MW-7[D]	1/89	367	357.4	<100	<1	<1	<1	**2**	<1,000	<1	<11	<11	**100**
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-8[D] (Replaced by MW-8S)[E]	1/89	364.7	355.1	<1,000,000	<10,000	<10,000	<10,000	<10,000	**430,000**	<10,000	**2,900**	**24,000**	**3,200,000**
	11/89			**470,000**	<10,000	<10,000	<10,000	<10,000	**300,000**	<10,000	**8,500**	**52,000**	**2,800,000**
	11/91			<1,000,000	<10,000	<10,000	<10,000	<30,000	**150,000**	<10,000	**8,000**	**33,000**	**1,600,000**
	8/95			<1,000	<250,000D	<250,000D	<250,000D	<250,000D	**22,000**	**60,000 JD**	<25,000D	**380,000 D**	**7,700,000 D**
	9/98			<10,000 J	<10,000	<10,000	<10,000	<10,000	**7,900**	**3,300 J**	**1,200 J**	**26,000 D**	**140,000**
	2/99			<20,000	<20,000	<20,000	<20,000	<20,000	**16,000JN**	**11,000 J**	**30,000 D**	**120,000 D**	**650,000 DB**
	7/99			**10 J**	**22 J**	**240 J**	**58 J**	**220 J**	**17,000**	**11,000 J**	**24,000**	**77,000**	**450,000 D**
	3/00			<100,000	<100,000	<100,000	<100,000	<100,000	**30,000 J**	<100,000	**62,000**	**270,000 D**	**1,300,000**
	9/00			<50,000 J	<50,000 J	<50,000 J	<50,000 J	<50,000 J	**14,000 J**	**9,200 J**	**42,000 J**	**59,000**	**540,000 BJ**
	3/01			<50,000	<50,000	<50,000	<50,000	<50,000	**53,000**	**11,000 J**	**90,000 D**	**120,000 D**	**990,000**
	9/01			<400	<400	**430**	**170 J**	**680**	**8,900 J**	**18,000 JD**	**21,000**	**29,000**	**440,000 BD**
	4/02			**2,100**	**50 J**	**410**	**100 J**	**400**	<1,000	**9,600 J**	**793,000 D**	**773,000 D**	**660,000 D**
	10/02			**120 J**	**23**	**310**	**73**	**267**	<1,000	**3,100**	**80,000**	**21,000 J**	**320,000**
	5/03			<12	**20 J**	**600 D**	**81**	**300**	<1,000	**6,700 D**	**79,000 D**	**29 J**	**910,000 D**
	10/03			**21**	**25**	**330 D**	**93**	**360**	**1,200 J**	**3,100 D**	**67,000 D**	**24,000 D**	**400,000 D**
	6/04			<25	**40**	**330 EJ**	**110**	**400**	<1,000	**5,900 D**	**56,000**	**51,000**	**1,200,000 D**
MW-8SR	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

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Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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	NA	5	5	1	5
MW-8SR	6/06			48	15	120	79	260	<1,000	<1.0	23,000	<200	<3.0
(cont'd.)	9/06			NS	NS	NS	NS	NS	NS	NS	52,000 (51,000)	<520 (<520)	NS
MW-9^{D}	1/89	365.6	356	1,600	NA	64	130	270	<1,000	<10	660	1,200	1,500
(Replaced by MW-9S)	11/89			<1,000	48	25	60	60	<1,000	<10	670	150	<10
	11/91			<100	<10	9	19	30	<1,000	<1	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 J	<10
	3/00			<10	2 J	2 J	11	21	<1,000 J	<10	2 J	9 J	<10
	9/00			<10 J	11 J	2 J	6 J	18 J	<1,000	<10 J	1 J	6 J	<10 J
	3/01			<10	1 J	3 J	17	61	<1,000	<10	2 J	11	<10
	9/01			<10	10	3 J	7 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	2 J	<10
	5/03			<12	11	<5	7	18	<1,000	<5	0.9 J	3 J	<5
	10/03			<12	2 J	<5	5	19	<1,000	<5	1 J	<5	<5
	6/04			14 J	6 J	2 J	8 J	19 J	<1,000	<10	<5	<5	<10
	11/04			<25	4 J	2 J	9 J	30 J	<1,000	<10	<5	<5	<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
MW-10^{D}	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
(Replaced by MW-9D)	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	2	<3	<1,000	<1	230	<10	41
	8/95			<1,000	<25 UD	<25 UD	<25 UD	<25 UD	<1,000	<25 UD	<5	<10	350 D
MW-11^{D}	1/89	355.1	345.5	<100	<1	<1	<1	<1	8,400	<1	<12	<12	1
(Replaced MW-6D)	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
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

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Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Screen Elev. (ft. AMSL) 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	NA	5	5	1	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 J**	<5	<10	**40**
MW-13S	11/89	368.7	359.1	<100	**3**	<1	<1	<1	<1,000	<1	<52	<52	<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-14D[C]	1/89	359	349.4	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-15S	1/89	370	360.25	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<52	<52	<1
MW-16D[C]	1/89	350.8	341.2	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-17[C] (Replaced by MW-17R)	11/90	365.7	356.1	<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<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	<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
	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

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Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Screen Elev. (ft. AMSL) 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	NA	5	5	1	5
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
MW-19	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

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Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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	NA	5	5	1	5
MW-19 (cont'd.)	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5^{G}	<5^{G}	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	10/03			<11	<5	<5	<5	<10	<1,000	<5	**51 J**	**16 J**	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<25	<10	<10	<10	<20	<1,000	<10	<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
MW-20^{C}	11/89	329.85	320.85	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
MW-21^{C}	11/89	323.65	314.65	<100	<5	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-22	11/89	368.55	359.55	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
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
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/96			<10	<10	<10	<10	<10	<1,000	<10	**7**	<10	<10
	2/97			<10	<10	<10	<10	<10	<1,000	<10	**11**	<10	<10
	8/97			**12**	<10	<10	<10	<10	<1,000	<10	**92**	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	**56**^{H}	**7 J**	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	**10**	<10 J
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	**2 J**	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	**2 J**	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	**2 J**	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5^{G}	<5^{G}	<10
	5/03			<62	<25	<25	<25	<50	**380 J**	<25	<5	<5	<25
	10/03			<12	<5	<5	<5	<10	<1,000	<5	**60**	<5	<5

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Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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	NA	5	5	1	5
MW-23S (cont'd.)	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
MW-23I	12/94	341.2	336.2	<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	<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
	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
MW-24S[C] (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]			NS	NS	NS	NS	NS	NS	NS	ND	ND	NS
	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

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McKesson Envirosystems Former Bear Street Facility, 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	NA	5	5	1	5
MW-24S[C] (cont'd.)	6/04 [J]			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			–	–	–	–	–	<1,000	–	<5	<5	–
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
MW-24D[C] (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]			NS	NS	NS	NS	NS	NS	NS	**ND**	ND	NS
	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
MW-25S	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

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Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Screen Elev. (ft. AMSL) 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	NA	5	5	1	5
MW-25S	11/04			–	–	–	–	–	<1,000	–	<5	<5	–
(cont'd.)	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
MW-25D	8/95	349.55	344.55	<1,000	<5	<5	<5	<5	<1,000	<5	<5	1 J	<5
	10/95			NA	<5	<5	<5	<5	NA	3 J	<5	<10	<5
	8/96			15	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<11	<10
	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
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			21 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			NS	NS	NS	NS	NS	NS	NS	1,700	<10	NS
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[R]	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
	4/02			<49	8	6	9	10 J	<1,000	<5	33,400 D	57	4,600 D

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McKesson Envirosystems Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Screen Elev. (ft. AMSL) 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	NA	5	5	1	5
MW-28 (cont'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			NS	NS	NS	NS	NS	NS	NS	**280**	<2.2	NS
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
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**
	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

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Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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	NA	5	5	1	5
MW-30	11/04			<120	<50	<50	<50	<100	<1,000	<50	<5	<5	<50
(cont'd.)	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
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			NS	NS	NS	NS	NS	NS	NS	**1.6**	**3.4**	NS
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
	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

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Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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	NA	5	5	1	5
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**	<16
	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			NS	NS	NS	NS	NS	NS	NS	**940**	**8.0**	NS
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
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

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Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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	NA	5	5	1	5
MW-35 (cont'd.)	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
MW-36	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
	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			NS	NS	NS	NS	NS	NS	NS	**3.5**	**1.2**	NS
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

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Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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	NA	5	5	1	5
TW-01 (cont'd.)	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
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**
	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	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			NS	NS	NS	NS	NS	NS	NS	**7,600**	<52	NS
PZ-4D	11/89	350.8	345.9	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	**0.8 J**	<5
	10/95			NA	<5	<5	<5	<5	NA	<5	<5	<10	<5
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<6	<12	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/06			<5.0	<1.0	**0.5 J**	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0

See Notes on Page 17.

Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Screen Elev. (ft. AMSL) 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	NA	5	5	1	5
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
	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
PZ-5D	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

See Notes on Page 17.

Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, 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	NA	5	5	1	5
PZ-5S	11/89	361.42	356.52	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			**5 J**	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5^{H}	<10	<12
	6/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10 J	<10 J	<10 J
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10	<10	<10 J
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	9/01			**7 J**	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5^{G}	<5^{G}	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
PZ-8S^{I}	9/98	362.6	357.7	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
PZ-11D^{D}	11/89	352.09	347.19	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-11S^{D}	11/89	359.09	354.19	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-12D^{D}	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^{D}	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 17.

Table 3. Summary of Historical Groundwater Monitoring Data, 2006 Biannual Process Control Monitoring Report
McKesson Envirosystems Former Bear Street Facility, Syracuse, New York

General Notes:

1. Concentrations are presented in micrograms per liter (ug/L), which is equivalent to parts per billion (ppb).
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 mg/L. 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 percent. This well was not resampled.
9. Volatile organic compound (VOC) results for the 11/04 sampling event were inadvertently lost due to laboratory equipment failure for monitoring locations MW-1, MW-17R, MW-18, MW-23I, MW-23S, MW-24DR, MW-24SR, MW-25, MW-33, PZ-5D, and PZ-5S. In addition, the initial VOC results were also irretrievable due to laboratory equipment failure for monitoring locations MW-27, MW-28, MW-29, and MW-30; however, results for subsequent dilutions of these groundwater samples were valid, but the detection limits were high. The duplicate sample VOC results for MW-27 and MW-28 have lower detection limits and are presented in parentheses. These wells were not resampled.
10. The sampling event in September 2006 was an interim sampling event to gauge the effects of the in-situ aerobic biodegradation treatment activities.

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/peizometers were resampled for aniline and N,N-dimethylaniline during 1/03, because the 10/02 results were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. These wells and piezometers are perimeter monitoring locations.

^{H} = MW-18, MW-19, MW-23I, MW-23S, MW24DR, MW-24SR, MW-28, PZ-5S, and PZ-5D wells/piezometers were resampled for aniline during 12/98, because the 9/98 results were rejected due to laboratory error.

^{I} = Piezometer PZ-8S was decommissioned 8/2000.

^{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.

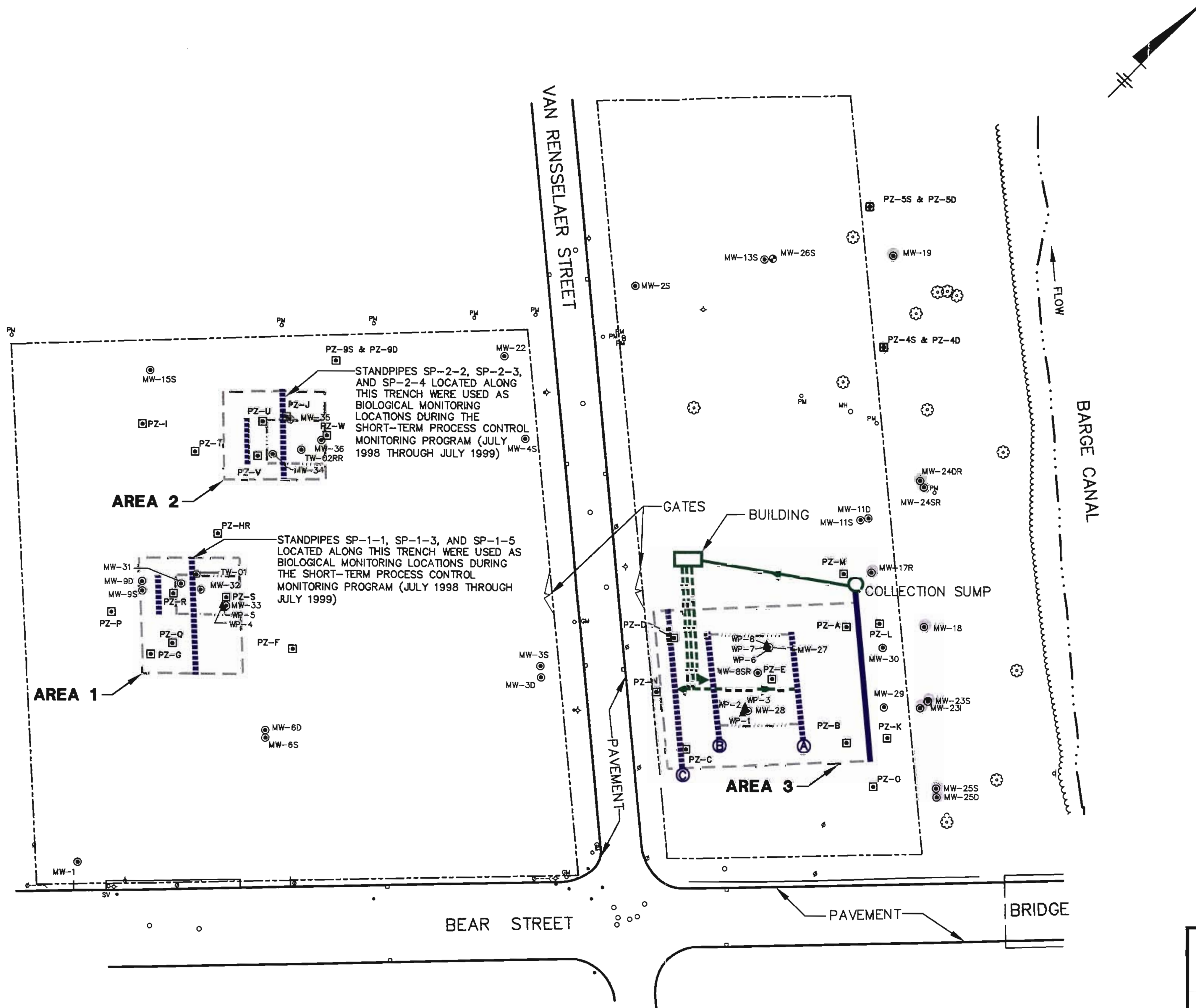
Abbreviations:

AMSL = Above Mean Sea Level (NGVD of 1929).
NA = Not available.
ND = Not detected.
NS = Not sampled.

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.)

FIGURES



LEGEND:

⌀ 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
▣ OR ◉ BIANNUAL DOWNGRADIENT PERIMETER GROUNDWATER MONITORING LOCATION
PZ-A ▣ PIEZOMETER
MW-26S ⊘ PUMPING WELL
WP-8 ▲ WELL POINT
– – – BOUNDARY OF IMPACTED AREA
━━━ GROUNDWATER WITHDRAWAL TRENCH
Ⓐ▪▪▪▪▪ GROUNDWATER INFILTRATION TRENCH AND IDENTIFICATION
━━━ PIPING TO BUILDING
- - - - PIPING FROM BUILDING
⋯⋯ AREA OF RELATIVELY HIGHER CONCENTRATIONS OF COCs

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
2. LOCATIONS ARE APPROXIMATE.

0 100' 200'
GRAPHIC SCALE

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

SITE PLAN

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
1

[SYR-85-LEAD] SYR-85-RCB LAF WLJ L: ON=*, OFF=REF*
F:\ACTIVE\-DWG\ACT\26003190\BIANNUAL\REVISED\26003B01.DWG SAVED:1/4/2007 1:15 PM LAYOUT:Layout1 PAGESETUP:SYR-BL1 PENTABLE:PLTFULL.CTB PRINTED:1/4/2007 1:15 PM BY:RALLEN
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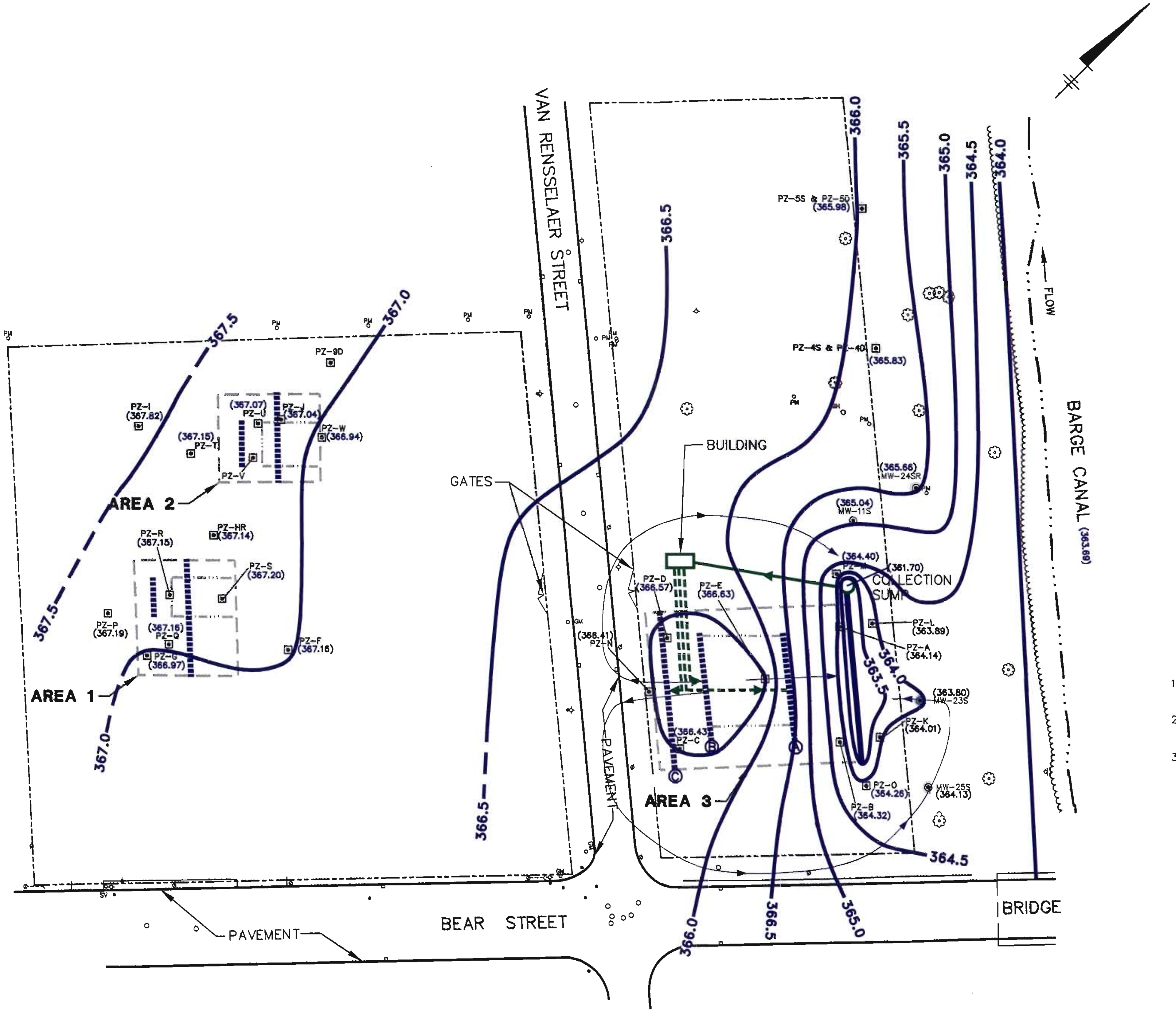
26003X01
26003X00



LEGEND:

- ⊘ 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
- ▣ OR ◉ BIANNUAL DOWNGRADIENT PERIMETER GROUNDWATER MONITORING LOCATION
- PZ-A ▣ PIEZOMETER
- ▭ BOUNDARY OF IMPACTED AREA
- ▬ GROUNDWATER WITHDRAWAL TRENCH
- Ⓐ▬ GROUNDWATER INFILTRATION TRENCH AND IDENTIFICATION
- ▬ PIPING TO BUILDING
- ▬ PIPING FROM BUILDING
- ⬚ AREA OF RELATIVELY HIGHER CONCENTRATIONS OF COCs
- 365.0 ▬ GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL) DASHED WHERE INFERRED
- (364.13) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- ——► INFERRED GROUNDWATER FLOW PATH

NOTES:

1. THIS FIGURE ONLY IDENTIFIES THE HYDRAULIC MONITORING LOCATIONS.
2. REPLACED MONITORING WELLS AND PIEZOMETERS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
3. ELEVATIONS BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929.

