AREA 14 EAST SYSTEM OPERATION REPORT
PERIOD JANUARY 30, 2010 THROUGH AUGUST 6, 2010

AREA 14 EAST – HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA
VRP# 6980601

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1.0 INTRODUCTION

Mactec Engineering and Consulting, Inc. (Mactec) has been contracted by Honeywell International, Inc. (Honeywell) to provide professional services related to the continued safe operation, monitoring and maintenance of an In-Well Vapor Stripping System, which was activated in May 2003 at the Honeywell Industrial Complex in South Bend, Indiana. The system was designed to remediate soil and shallow groundwater at the Area 14 East – Former Painting and Degreasing Operations Source Area (Area 14 East), as shown on Figure 1-1. It treats volatile organic compounds (VOCs) consisting primarily of trichloroethene (TCE) and other related chlorinated VOCs, which are the contaminants of concern in this area. The system includes soil vapor extraction (SVE), air sparging and groundwater recirculation.

Area 14 East is the first area of concern (AOC) to be remediated under the approved Facility-Wide Remediation Work Plan (RWP) at the Honeywell South Bend Industrial Complex. The Area-Specific RWP for Area 14 East was approved by the Indiana Department of Environmental Management (IDEM) in the fall of 2002. Design details for contractor procurement were finalized in the first quarter of 2003, and the system was constructed from March 31, 2003 through May 7, 2003. The system was activated on May 9, 2003.

As part of system operation monitoring, Mactec and/or its operations, monitoring and maintenance (OM&M) subcontractor (Peerless Midwest) visit the site on a monthly basis and respond to system alarm messages. The system is equipped with a wireless alert system (Mission Control System), which sends an e-mail message to Mactec in the event of system shut down. The Mission Control System also logs operational time of the SVE blower and sparge air compressor.

This document presents system OM&M activities performed between January 30, 2010 and August 6, 2010. The main sections of this report include:

- Routine System Inspections
- System Operational Data
- System Performance Monitoring
- Non-Routine Maintenance and Repairs
- Conclusions

2.0 ROUTINE SYSTEM INSPECTIONS

Monthly system inspections and air sampling were performed by Mactec's OM&M subcontractor. The system was operated and inspected in accordance with the system's Operation, Monitoring and Maintenance Plan (Mactec, 2003). At the end of this reporting period the system was operating at approximately 80 inches of water vacuum, which results in a total system vapor withdrawal flow of 250 standard cubic feet per minute (scfm). During this period of operation, only the SVE component of the system was utilized. Air sparging and groundwater circulation was discontinued in December 2007.

Routine system inspections included the following:

Inside Plant 1 at the Treatment Area

- Check electrical and mechanical systems.
- Observe and record vacuum and vapor extraction flow rates from individual treatment wells at the header distribution vault in Plant 1.
- Make operational adjustments to increase efficiency of the treatment wells.

At the Treatment Trailer Area

- Inspect blower room and components: observe and record - knockout tank levels (drain if needed), vacuum, vapor extraction flow rate, air stream temperature before and after blower and building temperature.
- Inspect carbon filtration system and record pressures before primary vessel and between primary and secondary vessels.
- Collect effluent air samples on monthly basis.

Each site inspection is documented on a site inspection report form. The OM&M subcontractor records all system information readings and completes observation site inspection reports, which are forwarded electronically to Mactec for review a day after each site visit. The site inspection reports for this reporting period are presented in Appendix A.

3.0 ROUTINE MAINTENACE AND REPAIRS

In an effort to enhance remediation of the residual VOC contamination present in groundwater and ultimately achieve Tier II industrial cleanup goals, ORIN Remediation Technologies, LLC (ORIN) was retained to conduct EOS™ injections in the Area 14 East location. Following the EOS™ injections, Mactec monitored groundwater until anaerobic conditions (low dissolved oxygen and negative oxygen reduction potential) were observed. ORIN returned to the site on February 4, 2010 to inject BAC-9™ culture into ART™ wells adjacent to MW-16 and MW-17. BAC-9™ is an enriched bioaugmentation culture which can increase dehalococcoides (DHC) population growth. This type of bacteria is known to be effective at degrading chlorinated solvents in the subsurface under anaerobic reducing conditions, which are currently present in Area 14 East.

On July 15, 2010 Mactec personnel replaced the heat exchanger motor and fan blade after the existing motor became seized. Mactec personnel followed lockout/tag-out procedures prior to conducting the replacement of the motor and fan blade.

4.0 SYSTEM OPERATIONAL DATA

As shown on Figure 4-1, seven in-well vapor stripping wells (ART-1 through ART-7) are located in the treatment area. The treatment wells were installed at approximately 30-foot-on-centers with one additional well (ART-4) in the area of highest contaminant mass. The distribution header and controls are located in a vault beneath the Plant 1 floor, adjacent to the treatment area.

Vapor recovered from the treatment wells is treated in a trailer located approximately 425 feet west of Area 14 East. The components in the treatment trailer area consist of an air compressor, receiving tank, associated filters, dryer, blower, moisture knockout tank, heat exchanger, and two 1,800-pound Carbon Vapor Pac™ units.

4.1 SYSTEM RUNTIME

Under normal operating conditions, the system operates continuously, seven days per week. The system requires manual resetting when the knockout tank fills with water or after power supply outages/surges.

Through the end of this reporting period (August 6, 2010), the system (SVE component only) was on-line for 2,270 days or 85.7% of the time. Table 4-1 presents weekly operational information including hours of operation, effluent air TCE concentrations, soil vapor extraction (SVE) flow rates, and VOC removal rates.

4.2 AIR (VAPOR) SAMPLING DATA

Air stream samples were collected from before and between the Carbon Vapor Pac™ units. Initially, air stream samples were collected once per week for the first month of operation, then twice per month for the next two months of operation, and then approximately monthly thereafter. Air stream samples were collected from sampling ports directly into Tedlar bags, which were sent to TestAmerica Laboratories, Inc. for analysis of VOCs by USEPA Method TO-14. Laboratory analytical are summarized on Table 4-1 and the analytical reports for air samples are presented in Appendix B. The results from the air stream samples are used to assess compliance with the exempted air permit application, to evaluate the need for carbon vessel change out, and to monitor the rate and amount of contaminants being removed from the subsurface by system operation.

During this period of operation (January 30, 2010 to August 6, 2010), TCE detected in vapors being drawn by the system ranged from 0.390 parts per million (ppm) to 0.610 ppm. The average weekly removal rate during this period of operation was 0.38 pounds of TCE per week. Table 4-2 shows the formula used for calculating removal rates. Chart 4-1 presents average weekly tetrachloroethene (PCE) and TCE removal rates from May 2003 through May 2004. Chart 4-2 presents average weekly removal rates from June 2004 through present. Chart 4-3 presents cumulative PCE and TCE removal rates over time. A total of 870.1 pounds of TCE and 371.4 pounds of PCE have been removed from the subsurface as a result of system operation through August 6, 2010.

5.0 SYSTEM PERFORMANCE MONITORING

During this reporting period, system performance monitoring included vapor and groundwater sampling, dissolved oxygen measurements and induced vacuum measurements.

5.1 GROUNDWATER SAMPLING

On April 13 and July 13, 2010 groundwater samples were collected from monitoring wells 86-14, 86-15, AS-1, EW-2B, MP-10, MW-16 and MW-17 (see Figure 4-1). The samples were analyzed for VOCs using Method 8260 Plus by TestAmerica Laboratories, Inc. of North Canton, Ohio.

Groundwater samples were collected using a peristaltic pump. A minimum of three well volumes were purged from each well prior to sample collection. As part of the groundwater sampling process, during the purging of the monitoring wells at each location prior to sampling, the purged groundwater was field screened for temperature, pH, specific conductance, oxidation reduction potential, turbidity and dissolved oxygen (DO). Groundwater Sample Record Sheets are presented in Appendix C.

Table 5-1 summarizes VOCs detected in groundwater samples from these monitoring wells, plus historical groundwater data since April 24, 2003 when baseline groundwater sampling was performed. Currently, MW-16 is the only monitoring well in Area 14 East at which groundwater sampling results still exceed 1996 Voluntary Remediation Program (VRP) Tier II Non-Residential cleanup goals (cleanup goals) for TCE, cis-1,2-dichloroethene (DCE) and vinyl chloride (VC). During the April 2010 sampling event, VC was detected in 86-14 above the VRP cleanup goals, but was not detected during the July 2010 sampling event. At MP-10 VC was detected above the VRP cleanup goals during both the April and July 2010 sampling events. This is the first time VC has been detected at this location since March 2009. At all other monitoring wells in the area, reported concentrations of detected VOCs are below the cleanup goals. Charts 5-1 through 5-6 present changes in VOC concentrations with time in groundwater samples from each individual monitoring well in/or adjacent to the treatment area. Groundwater analytical reports are presented in Appendix D.

Through August 2010, groundwater samples from monitoring wells 86-15, MP-10, AS-1, EW-2B and MW-17 have shown an overall decrease in TCE concentrations. Cis-1,2-DCE concentrations

in groundwater samples are stable in MP-10 and 86-15. The remaining wells, with the exception of MW-16, showed decreasing concentrations of cis-1,2-DCE.

As anticipated, concentration spikes were noted following the February 2010 BAC-9 injections in ART wells adjacent to MW-16. Concentration spikes in TCE, cis-1,2-DCE and VC were noted in MW-16 during the April 2010 sampling event. However, VOC concentrations during the July 2010 sampling event decreased to pre-BAC-9 injection concentrations.

To document changes resulting for the BAC-9 injections, bio-trap™ samplers were placed in MW-16 and MW-17 on April 13, 2010 and retrieved on July 13, 2010. These samplers were placed on ice in a cooler and submitted to Microbial Insights for dechlorinating bacteria (DHC) count. Pre-BAC-9™ samples were collected in June 2009. Sample results from both wells should an increase in DHC population. The MW-16 sample result from June 2009 for DHC was $2.82x10^{+04}$, and the reported result for DHC from July 12, 2010 was $3.79x10^{+07}$. With time the increased DHC population should continue to degrade TCE and other chlorinated compounds at this location. The sample result from June 2009 for DHC from MW-17 was reported at $5.30x10^{+04}$, and the reported result for DHC was $3.32x10^{+03}$. A slight decrease in DHC population was observed at this location. VOCs at this location have been reduced to just above or below the detection limit at this location.

5.2 DISSOLVED OXYGEN

In addition to VOC analysis, dissolved oxygen field measurements were recorded during the April and July 2010 sampling events utilizing a direct-reading instrument (Troll 9500). During the April 2010 sampling event, dissolved oxygen readings were collected only at wells MW-16 and MW-17 due to damage to the dissolved oxygen sensor. Field dissolved oxygen data is summarized on Table 5-2. Due to discontinued use of the air sparge component, dissolved oxygen levels measured in groundwater across the treatment area during this reporting period were notably lower than in previous events when the air sparge was utilized. The aquifer has returned to anaerobic conditions which are favorable for EOS™ product to enhance anaerobic degradation of chlorinated VOCs.

5.3 INDUCED VACUUM MEASUREMENTS

Induced vacuum measurement was conducted at locations MP-10 and EW-2B during the April 2010 sampling event, as shown on Figure 5-1, using an Omega Engineering, Inc. HHP-90 digital differential pressure meter. Vacuum reading were not collected during the July 2010 sampling event as the system was down due to a faulty heat exchanger motor. Vacuum measurements for

each monitoring point are summarized in Table 5-3. These data provide information on the effective radius of influence of the SVE system from the treatment wells. Similar to previous sampling, measurements indicate that the induced vacuum reaches at least as far as 40 feet from the nearest treatment well. This information was used to extrapolate the radius of influence of the induced vacuum in the treatment area where vapor monitoring points do not exist (see Figure 5-1). It is likely that the radius of influence will extend even further as the residual pore saturation in the vadose soils decreases due to induced air flow.

6.0 CONCLUSION

During this period of operation, the SVE component of the treatment system has been in operation. Air sparging and groundwater circulation components were discontinued in December 2007. TCE removal rates are down to approximately five pounds per quarter and appear to have reached asymptotic levels in its current configuration, indicating that TCE concentrations in vadose zone soils have been reduced. A total of 870.1 pounds of TCE have been removed from soil and groundwater in the treatment area by system operations to date.

Figures 6-1 and 6-2 show the lateral extents of TCE and total VOCs in groundwater at concentrations above 0.5 parts per million (ppm) and one ppm in July 2003 prior to the start up of the system. Figures 6-3 and 6-4 show the current lateral extents of TCE and total VOCs in groundwater at concentrations above one ppm reported during April 2010 sampling. Figures 6-5 and 6-6 show the current lateral extents of TCE and total VOCs in groundwater at concentrations above one ppm reported during July 2010 sampling. These figures suggest that system operations have resulted in a greater than 80% reduction in the area in which VOCs are present in groundwater above one ppm.

Concentrations of VOCs in groundwater have stabilized or have shown a slight downward trend over the reporting period. Cleanup goals for TCE, cis-1,2-DCE and VC have been achieved at all of the monitoring locations except MW-16 (and MP-10 for VC) in Area 14 East.

System operation has proven successful in Area 14 East; however, it appears to have reached asymptotic levels for further reducing VOCs in groundwater in its current configuration. The system will continue to operate as an SVE system. Groundwater monitoring will be continued to monitor progress on further VOC reduction by EOS™ enhanced bioremediation in the area of treatment. The next performance monitoring event is scheduled for October 2010.

TABLES

Table 4-1: System Operational Information

Week Ending	*System Operation Time (hours)*	*SVE Flow Rate (scfm)*	*PCE Concentrations before Carbon (ppm)*	*TCE Concentrations before Carbon (ppm)*	*Total VOC Concentrations before Carbon (ppm)*	*PCE Concentrations between Carbon (ppm)*	*TCE Concentrations between Carbon (ppm)*	*Total VOC Concentrations between Carbon (ppm)*	*Amount of PCE Removed (pounds)*	*Amount of TCE Removed (pounds)*
5/9/2003	**18**	**150**	**ND**	**220**	**239.9**	**ND**	**<0.003**	**ND**	**0.0**	**12.1**
5/16/2003	**63.5**	**150**	**ND**	**340**	**348.8**	**ND**	**<0.003**	**0.0076**	**0.0**	**65.8**
5/23/2003	**113.75**	**150**	**ND**	**180**	**182.44**	**ND**	**<0.003**	**2.4**	**0.0**	**62.4**
5/30/2003	**61.75**	**190**	**ND**	**89**	**94**	**ND**	**<0.003**	**0.55**	**0.0**	**21.2**
6/6/2003	89	190	ND	89	94	ND	<0.003	0.55	0.0	30.6
6/13/2003	166.83	190	ND	89	94	ND	<0.003	0.55	0.0	57.3
6/20/2003	**167.50**	**190**	**ND**	**170**	**174.7**	**ND**	**120**	**123.2**	**0.0**	**109.9**
6/27/2003	125.82	150	ND	170	174.7	ND	<0.003	ND	0.0	65.1
7/4/2003	**28.75**	**150**	**ND**	**120**	**147.6**	**ND**	**<0.003**	**ND**	**0.0**	**10.5**
7/11/2003	90.00	150	ND	120	147.6	ND	<0.003	ND	0.0	32.9
7/18/2003	105.00	150	ND	120	147.6	ND	<0.003	ND	0.0	38.4
7/25/2003	93.25	150	ND	120	147.6	ND	<0.003	ND	0.0	34.1
8/1/2003	**155.58**	**150**	**ND**	**10**	**10**	**ND**	**<0.003**	**ND**	**0.0**	**4.7**
8/8/2003	110.50	150	ND	10	10	ND	<0.003	ND	0.0	3.4
8/15/2003	**158.75**	**150**	**ND**	**7.9**	**7.9**	**ND**	**<0.003**	**ND**	**0.0**	**3.8**
8/22/2003	149.50	150	ND	7.9	7.9	ND	<0.003	ND	0.0	3.6
8/29/2003	118.75	150	ND	7.9	7.9	ND	<0.003	ND	0.0	2.9
9/5/2003	**63.00**	**140**	**ND**	**8.8**	**8.8**	**ND**	**0.28**	**0.28**	**0.0**	**1.6**
9/12/2003	97.83	140	ND	8.8	8.8	ND	0.28	0.28	0.0	2.4
9/19/2003	58.45	140	ND	8.8	8.8	ND	0.28	0.28	0.0	1.5
9/26/2003	62.25	140	ND	8.8	8.8	ND	0.28	0.28	0.0	1.6
10/3/2003	167.75	140	ND	8.8	8.8	ND	0.28	0.28	0.0	4.2
10/8/2003	167.75	140	ND	8.8	8.8	ND	0.28	0.28	0.0	4.2
10/17/2003	**167.50**	**140**	**ND**	**5.1**	**5.1**	**ND**	**1.5**	**1.5**	**0.0**	**2.4**
10/24/2003	111.58	140	ND	5.1	5.1	ND	1.5	1.5	0.0	1.6
10/31/2003	159.75	140	ND	5.1	5.1	ND	1.5	1.5	0.0	2.3
11/7/2003	84.50	140	ND	5.1	5.1	ND	1.5	1.5	0.0	1.2
11/14/2003	167.75	140	ND	5.1	5.1	ND	1.5	1.5	0.0	2.4
11/21/2003	166.42	140	ND	5.1	5.1	ND	1.5	1.5	0.0	2.4
11/28/2003	167.75	140	ND	5.1	5.1	ND	1.5	1.5	0.0	2.4
12/5/2003	**102.75**	**140**	**25**	**ND**	**25**	**ND**	**3.9**	**4.3**	**9.3**	**0.0**
12/12/2003	**167.75**	**140**	**350**	**ND**	**350**	**86**	**ND**	**86**	**211.5**	**0.0**
12/17/2003	119.50	140	350	ND	350	86	ND	86	150.7	0.0
12/26/2003	**215.75**	**140**	**ND**	**13**	**13**	**ND**	**3.1**	**3.1**	**0.0**	**8.0**
1/2/2004	167.75	140	ND	13	13	ND	3.1	3.1	0.0	6.2
1/9/2004	167.75	140	ND	13	13	ND	3.1	3.1	0.0	6.2
1/16/2004	167.75	140	ND	13	13	ND	3.1	3.1	0.0	6.2
1/23/2004	166.00	140	ND	13	13	ND	3.1	3.1	0.0	6.1
1/30/2004	**159.50**	**140**	**ND**	**20**	**20**	**ND**	**0.97**	**1.33**	**0.0**	**9.1**
2/6/2004	19.00	140	ND	20	20	ND	0.97	1.33	0.0	1.1
2/13/2004	66.67	140	ND	20	20	ND	0.97	1.33	0.0	3.8
2/20/2004	80.00	140	ND	20	20	ND	0.97	1.33	0.0	4.5
2/27/2004	**38.25**	**140**	**ND**	**23**	**28.5**	**ND**	**<0.15**	**ND**	**0.0**	**2.5**
3/5/2004	64.75	140	ND	23	28.5	ND	<0.15	ND	0.0	4.2
3/12/2004	167.75	140	ND	23	28.5	ND	<0.15	ND	0.0	11.0
3/19/2004	167.75	140	ND	23	28.5	ND	<0.15	ND	0.0	11.0
3/26/2004	**166.25**	**140**	**ND**	**22**	**25**	**ND**	**<0.0074**	**0.83**	**0.0**	**10.4**
4/2/2004	167.75	140	ND	22	25	ND	<0.0074	0.83	0.0	10.5
4/9/2004	104.25	140	ND	22	25	ND	<0.0074	0.83	0.0	6.5
4/16/2004	167.75	140	ND	22	25	ND	<0.0074	0.83	0.0	10.5
4/23/2004	94.50	140	ND	22	25	ND	<0.0074	0.83	0.0	5.9
4/30/2004	**63.25**	**140**	**ND**	**6.6**	**6.6**	**ND**	**0.70**	**1.66**	**0.0**	**1.2**
5/7/2004	89.25	140	ND	6.6	6.6	ND	0.70	1.66	0.0	1.7
5/14/2004	66.50	140	ND	6.6	6.6	ND	0.70	1.66	0.0	1.2
5/21/2004	73.50	140	ND	6.6	6.6	ND	0.70	1.66	0.0	1.4
5/28/2004	25.83	140	ND	6.6	6.6	ND	0.70	1.66	0.0	0.5
6/4/2004	29.75	140	ND	6.6	6.6	ND	0.70	1.66	0.0	0.6
6/11/2004	63.25	140	ND	6.6	6.6	ND	0.70	1.66	0.0	1.2
6/18/2004	167.75	140	ND	6.6	6.6	ND	0.70	1.66	0.0	3.1
6/25/2004	**95.75**	**140**	**<0.0074**	**<0.0074**	**0.25**	**<0.0074**	**<0.0074**	**0.25**	**0.0**	**0.0**
7/2/2004	167.75	140	<0.0074	<0.0074	0.25	<0.0074	<0.0074	0.25	0.0	0.0
7/9/2004	167.75	140	<0.0074	<0.0074	0.25	<0.0074	<0.0074	0.25	0.0	0.0
7/16/2004	167.75	140	<0.0074	<0.0074	0.25	<0.0074	<0.0074	0.25	0.0	0.0
7/23/2004	167.75	140	<0.0074	<0.0074	0.25	<0.0074	<0.0074	0.25	0.0	0.0
7/30/2004	**167.75**	**140**	**<0.0074**	**0.24**	**0.45**	**<0.0074**	**<0.0074**	**ND**	**0.0**	**0.1**
8/6/2004	167.75	140	<0.0074	0.24	0.45	<0.0074	<0.0074	ND	0.0	0.1
8/13/2004	167.75	140	<0.0074	0.24	0.45	<0.0074	<0.0074	ND	0.0	0.1
8/20/2004	167.75	140	<0.0074	0.24	0.45	<0.0074	<0.0074	ND	0.0	0.1
8/27/2004	167.75	140	<0.0074	0.24	0.45	<0.0074	<0.0074	ND	0.0	0.1
9/3/2004	167.75	140	<0.0074	0.24	0.45	<0.0074	<0.0074	ND	0.0	0.1
9/10/2004	167.75	140	<0.0074	0.24	0.45	<0.0074	<0.0074	ND	0.0	0.1
9/17/2004	167.75	140	<0.0074	0.24	0.45	<0.0074	<0.0074	ND	0.0	0.1
9/24/2004	167.75	140	<0.0074	0.24	0.45	<0.0074	<0.0074	ND	0.0	0.1
9/30/2004	143.75	140	<0.0074	0.24	0.45	<0.0074	<0.0074	ND	0.0	0.1
10/8/2004	**191.75**	**180**	**<0.0074**	**8**	**10.47**	**<0.0074**	**<0.0074**	**0.87**	**0.0**	**5.6**
10/15/2004	167.75	180	<0.0074	8	10.47	<0.0074	<0.0074	0.87	0.0	4.9
10/22/2004	117.25	180	<0.0074	8	10.47	<0.0074	<0.0074	0.87	0.0	3.4
10/29/2004	**27.75**	**210**	**<0.015**	**7.1**	**9.95**	**<0.0074**	**<0.0075**	**4.5**	**0.0**	**0.8**
11/5/2004	106.75	210	<0.015	7.1	9.95	<0.0074	<0.0075	4.5	0.0	3.2
11/12/2004	24.45	210	<0.015	7.1	9.95	<0.0074	<0.0075	4.5	0.0	0.7
11/19/2004	**159.17**	**250**	**<0.0074**	**2.4**	**4.17**	**<0.0074**	**<0.0074**	**0.58**	**0.0**	**1.9**
11/26/2004	167.50	250	<0.0074	2.4	4.17	<0.0074	<0.0074	0.58	0.0	2.0
12/3/2004	167.75	250	<0.0074	2.4	4.17	<0.0074	<0.0074	0.58	0.0	2.0
12/10/2004	166.75	250	<0.0074	2.4	4.17	<0.0074	<0.0074	0.58	0.0	2.0
12/17/2004	167.75	250	<0.0074	2.4	4.17	<0.0074	<0.0074	0.58	0.0	2.0
12/24/2004	**167.75**	**250**	**<0.0074**	**1.6**	**2.22**	**<0.0074**	**<0.0074**	**ND**	**0.0**	**1.4**
12/31/2004	167.75	250	<0.0074	1.6	2.22	<0.0074	<0.0074	ND	0.0	1.4
1/7/2005	167.75	250	<0.0074	1.6	2.22	<0.0074	<0.0074	ND	0.0	1.4
1/13/2005	167.75	250	<0.0074	1.6	2.22	<0.0074	<0.0074	ND	0.0	1.4
1/20/2005	167.75	250	<0.0074	1.6	2.22	<0.0074	<0.0074	ND	0.0	1.4
1/28/2005	167.75	250	<0.0074	1.6	2.22	<0.0074	<0.0074	ND	0.0	1.4
2/4/2005	167.75	250	<0.0074	1.6	2.22	<0.0074	<0.0074	ND	0.0	1.4
2/11/2005	167.75	250	<0.0074	1.6	2.22	<0.0074	<0.0074	ND	0.0	1.4
2/18/2005	167.75	250	<0.0074	1.6	2.22	<0.0074	<0.0074	ND	0.0	1.4
2/25/2005	**152.92**	**250**	**<0.010**	**1.1**	**2.2**	**<0.0074**	**0.047**	**0.10**	**0.0**	**0.9**
3/4/2005	167.75	250	<0.010	1.1	2.2	<0.0074	0.047	0.10	0.0	0.9
3/11/2005	167.75	250	<0.010	1.1	2.2	<0.0074	0.047	0.10	0.0	0.9
3/18/2005	167.75	250	<0.010	1.1	2.2	<0.0074	0.047	0.10	0.0	0.9
3/25/2005	167.75	250	<0.010	1.1	2.2	<0.0074	0.047	0.10	0.0	0.9
4/1/2005	**167.75**	**250**	**<0.010**	**0.34**	**0.372**	**<0.0074**	**<0.0074**	**0.063**	**0.0**	**0.3**
4/8/2005	166.75	250	<0.010	0.34	0.372	<0.0074	<0.0074	0.063	0.0	0.3
4/15/2005	166.75	250	<0.010	0.34	0.372	<0.0074	<0.0074	0.063	0.0	0.3
4/22/2005	166.75	250	<0.010	0.34	0.372	<0.0074	<0.0074	0.063	0.0	0.3
4/29/2005	**166.75**	**250**	**<0.010**	**0.38**	**0.403**	**<0.0074**	**0.016**	**0.072**	**0.0**	**0.3**
5/6/2005	166.75	250	<0.010	0.38	0.403	<0.0074	0.016	0.072	0.0	0.3
5/13/2005	128.75	250	<0.010	0.38	0.403	<0.0074	0.016	0.072	0.0	0.2
5/20/2005	166.75	250	<0.010	0.38	0.403	<0.0074	0.016	0.072	0.0	0.3
5/27/2005	**166.75**	**250**	**<0.010**	**0.42**	**0.714**	**<0.010**	**<0.010**	**0.018**	**0.0**	**0.4**
6/3/2005	166.75	250	<0.010	0.42	0.714	<0.010	<0.010	0.018	0.0	0.4
6/10/2005	166.75	250	<0.010	0.42	0.714	<0.010	<0.010	0.018	0.0	0.4
6/17/2005	166.75	250	<0.010	0.42	0.714	<0.010	<0.010	0.018	0.0	0.4
6/24/2005	**166.75**	**250**	**<0.010**	**0.31**	**0.349**	**<0.0074**	**0.110**	**0.410**	**0.0**	**0.3**
7/1/2005	166.75	250	<0.010	0.31	0.349	<0.0074	0.110	0.410	0.0	0.3
7/8/2005	166.75	250	<0.010	0.31	0.349	<0.0074	0.110	0.410	0.0	0.3
7/15/2005	166.75	250	<0.010	0.31	0.349	<0.0074	0.110	0.410	0.0	0.3
7/22/2005	166.75	250	<0.010	0.31	0.349	<0.0074	0.110	0.410	0.0	0.3
7/29/2005	166.75	250	<0.010	0.31	0.349	<0.0074	0.110	0.410	0.0	0.3
8/5/2005	166.75	250	<0.010	0.31	0.349	<0.0074	0.110	0.410	0.0	0.3
8/12/2005	166.75	250	<0.010	0.31	0.349	<0.0074	0.110	0.410	0.0	0.3
8/19/2005	166.75	250	<0.010	0.31	0.349	<0.0074	0.110	0.410	0.0	0.3
8/26/2005	**166.75**	**250**	**<0.010**	**1.20**	**1.32**	**<0.0074**	**0.480**	**0.636**	**0.0**	**1.0**
9/2/2005	166.75	250	<0.010	1.20	1.32	<0.0074	0.480	0.636	0.0	1.0
9/9/2005	166.75	250	<0.010	1.20	1.32	<0.0074	0.480	0.636	0.0	1.0
9/16/2005	166.75	250	<0.010	1.20	1.32	<0.0074	0.480	0.636	0.0	1.0
9/25/2005	166.75	250	<0.010	1.20	1.32	<0.0074	0.480	0.636	0.0	1.0
10/2/2005	166.75	250	<0.010	1.20	1.32	<0.0074	0.480	0.636	0.0	1.0
10/9/2005	164.83	250	<0.010	1.20	1.32	<0.0074	0.480	0.636	0.0	1.0
10/16/2005	166.75	250	<0.010	1.20	1.32	<0.0074	0.480	0.636	0.0	1.0

Notes: Operational Summary through January 29, 2010
SVE = Soil Vapor Extraction
TCE = trichloroethylene
TCA = trichloroethane
ppm = parts per million
BOLD = laboratory analytical results (Unbolded concentrations are estimated based on previous results.
= Analytical results from current reporting perioc

Table 4-1: System Operational Information

Week Ending	*System Operation Time (hours)*	*SVE Flow Rate (scfm)*	*PCE Concentrations before Carbon (ppm)*	*TCE Concentrations before Carbon (ppm)*	*Total VOC Concentrations before Carbon (ppm)*	*PCE Concentrations between Carbon (ppm)*	*TCE Concentrations between Carbon (ppm)*	*Total VOC Concentrations between Carbon (ppm)*	*Amount of PCE Removed (pounds)*	*Amount of TCE Removed (pounds)*
10/23/2005	166.75	250	<0.010	1.20	1.32	<0.0074	0.480	0.636	0.0	1.0
10/30/2005	**166.75**	**250**	**<0.010**	**0.70**	**0.81**	**<0.010**	**<0.010**	**0.075**	**0.0**	**0.6**
11/7/2005	166.75	250	<0.010	0.70	0.81	<0.010	<0.010	0.075	0.0	0.6
11/14/2005	166.75	250	<0.010	0.70	0.81	<0.010	<0.010	0.075	0.0	0.6
11/21/2005	166.75	250	<0.010	0.70	0.81	<0.010	<0.010	0.075	0.0	0.6
11/28/2005	**166.75**	**250**	**<0.010**	**0.47**	**0.535**	**<0.010**	**<0.010**	**0.073**	**0.0**	**0.4**
12/2/2005	166.75	250	<0.010	0.47	0.535	<0.010	<0.010	0.073	0.0	0.4
12/9/2005	166.75	250	<0.010	0.47	0.535	<0.010	<0.010	0.073	0.0	0.4
12/16/2005	166.75	250	<0.010	0.47	0.535	<0.010	<0.010	0.073	0.0	0.4
12/30/2005	**166.75**	**250**	**<0.010**	**0.40**	**0.547**	**<0.010**	**<0.020**	**0.121**	**0.0**	**0.3**
1/6/2006	166.75	250	<0.010	0.40	0.547	<0.010	<0.020	0.121	0.0	0.3
1/13/2006	166.75	250	<0.010	0.40	0.547	<0.010	<0.020	0.121	0.0	0.3
1/20/2006	166.75	250	<0.010	0.40	0.547	<0.010	<0.020	0.121	0.0	0.3
1/27/2006	166.75	250	<0.010	0.40	0.547	<0.010	<0.020	0.121	0.0	0.3
2/3/2006	**166.75**	**250**	**<0.010**	**0.40**	**0.503**	**<0.010**	**<0.020**	**0.17**	**0.0**	**0.3**
2/10/2006	166.75	250	<0.010	0.40	0.503	<0.010	<0.020	0.17	0.0	0.3
2/17/2006	166.75	250	<0.010	0.40	0.503	<0.010	<0.020	0.17	0.0	0.3
2/24/2006	166.75	250	<0.010	0.40	0.503	<0.010	<0.020	0.17	0.0	0.3
3/3/2006	**166.75**	**250**	**<0.010**	**0.58**	**0.704**	**<0.010**	**<0.020**	**0.056**	**0.0**	**0.5**
3/10/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
3/17/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
3/24/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
3/31/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
4/7/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
4/14/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
4/21/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
4/28/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
5/5/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
5/12/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
5/19/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
5/26/2006	166.75	250	<0.010	0.58	0.704	<0.010	<0.020	0.056	0.0	0.5
6/2/2006	166.75	250	**<0.010**	**0.11**	**0.11**	**<0.010**	**<0.010**	**<0.010**	**0.0**	**0.1**
6/9/2006	166.75	250	<0.010	0.11	0.11	<0.010	<0.010	<0.010	0.0	0.1
6/16/2006	166.75	250	<0.010	0.11	0.11	<0.010	<0.010	<0.010	0.0	0.1
6/23/2006	166.75	250	<0.010	0.11	0.11	<0.010	<0.010	<0.010	0.0	0.1
6/30/2006	166.75	250	**<0.010**	**0.04**	**0.095**	**<0.010**	**<0.010**	**<0.010**	**0.0**	**0.03**
7/7/2006	166.75	250	<0.010	0.04	0.095	<0.010	<0.010	<0.010	0.0	0.03
7/14/2006	166.75	250	<0.010	0.04	0.095	<0.010	<0.010	<0.010	0.0	0.03
7/21/2006	166.75	250	<0.010	0.04	0.095	<0.010	<0.010	<0.010	0.0	0.03
7/28/2006	166.75	250	<0.010	0.04	0.095	<0.010	<0.010	<0.010	0.0	0.03
8/4/2006	166.75	250	<0.010	0.04	0.095	<0.010	<0.010	<0.010	0.0	0.03
8/11/2006	166.75	250	<0.010	0.04	0.095	<0.010	<0.010	<0.010	0.0	0.03
8/18/2006	166.75	250	<0.010	0.04	0.095	<0.010	<0.010	<0.010	0.0	0.03
8/25/2006	166.75	250	<0.010	0.04	0.095	<0.010	<0.010	<0.010	0.0	0.03
9/1/2006	166.75	250	**<0.250**	**<0.250**	**32.07**	**<0.250**	**<0.250**	**0.43**	**0.0**	**0.0**
9/8/2006	166.75	250	<0.250	<0.250	32.07	<0.250	<0.250	0.43	0.0	0.0
9/15/2006	166.75	250	<0.250	<0.250	32.07	<0.250	<0.250	0.43	0.0	0.0
9/22/2006	166.75	250	<0.250	<0.250	32.07	<0.250	<0.250	0.43	0.0	0.0
9/29/2006	166.75	250	**<0.250**	**0.536**	**12.7**	**<0.250**	**<0.250**	**<0.250**	**0.0**	**0.5**
10/6/2006	166.75	250	<0.250	0.536	12.7	<0.250	<0.250	<0.250	0.0	0.5
10/13/2006	166.75	250	<0.250	0.536	12.7	<0.250	<0.250	<0.250	0.0	0.5
10/20/2006	166.75	250	<0.250	0.536	12.7	<0.250	<0.250	<0.250	0.0	0.5
10/27/2006	**166.75**	**250**	**<0.250**	**0.618**	**0.618**	**<0.218**	**<0.218**	**<0.218**	**0.0**	**0.5**
11/3/2006	166.75	250	<0.250	0.618	0.618	<0.218	<0.218	<0.218	0.0	0.5
11/10/2006	166.75	250	<0.250	0.618	0.618	<0.218	<0.218	<0.218	0.0	0.5
11/17/2006	166.75	250	<0.250	0.618	0.618	<0.218	<0.218	<0.218	0.0	0.5
11/24/2006	166.75	250	<0.250	0.618	0.618	<0.218	<0.218	<0.218	0.0	0.5
12/1/2006	166.75	250	<0.250	0.618	0.618	<0.218	<0.218	<0.218	0.0	0.5
12/8/2006	166.75	250	<0.250	0.618	0.618	<0.218	<0.218	<0.218	0.0	0.5
12/15/2006	166.75	250	<0.250	0.618	0.618	<0.218	<0.218	<0.218	0.0	0.5
12/22/2006	166.75	250	<0.250	0.618	0.618	<0.218	<0.218	<0.218	0.0	0.5
12/29/2006	**166.75**	**250**	**<0.250**	**0.316**	**0.316**	**<0.225**	**<0.225**	**<0.225**	**0.0**	**0.3**
1/5/2007	166.75	250	<0.250	0.316	0.316	<0.225	<0.225	<0.225	0.0	0.3
1/12/2007	166.75	250	<0.250	0.316	0.316	<0.225	<0.225	<0.225	0.0	0.3
1/19/2007	166.75	250	<0.250	0.316	0.316	<0.225	<0.225	<0.225	0.0	0.3
1/26/2007	166.75	250	<0.250	0.316	0.316	<0.225	<0.225	<0.225	0.0	0.3
2/2/2007	**166.75**	**225**	**<0.250**	**0.450**	**0.45**	NA	NA	NA	**0.0**	**0.3**
2/9/2007	166.8	225	<0.250	0.450	0.45	NA	NA	NA	0.0	0.3
2/16/2007	166.8	225	<0.250	0.450	0.45	NA	NA	NA	0.0	0.3
2/23/2007	166.8	225	<0.250	0.450	0.45	NA	NA	NA	0.0	0.3
3/2/2007	166.8	225	<0.250	0.450	0.45	NA	NA	NA	0.0	0.3
3/9/2007	80.0	225	<0.250	0.450	0.45	NA	NA	NA	0.0	0.2
3/16/2007	120.0	**225**	**<0.218**	**0.581**	**0.581**	**NA**	NA	NA	0.0	0.3
3/23/2007	168.0	225	<0.218	0.581	0.581	NA	NA	NA	0.0	0.4
3/30/2007	168.0	**225**	**<0.218**	**0.386**	**0.386**	**<0.210**	**<0.210**	**<0.210**	**0.0**	**0.3**
4/6/2007	168.0	225	<0.218	0.386	0.386	<0.210	<0.210	<0.210	0.0	0.3
4/13/2007	168.0	225	<0.218	0.386	0.386	<0.210	<0.210	<0.210	0.0	0.3
4/20/2007	168.0	225	<0.218	0.386	0.386	<0.210	<0.210	<0.210	0.0	0.3
4/27/2007	168.0	**225**	**<0.218**	**0.285**	**0.285**	**<0.210**	**<0.210**	**<0.210**	**0.0**	**0.2**
5/4/2007	168.0	225	<0.218	0.285	0.285	<0.210	<0.210	<0.210	0.0	0.2
5/11/2007	168.0	225	<0.218	0.285	0.285	<0.210	<0.210	<0.210	0.0	0.2
5/18/2007	168.0	225	<0.218	0.285	0.285	<0.210	<0.210	<0.210	0.0	0.2
5/25/2007	168.0	**225**	**<0.003**	**0.550**	**0.636**	**<0.003**	**0.41**	**0.625**	**0.0**	**0.4**
6/1/2007	168.0	225	<0.003	0.550	0.636	<0.003	0.41	0.625	0.0	0.4
6/8/2007	168.0	225	<0.003	0.550	0.636	<0.003	0.41	0.625	0.0	0.4
6/15/2007	168.0	225	<0.003	0.550	0.636	<0.003	0.41	0.625	0.0	0.4
6/22/2007	168.0	225	<0.003	0.550	0.636	<0.003	0.41	0.625	0.0	0.4
6/29/2007	168.0	**225**	**<0.008**	**1.1**	**1.167**	**<0.004**	**0.0052**	**0.0172**	**0.0**	**0.8**
7/6/2007	168.0	225	<0.008	1.1	1.167	<0.004	0.0052	0.0172	0.0	0.8
7/13/2007	168.0	225	<0.008	1.1	1.167	<0.004	0.0052	0.0172	0.0	0.8
7/20/2007	168.0	225	<0.008	1.1	1.167	<0.004	0.0052	0.0172	0.0	0.8
7/27/2007	168.0	225	<0.008	1.1	1.167	<0.004	0.0052	0.0172	0.0	0.8
8/3/2007	168.0	**225**	**0.0026**	**0.350**	**0.413**	**<0.002**	**0.0046**	**0.183**	**0.0**	**0.3**
8/10/2007	168.0	225	0.0026	0.350	0.413	<0.002	0.0046	0.183	0.0	0.3
8/17/2007	168.0	225	0.0026	0.350	0.413	<0.002	0.0046	0.183	0.0	0.3
8/24/2007	168.0	225	0.0026	0.350	0.413	<0.002	0.0046	0.183	0.0	0.3
8/31/2007	168.0	**225**	**<0.004**	**0.480**	**0.528**	**<0.002**	**0.02**	**0.244**	**0.0**	**0.4**
9/7/2007	168.0	225	<0.004	0.480	0.528	<0.002	0.02	0.244	0.0	0.4
9/14/2007	168.0	225	<0.004	0.480	0.528	<0.002	0.02	0.244	0.0	0.4
9/21/2007	168.0	225	<0.004	0.480	0.528	<0.002	0.02	0.244	0.0	0.4
9/28/2007	168.0	**225**	**<0.0034**	**0.460**	**0.541**	**<0.0036**	**0.0067**	**0.049**	**0.0**	**0.4**
10/5/2007	168.0	225	<0.0034	0.460	0.541	<0.0036	0.0067	0.049	0.0	0.4
10/12/2007	168.0	225	<0.0034	0.460	0.541	<0.0036	0.0067	0.049	0.0	0.4
10/19/2007	168.0	225	<0.0034	0.460	0.541	<0.0036	0.0067	0.049	0.0	0.4
10/26/2007	168.0	225	<0.0034	0.460	0.541	<0.0036	0.0067	0.049	0.0	0.4
11/2/2007	168.0	225	<0.0034	0.460	0.541	<0.0036	0.0067	0.049	0.0	0.4
11/9/2007	168.0	225	**<0.0034**	**0.280**	**0.306**	**<0.004**	**0.13**	**0.3106**	**0.0**	**0.2**
11/16/2007	168.0	225	<0.0034	0.280	0.306	<0.004	0.13	0.3106	0.0	0.2
11/23/2007	168.0	225	<0.0034	0.280	0.306	<0.004	0.13	0.3106	0.0	0.2
11/30/2007	168.0	225	<0.0034	0.280	0.306	<0.004	0.13	0.3106	0.0	0.2
12/7/2007	168.0	225	**<0.004**	**0.170**	**0.199**	**<0.004**	**<0.004**	**0.011**	**0.0**	**0.1**
12/15/2007	168.0	225	<0.004	0.170	0.199	<0.004	<0.004	0.011	0.0	0.1
12/21/2007	168.0	225	<0.004	0.170	0.199	<0.004	<0.004	0.011	0.0	0.1
12/28/2007	168.0	225	**<0.004**	**0.450**	**0.489**	**<0.004**	**0.015**	**0.041**	0.0	0.3
1/4/2008	168.0	250	<0.004	0.450	0.489	<0.004	0.015	0.041	0.0	0.4
01/11/08	168.0	250	<0.004	0.450	0.489	<0.004	0.015	0.041	0.0	0.4
01/18/08	168.0	250	<0.004	0.450	0.489	<0.004	0.015	0.041	0.0	0.4
01/25/08	168.0	250	<0.004	0.450	0.489	<0.004	0.015	0.041	0.0	0.4
02/01/08	168.0	250	**<0.009**	**1.100**	**1.139**	**<0.002**	**0.006**	**0.1332**	**0.0**	**0.9**
02/08/08	168.0	250	<0.009	1.100	1.139	<0.002	0.006	0.1332	0.0	0.9
02/15/08	168.0	250	<0.009	1.100	1.139	<0.002	0.006	0.1332	0.0	0.9
02/22/08	168.0	250	<0.009	1.100	1.139	<0.002	0.006	0.1332	0.0	0.9
02/29/08	168.0	250	**<0.008**	**0.630**	**0.650**	**<0.004**	**0.063**	**0.125**	**0.0**	**0.5**
03/07/08	168.0	250	<0.008	0.630	0.650	<0.004	0.063	0.125	0.0	0.5
03/14/08	168.0	250	<0.008	0.630	0.650	<0.004	0.063	0.125	0.0	0.5
03/21/08	168.0	250	<0.008	0.630	0.650	<0.004	0.063	0.125	0.0	0.5
03/28/08	168.0	250	**<0.008**	**0.840**	**0.858**	**<0.004**	**0.025**	**0.044**	**0.0**	**0.7**
04/02/08	168.0	250	<0.008	0.840	0.858	<0.004	0.025	0.044	0.0	0.7

Notes: Operational Summary through January 29, 2010
SVE = Soil Vapor Extraction
TCE = trichloroethylene
TCA = trichloroethane
ppm = parts per million
BOLD = laboratory analytical results (Unbolded concentrations are estimated based on previous results.
= Analytical results from current reporting perioc