0 100' 200'

GRAPHIC SCALE

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

POTENTIOMETRIC SURFACE OF THE SHALLOW HYDROGEOLOGIC UNIT SAND LAYER - JUNE 5, 2006

ARCADIS BBL
infrastructure, environment, facilities

FIGURE
2

SYR-85-RCB PGL BCP L: ON=*, OFF=REF
F:\ACTIVE\-DWG\ACT\26003190\BIANNUAL\GW\26003W01.DWG SAVED:1/9/2007 3:37 PM LAYOUT:Layout1 PAGESETUP:---- PENTABLE:PLTFULL.CTB PRINTED:1/24/2007 1:47 PM BY:BPITTSLEY
PROJECTNAME: ----
XREFS: IMAGES:
26003X01
26003X00

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	6/06
Acetone	18 J	7.2 J	26 J	16
Benzene	**4 J**	**3.6**	**6**	**4.4**
Toluene	**8 J**	2.1 J	4.1	1.3 J
Ethylbenzene	4 J	3.6 J	3.6	2.7 J
Xylene	**18 J**	**9.6**	**11**	**8.7**
Methanol	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<10	0.3 J	<0.4	<1.0
Aniline	**7,100 D**	**8,400**	**14,000**	**10,000**
N,N-dimethylaniline	<5.0	<50	<110 J	<100
Methylene Chloride	<10	<3.0	<0.5	<3.0

MW-35						
Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	5 J	<25	<25	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	<10	<1.0	<1.0	<1.0
Toluene	<5.0	<10	<10	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	<10	<4.0	<4.0	<4.0
Xylene	<10	<20	<20	<5.0	<5.0	<5.0
Methanol	<1000	<1000	240 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10	<1.0	<1.0	<1.0
Aniline	4 J	**30**	**82**	<1.0	<1.0	0.4 J
N,N-dimethylaniline	<5.0	**4 J**	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<10	<3.0	<3.0	<3.0

MW-36						
Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	**580 D**	22 J	13 J	24 J	**77 J**	25
Benzene	<5.0	<10 J	<10	**2.1**	**3.6**	**1.6**
Toluene	<5.0	<10 J	<10	<5.0	2.0 J	0.7 J
Ethylbenzene	<5.0	<10 J	<10	<4.0	0.6 J	<4.0
Xylene	<10	<20 J	<20	1.0 J	2.8 J	1.2 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10 J	<10	<1.0	<1.0	<1.0
Aniline	**100**	**33**	**22**	**1,200**	**1,600**	**76**
N,N-dimethylaniline	<5.0	**7**	<5.0	<5.4	<10 J	**1.9**
Methylene Chloride	<5.0	<10 J	<10	<3.0	<3.0	<3.0

MW-34						
Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	9 J	24 J	<25	5.6 J	20 J	6.4
Benzene	<5.0	<10	<10	0.7 J	<0.3	0.6 J
Toluene	<5.0	<10	<10	0.9 J	0.9	0.5 J
Ethylbenzene	<5	<10	<10	<4.0	<0.5	<4.0
Xylene	<10	<20	<20	1.2 J	1.1	<5.0
Methanol	<1000	<1000	180 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10	0.4 J	<0.4	<1.0
Aniline	**18**	**30**	**14**	**16**	**12**	**16**
N,N-dimethylaniline	<5.0	<5.0	<5.0	**2.5**	**2 J**	**2.3**
Methylene Chloride	<5.0	<10	<10	<3.0	<0.5	<3.0

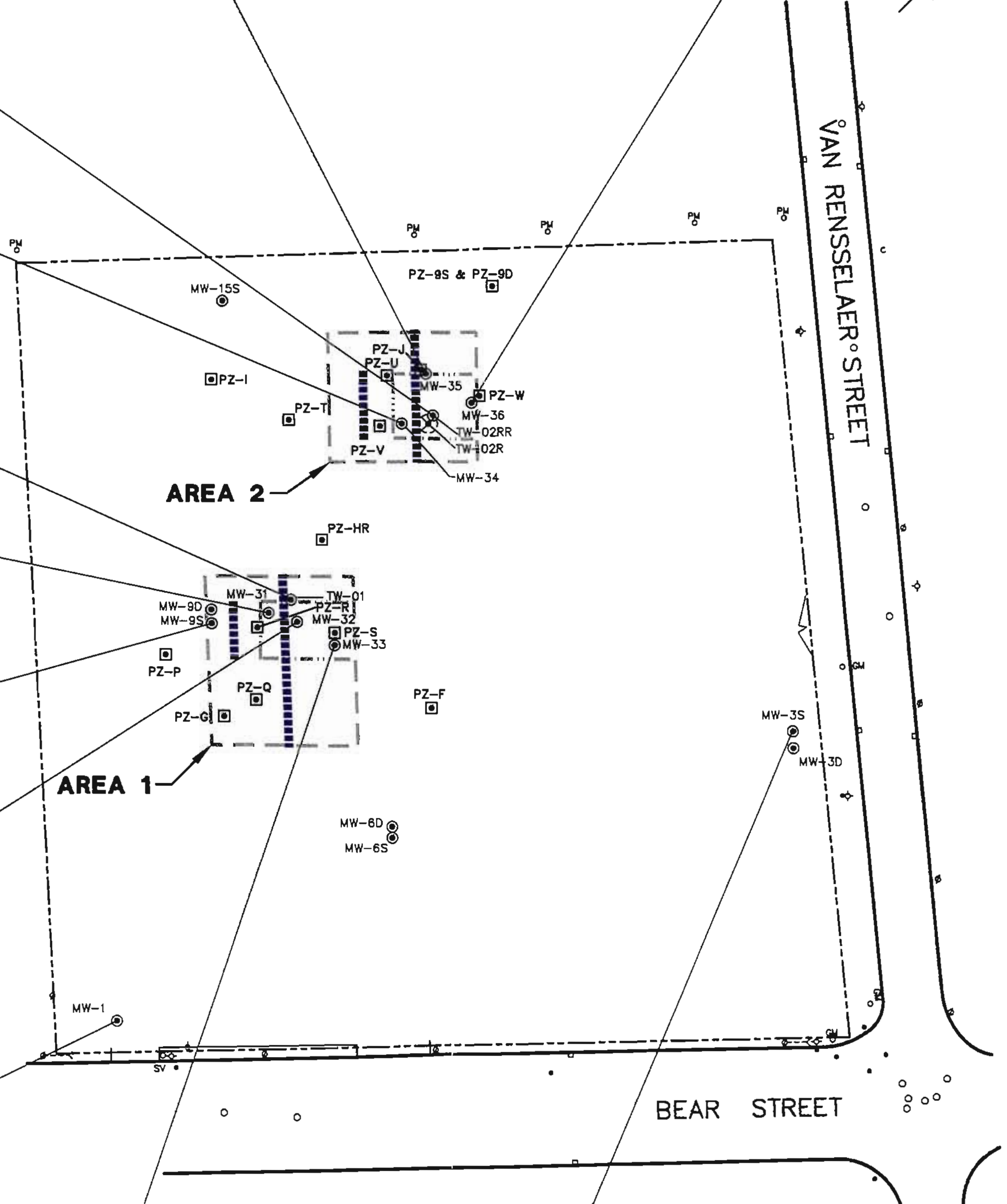
TW-01						
Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	6 J	<25	<5.0 J	<1.3 J	<5.0 J
Benzene	**6**	**3 J**	**2 J**	**1.8**	**1.9**	**1 J**
Toluene	<5.0	<10	<10	<5.0	<0.4	<5.0 J
Ethylbenzene	<5.0	<10	<10	<4.0	<0.5	<4.0 J
Xylene	<10	<20	<20	<5.0	<0.4	<5.0 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10	<10	<1.0	<0.4	<1.0 J
Aniline	0.6 J	<5.0	<5.0	<1.0	<1.0	<1.0 J
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	0.8 J
Methylene Chloride	<5.0	<10	<10	<3.0	<0.5	<3.0 J

MW-31						
Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	**1,200 D**	15 J	<25	<5.0 J	<1.3 J	<5.0 J
Benzene	**13**	**12**	**9 J**	**11**	**6.7**	**11 J**
Toluene	<5.0	<10	<10	<5.0	<0.4	0.6 J
Ethylbenzene	<5.0	<10	<10	<4.0	<0.5	<4.0 J
Xylene	<5.0	<20	<20	1.3 J	0.6	1.7 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10	<10	<1.0	<0.4	<1.0 J
Aniline	**88**	3 J	<5.0	3.2	**16**	<1.0 J
N,N-dimethylaniline	<5.0	<5.0	<5.0	**2.7**	<1.0 J	**2.4 J**
Methylene Chloride	<5.0	<10	<10	<3.0	<0.5	<3.0 J

MW-9S						
Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	14 J	<25	44 J	<1.3 J	<5.0 J
Benzene	**2 J**	**6 J**	**4 J**	**1.9**	**3.5**	**1.1 J**
Toluene	<5	2 J	2 J	3.2 J	3.8	2.3 J
Ethylbenzene	5	**8 J**	**9 J**	**24**	**11**	**25 J**
Xylene	**19**	**19 J**	**30 J**	**64**	**33**	**60 J**
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10	<10	<1.0	<0.4	<1.0 J
Aniline	1 J	<5.0	<5.0	2.6	1.4	<1.1 J
N,N-dimethylaniline	<5.0	<5.0	<5.0	**1.9**	**6.1 J**	**3.8 J**
Methylene Chloride	<5.0	<10	<10	<3.0	<0.5	<3.0 J

MW-32						
Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	20	6 J	<25	<5.0 J	<5.0 J	<5.0 J
Benzene	**2 J**	1 J	<10	1	<1.0	<1.0 J
Toluene	<5.0	<10	<10	<5.0	<5.0	<5.0 J
Ethylbenzene	<5.0	<10	<10	<4.0	<4.0	<4.0 J
Xylene	<10	<20	<20	<5.0	<5.0	<5.0 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10	<10	<1.0	<1.0	<1.0 J
Aniline	<5.0	1 J	<5.0	0.4 J	<1.0	<1.0 J
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.0 J
Methylene Chloride	<5.0	<10	<10	<3.0	<3.0	<3.0 J

MW-1						
Date	10/03	8/04	11/04	6/05	11/05	6/06
Acetone	<12	<25	–	<5.0 J	<1.3 J	<5.0 J
Benzene	<5.0	<10	–	<1.0	<0.3	<1.0 J
Toluene	<5.0	<10	–	<5.0	<0.4	<5.0 J
Ethylbenzene	<5.0	<10	–	<4.0	<0.5	<4.0 J
Xylene	<10	<20	–	<0.5	<0.5	<5.0 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10	–	<1.0	<0.4	<1.0 J
Aniline	2 J	<5.0	<5.0	0.2 J	<1.0	<1.0 J
N,N-Dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.0 J
Methylene Chloride	<5.0	<10	–	<3.0	<0.5	<3.0 J



MW-33						
Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	22	9 J	–	<5.0 J	<5.0 J	<5.0 J
Benzene	**2 J**	**12 J**	–	**11**	**16**	**6.7 J**
Toluene	<5.0	<10 J	–	1.0 J	1.8 J	0.7 J
Ethylbenzene	<5.0	<10 J	–	<4.0	<4.0	<4.0 J
Xylene	<10	<20 J	–	<5.0	<5.0	<5.0 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10 J	–	<1.0	<1.0	<1.0 J
Aniline	**1,900 D**	**2,700 D**	**2,700 D**	**1,800**	**3,500**	**370 J**
N,N-dimethylaniline	<6.0	**5 J**	**5 J**	<10	<25 J	**3.5 J**
Methylene Chloride	<5.0	<10 J	–	<3.0	<3.0	<3.0 J

MW-3S						
Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	6 J	<25	<5.0 J	<1.3 J	<5.0
Benzene	<5.0	<10	<10	<1.0	<0.3	<1.0
Toluene	<5.0	<10	<10	<5.0	<0.4	<5.0
Ethylbenzene	<5.0	<10	<10	<4.0	<0.5	<4.0
Xylene	<10	<20	<20	<5.0	<0.4	<5.0
Methanol	<1,000	<1,000	150 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10	<1.0	<0.4	<1.0
Aniline	4 J	0.8 J	4 J	**15**	<1.0	<1.0
N,N-dimethylaniline	<5.0	<6.0	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<10	<3.0	<0.5	<3.0

LEGEND:

⌀	UTILITY POLE	- - - - -	PROPERTY LINE
□	CATCH BASIN	MW-19 ◉	GROUNDWATER MONITORING WELL
PM ○	PETROLEUM PIPE LINE MARKER	PZ-A ▣	PIEZOMETER
GM ○	GAS LINE MARKER	TW-02R ⊗	REMOVED GROUNDWATER MONITORING WELL
SV ○	SEWER VENT	▭	BOUNDARY OF IMPACTED AREA
✧	HYDRANT	▪▪▪▪▪	GROUNDWATER INFILTRATION TRENCH
•	WATER VALVE	⬚	AREA OF RELATIVELY HIGHER CONCENTRATIONS OF COCs
○	MANHOLE		

SAMPLE IDENTIFICATION

MW-35						
Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	5 J	<25	<25	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	<10	<1.0	<1.0	<1.0
Toluene	<5.0	<10	<10	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	<10	<4.0	<4.0	<4.0
Xylene	<10	<20	<20	<5.0	<5.0	<5.0
Methanol	<1000	<1000	240 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10	<1.0	<1.0	<1.0
Aniline	4 J	**30**	**82**	<1.0	<1.0	0.4 J
N,N-dimethylaniline	<5.0	**4 J**	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<10	<3.0	<3.0	<3.0

DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.

CONCENTRATION (ppb)

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
2. TRENCH LOCATIONS ARE APPROXIMATE.
3. MONITORING LOCATIONS ARE APPROXIMATE.
4. FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
5. ONLY COC CONCENTRATIONS DETECTED OR THAT HAVE BEEN DETECTED ARE PRESENTED ON THIS FIGURE (SEE ATTACHMENT A FIGURE 1).
6. < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
7. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
8. D = CONCENTRATION IS BASED ON DILUTED SAMPLE ANALYSIS.
9. 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.
10. 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 DETAILED IN THE BIANNUAL REPORT, THESE MONITORING WELLS WERE NOT RESAMPLED.

0 100' 200'

GRAPHIC SCALE

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

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

ARCADIS BBL
infrastructure, environment, facilities

FIGURE
3

[SYR-85-LEAD] SYR-85-RCB PGL L: ON=*, OFF=REF
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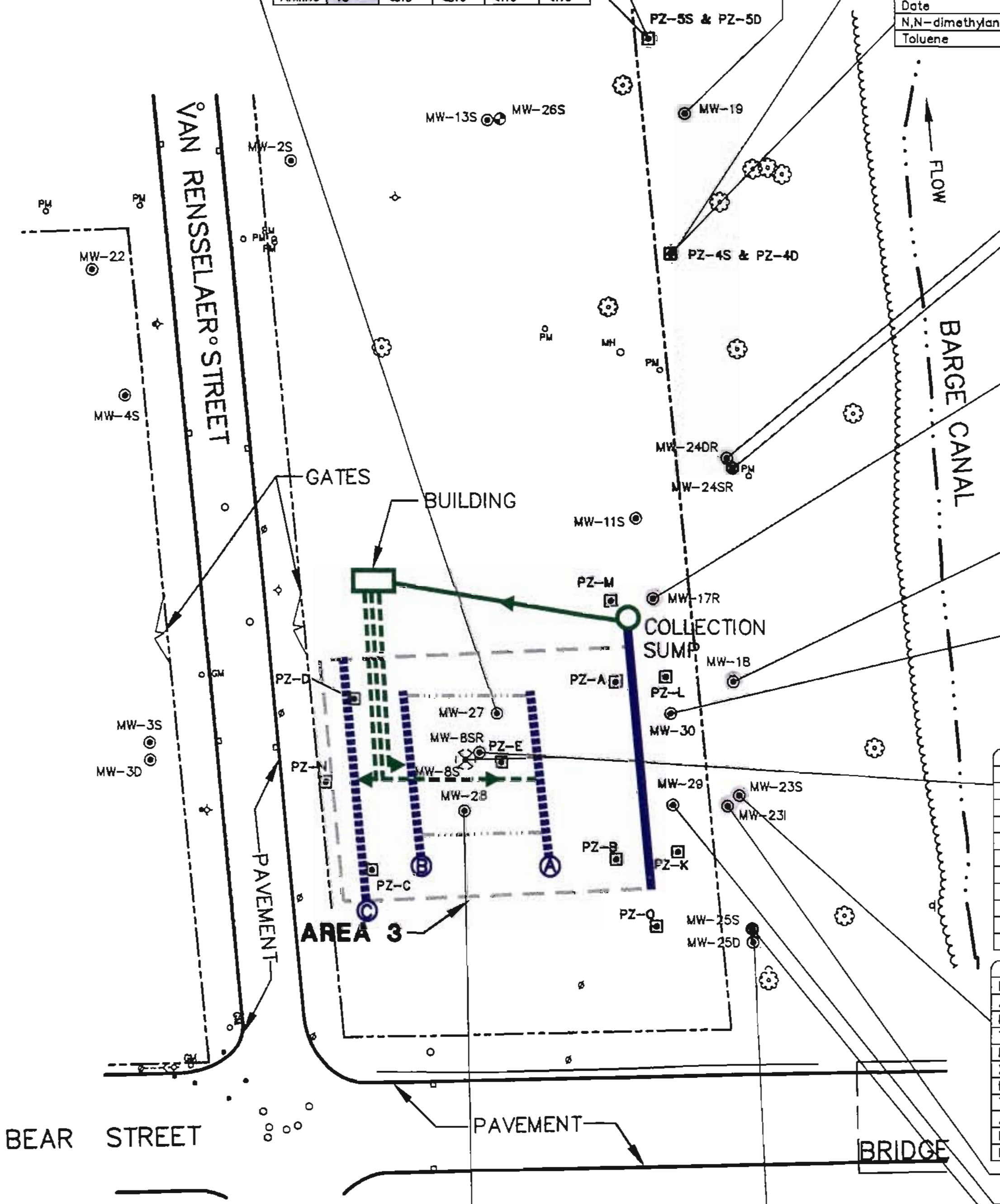

MW-27						
Date	10/03	06/04	11/04	06/05	11/05	06/06
Acetone	170	23 J	<120 (28)	31 J	35 J (37 J)	5.3 J (5.8 J)
Benzene	5	5 J	<50 (4 J)	6.1	11 (12)	9.5 J (8.9 J)
Toluene	<5.0	4 J	<50 (2 J)	15	77 (78)	50 J (48 J)
Ethylbenzene	<5.0	2 J	<50 (<10)	5.8	26 (28)	25 J (25 J)
Xylene	3 J	6 J	<100 (<20)	15	86 (88)	86 J (83 J)
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000 (<1,000)	<1,000 J (<1,000 J)
Trichloroethene	<5.0	<10	<50 (<10)	<1.0	<1.0 (<1.0)	<1.0 J (<1.0 J)
Aniline	3,700 D	3,700 D	1,100 D J	5,200	37,000 (38,000)	14,000 J (12,000 J)
N,N-dimethylaniline	<5.0	20 J	<5.0	<23	<270 J (<260 J)	<100 J (<100 J)
Methylene Chloride	240 D	<10	310 (490 D)	<3.0	<3.0 (<3.0)	<3.0 J (<3.0 J)

MW-19						
Date	10/03	06/04	11/04	06/05	11/05	06/06
Acetone	<11	<25	<25	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	<10	<1.0	<1.0	<1.0
Toluene	<5.0	<10	<10	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	<10	<4.0	<4.0	<4.0
Xylene	<10	<20	<20	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10	<1.0	<1.0	<1.0
Aniline	51 J	<5.0	<5.0	<1.1	<1.0	<1.0
N,N-dimethylaniline	16 J	<5.0	<5.0	<1.1	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<10	<3.0	<3.0	<3.0

MW-24DR				
Date	10/03	11/04	06/05	11/05
Acetone	<12	–	<5.0 J	<5.0 J
Benzene	<5.0	–	<1.0	<1.0
Toluene	<5.0	–	<5.0	<5.0
Ethylbenzene	<5.0	–	<4.0	<4.0
Xylene	<10	–	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	–	<1.0	<1.0
Aniline	0.5 J	<5.0	<1.0	<1.1
N,N-Dimethylaniline	<5.0	<5.0	<1.0	<1.1 J
Methylene Chloride	<5.0	–	<3.0	<3.0

PZ-5S				
Date	10/03	11/04	06/05	11/05
Acetone	<12	–	<5.0 J	<5.0 J

PZ-5D					
Date	10/03	06/04	11/04	06/05	11/05
Aniline	46	<5.0	<5.0	<1.0	<1.0

PZ-4S			
Date	06/04	06/05	06/06
Aniline	<5.0	<1.0	<1.0
N,N-dimethylaniline	<5.0	<1.0	<1.0
Toluene	<10	<5.0	<0.6J

PZ-4D			
Date	06/04	06/05	06/06
N,N-dimethylaniline	<5.0	<1.0	<1.0
Toluene	<10	<5.0	<0.5J

MW-24SR					
Date	10/03	06/04	11/04	06/05	11/05
Acetone	<12	<25	–	<5.0 J	<5.0 J
Benzene	<5.0	<10	–	<1.0	<1.0
Toluene	<5.0	<10	–	<5.0	<5.0
Ethylbenzene	<5.0	<10	–	<4.0	<4.0
Xylene	<10	<20	–	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	–	<1.0	<1.0
Aniline	16	<5.0	<5.0	<1.0	<1.0
N,N-Dimethylaniline	<6.0	<5.0	<5.0	<1.0	<1.0 J
Methylene Chloride	<5.0	<10	–	<3.0	<3.0

MW-17R						
Date	11/03	06/04	11/04	06/05	11/05	06/06
Acetone	<12	<25	–	<5.0 J	<5.0 J	<5.0
Benzene	7	5 J	–	<1.0	<1.0	0.8 J
Toluene	<5.0	<10	–	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	–	<4.0	<4.0	<4.0
Xylene	<10	<20	–	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	200 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	–	<1.0	<1.0	<1.0
Aniline	<5.0	<5.0	<5.0	<1.0	<1.0	<1.1
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.1
Methylene Chloride	<5.0	<10	–	<3.0	<3.0	<3.0

MW-18						
Date	10/03	06/04	11/04	06/05	11/05	06/06
Acetone	<12	<25	–	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	–	<1.0	<1.0	<1.0
Toluene	<5.0	<10	–	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	–	<4.0	<4.0	<4.0
Xylene	<10	<20	–	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	–	<1.0	<1.0	<1.0
Aniline	0.7 J	R	<5.0	<1.0	<1.1	<1.0
N,N-Dimethylaniline	<5.0	R	<5.0	<1.0	<1.1 J	<1.0
Methylene Chloride	<5.0	<10	–	<3.0	<3.0	<3.0

MW-30						
Date	10/03	06/04	11/04	06/05	11/05	06/06
Acetone	<12	<25	<120	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	<50	0.3 J	0.7 J	0.6 J
Toluene	<5.0	<10	<50	<5.0	0.6 J	0.4 J
Ethylbenzene	<5.0	<10	<50	<4.0	<4.0	<4.0
Xylene	<10	<20	<100	<5.0	0.5 J	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<50	<1.0	<1.0	<1.0
Aniline	4 J	<5.0	<5.0	<1.0	240	29
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<50	<3.0	<3.0	<3.0

MW-8S		
Date	10/03	06/04
Acetone	21	<25
Benzene	25	40
Toluene	330 D	330 EJ
Ethylbenzene	93	110
Xylene	360	400
Methanol	1,200 J	<1,000
Trichloroethene	3,100 D	5,900 D
Aniline	67,000 D	56,000
N,N-dimethylaniline	24,000 D	51,000
Methylene Chloride	400,000 D	1,200,000 D

MW-8SR				
Date	11/04	06/05	11/05	06/06
Acetone	<1,200	81 J	15 J	48
Benzene	<500	13	13	15
Toluene	100 DJ	100	130	120
Ethylbenzene	<500	53	66	79
Xylene	164 DJ	180	260	260
Methanol	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<500	<1.0	<1.0	<1.0
Aniline	35,000 D	30,000	32,000	23,000
N,N-dimethylaniline	5,300 D	<200	<260 J	<200
Methylene Chloride	10,000 D	<3.0	<3.0	<3.0

MW-23S						
Date	10/03	06/04	11/04	06/05	11/05	06/06
Acetone	<12	<25	–	<5.0 J	<5.0 J	<5.0 J
Benzene	<5.0	<10	–	<1.0	<1.0	<1.0
Toluene	<5.0	<10	–	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	–	<4.0	<4.0	<4.0
Xylene	<10	<20	–	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	–	<1.0	<1.0	<1.0
Aniline	60	<5.0	<5.0	<1.0	<1.0	<1.2
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.2
Methylene Chloride	<5.0	<10	–	<3.0	<3.0	<3.0

MW-23I						
Date	10/03	06/04	11/04	06/05	11/05	06/06
Acetone	<12	<25	–	<5.0 J	<5.0 J	<5.0 J
Benzene	<5.0	<10	–	<1.0	<1.0	<1.0
Toluene	<5.0	<10	–	<5.0	<5.0	0.6 J
Ethylbenzene	<5.0	<10	–	<4.0	<4.0	<4.0
Xylene	<10	<20	–	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	–	<1.0	<1.0	<1.0
Aniline	<5.0	1 J	<5.0	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	–	<3.0	<3.0	<3.0

MW-28						
Date	10/03	11/04	11/04	06/05	11/05	06/06
Acetone	24	20 J	<120 (<25)	5.2 J	6.8 J (7.8 J)	<5.0J (<5.0 J)
Benzene	11	4 J	<50 (4 J)	4.5	6.1 (5.8)	6.0J (6.3)J
Toluene	6	2 J	<50 (<10)	1.2 J	<5.0 (<5.0)	1.2 J (1.3 J)
Ethylbenzene	12	5 J	<50 (5 J)	4.6	4.7 (4.7)	5.3J (5.4)J
Xylene	13 J	4 J	<100 (3 J)	3.9 J	<5.0 (<5.0)	4.2 J (4.3 J)
Methanol	<1,000	<1,000	190 J	<1,000	<1,000 (<1,000)	<500J(<1,000 J)
Trichloroethene	<5	<10	<50 (<10)	<1.0	<1.0 (<1.0)	<1.0J (<1.0 J)
Aniline	1,900 D	910 D	640 D J	630	380 (350)	430J (530)J
N,N-dimethylaniline	<5.0	<5.0	<5.0	<5.0	<2.2 J (<2.1 J)	<2.1J (<5.0 J)
Methylene Chloride	<5.0	<10	<50 (<10)	<3.0	<3.0 (<3.0)	<3.0J (<3.0 J)

MW-25D			
Date	06/04	06/05	06/06
Acetone	<25	<5.0 J	<5.0
Trichloroethene	<10	<1.0	<1.0
Aniline	<5.0	<1.0	<1.0
N,N-dimethylaniline	<5.0	<1.0	<1.0
Toluene	<10	<5.0	0.7J

MW-25S						
Date	11/03	06/04	11/04	06/05	11/05	06/06
Acetone	<12	<25	–	<5.0 J	<5.0 J	<5.0 J
Benzene	<5.0	<10	–	<1.0	<1.0	<1.0
Toluene	<5.0	<10	–	<4.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	–	<4.0	<4.0	<4.0
Xylene	<10	<20	–	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	–	<1.0	<1.0	<1.0
Aniline	<5.0	<5.0	<5	<1.1	<1.0	<1.0
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.1	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	–	<3.0	<3.0	<3.0

MW-29						
Date	10/03	06/04	11/04	06/05	11/05	06/06
Acetone	<12	<25	<120	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	<50	<1.0	<1.0	<1.0
Toluene	<5.0	<10	<50	<5.0	<5.0	<5.0
Ethylbenzene	<5	<10	<50	<4.0	<4.0	<4.0
Xylene	<10	<20	<100	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	420 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<50	<1.0	<1.0	<1.0
Aniline	2 J	3 J	<5.0	<1.0	<1.0	<1.0
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<50	<3.0	<3.0	<3.0

LEGEND:

ø	UTILITY POLE
▫	CATCH BASIN
PMO	PETROLEUM PIPE LINE MARKER
GMO	GAS LINE MARKER
✧	HYDRANT
•	WATER VALVE
○	MANHOLE
——-——	PROPERTY LINE
MW-19 ◉	GROUNDWATER MONITORING WELL
PZ-A ▣	PIEZOMETER
▣ OR ◉	BIANNUAL DOWNGRADIENT PERIMETER GROUNDWATER MONITORING LOCATION
MW-26S ⊕	PUMPING WELL
MW-8S ⊗	REMOVED GROUNDWATER MONITORING WELL
┄┄┄	BOUNDARY OF IMPACTED AREA
A━━━	GROUNDWATER WITHDRAWAL TRENCH
○┅┅┅	GROUNDWATER INFILTRATION TRENCH
━━━	PIPING TO BUILDING
╍╍╍	PIPING FROM BUILDING
┄┄┄	AREA OF RELATIVELY HIGHER CONCENTRATIONS OF COCs

SAMPLE IDENTIFICATION

MW-19						
Date	10/03	06/04	11/04	06/05	11/05	06/06
Acetone	<11	<25	<25	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	<10	<1.0	<1.0	<1.0
Toluene	<5.0	<10	<10	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	<10	<4.0	<4.0	<4.0
Xylene	<10	<20	<20	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10	<1.0	<1.0	<1.0
Aniline	51 J	<5.0	<5.0	<1.1	<1.0	<1.0
N,N-dimethylaniline	16 J	<5.0	<5.0	<1.1	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<10	<3.0	<3.0	<3.0

CONCENTRATION (ppb)

DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.

0 100' 200'

GRAPHIC SCALE

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
2. TRENCH LOCATIONS ARE APPROXIMATE.
3. MONITORING LOCATIONS ARE APPROXIMATE.
4. FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
5. ONLY COC CONCENTRATIONS DETECTED OR HAVE BEEN DETECTED ARE PRESENTED ON THIS FIGURE (SEE ATTACHMENT A FIGURE 2).
6. < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
7. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
8. D = CONCENTRATION IS BASED ON DILUTED SAMPLE ANALYSIS.
9. R = THE SAMPLE RESULT WAS REJECTED.
10. 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.
11. 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.
12. 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 BIANNUAL REPORT, THESE MONITORING WELLS WERE NOT RESAMPLED.
13. THE 11/04 SAMPLING EVENT VOC INITIAL DATA FOR MW-27, MW-28, MW-29, AND MW-30 WERE INADVERTENTLY LOST DUE TO LABORATORY EQUIPMENT FAILURE. HOWEVER, VALID DATA WAS OBTAINED FROM SUBSEQUENT DILUTIONS OF THESE SAMPLES, RESULTING IN HIGHER DETECTION LIMITS. THE VOC RESULTS OBTAINED FROM THE DUPLICATE SAMPLES COLLECTED AT MW-27 AND MW-28 HAVE LOWER DETECTION LIMITS AND ARE PRESENTED ON THIS FIGURE IN PARENTHESES.

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

GROUNDWATER MONITORING DATA SUMMARY FOR OCTOBER 2003 - JUNE 2006 AREA 3

ARCADIS BBL
infrastructure, environment, facilities

FIGURE
4

[SYR-85-LEAD] SYR-85-RCB GHS LAF L: ON=*, OFF=REF
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ATTACHMENTS

ARCADIS BBL

Attachment A

Groundwater Monitoring Data Summary Figures for 1988 - May 2003

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

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	<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

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	228
Methanol	<1,000	5,000	14,000 JN	<1,000	<1,000 J	<1,000	<1,000	<1,000 J	<1,000	<1,000	<1,000
Trichloroethene	585 D	300 J	<1,000	55	<1,000	6 J	<10	<20	<5	<10	<5
Aniline	15,900 JD	38,000 D	83,000 D	100,000 D	64,000 D	79,000	67,000 D	63,000 D	1,090,000 D	80,000 D	160,000 D
N,N-dimethylaniline	3,920 D	61,000 D	7,900	3,500 J	3,900	<10,000	650 J	32	<5,300	10 J	230
Methylene Chloride	42,449 D	86,000 D	14,000 B	9,700 D	13,000	390 J	400 D	48 B	14	<10	97

MW-34

Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	2 J	<10 J	<10 J	<10	7 J	<32	37 J	16
Benzene	<10	0.9 J	1 J	<10 J	<10	2 J	<5	<10	<5
Toluene	<10	1 J	2 J	<10 J	2 J	2 J	<5	<10	<5
Xylene	<10	<10	<10	<10 J	2 J	2 J	<10	<20	<10
Aniline	83	380 D	200 D	320 D	700 D	76	640 D	380 DJ	140
N,N-dimethylaniline	<10	2 J	3 J	4 J	5 J	3 J	15	2 J	3 J

TW-01

Date	12/96	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Benzene	82	15	24	16	16	11 J	5 J	10	3 J	7 J	7
Toluene	4 J	<10	2 J	1 J	<10	<10 J	<10	<10	<5	<10	<5
Ethylbenzene	6 J	4 J	2 J	3 J	<10	<10 J	<10	<10	<5	<10	<5
Xylene	4 J	<10	2 J	<10	<10	<10 J	<10	<10	<10	<20	<10
Aniline	2,090 D	4,400 DEJ	9,000 D	4,400 D	280 D	15	<10	<10	8	<5	<5
N,N-dimethylaniline	13	4 J	5 J	4 J	4 J	2 J	3 J	2 J	13	R	1 J
Methylene Chloride	4 J	<10	<10	<10	<10	<10 J	<10	<10	<5	<10	<5
Acetone	<10	<10	<10	<10	<10	<10 J	<10	<10	<14	<25	<12

MW-31

Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	<10	<10	<10 J	21	<10	<14	<25	<12
Benzene	12	16	16	12 J	11	14	9	11	9
Aniline	34	230 D	3 J	10	<10	91 D	804 D	580 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