Table 4-1: System Operational Information

Week Ending	*System Operation Time (hours)*	*SVE Flow Rate (scfm)*	*PCE Concentrations before Carbon (ppm)*	*TCE Concentrations before Carbon (ppm)*	*Total VOC Concentrations before Carbon (ppm)*	*PCE Concentrations between Carbon (ppm)*	*TCE Concentrations between Carbon (ppm)*	*Total VOC Concentrations between Carbon (ppm)*	*Amount of PCE Removed (pounds)*	*Amount of TCE Removed (pounds)*
04/09/08	168.0	250	<0.008	0.840	0.858	<0.004	0.025	0.044	0.0	0.7
04/18/08	168.0	250	<0.008	0.840	0.858	<0.004	0.025	0.044	0.0	0.7
4/25/2008	168.0	250	<0.008	0.840	0.858	<0.004	0.025	0.044	0.0	0.7
5/2/2008	168.0	250	**<0.0040**	**0.350**	**0.366**	**<0.0036**	**0.036**	**0.0657**	0.0	0.3
5/9/2008	168.0	250	<0.0040	0.350	0.366	<0.0036	0.036	0.0657	0.0	0.3
5/16/2008	168.0	250	<0.0040	0.350	0.366	<0.0036	0.036	0.0657	0.0	0.3
5/23/2008	168.0	250	<0.0040	0.350	0.366	<0.0036	0.036	0.0657	0.0	0.3
5/30/2008	168.0	250	**<0.0033**	**0.530**	**0.545**	**<0.004**	**0.043**	**0.055**	**0.0**	**0.5**
6/6/2008	168.0	250	<0.0033	0.530	0.545	<0.004	0.043	0.055	0.0	0.5
6/13/2008	168.0	250	<0.0033	0.530	0.545	<0.004	0.043	0.055	0.0	0.5
6/20/2008	168.0	250	<0.0033	0.530	0.545	<0.004	0.043	0.055	0.0	0.5
6/27/2008	168.0	250	**<0.008**	**0.560**	**0.589**	**<0.004**	**0.065**	**0.087**	**0.0**	**0.5**
7/4/2008	168.0	250	<0.008	0.560	0.589	<0.004	0.065	0.087	0.0	0.5
7/11/2008	168.0	250	<0.008	0.560	0.589	<0.004	0.065	0.087	0.0	0.5
7/18/2008	168.0	250	<0.008	0.560	0.589	<0.004	0.065	0.087	0.0	0.5
7/25/2008	168.0	250	<0.008	0.560	0.589	<0.004	0.065	0.087	0.0	0.5
8/1/2008	168.0	250	**<0.0081**	**0.640**	**0.6772**	**<0.004**	**0.060**	**0.0778**	**0.0**	**0.5**
8/8/2008	168.0	250	<0.0081	0.640	0.6772	<0.004	0.060	0.0778	0.0	0.5
8/15/2008	168.0	250	<0.0081	0.640	0.6772	<0.004	0.060	0.0778	0.0	0.5
8/22/2008	168.0	250	<0.0081	0.640	0.6772	<0.004	0.060	0.0778	0.0	0.5
8/29/2008	168.0	250	**<0.00061**	**0.690**	**0.8030**	**<0.004**	**0.039**	**0.122**	**0.0**	**0.6**
9/5/2008	168.0	250	<0.00061	0.690	0.8030	<0.004	0.039	0.122	0.0	0.6
9/12/2008	168.0	250	<0.00061	0.690	0.8030	<0.004	0.039	0.122	0.0	0.6
9/19/2008	168.0	250	<0.00061	0.690	0.8030	<0.004	0.039	0.122	0.0	0.6
9/26/2008	168.0	250	<0.00061	0.690	0.8030	<0.004	0.039	0.122	0.0	0.6
10/3/2008	168.0	250	<0.00061	0.690	0.8030	<0.004	0.039	0.122	0.0	0.6
10/10/2008	168.0	250	<0.00061	0.690	0.8030	<0.004	0.039	0.122	0.0	0.6
10/17/2008	168.0	250	<0.00061	0.690	0.8030	<0.004	0.039	0.122	0.0	0.6
10/24/2008	168.0	250	<0.00061	0.690	0.8030	<0.004	0.039	0.122	0.0	0.6
10/31/2008	168.0	250	**<0.0040**	**0.580**	**0.6360**	**<0.004**	**0.056**	**0.2212**	**0.0**	**0.5**
11/7/2008	168.0	250	<0.0040	0.580	0.6360	<0.004	0.056	0.2212	0.0	0.5
11/14/2008	168.0	250	<0.0040	0.580	0.6360	<0.004	0.056	0.2212	0.0	0.5
11/21/2008	168.0	250	<0.0040	0.580	0.6360	<0.004	0.056	0.2212	0.0	0.5
11/28/2008	168.0	250	<0.0040	0.580	0.6360	<0.004	0.056	0.2212	0.0	0.5
12/5/2008	168.0	250	<0.0040	0.580	0.6360	<0.004	0.056	0.2212	0.0	0.5
12/12/2008	168.0	250	**<0.004**	**0.200**	**0.2560**	**<0.004**	**0.270**	**0.3354**	**0.0**	**0.2**
12/19/2008	168.0	250	<0.004	0.200	0.2560	<0.004	0.270	0.3354	0.0	0.2
12/26/2008	168.0	250	<0.004	0.200	0.2560	<0.004	0.270	0.3354	**0.0**	**0.2**
1/2/2009	168.0	250	<0.004	0.200	0.2560	<0.004	0.270	0.3354	0.0	0.2
1/9/2009	168.0	250	<0.004	0.200	0.2560	<0.004	0.270	0.3354	0.0	0.2
1/16/2009	168.0	250	<0.004	0.200	0.2560	<0.004	0.270	0.3354	0.0	0.2
1/23/2009	168.0	250	<0.004	0.200	0.2560	<0.004	0.270	0.3354	0.0	0.2
1/30/2009	168.0	250	**<0.0036**	**0.420**	**0.4360**	**<0.0036**	**0.043**	**0.0047**	**0.0**	**0.4**
2/6/2009	168.0	250	<0.0036	0.420	0.4360	<0.0036	0.043	0.0047	0.0	0.4
2/13/2009	168.0	250	<0.0036	0.420	0.4360	<0.0036	0.043	0.0047	0.0	0.4
2/20/2009	168.0	250	<0.0036	0.420	0.4360	<0.0036	0.043	0.0047	0.0	0.4
2/27/2009	168.0	250	**<0.005**	**0.170**	**0.1830**	**<0.004**	**0.100**	**0.1267**	**0.0**	**0.1**
3/6/2009	168.0	250	<0.005	0.170	0.1830	<0.004	0.100	0.1267	0.0	0.1
3/13/2009	168.0	250	<0.005	0.170	0.1830	<0.004	0.100	0.1267	0.0	0.1
3/20/2009	168.0	250	<0.005	0.170	0.1830	<0.004	0.100	0.1267	0.0	0.1
3/27/2009	168.0	250	**<0.0075**	**0.660**	**0.6996**	**<0.0049**	**0.280**	**0.297**	**0.0**	**0.6**
4/3/2009	168.0	250	<0.0075	0.660	0.6996	<0.0049	0.280	0.297	0.0	0.6
4/10/2009	168.0	250	<0.0075	0.660	0.6996	<0.0049	0.280	0.297	0.0	0.6
4/17/2009	168.0	250	<0.0075	0.660	0.6996	<0.0049	0.280	0.297	0.0	0.6
4/24/2009	168.0	235	<0.0075	0.660	0.6996	<0.0049	0.280	0.297	0.0	0.5
5/1/2009	168.0	235	**<0.004**	**0.160**	**0.1700**	**<0.004**	**0.140**	**0.156**	**0.0**	**0.1**
5/8/2009	168.0	235	<0.004	0.160	0.1700	<0.004	0.140	0.156	0.0	0.1
5/15/2009	168.0	235	<0.004	0.160	0.1700	<0.004	0.140	0.156	0.0	0.1
5/22/2009	168.0	235	<0.004	0.160	0.1700	<0.004	0.140	0.156	0.0	0.1
5/29/2009	168.0	235	**<0.004**	**0.170**	**0.1880**	**<0.004**	**0.075**	**0.075**	**0.0**	**0.1**
6/5/2009	168.0	235	<0.004	0.170	0.1880	<0.004	0.075	0.075	0.0	0.1
6/12/2009	168.0	235	<0.004	0.170	0.1880	<0.004	0.075	0.075	0.0	0.1
6/19/2009	168.0	235	<0.004	0.170	0.1880	<0.004	0.075	0.075	0.0	0.1
6/26/2009	168.0	235	**<0.0036**	**0.550**	**0.6080**	**<0.0036**	**0.210**	**0.229**	**0.0**	**0.4**
7/3/2009	168.0	235	<0.0036	0.550	0.6080	<0.0036	0.210	0.229	0.0	0.4
7/10/2009	168.0	235	<0.0036	0.550	0.6080	<0.0036	0.210	0.229	0.0	0.4
7/17/2009	168.0	235	<0.0036	0.550	0.6080	<0.0036	0.210	0.229	0.0	0.4
7/24/2009	168.0	235	<0.0036	0.550	0.6080	<0.0036	0.210	0.229	0.0	0.4
7/31/2009	168.0	235	**0.028**	**0.850**	**0.9330**	**<0.012**	**1.000**	**1.047**	**0.0**	**0.7**
8/7/2009	0.0	0	**Soil Vapor Extraction System Off-Line**							
1/22/2010	96.0	235	<0.0070	0.540	0.7868	<0.004	<0.004	0.21	0.0	0.2
1/29/2010	168.0	235	**<0.0070**	**0.540**	**0.7868**	**<0.004**	**<0.004**	**0.21**	**0.0**	**0.4**
2/5/2010	168.0	235	<0.0070	0.540	0.7868	<0.004	<0.004	0.21	0.0	0.4
2/12/2010	168.0	235	<0.0070	0.540	0.7868	<0.004	<0.004	0.21	0.0	0.4
2/19/2010	168.0	235	<0.0070	0.540	0.7868	<0.004	<0.004	0.21	0.0	0.4
2/26/2010	168.0	**250**	**<0.0036**	**0.390**	**0.4227**	**<0.0036**	**<0.0036**	**0.0052**	**0.0**	**0.3**
3/5/2010	168.0	250	<0.0036	0.390	0.4227	<0.0036	<0.0036	0.0052	0.0	0.3
3/12/2010	168.0	250	<0.0036	0.390	0.4227	<0.0036	<0.0036	0.0052	0.0	0.3
3/19/2010	168.0	250	<0.0036	0.390	0.4227	<0.0036	<0.0036	0.0052	0.0	0.3
3/26/2010	168.0	250	<0.0036	0.390	0.4227	<0.0036	<0.0036	0.0052	0.0	0.3
4/2/2010	168.0	**250**	**<0.0036**	**0.460**	**0.5006**	**<0.0036**	**<0.0036**	**0.0141**	**0.0**	**0.4**
4/9/2010	168.0	250	<0.0036	0.460	0.5006	<0.0036	<0.0036	0.0141	0.0	0.4
4/16/2010	168.0	250	<0.0036	0.460	0.5006	<0.0036	<0.0036	0.0141	0.0	0.4
4/23/2010	168.0	250	<0.0036	0.460	0.5006	<0.0036	<0.0036	0.0141	0.0	0.4
4/30/2010	168.0	**250**	**<0.0036**	**0.390**	**0.4050**	**<0.0036**	**<0.0036**	**<0.0036**	**0.0**	**0.3**
5/7/2010	168.0	250	<0.0036	0.390	0.4050	<0.0036	<0.0036	<0.0036	0.0	0.3
5/14/2010	168.0	250	<0.0036	0.390	0.4050	<0.0036	<0.0036	<0.0036	0.0	0.3
5/21/2010	168.0	250	<0.0036	0.390	0.4050	<0.0036	<0.0036	<0.0036	0.0	0.3
5/28/2010	168.0	**250**	**<0.012**	**0.520**	**0.6960**	**<0.004**	**<0.004**	**0.235**	**0.0**	**0.4**
6/4/2010	96.0	250	**System Off-Line from June 2, 2010 to July 13, 2010 - Seized Heat Exchanger Motor**							
7/16/2010	84.0	250	<0.012	0.520	0.6960	<0.004	<0.004	0.235	0.0	0.2
7/23/2010	168.0	250	<0.012	0.520	0.6960	<0.004	<0.004	0.235	0.0	0.4
7/30/2010	**168.0**	**250**	**<0.008**	**0.610**	**0.6280**	**<0.0036**	**<0.0036**	**0.0041**	**0.0**	**0.5**
8/6/2010	168.0	250	<0.008	0.610	0.6280	<0.0036	<0.0036	0.0041	0.0	0.5
								Total (pounds):	***371.4***	***870.1***

Notes: Operational Summary through January 29, 2010

SVE = Soil Vapor Extraction
TCE = trichloroethylene
TCA = trichloroethane
ppm = parts per million
BOLD = laboratory analytical results (Unbolded concentrations are estimated based on previous results.
= Analytical results from current reporting period

Number of Full Operating Days: **2269.5**

Percentage of Time System On-line Since 05/09/2003 Startup: ***85.7%***

Prepared by: JPS Date: 08/08/10

Checked by: SDM Date: 08/15/10

Table 4-2
Contaminant Mass Removal Calculation Reference
Honeywell Industrial Complex
South Bend, Indiana

Calculating Contaminant Mass Loading and Removal Rates

Contaminant mass loading and removal rates can be calculated with the same basic equation. However, the units and conversion factors are different for air than they are for water.

For Water:

$$M_{H_2O} = Q_{H_2O} \times C_{H_2O} \times \frac{3.785\ \text{L}}{\text{gallon}} \times \frac{1440\ \text{min.}}{\text{day}} \times \frac{2.2\ \text{lbs.}}{10^9\ \text{ug}}$$

M_{H_2O} = mass loading, removal rate in water (lbs / day)
Q_{H_2O} = flow rate in water (gpm)
C_{H_2O} = contaminant concentration (ug / L, ppb)

For Air:

$$M_{air} = Q_{air} \times C_{air} \times \frac{0.0283\ \text{m}^3}{\text{ft}^3} \times \frac{1440\ \text{min.}}{\text{day}} \times \frac{2.2\ \text{lbs.}}{10^6\ \text{mg}}$$

M_{air} = mass loading, removal rate in air (lbs / day)
Q_{air} = flow rate in air (cfm)
C_{air} = contaminant concentration (mg / m^3)

For air calculations, C_{air} in mg/m^3 (with molecular weight, MW_X, in grams per mole) can be obtained at 70°F and a pressure of 1 atmosphere from parts per million by volume (ppmv) by the following steps:

$$C_{air}(mg/m^3) = \frac{Conc(ppmv)}{10^6} \times \frac{1\ \text{mole air}}{24.1\ \text{L}} \times \frac{1000\ \text{L}}{\text{m}^3} \times \frac{1000\ \text{mg}}{\text{g}} \times MW_X$$

Note: The conversion factor (1 mole air)/(24.1 L) varies with both temperature and pressure. At a pressure of 1 atmosphere and a temperature of 32°F (0°C), the conversion is (1 mole air)/(22.4 L).

Approximate Molecular Weights (MW) in grams/mole of Common Volatile Organic Compounds (VOCs)

Benzene: 78	DCE: 97	TCE: 131
Carbon tetrachloride: 154	Ethylbenzene: 106	Toluene: 92
Chlorobenzene: 113	PCE: 166	Vinyl chloride: 62.5
DCA: 99	TCA: 133	Xylene: 106

Source: "Elements for Effective Management of Operating Pump and Treat Systems", USEPA, December 2002

Table 5-1: Analytical Summary - VOCs in Groundwater

			Trichloroethene	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	1,1-Dichloroethane	Chloroethane	Vinyl chloride
1996 VRP Tier II Non Residential Goal			**260**	**2,040**	**1,022**	**7**	**NA**	**23,160**	**10**
Location	**Date**	**Result Type**							
86-14	4/24/2003	Primary	180	<5	7.3	<5	<5	<5	<5
	11/4/2003	Primary	<5	<5	<5	<5	<5	<10	<10
	5/18/2004	Primary	<5	<5	<5	<5	<5	<10	<10
	12/7/2004	Primary	<5	<5	<5	<5	<5	<10	<10
	5/31/2005	Primary	<5	<5	<5	<5	<5	<10	<10
	12/5/2005	Primary	<5	<5	<5	<5	<5	<10	<10
	6/5/2006	Primary	<1	<1	<1	<1	<1	<1	5.7
	9/19/2006	Primary	<5	<5	<5	<5	<5	<5	<5
	3/14/2007	Primary	<1	<1	<1	<1	<1	<1	1.5
	10/9/2007	Primary	<1	<1	<1	<1	<1	<1	1.3
	6/23/2008	Primary	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/10/2009	Primary	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.3
	6/24/2009	Primary	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/1/2009	Primary	1.6	1.9	<1.0	<1.0	<1.0	<1.0	16
	1/20/2010	Primary	3.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/13/2010	Primary	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	13
	7/13/2010	Primary	3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
86-15	4/24/2003	Primary	400	36	40	<10	<10	<20	<20
	6/19/2003	Primary	310	52	38	<5	<5	<5	<5
	11/4/2003	Primary	300	57	36	<10	<10	<20	<20
	5/18/2004	Primary	220	45	33	<5	<5	<10	<10
	12/7/2004	Primary	280	66	44	<5	<5	<10	<10
	5/31/2005	Primary	230	37	27	<5	<5	<10	<10
	12/5/2005	Primary	190	22	17	<5	<5	<10	<10
	6/5/2006	Primary	336	74.0	42.5	<1.0	<1.0	<1.0	40.6
	9/19/2006	Primary	289	67.6	46.9	<10	<10	<20	<20
	12/7/2006	Primary	237	42.0	31.4	<10	<10	<20	<20
	12/7/2006	Duplicate	130	22.0	16.4	<5	<5	<10	<10
	3/14/2007	Primary	204	48.9	30.2	<1	<1	<1	<1
	6/5/2007	Primary	220	44	34	<6.7	<6.7	<6.7	<6.7
	12/10/2007	Primary	240	62	34	<8	<8	<8	<8
	6/23/2008	Primary	180	42	25	<6.7	<6.7	<6.7	<6.7
	12/1/2008	Primary	160	39	23	<9.1	<9.1	<9.1	<9.1
	3/10/2009	Primary	230	63	37	<6.7	<6.7	<6.7	<6.7
	6/24/2009	Primary	220	51	30	<10	<10	<10	<10
	10/1/2009	Primary	170	38	24	<6.2	<6.2	<6.2	<6.2
	1/20/2010	Primary	200	43	27	<5.7	<5.7	<5.7	<5.7
	4/13/2010	Primary	170	35	21	<5.0	<5.0	<5.0	<5.0
	7/13/2010	Primary	180	30	22	<5.0	<5.0	<5.0	<5.0

Table 5-1: Analytical Summary - VOCs in Groundwater

			Trichloroethene	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	1,1-Dichloroethane	Chloroethane	Vinyl chloride
1996 VRP Tier II Non Residential Goal			**260**	**2,040**	**1,022**	**7**	**NA**	**23,160**	**10**
Location	**Date**	**Result Type**							
AS-1	4/24/2003	Primary	51	<5	<5	<5	<5	<10	20
	7/31/2003	Primary	640	<25	76	<25	<25	<50	<50
	11/4/2003	Primary	500	<25	140	<25	<25	<50	<50
	2/26/2004	Primary	15	<10	240	<10	<10	<20	95
	5/18/2004	Primary	32	<5	76	<5	<5	<10	36
	8/24/2004	Primary	7.5	<5	15	<5	<5	<10	17
	12/7/2004	Primary	<5	<5	38	<5	<5	<10	44
	2/23/2005	Primary	<5	<5	25	<5	<5	<10	74
	5/31/2005	Primary	<5	6.2	27	<5	<5	<10	80
	8/30/2005	Primary	<5	9.2	12	<5	<5	<10	32
	12/5/2005	Primary	<5	15	35	<5	<5	<10	64
	3/22/2006	Primary	9.2	6.1	6	<5	<5	<10	10
	6/5/2006	Primary	3.2	<1.0	6.1	<1.0	<1.0	<1.0	12.8
	9/19/2006	Primary	<5	<5	8.4	<5	<5	<10	70.4
	12/21/2006	Primary	<5	<5	5	<5	<5	<10	49.4
	3/14/2007	Primary	<1	<1	<1	<1	<1	<1	16.6
	6/5/2007	Primary	<1	<1	1.4	<1	<1	<1	30
	10/9/2007	Primary	<1	7.5	19	<1	<1	<1	33
	10/9/2007	Primary	<1	7.5	19	<1	<1	<1	36
	12/10/2007	Primary	<1.4	2.9	7.9	<1.4	<1.4	<1.4	33
	3/17/2008	Primary	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	13
	7/24/2008	Primary	<1.4	3.4	10	<1.4	<1.4	<1.4	28
	10/13/2008	Primary	<2.5	12	24	<2.5	<2.5	<1.5	15
	12/18/2008	Primary	<2.0	3.4	<2.0	<2.0	<2.0	<2.0	<2.0
	3/10/2009	Primary	<1.0	1.4	<1.0	<1.0	<1.0	<1.0	<1.0
	6/24/2009	Primary	<1.0	1.3	<1.0	<1.0	<1.0	1.2	<1.0
	10/1/2009	Primary	<1.0	2.6	<1.0	<1.0	<1.0	<1.0	3.1
	1/20/2010	Primary	<1.0	1.4	<1.0	<1.0	<1.0	<1.0	1.9
	4/13/2010	Primary	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2
	7/13/2010	Primary	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Table 5-1: Analytical Summary - VOCs in Groundwater

Location	Date	Result Type	Trichloroethene	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	1,1-Dichloroethane	Chloroethane	Vinyl chloride
1996 VRP Tier II Non Residential Goal			**260**	**2,040**	**1,022**	**7**	**NA**	**23,160**	**10**
EW2B	5/9/2003	Primary	**760**	<25	**410**	**40**	<25	<50	**200**
	7/31/2003	Primary	**2,200**	<130	**380**	<130	<130	<250	<250
	11/4/2003	Primary	**530**	<50	**1,200**	**66**	<50	<100	**290**
	2/26/2004	Primary	<50	<50	**900**	<50	<50	<100	**470**
	5/18/2004	Primary	**71**	<5	**86**	<5	<5	<10	**160**
	8/24/2004	Primary	<5	<5	**28**	<5	<5	<10	**94**
	11/23/2004	Primary	<100	<100	**2,200**	<100	<100	<200	**870**
	2/23/2005	Primary	<250	<250	**4,500**	<250	<250	<250	**1,000**
	5/31/2005	Primary	**14**	<5	**22**	<5	<5	<10	**110**
	8/30/2005	Primary	<5	<5	**6.7**	<5	<5	<10	**28**
	12/5/2005	Primary	<5	<5	**5.5**	<5	<5	<10	**43**
	3/22/2006	Primary	**19**	<5	**31**	<5	<5	<10	**60**
	6/5/2006	Primary	**23.1**	<1.0	**20.9**	<1.0	<1.0	<1.0	**22.2**
	9/19/2006	Primary	<5	<5	**19.6**	<5	<5	<10	**24.2**
	12/21/2006	Primary	<5	<5	**5.8**	<5	<5	<10	**17.3**
	3/14/2007	Primary	**14.0**	<1	**12.0**	<1	<1	<1	**28.6**
	6/5/2007	Primary	**18**	<2	**14**	<2	<2	<2	**46**
	10/9/2007	Primary	**13**	<2.5	**8**	<2.5	<2.5	<2.5	**61**
	12/10/2007	Primary	**7.2**	<1	**5**	<1	<1	<1	**31**
	3/17/2008	Primary	**47**	<1.7	**17**	<1.7	<1.7	<1.7	**25**
	7/24/2008	Primary	**75**	<2.5	**31**	<2.5	<2.5	<2.5	**17**
	7/24/2008	Duplicate	**31**	<1.0	**19**	<1.0	<1.0	<1.0	**16**
	10/13/2008	Primary	**11**	<1.0	**25**	<1.0	<1.0	<1.0	**9**
	12/18/2008	Primary	**13**	<2.5	**97**	<2.5	<2.5	<2.5	**8.1**
	3/10/2009	Primary	<2.5	**6.3**	**53**	<2.5	<2.5	<2.5	**15**
	6/24/2009	Primary	<2.0	**4.5**	**49**	<2.0	<2.0	<2.0	**21**
	10/1/2009	Primary	**1.1**	<1.0	**13**	<1.0	<1.0	<1.0	**28**
	1/20/2010	Primary	**1.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/20/2010	Duplicate	**1.9**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/13/2010	Primary	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/13/2010	Primary	<1.0	<1.0	**1.3**	<1.0	<1.0	<1.0	<1.0

Table 5-1: Analytical Summary - VOCs in Groundwater

			Trichloroethene	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	1,1-Dichloroethane	Chloroethane	Vinyl chloride
1996 VRP Tier II Non Residential Goal			260	2,040	1,022	7	NA	23,160	10
Location	Date	Result Type							
MP-10	4/24/2003	Primary	300	27	28	<5	<5	<10	72
	7/31/2003	Primary	670	<25	39	<25	<25	<50	53
	11/4/2003	Primary	380	<25	38	<25	<25	<50	<50
	2/26/2004	Primary	230	15	34	<10	<10	<20	<20
	5/18/2004	Primary	370	14	46	<5	<5	<10	66
	8/24/2004	Primary	300	<10	49	<10	<10	<10	42
	11/23/2004	Primary	350	19	43	<5	<5	<10	<10
	2/23/2005	Primary	350	15	36	<5	<5	<10	<10
	5/31/2005	Primary	350	26	34	<10	<10	<20	<20
	8/30/2005	Primary	360	22	25	<10	<10	<20	<20
	12/5/2005	Primary	320	21	21	<10	<10	<20	<20
	3/22/2006	Primary	300	<25	<25	<25	<25	<50	70
	6/5/2006	Primary	421	16.4	32.6	4.7	<1.0	<1.0	49.5
	9/19/2006	Primary	430	<25	<25	<25	<25	<50	<50
	12/21/2006	Primary	290	<25	<25	<25	<25	<50	<50
	3/14/2007	Primary	237	18.0	21.6	<2	<2	<2	41.8
	6/5/2007	Primary	340	13	17	<10	<10	<10	15
	10/9/2007	Primary	180	31	32	<6.7	<6.7	<6.7	<6.7
	12/10/2007	Primary	270	20	18	<10	<10	<10	<10
	3/17/2008	Primary	220	18	18	<6.7	<6.7	<6.7	46
	7/24/2008	Primary	200	19	15	<6.7	<6.7	<6.7	<6.7
	10/13/2008	Primary	370	<14	<14	<14	<14	<14	<14
	12/18/2008	Primary	330	13	<10	<10	<10	<10	<10
	3/10/2009	Primary	170	28	22	<5.7	<5.7	<5.7	20
	6/24/2009	Primary	220	25	18	<10	<10	<10	<10
	10/1/2009	Primary	220	20	15	<10	<10	<10	<10
	1/20/2010	Primary	230	24	18	<6.7	<6.7	<6.7	<6.7
	4/13/2010	Primary	210	17	13	<5.7	<5.7	<5.7	54
	7/13/2010	Primary	220	17	15	<6.7	<6.7	<6.7	62

Table 5-1: Analytical Summary - VOCs in Groundwater

			Trichloroethene	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	1,1-Dichloroethane	Chloroethane	Vinyl chloride
1996 VRP Tier II Non Residential Goal			260	2,040	1,022	7	NA	23,160	10
Location	Date	Result Type							
MW-16	4/24/2003	Primary	5,600	<50	1,700	<50	<50	<100	340
	7/31/2003	Primary	5,200	<250	1,600	<250	<250	<500	<500
	11/4/2003	Primary	1,700	<50	970	<50	<50	<100	320
	2/26/2004	Primary	1,400	<50	1,100	<50	<50	<100	290
	2/26/2004	Duplicate	1,400	<50	1,100	<50	<50	<100	280
	5/18/2004	Primary	1,400	<10	1,300	<10	<10	<20	340
	5/18/2004	Duplicate	1,500	<10	1,300	<10	<10	<20	350
	8/24/2004	Primary	1,200	<50	1,300	<50	<50	<100	420
	11/23/2004	Primary	5,000	<250	2,300	<250	<250	<500	580
	2/23/2005	Primary	4,600	<250	1,200	<250	<250	<500	<500
	5/31/2005	Primary	3,700	<250	1,200	<250	<250	<500	<500
	5/31/2005	Duplicate	3,600	<120	1,200	<120	<120	<250	370
	8/30/2005	Primary	2,900	<120	760	<120	<120	<250	<250
	8/30/2005	Duplicate	2,500	<120	660	<120	<120	<250	<250
	12/5/2005	Primary	2,600	<120	780J	<120	<120	<250	250J
	12/5/2005	Duplicate	5,000J	<250	1,400J	<250	<250	<500	<500
	3/22/2006	Primary	3,900	<250	820	<250	<250	<250	<500
	3/22/2006	Duplicate	4,400	<250	910	<250	<250	<500	<500
	6/5/2006	Primary	7,040	5.7	1,840	6.2	<1.0	<1.0	149
	6/5/2006	Duplicate	7,830	7.7	<1.0	8.1	<1.0	<1.0	198
	9/19/2006	Primary	2,750	<100	1,070 J	<100	<100	<200	<200
	9/19/2006	Duplicate	6,920 J	<250	2,730 J	<250	<250	<500	787 J
	12/21/2006	Primary	4,220	<250	1,280	<250	<250	<500	<500
	3/14/2007	Primary	3,780	<50	1,010	<50	<50	<50	269
	6/5/2007	Primary	2,700	<100	980	<100	<100	<100	310
	6/5/2007	Duplicate	3,100	<100	1,100	<100	<100	<100	370
	10/9/2007	Primary	3,400	<110	900	<110	<110	<110	130
	12/10/2007	Primary	4,700	<170	1,400	<170	<170	<170	530
	12/10/2007	Duplicate	4,100	<200	1,200	<200	<200	<200	410
	3/17/2008	Primary	3,900	<120	1,500	<120	<120	<120	310
	3/17/2008	Duplicate	3,100	<140	1,300	<120	<120	<120	240
	7/24/2008	Primary	2,600	<71	760	<71	<71	<71	120
	10/13/2008	Primary	660	<140	4,500	<140	<140	<140	200
	11/24/2008	Primary	1,500	<500	14,000	<500	<500	<500	1,600
	12/18/2008	Primary	<420	<420	11,000	<420	<420	<420	1,400
	3/10/2009	Primary	3,800	<200	5,700	<200	<200	<200	480
	3/10/2009	Duplicate	4,200	<200	6,000	<200	<200	<200	550
	6/24/2009	Primary	7,000	<330	4,400	<330	<330	<330	350
	10/1/2009	Primary	9,300	<250	4,600	<250	<250	<250	560
	1/21/2010	Primary	12,000	<560	17,000	<560	<560	<560	1,100
	4/13/2010	Primary	62,000	<2,000	69,000	<2,000	<2,000	<2,000	8,200
	4/13/2010	Duplicate	63,000	<2,500	70,000	<2,500	<2,500	<2,500	8,200
	7/13/2010	Primary	5,400	<420	11,000	<420	<420	<420	720
	7/13/2010	Duplicate	5,100	<150	10,000	<150	<150	<150	640

Table 5-1: Analytical Summary - VOCs in Groundwater

Location	Date	Result Type	Trichloroethene	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	1,1-Dichloroethene	1,1-Dichloroethane	Chloroethane	Vinyl chloride
1996 VRP Tier II Non Residential Goal			260	2,040	1,022	7	NA	23,160	10
MW-17	4/24/2003	Primary	**2,600**	<20	**1,200**	<20	<20	<40	<40
	7/31/2003	Primary	<50	<50	**600**	<50	<50	<100	**1,100**
	11/4/2003	Primary	<50	<50	**62**	<50	<50	<100	**1,100**
	11/4/2003	Duplicate	<50	<50	**97**	<50	<50	<100	**1,200**
	2/26/2004	Primary	<100	<100	**120**	<100	<100	<200	**2,700**
	5/18/2004	Primary	<25	<25	**330**	<25	<25	<50	**4,900**
	8/24/2004	Primary	<250	<250	<250	<250	<250	<500	**4,200**
	8/24/2004	Duplicate	<100	<100	**120**	<100	<100	<200	**2,500**
	12/7/2004	Primary	<5	<5	<5	<5	<5	<10	**180**
	12/7/2004	Duplicate	<5	<5	<5	<5	<5	**13**	**180**
	2/23/2005	Primary	<5	<5	<5	<5	<5	<10	**33**
	2/23/2005	Duplicate	<5	<5	<5	<5	<5	<10	**29**
	5/31/2005	Primary	<5	<5	<5	<5	<5	<10	**19**
	8/30/2005	Primary	<5	<5	<5	<5	<5	<10	**33**
	12/5/2005	Primary	<5	<5	<5	<5	<5	<10	**64**
	3/22/2006	Primary	<5	<5	<5	<5	<5	<10	**140**
	6/5/2006	Primary	<20	<20	<20	<20	<20	<40	**3,850**
	9/19/2006	Primary	<10	<10	<10	<10	<10	<20	**250**
	12/21/2006	Primary	<50	<50	<50	<50	<50	<100	**1,090**
	12/21/2006	Duplicate	<10	<10	<10	<10	<10	<20	**1,010**
	3/14/2006	Primary	<5	<5	<5	<5	<5	<5	**114**
	3/14/2006	Duplicate	<5	<5	<5	<5	<5	<5	**114**
	6/5/2007	Primary	<1	<1	<1	<1	**2.2**	<1	**1.4**
	10/9/2007	Primary	<25	<25	<25	<25	<25	<25	**950**
	12/10/2007	Primary	<50	<50	<50	<50	<50	<50	**1,900**
	3/17/2008	Primary	<500	<500	**2,900**	<500	<500	<500	**12,000**
	7/24/2008	Primary	<620	<620	**6,400**	<620	<620	<620	**9,700**
	10/13/2008	Primary	<420	<420	**6,300**	<420	<420	<420	**14,000**
	11/24/2008	Primary	<710	<710	**8,300**	<710	<710	<710	**21,000**
	12/18/2008	Primary	<620	<620	**7,700**	<620	<620	<620	**14,000**
	3/10/2009	Primary	<500	<500	**5,500**	<500	<500	<500	**12,000**
	6/24/2009	Primary	<1.0	<1.0	<1.0	<1.0	**3.8**	<1.0	**1.5**
	6/24/2009	Duplicate	<1.0	<1.0	<1.0	<1.0	**3.7**	<1.0	**1.5**
	10/1/2009	Primary	<2.0	<2.0	<2.0	<2.0	**3.6**	<2.0	<2.0
	10/1/2009	Duplicate	<2.0	<2.0	<2.0	<2.0	**2.6**	<2.0	<2.0
	1/20/2010	Primary	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7
	4/13/2010	Primary	<1.0	<1.0	<1.0	<1.0	**2.7**	<1.0	<1.0
	7/13/2010	Primary	<1.0	<1.0	<1.0	<1.0	**2.8**	<1.0	<1.0

Notes: Samples analyzed for volatile organic compounds by USEPA Method 8260.
Only constituents detected are presented on the table for summary purposes.
Bolded value indicates detected concentration.
Criteria Comparison to Tier II Non-Residential Screening Levels under IDEM VRP Program
"J" qualifier indicates estimated value

Prepared by: JPS Date: 08/08/10

Checked by: SDM Date: 08/15/10

Table 5-2: Dissolved Oxygen Measurements

DATE	SITE / RESULT TYPE	86-14 Primary	86-15 Primary	AS-1 Primary	EW2B Primary	MP-10 Primary	MW-16 Primary	MW-17 Primary
12/7/2001	(mg/l)	NS	NS	0.53	0.5	0.66	NS	NS
5/8/2003	(mg/l)	7.7	NS	NS	0	0	0	0.6
7/31/2003	(mg/l)	NS	1.02	1.21	1.04	2.17	1.8	2.0
11/4/2003 *	(mg/l)	0.23	0.06	0.12	0.07	0.03	0.08	0.1
2/26/2004	(mg/l)	NS	NS	0.33	0.73	1.98	0.4	0.6
5/18/2004	(mg/l)	0.2	0.1	1.8	2	0.98	2.2	0.5
8/14/2004	(mg/l)	NS	NS	1.2	1.3	1.2	0.4	1.4
11/23/2004	(mg/l)	3.7	1.5	3.0	1.6	1.7	2.0	0.8
2/23/2005	(mg/l)	NS	NS	1.12	1.03	1.02	2.11	1.08
5/31/2005	(mg/l)	3.2	0.3	10.20	0.30	1.19	1.50	5.50
8/30/2005	(mg/l)	NS	NS	3.90	0.10	1.00	1.60	2.80
12/5/2005	(mg/l)	14.3	15.9	5.90	0.60	2.20	NR	7.10
3/22/2006	(mg/l)	NS	NS	5.80	5.60	1.00	16.00	6.60
6/5/2006	(mg/l)	3.3	1.5	4.20	1.60	1.40	1.40	1.20
9/19/2006	(mg/l)	1.5	8.6	2.4	2.5	1.5	0.2	1.7
12/7/2006	(mg/l)	NS	NS	5.9	2.3	2.2	Over Range	NA
3/14/2007	(mg/l)	14.3	15.9	5.9	2.3	2.2	Over Range	7.1
6/5/2007	(mg/l)	NS	NS	2.2	2.2	3.1	15.1	9.2
10/9/2007	(mg/l)	3.3	NS	2.9	0.2	1.5	2.0	0.24
3/10/2009	(mg/l)	3.53	5.94	4.71	2.87	5.4	5.6	1.39
6/24/2009	(mg/l)	2.9	3.2	3.7	2.4	2.7	2.7	3.7
1/20/2010	(mg/l)	0.08	0.19	0.03	0.04	0.24	0.0	0
4/13/2010	(mg/l)	NR	NR	NR	NR	NR	-0.05	-0.04
7/13/2010	(mg/l)	-0.04	0.02	-0.04	-0.04	-0.01	0.0	-0.05
Distance from Nearest treatment well (ft.)		***32***	***55***	***8***	***10***	***22***	***12***	***8***

Notes: NS - Not Sampled
NR - No Reading

Prepared by: JPS Date: 08/08/10

Checked by: SDM Date: 08/15/10

Table 5-3: Induced Vacuum Measurements

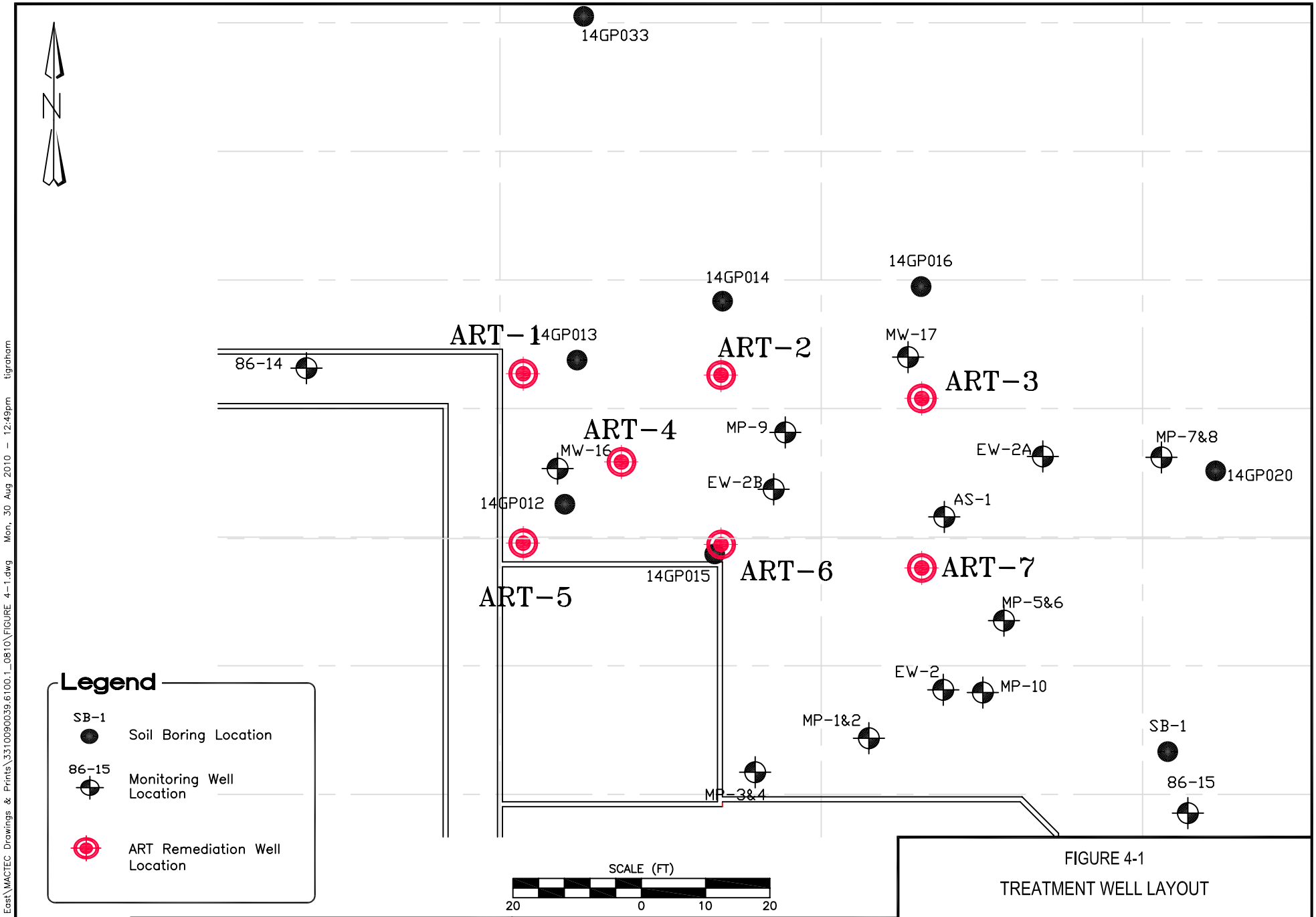
Date	*MP-10 (10-20')**	*EW-2B (3-18')**
5/8/2003	0.74	NM
5/22/2003	0.25	1.25
6/4/2003	0.60	2.00
7/31/2003	0.40	2.90
11/4/2003	0.55	2.20
2/26/2004	0.55	2.10
5/18/2004	0.50	2.00
8/14/2004	0.52	1.50
11/23/2004	0.32	1.10
2/23/2005	0.30	1.00
5/31/2005	0.25	0.90
8/30/2005	0.20	1.00
12/5/2005	0.15	0.95
3/22/2006	0.17	0.75
6/5/2005	0.15	0.60
9/19/2006	0.12	0.65
12/7/2006	0.13	0.65
3/14/2007	0.14	0.65
6/5/2007	0.13	0.68
10/9/2007	0.10	0.60
3/10/2009	0.24	0.86
6/24/2009	0.32	1.00
4/13/2010	0.24	0.80
7/13/2010	NM	NM
Distance from Nearest treatment well (ft.)	***22***	***10***

*Screened interval depth in feet
Measurements in inches of water
NM = Not Measured

Prepared by: JPS Date: 08/08/10

Checked by: SDM Date: 08/15/10

FIGURES



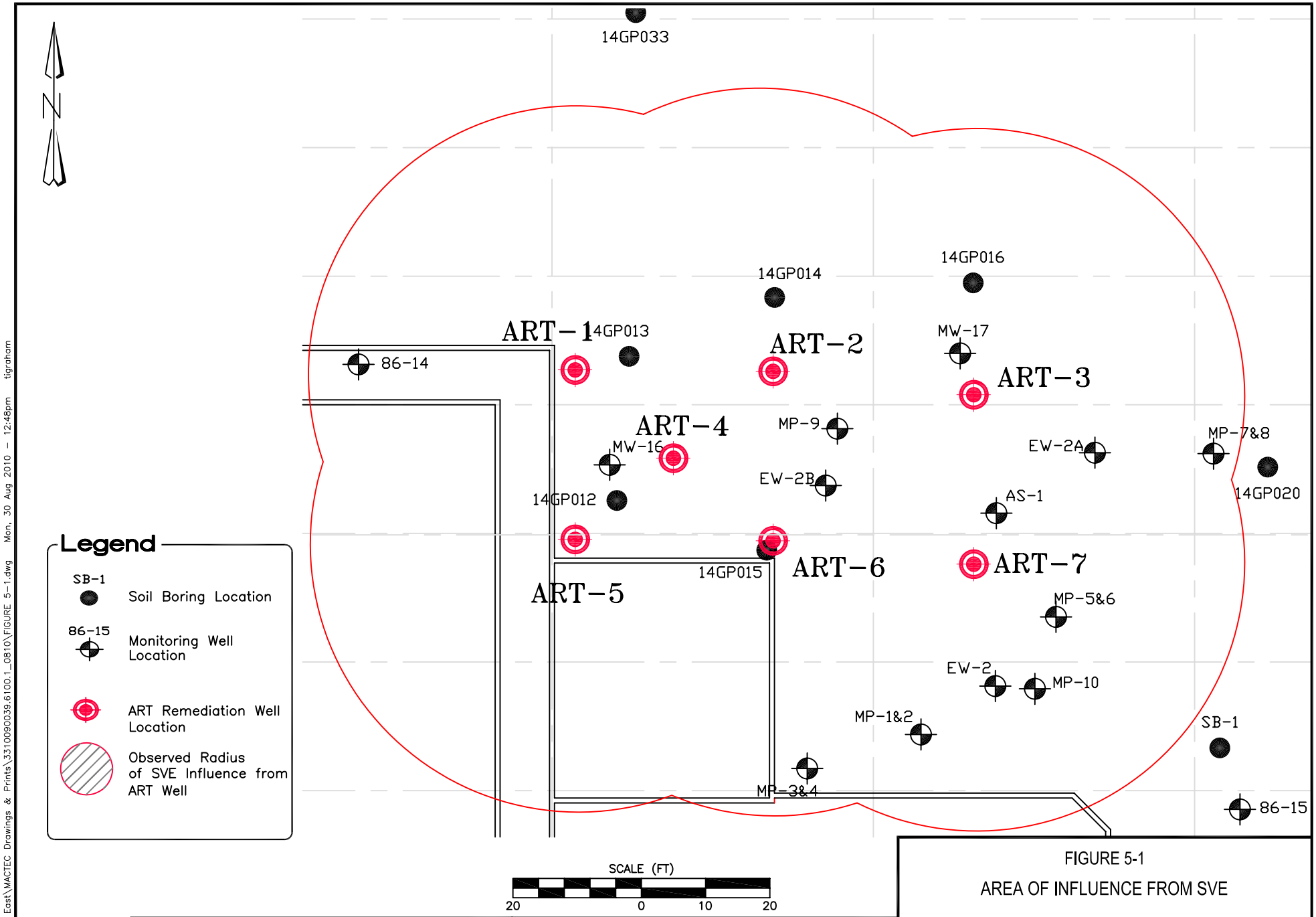
DESIGNED BY		
DRAWN BY		
CHKD. BY		

MACTEC
46850 Magellan Drive, Suite 190
Novi, MI 48377

FIGURE 4-1
TREATMENT WELL LAYOUT

AREA 14 EAST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

P:\HW - SB Area 14 East\MACTEC Drawings & Prints\33100900039.6100.1_0810\FIGURE 4-1.dwg Mon, 30 Aug 2010 - 12:49pm tigraham



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DRAWN BY		
CHKD. BY		

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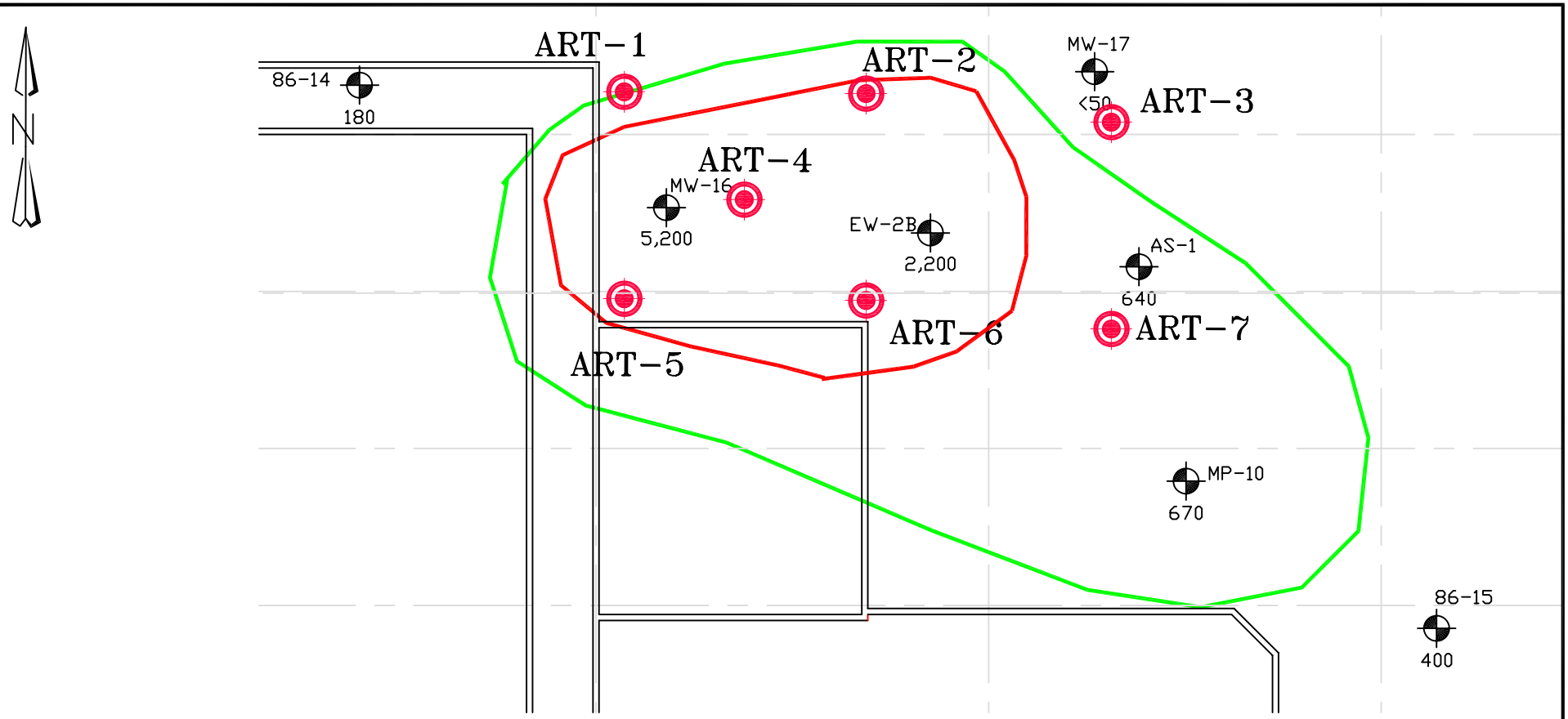
Novi, MI 48377

FIGURE 5-1
AREA OF INFLUENCE FROM SVE

AREA 14 EAST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

P:\HW - SB Area 14 East\MACTEC Drawings & Prints\3310090039.6100.1_0810\FIGURE 5-1.dwg Mon, 30 Aug 2010 - 12:48pm tigraham



Legend

- 86-15 / 220 — Monitoring Well Location; TCE concentration in groundwater ug/L
- ART Remediation Well Location
- Limits of TCE in groundwater at concentrations greater than 1,000 ug/L
- Limits of TCE in groundwater at concentrations greater than 500 ug/L

SCALE (FT)
20 0 10 20

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FIGURE 6-1
DISTRIBUTION OF TCE IN GROUNDWATER - 7/2003

AREA 14 EAST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

P:\HW - SB Area 14 East\MACTEC Drawings & Prints\33100900039.6100.1_0810\FIGURE 6-1.dwg Mon, 30 Aug 2010 - 12:48pm tigraham

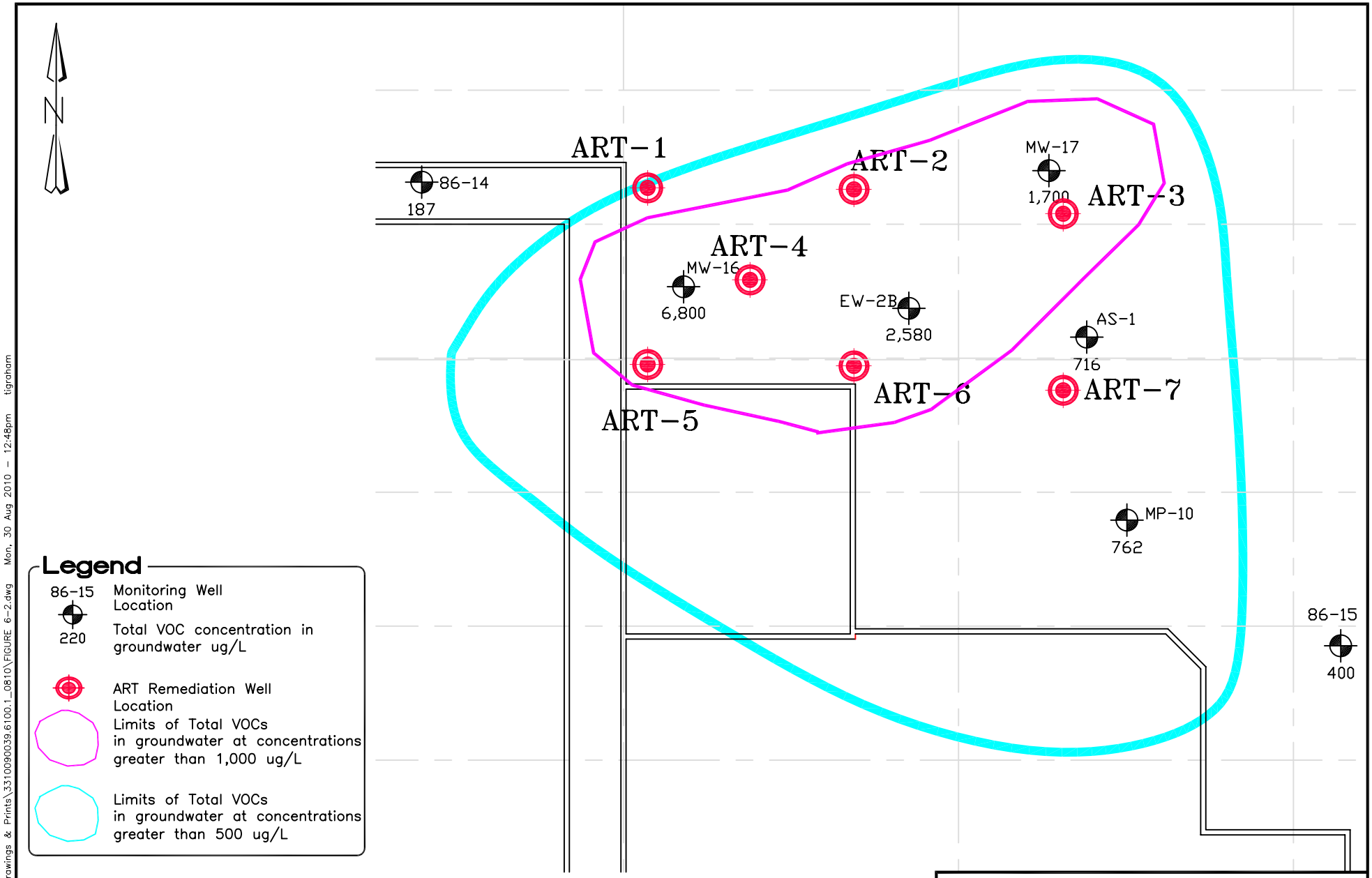

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FIGURE 6-2

DISTRIBUTION OF TOTAL VOCs IN GROUNDWATER - 7/2003

AREA 14 EAST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

P:\HW - SB Area 14 East\MACTEC Drawings & Prints\3310090039.6100.1_0810\FIGURE 6-2.dwg Mon, 30 Aug 2010 - 12:48pm tigraham

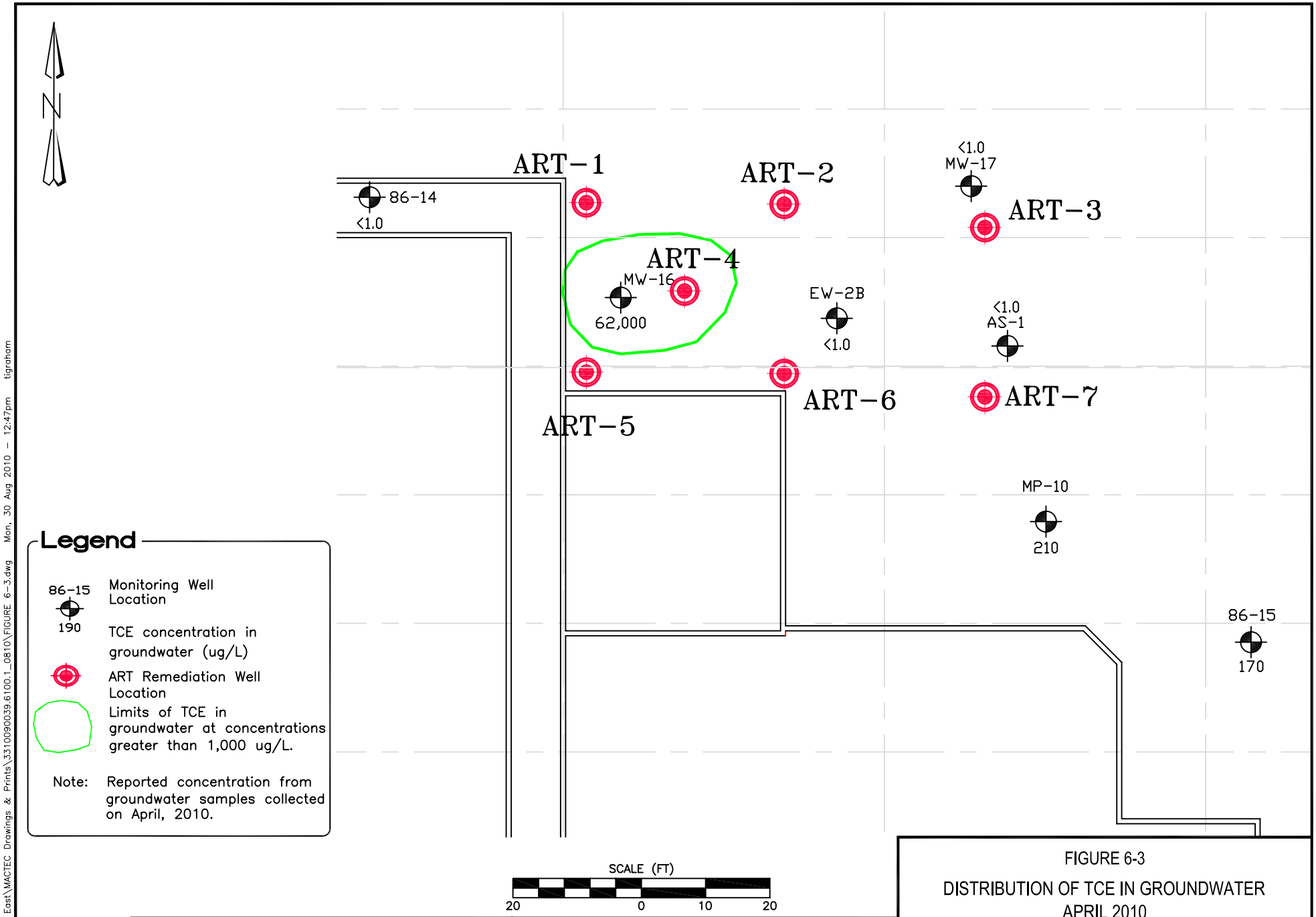

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FIGURE 6-3
DISTRIBUTION OF TCE IN GROUNDWATER
APRIL 2010

AREA 14 EAST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

P:\HW - SB Area 14 East\MACTEC Drawings & Prints\3310090039.6100.1_0810\FIGURE 6-3.dwg Mon, 30 Aug 2010 - 12:47pm tigraham

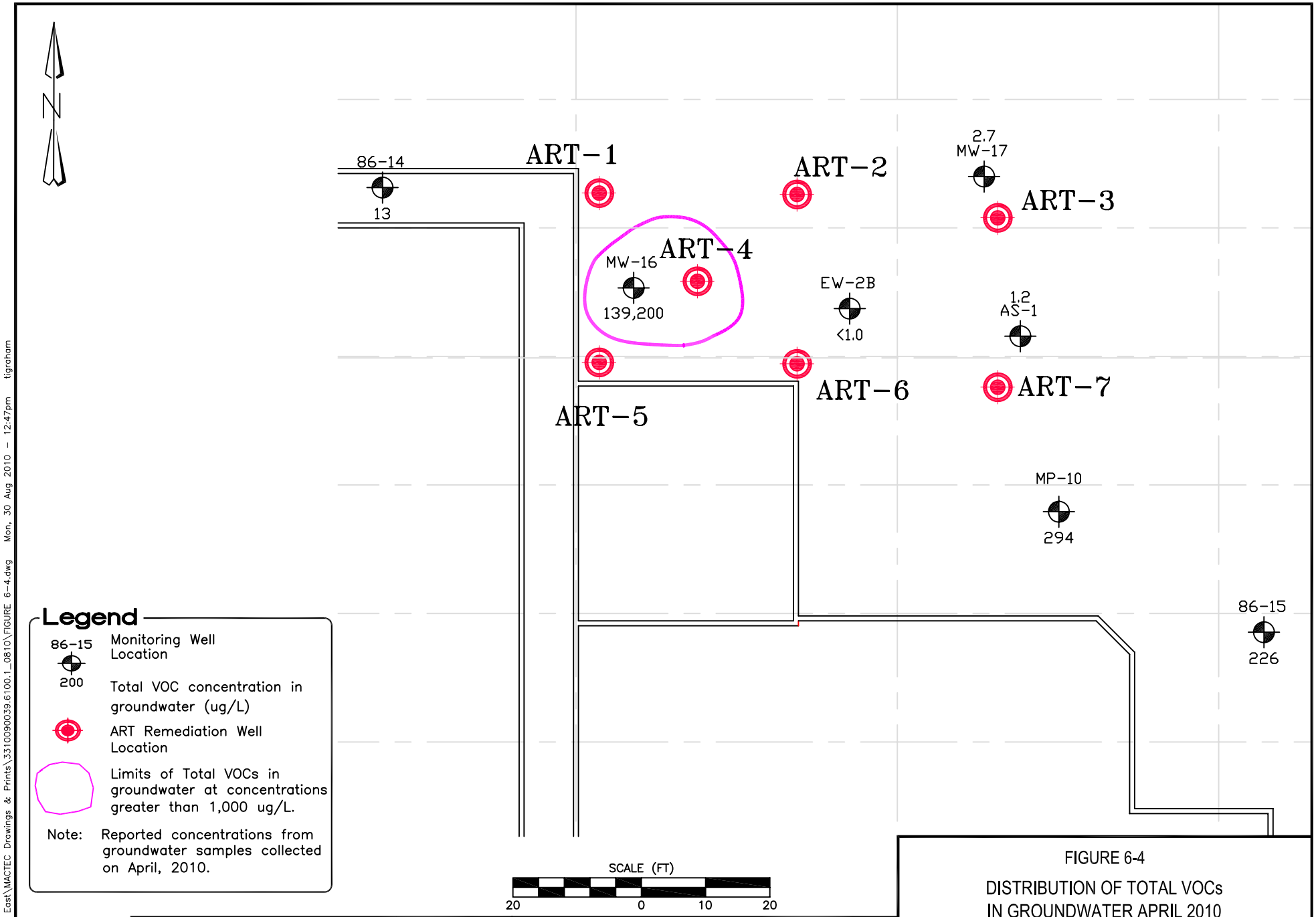

FIGURE 6-4

DISTRIBUTION OF TOTAL VOCs IN GROUNDWATER APRIL 2010

AREA 14 EAST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

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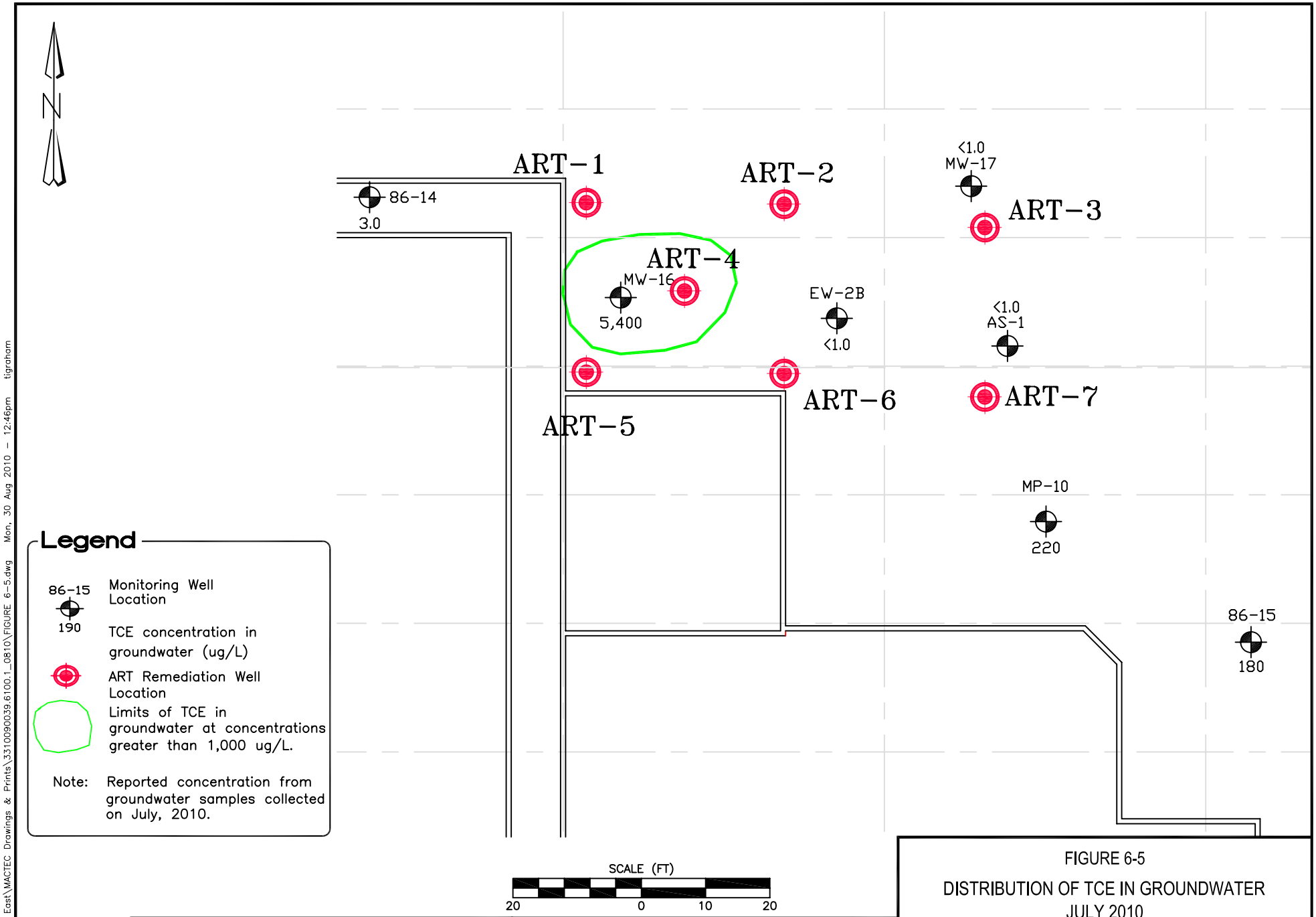

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DRAWN BY		
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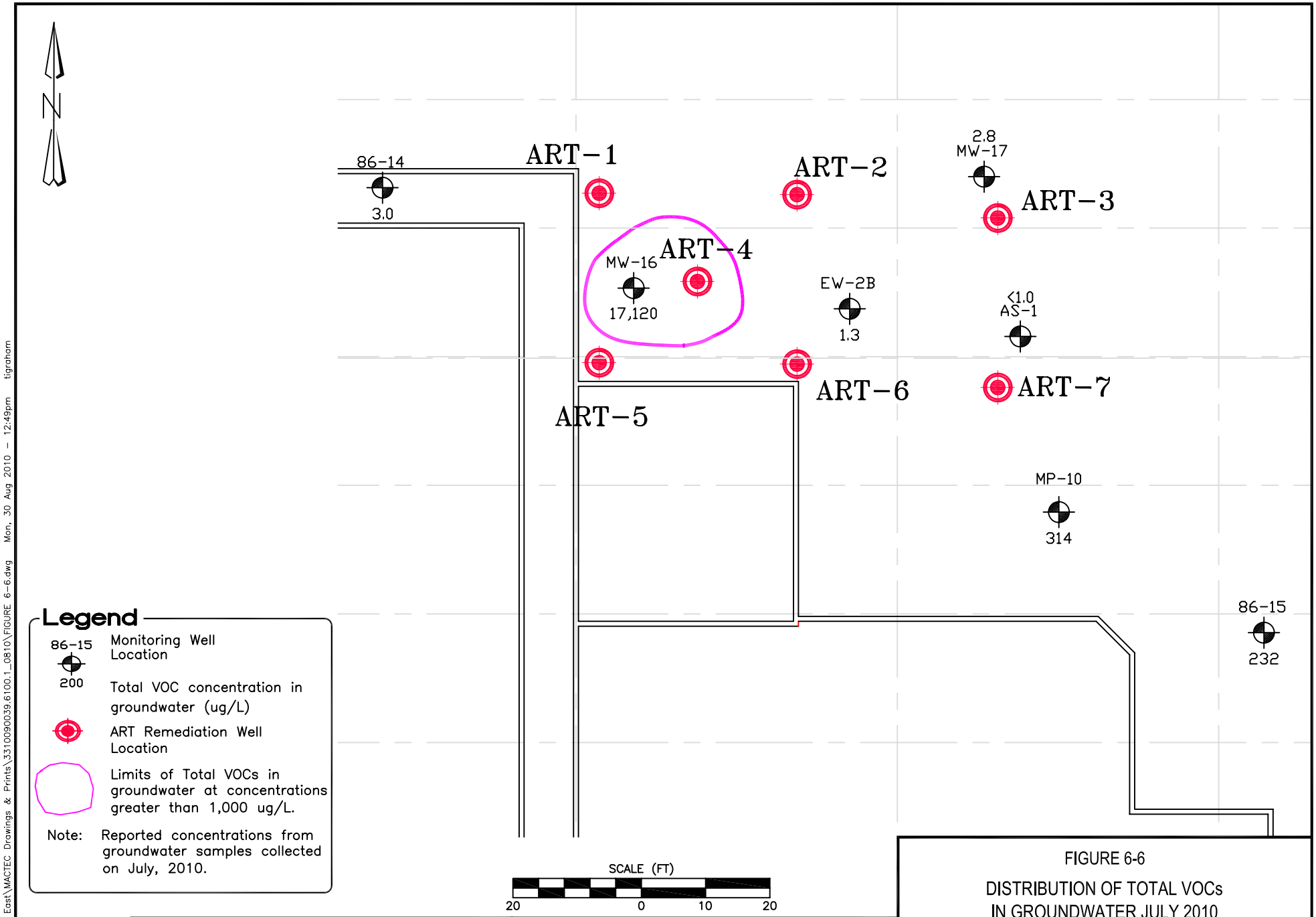
Novi, MI 48377

FIGURE 6-5

DISTRIBUTION OF TCE IN GROUNDWATER
JULY 2010

AREA 14 EAST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

P:\HW - SB Area 14 East\MACTEC Drawings & Prints\3310090039.6100.1_0810\FIGURE 6-5.dwg Mon, 30 Aug 2010 - 12:46pm tigraham



DESIGNED BY		
DRAWN BY		
CHKD. BY		

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41 Hughes Drive
Traverse City, Michigan 49686

FIGURE 6-6
DISTRIBUTION OF TOTAL VOCs IN GROUNDWATER JULY 2010

AREA 14 EAST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

P:\HW - SB Area 14 East\MACTEC Drawings & Prints\3310090039.6100.1_0810\FIGURE 6-6.dwg Mon, 30 Aug 2010 - 12:49pm tigraham

CHARTS

Chart 4-1
Weekly Removal Rates - May 2003 through May 2004
Area 14 East - Honeywell Industrial Complex
South Bend, Indiana

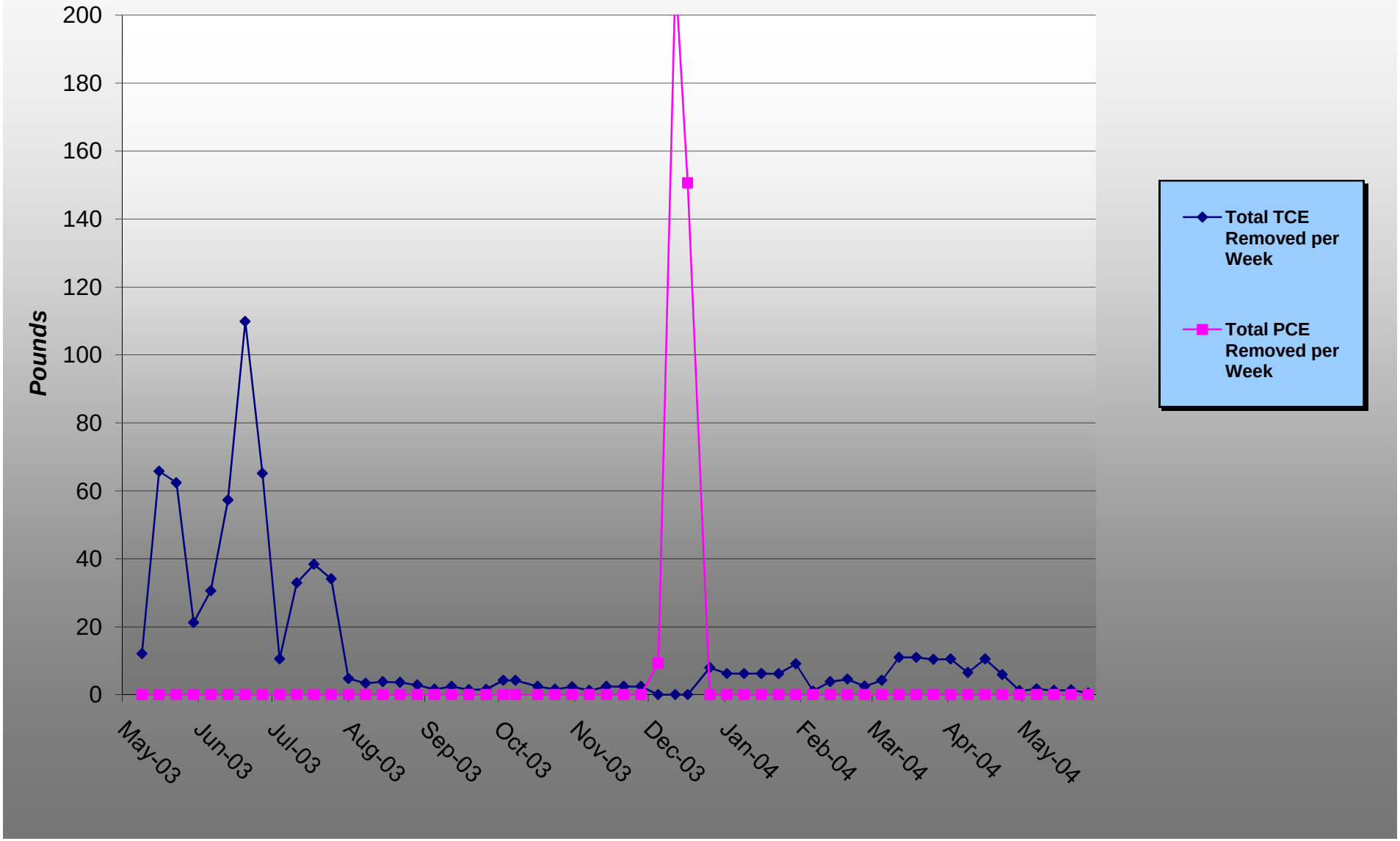


Chart 4-2
Weekly Removal Rates - June 2004 Through Present
Area 14 East - Honeywell Industrial Complex
South Bend, Indiana

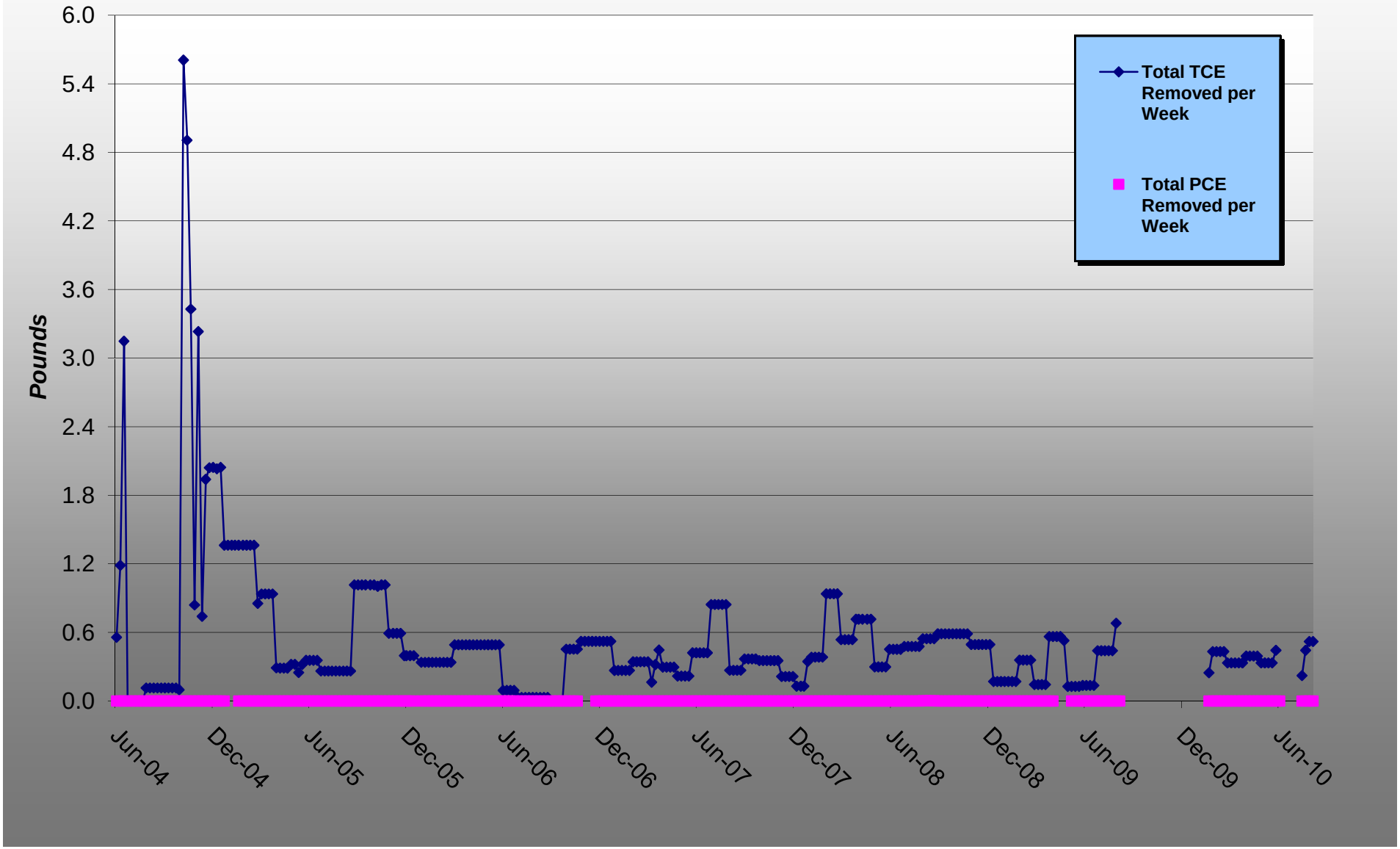


Chart 4-3
Total Mass of TCE Removed by the System
Area 14 East - Honeywell Industrial Complex
South Bend, Indiana

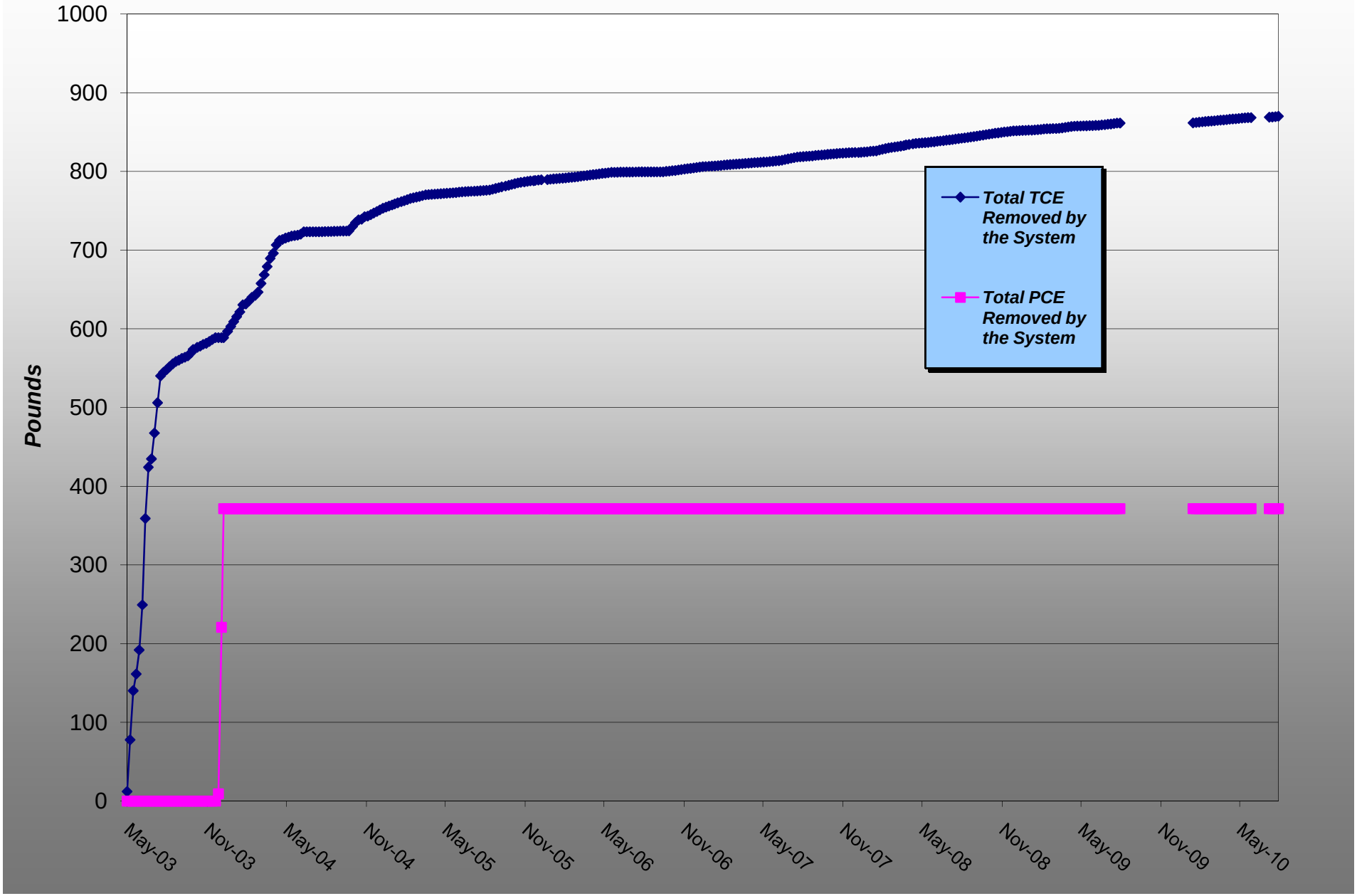


Chart 5-1
EW2B VOC Trends
Area 14 East - Honeywell Industrial Complex
South Bend, Indiana

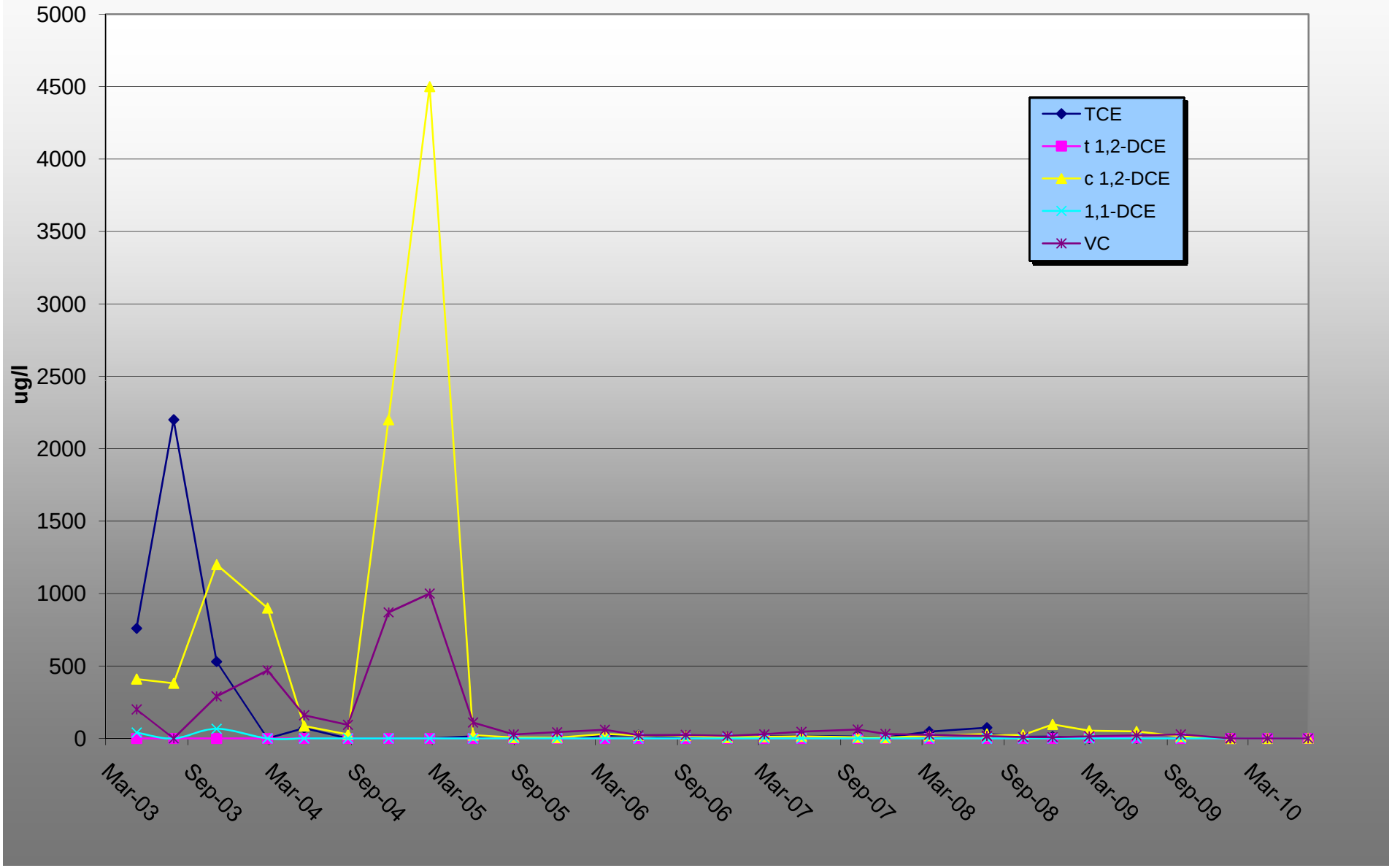


Chart 5-2
AS-1 VOC Trends
Area 14 East - Honeywell Industrial Complex
South Bend, Indiana

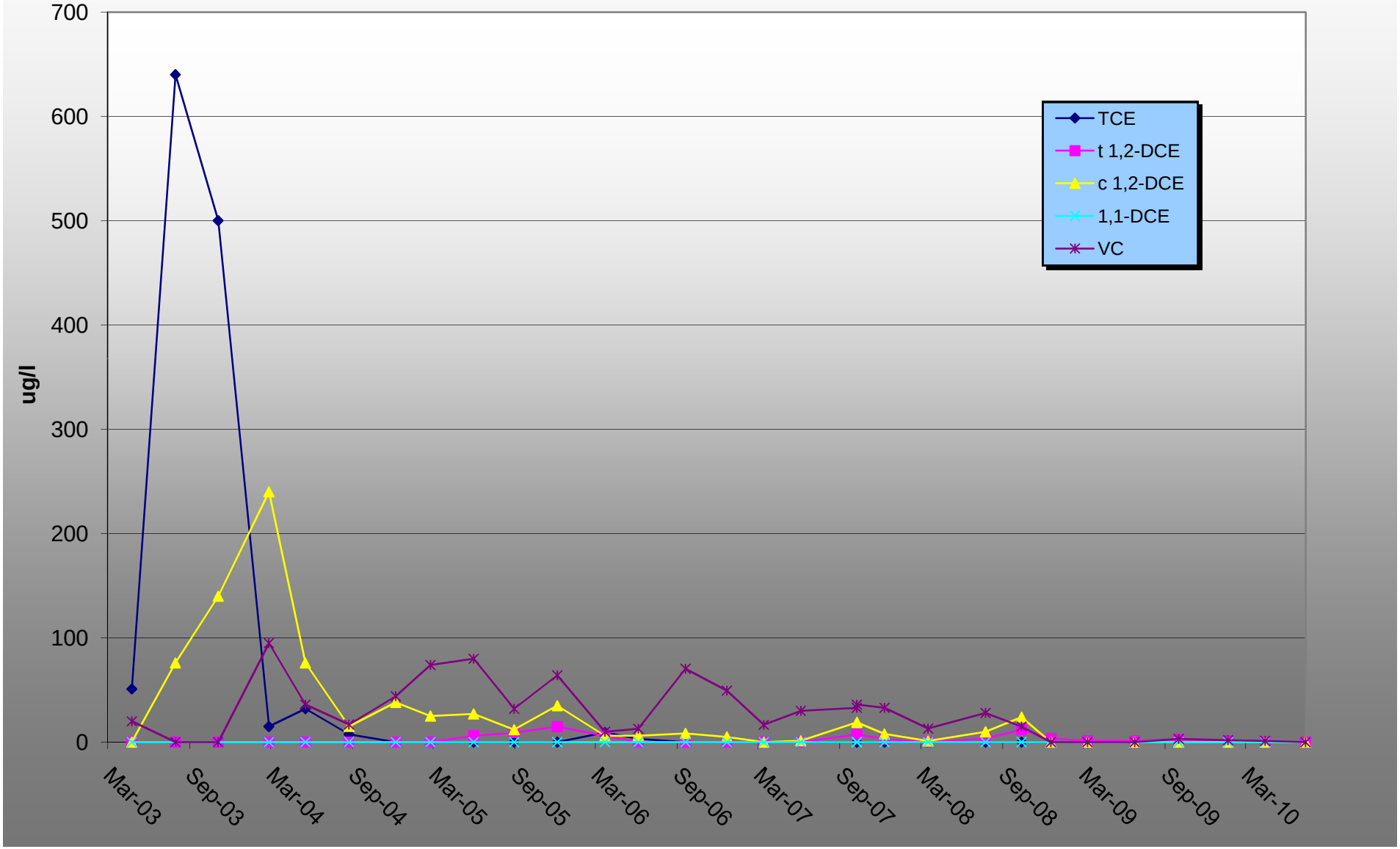


Chart 5-3
MP-10 VOC Trends
Area 14 East - Honeywell Industrial Complex
South Bend, Indiana

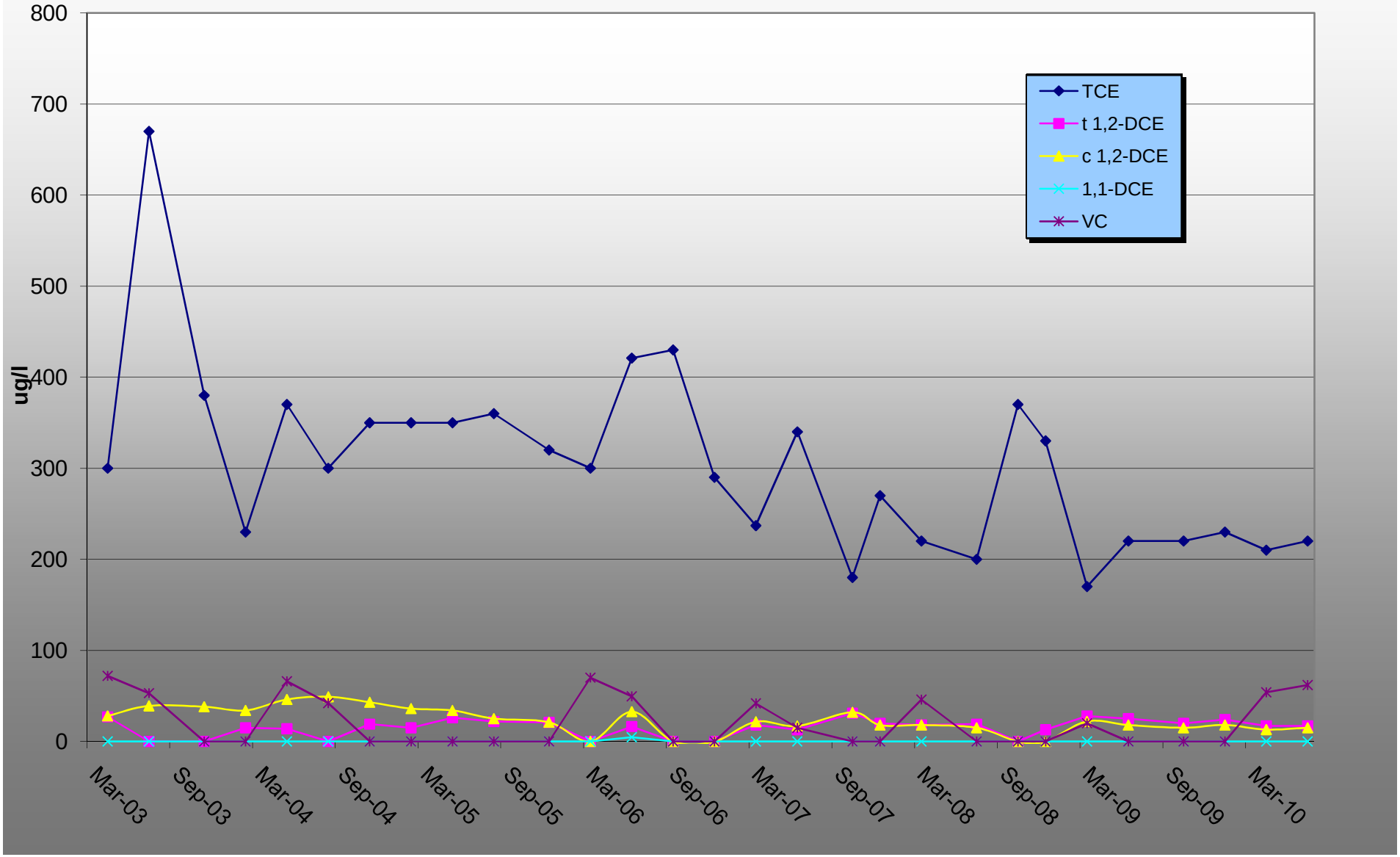


Chart 5-4
MW-16 VOC Trends
Area 14 East - Honeywell Industrial Complex
South Bend, Indiana