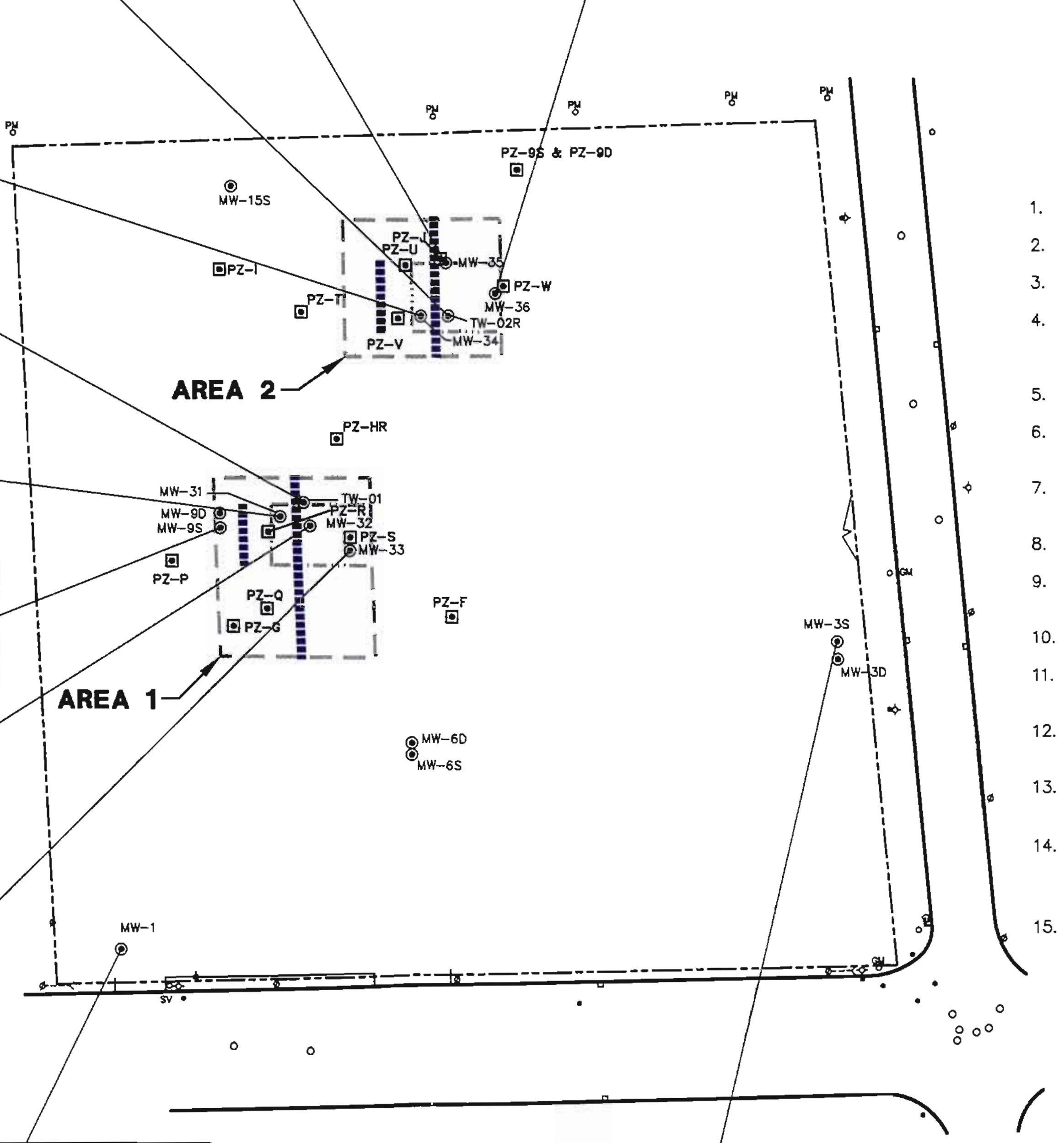
Date	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	<10	5 J	<10 J	45 J	17 J	21	<18	11 J	88
Benzene	<10	<10	2 J	<10	4 J	<20	5 J	3 J	4 J	13
Toluene	<10	<10	0.7 J	<10	1 J	<20	<10	<5	<10	<5
Aniline	9 J	120	150	51	540 D	1,300 D	1,900 D	2,780 D	290 D	2,000
N,N-dimethylaniline	6 J	6 J	8 J	7 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-3S

Date	3/88	1/89	11/89	11/91	8/95	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<100	<10,000	<10,000	2,900	<1,000	<10	<10	<10 J	<10 J	<10	<10	<12	<25	<12
Benzene	<1	<100	<100	10	<5	<10	1 J	<10	1 J	<10	3 J	<5	<10	<5
Toluene	<1	120	<100	10	<5	<10	0.7 J	<10	2 J	<10	8 J	<5	<10	<5
Ethylbenzene	<1	<100	<100	4	<5	<10	<10	<10	<10 J	<10	1 J	<5	<10	<5
Xylene	<1	<100	<100	31	<5	<10	<10	<10	<10 J	<10	2 J	<10	<20	<10
Methanol	<1,000	<1,000	<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
Trichloroethene	50	1,100	100	<10	<5	<10	<10	<10	<10 J	<10	<10	<5	<10	<5
Aniline	<10	<11	<52	790	15	<10	9 J	<10	2 J	<10	690 D (69*)	1.7 J	<5	<5
N,N-dimethylaniline	<10	5,570	440	170	2 J	<10	<10	<10	1 J	<10	4 J	<5	R	<5
Methylene Chloride	110	4,700	2,700	<10	<10	<10	<10	<10	<10 J	<10	<10	<5	<10	<5



LEGEND:

- 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
- BOUNDARY OF IMPACTED AREA
- GROUNDWATER INFILTRATION TRENCH
- AREA OF RELATIVELY HIGHER CONCENTRATIONS OF COCs

SAMPLE IDENTIFICATION

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

CONCENTRATION (ppb)

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
2. TRENCH LOCATIONS ARE APPROXIMATE.
3. MONITORING LOCATIONS ARE APPROXIMATE.
4. FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
5. ONLY DETECTED COCs ARE PRESENTED ON THIS FIGURE.
6. < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
7. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
8. D = CONCENTRATION IS BASED ON DILUTED SAMPLE ANALYSIS.
9. E = IDENTIFIES COMPOUNDS WHOSE CONCENTRATIONS EXCEED THE CALIBRATION RANGE OF THE INSTRUMENTS.
10. R = THE SAMPLE RESULT WAS REJECTED.
11. B = THE COMPOUND HAS BEEN FOUND IN THE SAMPLE AS WELL AS IN ITS ASSOCIATED BLANK; ITS PRESENCE IN THE SAMPLE MAY BE SUSPECT.
12. N = THIS ANALYSIS INDICATES THE PRESENCE OF A COMPOUND FOR WHICH THERE IS PRESUMPTIVE EVIDENCE TO MAKE AN TENTATIVE IDENTIFICATION.
13. DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.
14. *= MW-3S WAS RESAMPLED ON 11/8/01 DUE TO ANILINE DETECTION DURING 9/2001 SAMPLING EVENT AT A CONCENTRATION OF 690 PPB. ANILINE WAS DETECTED ON 11/8/01 AT A CONCENTRATION OF 69 PPB.
15. THE 10/02 SAMPLING EVENT N,N-DIMETHYLANILINE DATA FOR MW-1, MW-3S, MW-32, MW-35, AND TW-01 WERE REJECTED DUE TO MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RECOVERIES BELOW CONTROL LIMITS. THESE MONITORING WELLS WERE NOT RESAMPLED.

0 100' 200'

GRAPHIC SCALE

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

GROUNDWATER MONITORING DATA SUMMARY FOR 1988 - MAY 2003 AREAS 1 & 2

ARCADIS BBL
infrastructure, environment, facilities

FIGURE
1

SYR-85-RCB WLJ LJP L: ON=*, OFF=REF*
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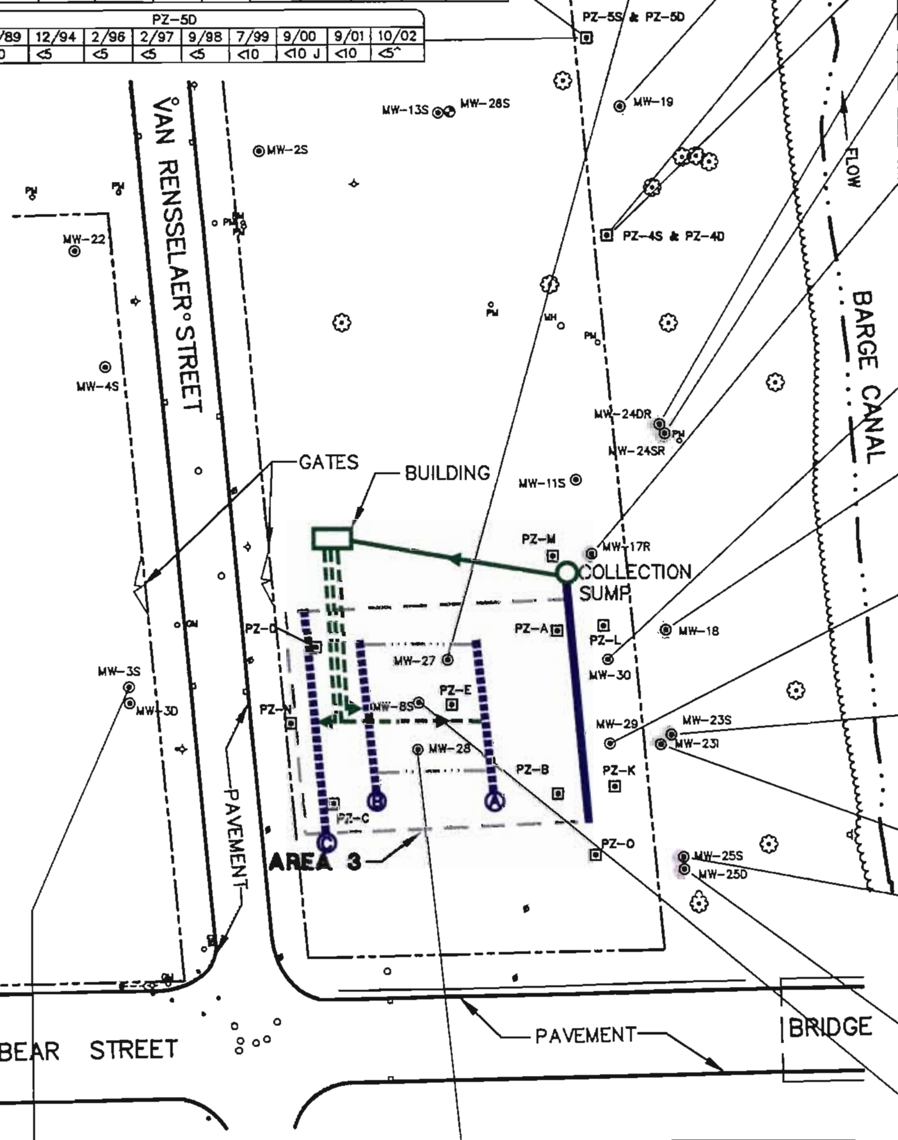
MW-27									
Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	23	<10 J	<10 J	<10 J	<10	<10	<18	9 J	<12
Benzene	3 J	4 J	8 J	4 J	5 J	5 J	7	3 J	8
Toluene	4 J	2 J	<10	<10	<10	<10	11	<10	11
Ethylbenzene	<10	3 J	8 J	3 J	5 J	2 J	12	<10	23
Xylene	3 J	8 J	2 J	1 J	2 J	<10	26	<20	51
Aniline	340 DJ	740 D	110 D	16 J	260 D	26	176,000 DJ	2,700 D	15,000 DJ
N,N-dimethylaniline	<10	<10	1 J	2 J	2 J	<10	19 J	100 J	11
Methylene Chloride	<10	<10	<10	1 J	<10	<10	<5	60 JN	43
Trichloroethene	<10	<10	<10	<10 J	<10	<10	<5	4 J	<5

PZ-5S										
Date	11/89	12/94	2/96	2/97	9/98	6/99	7/99	9/00	9/01	10/02
Acetone	<100	<10	<1,000	5 J	<10	<10 J	<10 J	<10 J	7 J	<25 J^

PZ-5D									
Date	11/89	12/94	2/96	2/97	9/98	7/99	9/00	9/01	10/02
Aniline	<10	<5	<5	<5	<5	<10	<10 J	<10	<5^



MW-28									
Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Benzene	<5,000	<500	<10,000	<1,000 J	<400	<400	8	8 J	4 J
Toluene	<5,000	<500	<10,000	<1,000 J	<400	<400	6	6 J	2 J
Ethylbenzene	<5,000	<500	<10,000	<1,000 J	<400	<400	9	11	2 J
Xylene	<5,000	<500	<10,000	<1,000 J	<400	<400	10 J	12 J	8 J
Methanol	2,200	<1,000	<1,000 J	<1,000 J	<1,000	<1,000 J	<1,000	<1,000	<1,000
Aniline	546 D	1,100 D	1,300 D	540 DJ	3,200 D	1,000 D	33,400 D	2,700 D	1,000 DJ
N,N-dimethylaniline	54	40	30	<10	7 J	<10	57	R	3 J
Methylene Chloride	64,000 J	39,000 D	130,000 J	8,100 BJ	5,900 B	4,700 B	4,600 D	<10	52
Acetone	<5,000 J	<500 J	<10,000	<1,000 J	<400	<400	<49	14 J	13

MW-3S														
Date	3/88	1/89	11/89	11/91	8/95	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<100	<10,000	<10,000	2,900	<1,000	<10	<10	<10 J	<10 J	<10	<10	<12	<25	<12
Benzene	<1	<100	<100	10	<5	<10	1 J	<10	1 J	<10	3 J	<5	<10	<5
Toluene	<1	120	<100	10	<5	<10	0.7 J	<10	2 J	<10	8 J	<5	<10	<5
Ethylbenzene	<1	<100	<100	4	<5	<10	<10	<10	<10 J	<10	1 J	<5	<10	<5
Xylene	<1	<100	<100	31	<5	<10	<10	<10	<10 J	<10	2 J	<10	<20	<10
Methanol	<1,000	<1,000	<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
Trichloroethene	50	1,100	100	<10	<5	<10	<10	<10	<10 J	<10	<10	<5	<10	<5
Aniline	<10	<11	<52	790	15	<10	9 J	<10	2 J	<10	690 D (69*)	1.7 J	<5	<5
N,N-dimethylaniline	<10	5,570	440	170	2 J	<10	<10	<10	1 J	<10	4 J	<5	R	<5
Methylene Chloride	110	4,700	2,700	<10	<10	<10	<10	<10	<10 J	<10	<10	<5	<10	<5

MW-19																
Date	11/89	12/94	8/95	2/96	8/96	2/97	8/97	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
N,N-dimethylaniline	<10	<10	<10	<10	<10	<10	<10	5 J	<10	<10	<10	<10	<10	<10	<5	<5^	<5
Acetone	<100	<10	<1,000	<1,000	<10	<10	<10	<10	<10	<10 J	<10	<10 J	<10	<10	<10	<25 J	<12
Aniline	<10	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10 J	<10	<10	<5	<5	<5

PZ-4S														
Date	11/89	11/90	11/91	11/92	8/95	8/96	8/97	2/99	6/99	3/00	3/01	4/02	10/02	5/03
Aniline	<10	<10	<10	<10	<5	<5	<6	<10	<5	<5	<10	8 (<5)**	<5^	<5
N,N-dimethylaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10 J	<10	3 J	<5 (<5)**	<5^	<5

PZ-4D														
Date	11/89	11/90	11/91	11/92	8/95	10/95	8/96	8/97	2/99	3/00	9/00	3/01	4/02	5/03
N,N-dimethylaniline	<10	<10	<10	<10	0.8 J	<10	<10	<12	<10	<10	<10	<10	<5	<5

MW-24DR										
Date	12/94	8/95	2/96	2/97	9/98	7/99	9/00	9/01	6/02	10/02
Aniline	<5	<5	<5	<5	<5	<10	<10 J	<10	ND**	<5^

MW-24SR											
Date	12/94	8/95	2/96	2/97	9/98	6/99	7/99	3/00	9/01	6/02	10/02
Aniline	<5	<5	<5	<5	<5	<10 J	<10	<10 J	<10	ND**	<5^

MW-17R															
Date	11/90	11/91	11/92	8/95	10/95	8/96	8/97	2/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<100	<100	<100	<1,000	NA	11	<10	<10	<10	<10 J	<10	<10	<10	<25 J	<12
Benzene	<1	<1	<1	<5	<5	<10	<10	1 J	8 J	15 J	8 J	5 J	6	14	8
Trichloroethene	<1	<1	<1	<5	2J	<10	<10	<10	<10	<10 J	<10	<10	<5	<10	<5
Methanol	<1,000	<1,000	<1,000	<1,000	NA	1,000	1,000	1,000	<1,000 J	<1,000 J	<1,000	<1,000	620 J	<1,000	<1,000
Aniline	<10	<10	<10	<5	NA	<5	<5	<10	<5	24 J	<10	<10	150 (<5)**	<5^	<5
N,N-dimethylaniline	<10	<10	<10	<10	NA	<10	<10	<10	<10	4 J	<10	<10	110 (<5)**	<5^	<5
Methylene Chloride	<1	<1	<1	<11	<5	<10	<10	<10 J	<10	1 J	<10	<10	<5	<10	<5

MW-30										
Date	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	7 J	<10	<10	<10 J	<10	4 J	<10	<25 J	<62
Benzene	<10	<10	0.7 J	<10	<10 J	<10	2 J	<5	<10	<25
Trichloroethene	<10	<10	0.5 J	<10	<10 J	<10	<10	<5	<10	<25
Aniline	<10	<10	<10	18	9 J	8 J	5 J	250	R	18
N,N-dimethylaniline	<10	2 J	1 J	2 J	2 J	2 J	1 J	210	R	0.6 J
Methylene Chloride	<10	<10	<10	4 J	2 J	<10	<10	<5	<10	8 J

MW-18																				
Date	11/89	11/90	11/91	11/92	12/94	8/95	2/96	8/96	2/97	8/97	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Methanol	<1,000	<1,000	<1,000	<1,000	<200	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J	<1,000 J	<1,000	<1,000	720 J	<1,000	280 J
Aniline	<10	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10 J	<10	<10	280 D (<5)**	<5^	<5
N,N-Dimethylaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	200 D (<5)**	<5^	<5
Acetone	<100	<100	<100	<100	<10	<1,000	<1,000	<10	<10	<10	<10	<10	<10 J	<10	<10 J	<10	<10	<10	6 J	<12

MW-29										
Date	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	7 J	<10	<10	<10 J	<10	<10	<10	<25 J	<12
Xylene	2 J	1 J	<10	<10	<10 J	<10	<10	<10	<20	<10
Aniline	<10	5 J	2 J	450 D	24 J	30	7 J	3 J	R	19
N,N-dimethylaniline	13	4 J	4 J	6 J	4 J	4 J	2 J	9	R	1 J
Methylene Chloride	<10	<10	<10	<10	<10 J	<10	<10	<6	4 JN	<3