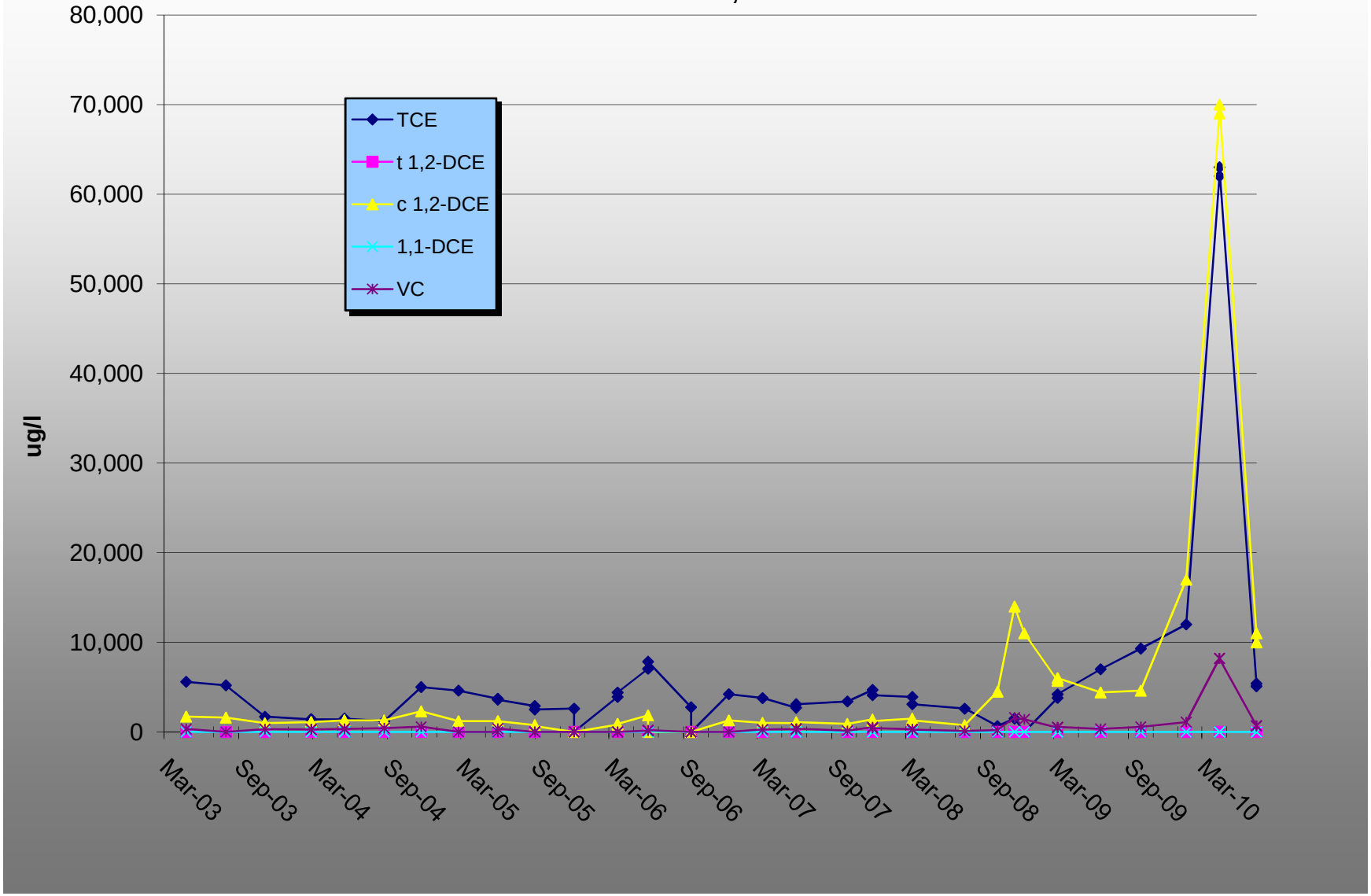


Chart 5-5
MW-17 VOC Trends
Area 14 East - Honeywell Industrial Complex
South Bend, Indiana

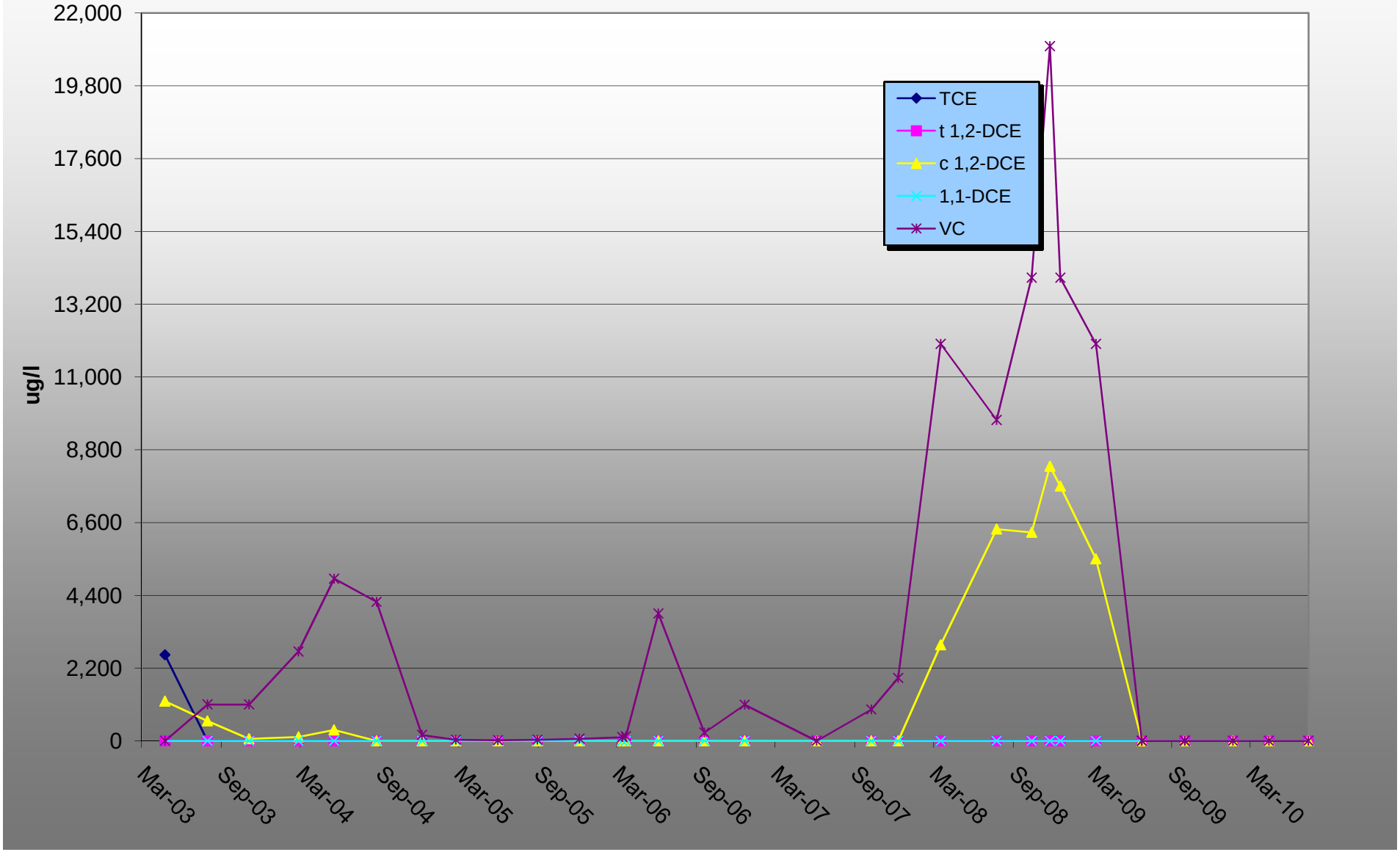
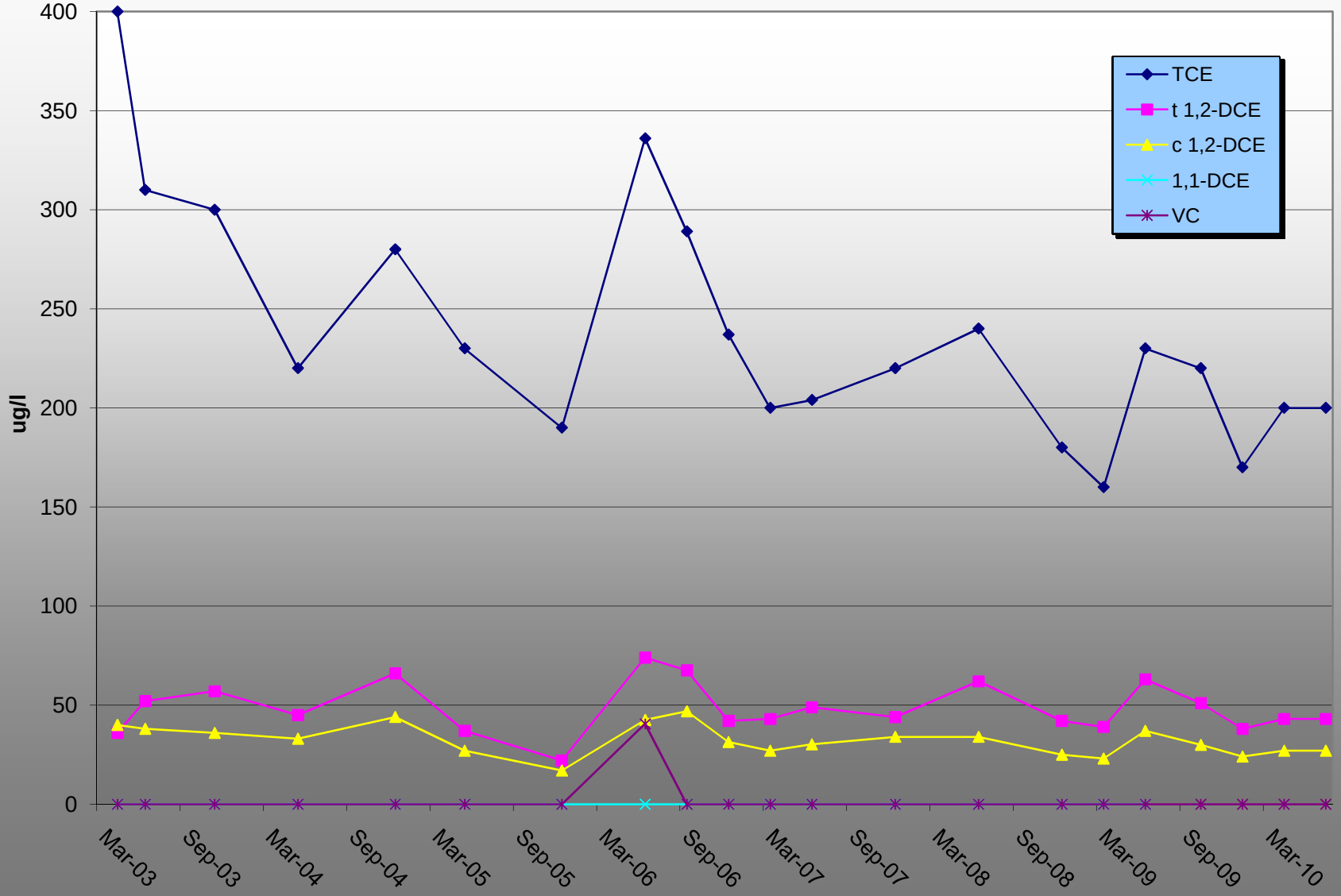


Chart 5-6
86-15 VOC Trends
Area 14 East - Honeywell Industrial Complex
South Bend, Indiana



APPENDIX A

SITE INSPECTION REPORTS

SITE INSPECTION REPORT
Area 14 East - Treatment System
Honeywell Industrial Complex

Personnel: Palmer Andresen

Date: 2/24/2010
Arrival Time: 7:35
Departure Time: NDC
Weather: Cloudy 25°

Reason for Visit:
Specify: Week 4 end of month

Treatment System Area

Compressor Status: off line

Compressor Temperature (F): 0
Hour Meter Reading: 0

Line Pressure (psi): 0
Line Temperature (F): 0

Total Flow (scfm): 0
In-line Filters : OK
Knock Out Tank Level: 1/3

Gallons Drained 200

Blower Status: On line

Blower Temperature (F): 182
Total Flow (scfm): 250
Line Vacuum (in water): 70"

Carbon Vapor Pacs: SV157 Lead
SV69 intermedate

After Heat Exchanger
Line Pressure (psi): 2
Line Temperature (F): 48°
Between Vapor Pacs
Line Pressure (psi): 2
Line Temperature (F): N/A

Plant 1 Treatment Area

Observations: Collected (2) air/gas samples

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	NDC	NDC	NDC		NDC	NDC
2	NDC	NDC	NDC		NDC	NDC
3	NDC	NDC	NDC		NDC	NDC
4	NDC	NDC	NDC		NDC	NDC
5	NDC	NDC	NDC		NDC	NDC
6	NDC	NDC	NDC		NDC	NDC
7	NDC	NDC	NDC		NDC	NDC

No Data Collected

MACTEC
Engineering & Consulting, Inc.

SITE INSPECTION REPORT
Area 14 East - Treatment System
Honeywell Industrial Complex

Personnel: Palmer Andresen

Date: 3/24/2010
Arrival Time: 7:30
Departure Time: NDC
Weather: Clear 42°

Reason for Visit:
Specify: Week 5 End of Month

Treatment System Area

Compressor Status: off line

Compressor Temperature (F): 0
Hour Meter Reading: 0

Line Pressure (psi): 0
Line Temperature (F): 0

Total Flow (scfm): 0
In-line Filters : OK
Knock Out Tank Level: 1/8

Gallons Drained 0

Blower Status: On line

Blower Temperature (F): 207
Total Flow (scfm): 250
Line Vacuum (in water): 68"

Carbon Vapor Pacs: SV157 Lead
SV69 intermedate

After Heat Exchanger
Line Pressure (psi): 2
Line Temperature (F): 65°
Between Vapor Pacs
Line Pressure (psi): 2
Line Temperature (F): N/A

Plant 1 Treatment Area

Observations: Collected (2) air/gas samples

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	NDC	NDC	NDC		NDC	NDC
2	NDC	NDC	NDC		NDC	NDC
3	NDC	NDC	NDC		NDC	NDC
4	NDC	NDC	NDC		NDC	NDC
5	NDC	NDC	NDC		NDC	NDC
6	NDC	NDC	NDC		NDC	NDC
7	NDC	NDC	NDC		NDC	NDC

No Data Collected

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SITE INSPECTION REPORT
Area 14 East - Treatment System
Honeywell Industrial Complex

Personnel: Ron Mead

Date: 4/28/2010
Arrival Time: 7:00
Departure Time: NDC
Weather: Sunny 45°

Reason for Visit:
Specify: End of Month

Treatment System Area

Compressor Status: off line

Compressor Temperature (F): 0
Hour Meter Reading: 0

Line Pressure (psi): 0
Line Temperature (F): 0

Total Flow (scfm): 0
In-line Filters : OK
Knock Out Tank Level: 0

Gallons Drained 0

Blower Status: On line

Blower Temperature (F): 200
Total Flow (scfm): 250
Line Vacuum (in water): 68"

Carbon Vapor Pacs: SV157 Lead
SV69 intermedate

After Heat Exchanger
Line Pressure (psi): 2
Line Temperature (F): 58°
Between Vapor Pacs
Line Pressure (psi): 2
Line Temperature (F): N/A

Plant 1 Treatment Area

Observations: Collected (2) air/gas samples

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	NDC	NDC	NDC		NDC	NDC
2	NDC	NDC	NDC		NDC	NDC
3	NDC	NDC	NDC		NDC	NDC
4	NDC	NDC	NDC		NDC	NDC
5	NDC	NDC	NDC		NDC	NDC
6	NDC	NDC	NDC		NDC	NDC
7	NDC	NDC	NDC		NDC	NDC

No Data Collected

MACTEC
Engineering & Consulting, Inc.

SITE INSPECTION REPORT
Area 14 East - Treatment System
Honeywell Industrial Complex

Personnel: Ron Mead

Date: 5/27/2010
Arrival Time: 8:55
Departure Time: NDC
Weather: Sunny 74°

Reason for Visit:
Specify: End of Month

Treatment System Area

Compressor Status: off line

Compressor Temperature (F): 0
Hour Meter Reading: 0

Line Pressure (psi): 0
Line Temperature (F): 0

Total Flow (scfm): 0
In-line Filters : OK
Knock Out Tank Level: 0

Gallons Drained 0

Blower Status: On line

Blower Temperature (F): 240
Total Flow (scfm): 250
Line Vacuum (in water): 60

Carbon Vapor Pacs: SV157 Lead
SV69 intermedate

After Heat Exchanger 0
Line Pressure (psi): 2
Line Temperature (F): 80°
Between Vapor Pacs
Line Pressure (psi): 2
Line Temperature (F): N/A

Plant 1 Treatment Area

Observations: collected (2) air/gas samples

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	NDC	NDC	NDC		NDC	NDC
2	NDC	NDC	NDC		NDC	NDC
3	NDC	NDC	NDC		NDC	NDC
4	NDC	NDC	NDC		NDC	NDC
5	NDC	NDC	NDC		NDC	NDC
6	NDC	NDC	NDC		NDC	NDC
7	NDC	NDC	NDC		NDC	NDC

No Data Collected

MACTEC
Engineering & Consulting, Inc.

SITE INSPECTION REPORT
Area 14 East - Treatment System
Honeywell Industrial Complex

Personnel: Palmer Andresen

Date: 6/30/2010
Arrival Time: 7:20
Departure Time: NDC
Weather: Clear 49°

Reason for Visit:
Specify: week 5

Treatment System Area

Compressor Status: off line
Compressor Temperature (F): 0
Hour Meter Reading: 0
Line Pressure (psi): 0
Line Temperature (F): 0

Total Flow (scfm): 0
In-line Filters : OK
Knock Out Tank Level: 0
Gallons Drained 0

Blower Status: off line
Blower Temperature (F): 0
Total Flow (scfm): 0
Line Vacuum (in water): 0

Carbon Vapor Pacs: SV157 Lead
SV69 intermedate
After Heat Exchanger 0
Line Pressure (psi): 0
Line Temperature (F): 0
Between Vapor Pacs
Line Pressure (psi): 0
Line Temperature (F): N/A

Plant 1 Treatment Area

Observations: off line due to heat exchanger not working due to bad motor

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	NDC	NDC	NDC		NDC	NDC
2	NDC	NDC	NDC		NDC	NDC
3	NDC	NDC	NDC		NDC	NDC
4	NDC	NDC	NDC		NDC	NDC
5	NDC	NDC	NDC		NDC	NDC
6	NDC	NDC	NDC		NDC	NDC
7	NDC	NDC	NDC		NDC	NDC

No Data Collected

MACTEC
Engineering & Consulting, Inc.

SITE INSPECTION REPORT
Area 14 East - Treatment System
Honeywell Industrial Complex

Personnel: Palmer Andresen

Date: 7/28/2010
Arrival Time: 9:10
Departure Time: NDC
Weather: Clear

Reason for Visit:
Specify: Week 4 End of Month

Treatment System Area

Compressor Status: off line

Compressor Temperature (F): 0
Hour Meter Reading: 0

Line Pressure (psi): 0
Line Temperature (F): 0

Total Flow (scfm): 0
In-line Filters : OK
Knock Out Tank Level: 0

Gallons Drained 0

Blower Status: On line

Blower Temperature (F): 132°F
Total Flow (scfm): 250
Line Vacuum (in water): 80"

Carbon Vapor Pacs: SV157 Lead
SV69 intermedate

After Heat Exchanger
Line Pressure (psi): 2
Line Temperature (F): 80°F
Between Vapor Pacs
Line Pressure (psi): 2
Line Temperature (F): N/A

Plant 1 Treatment Area

Observations: Collected (2) air/gas samples

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	NDC	NDC	NDC		NDC	NDC
2	NDC	NDC	NDC		NDC	NDC
3	NDC	NDC	NDC		NDC	NDC
4	NDC	NDC	NDC		NDC	NDC
5	NDC	NDC	NDC		NDC	NDC
6	NDC	NDC	NDC		NDC	NDC
7	NDC	NDC	NDC		NDC	NDC

No Data Collected

MACTEC
Engineering & Consulting, Inc.

APPENDIX B

ANALYTICAL REPORTS – AIR SAMPLES

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend - East

Lot #: H0B250409

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

March 3, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0B250409

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LEAD EAST 02/24/10 07:55 001				
Chloroform	0.0018 J	0.0036	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	0.00082 J	0.0036	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.018	0.0036	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.00092 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	0.0016 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.0030	0.0091	ppm(v/v)	EPA-2 TO-14A
	Qualifiers: J,B			
Toluene	0.0084	0.0036	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0024 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.39	0.0036	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	0.0063	0.0036	ppm(v/v)	EPA-2 TO-14A
o-Xylene	0.0019 J	0.0036	ppm(v/v)	EPA-2 TO-14A
INTERMEDIATE EAST 02/24/10 08:01 002				
Methylene chloride	0.0022	0.0091	ppm(v/v)	EPA-2 TO-14A
	Qualifiers: J,B			
Toluene	0.0052	0.0036	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0B250409

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0B250409

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LV266	001	LEAD EAST	02/24/10	07:55
LV267	002	INTERMEDIATE EAST	02/24/10	08:01

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H0B250409

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present..

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

The samples were received on 02/25/10 in Tedlar bags and analyzed within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: LEAD EAST

GC/MS Volatiles

Lot-Sample #...: H0B250409-001 Work Order #...: LV2661AA Matrix.....: AIR
Date Sampled...: 02/24/10 07:55 Date Received..: 02/25/10
Prep Date.....: 02/26/10 Analysis Date..: 02/26/10
Prep Batch #...: 0060124
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	**0.0018 J**	**0.0036**	**ppm(v/v)**
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	**0.00082 J**	**0.0036**	**ppm(v/v)**
cis-1,2-Dichloroethene	**0.018**	**0.0036**	**ppm(v/v)**
trans-1,2-Dichloroethene	**0.00092 J**	**0.0036**	**ppm(v/v)**
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	**0.0016 J**	**0.0036**	**ppm(v/v)**
Methylene chloride	**0.0030 J,B**	**0.0091**	**ppm(v/v)**
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	**0.0084**	**0.0036**	**ppm(v/v)**
1,1,1-Trichloroethane	**0.0024 J**	**0.0036**	**ppm(v/v)**
Trichloroethene	**0.39**	**0.0036**	**ppm(v/v)**
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	**0.0063**	**0.0036**	**ppm(v/v)**
o-Xylene	**0.0019 J**	**0.0036**	**ppm(v/v)**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

MACTEC Engineering and Consulting Inc

Client Sample ID: INTERMEDIATE EAST

GC/MS Volatiles

Lot-Sample #...: H0B250409-002 Work Order #...: LV2671AA Matrix.....: AIR
Date Sampled...: 02/24/10 08:01 Date Received..: 02/25/10
Prep Date.....: 02/26/10 Analysis Date..: 02/26/10
Prep Batch #...: 0060124
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	ND	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	ND	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	**0.0022 J,B**	**0.0091**	**ppm(v/v)**
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	**0.0052**	**0.0036**	**ppm(v/v)**
1,1,1-Trichloroethane	ND	0.0036	ppm(v/v)
Trichloroethene	ND	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0036	ppm(v/v)
o-Xylene	ND	0.0036	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0B250409 Work Order #...: LV6HH1AA Matrix.....: AIR
MB Lot-Sample #: H0C010000-124

Prep Date.....: 02/26/10
Analysis Date..: 02/26/10 Prep Batch #...: 0060124
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	**0.000047 J**	**0.00050**	**ppm(v/v)**	**EPA-2 TO-14A**
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0B250409 Work Order #...: LV6HH1AC Matrix.....: AIR
LCS Lot-Sample#: H0C010000-124
Prep Date.....: 02/26/10 Analysis Date..: 02/26/10
Prep Batch #...: 0060124
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	103	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	107	(70 - 130)	EPA-2 TO-14A
Chloroethane	106	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	106	(70 - 130)	EPA-2 TO-14A
Methylene chloride	107	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	105	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	101	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	100	(70 - 130)	EPA-2 TO-14A
Chloroform	96	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	97	(70 - 130)	EPA-2 TO-14A
Benzene	91	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	95	(70 - 130)	EPA-2 TO-14A
Trichloroethene	106	(70 - 130)	EPA-2 TO-14A
Toluene	86	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	87	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	84	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	85	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	83	(70 - 130)	EPA-2 TO-14A
o-Xylene	79	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: H0B250409 Work Order #...: LV6HH1AC Matrix.....: AIR
LCS Lot-Sample#: H0C010000-124
Prep Date.....: 02/26/10 Analysis Date..: 02/26/10
Prep Batch #...: 0060124
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	0.0025	0.0026	ppm(v/v)	103	EPA-2 TO-14A
Vinyl chloride	0.0025	0.0027	ppm(v/v)	107	EPA-2 TO-14A
Chloroethane	0.0025	0.0026	ppm(v/v)	106	EPA-2 TO-14A
1,1-Dichloroethene	0.0025	0.0027	ppm(v/v)	106	EPA-2 TO-14A
Methylene chloride	0.0025	0.0027	ppm(v/v)	107	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0025	0.0026	ppm(v/v)	105	EPA-2 TO-14A
1,1-Dichloroethane	0.0025	0.0025	ppm(v/v)	101	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.0025	0.0025	ppm(v/v)	100	EPA-2 TO-14A
Chloroform	0.0025	0.0024	ppm(v/v)	96	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0025	0.0024	ppm(v/v)	97	EPA-2 TO-14A
Benzene	0.0025	0.0023	ppm(v/v)	91	EPA-2 TO-14A
Carbon tetrachloride	0.0025	0.0024	ppm(v/v)	95	EPA-2 TO-14A
Trichloroethene	0.0025	0.0027	ppm(v/v)	106	EPA-2 TO-14A
Toluene	0.0025	0.0021	ppm(v/v)	86	EPA-2 TO-14A
Tetrachloroethene	0.0025	0.0022	ppm(v/v)	87	EPA-2 TO-14A
Chlorobenzene	0.0025	0.0021	ppm(v/v)	84	EPA-2 TO-14A
Ethylbenzene	0.0025	0.0021	ppm(v/v)	85	EPA-2 TO-14A
m-Xylene & p-Xylene	0.0050	0.0042	ppm(v/v)	83	EPA-2 TO-14A
o-Xylene	0.0025	0.0020	ppm(v/v)	79	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

140B250409

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 2/24/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie Mckinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below ____			
(231)922-9055 FAX	☐ 2 weeks			SDG No.
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	2/24/10	9:50	Air		1	X	
Intermediate West	↓	9:56	Air		1	X	
Lead East		7:55	Air		1	X	
Intermediate East		8:01	Air		1	X	
							NO CUSTODY SEALS
							RECEIVED AT AMBIENT
							TEMP BKD 2-25-10
							1 BOX - VRSH
							124387801516681 42

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification
☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For ____ Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Peerless Midwest	2/24/10 2:05	[signature]	Peerless-Midwest	2/24/10 2:20 PM
[signature]	Peerless-Midwest	2/24/10	[signature]	TA	2-25-10 10:25

11

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: HDB251409

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓	✓		☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	NA
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)			✓	☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?			✓	☐ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	✓			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?	✓			☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?		✓		☐ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ 15a Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ 15a Incomplete information	
18. Is the client and project name/# identified?	✓			☐ 15a Incomplete information	
19. Was the sampler identified on the COC?		✓			

Quote #: TSS25 PM Instructions: NA

Sample Receiving Associate: [signature] Date: 2-25-10

QA026R21.doc, 090409

Original Chain of Custody Documentation

STL Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

140B250409

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 2/24/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie Mckinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below			
(231)922-9055 FAX	☐ 2 weeks			SDG No.
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	2/24/10	9:50	Air		1	X	
Intermediate West	↓	9:56	Air		1	X	
Lead East		7:55	Air		1	X	
Intermediate East	↓	8:01	Air		1	X	
							NO CUSTODY SEALS
							RECEIVED AT AMBIENT
							TEMP AND 2-25-10
							1 BOX · UPS#
							1Z43887801516 68142

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____________

Possible Hazard Identification
☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ________ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Peerless Midwest	2/24/10 2:05	[signature]	Peerless-Midwest	2/24/10 2:20 PM
[signature]	Peerless-Midwest	2/24/10	[signature]	TA	2-25-10 10:25

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H0D010405

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

April 6, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0D010405

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LEAD EAST 03/31/10 07:58 001				
Benzene	0.0010 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Chloroform	0.0021 J	0.0036	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	0.0011 J	0.0036	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.018	0.0036	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.00094 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.0033 J	0.0091	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	0.00076 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Toluene	0.019	0.0036	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0032 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.46	0.0036	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	0.0036	0.0036	ppm(v/v)	EPA-2 TO-14A
o-Xylene	0.0012 J	0.0036	ppm(v/v)	EPA-2 TO-14A
INTERMEDIATE EAST 03/31/10 08:10 002				
Methylene chloride	0.0035 J	0.0091	ppm(v/v)	EPA-2 TO-14A
Toluene	0.010	0.0036	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	0.0041	0.0036	ppm(v/v)	EPA-2 TO-14A
o-Xylene	0.0014 J	0.0036	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0D010405

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0D010405

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LXD71	001	LEAD EAST	03/31/10	07:58
LXD72	002	INTERMEDIATE EAST	03/31/10	08:10

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H0D010405

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

The samples were received on 04/01/10 in Tedlar bags and analyzed within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: LEAD EAST

GC/MS Volatiles

Lot-Sample #...: H0D010405-001 Work Order #...: LXD711AA Matrix.....: AIR
Date Sampled...: 03/31/10 07:58 Date Received..: 04/01/10
Prep Date.....: 04/01/10 Analysis Date..: 04/02/10
Prep Batch #...: 0091291
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	0.0010 J	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	0.0021 J	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	0.0011 J	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	0.018	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	0.00094 J	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	0.0033 J	0.0091	ppm(v/v)
Tetrachloroethene	0.00076 J	0.0036	ppm(v/v)
Toluene	0.019	0.0036	ppm(v/v)
1,1,1-Trichloroethane	0.0032 J	0.0036	ppm(v/v)
Trichloroethene	0.46	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	0.0036	0.0036	ppm(v/v)
o-Xylene	0.0012 J	0.0036	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

MACTEC Engineering and Consulting Inc

Client Sample ID: INTERMEDIATE EAST

GC/MS Volatiles

Lot-Sample #...: H0D010405-002 Work Order #...: LXD721AA Matrix.....: AIR
Date Sampled...: 03/31/10 08:10 Date Received..: 04/01/10
Prep Date.....: 04/01/10 Analysis Date..: 04/02/10
Prep Batch #...: 0091291
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	ND	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	ND	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	**0.0035 J**	**0.0091**	**ppm(v/v)**
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	**0.010**	**0.0036**	**ppm(v/v)**
1,1,1-Trichloroethane	ND	0.0036	ppm(v/v)
Trichloroethene	ND	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	**0.0041**	**0.0036**	**ppm(v/v)**
o-Xylene	**0.0014 J**	**0.0036**	**ppm(v/v)**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0D010405 Work Order #...: LXE5J1AA Matrix.....: AIR
MB Lot-Sample #: H0D010000-291

Prep Date.....: 04/01/10
Analysis Date..: 04/01/10 Prep Batch #...: 0091291
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0D010405 Work Order #...: LXE5J1AC Matrix.....: AIR
LCS Lot-Sample#: H0D010000-291
Prep Date.....: 04/01/10 Analysis Date..: 04/01/10
Prep Batch #...: 0091291
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	97	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	97	(70 - 130)	EPA-2 TO-14A
Chloroethane	99	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	86	(70 - 130)	EPA-2 TO-14A
Methylene chloride	83	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	101	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	94	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	93	(70 - 130)	EPA-2 TO-14A
Chloroform	94	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	96	(70 - 130)	EPA-2 TO-14A
Benzene	89	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	94	(70 - 130)	EPA-2 TO-14A
Trichloroethene	87	(70 - 130)	EPA-2 TO-14A
Toluene	98	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	91	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	96	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	101	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	101	(70 - 130)	EPA-2 TO-14A
o-Xylene	100	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: H0D010405 Work Order #...: LXE5J1AC Matrix.....: AIR
LCS Lot-Sample#: H0D010000-291
Prep Date.....: 04/01/10 Analysis Date..: 04/01/10
Prep Batch #...: 0091291
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	0.010	0.0097	ppm(v/v)	97	EPA-2 TO-14A
Vinyl chloride	0.010	0.0097	ppm(v/v)	97	EPA-2 TO-14A
Chloroethane	0.010	0.0099	ppm(v/v)	99	EPA-2 TO-14A
1,1-Dichloroethene	0.010	0.0086	ppm(v/v)	86	EPA-2 TO-14A
Methylene chloride	0.010	0.0083	ppm(v/v)	83	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.010	0.010	ppm(v/v)	101	EPA-2 TO-14A
1,1-Dichloroethane	0.010	0.0094	ppm(v/v)	94	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.010	0.0093	ppm(v/v)	93	EPA-2 TO-14A
Chloroform	0.010	0.0094	ppm(v/v)	94	EPA-2 TO-14A
1,1,1-Trichloroethane	0.010	0.0096	ppm(v/v)	96	EPA-2 TO-14A
Benzene	0.010	0.0089	ppm(v/v)	89	EPA-2 TO-14A
Carbon tetrachloride	0.010	0.0094	ppm(v/v)	94	EPA-2 TO-14A
Trichloroethene	0.010	0.0087	ppm(v/v)	87	EPA-2 TO-14A
Toluene	0.010	0.0098	ppm(v/v)	98	EPA-2 TO-14A
Tetrachloroethene	0.010	0.0091	ppm(v/v)	91	EPA-2 TO-14A
Chlorobenzene	0.010	0.0096	ppm(v/v)	96	EPA-2 TO-14A
Ethylbenzene	0.010	0.010	ppm(v/v)	101	EPA-2 TO-14A
m-Xylene & p-Xylene	0.020	0.020	ppm(v/v)	101	EPA-2 TO-14A
o-Xylene	0.010	0.010	ppm(v/v)	100	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HOD 0104015

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 3-31-10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie McKinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below _____			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4778250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N)	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	3/31/10	8:25A	Air		1		X	
Intermediate West	3/31/10	8:30A	Air		1		X	
Lead East	3/31/10	7:50A	Air		1		X	
Intermediate East	3/31/10	8:10A	Air		1		X	
								NO CUSTODY SEALS
								RECEIVED AT AMBIENT
								TEMP NOTED 4-1-10.
								1 BOX UPS#
								1Z 438 780 15 3549 084

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company: Peerless Midwest	Date/Time: 3/31/10 13:05	Received by:	Company: Peerless-Midwest	Date/Time: 3/31/10 13:05
Relinquished by:	Company: Peerless-Midwest	Date/Time: 3/31/10 13:07	Received by:	Company: TA	Date/Time: 4-1-10 10:15
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: HDD0164D5

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)		✓		☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	NA
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668,.1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)			✓	☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		✓		☑ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	✓			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?	✓		✓	☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?			✓	☐ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ 15a Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ 15a Incomplete information	
18. Is the client and project name/# identified?	✓			☐ 15a Incomplete information	
19. Was the sampler identified on the COC?			✓		

Quote #: 75525 PM Instructions: NA

Sample Receiving Associate: [signature] Date: 4-1-10

QA026R21.doc, 090409

Original Chain of Custody Documentation

STL Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HOD 0104015

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 3-31-10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie McKinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N)	Chlorinated VOCs: TO-14	Sample Specific Notes:
Lead West	3/31/10	8:25A	Air		1		X	
Intermediate West	3/31/10	8:30A	Air		1		X	
Lead East	3/31/10	7:58A	Air		1		X	
Intermediate East	3/31/10	8:10A	Air		1		X	NO CUSTODY SEALS RECEIVED AT AMBIENT TEMP ASD 4-1-10 1 BOX UPS# 1Z 438 780 15 5549 084

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Palmer Andersen	Peerless Midwest	3/31/10 13:06		Peerless-Midwest	3/31/10 13:05
	Peerless-Midwest	3/31/10 17:27		TA	4-1-10 10:15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H0D290414

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

May 6, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0D290414

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LEAD EAST 04/28/10 07:25 001				
Chloroform	0.0015 J	0.0036	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	0.00061 J	0.0036	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.015	0.0036	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0011 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.0024 J	0.0091	ppm(v/v)	EPA-2 TO-14A
Toluene	0.0011 J	0.0036	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0028 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.39	0.0036	ppm(v/v)	EPA-2 TO-14A
INTERMEDIATE EAST 04/28/10 07:25 002				
Methylene chloride	0.0018 J	0.0091	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0D290414

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0D290414

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L0PFE	001	LEAD EAST	04/28/10	07:25
L0PFF	002	INTERMEDIATE EAST	04/28/10	07:25

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H0D290414

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

The samples were received on 4/29/10 in Tedlar bags and analyzed within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: LEAD EAST

GC/MS Volatiles

Lot-Sample #...: H0D290414-001 Work Order #...: L0PFE1AA Matrix.....: AIR
Date Sampled...: 04/28/10 07:25 Date Received..: 04/29/10
Prep Date.....: 04/29/10 Analysis Date..: 04/29/10
Prep Batch #...: 0120118
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	0.0015 J	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	0.00061 J	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	0.015	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	0.0011 J	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	0.0024 J	0.0091	ppm(v/v)
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	0.0011 J	0.0036	ppm(v/v)
1,1,1-Trichloroethane	0.0028 J	0.0036	ppm(v/v)
Trichloroethene	0.39	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0036	ppm(v/v)
o-Xylene	ND	0.0036	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

MACTEC Engineering and Consulting Inc

Client Sample ID: INTERMEDIATE EAST

GC/MS Volatiles

Lot-Sample #...: H0D290414-002 Work Order #...: L0PFF1AA Matrix.....: AIR
Date Sampled...: 04/28/10 07:25 Date Received..: 04/29/10
Prep Date.....: 04/29/10 Analysis Date..: 04/29/10
Prep Batch #...: 0120118
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	ND	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	ND	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	**0.0018 J**	**0.0091**	**ppm(v/v)**
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	ND	0.0036	ppm(v/v)
1,1,1-Trichloroethane	ND	0.0036	ppm(v/v)
Trichloroethene	ND	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0036	ppm(v/v)
o-Xylene	ND	0.0036	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	94	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0D290414 Work Order #...: L0RLW1AA Matrix.....: AIR
MB Lot-Sample #: H0D300000-118

Prep Date.....: 04/29/10
Analysis Date..: 04/29/10 Prep Batch #...: 0120118
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0D290414 Work Order #...: L0RLW1AC Matrix.....: AIR
LCS Lot-Sample#: H0D300000-118
Prep Date.....: 04/29/10 Analysis Date..: 04/29/10
Prep Batch #...: 0120118
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	103	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	99	(70 - 130)	EPA-2 TO-14A
Chloroethane	93	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	100	(70 - 130)	EPA-2 TO-14A
Methylene chloride	88	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	98	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	95	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	95	(70 - 130)	EPA-2 TO-14A
Chloroform	95	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	102	(70 - 130)	EPA-2 TO-14A
Benzene	94	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	86	(70 - 130)	EPA-2 TO-14A
Trichloroethene	92	(70 - 130)	EPA-2 TO-14A
Toluene	93	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	95	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	99	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	103	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	104	(70 - 130)	EPA-2 TO-14A
o-Xylene	102	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: H0D290414 Work Order #...: L0RLW1AC Matrix.....: AIR
LCS Lot-Sample#: H0D300000-118
Prep Date.....: 04/29/10 Analysis Date..: 04/29/10
Prep Batch #...: 0120118
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	0.010	0.010	ppm(v/v)	103	EPA-2 TO-14A
Vinyl chloride	0.010	0.0099	ppm(v/v)	99	EPA-2 TO-14A
Chloroethane	0.010	0.0093	ppm(v/v)	93	EPA-2 TO-14A
1,1-Dichloroethene	0.010	0.010	ppm(v/v)	100	EPA-2 TO-14A
Methylene chloride	0.010	0.0088	ppm(v/v)	88	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.010	0.0098	ppm(v/v)	98	EPA-2 TO-14A
1,1-Dichloroethane	0.010	0.0095	ppm(v/v)	95	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.010	0.0095	ppm(v/v)	95	EPA-2 TO-14A
Chloroform	0.010	0.0095	ppm(v/v)	95	EPA-2 TO-14A
1,1,1-Trichloroethane	0.010	0.010	ppm(v/v)	102	EPA-2 TO-14A
Benzene	0.010	0.0094	ppm(v/v)	94	EPA-2 TO-14A
Carbon tetrachloride	0.010	0.0086	ppm(v/v)	86	EPA-2 TO-14A
Trichloroethene	0.010	0.0092	ppm(v/v)	92	EPA-2 TO-14A
Toluene	0.010	0.0093	ppm(v/v)	93	EPA-2 TO-14A
Tetrachloroethene	0.010	0.0095	ppm(v/v)	95	EPA-2 TO-14A
Chlorobenzene	0.010	0.0099	ppm(v/v)	99	EPA-2 TO-14A
Ethylbenzene	0.010	0.010	ppm(v/v)	103	EPA-2 TO-14A
m-Xylene & p-Xylene	0.020	0.021	ppm(v/v)	104	EPA-2 TO-14A
o-Xylene	0.010	0.010	ppm(v/v)	102	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HDD290414

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 4/28/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie McKinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below _____			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779260 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	4/28/10	7:40	Air		1	X	
Intermediate West		7:40	Air		1	X	
Lead East		7:25	Air		1	X	BOX REC'D AMBIENT
Intermediate East	↓	7:25	Air		1	X	UPS # 1Z 438 878 01 5176 5920
							NO CUSTODY SEAL. TS 4/29/10

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company: Peerless Midwest	Date/Time: 4/28/10 12:04PM	Received by:	Company: Peerless-Midwest	Date/Time: 4/28/10 12:04 PM
Relinquished by:	Company: Peerless-Midwest	Date/Time: 4/28/10 12:06	Received by:	Company: TA KNOX.	Date/Time: 4/29/10 10:00
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: H0D2904|4

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	YA
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)			✓	☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		✓		☒ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	✓			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?	✓		✓	☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?	✓		✓	☒ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ 15a Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ 15a Incomplete information	
18. Is the client and project name/# identified?	✓			☐ 15a Incomplete information	
19. Was the sampler identified on the COC?		✓			

Quote #: 75525 PM Instructions: NA

Sample Receiving Associate: [signature] Date: 4/29/10

QA026R21.doc, 090409

Original Chain of Custody Documentation

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HDD290414

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 4/28/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie Mckinney	Carrier:	
41 Hughes Drive	**Analysis Turnaround Time**			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			SDG No.
(231)922-9050 Phone	TAT if different from Below			
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	4/28/10	7:10	Air		1	X	
Intermediate West		7:40	Air		1	X	
Lead East		7:05	Air		1	X	BOX REC'D AMBIENT
Intermediate East	↓	7:25	Air		1	X	UPS TR 1Z 438 878 01 5176 5920
							NO CUSTODY SEAL TS 4/29/10

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Peerless Midwest	4/28/10 12:04PM		Peerless-Midwest	4/28/10 12:04 PM
Relinquished by:	Company: Peerless-Midwest	Date/Time: 4/28/10 1206PM	Received by:	Company: TA KNOX.	Date/Time: 4/29/10 10:00
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H0E280409

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

June 9, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0E280409

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LEAD EAST 05/27/10 10:55 001				
cis-1,2-Dichloroethene	0.016	0.012	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.097	0.029	ppm(v/v)	EPA-2 TO-14A
Toluene	0.063	0.012	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0034 J	0.012	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.52	0.012	ppm(v/v)	EPA-2 TO-14A
INTERMEDIATE EAST 05/27/10 10:58 002				
Methylene chloride	0.16	0.010	ppm(v/v)	EPA-2 TO-14A
Toluene	0.075	0.0040	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0E280409

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0E280409

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L17FW	001	LEAD EAST	05/27/10	10:55
L17F0	002	INTERMEDIATE EAST	05/27/10	10:58

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
HOE280409

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

The samples were received on 5/28/10 in Tedlar bags and transferred into Summa Canisters within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: LEAD EAST

GC/MS Volatiles

Lot-Sample #...: H0E280409-001 Work Order #...: L17FW1AA Matrix.....: AIR
Date Sampled...: 05/27/10 10:55 Date Received..: 05/28/10
Prep Date.....: 06/01/10 Analysis Date..: 06/01/10
Prep Batch #...: 0153108
Dilution Factor: 58.5 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.012	ppm(v/v)
Carbon tetrachloride	ND	0.012	ppm(v/v)
Chlorobenzene	ND	0.012	ppm(v/v)
Chloroethane	ND	0.012	ppm(v/v)
Chloroform	ND	0.012	ppm(v/v)
Chloromethane	ND	0.029	ppm(v/v)
1,1-Dichloroethane	ND	0.012	ppm(v/v)
cis-1,2-Dichloroethene	0.016	0.012	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.012	ppm(v/v)
1,1-Dichloroethene	ND	0.012	ppm(v/v)
Ethylbenzene	ND	0.012	ppm(v/v)
Methylene chloride	0.097	0.029	ppm(v/v)
Tetrachloroethene	ND	0.012	ppm(v/v)
Toluene	0.063	0.012	ppm(v/v)
1,1,1-Trichloroethane	0.0034 J	0.012	ppm(v/v)
Trichloroethene	0.52	0.012	ppm(v/v)
Vinyl chloride	ND	0.012	ppm(v/v)
m-Xylene & p-Xylene	ND	0.012	ppm(v/v)
o-Xylene	ND	0.012	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

MACTEC Engineering and Consulting Inc

Client Sample ID: INTERMEDIATE EAST

GC/MS Volatiles

Lot-Sample #...: H0E280409-002 Work Order #...: L17F01AA Matrix.....: AIR
Date Sampled...: 05/27/10 10:58 Date Received..: 05/28/10
Prep Date.....: 06/01/10 Analysis Date..: 06/01/10
Prep Batch #...: 0153108
Dilution Factor: 20 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0040	ppm(v/v)
Carbon tetrachloride	ND	0.0040	ppm(v/v)
Chlorobenzene	ND	0.0040	ppm(v/v)
Chloroethane	ND	0.0040	ppm(v/v)
Chloroform	ND	0.0040	ppm(v/v)
Chloromethane	ND	0.010	ppm(v/v)
1,1-Dichloroethane	ND	0.0040	ppm(v/v)
cis-1,2-Dichloroethene	ND	0.0040	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.0040	ppm(v/v)
1,1-Dichloroethene	ND	0.0040	ppm(v/v)
Ethylbenzene	ND	0.0040	ppm(v/v)
Methylene chloride	**0.16**	**0.010**	**ppm(v/v)**
Tetrachloroethene	ND	0.0040	ppm(v/v)
Toluene	**0.075**	**0.0040**	**ppm(v/v)**
1,1,1-Trichloroethane	ND	0.0040	ppm(v/v)
Trichloroethene	ND	0.0040	ppm(v/v)
Vinyl chloride	ND	0.0040	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0040	ppm(v/v)
o-Xylene	ND	0.0040	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(60 - 140)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0E280409 Work Order #...: L2CFT1AA Matrix.....: AIR
MB Lot-Sample #: H0F020000-108

Prep Date.....: 06/01/10
Analysis Date..: 06/01/10 Prep Batch #...: 0153108
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	92	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0E280409 Work Order #...: L2CFT1AC Matrix.....: AIR
LCS Lot-Sample#: H0F020000-108
Prep Date.....: 06/01/10 Analysis Date..: 06/01/10
Prep Batch #...: 0153108
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	99	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	94	(70 - 130)	EPA-2 TO-14A
Chloroethane	89	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	85	(70 - 130)	EPA-2 TO-14A
Methylene chloride	75	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	100	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	87	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	86	(70 - 130)	EPA-2 TO-14A
Chloroform	87	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	108	(70 - 130)	EPA-2 TO-14A
Benzene	79	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	117	(70 - 130)	EPA-2 TO-14A
Trichloroethene	87	(70 - 130)	EPA-2 TO-14A
Toluene	84	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	99	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	96	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	96	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	99	(70 - 130)	EPA-2 TO-14A
o-Xylene	98	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: H0E280409 Work Order #...: L2CFT1AC Matrix.....: AIR
LCS Lot-Sample#: H0F020000-108
Prep Date.....: 06/01/10 Analysis Date..: 06/01/10
Prep Batch #...: 0153108
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	0.010	0.0099	ppm(v/v)	99	EPA-2 TO-14A
Vinyl chloride	0.010	0.0094	ppm(v/v)	94	EPA-2 TO-14A
Chloroethane	0.010	0.0089	ppm(v/v)	89	EPA-2 TO-14A
1,1-Dichloroethene	0.010	0.0085	ppm(v/v)	85	EPA-2 TO-14A
Methylene chloride	0.010	0.0075	ppm(v/v)	75	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.010	0.010	ppm(v/v)	100	EPA-2 TO-14A
1,1-Dichloroethane	0.010	0.0087	ppm(v/v)	87	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.010	0.0086	ppm(v/v)	86	EPA-2 TO-14A
Chloroform	0.010	0.0087	ppm(v/v)	87	EPA-2 TO-14A
1,1,1-Trichloroethane	0.010	0.011	ppm(v/v)	108	EPA-2 TO-14A
Benzene	0.010	0.0079	ppm(v/v)	79	EPA-2 TO-14A
Carbon tetrachloride	0.010	0.012	ppm(v/v)	117	EPA-2 TO-14A
Trichloroethene	0.010	0.0087	ppm(v/v)	87	EPA-2 TO-14A
Toluene	0.010	0.0084	ppm(v/v)	84	EPA-2 TO-14A
Tetrachloroethene	0.010	0.0099	ppm(v/v)	99	EPA-2 TO-14A
Chlorobenzene	0.010	0.0096	ppm(v/v)	96	EPA-2 TO-14A
Ethylbenzene	0.010	0.0096	ppm(v/v)	96	EPA-2 TO-14A
m-Xylene & p-Xylene	0.020	0.020	ppm(v/v)	99	EPA-2 TO-14A
o-Xylene	0.010	0.0098	ppm(v/v)	98	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HOE-280409

Chain of Custody Record

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 5/27/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie McKinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name: Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4770250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	5/27/2010	9:23 AM	Air		1	X	
Intermediate West	5/27/2010	9:25 AM	Air		1	X	
Lead East	5/27/2010	10:55 AM	Air		1	X	
Intermediate East	5/27/2010	10:58 AM	Air		1	X	

1 BOX RELIO AMBIENT
UPS # 1Z 4138 8728 01 5099 8663
NO CUSTODY SEAL
TS 5/28/10

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Peerless Midwest	5/27/10 2:06		Peerless-Midwest	5/27/10 2:06 PM
	Peerless-Midwest	5/27/10 2:42		TA KNOX	5/28/10 10:00

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: 410-28049-9

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	NA
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)			✓	☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		✓		☐ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	✓			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?			✓	☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?			✓	☐ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ 15a Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ 15a Incomplete information	
18. Is the client and project name/# identified?	✓			☐ 15a Incomplete information	
19. Was the sampler identified on the COC?		✓			

Quote #: 76525 PM Instructions: NA

Sample Receiving Associate: Date: 5/26/10

QA026R21.doc, 090409

Test America - Knoxville ---- Air Canister Dilution Log

Lot Number: *H0E280409*

Initial Can Pressure							Subsequent Dilutions											
Analyst/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can #	Pres. upon receipt (-in or + psig)	Adj. Initial Pres. (-in or + psig)	Analyst/Date	I / S	Pbarr (in)	Initial Pres. Pi (in)	Final Pres. Pf (psig)	First InCan Final Pres. Pf (psig)	Second In-can Final Pres. Pf (psig)	Third InCan Final Pres. Pf (psig)	Serial Dilution Can #	Vol (mL)	Final Pres. Pf (psig)	Comments
DPF 5-29-10	1116	28.87	L17FW	12481	-23.9	+0.1												8665
"	"	"	L17F0	04730	-24.6	+0.1												8666

Original Chain of Custody Documentation

STL Knoxville
5815 Middlebrook Pike

H0E280409

Chain of Custody Record

SEVERN TRENT **STL**

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 5/27/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie Mckinney	Carrier:	24000609-0
41 Hughes Drive	Analysis Turnaround Time			
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(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

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1 BOX REC'D AMBIENT
UPS H1Z 438 8780 15099 8663
NO CUSTODY SEAL
TS 5/28/10

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☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

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Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Peerless Midwest	5/27/10 2:06	[signature]	Peerless-Midwest	5/27/10 2:06 PM
[signature]	Peerless-Midwest	5/27/10 2:42	[signature]	TA KNOX	5/28/10 10:00

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend - EAST

Lot #: H0G290420

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

August 2, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0G290420

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LEAD EAST 07/28/10 10:10 001				
Chloroform	0.0028 J	0.0080	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.018	0.0080	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.0048 J	0.020	ppm(v/v)	EPA-2 TO-14A
Toluene	0.0044 J	0.0080	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0043 J	0.0080	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.61	0.0080	ppm(v/v)	EPA-2 TO-14A
INTERMEDIATE EAST 07/28/10 10:20 002				
Methylene chloride	0.0032 J	0.0091	ppm(v/v)	EPA-2 TO-14A
Toluene	0.0041	0.0036	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0G290420

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0G290420

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L4TW6	001	LEAD EAST	07/28/10	10:10
L4TW8	002	INTERMEDIATE EAST	07/28/10	10:20

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H0G290420

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

The samples were received on 7/29/10 in Tedlar bags. Sample LEAD EAST was transferred into a Summa Canister and sample INTERMEDIATE EAST was analyzed directly from the bag within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: LEAD EAST

GC/MS Volatiles

Lot-Sample #...: H0G290420-001 Work Order #...: L4TW61AA Matrix.....: AIR
Date Sampled...: 07/28/10 10:10 Date Received..: 07/29/10
Prep Date.....: 07/29/10 Analysis Date..: 07/29/10
Prep Batch #...: 0210419
Dilution Factor: 39.85 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0080	ppm(v/v)
Carbon tetrachloride	ND	0.0080	ppm(v/v)
Chlorobenzene	ND	0.0080	ppm(v/v)
Chloroethane	ND	0.0080	ppm(v/v)
Chloroform	**0.0028 J**	**0.0080**	**ppm(v/v)**
Chloromethane	ND	0.020	ppm(v/v)
1,1-Dichloroethane	ND	0.0080	ppm(v/v)
cis-1,2-Dichloroethene	**0.018**	**0.0080**	**ppm(v/v)**
trans-1,2-Dichloroethene	ND	0.0080	ppm(v/v)
1,1-Dichloroethene	ND	0.0080	ppm(v/v)
Ethylbenzene	ND	0.0080	ppm(v/v)
Methylene chloride	**0.0048 J**	**0.020**	**ppm(v/v)**
Tetrachloroethene	ND	0.0080	ppm(v/v)
Toluene	**0.0044 J**	**0.0080**	**ppm(v/v)**
1,1,1-Trichloroethane	**0.0043 J**	**0.0080**	**ppm(v/v)**
Trichloroethene	**0.61**	**0.0080**	**ppm(v/v)**
Vinyl chloride	ND	0.0080	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0080	ppm(v/v)
o-Xylene	ND	0.0080	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

MACTEC Engineering and Consulting Inc

Client Sample ID: INTERMEDIATE EAST

GC/MS Volatiles

Lot-Sample #...: H0G290420-002 Work Order #...: L4TW81AA Matrix.....: AIR
Date Sampled...: 07/28/10 10:20 Date Received..: 07/29/10
Prep Date.....: 07/29/10 Analysis Date..: 07/29/10
Prep Batch #...: 0210419
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	ND	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	ND	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	**0.0032 J**	**0.0091**	**ppm(v/v)**
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	**0.0041**	**0.0036**	**ppm(v/v)**
1,1,1-Trichloroethane	ND	0.0036	ppm(v/v)
Trichloroethene	ND	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0036	ppm(v/v)
o-Xylene	ND	0.0036	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0G290420 **Work Order #...:** L4V711AA **Matrix.....:** AIR
MB Lot-Sample #: H0G290000-419

Prep Date.....: 07/29/10
Analysis Date..: 07/29/10 **Prep Batch #...:** 0210419
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0G290420 Work Order #...: L4V711AC Matrix.....: AIR
LCS Lot-Sample#: H0G290000-419
Prep Date.....: 07/29/10 Analysis Date..: 07/29/10
Prep Batch #...: 0210419
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	105	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	98	(70 - 130)	EPA-2 TO-14A
Chloroethane	103	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	100	(70 - 130)	EPA-2 TO-14A
Methylene chloride	98	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	101	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	100	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	103	(70 - 130)	EPA-2 TO-14A
Chloroform	100	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	102	(70 - 130)	EPA-2 TO-14A
Benzene	107	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	120	(70 - 130)	EPA-2 TO-14A
Trichloroethene	110	(70 - 130)	EPA-2 TO-14A
Toluene	109	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	107	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	110	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	116	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	116	(70 - 130)	EPA-2 TO-14A
o-Xylene	116	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	106	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: H0G290420 Work Order #...: L4V711AC Matrix.....: AIR
LCS Lot-Sample#: H0G290000-419
Prep Date.....: 07/29/10 Analysis Date..: 07/29/10
Prep Batch #...: 0210419
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	0.0050	0.0053	ppm(v/v)	105	EPA-2 TO-14A
Vinyl chloride	0.0050	0.0049	ppm(v/v)	98	EPA-2 TO-14A
Chloroethane	0.0050	0.0052	ppm(v/v)	103	EPA-2 TO-14A
1,1-Dichloroethene	0.0050	0.0050	ppm(v/v)	100	EPA-2 TO-14A
Methylene chloride	0.0050	0.0049	ppm(v/v)	98	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0050	0.0050	ppm(v/v)	101	EPA-2 TO-14A
1,1-Dichloroethane	0.0050	0.0050	ppm(v/v)	100	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.0050	0.0052	ppm(v/v)	103	EPA-2 TO-14A
Chloroform	0.0050	0.0050	ppm(v/v)	100	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0050	0.0051	ppm(v/v)	102	EPA-2 TO-14A
Benzene	0.0050	0.0053	ppm(v/v)	107	EPA-2 TO-14A
Carbon tetrachloride	0.0050	0.0060	ppm(v/v)	120	EPA-2 TO-14A
Trichloroethene	0.0050	0.0055	ppm(v/v)	110	EPA-2 TO-14A
Toluene	0.0050	0.0055	ppm(v/v)	109	EPA-2 TO-14A
Tetrachloroethene	0.0050	0.0054	ppm(v/v)	107	EPA-2 TO-14A
Chlorobenzene	0.0050	0.0055	ppm(v/v)	110	EPA-2 TO-14A
Ethylbenzene	0.0050	0.0058	ppm(v/v)	116	EPA-2 TO-14A
m-Xylene & p-Xylene	0.010	0.012	ppm(v/v)	116	EPA-2 TO-14A
o-Xylene	0.0050	0.0058	ppm(v/v)	116	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	106	(60 - 140)

NOTE(S):

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HOG290420

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

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SEVERN TRENT STL

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Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O #4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	7/28/10	9:45	Air		1	X	1 BOX RECD AMBIENT
Intermediate West	↓	9:55	Air		1	X	UPS #
Lead East		10:10	Air		1	X	1Z438B780149012195
Intermediate East	↓	10:20	Air		1	X	NO CUSTODY SEAL
							TB 7/29/10

Preservation Used: 1=Ice, 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other _____

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Relinquished by:	Company: Peerless-Midwest	Date/Time: 7/28/10 14:30	Received by:	Company: TA KNOXVILLE	Date/Time: 7/29/10 10:00
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

11

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: HOG290420

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	4a
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)			✓	☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		✓		☒ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	✓			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?			✓	☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?			✓	☐ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ 15a Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ 15a Incomplete information	
18. Is the client and project name/# identified?	✓			☐ 15a Incomplete information	
19. Was the sampler identified on the COC?		✓			

Quote #: 75525 PM Instructions: _____

Sample Receiving Associate: _____ Date: 7/29/10

QA026R21.doc, 090409

Test America - Knoxville ---- Air Canister Dilution Log

Lot Number: *H0G290420*

Initial Can Pressure							Subsequent Dilutions											
Analyst/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can #	Pres. upon receipt (-in or + psig)	Adj. Initial Pres. (- in or + psig)	Analyst/Date	I / S	Pbarr (in)	Initial Pres. Pi (in)	Final Pres. Pf (psig)	First InCan Final Pres. Pf (psig)	Second In-can Final Pres. Pf (psig)	Third InCan Final Pres. Pf (psig)	Serial Dilution Can #	Vol (mL)	Final Pres. Pf (psig)	Comments
AM 7/29/10	1657	28.9	L4TW6	12734	-26.1	+0.6												8745
			L4TW8															

Original Chain of Custody Documentation

HOG290420

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date:	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loch/Jamie McKinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below _____			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	7/28/10	9:45	Air		1		X	1 BOX REC'D AMBIENT
Intermediate West		9:55	Air		1		X	UPS #
Lead East		10:10	Air		1		X	1Z438878014001,2195
Intermediate East	↓	10:20	Air		1		X	NO CUSTODY SEAL
								TB 7/29/10

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company: Peerless Midwest	Date/Time: 7-28-10 14:00	Received by:	Company: Peerless-Midwest	Date/Time: 7/28/10 14:00
Relinquished by:	Company: Peerless-Midwest	Date/Time: 7/28/10 14:20	Received by:	Company: TA KNOXVILLE	Date/Time: 7/29/10 1040
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

APPENDIX C

GROUNDWATER SAMPLE RECORD SHEETS

MACTEC

Sample No.: **86-14 04 10**
Sample Date: 13-Apr-10
Sample Time: 12:18

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 11:55 Activity End: 12:20
Weather: Indoors,
Well Type and Location: 1.5" Flushmount A14E

WATER LEVEL/WELL DATA

Well Depth: 23.65 feet using _____ (from top of well casing / measuring device)
Water Depth: 14.51 feet using _____ (from top of well casing / measuring device)
Historical Well Depth: _____ feet (from ground surface)
Protective Casing Stickup: _____ feet (for above-ground surface)
Protect. Casing Well Casing Difference: _____ feet
Floating Product Thickness: _____ feet using _____ (measuring device)
Well Condition: Good/ No J Cap
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na na Ambient Air: na na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet: ***9.14***

	.041 gal/ft (1 in)
X	.09 gal/ft (1.5 in)
	.16 gal/ft (2 in)
	.65 gal/ft (4 in)
	2.6 gal/ft (8 in)

0.8

X 3 casing volumes = 2.5 gallons to purge

Purge Method: Peristaltic

Purge Vol. (gal)	0.62	1.24	1.86	2.47
Time (Min.)	12:02	12:06	12:11	12:15
Temperature (C°)	19.90	20.20	20.20	20.30
pH (Units)	7.41	7.44	7.42	7.44
Conductivity at 25°C (mS/cm)	4265.00	4225.00	4219.00	4217.00
ORP (mV)	-124.00	-135.00	-139.00	-143.00
Turb (NTU)	3271.00	3226.00	32.33	32.25
DO (%)	na	na	na	na

Total Volume Purged: 2.50 gallons
Water Appearance (describe color, clarity odor:): slightly cloudy

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic
Sample Water Appearance (color, clarity, odor): Clear, slight sweet odor

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	***Y***	***N***
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print): Brent Wheat
SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: 86-15 04 10
Sample Date: 13-Apr-10
Sample Time: 10:20

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 10:00 Activity End: 10:25
Weather: Indoors,
Well Type and Location: 1.5" flushmount

WATER LEVEL/WELL DATA

Well Depth: 25.30 feet using _____ Water Depth: 14.68 feet using _____
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well Casing Difference: _____ feet
(from ground surface) (for above-ground surface)

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition: Missing J Cap
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na na Ambient Air: na na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet

	.041 gal/ft (1 in)
X	.09 gal/ft (1.5 in)
	.16 gal/ft (2 in)
	.65 gal/ft (4 in)

X 3 casing volumes = 2.9 gallons to purge

1.0

10.62

2.6 gal/ft (8 in)

Purge Method: Peristaltic

Purge Vol. (gal)	0.72	1.44	2.16	2.88
Time (Min.)	10:05	10:09	10:13	10:16
Temperature (C°)	19.80	19.70	19.70	19.70
pH (Units)	6.88	6.92	6.98	7.13
Conductivity at 25°C (mS/cm)	6291.00	6290.00	6252.00	6236.00
ORP (mV)	191.00	190.00	179.00	178.00
Turb (NTU)	5006.00	4974.00	4974.00	4957.00
DO (%)	na	na	na	na

Total Volume Purged 3.00 gallons

Water Appearance (describe color, clarity odor:) clear

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): clear

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	*Y*	*N*
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

MS/MSD COLLECTED

NAME (Print) Brent Wheat

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: **MW-16 04 10**
Sample Date: 13-Apr-10
Sample Time: 14:40

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 14:10 Activity End: 14:45
Weather: Indoors,
Well Type and Location: 2" flushmount

WATER LEVEL/WELL DATA

Well Depth: 20.75 feet using _____ (from top of well casing) (measuring device)
Water Depth: 15 feet using _____ (from top of well casing) (measuring device)
Historical Well Depth: _____ feet (from ground surface)
Protective Casing Stickup: _____ feet (for above-ground surface)
Protect. Casing Well Casing Difference: _____ feet
Floating Product Thickness: _____ feet using _____ (measuring device)
Well Condition: Good
Measuring Device Decontamination Procedure: **Alconox & DI Rinse**
PI Meter ID: na na Ambient Air: na na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet		.041 gal/ft (1 in)			
		.09 gal/ft (1.5 in)			
	X	.16 gal/ft (2 in)	X 3	casing volumes = 2.8	gallons to purge
		.65 gal/ft (4 in)	**0.9**		

5.75 2.6 gal/ft (8 in)

Purge Method: Peristaltic

Purge Vol. (gal)	0.69	1.38	2.07	2.76
Time (Min.)	14:20	14:25	14:30	14:35
Temperature (C°)	20.44	20.39	20.27	20.22
pH (Units)	5.61	5.90	6.04	6.07
Conductivity at 25°C (mS/cm)	6.36	6.50	6.58	6.64
ORP (mV)	-84.00	-112.00	-123.00	-122.00
Turb (NTU)	709.80	627.00	54.80	56.15
DO (%)	0.03	-0.01	-0.04	-0.05

Total Volume Purged 3.00 gallons
Water Appearance (describe color, clarity odor:) gray to brown

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic
Sample Water Appearance (color, clarity, odor): strong odor

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

Duplicate sample = MW-100-0410-14. Deploy biotrap @ 15:10. Trap set @ 18.25' btoc.

NAME (Print) Brent Wheat
SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-17 04 10
Sample Date: 13-Apr-10
Sample Time: 13:52

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 13:00 Activity End: 14:00
Weather: Indoors,0
Well Type and Location: 2" flushmount

WATER LEVEL/WELL DATA

Well Depth: 29.30 feet using _____ Water Depth: 14.49 feet using _____
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet (from ground surface) Protective Casing Stickup: _____ feet (for above-ground surface) Protect. Casing Well Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____ (measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na na Ambient Air: na na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet

	.041 gal/ft (1 in)	
	.09 gal/ft (1.5 in)	
X	.16 gal/ft (2 in)	X 3 casing volumes = 7.3 gallons to purge
	.65 gal/ft (4 in)	

14.81 ***2.4***

2.6 gal/ft (8 in)

Purge Method: Peristaltic

Purge Vol. (gal)	1.78	3.56	5.34	7.12
Time (Min.)	13:16	13:24	13:39	13:49
Temperature (C°)	19.82	19.81	19.82	19.81
pH (Units)	6.51	6.50	6.49	6.49
Conductivity at 25°C (mS/cm)	5.41	5.48	5.60	5.65
ORP (mV)	-124.00	-126.00	-127.00	-128.00
Turb (NTU)	334.10	100.60	138.60	173.60
DO (%)	-0.01	-0.03	-0.03	-0.04

Total Volume Purged 7.25 gallons

Water Appearance (describe color, clarity odor:) gray to black

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): slightly cloudy, strong odor

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

Deploy Biotrap @ 15:01. Trap set @ 27' btoc

NAME (Print) Brent Wheat

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: EW-2B 04 10
Sample Date: 13-Apr-10
Sample Time: 11:45

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 11:25 Activity End: 11:49
Weather: Indoors,
Well Type and Location: 2" flushmount

WATER LEVEL/WELL DATA

Well Depth: 18.00 feet using _____ Water Depth: 14.26 feet using _____
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well Casing Difference: _____ feet
(from ground surface) (for above-ground surface)

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na na Ambient Air: na na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet

	.041 gal/ft (1 in)
	.09 gal/ft (1.5 in)
X	.16 gal/ft (2 in)
	.65 gal/ft (4 in)

3.74 ***0.6***

2.6 gal/ft (8 in)

X 3 casing volumes = 1.8 gallons to purge

Purge Method: Peristaltic

Purge Vol. (gal)	0.45	0.90	1.35	1.80
Time (Min.)	11:29	11:35	11:40	11:43
Temperature (C°)	19.90	20.10	20.20	20.20
pH (Units)	6.88	6.88	6.86	6.92
Conductivity at 25°C (mS/cm)	5743.00	5737.00	5695.00	5717.00
ORP (mV)	-143.00	-137.00	-140.00	-114.00
Turb (NTU)	4532.00	4527.00	4489.00	4510.00
DO (%)	na	na	na	na

Total Volume Purged 2.30 gallons

Water Appearance (describe color, clarity odor:) slightly cloudy

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): slightly cloudy

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	*Y*	*N*
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) Brent Wheat

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: AS-1 04 10
Sample Date: 13-Apr-10
Sample Time: 11:18

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 10:58 Activity End: 11:20
Weather: Indoors,
Well Type and Location: 2" flushmount

WATER LEVEL/WELL DATA

Well Depth: 21.12 feet using _____ Water Depth: 14.33 feet using _____
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well Casing Difference: _____ feet
(from ground surface) (for above-ground surface)

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na na Ambient Air: na na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet

	.041 gal/ft (1 in)
	.09 gal/ft (1.5 in)
X	.16 gal/ft (2 in)
	.65 gal/ft (4 in)

1.1

X 3 casing volumes = 3.3 gallons to purge

6.79 2.6 gal/ft (8 in)

Purge Method: Peristaltic

Purge Vol. (gal)	0.81	1.62	2.43	3.24
Time (Min.)	11:03	11:08	11:11	11:16
Temperature (C°)	19.70	19.80	19.80	19.80
pH (Units)	7.00	6.87	6.88	6.84
Conductivity at 25°C (mS/cm)	6081.00	6033.00	6037.00	6047.00
ORP (mV)	-161.00	-152.00	-152.00	-149.00
Turb (NTU)	4825.00	4784.00	4787.00	4795.00
DO (%)	na	na	na	na

Total Volume Purged 3.50 gallons

Water Appearance (describe color, clarity odor:) moderate cloudy, slight odor

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): slightly cloudy

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	*Y*	*N*
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) Brent Wheat

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MP-10 04 10
Sample Date: 13-Apr-10
Sample Time: 10:53

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 10:28 Activity End: 10:56
Weather: Indoors,
Well Type and Location: 2" flushmount

WATER LEVEL/WELL DATA

Well Depth: 20.75 feet using _____ Water Depth: 14.29 feet using _____
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well Casing Difference: _____ feet
(from ground surface) (for above-ground surface)

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na na Ambient Air: na na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet

	.041 gal/ft (1 in)	
	.09 gal/ft (1.5 in)	
X	.16 gal/ft (2 in)	X 3 casing volumes = 3.2 gallons to purge
	.65 gal/ft (4 in)	

6.46 ***1.1***

2.6 gal/ft (8 in)

Purge Method: Peristaltic

Purge Vol. (gal)	0.78	1.56	2.34	3.12
Time (Min.)	10:33	10:37	10:44	10:50
Temperature (C°)	19.00	19.00	18.90	18.90
pH (Units)	7.26	7.26	7.27	7.26
Conductivity at 25°C (mS/cm)	5047.00	4476.00	4278.00	4277.00
ORP (mV)	184.00	93.00	65.00	46.00
Turb (NTU)	3941.00	3455.00	3290.00	3288.00
DO (%)	na	na	na	na

Total Volume Purged 3.25 gallons

Water Appearance (describe color, clarity odor:) slightly cloudy

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): cloudy

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	*Y*	*N*
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) Brent Wheat

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: 86-15 07 10
Sample Date: 13-Jul-10
Sample Time: 10:25

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/JLD
Activity Start: 10:10 Activity End: 10:30
Weather: Indoors,
Well Type and Location: 1.5" flushmount

WATER LEVEL/WELL DATA

Well Depth: 25.30 feet using ____ (from top of well casing) (measuring device) Water Depth: 14.43 feet using ____ (from top of well casing) (measuring device)

Historical Well Depth: ____ feet (from ground surface) Protective Casing Stickup: ____ feet (for above-ground surface) Protect. Casing Well Casing Difference: ____ feet

Floating Product Thickness: ____ feet using ____ (measuring device)

Well Condition: -
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet

	.041 gal/ft (1 in)
X	.09 gal/ft (1.5 in)
	.16 gal/ft (2 in)
	.65 gal/ft (4 in)

1.0

X 3 casing volumes = 3.0 gallons to purge

10.87 2.6 gal/ft (8 in)

Purge Method: Peristaltic

	0.75	1.50	2.25	3.00
Time (Min.)	10:14	10:17	10:20	10:24
Temperature (C°)	19.64	19.75	19.71	19.71
pH (Units)	6.38	6.89	6.89	6.91
Conductivity at 25°C (mS/cm)	5.61	5.61	5.60	5.59
ORP (mV)	164.00	154.00	149.00	146.00
Turb (NTU)	14.30	39.29	61.18	24.35
DO (%)	0.37	0.02	0.01	0.02

Total Volume Purged 3.00 gallons

Water Appearance (describe color, clarity odor:) -

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): -

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	*Y*	*N*
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) James Staley

SIGNATURE: ____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MP-10 07 10
Sample Date: 13-Jul-10
Sample Time: 10:55

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/JLD
Activity Start: 10:35 Activity End: 11:00
Weather: Indoors,
Well Type and Location: 2" flushmount

WATER LEVEL/WELL DATA

Well Depth: 20.75 feet using _____ (from top of well casing) (measuring device)
Water Depth: 14.01 feet using _____ (from top of well casing) (measuring device)
Historical Well Depth: _____ feet (from ground surface)
Protective Casing Stickup: _____ feet (for above-ground surface)
Protect. Casing Well Casing Difference: _____ feet
Floating Product Thickness: _____ feet using _____ (measuring device)
Well Condition: -
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet

	.041 gal/ft (1 in)
	.09 gal/ft (1.5 in)
X	.16 gal/ft (2 in)
	.65 gal/ft (4 in)

1.1

X 3 casing volumes = 3.3 gallons to purge

6.74

2.6 gal/ft (8 in)

Purge Method: Peristaltic

Purge Vol. (gal)	0.75	1.50	2.25	3.25
Time (Min.)	10:38	10:43	10:48	10:53
Temperature (C°)	19.01	18.89	18.96	18.88
pH (Units)	6.94	6.97	6.99	6.99
Conductivity at 25°C (mS/cm)	4.87	4.21	3.91	3.90
ORP (mV)	116.00	78.00	56.00	45.00
Turb (NTU)	22.70	26.78	19.78	19.48
DO (%)	0.01	0.03	0.03	-0.01

Total Volume Purged: 3.25 gallons
Water Appearance (describe color, clarity odor:) -

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic
Sample Water Appearance (color, clarity, odor): -

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) James Staley
SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: AS-1 07 10
Sample Date: 13-Jul-10
Sample Time: 11:23

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/JLD
Activity Start: 11:03 Activity End: 11:35
Weather: Indoors,
Well Type and Location: 2" flushmount

WATER LEVEL/WELL DATA

Well Depth: 21.12 feet using _____ Water Depth: 14.06 feet using _____
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well Casing Difference: _____ feet
(from ground surface) (for above-ground surface)

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition: -
Measuring Device Decontamination Procedure: *Alconox & DI Rinse*
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet

	.041 gal/ft (1 in)
	.09 gal/ft (1.5 in)
X	.16 gal/ft (2 in)
	.65 gal/ft (4 in)

X 3 casing volumes = 3.5 gallons to purge

1.2

7.06

2.6 gal/ft (8 in)

Purge Method: Peristaltic

Purge Vol. (gal)	0.75	1.50	2.25	3.40
Time (Min.)	11:11	11:14	11:19	11:23
Temperature (C°)	19.83	19.90	19.92	19.92
pH (Units)	6.44	6.44	6.46	6.46
Conductivity at 25°C (mS/cm)	5.36	5.37	5.35	5.35
ORP (mV)	-87.00	-89.00	-91.00	-92.00
Turb (NTU)	62.24	53.14	44.53	47.10
DO (%)	-0.02	-0.03	-0.04	-0.04

Total Volume Purged 3.40 gallons

Water Appearance (describe color, clarity odor:) clear, slight sulfur odor, effervescent

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): clear, slight sulfur odor

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	*Y*	*N*
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) James Staley

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: EW-2B 07 10
Sample Date: 13-Jul-10
Sample Time: 11:53

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/JLD
Activity Start: 11:37 Activity End: 11:55
Weather: Indoors,
Well Type and Location: 2" flushmount

WATER LEVEL/WELL DATA

Well Depth: 18.00 feet using _____ Water Depth: 14.04 feet using _____
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well Casing Difference: _____ feet
(from ground surface) (for above-ground surface)

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition: -
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet

	.041 gal/ft (1 in)	
	.09 gal/ft (1.5 in)	
X	.16 gal/ft (2 in)	X 3 casing volumes = 1.9 gallons to purge
	.65 gal/ft (4 in)	

3.96 ***0.6*** 2.6 gal/ft (8 in)

Purge Method: Peristaltic

Purge Vol. (gal)	0.50	1.00	1.50	2.00
Time (Min.)	11:40	11:43	11:49	11:53
Temperature (C°)	20.24	20.20	20.20	20.20
pH (Units)	6.58	6.59	6.60	6.60
Conductivity at 25°C (mS/cm)	4.79	4.75	4.69	4.62
ORP (mV)	-104.00	-105.00	-107.00	-108.00
Turb (NTU)	33.04	28.27	33.52	50.48
DO (%)	0.00	-0.02	0.01	-0.04

Total Volume Purged 2.00 gallons

Water Appearance (describe color, clarity odor:) clear

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): clear

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	***Y***	***N***
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) James Staley

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: 86-14 07 10
Sample Date: 13-Jul-10
Sample Time: 12:28

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/JLD
Activity Start: 11:58 Activity End: 12:35
Weather: Indoors,
Well Type and Location: 1.5" Flushmount A14E

WATER LEVEL/WELL DATA

Well Depth: 23.65 feet using _____ Water Depth: 14.29 feet using _____
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well Casing Difference: _____ feet
(from ground surface) (for above-ground surface)

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition: -
Measuring Device Decontamination Procedure: *Alconox & DI Rinse*
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet

	.041 gal/ft (1 in)
X	.09 gal/ft (1.5 in)
	.16 gal/ft (2 in)
	.65 gal/ft (4 in)

9.36 0.9 X 3 casing volumes = 2.6 gallons to purge

2.6 gal/ft (8 in)

Purge Method: Peristaltic

Purge Vol. (gal)	0.50	1.00	1.50	2.50
Time (Min.)	12:11	12:13	12:18	12:22
Temperature (C°)	20.20	20.14	20.14	20.13
pH (Units)	7.02	7.15	7.19	7.18
Conductivity at 25°C (mS/cm)	4.03	4.00	3.99	3.99
ORP (mV)	-118.00	-119.00	-117.00	-118.00
Turb (NTU)	26.44	50.38	20.46	20.13
DO (%)	0.07	-0.01	-0.03	-0.04

Total Volume Purged 2.50 gallons

Water Appearance (describe color, clarity odor:) -

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): -

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

MS/MSD Collected

NAME (Print) James Staley

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-16 07 10
Sample Date: 13-Jul-10
Sample Time: 13:43

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/JLD
Activity Start: 13:22 Activity End: 13:48
Weather: Indoors,
Well Type and Location: 2" flushmount

WATER LEVEL/WELL DATA

Well Depth: 20.75 feet using _____ Water Depth: 14.27 feet using _____
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well Casing Difference: _____ feet
(from ground surface) (for above-ground surface)

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition: -
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet

	.041 gal/ft (1 in)
	.09 gal/ft (1.5 in)
X	.16 gal/ft (2 in)
	.65 gal/ft (4 in)

1.1

X 3 casing volumes = 3.2 gallons to purge

6.48 2.6 gal/ft (8 in)

Purge Method: Peristaltic

Purge Vol. (gal)	0.75	1.50	2.25	3.10
Time (Min.)	13:24	13:29	13:34	13:37
Temperature (C°)	20.99	20.88	20.67	20.57
pH (Units)	6.56	6.59	6.54	6.48
Conductivity at 25°C (mS/cm)	6.89	7.07	6.72	6.33
ORP (mV)	-143.00	-151.00	-138.00	-125.00
Turb (NTU)	59.91	29.51	185.60	223.60
DO (%)	0.01	-0.02	0.04	0.00

Total Volume Purged 3.25 gallons

Water Appearance (describe color, clarity odor:) cloudy, sulfur odor

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): sulfur odor

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	*Y*	*N*
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

Duplicate sample = MW-100-0710-a14e. Retreive Biotrap. NAME (Print) James Staley

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-17 07 10
Sample Date: 13-Jul-10
Sample Time: 13:08

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/JLD
Activity Start: 12:38 Activity End: 13:12
Weather: Indoors,0
Well Type and Location: 2" flushmount

WATER LEVEL/WELL DATA

Well Depth: 29.30 feet using _____ (measuring device) (from top of well casing)
Water Depth: 14.22 feet using _____ (measuring device) (from top of well casing)
Historical Well Depth: _____ feet (from ground surface)
Protective Casing Stickup: _____ feet (for above-ground surface)
Protect. Casing Well Casing Difference: _____ feet
Floating Product Thickness: _____ feet using _____ (measuring device)
Well Condition: -
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column 15.08 feet

	.041 gal/ft (1 in)
	.09 gal/ft (1.5 in)
X	.16 gal/ft (2 in)
	.65 gal/ft (4 in)
	2.6 gal/ft (8 in)

2.5 X 3 casing volumes = 7.4 gallons to purge

Purge Method: Peristaltic

Purge Vol. (gal)	1.75	3.50	5.25	7.25
Time (Min.)	12:35	12:53	13:00	13:08
Temperature (C°)	19.78	19.75	19.75	19.74
pH (Units)	6.45	6.45	6.44	6.45
Conductivity at 25°C (mS/cm)	5.39	5.42	5.43	5.47
ORP (mV)	-99.00	-99.00	-101.00	-102.00
Turb (NTU)	101.20	148.70	134.20	21.03
DO (%)	-0.03	-0.03	-0.05	-0.05

Total Volume Purged: 7.50 gallons
Water Appearance (describe color, clarity odor:): clear, strong sulfur odor

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic
Sample Water Appearance (color, clarity, odor): strong sulfur odor

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

Retrieve Biotrap

NAME (Print): James Staley
SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

APPENDIX D

ANALYTICAL REPORTS – GROUNDWATER SAMPLES

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

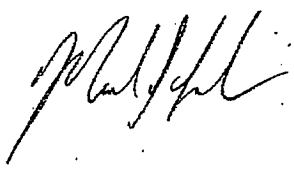
HONEYWELL SOUTH BEND-AREA 14 E

Lot #: A0G150531

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.



Mark J. Loeb
Project Manager
mark.loeb@testamericainc.com

Approved for release.
Mark J. Loeb
Project Manager II
7/28/2010 5:46 PM

July 28, 2010

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

CASE NARRATIVE

A0G150531

The following report contains the analytical results for eight water samples submitted to TestAmerica North Canton by MACTEC Engineering & Consulting, Inc. from the HONEYWELL SOUTH BEND-AREA 14 E Site. The samples were received July 15, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Christopher J. Kapanowski, Nick Rogers, and Steven Murray on July 27, 2010. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Mark J. Loeb, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.7°C.

GC/MS VOLATILES

The matrix spike/matrix spike duplicate(s) for 86-14 07 10 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

The matrix spike/matrix spike duplicate(s) for batch(es) 0207154 had RPD's and recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 0205064. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A0G150531

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-16 07 10 07/13/10 13:43 001				
cis-1,2-Dichloroethene	11000	420	ug/L	SW846 8260B
Vinyl chloride	720	420	ug/L	SW846 8260B
Trichloroethene	5400	420	ug/L	SW846 8260B
MW-17 07 10 07/13/10 13:08 002				
1,1-Dichloroethane	2.8	1.0	ug/L	SW846 8260B
Toluene	1.4	1.0	ug/L	SW846 8260B
EW-2B 07 10 07/13/10 11:53 004				
cis-1,2-Dichloroethene	1.3	1.0	ug/L	SW846 8260B
MP-10 07 10 07/13/10 10:55 005				
cis-1,2-Dichloroethene	15	6.7	ug/L	SW846 8260B
trans-1,2-Dichloroethene	17	6.7	ug/L	SW846 8260B
Vinyl chloride	62	6.7	ug/L	SW846 8260B
Trichloroethene	220	6.7	ug/L	SW846 8260B
86-15 07 10 07/13/10 10:25 006				
cis-1,2-Dichloroethene	22	5.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	30	5.0	ug/L	SW846 8260B
Trichloroethene	180	5.0	ug/L	SW846 8260B
86-14 07 10 07/13/10 12:28 007				
Trichloroethene	3.0	1.0	ug/L	SW846 8260B
MW-100 07 10-14 EAST 07/13/10 008				
cis-1,2-Dichloroethene	10000	150	ug/L	SW846 8260B
Vinyl chloride	640	150	ug/L	SW846 8260B
Trichloroethene	5100	150	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A0G150531

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A0G150531

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L38JF	001	MW-16 07 10	07/13/10	13:43
L38JK	002	MW-17 07 10	07/13/10	13:08
L38JM	003	AS-1 07 10	07/13/10	11:23
L38JN	004	EW-2B 07 10	07/13/10	11:53
L38JV	005	MP-10 07 10	07/13/10	10:55
L38JW	006	86-15 07 10	07/13/10	10:25
L38JX	007	86-14 07 10	07/13/10	12:28
L38J1	008	MW-100 07 10-14 EAST	07/13/10	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-16 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-001 Work Order #...: L38JF1AA Matrix.....: WG
Date Sampled...: 07/13/10 13:43 Date Received..: 07/15/10
Prep Date.....: 07/24/10 Analysis Date..: 07/24/10
Prep Batch #...: 0207154
Dilution Factor: 416.67 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	4200	ug/L
Acrolein	ND	8300	ug/L
Acrylonitrile	ND	8300	ug/L
Benzene	ND	420	ug/L
Bromobenzene	ND	420	ug/L
Bromochloromethane	ND	420	ug/L
Bromodichloromethane	ND	420	ug/L
Bromoform	ND	420	ug/L
Bromomethane	ND	420	ug/L
Methyl ethyl ketone	ND	4200	ug/L
n-Butylbenzene	ND	420	ug/L
sec-Butylbenzene	ND	420	ug/L
tert-Butylbenzene	ND	420	ug/L
Carbon disulfide	ND	420	ug/L
Carbon tetrachloride	ND	420	ug/L
Chlorobenzene	ND	420	ug/L
Chlorodibromomethane	ND	420	ug/L
Chloroethane	ND	420	ug/L
2-Chloroethyl vinyl ether	ND	4200	ug/L
Chloroform	ND	420	ug/L
Chloromethane	ND	420	ug/L
2-Chlorotoluene	ND	420	ug/L
4-Chlorotoluene	ND	420	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	830	ug/L
1,2-Dibromoethane	ND	420	ug/L
Dibromomethane	ND	420	ug/L
1,2-Dichlorobenzene	ND	420	ug/L
1,3-Dichlorobenzene	ND	420	ug/L
1,4-Dichlorobenzene	ND	420	ug/L
trans-1,4-Dichloro-2-butene	ND	420	ug/L
Dichlorodifluoromethane	ND	420	ug/L
1,1-Dichloroethane	ND	420	ug/L
1,2-Dichloroethane	ND	420	ug/L
cis-1,2-Dichloroethene	11000	420	ug/L
trans-1,2-Dichloroethene	ND	420	ug/L
1,1-Dichloroethene	ND	420	ug/L
Dichlorofluoromethane	ND	830	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-16 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-001 Work Order #...: L38JF1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	420	ug/L
1,3-Dichloropropane	ND	420	ug/L
2,2-Dichloropropane	ND	420	ug/L
cis-1,3-Dichloropropene	ND	420	ug/L
trans-1,3-Dichloropropene	ND	420	ug/L
1,1-Dichloropropene	ND	420	ug/L
Ethylbenzene	ND	420	ug/L
Diethyl ether	ND	830	ug/L
Ethyl methacrylate	ND	420	ug/L
Hexachlorobutadiene	ND	420	ug/L
2-Hexanone	ND	4200	ug/L
Iodomethane	ND	420	ug/L
Isopropylbenzene	ND	420	ug/L
p-Isopropyltoluene	ND	420	ug/L
Methylene chloride	ND	420	ug/L
Methyl methacrylate	ND	830	ug/L
4-Methyl-2-pentanone (MIBK)	ND	4200	ug/L
Methyl tert-butyl ether (MTBE)	ND	2100	ug/L
Naphthalene	ND	420	ug/L
n-Propylbenzene	ND	420	ug/L
Styrene	ND	420	ug/L
1,1,1,2-Tetrachloroethane	ND	420	ug/L
1,1,2,2-Tetrachloroethane	ND	420	ug/L
Tetrachloroethene	ND	420	ug/L
Tetrahydrofuran	ND	2100	ug/L
Toluene	ND	420	ug/L
1,2,3-Trichlorobenzene	ND	420	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	420	ug/L
1,2,4-Trimethylbenzene	ND	420	ug/L
1,3,5-Trimethylbenzene	ND	420	ug/L
Vinyl acetate	ND	830	ug/L
Vinyl chloride	720	420	ug/L
m-Xylene & p-Xylene	ND	830	ug/L
o-Xylene	ND	420	ug/L
Cyclohexanone	ND	8300	ug/L
Trichlorofluoromethane	ND	420	ug/L
Trichloroethene	5400	420	ug/L
1,2,4-Trichloro-benzene	ND	420	ug/L
1,1,1-Trichloroethane	ND	420	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-16 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-001 Work Order #...: L38JF1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	420	ug/L
1,2,3-Trichloropropane	ND	420	ug/L
1-Chlorohexane	ND	420	ug/L
n-Heptane	ND	420	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	110	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-17 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-002 Work Order #...: L38JK1AA Matrix.....: WG
Date Sampled...: 07/13/10 13:08 Date Received..: 07/15/10
Prep Date.....: 07/23/10 Analysis Date..: 07/23/10
Prep Batch #...: 0205064
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	2.8	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-17 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-002 Work Order #...: L38JK1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	1.4	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-17 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-002 Work Order #...: L38JK1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	114	(73 - 122)
1,2-Dichloroethane-d4	112	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	106	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: AS-1 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-003 Work Order #...: L38JM1AA Matrix.....: WG
Date Sampled...: 07/13/10 11:23 Date Received..: 07/15/10
Prep Date.....: 07/23/10 Analysis Date..: 07/23/10
Prep Batch #...: 0205064
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: AS-1 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-003 Work Order #...: L38JM1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: AS-1 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-003 Work Order #...: L38JM1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(73 - 122)
1,2-Dichloroethane-d4	116	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: EW-2B 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-004 Work Order #...: L38JN1AA Matrix.....: WG
Date Sampled...: 07/13/10 11:53 Date Received..: 07/15/10
Prep Date.....: 07/23/10 Analysis Date..: 07/23/10
Prep Batch #...: 0205064
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	1.3	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: EW-2B 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-004 Work Order #...: L38JN1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: EW-2B 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-004 Work Order #...: L38JN1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	115	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MP-10 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-005 Work Order #...: L38JV1AA Matrix.....: WG
Date Sampled...: 07/13/10 10:55 Date Received..: 07/15/10
Prep Date.....: 07/24/10 Analysis Date..: 07/24/10
Prep Batch #...: 0207154
Dilution Factor: 6.67 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	67	ug/L
Acrolein	ND	130	ug/L
Acrylonitrile	ND	130	ug/L
Benzene	ND	6.7	ug/L
Bromobenzene	ND	6.7	ug/L
Bromochloromethane	ND	6.7	ug/L
Bromodichloromethane	ND	6.7	ug/L
Bromoform	ND	6.7	ug/L
Bromomethane	ND	6.7	ug/L
Methyl ethyl ketone	ND	67	ug/L
n-Butylbenzene	ND	6.7	ug/L
sec-Butylbenzene	ND	6.7	ug/L
tert-Butylbenzene	ND	6.7	ug/L
Carbon disulfide	ND	6.7	ug/L
Carbon tetrachloride	ND	6.7	ug/L
Chlorobenzene	ND	6.7	ug/L
Chlorodibromomethane	ND	6.7	ug/L
Chloroethane	ND	6.7	ug/L
2-Chloroethyl vinyl ether	ND	67	ug/L
Chloroform	ND	6.7	ug/L
Chloromethane	ND	6.7	ug/L
2-Chlorotoluene	ND	6.7	ug/L
4-Chlorotoluene	ND	6.7	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	13	ug/L
1,2-Dibromoethane	ND	6.7	ug/L
Dibromomethane	ND	6.7	ug/L
1,2-Dichlorobenzene	ND	6.7	ug/L
1,3-Dichlorobenzene	ND	6.7	ug/L
1,4-Dichlorobenzene	ND	6.7	ug/L
trans-1,4-Dichloro-2-butene	ND	6.7	ug/L
Dichlorodifluoromethane	ND	6.7	ug/L
1,1-Dichloroethane	ND	6.7	ug/L
1,2-Dichloroethane	ND	6.7	ug/L
cis-1,2-Dichloroethene	15	6.7	ug/L
trans-1,2-Dichloroethene	17	6.7	ug/L
1,1-Dichloroethene	ND	6.7	ug/L
Dichlorofluoromethane	ND	13	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MP-10 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-005 Work Order #...: L38JV1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	6.7	ug/L
1,3-Dichloropropane	ND	6.7	ug/L
2,2-Dichloropropane	ND	6.7	ug/L
cis-1,3-Dichloropropene	ND	6.7	ug/L
trans-1,3-Dichloropropene	ND	6.7	ug/L
1,1-Dichloropropene	ND	6.7	ug/L
Ethylbenzene	ND	6.7	ug/L
Diethyl ether	ND	13	ug/L
Ethyl methacrylate	ND	6.7	ug/L
Hexachlorobutadiene	ND	6.7	ug/L
2-Hexanone	ND	67	ug/L
Iodomethane	ND	6.7	ug/L
Isopropylbenzene	ND	6.7	ug/L
p-Isopropyltoluene	ND	6.7	ug/L
Methylene chloride	ND	6.7	ug/L
Methyl methacrylate	ND	13	ug/L
4-Methyl-2-pentanone (MIBK)	ND	67	ug/L
Methyl tert-butyl ether (MTBE)	ND	33	ug/L
Naphthalene	ND	6.7	ug/L
n-Propylbenzene	ND	6.7	ug/L
Styrene	ND	6.7	ug/L
1,1,1,2-Tetrachloroethane	ND	6.7	ug/L
1,1,2,2-Tetrachloroethane	ND	6.7	ug/L
Tetrachloroethene	ND	6.7	ug/L
Tetrahydrofuran	ND	33	ug/L
Toluene	ND	6.7	ug/L
1,2,3-Trichlorobenzene	ND	6.7	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.7	ug/L
1,2,4-Trimethylbenzene	ND	6.7	ug/L
1,3,5-Trimethylbenzene	ND	6.7	ug/L
Vinyl acetate	ND	13	ug/L
Vinyl chloride	62	6.7	ug/L
m-Xylene & p-Xylene	ND	13	ug/L
o-Xylene	ND	6.7	ug/L
Cyclohexanone	ND	130	ug/L
Trichlorofluoromethane	ND	6.7	ug/L
Trichloroethene	220	6.7	ug/L
1,2,4-Trichloro-benzene	ND	6.7	ug/L
1,1,1-Trichloroethane	ND	6.7	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MP-10 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-005 Work Order #...: L38JV1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	6.7	ug/L
1,2,3-Trichloropropane	ND	6.7	ug/L
1-Chlorohexane	ND	6.7	ug/L
n-Heptane	ND	6.7	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(73 - 122)
1,2-Dichloroethane-d4	114	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: 86-15 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-006 Work Order #...: L38JW1AA Matrix.....: WG
Date Sampled...: 07/13/10 10:25 Date Received..: 07/15/10
Prep Date.....: 07/24/10 Analysis Date..: 07/24/10
Prep Batch #...: 0207154
Dilution Factor: 5 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	50	ug/L
Acrolein	ND	100	ug/L
Acrylonitrile	ND	100	ug/L
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	5.0	ug/L
Methyl ethyl ketone	ND	50	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	5.0	ug/L
2-Chloroethyl vinyl ether	ND	50	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	5.0	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
trans-1,4-Dichloro-2-butene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	5.0	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	22	5.0	ug/L
trans-1,2-Dichloroethene	30	5.0	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
Dichlorofluoromethane	ND	10	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: 86-15 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-006 Work Order #...: L38JW1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Diethyl ether	ND	10	ug/L
Ethyl methacrylate	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
2-Hexanone	ND	50	ug/L
Iodomethane	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L
Methylene chloride	ND	5.0	ug/L
Methyl methacrylate	ND	10	ug/L
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L
Methyl tert-butyl ether (MTBE)	ND	25	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Tetrahydrofuran	ND	25	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl acetate	ND	10	ug/L
Vinyl chloride	ND	5.0	ug/L
m-Xylene & p-Xylene	ND	10	ug/L
o-Xylene	ND	5.0	ug/L
Cyclohexanone	ND	100	ug/L
Trichlorofluoromethane	ND	5.0	ug/L
Trichloroethene	180	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: 86-15 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-006 Work Order #...: L38JW1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	5.0	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1-Chlorohexane	ND	5.0	ug/L
n-Heptane	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	111	(61 - 128)
Toluene-d8	103	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: 86-14 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-007 Work Order #...: L38JX1AA Matrix.....: WG
Date Sampled...: 07/13/10 12:28 Date Received..: 07/15/10
Prep Date.....: 07/23/10 Analysis Date..: 07/23/10
Prep Batch #...: 0207154
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: 86-14 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-007 Work Order #...: L38JX1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Trichloroethene	3.0	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: 86-14 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150531-007 Work Order #...: L38JX1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(73 - 122)
1,2-Dichloroethane-d4	117	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-100 07 10-14 EAST