MW-23S																	
Date	12/94	8/95	2/96	8/96	2/97	8/97	9/98	2/99	6/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	<1,000	<1,000	<10	<10	12	<10	<10	<10 J	<10 J	<10	<10 J	<10	<10	<10	<25 J	<62
Aniline	<5	<5	<5	7	11	92	56	<10	<10 J	<10	<5	<10 J	<10	<10	<5	<5^	<5
N,N-dimethylaniline	<10	<10	<10	<10	<10	<10	7 J	10	2 J	<10	2 J	2 J	<10	<10	<5	<5^	<5
Methanol	<200	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J	<1,000	<1,000 J	<1000 J	<1,000	<1,000	<1,000	<1,000	380 J

MW-23I																
Date	12/94	8/95	2/96	8/96	2/97	8/97	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	<1,000	<1,000	<10	<10	<10	<10	<10	<10 J	<10	<10 J	<10	4 J	<10	<25 J	<12
Xylene	<5	<5	<10	<10	<10	<10	<10	<10	<10	<10	<10 J	<10	2 J	<10	<20 J	<5
Methylene Chloride	<5	<10	<10	<10	<10	<10	<10	<10 J	<10	<10	<10 J	<10	<10	2 J	<10	<5
Aniline	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10 J	<10	<10	<5	<5	<5

MW-25S														
Date	8/95	10/95	8/96	8/97	2/99	6/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Aniline	<5	<5	<5	<5	130	110 J	5 J	<5	<10 J	<10	<10	<5	<5^	<5
N,N-dimethylaniline	0.7 J	<10	<10	<10	<10	21 J	<10	<10	<10	<10	<10	<5	<5^	<5

MW-25D										
Date	8/95	10/95	8/96	8/97	2/99	3/00	9/00	3/01	4/02	5/03
Acetone	<1,000	NA	15	<10	<10	<10	<10	<10	<10	<12
Trichloroethene	<5	3 J	<10	<10	<10	<10	<10	<10	<5	<5
N,N-dimethylaniline	1 J	<10	<10	<11	<10	<10	<10	<10	<5	<5
Aniline	<5	<5	<5	<5	<5	<10	<5	5 J	<5	<5

MW-8S														
Date	1/89	11/89	11/91	8/95	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<1,000,000	470,000	<1,000,000	<1,000	<10,000 J	<20,000	10 J	<100,000	<50,000 J	<50,000	<400	2,100	120 J	<12
Benzene	<10,000	<10,000	<10,000	<250,000 D	<10,000	<20,000	22 J	<100,000	<50,000 J	<50,000	<400	50 J	23	20 J
Toluene	<10,000	<10,000	<10,000	<250,000 D	<10,000	<20,000	240 J	<100,000	<50,000 J	<50,000	430	410	310	600 D
Ethylbenzene	<10,000	<10,000	<10,000	<250,000 D	<10,000	<20,000	58 J	<100,000	<50,000 J	<50,000	170 J	100 J	73	81
Xylene	<10,000	<10,000	<30,000	<250,000 D	<10,000	<20,000	220 J	<100,000	<50,000 J	<50,000	680	400	287	300
Methanol	430,000	300,000	150,000	22,000	7,900	16,000 JN	17,000	30,000 J	14,000 J	53,000	8,900 J	<1,000	<1,000	<1,000
Trichloroethene	<10,000	<10,000	<10,000	80,000 JD	3,300 J	11,000 J	11,000 J	<100,000	9,200 J	11,000 J	18,000 JD	9,800 J	3,100	6,700 D
Aniline	2,900	8,500	8,000	<25,000 D	1,200 J	30,000 D	24,000	82,000	42,000 J	90,000 D	21,000	783,000 D	80,000	78,000 D
N,N-dimethylaniline	24,000	52,000	33,000	380,000 D	28,000 D	120,000 D	77,000	270,000 D	59,000	120,000 D	29,000	773,000 D	21,000 J	29 J
Methylene Chloride	3,200,000	2,800,000	1,600,000	7,700,000 D	140,000	650,000 DB	450,000 D	1,300,000	540,000 BJ	990,000	440,000 BD	880,000 D	320,000	910,000 D

LEGEND:

•	UTILITY POLE
▫	CATCH BASIN
PM ○	PETROLEUM PIPE LINE MARKER
GM ○	GAS LINE MARKER
✧	HYDRANT
•	WATER VALVE
○	MANHOLE
— - - —	PROPERTY LINE
MW-19 ◉	GROUNDWATER MONITORING WELL
PZ-A ▣	PIEZOMETER
▣ OR ◉	BIANNUAL DOWNGRADIENT PERIMETER GROUNDWATER MONITORING LOCATION
MW-26S ⊘	PUMPING WELL
— — —	BOUNDARY OF IMPACTED AREA
━━━	GROUNDWATER WITHDRAWAL TRENCH
Ⓐ▪▪▪▪▪▪▪▪	GROUNDWATER INFILTRATION TRENCH
───	PIPING TO BUILDING
‒ ‒ ‒ ‒	PIPING FROM BUILDING
⬚	AREA OF RELATIVELY HIGHER CONCENTRATIONS OF COCs

SAMPLE IDENTIFICATION

MW-25		
Date	8/95	10/95
Acetone	<1,000	NA
Trichloroethene	<5	3 J
N,N-dimethylaniline	1 J	<10
Aniline	<5	<5

CONCENTRATION (ppb)

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
2. TRENCH LOCATIONS ARE APPROXIMATE.
3. MONITORING LOCATIONS ARE APPROXIMATE.
4. FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
5. ONLY DETECTED COCs ARE PRESENTED ON THIS FIGURE.
6. < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
7. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
8. D = CONCENTRATION IS BASED ON DILUTED SAMPLE ANALYSIS.
9. E = IDENTIFIES COMPOUNDS WHOSE CONCENTRATIONS EXCEED THE CALIBRATION RANGE OF THE INSTRUMENTS.
10. B = THE COMPOUND HAS BEEN FOUND IN THE SAMPLE AS WELL AS IN ITS ASSOCIATED BLANK; ITS PRESENCE IN THE SAMPLE MAY BE SUSPECT.
11. N = THIS ANALYSIS INDICATES THE PRESENCE OF A COMPOUND FOR WHICH THERE IS PRESUMPTIVE EVIDENCE TO MAKE AN TENTATIVE IDENTIFICATION.
12. R = THE SAMPLE RESULT WAS REJECTED.
13. DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.
14. THE ANILINE DATA FOR THE 9/98 SAMPLING EVENT FOR MW-18, MW-19, MW-23S, MW-23I, MW-24SR, MW-24DR, MW-28, PZ-5S AND PZ-5D WERE OBTAINED IN 12/98, BECAUSE THE 9/98 RESULTS WERE REJECTED DUE TO LABORATORY ERROR.
15. * = MW-3S WAS RESAMPLED ON 11/8/01 DUE TO ANILINE DETECTION DURING 9/2001 SAMPLING EVENT AT A CONCENTRATION OF 690 PPB. ANILINE WAS DETECTED ON 11/8/01 AT A CONCENTRATION OF 69 PPB.
16. ** = MONITORING WELLS MW-17R, MW-18, AND PZ-4S WERE RESAMPLED FOR ANILINE AND N,N-DIMETHYLANILINE ON JUNE 18, 2002 DUE TO N,N-DIMETHYLANILINE AND/ OR ANILINE DETECTION AT THESE PERIMETER MONITORING LOCATIONS DURING THE APRIL 2002 SAMPLING EVENT. THE RESULTS OF THIS RESAMPLING EVENT ARE SHOWN IN PARENTHESIS. MONITORING WELLS MW-24SR AND MW-24DR WERE ALSO SAMPLED ON JUNE 18, 2002 FOR ANALYSIS OF ANILINE AND N,N-DIMETHYLANILINE. THESE COMPOUNDS WERE NOT DETECTED.
17. ^ = THE ANILINE AND N,N-DIMETHYLANILINE DATA FOR THE 10/02 SAMPLING EVENT FOR MW-17R, MW-18, MW-19, MW-23S, MW-23I, MW-24SR, MW-24DR, MW-25S, PZ-4S, PZ-5S, AND PZ-5D WERE OBTAINED IN 1/03, BECAUSE THE 10/02 RESULTS WERE REJECTED DUE TO MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RECOVERIES BELOW CONTROL LIMITS.
18. THE 10/02 SAMPLING EVENT N,N-DIMETHYLANILINE DATA FOR MW-3S, MW-28 AND MW-29 AND THE 10/02 SAMPLING EVENT ANILINE AND N,N-DIMETHYLANILINE DATA FOR MW-30 WERE REJECTED DUE TO MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RECOVERIES BELOW CONTROL LIMITS. THESE MONITORING WELLS WERE NOT RESAMPLED.

0 120' 240'

GRAPHIC SCALE

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

GROUNDWATER MONITORING DATA SUMMARY FOR 1988 - MAY 2003 AREA 3

ARCADIS BBL
infrastructure, environment, facilities

FIGURE
2

SYR-85-RCB LJP WLJ L: ON=*, OFF=REF*
F:\ACTIVE\-DWG\ACT\26003190\BIANNUAL\REVISED\26003C02.DWG SAVED: 1/4/2007 10:52 AM LAYOUT:Layout1 PAGESETUP:---- PENTABLE:PLTFULL.CTB PRINTED: 1/4/2007 10:52 AM BY: RALLEN
XREFS: 26003X00 26003X01 IMAGES:

Attachment B

Validated Data Packages

Summary

The following is an assessment of the data package for sample delivery group (SDG) #T135 for sampling from the McKesson Bear Street Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis				
				VOC	SVOC	PCB	MET	MISC
MW-3S	744026	Water	06/09/2006	X	X			X
Trip Blank	744027	Water	6/09/2006	X				X

Notes:

1. Miscellaneous parameters include methanol.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

Introduction

Analyses were performed according to (United Stated Environmental Protection Agency) USEPA SW-846 Method 8260 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

U	The 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.
B	The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
N	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
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.
E	The compound was quantitated above the calibration range.
D	Concentration is based on a diluted sample analysis.
C	Identification confirmed by gas chromatograph/mass spectrometer (GC/MS).
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

.Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260	Water	14 days from collection to analysis	Cooled @ 4 °C; preserved to a pH of less than 2.
	Soil	14 days from collection to analysis	Cooled @ 4 °C.

All sample holding times were met.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure contamination of samples during shipment. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No compounds were detected in the associated blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses and retention times were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate.

No field duplicates were included with this SDG.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

No target compounds were identified in the samples.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Was one or more surrogate recovery outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 10			
How many RPDs for MS/MSD were outside of QC limits?			
0 out of 5			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each day or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every 12 hours for each system used?	X		
Do any method/instrument blanks have positive results?		X	
Are trip/field/rinse blanks associated with every sample?	X		

	YES	NO	NA
Do any trip/field/rinse blanks have positive results?		X	
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each 12 hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?			X
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?			X
Do the samples and standard relative ion intensities agree within 20%?			X
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	

	YES	NO	NA
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?	~~X~~		✓
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?		X	

SEMI-VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

Introduction

Analyses were performed according to (United Stated Environmental Protection Agency) USEPA SW-846 Method 8270 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

U	The 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.
B	The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
N	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
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.
E	The compound was quantitated above the calibration range.
D	Concentration is based on a diluted sample analysis.
C	Identification confirmed by gas chromatograph/mass spectrometer (GC/MS).
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No compounds were detected in the associated blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All sample locations exhibited acceptable surrogate recoveries.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC to exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) the area counts of the associated continuing calibration standard.

All internal standard areas and retention times were within established limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LSC analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate.

No field duplicates were included with this SDG.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

No target compounds were identified in the samples.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Semivolatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were MSs analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits?			
0 out of 22			
How many RPDs for MS/MSD were outside of QC limits?			
0 out of 11			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each system used?	X		
Do any method blanks have positive results?		X	
Are field/rinse blanks associated with every sample?		X	

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each 12 hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?			X
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?			X
Do the samples and standard relative ion intensities agree within 20%?			X
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?			X

	YES	NO	NA
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF ≥ minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?		X	

MISCELLANEOUS ANALYSES

Introduction

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8015 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1994.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U	The 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.
B	The reported value was obtained from a reading less than the RL but greater than or equal to the IDL.
M	Duplicate injection precision not met.
N	Spiked sample recovery not within control limits.
*	Duplicate analysis not within control limits.
E	The reported value is estimated due to the presence of interference.
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time
Methanol	Water	7 days from collection to extraction, 40 days from extraction to analysis
	Soil	14 days from collection to extraction, 40 days from extraction to analysis

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No analytes were detected above the reporting limit in the associated blanks.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All calibration verification standard recoveries were within the control limit.

4. MS/MSD Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compound's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

5. LCS Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LSC analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

The laboratory control sample exhibited results within the control limit.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method.

No field duplicates were included in this SDG.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Was one or more surrogate recovery outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 16			
How many RPDs for MS/MSD were outside of QC limits?			
0 out of 8			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each day or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every 12 hours for each system used?	X		
Do any method/instrument blanks have positive results?		X	
Are trip/field/rinse blanks associated with every sample?	X		
Do any trip/field/rinse blanks have positive results?		X	
Target Analytes			
Is an organics analysis data sheet present for each of the following:			

	YES	NO	NA
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?			X
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?			X
Do the samples and standard relative ion intensities agree within 20%?			X

Quantitation and Detection Limits

	YES	NO	NA
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?			X

Standard Data

	YES	NO	NA
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		

Initial Calibration

	YES	NO	NA
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	

Continuing Calibration

	YES	NO	NA
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	

Field Duplicates

	YES	NO	NA
Were field duplicates submitted with the samples?		X	

Corrected Sample Analysis Data Sheets

Client ID: **MW-3S**
Site: McKesson Bear

Lab Sample No: **744026**
Lab Job No: T135

Date Sampled: 06/09/06
Date Received: 06/10/06
Date Analyzed: 06/15/06
GC Column: RTX-VMS
Instrument ID: VOAMS6.i
Lab File ID: f17078.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **Trip_Blank**
Site: McKesson Bear

Lab Sample No: **744027**
Lab Job No: T135

Date Sampled: 06/09/06
Date Received: 06/10/06
Date Analyzed: 06/15/06
GC Column: RTX-VMS
Instrument ID: VOAMS6.i
Lab File ID: f17079.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-3S**
Site: McKesson Bear

Lab Sample No: **744026**
Lab Job No: T135

Date Sampled: 06/09/06
Date Received: 06/10/06
Date Extracted: 06/14/06
Date Analyzed: 06/23/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23179.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND	1.0
N,N-Dimethylaniline	ND	1.0

Client ID: **MW-3S**
Site: McKesson Bear

Lab Sample No: **744026**
Lab Job No: T135

Date Sampled: 06/09/06
Date Received: 06/10/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9585.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **Trip_Blank**	Lab Sample No: **744027**
Site: McKesson Bear	Lab Job No: T135
Date Sampled: 06/09/06	Matrix: WATER
Date Received: 06/10/06	Level: LOW
Date Analyzed: 06/13/06	Injection Volume: 1.0 ul
GC Column: DB624	Final Volume: 0.0 mL
Instrument ID: BNAGC5.i	Dilution Factor: 1.0
Lab File ID: gc5f9586.d	

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Laboratory Narrative

SEVERN TRENT STL

SDG NARRATIVE

STL EDISON

SDG No. T135

STL Edison Sample	Client ID
744026	MW-3S
744027	Trip Blank

Sample Receipt:

Sample delivery conforms with requirements.

Volatile Organic Analysis (GC/MS):

QA batch 2299: MS % recovery of Toluene is outside of Q.C. limits (sample amount is too high for spike level). Blank Spike meets all Q.C. limits.

Base/Neutral and/or Acid Extractable Organics (GC/MS):

QA batch # 3873: MS/MSD of spike compounds diluted out.

Nonhalogenated Organic Analysis (GC/FID):

All data conforms with method requirements.

I certify that this data package is in compliance with the protocols in NYSDEC ASP B both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this package has been authorized by the Laboratory Manager or his designee

Michael J. Urban

Michael J.Urban
Laboratory Manager

NYSDEC Sample Identification and Analysis Summary Sheets

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOLATILE (VOA)
ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
744026	WATER	6/9/06	6/10/06		6/15/06
744027	WATER	6/9/06	6/10/06		6/15/06

10/95

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
744026	WATER	6/9/06	6/10/06	6/14/06	6/23/06

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
744026	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
744026	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
744027	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PCB	MET	MISC	
T135	6/09/2006	2000	MW-3S	Water	Yes	Yes	--	--	Yes	
T135	6/09/2006	2000	Trip Blank	Water	Yes	Yes	--	--	Yes	

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

DATA USABILITY SUMMARY REPORT

MCKESSON

BEAR STREET

SDG #T130

VOLATILE, SEMIVOLATILE AND METHANOL ANALYSES

Analyses performed by:

Severn Trent Laboratories
Edison, New Jersey

Review performed by:

BBL®
an ARCADIS company

Syracuse, New York
Report #5923

Summary

The following is an assessment of the data package for sample delivery group (SDG) #T130 for sampling from the McKesson Bear Street Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis				
				VOC	SVOC	PCB	MET	MISC
MW-30	744009	Water	6/08/2006	X	X			X
MW-17R	744010	Water	6/08/2006	X	X			X
MW-8SR	744011	Water	6/08/2006	X	X			X
MW-29	744012	Water	6/08/2006	X	X			X
Trip Blank	744013	Water	6/08/2006	X				X

Notes:

1. Miscellaneous parameters include methanol.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

Introduction

Analyses were performed according to (United Stated Environmental Protection Agency) USEPA SW-846 Method 8260 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

U	The 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.
B	The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
N	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
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.
E	The compound was quantitated above the calibration range.
D	Concentration is based on a diluted sample analysis.
C	Identification confirmed by gas chromatograph/mass spectrometer (GC/MS).
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

.Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260	Water	14 days from collection to analysis	Cooled @ 4 °C; preserved to a pH of less than 2.
	Soil	14 days from collection to analysis	Cooled @ 4 °C.

All sample holding times were met.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure contamination of samples during shipment. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No compounds were detected in the associated blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses and retention times were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate.