GC/MS Volatiles

Lot-Sample #...: A0G150531-008 Work Order #...: L38J11AA Matrix.....: WG
Date Sampled...: 07/13/10 Date Received..: 07/15/10
Prep Date.....: 07/24/10 Analysis Date..: 07/24/10
Prep Batch #...: 0207154
Dilution Factor: 146.67 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	1500	ug/L
Acrolein	ND	2900	ug/L
Acrylonitrile	ND	2900	ug/L
Benzene	ND	150	ug/L
Bromobenzene	ND	150	ug/L
Bromochloromethane	ND	150	ug/L
Bromodichloromethane	ND	150	ug/L
Bromoform	ND	150	ug/L
Bromomethane	ND	150	ug/L
Methyl ethyl ketone	ND	1500	ug/L
n-Butylbenzene	ND	150	ug/L
sec-Butylbenzene	ND	150	ug/L
tert-Butylbenzene	ND	150	ug/L
Carbon disulfide	ND	150	ug/L
Carbon tetrachloride	ND	150	ug/L
Chlorobenzene	ND	150	ug/L
Chlorodibromomethane	ND	150	ug/L
Chloroethane	ND	150	ug/L
2-Chloroethyl vinyl ether	ND	1500	ug/L
Chloroform	ND	150	ug/L
Chloromethane	ND	150	ug/L
2-Chlorotoluene	ND	150	ug/L
4-Chlorotoluene	ND	150	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	290	ug/L
1,2-Dibromoethane	ND	150	ug/L
Dibromomethane	ND	150	ug/L
1,2-Dichlorobenzene	ND	150	ug/L
1,3-Dichlorobenzene	ND	150	ug/L
1,4-Dichlorobenzene	ND	150	ug/L
trans-1,4-Dichloro-2-butene	ND	150	ug/L
Dichlorodifluoromethane	ND	150	ug/L
1,1-Dichloroethane	ND	150	ug/L
1,2-Dichloroethane	ND	150	ug/L
cis-1,2-Dichloroethene	10000	150	ug/L
trans-1,2-Dichloroethene	ND	150	ug/L
1,1-Dichloroethene	ND	150	ug/L
Dichlorofluoromethane	ND	290	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-100 07 10-14 EAST

GC/MS Volatiles

Lot-Sample #...: A0G150531-008 Work Order #...: L38J11AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	150	ug/L
1,3-Dichloropropane	ND	150	ug/L
2,2-Dichloropropane	ND	150	ug/L
cis-1,3-Dichloropropene	ND	150	ug/L
trans-1,3-Dichloropropene	ND	150	ug/L
1,1-Dichloropropene	ND	150	ug/L
Ethylbenzene	ND	150	ug/L
Diethyl ether	ND	290	ug/L
Ethyl methacrylate	ND	150	ug/L
Hexachlorobutadiene	ND	150	ug/L
2-Hexanone	ND	1500	ug/L
Iodomethane	ND	150	ug/L
Isopropylbenzene	ND	150	ug/L
p-Isopropyltoluene	ND	150	ug/L
Methylene chloride	ND	150	ug/L
Methyl methacrylate	ND	290	ug/L
4-Methyl-2-pentanone (MIBK)	ND	1500	ug/L
Methyl tert-butyl ether (MTBE)	ND	730	ug/L
Naphthalene	ND	150	ug/L
n-Propylbenzene	ND	150	ug/L
Styrene	ND	150	ug/L
1,1,1,2-Tetrachloroethane	ND	150	ug/L
1,1,2,2-Tetrachloroethane	ND	150	ug/L
Tetrachloroethene	ND	150	ug/L
Tetrahydrofuran	ND	730	ug/L
Toluene	ND	150	ug/L
1,2,3-Trichlorobenzene	ND	150	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	150	ug/L
1,2,4-Trimethylbenzene	ND	150	ug/L
1,3,5-Trimethylbenzene	ND	150	ug/L
Vinyl acetate	ND	290	ug/L
Vinyl chloride	640	150	**ug/L**
m-Xylene & p-Xylene	ND	290	ug/L
o-Xylene	ND	150	ug/L
Cyclohexanone	ND	2900	ug/L
Trichlorofluoromethane	ND	150	ug/L
Trichloroethene	5100	150	**ug/L**
1,2,4-Trichloro-benzene	ND	150	ug/L
1,1,1-Trichloroethane	ND	150	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-100 07 10-14 EAST

GC/MS Volatiles

Lot-Sample #...: A0G150531-008 Work Order #...: L38J11AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	150	ug/L
1,2,3-Trichloropropane	ND	150	ug/L
1-Chlorohexane	ND	150	ug/L
n-Heptane	ND	150	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(73 - 122)
1,2-Dichloroethane-d4	115	(61 - 128)
Toluene-d8	103	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)

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7

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4M2C1AA Matrix.....: WATER
MB Lot-Sample #: A0G240000-064

Prep Date.....: 07/23/10
Analysis Date..: 07/23/10 Prep Batch #...: 0205064
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Acrolein	ND	20	ug/L	SW846 8260B
Acrylonitrile	ND	20	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4M2C1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2-Chloroethyl vinyl ether	ND	10	ug/L	SW846 8260B
1-Chlorohexane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexanone	ND	20	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Diethyl ether	ND	2.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
n-Heptane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
Iodomethane	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl methacrylate	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4M2C1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	111	(73 - 122)		
1,2-Dichloroethane-d4	112	(61 - 128)		
Toluene-d8	98	(76 - 110)		
4-Bromofluorobenzene	97	(74 - 116)		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4NGJ1AA Matrix.....: WATER
MB Lot-Sample #: A0G260000-154

Prep Date.....: 07/23/10
Analysis Date..: 07/23/10 Prep Batch #...: 0207154
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Acetone	ND	10	ug/L	SW846 8260B
Acrolein	ND	20	ug/L	SW846 8260B
Acrylonitrile	ND	20	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
2-Chloroethyl vinyl ether	ND	10	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4NGJ1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1-Chlorohexane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexanone	ND	20	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Diethyl ether	ND	2.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
n-Heptane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Iodomethane	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl methacrylate	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4NGJ1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	111	(73 - 122)		
1,2-Dichloroethane-d4	113	(61 - 128)		
Toluene-d8	97	(76 - 110)		
4-Bromofluorobenzene	94	(74 - 116)		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4M2C1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G240000-064 L4M2C1AD-LCSD
Prep Date.....: 07/23/10 Analysis Date..: 07/23/10
Prep Batch #...: 0205064
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloromethane	75	(48 - 123)			SW846 8260B
	83	(48 - 123)	9.8	(0-30)	SW846 8260B
Bromomethane	80	(64 - 129)			SW846 8260B
	74	(64 - 129)	7.5	(0-30)	SW846 8260B
Vinyl chloride	69	(61 - 120)			SW846 8260B
	78	(61 - 120)	12	(0-30)	SW846 8260B
Chloroethane	82	(66 - 126)			SW846 8260B
	78	(66 - 126)	5.4	(0-30)	SW846 8260B
Methylene chloride	89	(78 - 118)			SW846 8260B
	92	(78 - 118)	3.1	(0-30)	SW846 8260B
Acetone	72	(22 - 200)			SW846 8260B
	66	(22 - 200)	8.4	(0-95)	SW846 8260B
Carbon disulfide	82	(73 - 139)			SW846 8260B
	89	(73 - 139)	7.8	(0-30)	SW846 8260B
1,1-Dichloroethene	85	(63 - 130)			SW846 8260B
	92	(63 - 130)	7.8	(0-20)	SW846 8260B
1,1-Dichloroethane	89	(86 - 123)			SW846 8260B
	96	(86 - 123)	7.3	(0-30)	SW846 8260B
Chloroform	95	(84 - 128)			SW846 8260B
	97	(84 - 128)	2.8	(0-30)	SW846 8260B
1,2-Dichloroethane	103	(79 - 136)			SW846 8260B
	106	(79 - 136)	3.2	(0-30)	SW846 8260B
Methyl ethyl ketone	92	(28 - 237)			SW846 8260B
	81	(28 - 237)	12	(0-65)	SW846 8260B
1,1,1-Trichloroethane	94	(78 - 140)			SW846 8260B
	99	(78 - 140)	5.4	(0-30)	SW846 8260B
Carbon tetrachloride	100	(75 - 149)			SW846 8260B
	105	(75 - 149)	4.2	(0-30)	SW846 8260B
Bromodichloromethane	95	(87 - 130)			SW846 8260B
	100	(87 - 130)	5.3	(0-30)	SW846 8260B
1,2-Dichloropropane	85	(82 - 115)			SW846 8260B
	90	(82 - 115)	5.7	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	81 a	(84 - 130)			SW846 8260B
	88	(84 - 130)	7.3	(0-30)	SW846 8260B
Trichloroethene	97	(75 - 122)			SW846 8260B
	99	(75 - 122)	2.3	(0-20)	SW846 8260B
Chlorodibromomethane	99	(81 - 138)			SW846 8260B
	97	(81 - 138)	1.8	(0-30)	SW846 8260B
1,1,2-Trichloroethane	94	(83 - 122)			SW846 8260B
	92	(83 - 122)	2.3	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4M2C1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G240000-064 L4M2C1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	85	**(80 - 116)**			**SW846 8260B**
	89	**(80 - 116)**	**4.3**	**(0-20)**	**SW846 8260B**
trans-1,3-Dichloropropene	93	(84 - 130)			SW846 8260B
	91	(84 - 130)	2.0	(0-30)	SW846 8260B
Bromoform	98	(76 - 150)			SW846 8260B
	97	(76 - 150)	0.63	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	101	(78 - 141)			SW846 8260B
	99	(78 - 141)	2.4	(0-32)	SW846 8260B
2-Hexanone	104	(35 - 200)			SW846 8260B
	98	(35 - 200)	6.0	(0-52)	SW846 8260B
Tetrachloroethene	92	(88 - 113)			SW846 8260B
	92	(88 - 113)	0.030	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	85	(85 - 118)			SW846 8260B
	89	(85 - 118)	4.4	(0-30)	SW846 8260B
Toluene	87	**(74 - 119)**			**SW846 8260B**
	87	**(74 - 119)**	**0.0**	**(0-20)**	**SW846 8260B**
Chlorobenzene	89	**(76 - 117)**			**SW846 8260B**
	90	**(76 - 117)**	**1.2**	**(0-20)**	**SW846 8260B**
Ethylbenzene	90	(86 - 116)			SW846 8260B
	89	(86 - 116)	0.77	(0-30)	SW846 8260B
Styrene	87	(85 - 117)			SW846 8260B
	88	(85 - 117)	0.89	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	87	(85 - 113)			SW846 8260B
	93	(85 - 113)	6.2	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	86	(80 - 120)			SW846 8260B
	92	(80 - 120)	7.0	(0-30)	SW846 8260B
Dichlorodifluoromethane	68 a	(70 - 130)			SW846 8260B
	72	(70 - 130)	6.0	(0-30)	SW846 8260B
Trichlorofluoromethane	78	(70 - 130)			SW846 8260B
	89	(70 - 130)	13	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	97	(70 - 130)			SW846 8260B
	112	(70 - 130)	14	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	87	(70 - 130)			SW846 8260B
	91	(70 - 130)	3.8	(0-30)	SW846 8260B
1,2-Dibromoethane	97	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.8	(0-30)	SW846 8260B
Isopropylbenzene	83	(70 - 130)			SW846 8260B
	85	(70 - 130)	2.4	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4M2C1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G240000-064 L4M2C1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	86	(70 - 130)			SW846 8260B
	90	(70 - 130)	3.9	(0-30)	SW846 8260B
1,4-Dichlorobenzene	88	(70 - 130)			SW846 8260B
	92	(70 - 130)	4.4	(0-30)	SW846 8260B
1,2-Dichlorobenzene	87	(70 - 130)			SW846 8260B
	92	(70 - 130)	6.1	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	98	(70 - 130)			SW846 8260B
	113	(70 - 130)	14	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	85	(70 - 130)			SW846 8260B
	99	(70 - 130)	15	(0-30)	SW846 8260B
o-Xylene	85	(70 - 130)			SW846 8260B
	88	(70 - 130)	3.6	(0-30)	SW846 8260B
m-Xylene & p-Xylene	88	(70 - 130)			SW846 8260B
	88	(70 - 130)	0.80	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	92	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.2	(0-30)	SW846 8260B
Acrolein	64	(50 - 130)			SW846 8260B
	68	(50 - 130)	5.4	(0-30)	SW846 8260B
Vinyl acetate	75	(70 - 130)			SW846 8260B
	76	(70 - 130)	1.2	(0-30)	SW846 8260B
Acrylonitrile	88	(50 - 130)			SW846 8260B
	89	(50 - 130)	1.5	(0-30)	SW846 8260B
Bromobenzene	95	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.88	(0-30)	SW846 8260B
Bromochloromethane	97	(70 - 130)			SW846 8260B
	99	(70 - 130)	2.2	(0-30)	SW846 8260B
n-Butylbenzene	78	(70 - 130)			SW846 8260B
	85	(70 - 130)	8.4	(0-30)	SW846 8260B
sec-Butylbenzene	81	(70 - 130)			SW846 8260B
	88	(70 - 130)	8.2	(0-30)	SW846 8260B
tert-Butylbenzene	82	(70 - 130)			SW846 8260B
	86	(70 - 130)	4.8	(0-30)	SW846 8260B
2-Chlorotoluene	87	(70 - 130)			SW846 8260B
	89	(70 - 130)	1.9	(0-30)	SW846 8260B
4-Chlorotoluene	87	(70 - 130)			SW846 8260B
	88	(70 - 130)	0.64	(0-30)	SW846 8260B
Dibromomethane	103	(70 - 130)			SW846 8260B
	103	(70 - 130)	0.78	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4M2C1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G240000-064 L4M2C1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	96	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.3	(0-30)	SW846 8260B
2,2-Dichloropropane	77	(70 - 130)			SW846 8260B
	85	(70 - 130)	10	(0-30)	SW846 8260B
1,1-Dichloropropene	84	(70 - 130)			SW846 8260B
	90	(70 - 130)	7.0	(0-30)	SW846 8260B
Hexachlorobutadiene	65 a	(70 - 130)			SW846 8260B
	82	(70 - 130)	23	(0-30)	SW846 8260B
Iodomethane	106	(70 - 130)			SW846 8260B
	113	(70 - 130)	6.2	(0-30)	SW846 8260B
p-Isopropyltoluene	86	(70 - 130)			SW846 8260B
	95	(70 - 130)	9.3	(0-30)	SW846 8260B
Naphthalene	76	(70 - 130)			SW846 8260B
	88	(70 - 130)	15	(0-30)	SW846 8260B
n-Propylbenzene	89	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.8	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	95	(70 - 130)			SW846 8260B
	97	(70 - 130)	2.8	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	78	(70 - 130)			SW846 8260B
	90	(70 - 130)	14	(0-30)	SW846 8260B
1,2,3-Trichloropropane	98	(70 - 130)			SW846 8260B
	101	(70 - 130)	3.6	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	87	(70 - 130)			SW846 8260B
	92	(70 - 130)	5.9	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	86	(70 - 130)			SW846 8260B
	91	(70 - 130)	5.1	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
	102	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
	115	(61 - 128)
Toluene-d8	105	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4NGJ1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-154 L4NGJ1AD-LCSD
Prep Date.....: 07/23/10 Analysis Date..: 07/23/10
Prep Batch #...: 0207154
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloromethane	77	(48 - 123)			SW846 8260B
	80	(48 - 123)	4.0	(0-30)	SW846 8260B
Bromomethane	86	(64 - 129)			SW846 8260B
	93	(64 - 129)	7.9	(0-30)	SW846 8260B
Vinyl chloride	76	(61 - 120)			SW846 8260B
	76	(61 - 120)	0.13	(0-30)	SW846 8260B
Chloroethane	81	(66 - 126)			SW846 8260B
	89	(66 - 126)	8.8	(0-30)	SW846 8260B
Methylene chloride	93	(78 - 118)			SW846 8260B
	96	(78 - 118)	3.0	(0-30)	SW846 8260B
Acetone	79	(22 - 200)			SW846 8260B
	76	(22 - 200)	3.7	(0-95)	SW846 8260B
Carbon disulfide	95	(73 - 139)			SW846 8260B
	93	(73 - 139)	2.0	(0-30)	SW846 8260B
1,1-Dichloroethene	97	(63 - 130)			SW846 8260B
	94	(63 - 130)	3.8	(0-20)	SW846 8260B
1,1-Dichloroethane	93	(86 - 123)			SW846 8260B
	92	(86 - 123)	1.6	(0-30)	SW846 8260B
Chloroform	98	(84 - 128)			SW846 8260B
	101	(84 - 128)	2.4	(0-30)	SW846 8260B
1,2-Dichloroethane	105	(79 - 136)			SW846 8260B
	108	(79 - 136)	2.3	(0-30)	SW846 8260B
Methyl ethyl ketone	88	(28 - 237)			SW846 8260B
	86	(28 - 237)	2.2	(0-65)	SW846 8260B
1,1,1-Trichloroethane	102	(78 - 140)			SW846 8260B
	105	(78 - 140)	2.9	(0-30)	SW846 8260B
Carbon tetrachloride	114	(75 - 149)			SW846 8260B
	112	(75 - 149)	1.8	(0-30)	SW846 8260B
Bromodichloromethane	102	(87 - 130)			SW846 8260B
	99	(87 - 130)	2.5	(0-30)	SW846 8260B
1,2-Dichloropropane	91	(82 - 115)			SW846 8260B
	93	(82 - 115)	2.2	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	89	(84 - 130)			SW846 8260B
	90	(84 - 130)	1.8	(0-30)	SW846 8260B
Trichloroethene	103	(75 - 122)			SW846 8260B
	105	(75 - 122)	1.8	(0-20)	SW846 8260B
Chlorodibromomethane	104	(81 - 138)			SW846 8260B
	104	(81 - 138)	0.10	(0-30)	SW846 8260B
1,1,2-Trichloroethane	93	(83 - 122)			SW846 8260B
	92	(83 - 122)	1.5	(0-30)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4NGJ1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-154 L4NGJ1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**90**	**(80 - 116)**			**SW846 8260B**
	90	**(80 - 116)**	**0.020**	**(0-20)**	**SW846 8260B**
trans-1,3-Dichloropropene	96	(84 - 130)			SW846 8260B
	97	(84 - 130)	0.65	(0-30)	SW846 8260B
Bromoform	99	(76 - 150)			SW846 8260B
	99	(76 - 150)	0.22	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	100	(78 - 141)			SW846 8260B
	100	(78 - 141)	0.28	(0-32)	SW846 8260B
2-Hexanone	104	(35 - 200)			SW846 8260B
	96	(35 - 200)	8.2	(0-52)	SW846 8260B
Tetrachloroethene	102	(88 - 113)			SW846 8260B
	102	(88 - 113)	0.090	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	93	(85 - 118)			SW846 8260B
	89	(85 - 118)	3.8	(0-30)	SW846 8260B
Toluene	**94**	**(74 - 119)**			**SW846 8260B**
	94	**(74 - 119)**	**0.050**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**96**	**(76 - 117)**			**SW846 8260B**
	94	**(76 - 117)**	**2.4**	**(0-20)**	**SW846 8260B**
Ethylbenzene	100	(86 - 116)			SW846 8260B
	97	(86 - 116)	2.6	(0-30)	SW846 8260B
Styrene	96	(85 - 117)			SW846 8260B
	93	(85 - 117)	3.1	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	91	(85 - 113)			SW846 8260B
	96	(85 - 113)	5.4	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	94	(80 - 120)			SW846 8260B
	98	(80 - 120)	3.8	(0-30)	SW846 8260B
Dichlorodifluoromethane	77	(70 - 130)			SW846 8260B
	78	(70 - 130)	1.4	(0-30)	SW846 8260B
Trichlorofluoromethane	97	(70 - 130)			SW846 8260B
	105	(70 - 130)	8.4	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	121	(70 - 130)			SW846 8260B
	128	(70 - 130)	5.5	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	94	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.41	(0-30)	SW846 8260B
1,2-Dibromoethane	97	(70 - 130)			SW846 8260B
	98	(70 - 130)	0.80	(0-30)	SW846 8260B
Isopropylbenzene	94	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.2	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4NGJ1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-154 L4NGJ1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	96	(70 - 130)			SW846 8260B
	94	(70 - 130)	1.4	(0-30)	SW846 8260B
1,4-Dichlorobenzene	100	(70 - 130)			SW846 8260B
	96	(70 - 130)	4.2	(0-30)	SW846 8260B
1,2-Dichlorobenzene	93	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.32	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	102	(70 - 130)			SW846 8260B
	110	(70 - 130)	7.2	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	98	(70 - 130)			SW846 8260B
	98	(70 - 130)	0.46	(0-30)	SW846 8260B
o-Xylene	97	(70 - 130)			SW846 8260B
	95	(70 - 130)	2.2	(0-30)	SW846 8260B
m-Xylene & p-Xylene	97	(70 - 130)			SW846 8260B
	95	(70 - 130)	2.7	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	93	(70 - 130)			SW846 8260B
	95	(70 - 130)	1.3	(0-30)	SW846 8260B
Acrolein	84	(50 - 130)			SW846 8260B
	85	(50 - 130)	1.2	(0-30)	SW846 8260B
Vinyl acetate	95	(70 - 130)			SW846 8260B
	99	(70 - 130)	3.6	(0-30)	SW846 8260B
Acrylonitrile	90	(50 - 130)			SW846 8260B
	91	(50 - 130)	0.84	(0-30)	SW846 8260B
Bromobenzene	102	(70 - 130)			SW846 8260B
	101	(70 - 130)	1.2	(0-30)	SW846 8260B
Bromochloromethane	103	(70 - 130)			SW846 8260B
	107	(70 - 130)	3.7	(0-30)	SW846 8260B
n-Butylbenzene	91	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.78	(0-30)	SW846 8260B
sec-Butylbenzene	96	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.30	(0-30)	SW846 8260B
tert-Butylbenzene	96	(70 - 130)			SW846 8260B
	103	(70 - 130)	7.6	(0-30)	SW846 8260B
2-Chlorotoluene	96	(70 - 130)			SW846 8260B
	96	(70 - 130)	0.43	(0-30)	SW846 8260B
4-Chlorotoluene	95	(70 - 130)			SW846 8260B
	91	(70 - 130)	4.4	(0-30)	SW846 8260B
Dibromomethane	102	(70 - 130)			SW846 8260B
	102	(70 - 130)	0.16	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L4NGJ1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-154 L4NGJ1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	96	(70 - 130)			SW846 8260B
	92	(70 - 130)	4.7	(0-30)	SW846 8260B
2,2-Dichloropropane	97	(70 - 130)			SW846 8260B
	101	(70 - 130)	4.2	(0-30)	SW846 8260B
1,1-Dichloropropene	95	(70 - 130)			SW846 8260B
	97	(70 - 130)	2.2	(0-30)	SW846 8260B
Hexachlorobutadiene	77	(70 - 130)			SW846 8260B
	82	(70 - 130)	6.0	(0-30)	SW846 8260B
Iodomethane	111	(70 - 130)			SW846 8260B
	114	(70 - 130)	2.8	(0-30)	SW846 8260B
p-Isopropyltoluene	100	(70 - 130)			SW846 8260B
	99	(70 - 130)	1.1	(0-30)	SW846 8260B
Naphthalene	78	(70 - 130)			SW846 8260B
	83	(70 - 130)	5.7	(0-30)	SW846 8260B
n-Propylbenzene	101	(70 - 130)			SW846 8260B
	98	(70 - 130)	2.9	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	99	(70 - 130)			SW846 8260B
	98	(70 - 130)	0.60	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	89	(70 - 130)			SW846 8260B
	92	(70 - 130)	3.9	(0-30)	SW846 8260B
1,2,3-Trichloropropane	104	(70 - 130)			SW846 8260B
	103	(70 - 130)	0.47	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	97	(70 - 130)			SW846 8260B
	98	(70 - 130)	0.82	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	95	(70 - 130)			SW846 8260B
	96	(70 - 130)	0.47	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
	105	(73 - 122)
1,2-Dichloroethane-d4	108	(61 - 128)
	112	(61 - 128)
Toluene-d8	103	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	100	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L351M1A2-MS Matrix.....: WATER
MS Lot-Sample #: A0G140439-005 L351M1A3-MSD
Date Sampled...: 07/13/10 08:20 Date Received..: 07/14/10
Prep Date.....: 07/23/10 Analysis Date..: 07/23/10
Prep Batch #...: 0207154
Dilution Factor: 66.67

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	97	(62 - 130)			SW846 8260B
	94	(62 - 130)	3.6	(0-20)	SW846 8260B
Chloromethane	84	(40 - 137)			SW846 8260B
	84	(40 - 137)	0.17	(0-39)	SW846 8260B
Bromomethane	86	(55 - 145)			SW846 8260B
	61 p	(55 - 145)	34	(0-30)	SW846 8260B
Vinyl chloride	77 a	(88 - 126)			SW846 8260B
	77 a	(88 - 126)	0.27	(0-30)	SW846 8260B
Chloroethane	82	(59 - 142)			SW846 8260B
	26 a	(59 - 142)	14	(0-30)	SW846 8260B
Methylene chloride	91	(82 - 115)			SW846 8260B
	88	(82 - 115)	2.7	(0-30)	SW846 8260B
Acetone	95	(45 - 128)			SW846 8260B
	82	(45 - 128)	14	(0-30)	SW846 8260B
Carbon disulfide	95	(69 - 138)			SW846 8260B
	92	(69 - 138)	3.0	(0-41)	SW846 8260B
1,1-Dichloroethane	94	(88 - 127)			SW846 8260B
	84 a	(88 - 127)	3.0	(0-30)	SW846 8260B
Chloroform	102	(83 - 141)			SW846 8260B
	99	(83 - 141)	2.9	(0-30)	SW846 8260B
1,2-Dichloroethane	110	(71 - 160)			SW846 8260B
	110	(71 - 160)	0.47	(0-30)	SW846 8260B
Methyl ethyl ketone	93	(71 - 123)			SW846 8260B
	89	(71 - 123)	4.1	(0-30)	SW846 8260B
1,1,1-Trichloroethane	103	(71 - 162)			SW846 8260B
	101	(71 - 162)	2.1	(0-30)	SW846 8260B
Carbon tetrachloride	114	(63 - 176)			SW846 8260B
	108	(63 - 176)	5.2	(0-30)	SW846 8260B
Bromodichloromethane	103	(80 - 146)			SW846 8260B
	102	(80 - 146)	0.54	(0-30)	SW846 8260B
1,2-Dichloropropane	91	(87 - 114)			SW846 8260B
	91	(87 - 114)	0.21	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	87	(82 - 130)			SW846 8260B
	85	(82 - 130)	2.4	(0-30)	SW846 8260B
Trichloroethene	103	(62 - 130)			SW846 8260B
	102	(62 - 130)	1.3	(0-20)	SW846 8260B
Chlorodibromomethane	108	(71 - 158)			SW846 8260B
	102	(71 - 158)	5.7	(0-30)	SW846 8260B
1,1,2-Trichloroethane	99	(86 - 129)			SW846 8260B
	93	(86 - 129)	6.0	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L351M1A2-MS Matrix.....: WATER
MS Lot-Sample #: A0G140439-005 L351M1A3-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**92**	**(78 - 118)**			**SW846 8260B**
	91	**(78 - 118)**	0.87	(0-20)	**SW846 8260B**
trans-1,3-Dichloropropene	98	(73 - 147)			SW846 8260B
	94	(73 - 147)	4.9	(0-30)	SW846 8260B
Bromoform	102	(58 - 176)			SW846 8260B
	100	(58 - 176)	2.4	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	109	(82 - 135)			SW846 8260B
	103	(82 - 135)	5.6	(0-30)	SW846 8260B
2-Hexanone	116	(81 - 128)			SW846 8260B
	110	(81 - 128)	4.8	(0-30)	SW846 8260B
Tetrachloroethene	98	(85 - 121)			SW846 8260B
	98	(85 - 121)	0.21	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	97	(88 - 116)			SW846 8260B
	92	(88 - 116)	5.2	(0-30)	SW846 8260B
Toluene	**103**	**(70 - 119)**			**SW846 8260B**
	92	**(70 - 119)**	3.2	(0-20)	**SW846 8260B**
Chlorobenzene	**96**	**(76 - 117)**			**SW846 8260B**
	94	**(76 - 117)**	1.5	(0-20)	**SW846 8260B**
Ethylbenzene	104	(86 - 132)			SW846 8260B
	101	(86 - 132)	1.2	(0-30)	SW846 8260B
Styrene	99	(83 - 120)			SW846 8260B
	99	(83 - 120)	0.04	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	98	(87 - 114)			SW846 8260B
	94	(87 - 114)	3.9	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	99	(85 - 116)			SW846 8260B
	95	(85 - 116)	3.7	(0-30)	SW846 8260B
Dichlorodifluoromethane	76	(70 - 130)			SW846 8260B
	74	(70 - 130)	1.8	(0-30)	SW846 8260B
Trichlorofluoromethane	93	(70 - 130)			SW846 8260B
	86	(70 - 130)	8.9	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	125	(70 - 130)			SW846 8260B
	118	(70 - 130)	5.7	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	99	(70 - 130)			SW846 8260B
	94	(70 - 130)	4.4	(0-30)	SW846 8260B
1,2-Dibromoethane	102	(70 - 130)			SW846 8260B
	99	(70 - 130)	3.6	(0-30)	SW846 8260B
Isopropylbenzene	93	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.3	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L351M1A2-MS Matrix.....: WATER
MS Lot-Sample #: A0G140439-005 L351M1A3-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	95	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.89	(0-30)	SW846 8260B
1,4-Dichlorobenzene	95	(70 - 130)			SW846 8260B
	92	(70 - 130)	3.6	(0-30)	SW846 8260B
1,2-Dichlorobenzene	92	(70 - 130)			SW846 8260B
	92	(70 - 130)	0.48	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	102	(70 - 130)			SW846 8260B
	100	(70 - 130)	2.4	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	95	(70 - 130)			SW846 8260B
	91	(70 - 130)	3.4	(0-30)	SW846 8260B
o-Xylene	101	(70 - 130)			SW846 8260B
	95	(70 - 130)	3.6	(0-30)	SW846 8260B
m-Xylene & p-Xylene	99	(70 - 130)			SW846 8260B
	95	(70 - 130)	2.0	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	26 a	(70 - 130)			SW846 8260B
	26 a	(70 - 130)	1.4	(0-30)	SW846 8260B
Acrolein	95	(50 - 130)			SW846 8260B
	81	(50 - 130)	16	(0-30)	SW846 8260B
Acrylonitrile	101	(50 - 130)			SW846 8260B
	94	(50 - 130)	7.3	(0-30)	SW846 8260B
Vinyl acetate	97	(70 - 130)			SW846 8260B
	99	(70 - 130)	1.8	(0-30)	SW846 8260B
Bromobenzene	104	(70 - 130)			SW846 8260B
	98	(70 - 130)	6.5	(0-30)	SW846 8260B
Bromochloromethane	106	(70 - 130)			SW846 8260B
	106	(70 - 130)	0.28	(0-30)	SW846 8260B
n-Butylbenzene	90	(70 - 130)			SW846 8260B
	88	(70 - 130)	1.8	(0-30)	SW846 8260B
sec-Butylbenzene	93	(70 - 130)			SW846 8260B
	90	(70 - 130)	3.5	(0-30)	SW846 8260B
tert-Butylbenzene	92	(70 - 130)			SW846 8260B
	99	(70 - 130)	7.2	(0-30)	SW846 8260B
2-Chlorotoluene	95	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.65	(0-30)	SW846 8260B
4-Chlorotoluene	94	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.45	(0-30)	SW846 8260B
Dibromomethane	105	(70 - 130)			SW846 8260B
	102	(70 - 130)	3.2	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L351M1A2-MS Matrix.....: WATER
MS Lot-Sample #: A0G140439-005 L351M1A3-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	97	(70 - 130)			SW846 8260B
	97	(70 - 130)	0.61	(0-30)	SW846 8260B
2,2-Dichloropropane	92	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.93	(0-30)	SW846 8260B
1,1-Dichloropropene	95	(70 - 130)			SW846 8260B
	94	(70 - 130)	1.0	(0-30)	SW846 8260B
Hexachlorobutadiene	74	(70 - 130)			SW846 8260B
	73	(70 - 130)	1.5	(0-30)	SW846 8260B
Iodomethane	115	(70 - 130)			SW846 8260B
	114	(70 - 130)	0.75	(0-30)	SW846 8260B
p-Isopropyltoluene	97	(70 - 130)			SW846 8260B
	95	(70 - 130)	1.7	(0-30)	SW846 8260B
Naphthalene	82	(70 - 130)			SW846 8260B
	80	(70 - 130)	3.0	(0-30)	SW846 8260B
n-Propylbenzene	98	(70 - 130)			SW846 8260B
	93	(70 - 130)	5.4	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	101	(70 - 130)			SW846 8260B
	98	(70 - 130)	3.6	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	87	(70 - 130)			SW846 8260B
	84	(70 - 130)	4.0	(0-30)	SW846 8260B
1,2,3-Trichloropropane	103	(70 - 130)			SW846 8260B
	98	(70 - 130)	5.4	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	96	(70 - 130)			SW846 8260B
	94	(70 - 130)	2.4	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	95	(70 - 130)			SW846 8260B
	92	(70 - 130)	3.5	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
	108	(73 - 122)
1,2-Dichloroethane-d4	112	(61 - 128)
	111	(61 - 128)
Toluene-d8	102	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	101	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L38JX1AC-MS Matrix.....: WG
MS Lot-Sample #: A0G150531-007 L38JX1AD-MSD
Date Sampled...: 07/13/10 12:28 Date Received..: 07/15/10
Prep Date.....: 07/23/10 Analysis Date..: 07/23/10
Prep Batch #...: 0207154
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	95	(62 - 130)			SW846 8260B
	92	(62 - 130)	2.8	(0-20)	SW846 8260B
Chloromethane	71	(40 - 137)			SW846 8260B
	70	(40 - 137)	0.49	(0-39)	SW846 8260B
Bromomethane	85	(55 - 145)			SW846 8260B
	82	(55 - 145)	4.4	(0-30)	SW846 8260B
Vinyl chloride	76 a	(88 - 126)			SW846 8260B
	75 a	(88 - 126)	2.2	(0-30)	SW846 8260B
Chloroethane	87	(59 - 142)			SW846 8260B
	86	(59 - 142)	1.2	(0-30)	SW846 8260B
Methylene chloride	87	(82 - 115)			SW846 8260B
	86	(82 - 115)	0.34	(0-30)	SW846 8260B
Acetone	78	(45 - 128)			SW846 8260B
	59	(45 - 128)	27	(0-30)	SW846 8260B
Carbon disulfide	96	(69 - 138)			SW846 8260B
	94	(69 - 138)	1.9	(0-41)	SW846 8260B
1,1-Dichloroethane	93	(88 - 127)			SW846 8260B
	93	(88 - 127)	0.24	(0-30)	SW846 8260B
Chloroform	98	(83 - 141)			SW846 8260B
	101	(83 - 141)	3.1	(0-30)	SW846 8260B
1,2-Dichloroethane	104	(71 - 160)			SW846 8260B
	106	(71 - 160)	1.4	(0-30)	SW846 8260B
Methyl ethyl ketone	88	(71 - 123)			SW846 8260B
	85	(71 - 123)	3.9	(0-30)	SW846 8260B
1,1,1-Trichloroethane	103	(71 - 162)			SW846 8260B
	103	(71 - 162)	0.05	(0-30)	SW846 8260B
Carbon tetrachloride	112	(63 - 176)			SW846 8260B
	110	(63 - 176)	1.2	(0-30)	SW846 8260B
Bromodichloromethane	98	(80 - 146)			SW846 8260B
	99	(80 - 146)	1.1	(0-30)	SW846 8260B
1,2-Dichloropropane	86 a	(87 - 114)			SW846 8260B
	86 a	(87 - 114)	0.18	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	82	(82 - 130)			SW846 8260B
	81 a	(82 - 130)	1.4	(0-30)	SW846 8260B
Trichloroethene	105	(62 - 130)			SW846 8260B
	93	(62 - 130)	9.8	(0-20)	SW846 8260B
Chlorodibromomethane	102	(71 - 158)			SW846 8260B
	105	(71 - 158)	3.3	(0-30)	SW846 8260B
1,1,2-Trichloroethane	94	(86 - 129)			SW846 8260B
	92	(86 - 129)	2.5	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L38JX1AC-MS Matrix.....: WG
MS Lot-Sample #: A0G150531-007 L38JX1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**89**	**(78 - 118)**			**SW846 8260B**
	90	**(78 - 118)**	**0.81**	**(0-20)**	**SW846 8260B**
trans-1,3-Dichloropropene	92	(73 - 147)			SW846 8260B
	94	(73 - 147)	2.1	(0-30)	SW846 8260B
Bromoform	108	(58 - 176)			SW846 8260B
	106	(58 - 176)	1.6	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	95	(82 - 135)			SW846 8260B
	95	(82 - 135)	0.0	(0-30)	SW846 8260B
2-Hexanone	100	(81 - 128)			SW846 8260B
	101	(81 - 128)	0.83	(0-30)	SW846 8260B
Tetrachloroethene	99	(85 - 121)			SW846 8260B
	103	(85 - 121)	3.5	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	95	(88 - 116)			SW846 8260B
	94	(88 - 116)	1.3	(0-30)	SW846 8260B
Toluene	**90**	**(70 - 119)**			**SW846 8260B**
	91	**(70 - 119)**	**0.70**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**94**	**(76 - 117)**			**SW846 8260B**
	95	**(76 - 117)**	**2.0**	**(0-20)**	**SW846 8260B**
Ethylbenzene	94	(86 - 132)			SW846 8260B
	97	(86 - 132)	3.2	(0-30)	SW846 8260B
Styrene	96	(83 - 120)			SW846 8260B
	96	(83 - 120)	0.33	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	96	(87 - 114)			SW846 8260B
	95	(87 - 114)	1.6	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	95	(85 - 116)			SW846 8260B
	95	(85 - 116)	0.65	(0-30)	SW846 8260B
Dichlorodifluoromethane	78	(70 - 130)			SW846 8260B
	81	(70 - 130)	3.6	(0-30)	SW846 8260B
Trichlorofluoromethane	90	(70 - 130)			SW846 8260B
	86	(70 - 130)	5.2	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	123	(70 - 130)			SW846 8260B
	120	(70 - 130)	2.9	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	92	(70 - 130)			SW846 8260B
	90	(70 - 130)	2.5	(0-30)	SW846 8260B
1,2-Dibromoethane	96	(70 - 130)			SW846 8260B
	98	(70 - 130)	1.6	(0-30)	SW846 8260B
Isopropylbenzene	92	(70 - 130)			SW846 8260B
	94	(70 - 130)	2.2	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L38JX1AC-MS Matrix.....: WG
MS Lot-Sample #: A0G150531-007 L38JX1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	95	(70 - 130)			SW846 8260B
	92	(70 - 130)	2.3	(0-30)	SW846 8260B
1,4-Dichlorobenzene	95	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.33	(0-30)	SW846 8260B
1,2-Dichlorobenzene	92	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.3	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	106	(70 - 130)			SW846 8260B
	106	(70 - 130)	0.0	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	90	(70 - 130)			SW846 8260B
	96	(70 - 130)	6.6	(0-30)	SW846 8260B
o-Xylene	91	(70 - 130)			SW846 8260B
	97	(70 - 130)	6.0	(0-30)	SW846 8260B
m-Xylene & p-Xylene	95	(70 - 130)			SW846 8260B
	96	(70 - 130)	0.53	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acrolein	84	(50 - 130)			SW846 8260B
	78	(50 - 130)	8.4	(0-30)	SW846 8260B
Acrylonitrile	91	(50 - 130)			SW846 8260B
	86	(50 - 130)	5.6	(0-30)	SW846 8260B
Vinyl acetate	94	(70 - 130)			SW846 8260B
	88	(70 - 130)	7.2	(0-30)	SW846 8260B
Bromobenzene	104	(70 - 130)			SW846 8260B
	101	(70 - 130)	2.9	(0-30)	SW846 8260B
Bromochloromethane	105	(70 - 130)			SW846 8260B
	98	(70 - 130)	7.0	(0-30)	SW846 8260B
n-Butylbenzene	90	(70 - 130)			SW846 8260B
	90	(70 - 130)	0.21	(0-30)	SW846 8260B
sec-Butylbenzene	93	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.68	(0-30)	SW846 8260B
tert-Butylbenzene	91	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.02	(0-30)	SW846 8260B
2-Chlorotoluene	98	(70 - 130)			SW846 8260B
	94	(70 - 130)	3.6	(0-30)	SW846 8260B
4-Chlorotoluene	96	(70 - 130)			SW846 8260B
	94	(70 - 130)	1.6	(0-30)	SW846 8260B
Dibromomethane	101	(70 - 130)			SW846 8260B
	98	(70 - 130)	3.2	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150531 Work Order #...: L38JX1AC-MS Matrix.....: WG
MS Lot-Sample #: A0G150531-007 L38JX1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	92	(70 - 130)			SW846 8260B
	94	(70 - 130)	2.1	(0-30)	SW846 8260B
2,2-Dichloropropane	95	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.25	(0-30)	SW846 8260B
1,1-Dichloropropene	96	(70 - 130)			SW846 8260B
	96	(70 - 130)	0.16	(0-30)	SW846 8260B
Hexachlorobutadiene	77	(70 - 130)			SW846 8260B
	82	(70 - 130)	6.9	(0-30)	SW846 8260B
Iodomethane	114	(70 - 130)			SW846 8260B
	113	(70 - 130)	0.78	(0-30)	SW846 8260B
p-Isopropyltoluene	98	(70 - 130)			SW846 8260B
	98	(70 - 130)	0.52	(0-30)	SW846 8260B
Naphthalene	85	(70 - 130)			SW846 8260B
	90	(70 - 130)	5.6	(0-30)	SW846 8260B
n-Propylbenzene	98	(70 - 130)			SW846 8260B
	101	(70 - 130)	2.7	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	97	(70 - 130)			SW846 8260B
	100	(70 - 130)	2.8	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	86	(70 - 130)			SW846 8260B
	92	(70 - 130)	6.5	(0-30)	SW846 8260B
1,2,3-Trichloropropane	106	(70 - 130)			SW846 8260B
	100	(70 - 130)	5.8	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	96	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.89	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	94	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.1	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(73 - 122)
	107	(73 - 122)
1,2-Dichloroethane-d4	118	(61 - 128)
	116	(61 - 128)
Toluene-d8	103	(76 - 110)
	103	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	102	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