No field duplicates were included with this SDG.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Was one or more surrogate recovery outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 10			
How many RPDs for MS/MSD were outside of QC limits?			
0 out of 5			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each day or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every 12 hours for each system used?	X		
Do any method/instrument blanks have positive results?		X	
Are trip/field/rinse blanks associated with every sample?	X		

	YES	NO	NA
Do any trip/field/rinse blanks have positive results?		X	
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each 12 hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	

	YES	NO	NA
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?			X
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?		X	

SEMI-VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

Introduction

Analyses were performed according to (United Stated Environmental Protection Agency) USEPA SW-846 Method 8270 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

U	The 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.
B	The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
N	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
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.
E	The compound was quantitated above the calibration range.
D	Concentration is based on a diluted sample analysis.
C	Identification confirmed by gas chromatograph/mass spectrometer (GC/MS).
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No compounds were detected in the associated blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
MW-8SR	Nitrobenzene-d5	D
	2-Fluorobiphenyl	D
	Terphenyl-d14	D

Diluted (D)

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	J
	Detect	J
< 10%	Non-detect	R
	Detect	J
One of three surrogate exhibiting recovery outside the control limits but greater than 10%.	Non-detect	No Action
	Detect	

Control Limit	Sample Result	Qualification
Surrogates diluted below the calibration curve due to the high concentration of a target compounds	Non-detect	No Action
	Detect	

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC to exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) the area counts of the associated continuing calibration standard.

All internal standard areas and retention times were within established limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LSC analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate.

No field duplicates were included with this SDG.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Semivolatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were MSs analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits?			
0 out of 22			
How many RPDs for MS/MSD were outside of QC limits?			
0 out of 11			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each system used?	X		
Do any method blanks have positive results?		X	
Are field/rinse blanks associated with every sample?		X	

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each 12 hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		

	YES	NO	NA
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF ≥ minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?		X	

MISCELLANEOUS ANALYSES

Introduction

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8015 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1994.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U	The 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.
B	The reported value was obtained from a reading less than the RL but greater than or equal to the IDL.
M	Duplicate injection precision not met.
N	Spiked sample recovery not within control limits.
*	Duplicate analysis not within control limits.
E	The reported value is estimated due to the presence of interference.
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time
Methanol	Water	7 days from collection to extraction, 40 days from extraction to analysis
	Soil	14 days from collection to extraction, 40 days from extraction to analysis

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No analytes were detected above the reporting limit in the associated blanks.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All calibration verification standard recoveries were within the control limit.

4. MS/MSD Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compound's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

5. LCS Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LSC analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

The laboratory control sample exhibited results within the control limit.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method.

No field duplicates were included in this SDG.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Data Validation Checklist

Data Completeness and Deliverables

	YES	NO	NA
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	

Holding Times

	YES	NO	NA
Have any holding times been exceeded?		X	

Surrogate Recovery

	YES	NO	NA
Are surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Was one or more surrogate recovery outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	

Matrix Spikes

	YES	NO	NA
Is there a MS recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		

How many spike recoveries were outside of QC limits?

0 out of 16

How many RPDs for MS/MSD were outside of QC limits?

0 out of 8

Blanks

	YES	NO	NA
Is a method blank summary form present?	X		
Has a method blank been analyzed for each day or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every 12 hours for each system used?	X		
Do any method/instrument blanks have positive results?		X	
Are trip/field/rinse blanks associated with every sample?	X		
Do any trip/field/rinse blanks have positive results?		X	

Target Analytes

	YES	NO	NA
Is an organics analysis data sheet present for each of the following:			

	YES	NO	NA
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?			X
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?			X
Do the samples and standard relative ion intensities agree within 20%?			X

Quantitation and Detection Limits

	YES	NO	NA
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?			X

Standard Data

	YES	NO	NA
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		

Initial Calibration

	YES	NO	NA
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	

Continuing Calibration

	YES	NO	NA
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	

Field Duplicates

	YES	NO	NA
Were field duplicates submitted with the samples?		X	

Corrected Sample Analysis Data Sheets

Client ID: **MW-30**
Site: McKesson Bear

Lab Sample No: **744009**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Analyzed: 06/15/06
GC Column: RTX-VMS
Instrument ID: VOAMS6.i
Lab File ID: f17073.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	0.6J	1.0
Toluene	0.4J	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-17R**
Site: McKesson Bear

Lab Sample No: **744010**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Analyzed: 06/15/06
GC Column: RTX-VMS
Instrument ID: VOAMS6.i
Lab File ID: f17074.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	0.8J	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-8SR**
Site: McKesson Bear

Lab Sample No: **744011**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Analyzed: 06/15/06
GC Column: RTX-VMS
Instrument ID: VOAMS6.i
Lab File ID: f17075.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	48	5.0
Trichloroethene	ND	1.0
Benzene	15	1.0
Toluene	120	5.0
Ethylbenzene	79	4.0
Xylene (Total)	260	5.0

Client ID: **MW-29**
Site: McKesson Bear

Lab Sample No: **744012**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Analyzed: 06/15/06
GC Column: RTX-VMS
Instrument ID: VOAMS6.i
Lab File ID: f17076.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **Trip_Blank**
Site: McKesson Bear

Lab Sample No: **744013**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Analyzed: 06/15/06
GC Column: RTX-VMS
Instrument ID: VOAMS6.i
Lab File ID: f17077.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-30**
Site: McKesson Bear

Lab Sample No: **744009**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Extracted: 06/14/06
Date Analyzed: 06/23/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23175.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	29	1.0
N,N-Dimethylaniline	ND	1.0

Client ID: **MW-17R**
Site: McKesson Bear

Lab Sample No: **744010**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Extracted: 06/14/06
Date Analyzed: 06/23/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23176.d

Matrix: WATER
Level: LOW
Sample Volume: 940 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND	1.1
N,N-Dimethylaniline	ND	1.1

Client ID: **MW-8SR**
Site: McKesson Bear

Lab Sample No: **744011**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Extracted: 06/14/06
Date Analyzed: 06/23/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23177.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 200.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	23000	200
N,N-Dimethylaniline	ND	200

Client ID: **MW-29**
Site: McKesson Bear

Lab Sample No: **744012**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Extracted: 06/14/06
Date Analyzed: 06/23/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23178.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND	1.0
N,N-Dimethylaniline	ND	1.0

Client ID: **MW-30**
Site: McKesson Bear

Lab Sample No: **744009**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9580.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **MW-17R**
Site: McKesson Bear

Lab Sample No: **744010**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9581.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **MW-8SR**
Site: McKesson Bear

Lab Sample No: **744011**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9582.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **MW-29**
Site: McKesson Bear

Lab Sample No: **744012**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9583.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **Trip_Blank**
Site: McKesson Bear

Lab Sample No: **744013**
Lab Job No: T130

Date Sampled: 06/08/06
Date Received: 06/09/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9584.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Laboratory Narrative

SDG NARRATIVE

STL EDISON

SDG No. T130

STL Edison Sample	Client ID
744009	MW-30
744010	MW-17R
744011	MW-8SR
744012	MW-29
744013	Trip Blank

Sample Receipt:

Sample delivery conforms with requirements.

Volatile Organic Analysis (GC/MS):

QA batch 2299: MS/MSD% recovery of Toluene is outside of Q.C. limits (sample amount is too high for spike level).

Base/Neutral and/or Acid Extractable Organics (GC/MS):

QA batch # 3873: MS/MSD diluted out. Blank spike recoveries within Q.C. limits.

QA batch # 3873: MS/MSD % recovery of spike compounds diluted out.

Sample # 744011: S-1,2,3 surrogates std recovery is diluted out.

Nonhalogenated Organic Analysis (GC/FID):

All data conforms with method requirements.

I certify that this data package is in compliance with the protocols in NYSDEC ASP B both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this package has been authorized by the Laboratory Manager or his designee

NYSDEC Sample Identification and Analysis Summary Sheets

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY VOLATILE (VOA) ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
744009	WATER	6/8/06	6/9/06		6/15/06
744010	WATER	6/8/06	6/9/06		6/15/06
744011	WATER	6/8/06	6/9/06		6/15/06
744012	WATER	6/8/06	6/9/06		6/15/06
744013	WATER	6/8/06	6/9/06		6/15/06

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
744009	WATER	6/8/06	6/9/06	6/14/06	6/23/06
744010	WATER	6/8/06	6/9/06	6/14/06	6/23/06
744011	WATER	6/8/06	6/9/06	6/14/06	6/23/06
744012	WATER	6/8/06	6/9/06	6/14/06	6/23/06

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
744009	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
744009	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
744010	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
744010	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
744011	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
744011	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		200.00
744012	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
744012	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
744013	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PCB	MET	MISC	
T130	6/08/2006	2000	MW-30	Water	Yes	Yes	--	--	Yes	
T130	6/08/2006	2000	MW-17R	Water	Yes	Yes	--	--	Yes	
T130	6/08/2006	2000	MW-8SR	Water	Yes	Yes	--	--	Yes	
T130	6/08/2006	2000	MW-29	Water	Yes	Yes	--	--	Yes	
T130	6/08/2006	2000	Trip Blank	Water	Yes	Yes	--	--	Yes	

[1] Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

DATA USABILITY SUMMARY REPORT

MCKESSON

BEAR STREET

SDG #T035

VOLATILE, SEMIVOLATILE AND METHANOL ANALYSES

Analyses performed by:

Severn Trent Laboratories
Edison, New Jersey

Review performed by:

BBL®
an ARCADIS company

Syracuse, New York
Report #5924

Summary

The following is an assessment of the data package for sample delivery group (SDG) #T035 for sampling from the McKesson Bear Street Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis				
				VOC	SVOC	PCB	MET	MISC
MW-33	743302	Water	6/07/2006	X	X			X
MW-32	743303	Water	6/07/2006	X	X			X
MW-31	743304	Water	6/07/2006	X	X			X
TW-01	743305	Water	6/07/2006	X	X			X
MW-9S	743306	Water	6/07/2006	X	X			X
MW-1	743307	Water	6/07/2006	X	X			X
DUP-1	743308	Water	6/07/2006	X	X			X
Trip Blank	743309	Water	6/07/2006	X				X
DUP-2	743310	Water	6/07/2006	X	X			X
MW-27	743311	Water	6/07/2006	X	X			X
MW-28	743312	Water	6/07/2006	X	X			X

Notes:

1. Miscellaneous parameters include methanol.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

Introduction

Analyses were performed according to (United Stated Environmental Protection Agency) USEPA SW-846 Method 8260 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

U	The 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.
B	The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
N	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
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.
E	The compound was quantitated above the calibration range.
D	Concentration is based on a diluted sample analysis.
C	Identification confirmed by gas chromatograph/mass spectrometer (GC/MS).
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

.Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260	Water	14 days from collection to analysis	Cooled @ 4 °C; preserved to a pH of less than 2.
	Soil	14 days from collection to analysis	Cooled @ 4 °C.

All sample holding times were met. The sample receipt temperatures were, however, outside the acceptable preservation limits.

Sample Locations	Preservation	Criteria
All sample locations	Sample receipt temperature 12°C	4 °C

Sample results associated with sample locations analyzed by analytical method SW-846 8260 were qualified, as specified in the table below.

Criteria	Qualification	
	Detected Analytes	Non-detect Analytes
>4 °C	J	UJ

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure contamination of samples during shipment. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No compounds were detected in the associated blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses and retention times were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate.

Results for duplicate samples are summarized in the following table.

Sample ID / Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-27 / DUP-1	Acetone	5.3	5.8	AC
	Benzene	9.5	8.9	6.5%
	Toluene	50	48	4.1%
	Ethylbenzene	25	25	0.0%
	Xylene (total)	66	63	4.6%
MW-28 / DUP-2	Benzene	6.0	6.3	4.9%
	Toluene	1.2 J	1.3 J	AC
	Ethylbenzene	5.3 J	5.4	AC
	Xylene (total)	4.2 J	4.3 J	AC

ND = Not detected.

AC = The field duplicate RPD is acceptable when the RPD between parent sample and field duplicate sample is less than one times the RL and where the parent sample and/or duplicate concentration is less than five times the RL.

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	X		
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Was one or more surrogate recovery outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		

How many spike recoveries were outside of QC limits?

0 out of 20

How many RPDs for MS/MSD were outside of QC limits?

0 out of 10

	YES	NO	NA
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each day or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every 12 hours for each system used?	X		
Do any method/instrument blanks have positive results?		X	
Are trip/field/rinse blanks associated with every sample?	X		

	YES	NO	NA
Do any trip/field/rinse blanks have positive results?		X	
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each 12 hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	

	YES	NO	NA
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?			X
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

SEMI-VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

Introduction

Analyses were performed according to (United Stated Environmental Protection Agency) USEPA SW-846 Method 8270 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

U	The 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.
B	The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
N	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
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.
E	The compound was quantitated above the calibration range.
D	Concentration is based on a diluted sample analysis.
C	Identification confirmed by gas chromatograph/mass spectrometer (GC/MS).
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C

All sample holding times were met. The sample receipt temperatures were, however, outside the acceptable preservation limits.

Sample Locations	Preservation	Criteria
All sample locations	Sample receipt temperature 12°C	4 °C

Sample results associated with sample locations analyzed by analytical method SW-846 8260 were qualified, as specified in the table below.

Criteria	Qualification	
	Detected Analytes	Non-detect Analytes
>4 °C	J	UJ

2. Blank Contamination

Quality assurance blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No compounds were detected in the associated blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
MW-27 DUP-1	Nitrobenzene-d5	D
	2-Fluorobiphenyl	D
	Terphenyl-d14	D

Diluted (D)

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	J
	Detect	J
< 10%	Non-detect	R
	Detect	J
One of three surrogate exhibiting recovery outside the control limits but greater than 10%.	Non-detect	No Action
	Detect	
Surrogates diluted below the calibration curve due to the high concentration of a target compounds	Non-detect	No Action
	Detect	

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC to exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) the area counts of the associated continuing calibration standard.

All internal standard areas and retention times were within established limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LSC analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate.

Results for duplicate samples are summarized in the following table.

Sample ID / Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-27 / DUP-1	Aniline	14000	12000	15.4%
MW-28 / DUP-2	Aniline	430	530	20.8%

ND = Not detected.

AC = The field duplicate RPD is acceptable when the RPD between parent sample and field duplicate sample is less than one times the RL and where the parent sample and/or duplicate concentration is less than five times the RL.

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Semivolatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	X		
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were MSs analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits?			
0 out of 44			
How many RPDs for MS/MSD were outside of QC limits?			
0 out of 22			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each system used?	X		
Do any method blanks have positive results?		X	
Are field/rinse blanks associated with every sample?		X	

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each 12 hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		

	YES	NO	NA
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF ≥ minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

MISCELLANEOUS ANALYSES

Introduction

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8015 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1994.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U	The 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.
B	The reported value was obtained from a reading less than the RL but greater than or equal to the IDL.
M	Duplicate injection precision not met.
N	Spiked sample recovery not within control limits.
*	Duplicate analysis not within control limits.
E	The reported value is estimated due to the presence of interference.
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time
Methanol	Water	7 days from collection to extraction, 40 days from extraction to analysis
	Soil	14 days from collection to extraction, 40 days from extraction to analysis

All sample holding times were met. The sample receipt temperatures were, however, outside the acceptable preservation limits.

Sample Locations	Preservation	Criteria
All sample locations	Sample receipt temperature 12°C	4 °C

Sample results associated with sample locations analyzed by analytical method SW-846 8260 were qualified, as specified in the table below.

Criteria	Qualification	
	Detected Analytes	Non-detect Analytes
>4 °C	J	UJ

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No analytes were detected above the reporting limit in the associated blanks.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All calibration verification standard recoveries were within the control limit.

4. MS/MSD Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compound's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

5. LCS Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LSC analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

The laboratory control sample exhibited results within the control limit.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method.

Results for duplicate samples are summarized in the following table.

Sample ID / Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-27 / DUP-1	Methanol	ND	ND	AC
MW-28 / DUP-2	Methanol	ND	ND	AC

ND = Not detected.
AC = The field duplicate RPD is acceptable when the RPD between parent sample and field duplicate sample is less than one times the RL and where the parent sample and/or duplicate concentration is less than five times the RL.

The calculated RPDs between the parent sample and field duplicate were acceptable.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	X		
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Was one or more surrogate recovery outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 32			
How many RPDs for MS/MSD were outside of QC limits?			
0 out of 16			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each day or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every 12 hours for each system used?	X		
Do any method/instrument blanks have positive results?		X	
Are trip/field/rinse blanks associated with every sample?	X		
Do any trip/field/rinse blanks have positive results?		X	
Target Analytes			
Is an organics analysis data sheet present for each of the following:			

	YES	NO	NA
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?			X
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?			X
Do the samples and standard relative ion intensities agree within 20%?			X

Quantitation and Detection Limits

	YES	NO	NA
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?			X

Standard Data

	YES	NO	NA
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		

Initial Calibration

	YES	NO	NA
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	

Continuing Calibration

	YES	NO	NA
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	

Field Duplicates

	YES	NO	NA
Were field duplicates submitted with the samples?	X		

Corrected Sample Analysis Data Sheets

Client ID: **MW-33**
Site: McKesson Bear

Lab Sample No: **743302**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07255.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND J	3.0
Acetone	ND J	5.0
Trichloroethene	ND J	1.0
Benzene	6.7 J	1.0
Toluene	0.7J	5.0
Ethylbenzene	ND J	4.0
Xylene (Total)	ND J	5.0

Client ID: **MW-32**
Site: McKesson Bear

Lab Sample No: **743303**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07256.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND J	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND ↓	4.0
Xylene (Total)	ND J	5.0

Client ID: **MW-31**
Site: McKesson Bear

Lab Sample No: **743304**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/14/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07279.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND J	3.0
Acetone	ND J	5.0
Trichloroethene	ND J	1.0
Benzene	11 J	1.0
Toluene	0.6J	5.0
Ethylbenzene	ND J	4.0
Xylene (Total)	1.7J	5.0

Client ID: **TW-01**
Site: McKesson Bear

Lab Sample No: **743305**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07257.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND J	3.0
Acetone	ND J	5.0
Trichloroethene	ND J	1.0
Benzene	1.0J	1.0
Toluene	ND J	5.0
Ethylbenzene	ND J	4.0
Xylene (Total)	ND J	5.0

Client ID: **MW-9S**
Site: McKesson Bear

Lab Sample No: **743306**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/14/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07280.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND J	3.0
Acetone	ND J	5.0
Trichloroethene	ND J	1.0
Benzene	1.1 J	1.0
Toluene	2.3J	5.0
Ethylbenzene	25 J	4.0
Xylene (Total)	60 J	5.0

Client ID: **MW-1**
Site: McKesson Bear

Lab Sample No: **743307**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07258.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND J	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND ↓	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND J	5.0

Client ID: **Dup-1**
Site: McKesson Bear

Lab Sample No: **743308**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07259.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND J	3.0
Acetone	5.8 J	5.0
Trichloroethene	ND J	1.0
Benzene	8.9 J	1.0
Toluene	48 J	5.0
Ethylbenzene	25 J	4.0
Xylene (Total)	63 J	5.0

Client ID: **Trip_Blank**
Site: McKesson Bear

Lab Sample No: **743309**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07254.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND J	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND ↓	4.0
Xylene (Total)	ND J	5.0

Client ID: **Dup-2**
Site: McKesson Bear

Lab Sample No: **743310**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07260.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND J	3.0
Acetone	ND J	5.0
Trichloroethene	ND J	1.0
Benzene	6.3 J	1.0
Toluene	1.3J	5.0
Ethylbenzene	5.4 J	4.0
Xylene (Total)	4.3J	5.0

Client ID: **MW-27**
Site: McKesson Bear

Lab Sample No: **743311**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07263.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND J	3.0
Acetone	5.3 J	5.0
Trichloroethene	ND J	1.0
Benzene	9.5 J	1.0
Toluene	50 J	5.0
Ethylbenzene	25 J	4.0
Xylene (Total)	66 J	5.0

Client ID: **MW-28**
Site: McKesson Bear

Lab Sample No: **743312**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/14/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07291.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND J	3.0
Acetone	ND J	5.0
Trichloroethene	ND J	1.0
Benzene	6.0 J	1.0
Toluene	1.2J	5.0
Ethylbenzene	5.3 J	4.0
Xylene (Total)	4.2J	5.0

Client ID: **MW-33**
Site: McKesson Bear

Lab Sample No: **743302**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Extracted: 06/14/06
Date Analyzed: 06/23/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23172.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	370 J	2.1
N,N-Dimethylaniline	3.5 J	2.1

Client ID: **MW-32**
Site: McKesson Bear

Lab Sample No: **743303**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Extracted: 06/14/06
Date Analyzed: 06/19/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23111.d

Matrix: WATER
Level: LOW
Sample Volume: 990 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND J	1.0
N,N-Dimethylaniline	ND J	1.0

Client ID: **MW-31**	Lab Sample No: **743304**
Site: McKesson Bear	Lab Job No: T035
Date Sampled: 06/07/06	Matrix: WATER
Date Received: 06/08/06	Level: LOW
Date Extracted: 06/14/06	Sample Volume: 990 ml
Date Analyzed: 06/19/06	Extract Final Volume: 2.0 ml
GC Column: DB-5	Dilution Factor: 1.0
Instrument ID: BNAMS6.i	
Lab File ID: m23112.d	

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND J	1.0
N,N-Dimethylaniline	2.4 J	1.0

Client ID: **TW-01**
Site: McKesson Bear

Lab Sample No: **743305**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Extracted: 06/14/06
Date Analyzed: 06/19/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23113.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND J	1.0
N,N-Dimethylaniline	0.8J	1.0

Client ID: **MW-9S**
Site: McKesson Bear

Lab Sample No: **743306**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Extracted: 06/14/06
Date Analyzed: 06/19/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23114.d

Matrix: WATER
Level: LOW
Sample Volume: 940 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND J	1.1
N,N-Dimethylaniline	3.8 J	1.1

Client ID: **MW-1**
Site: McKesson Bear

Lab Sample No: **743307**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Extracted: 06/14/06
Date Analyzed: 06/19/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23115.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND J	1.0
N,N-Dimethylaniline	ND J	1.0

Client ID: **Dup-1**
Site: McKesson Bear

Lab Sample No: **743308**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Extracted: 06/14/06
Date Analyzed: 06/23/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23173.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 100.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	12000 J	100
N,N-Dimethylaniline	ND J	100

Client ID: **Dup-2**
Site: McKesson Bear

Lab Sample No: **743310**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Extracted: 06/14/06
Date Analyzed: 06/26/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26633.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 5.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	530 J	5.0
N,N-Dimethylaniline	ND J	5.0

Client ID: **MW-27**
Site: McKesson Bear

Lab Sample No: **743311**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Extracted: 06/14/06
Date Analyzed: 06/19/06
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m23108.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 100.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	14000 J	100
N,N-Dimethylaniline	ND J	100

Client ID: **MW-28**
Site: McKesson Bear

Lab Sample No: **743312**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Extracted: 06/14/06
Date Analyzed: 06/26/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26629.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	430 J	2.1
N,N-Dimethylaniline	ND J	2.1

Client ID: **MW-33**
Site: McKesson Bear

Lab Sample No: **743302**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9570.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND J	1000

Client ID: **MW-32**
Site: McKesson Bear

Lab Sample No: **743303**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9571.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND J	1000

Client ID: **MW-31**
Site: McKesson Bear

Lab Sample No: **743304**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9572.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND J	1000

Client ID: **TW-01**
Site: McKesson Bear

Lab Sample No: **743305**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9573.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND J	1000

Client ID: **MW-9S**
Site: McKesson Bear

Lab Sample No: **743306**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9574.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND J	1000

Client ID: **MW-1**
Site: McKesson Bear

Lab Sample No: **743307**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9575.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND J	1000

Client ID: **Dup-1**
Site: McKesson Bear

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9576.d

Lab Sample No: **743308**
Lab Job No: T035

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID

ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND J	1000

Client ID: **Trip_Blank**
Site: McKesson Bear

Lab Sample No: **743309**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9590.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND J	1000

Client ID: **Dup-2**
Site: McKesson Bear

Lab Sample No: **743310**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9577.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND J	1000

Client ID: **MW-27**
Site: McKesson Bear

Lab Sample No: **743311**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9562.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND J	1000

Client ID: **MW-28**
Site: McKesson Bear

Lab Sample No: **743312**
Lab Job No: T035

Date Sampled: 06/07/06
Date Received: 06/08/06
Date Analyzed: 06/13/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9579.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND J	500

Laboratory Narrative

SEVERN TRENT STL

SDG NARRATIVE

STL EDISON

SDG No. T035

STL Edison Sample	Client ID
743302	MW-33
743303	MW-32
743304	MW-31
743305	TW-01
743306	MW-9S
743307	MW-1
743308	Dup-1
743309	Trip Blank
743310	Dup-2
743311	MW-27
743311MS	MW-27MS
743311SD	MW-27MSD
743312	MW-28
743312MS	MW-28MS
743312SD	MW-28MSD

Sample Receipt:

Samples were received at laboratory with temperature of 12 deg C. Samples are considered acceptable since there is evidence that the chilling process has begun: sufficient ice present upon receipt

Volatile Organic Analysis (GC/MS):

QA batch 2319 : MS/MSD % recovery of Chlorobenzene is outside of Q.C. limits (sample amount is too high for spike level).

Base/Neutral and/or Acid Extractable Organics (GC/MS):

All data conforms with method requirements.

onhalogenated Organic Analysis (GC/FID):

All data conforms with method requirements.

I certify that this data package is in compliance with the protocols in NYSDEC ASP B both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this package has been authorized by the Laboratory Manager or his designee

Michael J. Urban

Michael J.Urban
Laboratory Manager

NYSDEC Sample Identification and Analysis Summary Sheets

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOLATILE (VOA)
ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
743302	WATER	6/7/06	6/8/06		6/13/06
743303	WATER	6/7/06	6/8/06		6/13/06
743304	WATER	6/7/06	6/8/06		6/14/06
743305	WATER	6/7/06	6/8/06		6/13/06
743306	WATER	6/7/06	6/8/06		6/14/06
743307	WATER	6/7/06	6/8/06		6/13/06
743308	WATER	6/7/06	6/8/06		6/13/06
743309	WATER	6/7/06	6/8/06		6/13/06
743310	WATER	6/7/06	6/8/06		6/13/06
743311	WATER	6/7/06	6/8/06		6/13/06
743311MS	WATER	6/7/06	6/8/06		6/13/06
743311SD	WATER	6/7/06	6/8/06		6/13/06
743312	WATER	6/7/06	6/8/06		6/14/06
743312MS	WATER	6/7/06	6/8/06		6/14/06
743312SD	WATER	6/7/06	6/8/06		6/14/06

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
743302	WATER	6/7/06	6/8/06	6/14/06	6/23/06
743303	WATER	6/7/06	6/8/06	6/14/06	6/19/06
743304	WATER	6/7/06	6/8/06	6/14/06	6/19/06
743305	WATER	6/7/06	6/8/06	6/14/06	6/19/06
743306	WATER	6/7/06	6/8/06	6/14/06	6/19/06
743307	WATER	6/7/06	6/8/06	6/14/06	6/19/06
743308	WATER	6/7/06	6/8/06	6/14/06	6/23/06
743310	WATER	6/7/06	6/8/06	6/14/06	6/26/06
743311	WATER	6/7/06	6/8/06	6/14/06	6/19/06
743311MS	WATER	6/7/06	6/8/06	6/14/06	6/19/06
743311SD	WATER	6/7/06	6/8/06	6/14/06	6/19/06
743312	WATER	6/7/06	6/8/06	6/14/06	6/26/06
743312MS	WATER	6/7/06	6/8/06	6/14/06	6/26/06
743312SD	WATER	6/7/06	6/8/06	6/14/06	6/26/06

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
743302	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743302	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		2.00
743303	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743303	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743304	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743304	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743305	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743305	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743306	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743306	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743307	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743307	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743308	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743308	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		100.00
743309	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743310	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743310	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		5.00
743311	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743311	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		100.00
743311MS	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		100.00
743311MS	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743311SD	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		100.00
743311SD	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743312	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743312	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		2.00
743312MS	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		2.00
743312MS	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743312SD	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		2.00
743312SD	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PCB	MET	MISC	
T035	6/07/2006	2000	MW-33	Water	No	No	--	--	No	VOC, SVOC, MISC – Sample receipt temp
T035	6/07/2006	2000	MW-32	Water	No	No	--	--	No	VOC, SVOC, MISC – Sample receipt temp
T035	6/07/2006	2000	MW-31	Water	No	No	--	--	No	VOC, SVOC, MISC – Sample receipt temp
T035	6/07/2006	2000	TW-01	Water	No	No	--	--	No	VOC, SVOC, MISC – Sample receipt temp
T035	6/07/2006	2000	MW-9S	Water	No	No	--	--	No	VOC, SVOC, MISC – Sample receipt temp
T035	6/07/2006	2000	MW-1	Water	No	No	--	--	No	VOC, SVOC, MISC – Sample receipt temp
T035	6/07/2006	2000	DUP-1	Water	No	No	--	--	No	VOC, SVOC, MISC – Sample receipt temp
T035	6/07/2006	2000	Trip Blank	Water	No	No	--	--	No	VOC, SVOC, MISC – Sample receipt temp
T035	6/07/2006	2000	DUP-2	Water	No	No	--	--	No	VOC, SVOC, MISC – Sample receipt temp
T035	6/07/2006	2000	MW-27	Water	No	No	--	--	No	VOC, SVOC, MISC – Sample receipt temp
T035	6/07/2006	2000	MW-28	Water	No	No	--	--	No	VOC, SVOC, MISC – Sample receipt temp

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

DATA USABILITY SUMMARY REPORT

MCKESSON

BEAR STREET

SDG #S940

VOLATILE, SEMIVOLATILE AND METHANOL ANALYSES

Analyses performed by:

Severn Trent Laboratories
Edison, New Jersey

Review performed by:

BBL®
an ARCADIS company

Syracuse, New York
Report #5929

Summary

The following is an assessment of the data package for sample delivery group (SDG) #S940 for sampling from the McKesson Bear Street Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis				
				VOC	SVOC	PCB	MET	MISC
MW-25S	742718	Water	6/05/2006	X	X			X
MW-23S	742719	Water	6/05/2006	X	X			X
MW-25D	742720	Water	6/05/2006	X	X			X
MW-23I	742721	Water	6/05/2006	X	X			X
Trip Blank	742722	Water	6/05/2006	X				X

Notes:

1. Miscellaneous parameters include methanol.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

Introduction

Analyses were performed according to (United Stated Environmental Protection Agency) USEPA SW-846 Method 8260 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

U	The 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.
B	The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
N	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
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.
E	The compound was quantitated above the calibration range.
D	Concentration is based on a diluted sample analysis.
C	Identification confirmed by gas chromatograph/mass spectrometer (GC/MS).
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

.Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260	Water	14 days from collection to analysis	Cooled @ 4 °C; preserved to a pH of less than 2.
	Soil	14 days from collection to analysis	Cooled @ 4 °C.

All sample holding times were met.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure contamination of samples during shipment. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No compounds were detected in the associated blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
All sample locations	ICV %RSD	Acetone	27.4%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01[1]	Non-detect	R
		Detect	J
	RRF >0.05 or RRF >0.01[1]	Non-detect	No Action
		Detect	
Initial Calibration	%RSD > 15% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J

1. RRF of 0.01 only applies to compounds which are typically poor responding compounds (i.e. ketones, 1,4-Dioxane, etc.)

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses and retention times were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate.

No field duplicates were included with this SDG.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Volatile Organics Data Validation Checklist

Data Completeness and Deliverables

	YES	NO	NA
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	

Holding Times

	YES	NO	NA
Have any holding times been exceeded?		X	

Surrogate Recovery

	YES	NO	NA
Are surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Was one or more surrogate recovery outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	

Matrix Spikes

	YES	NO	NA
Is there a MS recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		

How many spike recoveries were outside of QC limits?

0 out of 10

How many RPDs for MS/MSD were outside of QC limits?

0 out of 5

Blanks

	YES	NO	NA
Is a method blank summary form present?	X		
Has a method blank been analyzed for each day or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every 12 hours for each system used?	X		
Do any method/instrument blanks have positive results?		X	
Are trip/field/rinse blanks associated with every sample?	X		

	YES	NO	NA
Do any trip/field/rinse blanks have positive results?		X	
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each 12 hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	

	YES	NO	NA
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?			X
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?		X	
Are the average RRFs ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?		X	

SEMI-VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

Introduction

Analyses were performed according to (United Stated Environmental Protection Agency) USEPA SW-846 Method 8270 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

U	The 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.
B	The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
N	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
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.
E	The compound was quantitated above the calibration range.
D	Concentration is based on a diluted sample analysis.
C	Identification confirmed by gas chromatograph/mass spectrometer (GC/MS).
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No compounds were detected in the associated blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All sample locations exhibited acceptable recoveries.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC to exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) the area counts of the associated continuing calibration standard.

All internal standard areas and retention times were within established limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LSC analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate.

No field duplicates were included with this SDG.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Semivolatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were MSs analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits?			
0 out of 22			
How many RPDs for MS/MSD were outside of QC limits?			
0 out of 11			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each system used?	X		
Do any method blanks have positive results?		X	
Are field/rinse blanks associated with every sample?		X	

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each 12 hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?			X
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?			X
Do the samples and standard relative ion intensities agree within 20%?			X
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?			X

	YES	NO	NA
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF ≥ minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?		X	

MISCELLANEOUS ANALYSES

Introduction

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8015 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1994.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U	The 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.
B	The reported value was obtained from a reading less than the RL but greater than or equal to the IDL.
M	Duplicate injection precision not met.
N	Spiked sample recovery not within control limits.
*	Duplicate analysis not within control limits.
E	The reported value is estimated due to the presence of interference.
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time
Methanol	Water	7 days from collection to extraction, 40 days from extraction to analysis
	Soil	14 days from collection to extraction, 40 days from extraction to analysis

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No analytes were detected above the reporting limit in the associated blanks.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All calibration verification standard recoveries were within the control limit.

4. MS/MSD Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compound's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

5. LCS Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LSC analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

The laboratory control sample exhibited results within the control limit.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method.

No field duplicates were included in this SDG.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Data Validation Checklist

Data Completeness and Deliverables

	YES	NO	NA
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	

Holding Times

	YES	NO	NA
Have any holding times been exceeded?		X	

Surrogate Recovery

	YES	NO	NA
Are surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Was one or more surrogate recovery outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	

Matrix Spikes

	YES	NO	NA
Is there a MS recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		

How many spike recoveries were outside of QC limits?

0 out of 16

How many RPDs for MS/MSD were outside of QC limits?

0 out of 8

Blanks

	YES	NO	NA
Is a method blank summary form present?	X		
Has a method blank been analyzed for each day or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every 12 hours for each system used?	X		
Do any method/instrument blanks have positive results?		X	
Are trip/field/rinse blanks associated with every sample?	X		
Do any trip/field/rinse blanks have positive results?		X	

Target Analytes

	YES	NO	NA
Is an organics analysis data sheet present for each of the following:			

	YES	NO	NA
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?			X
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?			X
Do the samples and standard relative ion intensities agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?			X
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Field Duplicates			
Were field duplicates submitted with the samples?		X	

Corrected Sample Analysis Data Sheets

Client ID: **MW-25S**
Site: McKesson Bear St.

Lab Sample No: **742718**
Lab Job No: S940

Date Sampled: 06/05/06
Date Received: 06/06/06
Date Analyzed: 06/11/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca11699.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND J	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-23S**
Site: McKesson Bear St.

Lab Sample No: **742719**
Lab Job No: S940

Date Sampled: 06/05/06
Date Received: 06/06/06
Date Analyzed: 06/11/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: cal1680.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND J	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-25D**
Site: McKesson Bear St.

Lab Sample No: **742720**
Lab Job No: S940

Date Sampled: 06/05/06
Date Received: 06/06/06
Date Analyzed: 06/11/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca11681.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND J	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	0.7J	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-23I**
Site: McKesson Bear St.

Lab Sample No: **742721**
Lab Job No: S940

Date Sampled: 06/05/06
Date Received: 06/06/06
Date Analyzed: 06/11/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca11682.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND J	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	0.6J	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **TRIP_BLANK**
Site: McKesson Bear St.

Lab Sample No: **742722**
Lab Job No: S940

Date Sampled: 06/05/06
Date Received: 06/06/06
Date Analyzed: 06/11/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca11678.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND J	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-25S**	Lab Sample No: **742718**
Site: McKesson Bear St.	Lab Job No: S940
Date Sampled: 06/05/06	Matrix: WATER
Date Received: 06/06/06	Level: LOW
Date Extracted: 06/09/06	Sample Volume: 990 ml
Date Analyzed: 06/26/06	Extract Final Volume: 2.0 ml
GC Column: DB-5	Dilution Factor: 1.0
Instrument ID: BNAMS3.i	
Lab File ID: t26635.d	

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND	1.0
N,N-Dimethylaniline	ND	1.0

Client ID: **MW-23S**	Lab Sample No: **742719**
Site: McKesson Bear St.	Lab Job No: S940

Date Sampled: 06/05/06	Matrix: WATER
Date Received: 06/06/06	Level: LOW
Date Extracted: 06/09/06	Sample Volume: 850 ml
Date Analyzed: 06/26/06	Extract Final Volume: 2.0 ml
GC Column: DB-5	Dilution Factor: 1.0
Instrument ID: BNAMS3.i	
Lab File ID: t26636.d	

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND	1.2
N,N-Dimethylaniline	ND	1.2

Client ID: **MW-25D**
Site: McKesson Bear St.