North Canton
4101 Shuffel Street, N. W.
North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: James Staley	Date: 7/14/10	COC No:
Company: MACTEC Engineering and Consulting, Inc.	Tel/Fax: (231) 922-9050	Lab Contact: Mark Loeb	Carrier:	1 of 3 COCs
Address: 41 Hughes Drive	Analysis Turnaround Time			Job No.
City/State/Zip: Traverse City, Michigan 49686	Calendar (C) or Work Days (W) _____			
(231) 922-9050 Phone	TAT if different from Below _____			SDG No.
(231) 922-9055 FAX	■ 2 weeks			
Project Name: Honeywell South Bend - Area 14 East	☐ 1 week			
Site: South Bend	☐ 2 days			
P O #: 5133286	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N)	VOCs - 8260 B	Sample Specific Notes:
MW-16 07 10	7/13/10	13:43	VOA/Grab	Water	3	N	X	
MW-17 07 10		13:08	VOA/Grab	Water	3	N	X	
AS-1 07 10		11:23	VOA/Grab	Water	3	N	X	
EW-2B 07 10		11:53	VOA/Grab	Water	3	N	X	
MP-10 07 10		10:55	VOA/Grab	Water	3	N	X	
86-15 07 10		10:25	VOA/Grab	Water	3	N	X	
86-14 07 10		12:28	VOA/Grab	Water	3	N	X	
86-14 MS/MSD 07 10		12:28	VOA/Grab	Water	6	N	X	
MW-100 07 10 - 14 East	↓	—	VOA/Grab	Water	2	N	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
■ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	MACTEC	7/14/10		TA-NC	7/15/10 9:15am
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica Cooler Receipt Form/Narrative Lot Number: 440150531
North Canton Facility

Client Mactec Project _____ By: _____
Cooler Received on 7/15/10 Opened on 7/15/10 (Signature)
FedEx [X] UPS [ ] DHL [ ] FAS [ ] Stetson [ ] Client Drop Off [ ] TestAmerica Courier [ ] Other _____
TestAmerica Cooler # 241-820 Multiple Coolers [ ] Foam Box [ ] Client Cooler [ ] Other _____
1. Were custody seals on the outside of the cooler(s)? Yes [X] No [ ] Intact? Yes [X] No [ ] NA [ ]
If YES, Quantity 2 Quantity Unsalvageable _____
Were custody seals on the outside of cooler(s) signed and dated? Yes [X] No [ ] NA [ ]
Were custody seals on the bottle(s)? Yes [ ] No [X]
If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes [X] No [ ]
3. Did custody papers accompany the sample(s)? Yes [X] No [ ] Relinquished by client? Yes [X] No [ ]
4. Were the custody papers signed in the appropriate place? Yes [X] No [ ]
5. Packing material used: Bubble Wrap [X] Foam [X] None [ ] Other _____
6. Cooler temperature upon receipt 1.7 °C See back of form for multiple coolers/temps [ ].
METHOD: IR [X] Other [ ] _____
COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] Water [ ] None [ ]
7. Did all bottles arrive in good condition (Unbroken)? Yes [X] No [ ]
8. Could all bottle labels be reconciled with the COC? Yes [X] No [ ]
9. Were sample(s) at the correct pH upon receipt? Yes [ ] No [ ] NA [X]
10. Were correct bottle(s) used for the test(s) indicated? Yes [X] No [ ]
11. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [X] NA [ ]
12. Sufficient quantity received to perform indicated analyses? Yes [X] No [ ]
13. Was a trip blank present in the cooler(s)? Yes [X] No [ ] Were VOAs on the COC? Yes [X] No [ ]
Contacted PM _____ Date _____ by _____ via Verbal [ ] Voice Mail [ ] Other [ ]
Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

~~Sample(s) _____ were received after the recommended holding time had expired.~~
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 051010-HNO_3; Sulfuric Acid Lot# 121709-H_2SO_4; Sodium Hydroxide Lot# 100108 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-$(CH_3COO)_2ZN/NaOH$.* What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

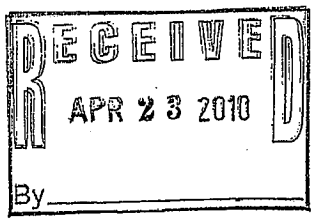
Discrepancies Cont'd:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

HONEYWELL SOUTH BEND A14E

Lot #: A0D140426

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Approved for release.
Mark J. Loeb
Project Manager II
4/21/2010 3:20 PM

Mark J. Loeb
Project Manager
mark.loeb@testamericainc.com

April 21, 2010

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

CASE NARRATIVE

A0D140426

The following report contains the analytical results for eight water samples and one quality control sample submitted to TestAmerica North Canton by MACTEC Engineering & Consulting, Inc. from the Honeywell South Bend A14E Site. The samples were received April 14, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Christopher J. Kapanowski, Nick Rogers, and Steven Murray on April 20, 2010. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Mark J. Loeb, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.4°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The matrix spike/matrix spike duplicate(s) for 86-15 0410 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

2-Chloroethyl-vinyl ether cannot be reliably recovered in an acid preserved sample.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A0D140426

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
86-15 0410 04/13/10 10:20 001				
cis-1,2-Dichloroethene	21	5.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	35	5.0	ug/L	SW846 8260B
Trichloroethene	170	5.0	ug/L	SW846 8260B
MP-10 0410 04/13/10 10:53 002				
cis-1,2-Dichloroethene	13	5.7	ug/L	SW846 8260B
trans-1,2-Dichloroethene	17	5.7	ug/L	SW846 8260B
Trichloroethene	210	5.7	ug/L	SW846 8260B
Vinyl chloride	54	5.7	ug/L	SW846 8260B
AS-1 0410 04/13/10 11:18 003				
Vinyl chloride	1.2	1.0	ug/L	SW846 8260B
86-14 0410 04/13/10 12:18 005				
Vinyl chloride	13	1.0	ug/L	SW846 8260B
MW-17 0410 04/13/10 13:52 006				
Carbon disulfide	1.6	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	2.7	1.0	ug/L	SW846 8260B
Toluene	1.2	1.0	ug/L	SW846 8260B
MW-16 0410 04/13/10 14:40 007				
cis-1,2-Dichloroethene	69000	2000	ug/L	SW846 8260B
Trichloroethene	62000	2000	ug/L	SW846 8260B
Vinyl chloride	8200	2000	ug/L	SW846 8260B
MW-100 0410 A14E 04/13/10 008				
cis-1,2-Dichloroethene	70000	2500	ug/L	SW846 8260B
Trichloroethene	63000	2500	ug/L	SW846 8260B
Vinyl chloride	8200	2500	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A0D140426

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A0D140426

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LXXM3	001	86-15 0410	04/13/10	10:20
LXXND	002	MP-10 0410	04/13/10	10:53
LXXNE	003	AS-1 0410	04/13/10	11:18
LXXNG	004	EW-2B 0410	04/13/10	11:45
LXXNK	005	86-14 0410	04/13/10	12:18
LXXNM	006	MW-17 0410	04/13/10	13:52
LXXNP	007	MW-16 0410	04/13/10	14:40
LXXNQ	008	MW-100 0410 A14E	04/13/10	
LXXNR	009	TRIP BLANK	04/13/10	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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Client Sample ID: 86-15 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-001 Work Order #...: LXXM31AA Matrix.....: WG
Date Sampled...: 04/13/10 10:20 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 5 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	50	ug/L
Acrolein	ND	100	ug/L
Acrylonitrile	ND	100	ug/L
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	5.0	ug/L
Methyl ethyl ketone	ND	50	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	5.0	ug/L
2-Chloroethyl vinyl ether	ND	50	ug/L
Chloroform	ND	5.0	ug/L
1-Chlorohexane	ND	5.0	ug/L
Chloromethane	ND	5.0	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
Cyclohexanone	ND	100	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
trans-1,4-Dichloro-2-butene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	5.0	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
cis-1,2-Dichloroethene	21	5.0	ug/L
trans-1,2-Dichloroethene	35	5.0	ug/L
Dichlorofluoromethane	ND	10	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: 86-15 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-001 Work Order #...: LXXM31AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	5.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Diethyl ether	ND	10	ug/L
Ethyl methacrylate	ND	5.0	ug/L
Trichlorofluoromethane	ND	5.0	ug/L
n-Heptane	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
2-Hexanone	ND	50	ug/L
Iodomethane	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L
Methylene chloride	ND	5.0	ug/L
Methyl methacrylate	ND	10	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Tetrahydrofuran	ND	25	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	**170**	**5.0**	**ug/L**
1,2,3-Trichloropropane	ND	5.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl acetate	ND	10	ug/L
Vinyl chloride	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L
m-Xylene & p-Xylene	ND	10	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: 86-15 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-001 Work Order #...: LXXM31AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L
Methyl tert-butyl ether (MTBE)	ND	25	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MP-10 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-002 Work Order #...: LXXND1AA Matrix.....: WG
Date Sampled...: 04/13/10 10:53 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 5.71 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	57	ug/L
Acrolein	ND	110	ug/L
Acrylonitrile	ND	110	ug/L
Benzene	ND	5.7	ug/L
Bromobenzene	ND	5.7	ug/L
Bromochloromethane	ND	5.7	ug/L
Bromodichloromethane	ND	5.7	ug/L
Bromoform	ND	5.7	ug/L
Bromomethane	ND	5.7	ug/L
Methyl ethyl ketone	ND	57	ug/L
n-Butylbenzene	ND	5.7	ug/L
sec-Butylbenzene	ND	5.7	ug/L
tert-Butylbenzene	ND	5.7	ug/L
Carbon disulfide	ND	5.7	ug/L
Carbon tetrachloride	ND	5.7	ug/L
Chlorobenzene	ND	5.7	ug/L
Chlorodibromomethane	ND	5.7	ug/L
Chloroethane	ND	5.7	ug/L
2-Chloroethyl vinyl ether	ND	57	ug/L
Chloroform	ND	5.7	ug/L
1-Chlorohexane	ND	5.7	ug/L
Chloromethane	ND	5.7	ug/L
2-Chlorotoluene	ND	5.7	ug/L
4-Chlorotoluene	ND	5.7	ug/L
Cyclohexanone	ND	110	ug/L
1,2-Dibromoethane	ND	5.7	ug/L
Dibromomethane	ND	5.7	ug/L
1,2-Dichlorobenzene	ND	5.7	ug/L
1,3-Dichlorobenzene	ND	5.7	ug/L
1,4-Dichlorobenzene	ND	5.7	ug/L
trans-1,4-Dichloro-2-butene	ND	5.7	ug/L
Dichlorodifluoromethane	ND	5.7	ug/L
1,1-Dichloroethane	ND	5.7	ug/L
1,2-Dichloroethane	ND	5.7	ug/L
1,1-Dichloroethene	ND	5.7	ug/L
cis-1,2-Dichloroethene	13	5.7	ug/L
trans-1,2-Dichloroethene	17	5.7	ug/L
Dichlorofluoromethane	ND	11	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MP-10 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-002 Work Order #...: LXXND1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	5.7	ug/L
1,3-Dichloropropane	ND	5.7	ug/L
2,2-Dichloropropane	ND	5.7	ug/L
1,1-Dichloropropene	ND	5.7	ug/L
cis-1,3-Dichloropropene	ND	5.7	ug/L
trans-1,3-Dichloropropene	ND	5.7	ug/L
Ethylbenzene	ND	5.7	ug/L
Diethyl ether	ND	11	ug/L
Ethyl methacrylate	ND	5.7	ug/L
Trichlorofluoromethane	ND	5.7	ug/L
n-Heptane	ND	5.7	ug/L
Hexachlorobutadiene	ND	5.7	ug/L
2-Hexanone	ND	57	ug/L
Iodomethane	ND	5.7	ug/L
Isopropylbenzene	ND	5.7	ug/L
p-Isopropyltoluene	ND	5.7	ug/L
Methylene chloride	ND	5.7	ug/L
Methyl methacrylate	ND	11	ug/L
Naphthalene	ND	5.7	ug/L
n-Propylbenzene	ND	5.7	ug/L
Styrene	ND	5.7	ug/L
1,1,1,2-Tetrachloroethane	ND	5.7	ug/L
1,1,2,2-Tetrachloroethane	ND	5.7	ug/L
Tetrachloroethene	ND	5.7	ug/L
Tetrahydrofuran	ND	29	ug/L
Toluene	ND	5.7	ug/L
1,2,3-Trichlorobenzene	ND	5.7	ug/L
1,2,4-Trichloro-benzene	ND	5.7	ug/L
1,1,1-Trichloroethane	ND	5.7	ug/L
1,1,2-Trichloroethane	ND	5.7	ug/L
Trichloroethene	**210**	**5.7**	**ug/L**
1,2,3-Trichloropropane	ND	5.7	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.7	ug/L
1,2,4-Trimethylbenzene	ND	5.7	ug/L
1,3,5-Trimethylbenzene	ND	5.7	ug/L
Vinyl acetate	ND	11	ug/L
Vinyl chloride	**54**	**5.7**	**ug/L**
o-Xylene	ND	5.7	ug/L
m-Xylene & p-Xylene	ND	11	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	11	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MP-10 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-002 Work Order #...: LXXND1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	57	ug/L
Methyl tert-butyl ether (MTBE)	ND	29	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: AS-1 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-003 Work Order #...: LXXNE1AA Matrix.....: WG
Date Sampled...: 04/13/10 11:18 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: AS-1 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-003 Work Order #...: LXXNE1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	**1.2**	**1.0**	**ug/L**
o-Xylene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: AS-1 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-003 Work Order #...: LXXNE1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	88	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: EW-2B 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-004 Work Order #...: LXXNG1AA Matrix.....: WG
Date Sampled...: 04/13/10 11:45 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: EW-2B 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-004 Work Order #...: LXXNG1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
o-Xylene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: EW-2B 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-004 Work Order #...: LXXNG1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: 86-14 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-005 Work Order #...: LXXNK1AA Matrix.....: WG
Date Sampled...: 04/13/10 12:18 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: 86-14 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-005 Work Order #...: LXXNK1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	**13**	**1.0**	**ug/L**
o-Xylene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: 86-14 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-005 Work Order #...: LXXNK1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-17 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-006 Work Order #...: LXXNM1AA Matrix.....: WG
Date Sampled...: 04/13/10 13:52 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	**1.6**	**1.0**	**ug/L**
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	**2.7**	**1.0**	**ug/L**
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-17 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-006 Work Order #...: LXXNM1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	**1.2**	**1.0**	**ug/L**
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
o-Xylene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-17 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-006 Work Order #...: LXXNM1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	85	(76 - 110)
4-Bromofluorobenzene	107	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-16 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-007 Work Order #...: LXXNP1AA Matrix.....: WG
Date Sampled...: 04/13/10 14:40 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 2000 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	20000	ug/L
Acrolein	ND	40000	ug/L
Acrylonitrile	ND	40000	ug/L
Benzene	ND	2000	ug/L
Bromobenzene	ND	2000	ug/L
Bromochloromethane	ND	2000	ug/L
Bromodichloromethane	ND	2000	ug/L
Bromoform	ND	2000	ug/L
Bromomethane	ND	2000	ug/L
Methyl ethyl ketone	ND	20000	ug/L
n-Butylbenzene	ND	2000	ug/L
sec-Butylbenzene	ND	2000	ug/L
tert-Butylbenzene	ND	2000	ug/L
Carbon disulfide	ND	2000	ug/L
Carbon tetrachloride	ND	2000	ug/L
Chlorobenzene	ND	2000	ug/L
Chlorodibromomethane	ND	2000	ug/L
Chloroethane	ND	2000	ug/L
2-Chloroethyl vinyl ether	ND	20000	ug/L
Chloroform	ND	2000	ug/L
1-Chlorohexane	ND	2000	ug/L
Chloromethane	ND	2000	ug/L
2-Chlorotoluene	ND	2000	ug/L
4-Chlorotoluene	ND	2000	ug/L
Cyclohexanone	ND	40000	ug/L
1,2-Dibromoethane	ND	2000	ug/L
Dibromomethane	ND	2000	ug/L
1,2-Dichlorobenzene	ND	2000	ug/L
1,3-Dichlorobenzene	ND	2000	ug/L
1,4-Dichlorobenzene	ND	2000	ug/L
trans-1,4-Dichloro-2-butene	ND	2000	ug/L
Dichlorodifluoromethane	ND	2000	ug/L
1,1-Dichloroethane	ND	2000	ug/L
1,2-Dichloroethane	ND	2000	ug/L
1,1-Dichloroethene	ND	2000	ug/L
cis-1,2-Dichloroethene	69000	2000	ug/L
trans-1,2-Dichloroethene	ND	2000	ug/L
Dichlorofluoromethane	ND	4000	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-16 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-007 Work Order #...: LXXNP1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	2000	ug/L
1,3-Dichloropropane	ND	2000	ug/L
2,2-Dichloropropane	ND	2000	ug/L
1,1-Dichloropropene	ND	2000	ug/L
cis-1,3-Dichloropropene	ND	2000	ug/L
trans-1,3-Dichloropropene	ND	2000	ug/L
Ethylbenzene	ND	2000	ug/L
Diethyl ether	ND	4000	ug/L
Ethyl methacrylate	ND	2000	ug/L
Trichlorofluoromethane	ND	2000	ug/L
n-Heptane	ND	2000	ug/L
Hexachlorobutadiene	ND	2000	ug/L
2-Hexanone	ND	20000	ug/L
Iodomethane	ND	2000	ug/L
Isopropylbenzene	ND	2000	ug/L
p-Isopropyltoluene	ND	2000	ug/L
Methylene chloride	ND	2000	ug/L
Methyl methacrylate	ND	4000	ug/L
Naphthalene	ND	2000	ug/L
n-Propylbenzene	ND	2000	ug/L
Styrene	ND	2000	ug/L
1,1,1,2-Tetrachloroethane	ND	2000	ug/L
1,1,2,2-Tetrachloroethane	ND	2000	ug/L
Tetrachloroethene	ND	2000	ug/L
Tetrahydrofuran	ND	10000	ug/L
Toluene	ND	2000	ug/L
1,2,3-Trichlorobenzene	ND	2000	ug/L
1,2,4-Trichloro-benzene	ND	2000	ug/L
1,1,1-Trichloroethane	ND	2000	ug/L
1,1,2-Trichloroethane	ND	2000	ug/L
Trichloroethene	**62000**	**2000**	**ug/L**
1,2,3-Trichloropropane	ND	2000	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2000	ug/L
1,2,4-Trimethylbenzene	ND	2000	ug/L
1,3,5-Trimethylbenzene	ND	2000	ug/L
Vinyl acetate	ND	4000	ug/L
Vinyl chloride	**8200**	**2000**	**ug/L**
o-Xylene	ND	2000	ug/L
m-Xylene & p-Xylene	ND	4000	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	4000	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-16 0410

GC/MS Volatiles

Lot-Sample #...: A0D140426-007 Work Order #...: LXXNP1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	20000	ug/L
Methyl tert-butyl ether (MTBE)	ND	10000	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-100 0410 A14E

GC/MS Volatiles

Lot-Sample #...: A0D140426-008 Work Order #...: LXXNQ1AA Matrix.....: WG
Date Sampled...: 04/13/10 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 2500 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25000	ug/L
Acrolein	ND	50000	ug/L
Acrylonitrile	ND	50000	ug/L
Benzene	ND	2500	ug/L
Bromobenzene	ND	2500	ug/L
Bromochloromethane	ND	2500	ug/L
Bromodichloromethane	ND	2500	ug/L
Bromoform	ND	2500	ug/L
Bromomethane	ND	2500	ug/L
Methyl ethyl ketone	ND	25000	ug/L
n-Butylbenzene	ND	2500	ug/L
sec-Butylbenzene	ND	2500	ug/L
tert-Butylbenzene	ND	2500	ug/L
Carbon disulfide	ND	2500	ug/L
Carbon tetrachloride	ND	2500	ug/L
Chlorobenzene	ND	2500	ug/L
Chlorodibromomethane	ND	2500	ug/L
Chloroethane	ND	2500	ug/L
2-Chloroethyl vinyl ether	ND	25000	ug/L
Chloroform	ND	2500	ug/L
1-Chlorohexane	ND	2500	ug/L
Chloromethane	ND	2500	ug/L
2-Chlorotoluene	ND	2500	ug/L
4-Chlorotoluene	ND	2500	ug/L
Cyclohexanone	ND	50000	ug/L
1,2-Dibromoethane	ND	2500	ug/L
Dibromomethane	ND	2500	ug/L
1,2-Dichlorobenzene	ND	2500	ug/L
1,3-Dichlorobenzene	ND	2500	ug/L
1,4-Dichlorobenzene	ND	2500	ug/L
trans-1,4-Dichloro-2-butene	ND	2500	ug/L
Dichlorodifluoromethane	ND	2500	ug/L
1,1-Dichloroethane	ND	2500	ug/L
1,2-Dichloroethane	ND	2500	ug/L
1,1-Dichloroethene	ND	2500	ug/L
cis-1,2-Dichloroethene	70000	2500	ug/L
trans-1,2-Dichloroethene	ND	2500	ug/L
Dichlorofluoromethane	ND	5000	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-100 0410 A14E

GC/MS Volatiles

Lot-Sample #...: A0D140426-008 Work Order #...: LXXNQ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	2500	ug/L
1,3-Dichloropropane	ND	2500	ug/L
2,2-Dichloropropane	ND	2500	ug/L
1,1-Dichloropropene	ND	2500	ug/L
cis-1,3-Dichloropropene	ND	2500	ug/L
trans-1,3-Dichloropropene	ND	2500	ug/L
Ethylbenzene	ND	2500	ug/L
Diethyl ether	ND	5000	ug/L
Ethyl methacrylate	ND	2500	ug/L
Trichlorofluoromethane	ND	2500	ug/L
n-Heptane	ND	2500	ug/L
Hexachlorobutadiene	ND	2500	ug/L
2-Hexanone	ND	25000	ug/L
Iodomethane	ND	2500	ug/L
Isopropylbenzene	ND	2500	ug/L
p-Isopropyltoluene	ND	2500	ug/L
Methylene chloride	ND	2500	ug/L
Methyl methacrylate	ND	5000	ug/L
Naphthalene	ND	2500	ug/L
n-Propylbenzene	ND	2500	ug/L
Styrene	ND	2500	ug/L
1,1,1,2-Tetrachloroethane	ND	2500	ug/L
1,1,2,2-Tetrachloroethane	ND	2500	ug/L
Tetrachloroethene	ND	2500	ug/L
Tetrahydrofuran	ND	12000	ug/L
Toluene	ND	2500	ug/L
1,2,3-Trichlorobenzene	ND	2500	ug/L
1,2,4-Trichloro-benzene	ND	2500	ug/L
1,1,1-Trichloroethane	ND	2500	ug/L
1,1,2-Trichloroethane	ND	2500	ug/L
Trichloroethene	**63000**	**2500**	**ug/L**
1,2,3-Trichloropropane	ND	2500	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2500	ug/L
1,2,4-Trimethylbenzene	ND	2500	ug/L
1,3,5-Trimethylbenzene	ND	2500	ug/L
Vinyl acetate	ND	5000	ug/L
Vinyl chloride	**8200**	**2500**	**ug/L**
o-Xylene	ND	2500	ug/L
m-Xylene & p-Xylene	ND	5000	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	5000	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-100 0410 A14E

GC/MS Volatiles

Lot-Sample #...: A0D140426-008 Work Order #...: LXXNQ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	25000	ug/L
Methyl tert-butyl ether (MTBE)	ND	12000	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A0D140426-009 Work Order #...: LXXNR1AA Matrix.....: WQ
Date Sampled...: 04/13/10 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A0D140426-009 Work Order #...: LXXNR1AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
o-Xylene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A0D140426-009 Work Order #...: LXXNR1AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	85	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

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QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D140426 Work Order #...: LX6J41AA Matrix.....: WATER
MB Lot-Sample #: A0D190000-163

Prep Date.....: 04/16/10
Analysis Date..: 04/16/10 Prep Batch #...: 0109163
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Acrolein	ND	20	ug/L	SW846 8260B
Acrylonitrile	ND	20	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
2-Chloroethyl vinyl ether	ND	10	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1-Chlorohexane	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexanone	ND	20	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D140426 Work Order #...: LX6J41AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Diethyl ether	ND	2.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
n-Heptane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Iodomethane	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Methyl methacrylate	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D140426 Work Order #...: LX6J41AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140426 Work Order #...: LX6J41AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D190000-163 LX6J41AD-LCSD
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloromethane	92	(48 - 123)			SW846 8260B
	91	(48 - 123)	0.81	(0-30)	SW846 8260B
Bromomethane	108	(64 - 129)			SW846 8260B
	103	(64 - 129)	4.7	(0-30)	SW846 8260B
Vinyl chloride	100	(61 - 120)			SW846 8260B
	99	(61 - 120)	0.19	(0-30)	SW846 8260B
Chloroethane	53 a	(66 - 126)			SW846 8260B
	58 a	(66 - 126)	8.9	(0-30)	SW846 8260B
Methylene chloride	83	(78 - 118)			SW846 8260B
	81	(78 - 118)	2.1	(0-30)	SW846 8260B
Acetone	95	(22 - 200)			SW846 8260B
	100	(22 - 200)	5.6	(0-95)	SW846 8260B
Carbon disulfide	80	(73 - 139)			SW846 8260B
	79	(73 - 139)	1.2	(0-30)	SW846 8260B
1,1-Dichloroethene	**96**	**(63 - 130)**			**SW846 8260B**
	94	**(63 - 130)**	**1.8**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethane	96	(86 - 123)			SW846 8260B
	95	(86 - 123)	0.96	(0-30)	SW846 8260B
Chloroform	98	(84 - 128)			SW846 8260B
	97	(84 - 128)	1.5	(0-30)	SW846 8260B
1,2-Dichloroethane	112	(79 - 136)			SW846 8260B
	112	(79 - 136)	0.55	(0-30)	SW846 8260B
Methyl ethyl ketone	102	(28 - 237)			SW846 8260B
	103	(28 - 237)	0.88	(0-65)	SW846 8260B
1,1,1-Trichloroethane	93	(78 - 140)			SW846 8260B
	93	(78 - 140)	0.24	(0-30)	SW846 8260B
Carbon tetrachloride	93	(75 - 149)			SW846 8260B
	92	(75 - 149)	0.97	(0-30)	SW846 8260B
Bromodichloromethane	94	(87 - 130)			SW846 8260B
	95	(87 - 130)	0.96	(0-30)	SW846 8260B
1,2-Dichloropropane	96	(82 - 115)			SW846 8260B
	95	(82 - 115)	0.23	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	88	(84 - 130)			SW846 8260B
	85	(84 - 130)	3.4	(0-30)	SW846 8260B
Trichloroethene	**96**	**(75 - 122)**			**SW846 8260B**
	93	**(75 - 122)**	**2.9**	**(0-20)**	**SW846 8260B**
Chlorodibromomethane	87	(81 - 138)			SW846 8260B
	87	(81 - 138)	0.11	(0-30)	SW846 8260B
1,1,2-Trichloroethane	95	(83 - 122)			SW846 8260B
	95	(83 - 122)	0.69	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140426 Work Order #...: LX6J41AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D190000-163 LX6J41AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**93**	**(80 - 116)**			**SW846 8260B**
	93	**(80 - 116)**	**0.18**	**(0-20)**	**SW846 8260B**
trans-1,3-Dichloropropene	91	(84 - 130)			SW846 8260B
	89	(84 - 130)	1.8	(0-30)	SW846 8260B
Bromoform	81	(76 - 150)			SW846 8260B
	78	(76 - 150)	4.0	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	100	(78 - 141)			SW846 8260B
	101	(78 - 141)	1.6	(0-32)	SW846 8260B
2-Hexanone	100	(35 - 200)			SW846 8260B
	102	(35 - 200)	2.0	(0-52)	SW846 8260B
Tetrachloroethene	97	(88 - 113)			SW846 8260B
	95	(88 - 113)	2.4	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	84 a	(85 - 118)			SW846 8260B
	85	(85 - 118)	1.8	(0-30)	SW846 8260B
Toluene	**99**	**(74 - 119)**			**SW846 8260B**
	99	**(74 - 119)**	**0.56**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**95**	**(76 - 117)**			**SW846 8260B**
	93	**(76 - 117)**	**1.8**	**(0-20)**	**SW846 8260B**
Ethylbenzene	101	(86 - 116)			SW846 8260B
	99	(86 - 116)	1.8	(0-30)	SW846 8260B
Styrene	104	(85 - 117)			SW846 8260B
	102	(85 - 117)	1.5	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	91	(85 - 113)			SW846 8260B
	90	(85 - 113)	1.2	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	95	(80 - 120)			SW846 8260B
	93	(80 - 120)	2.6	(0-30)	SW846 8260B
Dichlorodifluoromethane	82	(70 - 130)			SW846 8260B
	80	(70 - 130)	1.6	(0-30)	SW846 8260B
Trichlorofluoromethane	132 a	(70 - 130)			SW846 8260B
	126	(70 - 130)	4.0	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	102	(70 - 130)			SW846 8260B
	98	(70 - 130)	3.6	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	91	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.17	(0-30)	SW846 8260B
1,2-Dibromoethane	95	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.5	(0-30)	SW846 8260B
Isopropylbenzene	93	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.020	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140426 Work Order #...: LX6J41AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D190000-163 LX6J41AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	93	(70 - 130)			SW846 8260B
	94	(70 - 130)	1.4	(0-30)	SW846 8260B
1,4-Dichlorobenzene	92	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.65	(0-30)	SW846 8260B
1,2-Dichlorobenzene	92	(70 - 130)			SW846 8260B
	94	(70 - 130)	1.9	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	69 a	(70 - 130)			SW846 8260B
	75	(70 - 130)	8.1	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	92	(70 - 130)			SW846 8260B
	100	(70 - 130)	7.9	(0-30)	SW846 8260B
o-Xylene	103	(70 - 130)			SW846 8260B
	102	(70 - 130)	1.2	(0-30)	SW846 8260B
m-Xylene & p-Xylene	103	(70 - 130)			SW846 8260B
	101	(70 - 130)	1.9	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	97	(70 - 130)			SW846 8260B
	92	(70 - 130)	5.2	(0-30)	SW846 8260B
Acrolein	119	(50 - 130)			SW846 8260B
	118	(50 - 130)	0.070	(0-30)	SW846 8260B
Vinyl acetate	122	(70 - 130)			SW846 8260B
	123	(70 - 130)	0.46	(0-30)	SW846 8260B
Acrylonitrile	95	(50 - 130)			SW846 8260B
	94	(50 - 130)	0.67	(0-30)	SW846 8260B
Bromobenzene	89	(70 - 130)			SW846 8260B
	92	(70 - 130)	3.4	(0-30)	SW846 8260B
Bromochloromethane	93	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.8	(0-30)	SW846 8260B
n-Butylbenzene	93	(70 - 130)			SW846 8260B
	96	(70 - 130)	3.6	(0-30)	SW846 8260B
sec-Butylbenzene	93	(70 - 130)			SW846 8260B
	95	(70 - 130)	2.1	(0-30)	SW846 8260B
tert-Butylbenzene	104	(70 - 130)			SW846 8260B
	106	(70 - 130)	2.6	(0-30)	SW846 8260B
2-Chlorotoluene	92	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.88	(0-30)	SW846 8260B
4-Chlorotoluene	93	(70 - 130)			SW846 8260B
	95	(70 - 130)	1.6	(0-30)	SW846 8260B
Dibromomethane	103	(70 - 130)			SW846 8260B
	103	(70 - 130)	0.33	(0-30)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140426 Work Order #...: LX6J41AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D190000-163 LX6J41AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	98	(70 - 130)			SW846 8260B
	96	(70 - 130)	2.7	(0-30)	SW846 8260B
2,2-Dichloropropane	89	(70 - 130)			SW846 8260B
	84	(70 - 130)	5.9	(0-30)	SW846 8260B
1,1-Dichloropropene	100	(70 - 130)			SW846 8260B
	98	(70 - 130)	1.4	(0-30)	SW846 8260B
Hexachlorobutadiene	86	(70 - 130)			SW846 8260B
	89	(70 - 130)	3.1	(0-30)	SW846 8260B
Iodomethane	83	(70 - 130)			SW846 8260B
	81	(70 - 130)	2.2	(0-30)	SW846 8260B
p-Isopropyltoluene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.9	(0-30)	SW846 8260B
Naphthalene	86	(70 - 130)			SW846 8260B
	94	(70 - 130)	9.0	(0-30)	SW846 8260B
n-Propylbenzene	91	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.39	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	89	(70 - 130)			SW846 8260B
	88	(70 - 130)	1.7	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	93	(70 - 130)			SW846 8260B
	101	(70 - 130)	8.8	(0-30)	SW846 8260B
1,2,3-Trichloropropane	101	(70 - 130)			SW846 8260B
	98	(70 - 130)	2.9	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	97	(70 - 130)			SW846 8260B
	100	(70 - 130)	3.3	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	88	(70 - 130)			SW846 8260B
	90	(70 - 130)	2.0	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(73 - 122)
	87	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
	99	(61 - 128)
Toluene-d8	94	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	108	(74 - 116)
	106	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140426 Work Order #...: LXXM31AC-MS Matrix.....: WG
MS Lot-Sample #: A0D140426-001 LXXM31AD-MSD
Date Sampled...: 04/13/10 10:20 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	95	(62 - 130)			SW846 8260B
	95	(62 - 130)	0.67	(0-20)	SW846 8260B
Chloromethane	97	(40 - 137)			SW846 8260B
	98	(40 - 137)	1.8	(0-39)	SW846 8260B
Bromomethane	118	(55 - 145)			SW846 8260B
	114	(55 - 145)	2.9	(0-30)	SW846 8260B
Vinyl chloride	100	(88 - 126)			SW846 8260B
	99	(88 - 126)	0.76	(0-30)	SW846 8260B
Chloroethane	70	(59 - 142)			SW846 8260B
	75	(59 - 142)	7.7	(0-30)	SW846 8260B
Methylene chloride	79 a	(82 - 115)			SW846 8260B
	82	(82 - 115)	4.2	(0-30)	SW846 8260B
Acetone	105	(45 - 128)			SW846 8260B
	100	(45 - 128)	5.0	(0-30)	SW846 8260B
Carbon disulfide	79	(69 - 138)			SW846 8260B
	79	(69 - 138)	0.09	(0-41)	SW846 8260B
1,1-Dichloroethane	96	(88 - 127)			SW846 8260B
	97	(88 - 127)	0.99	(0-30)	SW846 8260B
Chloroform	98	(83 - 141)			SW846 8260B
	99	(83 - 141)	1.1	(0-30)	SW846 8260B
1,2-Dichloroethane	112	(71 - 160)			SW846 8260B
	109	(71 - 160)	2.2	(0-30)	SW846 8260B
Methyl ethyl ketone	103	(71 - 123)			SW846 8260B
	103	(71 - 123)	0.34	(0-30)	SW846 8260B
1,1,1-Trichloroethane	93	(71 - 162)			SW846 8260B
	98	(71 - 162)	5.3	(0-30)	SW846 8260B
Carbon tetrachloride	89	(63 - 176)			SW846 8260B
	93	(63 - 176)	3.5	(0-30)	SW846 8260B
Bromodichloromethane	93	(80 - 146)			SW846 8260B
	97	(80 - 146)	3.4	(0-30)	SW846 8260B
1,2-Dichloropropane	95	(87 - 114)			SW846 8260B
	95	(87 - 114)	0.69	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	80 a	(82 - 130)			SW846 8260B
	82	(82 - 130)	1.9	(0-30)	SW846 8260B
Trichloroethene	81	(62 - 130)			SW846 8260B
	74	(62 - 130)	1.7	(0-20)	SW846 8260B
Chlorodibromomethane	83	(71 - 158)			SW846 8260B
	85	(71 - 158)	3.3	(0-30)	SW846 8260B
1,1,2-Trichloroethane	94	(86 - 129)			SW846 8260B
	95	(86 - 129)	0.88	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140426 Work Order #...: LXXM31AC-MS Matrix.....: WG
MS Lot-Sample #: A0D140426-001 LXXM31AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**92**	**(78 - 118)**			**SW846 8260B**
	93	**(78 - 118)**	**1.9**	**(0-20)**	**SW846 8260B**
trans-1,3-Dichloropropene	81	(73 - 147)			SW846 8260B
	89	(73 - 147)	9.0	(0-30)	SW846 8260B
Bromoform	77	(58 - 176)			SW846 8260B
	82	(58 - 176)	6.0	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	100	(82 - 135)			SW846 8260B
	103	(82 - 135)	3.0	(0-30)	SW846 8260B
2-Hexanone	98	(81 - 128)			SW846 8260B
	104	(81 - 128)	5.7	(0-30)	SW846 8260B
Tetrachloroethene	89	(85 - 121)			SW846 8260B
	96	(85 - 121)	6.9	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	84 a	(88 - 116)			SW846 8260B
	90	(88 - 116)	6.8	(0-30)	SW846 8260B
Toluene	**96**	**(70 - 119)**			**SW846 8260B**
	98	**(70 - 119)**	**2.2**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**91**	**(76 - 117)**			**SW846 8260B**
	94	**(76 - 117)**	**2.4**	**(0-20)**	**SW846 8260B**
Ethylbenzene	97	(86 - 132)			SW846 8260B
	98	(86 - 132)	1.3	(0-30)	SW846 8260B
Styrene	101	(83 - 120)			SW846 8260B
	103	(83 - 120)	1.8	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	88	(87 - 114)			SW846 8260B
	92	(87 - 114)	3.3	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	92	(85 - 116)			SW846 8260B
	91	(85 - 116)	0.89	(0-30)	SW846 8260B
Dichlorodifluoromethane	74	(70 - 130)			SW846 8260B
	78	(70 - 130)	5.2	(0-30)	SW846 8260B
Trichlorofluoromethane	129	(70 - 130)			SW846 8260B
	130	(70 - 130)	0.60	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	92	(70 - 130)			SW846 8260B
	98	(70 - 130)	6.7	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	90	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.1	(0-30)	SW846 8260B
1,2-Dibromoethane	92	(70 - 130)			SW846 8260B
	96	(70 - 130)	4.6	(0-30)	SW846 8260B
Isopropylbenzene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.8	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140426 Work Order #...: LXXM31AC-MS Matrix.....: WG
MS Lot-Sample #: A0D140426-001 LXXM31AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	93	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.98	(0-30)	SW846 8260B
1,4-Dichlorobenzene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.2	(0-30)	SW846 8260B
1,2-Dichlorobenzene	92	(70 - 130)			SW846 8260B
	94	(70 - 130)	2.3	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	73	(70 - 130)			SW846 8260B
	79	(70 - 130)	8.1	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	92	(70 - 130)			SW846 8260B
	96	(70 - 130)	4.1	(0-30)	SW846 8260B
o-Xylene	98	(70 - 130)			SW846 8260B
	105	(70 - 130)	6.7	(0-30)	SW846 8260B
m-Xylene & p-Xylene	98	(70 - 130)			SW846 8260B
	101	(70 - 130)	2.3	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acrolein	120	(50 - 130)			SW846 8260B
	125	(50 - 130)	3.8	(0-30)	SW846 8260B
Acrylonitrile	94	(50 - 130)			SW846 8260B
	96	(50 - 130)	1.8	(0-30)	SW846 8260B
Vinyl acetate	121	(70 - 130)			SW846 8260B
	128	(70 - 130)	6.0	(0-30)	SW846 8260B
Bromobenzene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.1	(0-30)	SW846 8260B
Bromochloromethane	90	(70 - 130)			SW846 8260B
	90	(70 - 130)	0.02	(0-30)	SW846 8260B
n-Butylbenzene	88	(70 - 130)			SW846 8260B
	90	(70 - 130)	1.6	(0-30)	SW846 8260B
sec-Butylbenzene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.5	(0-30)	SW846 8260B
tert-Butylbenzene	101	(70 - 130)			SW846 8260B
	105	(70 - 130)	3.2	(0-30)	SW846 8260B
2-Chlorotoluene	88	(70 - 130)			SW846 8260B
	92	(70 - 130)	3.6	(0-30)	SW846 8260B
4-Chlorotoluene	94	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.26	(0-30)	SW846 8260B
Dibromomethane	105	(70 - 130)			SW846 8260B
	103	(70 - 130)	2.2	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140426 Work Order #...: LXXM31AC-MS Matrix.....: WG
MS Lot-Sample #: A0D140426-001 LXXM31AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	94	(70 - 130)			SW846 8260B
	97	(70 - 130)	3.9	(0-30)	SW846 8260B
2,2-Dichloropropane	84	(70 - 130)			SW846 8260B
	84	(70 - 130)	0.10	(0-30)	SW846 8260B
1,1-Dichloropropene	96	(70 - 130)			SW846 8260B
	100	(70 - 130)	3.9	(0-30)	SW846 8260B
Hexachlorobutadiene	83	(70 - 130)			SW846 8260B
	87	(70 - 130)	4.3	(0-30)	SW846 8260B
Iodomethane	83	(70 - 130)			SW846 8260B
	84	(70 - 130)	0.99	(0-30)	SW846 8260B
p-Isopropyltoluene	89	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.4	(0-30)	SW846 8260B
Naphthalene	86	(70 - 130)			SW846 8260B
	93	(70 - 130)	7.4	(0-30)	SW846 8260B
n-Propylbenzene	88	(70 - 130)			SW846 8260B
	91	(70 - 130)	3.0	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	83	(70 - 130)			SW846 8260B
	86	(70 - 130)	3.3	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	94	(70 - 130)			SW846 8260B
	101	(70 - 130)	7.1	(0-30)	SW846 8260B
1,2,3-Trichloropropane	103	(70 - 130)			SW846 8260B
	105	(70 - 130)	1.4	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	96	(70 - 130)			SW846 8260B
	98	(70 - 130)	1.8	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	86	(70 - 130)			SW846 8260B
	89	(70 - 130)	3.9	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(73 - 122)
	86	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	96	(61 - 128)
Toluene-d8	92	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	106	(74 - 116)
	108	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
MACTEC	Steve Murray	4/13/10	145771
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
41 Hughes Drive	(231) 922-9050		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
Traverse City / MI / 49686	James Stirley	Mark Loeb	
Project Name and Location (State)	**Carrier/Waybill Number**		
Honeywell South Bend A14E			
Contract/Purchase Order/Quote No.			
5133286			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8260 VOCs	Special Instructions/ Conditions of Receipt
B6-15 0410	4/13/10	1020		X						3			X	
MP-10 0410		1053		X						3			X	
AS-1 0410		1118		X						3			X	
EW-2R 0410		1145		X						3			X	
B6-14 0410		1218		X						3			X	
MW-17 0410		1352		X						3			X	
MW-16 0410		1440		X						3			X	
B6-15 MS/MSD 0410		1020		X						6			X	
MW-100 0410 A14E	↓	—		X						3	←6		X	
Trip Blank	—	—		X						1			X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4/13/10	17:20	1. Received By	4/14/10	915
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** A0D140426
North Canton Facility

Client Mactec Project ________ By: [signature] (Signature)
Cooler Received on 4-14-10 Opened on 4-14-10
FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other ________
TestAmerica Cooler # 241-878 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other ________

1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 2 Quantity Unsalvageable ________
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? ________
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other ________
6. Cooler temperature upon receipt 1.4 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐ ________
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM ________ Date ________ by ________ via Verbal ☐ Voice Mail ☐ Other ☐
Concerning ________

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) ________ were received after the recommended holding time had expired.
Sample(s) ________ were received in a broken container.
Sample(s) ________ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) ________ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 121709-HNO_3; Sulfuric Acid Lot# 121709-H_2SO_4; Sodium Hydroxide Lot# 100108-NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-$(CH_3COO)_2ZN/NaOH$.* What time was preservative added to sample(s)? ________

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

microbialinsights

2340 Stock Creek Blvd.
Rockford TN 37853-3044
Phone: (865) 573-8188
Fax: (865) 573-8133
Email: info@microbe.com

Client: James Staley
MACTEC Engineering & Consulting
41 Hughes Drive
Traverse City, MI 49686

Phone: (231) 922-9050

Fax: (231) 922-9055

Identifier: 084GF **Date Rec:** 06/26/2009 **Report Date:** 06/29/2009

Client Project #: 3310090026 **Client Project Name:** Honeywell South Bend

Purchase Order #: 200905789

Analysis Requested: CENSUS

Comments:

Reviewed By:

Anita Biernacki

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **MACTEC Engineering & Consulting** **MI Project Number:** **084GF**
Project: Honeywell South Bend Date Received: 06/26/2009

Sample Information

Client Sample ID:		MW-16 0609	MW-17 0609	PZ-23A 0609	PZ-23B 0609	PZ-22A 0609
Sample Date:		06/24/2009	06/24/2009	06/25/2009	06/25/2009	06/25/2009
Units:		cells/bead	cells/bead	cells/bead	cells/bead	cells/bead
Analyst:		ab	ab	ab	ab	ab
Dechlorinating Bacteria						
Dehalococcoides spp.	DHC	**2.82E+04**	**5.30E+04**	**1.14E+02**	<2.50E+01	**8.77E+01**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client:	**MACTEC Engineering & Consulting**	**MI Project Number:**	**084GF**
Project:	Honeywell South Bend	Date Received:	06/26/2009

Sample Information

Client Sample ID:	**PZ-22B 0609**
Sample Date:	06/25/2009
Units:	cells/bead
Analyst:	ab

Dechlorinating Bacteria

Dehalococcoides spp.	DHC	<2.50E+01

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

microbialinsights

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Client: James Staley
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Phone: (231) 922-9050

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Identifier: 028HG **Date Rec:** 07/13/2010 **Report Date:** 07/14/2010

Client Project #: 3310090026.02 **Client Project Name:** Honeywell - South Bend

Purchase Order #: 201009424

Analysis Requested: CENSUS

Reviewed By:

Anita Biernacki

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CENSUS

Client: **MACTEC Engineering & Consulting** **MI Project Number:** **028HG**
Project: Honeywell - South Bend Date Received: 07/13/2010

Sample Information

Client Sample ID:		MW-16 0710	MW-17 0710	S-22 0710	PZ-22A 0710	S-23 0710
Sample Date:		07/12/2010	07/12/2010	07/12/2010	07/12/2010	07/12/2010
Units:		cells/bead	cells/bead	cells/bead	cells/bead	cells/bead
Analyst:		CT	CT	CT	CT	CT
Dechlorinating Bacteria						
Dehalococcoides spp.	DHC	**3.79E+07**	**3.32E+03**	**4.16E+02**	**1.02E+03**	**1.14E+02**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

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CENSUS

Client: **MACTEC Engineering & Consulting**
Project: Honeywell - South Bend

MI Project Number: **028HG**
Date Received: 07/13/2010

Sample Information

Client Sample ID:	**PZ-23A 0710**
Sample Date:	07/12/2010
Units:	cells/bead
Analyst:	CT

Dechlorinating Bacteria

Dehalococcoides spp.	DHC	**1.19E+04**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

microbialinsights

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Identifier: 028HG **Date Rec:** 07/13/2010 **Report Date:** 07/14/2010

Client Project #: 3310090026.02 **Client Project Name:** Honeywell - South Bend

Purchase Order #: 201009424

Comments:

SYSTEM OPERATION REPORT:
PERIOD JANUARY 30, 2010 THROUGH AUGUST 6, 2010
VAPOR EXTRACTION/IN-WELL VAPOR STRIPPING SYSTEM

AREA 14 WEST – HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA
VRP# 6980601

Prepared for:

Honeywell

1985 Douglas Drive North
MN 10-182A
Golden Valley, MN 55422

Prepared by:

MACTEC ENGINEERING AND CONSULTING, INC.
41 HUGHES DRIVE
TRAVERSE CITY, MICHIGAN 49686

SEPTEMBER 14, 2010

MACTEC PROJECT NUMBER: 3310102011.6100

TABLE OF CONTENTS

1.0 INTRODUCTION

Mactec Engineering and Consulting, Inc. (Mactec) has been contracted by Honeywell International, Inc. (Honeywell) to provide professional services related to the continued safe operation, monitoring and maintenance of an In-Well Vapor Stripping System and Soil Vapor Extraction (SVE) wells at the Honeywell Industrial Complex in South Bend, Indiana. The system was designed to remediate soil and shallow groundwater at the Area 14 West – Former Painting and Degreasing Operations Source Area (Area 14 West), as shown on Figure 1-1. It treats volatile organic compounds (VOCs) consisting primarily of trichloroethene (TCE) and other related chlorinated organic constituents, which are the contaminants of concern in this area. The system includes groundwater circulation, air sparging and SVE.