Lab Sample No: **742720**
Lab Job No: S940

Date Sampled: 06/05/06
Date Received: 06/06/06
Date Extracted: 06/09/06
Date Analyzed: 06/26/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26637.d

Matrix: WATER
Level: LOW
Sample Volume: 990 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND	1.0
N,N-Dimethylaniline	ND	1.0

Client ID: **MW-23I**
Site: McKesson Bear St.

Lab Sample No: **742721**
Lab Job No: S940

Date Sampled: 06/05/06
Date Received: 06/06/06
Date Extracted: 06/09/06
Date Analyzed: 06/26/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26638.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND	1.0
N,N-Dimethylaniline	ND	1.0

Client ID: **MW-25S**
Site: McKesson Bear St.

Lab Sample No: **742718**
Lab Job No: S940

Date Sampled: 06/05/06
Date Received: 06/06/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9546.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **MW-23S**
Site: McKesson Bear St.

Lab Sample No: **742719**
Lab Job No: S940

Date Sampled: 06/05/06
Date Received: 06/06/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9547.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **MW-25D**
Site: McKesson Bear St.

Lab Sample No: **742720**
Lab Job No: S940

Date Sampled: 06/05/06
Date Received: 06/06/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9548.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **MW-23I**	Lab Sample No: **742721**
Site: McKesson Bear St.	Lab Job No: S940

Date Sampled: 06/05/06	Matrix: WATER
Date Received: 06/06/06	Level: LOW
Date Analyzed: 06/12/06	Injection Volume: 1.0 ul
GC Column: DB624	Final Volume: 0.0 mL
Instrument ID: BNAGC5.i	Dilution Factor: 1.0
Lab File ID: gc5f9549.d	

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **TRIP_BLANK**
Site: McKesson Bear St.

Lab Sample No: **742722**
Lab Job No: S940

Date Sampled: 06/05/06
Date Received: 06/06/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9561.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Laboratory Narrative

SEVERN TRENT STL

SDG NARRATIVE

STL EDISON

SDG No. S940

STL Edison Sample	Client ID
742718	MW-25S
742719	MW-23S
742720	MW-25D
742721	MW-23I
742722	TRIP BLANK

Sample Receipt:

Sample delivery conforms with requirements.

Volatile Organic Analysis (GC/MS):

All data conforms with method requirements.

Base/Neutral and/or Acid Extractable Organics (GC/MS):

All data conforms with method requirements.

Nonhalogenated Organic Analysis (GC/FID):

All data conforms with method requirements.

I certify that this data package is in compliance with the protocols in NYSDEC ASP B both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this package has been authorized by the Laboratory Manager or his designee

Michael J. Urban

Michael J.Urban
Laboratory Manager

NYSDEC Sample Identification and Analysis Summary Sheets

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOLATILE (VOA)
ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
742718	WATER	6/5/06	6/6/06		6/11/06
742719	WATER	6/5/06	6/6/06		6/11/06
742720	WATER	6/5/06	6/6/06		6/11/06
742721	WATER	6/5/06	6/6/06		6/11/06
742722	WATER	6/5/06	6/6/06		6/11/06

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
742718	WATER	6/5/06	6/6/06	6/9/06	6/26/06
742719	WATER	6/5/06	6/6/06	6/9/06	6/26/06
742720	WATER	6/5/06	6/6/06	6/9/06	6/26/06
742721	WATER	6/5/06	6/6/06	6/9/06	6/26/06

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
742718	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
742718	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
742719	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
742719	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
742720	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
742720	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
742721	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
742721	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
742722	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00

10/95

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PCB	MET	MISC	
S940	6/05/2006	2000	MW-25S	Water	No	Yes	--	--	Yes	VOC – ical
S940	6/05/2006	2000	MW-23S	Water	No	Yes	--	--	Yes	VOC – ical
S940	6/05/2006	2000	MW-25D	Water	No	Yes	--	--	Yes	VOC – ical
S940	6/05/2006	2000	MW-23I	Water	No	Yes	--	--	Yes	VOC – ical
S940	6/05/2006	2000	Trip Blank	Water	No	Yes	--	--	Yes	VOC – ical

[1] Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

DATA USABILITY SUMMARY REPORT

MCKESSON

BEAR STREET

SDG #T030

VOLATILE, SEMIVOLATILE AND METHANOL ANALYSES

Analyses performed by:

Severn Trent Laboratories
Edison, New Jersey

Review performed by:

BBL®
an ARCADIS company

Syracuse, New York
Report #5937

Summary

The following is an assessment of the data package for sample delivery group (SDG) #T030 for sampling from the McKesson Bear Street Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis				
				VOC	SVOC	PCB	MET	MISC
MW-18	743263	Water	6/06/2006	X	X			X
MW-19	743264	Water	6/06/2006	X	X			X
PZ-4D	743265	Water	6/06/2006	X	X			X
PZ-4S	743266	Water	6/06/2006	X	X			X
MW-36	743267	Water	6/06/2006	X	X			X
TW-02RR	743268	Water	6/06/2006	X	X			X
MW-35	743269	Water	6/06/2006	X	X			X
MW-34	743270	Water	6/06/2006	X	X			X
Trip Blank	743271	Water	6/06/2006	X				X

Notes:

1. Miscellaneous parameters include methanol.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

Introduction

Analyses were performed according to (United Stated Environmental Protection Agency) USEPA SW-846 Method 8260 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

U	The 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.
B	The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
N	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
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.
E	The compound was quantitated above the calibration range.
D	Concentration is based on a diluted sample analysis.
C	Identification confirmed by gas chromatograph/mass spectrometer (GC/MS).
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

.Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260	Water	14 days from collection to analysis	Cooled @ 4 °C; preserved to a pH of less than 2.
	Soil	14 days from collection to analysis	Cooled @ 4 °C.

All sample holding times were met.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure contamination of samples during shipment. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No compounds were detected in the associated blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses and retention times were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate.

No field duplicates were included with this SDG.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Was one or more surrogate recovery outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits? _0_ out of _10_			
How many RPDs for MS/MSD were outside of QC limits? _0_ out of _5_			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each day or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every 12 hours for each system used?	X		
Do any method/instrument blanks have positive results?		X	
Are trip/field/rinse blanks associated with every sample?		X	

	YES	NO	NA
Do any trip/field/rinse blanks have positive results?			X
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	X		
Are the bar graph spectrum and mass/charge listing provided for each BFB?	X		
Has a BFB been analyzed for each 12 hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	

	YES	NO	NA
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?			X
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?		X	

SEMI-VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

Introduction

Analyses were performed according to (United Stated Environmental Protection Agency) USEPA SW-846 Method 8270 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

U	The 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.
B	The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
N	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
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.
E	The compound was quantitated above the calibration range.
D	Concentration is based on a diluted sample analysis.
C	Identification confirmed by gas chromatograph/mass spectrometer (GC/MS).
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No compounds were detected in the associated blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All sample locations exhibited acceptable recoveries.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC to exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) the area counts of the associated continuing calibration standard.

All internal standard areas and retention times were within established limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LSC analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate.

No field duplicates were included with this SDG.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Semivolatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Were two or more base-neutral or acid surrogate recoveries outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were MSs analyzed at the required frequency	X		

How many spike recoveries were outside of QC limits?

0 out of 22

How many RPDs for MS/MSD were outside of QC limits?

0 out of 11

	YES	NO	NA
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each system used?	X		
Do any method blanks have positive results?		X	
Are field/rinse blanks associated with every sample?		X	

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each 12 hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		

	YES	NO	NA
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF ≥ minimum requirements?	X		
Are there any transcription/calculation error in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?		X	

MISCELLANEOUS ANALYSES

Introduction

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8015 as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1994.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

U	The 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.
B	The reported value was obtained from a reading less than the RL but greater than or equal to the IDL.
M	Duplicate injection precision not met.
N	Spiked sample recovery not within control limits.
*	Duplicate analysis not within control limits.
E	The reported value is estimated due to the presence of interference.
UJ	The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R	The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time
Methanol	Water	7 days from collection to extraction, 40 days from extraction to analysis
	Soil	14 days from collection to extraction, 40 days from extraction to analysis

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

No analytes were detected above the reporting limit in the associated blanks.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All calibration verification standard recoveries were within the control limit.

4. MS/MSD Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

> Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compound's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

5. LCS Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LSC analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

The laboratory control sample exhibited results within the control limit.

6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method.

No field duplicates were included in this SDG.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist

Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all samples listed on the surrogate recovery form?	X		
Was one or more surrogate recovery outside control limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Are there any transcription/calculation errors between the raw data and the summary form?		X	
Matrix Spikes			
Is there a MS recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
_0_ out of _16_			
How many RPDs for MS/MSD were outside of QC limits?			
_0_ out of _8_			
Blanks			
Is a method blank summary form present?	X		
Has a method blank been analyzed for each day or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every 12 hours for each system used?	X		
Do any method/instrument blanks have positive results?		X	
Are trip/field/rinse blanks associated with every sample?	X		
Do any trip/field/rinse blanks have positive results?		X	
Target Analytes			
Is an organics analysis data sheet present for each of the following:			

	YES	NO	NA
Samples	X		
Matrix spikes	X		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?			X
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?			X
Do the samples and standard relative ion intensities agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions and, for soils, sample moisture?			X
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRFs ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRFs or RSDs?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each 12 hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF ≥ minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Field Duplicates			
Were field duplicates submitted with the samples?		X	

Corrected Sample Analysis Data Sheets

Client ID: **MW-18**
Site: McKesson Bear

Lab Sample No: **743263**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/14/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07281.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-19**
Site: McKesson Bear

Lab Sample No: **743264**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/14/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07282.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **PZ-4D**
Site: McKesson Bear

Lab Sample No: **743265**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/14/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07283.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	0.5J	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **PZ-4S**
Site: McKesson Bear

Lab Sample No: **743266**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/14/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07284.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	0.6J	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-36**	Lab Sample No: **743267**
Site: McKesson Bear	Lab Job No: T030

Date Sampled: 06/06/06	Matrix: WATER
Date Received: 06/07/06	Level: LOW
Date Analyzed: 06/14/06	Purge Volume: 5.0 ml
GC Column: RTX-VMS	Dilution Factor: 1.0
Instrument ID: VOAMS12.i	
Lab File ID: o07285.d	

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	25	5.0
Trichloroethene	ND	1.0
Benzene	1.6	1.0
Toluene	0.7J	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	1.2J	5.0

Client ID: **TW-02RR**
Site: McKesson Bear

Lab Sample No: **743268**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/14/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07286.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	16	5.0
Trichloroethene	ND	1.0
Benzene	4.4	1.0
Toluene	1.3J	5.0
Ethylbenzene	2.7J	4.0
Xylene (Total)	6.7	5.0

Client ID: **MW-35**
Site: McKesson Bear

Lab Sample No: **743269**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/14/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07287.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-34**
Site: McKesson Bear

Lab Sample No: **743270**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/14/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07288.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	6.4	5.0
Trichloroethene	ND	1.0
Benzene	0.6J	1.0
Toluene	0.5J	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **Trip_Blank**
Site: McKesson Bear

Lab Sample No: **743271**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/14/06
GC Column: RTX-VMS
Instrument ID: VOAMS12.i
Lab File ID: o07289.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Trichloroethene	ND	1.0
Benzene	ND	1.0
Toluene	ND	5.0
Ethylbenzene	ND	4.0
Xylene (Total)	ND	5.0

Client ID: **MW-18**
Site: McKesson Bear

Lab Sample No: **743263**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Extracted: 06/10/06
Date Analyzed: 06/21/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26584.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND	1.0
N,N-Dimethylaniline	ND	1.0

Client ID: **MW-19**
Site: McKesson Bear

Lab Sample No: **743264**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Extracted: 06/10/06
Date Analyzed: 06/21/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26585.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND	1.0
N,N-Dimethylaniline	ND	1.0

Client ID: **PZ-4D**
Site: McKesson Bear

Lab Sample No: **743265**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Extracted: 06/10/06
Date Analyzed: 06/21/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26586.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND	1.0
N,N-Dimethylaniline	ND	1.0

Client ID: **PZ-4S**
Site: McKesson Bear

Lab Sample No: **743266**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Extracted: 06/10/06
Date Analyzed: 06/21/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26587.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	ND	1.0
N,N-Dimethylaniline	ND	1.0

Client ID: **MW-36**
Site: McKesson Bear

Lab Sample No: **743267**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Extracted: 06/10/06
Date Analyzed: 06/22/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26597.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	76	1.1
N,N-Dimethylaniline	1.9	1.1

Client ID: **TW-02RR**
Site: McKesson Bear

Lab Sample No: **743268**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Extracted: 06/10/06
Date Analyzed: 06/21/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26589.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 100.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	10000	100
N,N-Dimethylaniline	ND	100

Client ID: **MW-35**
Site: McKesson Bear

Lab Sample No: **743269**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Extracted: 06/10/06
Date Analyzed: 06/21/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26590.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	0.4J	1.0
N,N-Dimethylaniline	ND	1.0

Client ID: **MW-34**
Site: McKesson Bear

Lab Sample No: **743270**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Extracted: 06/10/06
Date Analyzed: 06/21/06
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t26591.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Aniline	16	1.0
N,N-Dimethylaniline	2.3	1.0

Client ID: **MW-18**	Lab Sample No: **743263**
Site: McKesson Bear	Lab Job No: T030
Date Sampled: 06/06/06	Matrix: WATER
Date Received: 06/07/06	Level: LOW
Date Analyzed: 06/12/06	Injection Volume: 1.0 ul
GC Column: DB624	Final Volume: 0.0 mL
Instrument ID: BNAGC5.i	Dilution Factor: 1.0
Lab File ID: gc5f9551.d	

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **MW-19**
Site: McKesson Bear

Lab Sample No: **743264**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9552.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **PZ-4D**
Site: McKesson Bear

Lab Sample No: **743265**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9553.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **PZ-4S**
Site: McKesson Bear

Lab Sample No: **743266**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9555.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **MW-36**
Site: McKesson Bear

Lab Sample No: **743267**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9556.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **TW-02RR**
Site: McKesson Bear

Lab Sample No: **743268**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9557.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **MW-35**
Site: McKesson Bear

Lab Sample No: **743269**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9558.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **MW-34**
Site: McKesson Bear

Lab Sample No: **743270**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9559.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID

ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Client ID: **Trip_Blank**
Site: McKesson Bear

Lab Sample No: **743271**
Lab Job No: T030

Date Sampled: 06/06/06
Date Received: 06/07/06
Date Analyzed: 06/12/06
GC Column: DB624
Instrument ID: BNAGC5.i
Lab File ID: gc5f9560.d

Matrix: WATER
Level: LOW
Injection Volume: 1.0 ul
Final Volume: 0.0 mL
Dilution Factor: 1.0

NONHALOGENATED ORGANICS - GC/FID
ALCOHOLS

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Methanol	ND	1000

Laboratory Narrative

SEVERN TRENT STL

SDG NARRATIVE

STL EDISON

SDG No. T030

STL Edison Sample	Client ID
743263	MW-18
743264	MW-19
743265	PZ-4D
743266	PZ-4S
743267	MW-36
743268	TW-02RR
743269	MW-35
743270	MW-34
743271	Trip Blank

Sample Receipt:

Sample delivery conforms with requirements.

Volatile Organic Analysis (GC/MS):

QA batch2319: MS/MSD % recovery of Chlorobenzene is outside of Q.C. limits (sample amount is too high for spike level).

Base/Neutral and/or Acid Extractable Organics (GC/MS):

Nonhalogenated Organic Analysis (GC/FID):

All data conforms with method requirements.

rtify that this data package is in compliance with the protocols in NYSDEC ASP B both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this package has been authorized by the Laboratory Manager or his designee

NYSDEC Sample Identification and Analysis Summary Sheets

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
VOLATILE (VOA)
ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
743263	WATER	6/6/06	6/7/06		6/14/06
743264	WATER	6/6/06	6/7/06		6/14/06
743265	WATER	6/6/06	6/7/06		6/14/06
743266	WATER	6/6/06	6/7/06		6/14/06
743267	WATER	6/6/06	6/7/06		6/14/06
743268	WATER	6/6/06	6/7/06		6/14/06
743269	WATER	6/6/06	6/7/06		6/14/06
743270	WATER	6/6/06	6/7/06		6/14/06
743271	WATER	6/6/06	6/7/06		6/14/06

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
743263	WATER	6/6/06	6/7/06	6/10/06	6/21/06
743264	WATER	6/6/06	6/7/06	6/10/06	6/21/06
743265	WATER	6/6/06	6/7/06	6/10/06	6/21/06
743266	WATER	6/6/06	6/7/06	6/10/06	6/21/06
743267	WATER	6/6/06	6/7/06	6/10/06	6/22/06
743268	WATER	6/6/06	6/7/06	6/10/06	6/21/06
743269	WATER	6/6/06	6/7/06	6/10/06	6/21/06
743270	WATER	6/6/06	6/7/06	6/10/06	6/21/06

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
743263	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743263	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743264	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743264	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743265	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743265	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743266	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743266	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743267	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743267	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743268	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743268	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		100.00
743269	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743269	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743270	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743270	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00
743271	WATER	1989 NYSDEC ASP - Revision 10/95	Liquid-Liquid		1.00

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PCB	MET	MISC	
T030	6/06/2006	2000	MW-18	Water	Yes	Yes	--	--	Yes	
T030	6/06/2006	2000	MW-19	Water	Yes	Yes	--	--	Yes	
T030	6/06/2006	2000	PZ-4D	Water	Yes	Yes	--	--	Yes	
T030	6/06/2006	2000	PZ-4S	Water	Yes	Yes	--	--	Yes	
T030	6/06/2006	2000	MW-36	Water	Yes	Yes	--	--	Yes	
T030	6/06/2006	2000	TW-02RR	Water	Yes	Yes	--	--	Yes	
T030	6/06/2006	2000	MW-35	Water	Yes	Yes	--	--	Yes	
T030	6/06/2006	2000	MW-34	Water	Yes	Yes	--	--	Yes	
T030	6/06/2006	2000	Trip Blank	Water	Yes	Yes	--	--	Yes	

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.