Area 14 West is the second area of concern (AOC) to be remediated under the approved Facility-Wide Remediation Work Plan (RWP) at the Honeywell South Bend Industrial Complex. The Area Specific RWP for Area 14 West was approved by the Indiana Department of Environmental Management (IDEM) in April 2001. Design details for contractor procurement were finalized in the first quarter of 2006, and the system was constructed from August 14, 2006 through January 25, 2007. The system was activated on January 18, 2007.

To support safe and effective operations, Mactec and/or its operations, monitoring and maintenance (OM&M) subcontractor (Peerless Midwest) visit the site on a monthly basis and respond to system alarm messages. The system is equipped with a wireless control/monitoring system (EOS™), which allows remote access to system controls and sends a fax message summarizing operational data to Mactec on a daily basis and in the event of system shut down. The EOS™ also logs operational time of the SVE blower and sparge air compressor.

This document presents system OM&M activities performed during the time period from January 30, 2010 through August 6, 2010.

The main sections of this report include:

- Routine System Inspections
- System Operational Data
- Routine Maintenance and Repairs
- System Performance Monitoring
- Conclusions

2.0 ROUTINE SYSTEM INSPECTIONS

Monthly system inspections were performed by Mactec's OM&M subcontractor. The system was operated and inspected in accordance with the system's Operation, Monitoring and Maintenance Plan (Mactec, 2007). At the end of this reporting period the vapor extraction system was operating at 40 inches of water vacuum, which resulted in a total system vapor withdrawal flow of 250 standard cubic feet per minute (scfm). At this vacuum rate, air sparging and groundwater circulation can be performed without excessive capture of groundwater. The air sparge compressor pressure is regulated to 33 pounds per square inch (psi) with total regulated air flow rate of approximately 17 scfm.

Routine system inspections at the treatment trailer area included the following:

- Inspect compressor room and components: observe and record – submersible pump operational lights on control panel, air compressor oil level, air sparge pressure regulator, and air sparge delivery flow rate to each in-well vapor stripping well.
- Inspect blower room and components: observe and record - knockout tank levels (drain if needed), vacuum levels, total vapor extraction flow rate, air stream temperature before and after blower and inspect vapor discharge hoses.
- Inspect carbon filtration system and record pressures before primary vessel and between primary and secondary vessels.
- Collect effluent air samples on scheduled basis.

Each site inspection is documented on a site inspection report form. The O&M subcontractor records all system information readings and completes observation site inspection reports, which are forwarded electronically to Mactec for review a day after each site visit. The site inspection reports for this period of operation are presented in Appendix A. On a weekly basis, the system is accessed remotely through the EOS™ telemetry system to download system operational data.

3.0 ROUTINE MAINTENACE AND REPAIRS

During this reporting period, freezing was identified in the above-grade vapor extraction lines. In an effort to better protect the lines from the elements, on February 4, 2010 Mactec personnel installed insulated duct over the cam-locked flex lines leading from the Plant 1 building to the treatment trailer.

ART™ well cleaning activities took place on March 16 and 17, 2010. During well cleaning the motor and liquid end on ART-5 was replaced, and ART-3 and ART-4 received new liquid ends. All remaining ART™ circulation pumps and liquid ends were cleaned in a run tank using RydLyme®. The ART™ in-well components were removed from the wells and the pumps were placed into a run tank and started for a short period of time to introduce the RydLyme® to the internal liquid end components. The pumps were allowed to soak in the RydLyme® while the remaining ART™ well components were cleaned. The air sparge delivery and groundwater spray nozzles were also cleaned using RydLyme®. Jetting was performed to clean out iron fouling and mineralization scale in the treatment wells using a power washer and special jetting apparatus. After jetting the entire screened interval of each well several times, the scale debris was pumped from the bottom of the well using air lift technique. After jetting and development, the pumps were started and purged of RydLyme® before returning the ART™ components to the well.

On July 15, 2010 and July 22, 2010 Mactec personnel replaced the exhaust fans in the control room and process room, respectively, after discovering that the original fans were not operating correctly. Mactec personnel followed lockout/tag-out procedures prior to conducting the replacement of the exhaust fan motors.

4.0 SYSTEM OPERATIONAL DATA

As shown on Figure 4-1, five in-well vapor stripping wells (ART-1 through ART-5) are located in the treatment area. The treatment wells were installed at approximately 30-foot-on-centers with one well (ART-3) in the area of highest contaminant mass. Four SVE wells (SVE-1 through SVE-4) are also operated to focus vapor removal from soils above the water table. The distribution header and controls are located in the treatment trailer, adjacent to the treatment area. Vapor recovered through the treatment wells is treated at the equipment area located along the east wall of the Plant 1 building. The components in the treatment trailer area consist of an EOS™ system control, an air compressor, dryer, receiving tank, associated filters, vacuum blower, moisture knockout tank, heat exchanger and two 1,800-pound Carbon Vapor Pac™ units.

4.1 SYSTEM RUNTIME

Under normal operating conditions, the system operates continuously, seven days per week. The system requires manual resetting if the knockout tank fills with water or after power supply outages/surges.

Through the end of this reporting period (August 6, 2010), the system was online for 1,210 days or 92.3% of the time. The system was off-line during the first part of the reporting period (from January 30, 2010 to February 23, 2010) due to freezing SVE lines. Table 4-1 presents weekly operational information including hours of operation, volatile organic concentrations detected in vapors being drawn from treatment wells, SVE flow rates and VOC removal rates.

4.2 AIR (VAPOR) SAMPLING DATA

Air stream samples were collected before and between the Carbon Vapor Pac™ units. Air stream samples were collected approximately once per month during this operation period. Air stream samples were collected from sampling ports directly into Tedlar bags, which were sent to TestAmerica Laboratories, Inc., for analysis of VOCs by USEPA Method TO14. Laboratory analytical are summarized on Table 4-1 rates and the analytical reports for air samples are presented in Appendix B. The results from the air stream samples are used to assess compliance with the exempted air permit application, to evaluate the need for carbon vessel change out and to monitor the rate and amount of contaminants being removed from the subsurface by system operation.

During this reporting period, TCE detected in vapors being drawn by the system were reported ranging from 0.23 parts per million (ppm) to 1.7 ppm. The average weekly removal rate during this period of operation was 0.6 pounds of TCE per week. Table 4-2 shows the formula used for calculating removal rates. Chart 4-1 presents average weekly TCE, cis-1,2-dichloroethene (DCE), and trans-1,2-DCE removal rates from January 2007 through present; Chart 4-2 presents the total mass of TCE, cis-1,2-DCE and trans-1,2-DCE removed from the system from January 2007 through present. A total of 656.3 pounds of TCE have been removed from the subsurface as a result of system operation through August 6, 2010.

5.0 SYSTEM PERFORMANCE MONITORING

During this reporting period, system performance monitoring included vapor and groundwater sampling, dissolved oxygen measurements and induced vacuum measurements.

5.1 GROUNDWATER SAMPLING

On April 12, 2010 and July 14, 2010 groundwater samples were collected from monitoring wells MW-As, MW-Ad, MW-Bs, MW-Bd, MW-Cs, MW-Cd and MW-7. The samples were analyzed by Test America Laboratories, Inc. for VOCs using Method 8260 Plus.

Groundwater samples were collected using a peristaltic pump or disposable bailer. A minimum of three well volumes was purged from each well prior to sample collection. As part of the groundwater sampling process, during the purging of the monitoring wells at each location prior to sampling, the purged groundwater was field screened for temperature, pH, specific conductance, oxidation reduction potential, turbidity and dissolved oxygen (DO). Groundwater Sample Record Sheets are presented in Appendix C.

Table 5-1 summarizes VOCs detected in groundwater samples from these monitoring wells, as well as historical groundwater data back to August 30, 2005 when the monitoring well network in this area was installed as part of pre-design activities. Groundwater analytical reports are presented in Appendix D. The December 2006 groundwater samples were collected as baseline samples prior to system startup. Charts 5-1 through 5-7 present changes in VOC concentrations with time in groundwater samples from each individual monitoring well in/or adjacent to the treatment area.

Groundwater samples from monitoring wells directly beneath source area have shown a decrease in TCE concentrations since the December 2006 baseline sampling. At MW-As, an 80% reduction in TCE concentrations has been observed while a 64% reduction in TCE concentrations has been observed at MW-Cs. TCE in groundwater samples from MW-7 has reduced to below the limit of detection. Cis-1,2-DCE in groundwater samples from MW-As, MW-Ad, MW-Bd, MW-Cs, MW-Cd and MW-7 have shown a decrease in concentrations, while MW-Bs remains relatively stable. At each location, cis-1,2-DCE in groundwater is at a concentration below the Tier II Non-residential Cleanup Goal (IDEM, 1996). Reported vinyl chloride concentrations in groundwater samples from MW-As, MW-Bs and MW-7 have decreased since December 2007.

5.2 DISSOLVED OXYGEN

In addition to VOC analysis, dissolved oxygen field measurements were resumed during the July 2010 sampling event utilizing a direct-reading instrument (Troll 9500). During the April 2010 sampling event the dissolved oxygen meter was damaged during calibration procedures. Therefore, dissolved oxygen data was not collected during the April 2010 sampling event. Field dissolved oxygen data is summarized on Table 5-2. Dissolved oxygen levels measured in groundwater across the treatment area during the July 2010 sampling event are notably lower than in previous events. During the July 2010 sampling event higher than normal temperatures were encountered. This, combined with faulty exhaust fans, caused the air compressor associated with the air sparge portion of the remediation system to overheat and shut down. This lack of air sparging resulted in the decreased dissolved oxygen measurements in the groundwater, approaching anaerobic conditions. It is anticipated that dissolved oxygen levels will rebound on future sampling events once the compressor has been returned to normal operating conditions.

5.3 INDUCED VACUUM MEASUREMENTS

Induced vacuum measurement were collected during the April and July 2010 sampling events at locations MW-As, MW-Bs and MW-Cs using an Omega Engineering, Inc. HHP-90 digital differential pressure meter (Figure 5-1). Vacuum measurements for each monitoring point are summarized in Table 5-3. The vacuum measurements have remained relatively stable over time. The digital pressure meter was attached to the top of the vapor monitoring points to measure induced vacuums. These data provide information on the influence of the SVE system from the treatment wells.

6.0 CONCLUSIONS

This period marks the end of the fourteenth quarter of system operation. At this time the system is running as designed and mass removal of contaminants of concern is evident.

Dissolved oxygen and induced vacuum measurements indicate that the desired radius of influence from system operation is being achieved. Changes in reported VOC concentrations in groundwater samples indicate the system is influencing groundwater greater than 100 feet down gradient of Area 14 West (MW-7 location). Groundwater passing beneath this area is ultimately captured by naphtha recovery well E3, which is located approximately 480 feet north of Area 14 West.

The results during this operation period indicate that the in-well vapor stripping system is removing TCE from the subsurface of Area 14 West. During this reporting period, approximately 13.3 pounds of TCE were removed from soil and groundwater in the treatment area.

Figures 6-1 and 6-2 show the lateral extents of TCE and total VOCs in groundwater prior to system startup. Estimated iso-concentration contours of 500 micrograms per liter (µg/l), 1,000 µg/l and 2,000 µg/l are presented on contaminant distribution figures. Figures 6-3 through 6-6 show the lateral extents of TCE and VOCs in groundwater based on reported results from during the reporting period. These figures show that system operations have resulted in a reduction in the lateral extent in which TCE is present in groundwater, beneath the source area. System operation has also reduced the lateral extent of total VOCs concentrations greater than 1,000 µg/l in shallow groundwater.

Mactec will continue operation of the in-well vapor stripping system to continue to reduce VOC concentrations in subsurface soils and groundwater beneath the treatment area. The next system performance monitoring/maintenance event is scheduled for October 2010.

TABLES

Table 4-1: System Operational Information

Week Ending	System Operation Time (hours)	SVE Vacuum Level (Inches of Water)	SVE Flow Rate (scfm)	TCE Concentrations before Carbon (ppm)	cis 1,2-DCE Concentrations before Carbon (ppm)	trans 1,2-DCE Concentrations before Carbon (ppm)	Total VOC Concentrations before Carbon (ppm)	TCE Concentrations between Carbon (ppm)	cis 1,2-DCE Concentrations between Carbon (ppm)	trans 1,2-DCE Concentrations between Carbon (ppm)	Total VOC Concentrations between Carbon (ppm)	Amount of TCE Removed (pounds)	Amount of cis 1,2-DCE Removed (pounds)	Amount of trans 1,2-DCE Removed (pounds)
01/19/07	48	42	245	**142**	**7.69**	**0.565**	**150.255**	NA	NA	NA	<0.1	**34.0**	**1.4**	**0.1**
01/26/07	168	39	246	142	7.69	0.565	150.255	NA	NA	NA	<0.1	119.5	4.8	0.4
02/02/07	144	56	225	142	7.69	0.565	150.255	NA	NA	NA	<0.1	93.7	3.7	0.0
02/09/07	168	60	220	**10.1**	**0.9**	**<0.250**	**11**	NA	NA	NA	<0.1	**7.6**	**0.5**	**0.0**
02/16/07	168	68	207	**4.63**	**<0.359**	**<0.359**	**4.63**	**7.59**	**2.09**	<0.210	9.68	**3.3**	**0.0**	**0.0**
02/23/07	120	79	190	4.63	<0.359	<0.359	4.63	7.59	2.09	<0.210	9.68	2.2	0.0	**0.0**
03/02/07	132	15	285	**15.0**	**0.830**	**<0.210**	**15.83**	**<0.210**	**0.25**	**<0.210**	0.25	**11.5**	**0.5**	**0.0**
03/09/07	132	15	285	15.0	0.830	<0.210	15.83	<0.210	0.25	<0.210	0.25	11.5	0.5	0.0
03/16/07	144	51	250	**14.0**	**0.972**	**<0.210**	**14.972**	**<0.791**	**<0.791**	**<0.791**	**<0.791**	**10.3**	**0.5**	**0.0**
03/23/07	168	51	250	14.0	0.972	<0.210	14.972	<0.791	<0.791	<0.791	<0.791	12.0	0.6	0.0
03/30/07	168	53	265	**5.22**	**0.293**	**<0.210**	**5.513**	**<0.494**	**<0.494**	**<0.494**	**<0.494**	**4.7**	**0.2**	0.0
04/06/07	168	53	265	5.22	0.293	<0.210	5.513	<0.494	<0.494	<0.494	<0.494	4.7	0.2	0.0
04/13/07	168	53	265	5.22	0.293	<0.210	5.513	<0.494	<0.494	<0.494	<0.494	4.7	0.2	0.0
04/20/07	168	53	265	5.22	0.293	<0.210	5.513	<0.494	<0.494	<0.494	<0.494	4.7	0.2	0.0
04/27/07	164	54	264	**1.08**	**<0.341**	**<0.341**	**1.08**	**0.434**	**<0.218**	**<0.218**	**<0.218**	**1.0**	**0.0**	**0.0**
05/04/07	72	47	289	1.08	<0.341	<0.341	1.08	0.434	<0.218	<0.218	<0.218	0.5	0.0	0.0
05/04/07	168	48	295	1.08	<0.341	<0.341	1.08	0.434	<0.218	<0.218	<0.218	1.1	0.0	0.0
05/11/07	168	48	295	1.08	<0.341	<0.341	1.08	0.434	<0.218	<0.218	<0.218	1.1	0.0	0.0
05/18/07	168	48	295	1.08	<0.341	<0.341	1.08	0.434	<0.218	<0.218	<0.218	1.1	0.0	0.0
05/25/07	168	48	295	**6.10**	**0.52**	**<0.043**	**6.691**	**<0.002**	**<0.002**	**<0.002**	**0.017**	**6.2**	**0.4**	**0.0**
06/01/07	168	47	288	6.10	0.52	<0.043	6.691	<0.002	<0.002	<0.002	0.017	6.0	0.4	0.0
06/08/07	168	47	288	6.10	0.52	<0.043	6.691	<0.002	<0.002	<0.002	0.017	6.0	0.4	0.0
06/15/07	168	47	288	6.10	0.52	<0.043	6.691	<0.002	<0.002	<0.002	0.017	6.0	0.4	0.0
06/22/07	168	49	302	6.10	0.52	<0.043	6.691	<0.002	<0.002	<0.002	0.017	6.3	0.4	0.0
06/29/07	168	51	306	**15**	**0.83**	**<0.077**	**15.83**	**<0.004**	**<0.004**	**<0.004**	**0.073**	**15.7**	**0.6**	**0.0**
07/06/07	168	51	306	15	0.83	<0.077	15.83	<0.004	<0.004	<0.004	0.073	15.7	0.6	0.0
07/13/07	168	51	306	15	0.83	<0.077	15.83	<0.004	<0.004	<0.004	0.073	15.7	0.6	0.0
07/20/07	168	51	306	15	0.83	<0.077	15.83	<0.004	<0.004	<0.004	0.073	15.7	0.6	0.0
07/27/07	168	52	306	15	0.83	<0.077	15.83	<0.004	<0.004	<0.004	0.073	15.7	0.6	0.0
08/03/07	168	52	306	**3.8**	**0.32**	**<0.040**	**4.12**	**0.52**	**0.4**	**0.029**	**1.023**	**4.0**	**0.2**	**0.0**
08/10/07	168	52	306	3.8	0.32	<0.040	4.12	0.52	0.4	0.029	1.023	4.0	0.2	0.0
08/17/07	168	52	306	3.8	0.32	<0.040	4.12	0.52	0.4	0.029	1.023	4.0	0.2	0.0
08/24/07	168	52	306	3.8	0.32	<0.040	4.12	0.52	0.4	0.029	1.023	4.0	0.2	0.0
08/31/07	168	52	306	**6.5**	**0.40**	**<0.066**	**7.22**	**0.054**	**0.0078**	**<0.0020**	**0.0817**	**6.8**	**0.3**	**0.0**
09/07/07	168	32	254	**5.9**	**0.32**	**<0.066**	**6.22**	0.054	0.0078	<0.0020	0.0817	5.1	0.2	0.0
09/14/07	168	32	254	5.9	0.32	<0.066	6.22	0.054	0.0078	<0.0020	0.0817	5.1	0.2	0.0
09/21/07	168	32	254	5.9	0.32	<0.066	6.22	0.054	0.0078	<0.0020	0.0817	5.1	0.2	0.0
09/28/07	168	32	251	**4.9**	**0.34**	**<0.036**	**5.24**	**3.8**	**0.29**	**<0.026**	**4.09**	**4.2**	**0.2**	**0.0**
10/05/07	168	32	251	4.9	0.34	<0.036	5.24	3.8	0.29	<0.026	4.09	4.2	0.2	0.0
10/12/07	168	32	251	4.9	0.34	<0.036	5.24	3.8	0.29	<0.026	4.09	4.2	0.2	0.0
10/19/07	120	32	251	4.9	0.34	<0.036	5.24	3.8	0.29	<0.026	4.09	3.0	0.2	0.0
10/26/07	0	32	251	4.9	0.34	<0.036	5.24	3.8	0.29	<0.026	4.09	0.0	0.0	0.0
11/02/07	87	32	255	**6.0**	**0.41**	**<0.072**	**6.41**	**<0.0042**	**<0.0042**	**<0.0042**	**<0.0042**	**2.7**	**0.1**	**0.0**
11/09/07	168	36	250	6.0	0.41	<0.072	6.41	<0.0042	<0.0042	<0.0042	<0.0042	5.1	0.3	0.0
11/16/07	168	36	250	6.0	0.41	<0.072	6.41	<0.0042	<0.0042	<0.0042	<0.0042	5.1	0.3	0.0
11/23/07	168	36	250	6.0	0.41	<0.072	6.41	<0.0042	<0.0042	<0.0042	<0.0042	5.1	0.3	0.0
11/30/07	168	36	250	6.0	0.41	<0.072	6.41	<0.0042	<0.0042	<0.0042	<0.0042	5.1	0.3	0.0
12/07/07	168	36	250	**2.5**	**0.19**	**<0.072**	**2.758**	**0.027**	**0.025**	**<0.0040**	**0.052**	**2.1**	**0.1**	**0.0**
12/14/07	168	36	225	2.5	0.19	<0.072	2.758	0.027	0.025	<0.0040	0.052	1.9	0.1	0.0
12/21/07	168	36	225	2.5	0.19	<0.072	2.758	0.027	0.025	<0.0040	0.052	1.9	0.1	0.0
12/28/07	168	36	235	**2.0**	**0.15**	**<0.013**	**2.15**	**<0.004**	**0.0048**	**<0.0040**	**0.0148**	**1.6**	**0.1**	**0.0**
01/04/08	168	36	235	2.0	0.15	<0.013	2.15	<0.004	0.0048	<0.0040	0.0148	1.6	0.1	0.0
01/11/08	168	36	235	2.0	0.15	<0.013	2.15	<0.004	0.0048	<0.0040	0.0148	1.6	0.1	0.0
01/18/08	168	36	235	2.0	0.15	<0.013	2.15	<0.004	0.0048	<0.0040	0.0148	1.6	0.1	0.0
01/25/08	168	36	235	2.0	0.15	<0.013	2.15	<0.004	0.0048	<0.0040	0.0148	1.6	0.1	0.0
02/01/08	168	36	235	**0.610**	**0.03**	**<0.010**	**0.64**	**<0.002**	**0.009**	**<0.002**	**0.009**	**0.5**	**0.0**	**0.0**
02/08/08	168	36	235	0.610	0.03	<0.010	0.64	<0.002	0.009	<0.002	0.009	0.5	0.0	0.0
02/15/08	168	36	235	0.610	0.03	<0.010	0.64	<0.002	0.009	<0.002	0.009	0.5	0.0	0.0
02/22/08	168	36	235	0.610	0.03	<0.010	0.64	<0.002	0.009	<0.002	0.009	0.5	0.0	0.0
02/29/08	168	36	235	0.610	0.03	<0.010	0.64	<0.002	0.009	<0.002	0.009	0.5	0.0	0.0
03/07/08	168	36	235	0.610	0.03	<0.010	0.64	<0.002	0.009	<0.002	0.009	0.5	0.0	0.0
03/14/08	168	36	235	0.610	0.03	<0.010	0.64	<0.002	0.009	<0.002	0.009	0.5	0.0	0.0
03/21/08	168	36	235	0.610	0.03	<0.010	0.64	<0.002	0.009	<0.002	0.009	0.5	0.0	0.0
03/28/08	168	36	235	**1.100**	**0.04**	**<0.006**	**1.153**	**0.14**	**0.29**	**0.017**	**0.485**	**0.9**	**0.0**	**0.0**
04/04/08	168	36	235	1.100	0.04	<0.006	1.153	0.14	0.29	0.017	0.485	0.9	0.0	0.0
04/11/08	168	36	235	1.100	0.04	<0.006	1.153	0.14	0.29	0.017	0.485	0.9	0.0	0.0
04/18/08	168	36	235	1.100	0.04	<0.006	1.153	0.14	0.29	0.017	0.485	0.9	0.0	0.0
04/25/08	168	36	235	1.100	0.04	<0.006	1.153	0.14	0.29	0.017	0.485	0.9	0.0	0.0
05/02/08	168	41	240	**1.300**	**0.06**	**<0.0081**	**1.363**	**0.036**	**0.046**	**0.0041**	**0.093**	**1.1**	**0.0**	**0.0**
05/09/08	168	41	240	1.300	0.06	<0.0081	1.363	0.036	0.046	0.0041	0.093	1.1	0.0	0.0
05/16/08	168	41	240	1.300	0.06	<0.0081	1.363	0.036	0.046	0.0041	0.093	1.1	0.0	0.0
05/23/08	168	41	240	1.300	0.06	<0.0081	1.363	0.036	0.046	0.0041	0.093	1.1	0.0	0.0
05/30/08	168	41	240	**1.700**	**0.066**	**<0.020**	**1.766**	**0.033**	**0.038**	**0.0038**	**0.0748**	**1.4**	**0.0**	**0.0**
06/06/08	168	41	240	1.700	0.066	<0.020	1.766	0.033	0.038	0.0038	0.0748	1.4	0.0	0.0
06/13/08	168	41	240	1.700	0.066	<0.020	1.766	0.033	0.038	0.0038	0.0748	1.4	0.0	0.0
06/20/08	168	41	242	1.700	0.066	<0.020	1.766	0.033	0.038	0.0038	0.0748	1.4	0.0	0.0
06/27/08	168	41	250	**1.700**	**0.089**	**<0.025**	**1.789**	**0.11**	**0.11**	**0.0084**	**0.2436**	**1.5**	**0.1**	**0.0**
07/04/08	168	41	250	1.700	0.089	<0.025	1.789	0.11	0.11	0.0084	0.2436	1.5	0.1	0.0
07/11/08	168	41	250	1.700	0.089	<0.025	1.789	0.11	0.11	0.0084	0.2436	1.5	0.1	0.0
07/18/08	168	41	250	1.700	0.089	<0.025	1.789	0.11	0.11	0.0084	0.2436	1.5	0.1	0.0
07/25/08	168	41	250	1.700	0.089	<0.025	1.789	0.11	0.11	0.0084	0.2436	1.5	0.1	0.0
08/01/08	168	41	250	**2.300**	**0.130**	**<0.025**	**2.430**	**0.33**	**0.16**	**0.013**	**0.528**	**2.0**	**0.1**	**0.0**
08/08/08	168	41	250	2.300	0.130	<0.025	2.430	0.33	0.16	0.013	0.528	2.0	0.1	0.0
08/15/08	168	41	250	2.300	0.130	<0.025	2.430	0.33	0.16	0.013	0.528	2.0	0.1	0.0
08/22/08	168	41	250	2.300	0.130	<0.025	2.430	0.33	0.16	0.013	0.528	2.0	0.1	0.0
08/29/08	168	41	250	**2.400**	**0.160**	**<0.020**	**2.745**	**0.92**	**0.15**	**0.012**	**1.082**	**2.1**	**0.1**	**0.0**
09/05/08	168	41	250	2.400	0.160	<0.020	2.745	0.92	<0.012	<0.012	1.082	2.1	0.1	0.0
09/12/08	168	41	250	2.400	0.160	<0.020	2.745	0.92	<0.012	<0.012	1.082	2.1	0.1	0.0
09/19/08	168	41	250	2.400	0.160	<0.020	2.745	0.92	<0.012	<0.012	1.082	2.1	0.1	0.0
09/26/08	168	41	250	**4.400**	**<0.061**	**<0.061**	**4.664**	**<0.0036**	**0.45**	**0.049**	**0.578**	**3.8**	**0.0**	**0.0**
10/03/08	168	41	250	4.400	<0.061	<0.061	4.664	<0.0036	0.45	0.049	0.578	3.8	0.0	0.0
10/10/08	168	41	250	4.400	<0.061	<0.061	4.664	<0.0036	0.45	0.049	0.578	3.8	0.0	0.0
10/17/08	168	55	288	4.400	<0.061	<0.061	4.664	<0.0036	0.45	0.049	0.578	4.3	0.0	0.0
10/24/08	168	55	288	4.400	<0.061	<0.061	4.664	<0.0036	0.45	0.049	0.578	4.3	0.0	0.0
10/31/08	168	55	288	**1.100**	**0.063**	**<0.012**	**1.175**	**2.200**	**0.23**	**<0.20**	**2.66**	1.1	0.0	0.0
11/07/08	148	55	288	1.100	0.063	<0.012	1.175	2.200	0.23	<0.20	2.66	1.0	0.0	0.0
11/14/08	0	55	0	1.100	0.063	<0.012	1.175	2.200	0.23	<0.20	2.66	0.0	0.0	0.0
11/21/08	0	55	0	1.100	0.063	<0.012	1.175	2.200	0.23	<0.20	2.66	0.0	0.0	0.0
11/28/08	0	55	0	1.100	0.063	<0.012	1.175	2.200	0.23	<0.20	2.66	0.0	0.0	0.0
12/05/08	168	55	288	**1.300**	**0.075**	**<0.010**	**1.375**	**0.016**	**<0.004**	**<0.004**	**<0.004**	**1.3**	**0.0**	**0.0**
12/12/08	168	55	288	1.300	0.075	<0.010	1.375	0.016	<0.004	<0.004	<0.004	1.3	0.1	0.0
12/19/08	168	55	288	1.300	0.075	<0.010	1.375	0.016	<0.004	<0.004	<0.004	1.3	0.1	0.0
12/26/08	107	55	288	1.300	0.075	<0.010	1.375	0.016	<0.004	<0.004	<0.004	0.8	0.1	0.0
01/02/09	159	55	288	1.300	0.075	<0.010	1.375	0.016	<0.004	<0.004	<0.004	1.2	0.0	0.0
01/09/09	168	55	288	1.300	0.075	<0.010	1.375	0.016	<0.004	<0.004	<0.004	1.3	0.1	0.0
01/16/09	168	55	288	1.300	0.075	<0.010	1.375	0.016	<0.004	<0.004	<0.004	1.3	0.1	0.0
01/23/09	168	55	288	1.300	0.075	<0.010	1.375	0.016	<0.004	<0.004	<0.004	1.3	0.1	0.0
01/30/09	168	55	288	1.300	0.075	<0.010	1.375	0.016	<0.004	<0.004	<0.004	1.3	0.1	0.0
02/06/09	168	55	288	**0.065**	**<0.004**	**<0.004**	**0.080**	**<0.004**	**<0.004**	**<0.004**	**0.021**	**0.1**	**0.0**	**0.0**
02/13/09	168	55	288	0.065	<0.004	<0.004	0.080	<0.004	<0.004	<0.004	0.021	0.1	0.0	0.0
02/20/09	168	55	288	0.065	<0.004	<0.004	0.080	<0.004	<0.004	<0.004	0.021	0.1	0.0	0.0
02/27/09	168	35	255	**0.039**	**0.010**	**<0.004**	**0.080**	**<0.004**	**<0.004**	**<0.004**	**0.018**	**0.0**	**0.0**	**0.0**
03/06/09	168	35	255	0.039	0.010	<0.004	0.080	<0.004	<0.004	<0.004	0.018	0.0	0.0	0.0
03/13/09	168	35	255	0.039	0.010	<0.004	0.080	<0.004	<0.004	<0.004	0.018	0.0	0.0	0.0
03/20/09	168	35	255	0.039	0.010	<0.004	0.080	<0.004	<0.004	<0.004	0.018	0.0	0.0	0.0
03/27/09	168	35	255	**0.630**	**0.035**	**<0.005**	**0.665**	**<0.004**	**<0.004**	**<0.004**	**0.005**	**0.5**	**0.0**	**0.0**
04/03/09	168	35	255	0.630	0.035	<0.005	0.665	<0.004	<0.004	<0.004	0.005	0.5	0.0	0.0
04/10/09	168	35	255	0.630	0.035	<0.005	0.665	<0.004	<0.004	<0.004	0.005	0.5	0.0	0.0
04/17/09	168	35	255	0.630	0.035	<0.005	0.665	<0.004	<0.004	<0.004	0.005	0.5	0.0	0.0
04/24/09	168	35	235	0.630	0.035	<0.005	0.665	<0.004	<0.004	<0.004	0.005	0.5	0.0	0.0
05/01/09	168	35	245	**0.320**	**0.013**	**<0.004**	**0.333**	**<0.004**	**<0.004**	**<0.004**	**<0.004**	**0.3**	**0.0**	**0.0**
05/08/09	168	35	245	0.320	0.013	<0.004	0.333	<0.004	<0.004	<0.004	<0.004	0.3	0.0	0.0
05/15/09	168	35	250	0.320	0.013	<0.004	0.333	<0.004	<0.004	<0.004	<0.004	0.3	0.0	0.0
05/22/09	168	35	250	0.320	0.013	<0.004	0.333	<0.004	<0.004	<0.004	<0.004	0.3	0.0	0.0
05/29/09	168	35	250	**0.830**	**0.034**	**<0.004**	**0.918**	**<0.004**	**<0.004**	**<0.004**	**<0.004**	**0.7**	**0.0**	**0.0**
06/05/09	168	35	250	0.830	0.034	<0.004	0.918	<0.004	<0.004	<0.004	<0.004	0.7	0.0	0.0
06/12/09	168	35	250	0.830	0.034	<0.004	0.918	<0.004	<0.004	<0.004	<0.004	0.7	0.0	0.0
06/19/09	168	35	250	0.830	0.034	<0.004	0.918	<0.004	<0.004	<0.004	<0.004	0.7	0.0	0.0
06/26/09	168	35	250	**1.600**	**0.059**	**0.007**	**1.680**	**<0.004**	**0.012**	**<0.004**	**0.0227**	**1.4**	**0.0**	**0.0**
07/03/09	168	35	250	1.600	0.059	0.007	1.680	<0.004	0.012	<0.004	0.0227	1.4	0.0	0.0
07/10/09	168	35	250	1.600	0.059	0.007	1.680	<0.004	0.012	<0.004	0.0227	1.4	0.0	0.0
07/17/09	168	35	250	1.600	0.059	0.007	1.680	<0.004	0.012	<0.004	0.0227	1.4	0.0	0.0
07/24/09	168	35	250	1.600	0.059	0.007	1.680	<0.004	0.012	<0.004	0.0227	1.4	0.0	0.0
07/31/09	168	36	250	**1.900**	**0.075**	**<0.012**	**2.059**	**<0.004**	**0.057**	**0.008**	**0.0799**	**1.6**	**0.0**	**0.0**
08/07/09	168	36	250	1.900	0.075	<0.012	2.059	<0.004	0.057	0.008	0.0799	1.6	0.0	0.0
08/14/09	168	36	250	1.900	0.075	<0.012	2.059	<0.004	0.057	0.008	0.0799	1.6	0.0	0.0

Notes: Operation summary through January 29, 2010.
SVE = Soil Vapor Extraction
TCE = trichloroethylene
TCA = trichloroethane
ppm = parts per million
BOLD = laboratory analytical results (Unbolded concentrations are estimated based on previous results.
= Data collected during current reporting period

Table 4-1: System Operational Information

Week Ending	System Operation Time (hours)	SVE Vacuum Level (Inches of Water)	SVE Flow Rate (scfm)	TCE Concentrations before Carbon (ppm)	cis 1,2-DCE Concentrations before Carbon (ppm)	trans 1,2-DCE Concentrations before Carbon (ppm)	Total VOC Concentrations before Carbon (ppm)	TCE Concentrations between Carbon (ppm)	cis 1,2-DCE Concentrations between Carbon (ppm)	trans 1,2-DCE Concentrations between Carbon (ppm)	Total VOC Concentrations between Carbon (ppm)	Amount of TCE Removed (pounds)	Amount of cis 1,2-DCE Removed (pounds)	Amount of trans 1,2-DCE Removed (pounds)
08/21/09	168	36	250	1.900	0.075	<0.012	2.059	<0.004	0.057	0.008	0.0799	1.6	0.0	0.0
08/28/09	168	36	250	1.900	0.075	<0.012	2.059	<0.004	0.057	0.008	0.0799	1.6	0.0	0.0
09/04/09	168	36	250	**1.500**	**0.068**	**<0.019**	**1.741**	**0.034**	**0.083**	**0.008**	**0.196**	**1.3**	**0.0**	**0.0**
09/11/09	168	36	250	1.500	0.068	<0.019	1.741	0.034	0.083	0.008	0.196	1.3	0.0	0.0
09/18/09	168	36	250	1.500	0.068	<0.019	1.741	0.034	0.083	0.008	0.196	1.3	0.0	0.0
09/25/09	168	36	250	1.500	0.068	<0.019	1.741	0.034	0.083	0.008	0.196	1.3	0.0	0.0
10/02/09	168	36	250	**1.100**	**0.057**	**<0.010**	**1.423**	**0.23**	**0.0074**	**<0.007**	**0.354**	**0.9**	**0.0**	**0.0**
10/09/09	168	36	250	1.100	0.057	<0.010	1.423	0.23	0.0074	<0.007	0.354	0.9	0.0	0.0
10/16/09	168	36	250	1.100	0.057	<0.010	1.423	0.23	0.0074	<0.007	0.354	0.9	0.0	0.0
10/23/09	168	36	250	1.100	0.057	<0.010	1.423	0.23	0.0074	<0.007	0.354	0.9	0.0	0.0
10/30/09	168	36	250	**1.300**	**0.059**	**<0.016**	**1.392**	**0.93**	**0.051**	**<0.014**	**0.981**	**1.1**	**0.0**	**0.0**
11/06/09	168	36	250	1.300	0.059	<0.016	1.392	0.93	0.051	<0.014	0.981	1.1	0.0	0.0
11/13/09	168	36	250	1.300	0.059	<0.016	1.392	0.93	0.051	<0.014	0.981	1.1	0.0	0.0
11/20/09	168	36	250	1.300	0.059	<0.016	1.392	0.93	0.051	<0.014	0.981	1.1	0.0	0.0
11/27/09	168	36	250	**0.650**	**0.038**	**<0.010**	**0.714**	**0.93**	**0.042**	**<0.014**	**0.988**	**0.6**	**0.0**	**0.0**
12/04/09	168	36	250	0.650	0.038	<0.010	0.714	0.93	0.042	<0.014	0.988	0.6	0.0	0.0
12/11/09	168	36	250	0.650	0.038	<0.010	0.714	0.93	0.042	<0.014	0.988	0.6	0.0	0.0
12/18/09	168	36	250	**0.740**	**0.049**	**<0.006**	**0.815**	**0.19**	**0.082**	**0.007**	**0.301**	**0.6**	**0.0**	**0.0**
12/25/09	168	36	250	0.740	0.049	<0.006	0.815	0.19	0.082	0.007	0.301	0.6	0.0	0.0
01/01/10	145	36	250	0.740	0.049	<0.006	0.815	0.19	0.082	0.007	0.301	0.5	0.0	0.0
01/08/10	145	36	250	0.740	0.049	<0.007	0.815	0.19	0.082	0.007	0.301	0.5	0.0	0.0
01/15/10	72	36	250	**System Offline Due to Above-Grade Line Freezing - 1/12/2010 through 2/24/201(**										
02/26/10	48	**67**	**218**	**0.230**	**0.016**	**<0.0036**	**0.255**	**<0.0036**	**<0.0036**	**<0.0036**	**0.011**	0.0	0.0	0.0
03/05/10	168	67	218	0.230	0.016	<0.0036	0.255	<0.0036	<0.0036	<0.0036	0.011	0.2	0.0	0.0
03/12/10	168	67	218	0.230	0.016	<0.0036	0.255	<0.0036	<0.0036	<0.0036	0.011	0.2	0.0	0.0
03/19/10	168	67	218	0.230	0.016	<0.0036	0.255	<0.0036	<0.0036	<0.0036	0.011	0.2	0.0	0.0
03/26/10	168	67	218	0.230	0.016	<0.0036	0.255	<0.0036	<0.0036	<0.0036	0.011	0.2	0.0	0.0
04/02/10	168	**40**	**240**	**0.520**	**0.032**	**<0.0036**	**0.557**	**<0.0036**	**<0.0036**	**<0.0036**	**0.013**	0.4	0.0	0.0
04/09/10	168	40	240	0.520	0.032	<0.0036	0.557	<0.0036	<0.0036	<0.0036	0.013	0.4	0.0	0.0
04/16/10	168	40	240	0.520	0.032	<0.0036	0.557	<0.0036	<0.0036	<0.0036	0.013	0.4	0.0	0.0
04/23/10	168	40	240	0.520	0.032	<0.0036	0.557	<0.0036	<0.0036	<0.0036	0.013	0.4	0.0	0.0
04/30/10	168	**78**	**214**	**0.600**	**0.03**	**<0.012**	**0.694**	**0.021**	**<0.0036**	**<0.0036**	**0.07**	0.4	0.0	0.0
05/07/10	168	78	214	0.600	0.03	<0.012	0.694	0.021	<0.0036	<0.0036	0.07	0.4	0.0	0.0
05/14/10	168	78	214	0.600	0.03	<0.012	0.694	0.021	<0.0036	<0.0036	0.07	0.4	0.0	0.0
05/21/10	168	78	214	0.600	0.03	<0.012	0.694	0.021	<0.0036	<0.0036	0.07	0.4	0.0	0.0
05/28/10	168	**100**	**210**	**0.760**	**0.03**	**<0.012**	**0.89**	**<0.004**	**<0.004**	**<0.004**	**0.091**	0.5	0.0	0.0
06/04/10	168	100	210	0.760	0.03	<0.012	0.89	<0.004	<0.004	<0.004	0.091	0.5	0.0	0.0
06/11/10	168	100	210	0.760	0.03	<0.012	0.89	<0.004	<0.004	<0.004	0.091	0.5	0.0	0.0
06/18/10	168	100	210	0.760	0.03	<0.012	0.89	<0.004	<0.004	<0.004	0.091	0.5	0.0	0.0
06/25/10	168	100	210	0.760	0.03	<0.012	0.89	<0.004	<0.004	<0.004	0.091	0.5	0.0	0.0
07/02/10	168	**42**	**250**	**1.000**	**0.037**	**<0.0066**	**1.061**	**<0.0036**	**<0.0036**	**<0.0036**	**0.015**	0.9	0.0	0.0
07/09/10	168	42	250	1.000	0.037	<0.0066	1.061	<0.0036	<0.0036	<0.0036	0.015	0.9	0.0	0.0
07/16/10	168	42	250	1.000	0.037	<0.0066	1.061	<0.0036	<0.0036	<0.0036	0.015	0.9	0.0	0.0
07/23/10	168	42	250	1.000	0.037	<0.0066	1.061	<0.0036	<0.0036	<0.0036	0.015	0.9	0.0	0.0
07/30/10	168	**40**	**250**	**1.700**	**0.066**	**<0.022**	**1.797**	**<0.0036**	**<0.0036**	**<0.0036**	**0.0038**	1.5	0.0	0.0
08/06/10	168	40	250	1.700	0.066	<0.022	1.797	<0.0036	<0.0036	<0.0036	0.0038	1.5	0.0	0.0
											Total (pounds):	**656.3**	**26.9**	**0.5**

Notes: Operation summary through January 29, 2010.

SVE = Soil Vapor Extraction
TCE = trichloroethylene
TCA = trichloroethane
ppm = parts per million
BOLD = laboratory analytical results (Unbolded concentrations are estimated based on previous results.)
= Data collected during current reporting period

Run Time (Days) **1210**
Percent Operation **92.3%**

Prepared by: JPS Date: 08/08/10

Checked by: SDM Date: 08/15/10

Table 4-2
Contaminant Mass Removal Calculation Reference - Area 14 West
Honeywell Industrial Complex
South Bend, Indiana

Calculating Contaminant Mass Loading and Removal Rates

Contaminant mass loading and removal rates can be calculated with the same basic equation. However, the units and conversion factors are different for air than they are for water.

For Water:

$$M_{H_2O} = Q_{H_2O} \times C_{H_2O} \times \frac{3.785\ \text{L}}{\text{gallon}} \times \frac{1440\ \text{min.}}{\text{day}} \times \frac{2.2\ \text{lbs.}}{10^9\ \text{ug}}$$

M_{H_2O} = mass loading, removal rate in water (lbs / day)
Q_{H_2O} = flow rate in water (gpm)
C_{H_2O} = contaminant concentration (ug / L, ppb)

For Air:

$$M_{air} = Q_{air} \times C_{air} \times \frac{0.0283\ \text{m}^3}{\text{ft}^3} \times \frac{1440\ \text{min.}}{\text{day}} \times \frac{2.2\ \text{lbs.}}{10^6\ \text{mg}}$$

M_{air} = mass loading, removal rate in air (lbs / day)
Q_{air} = flow rate in air (cfm)
C_{air} = contaminant concentration (mg / m^3)

For air calculations, C_{air} in mg/m^3 (with molecular weight, MW_X, in grams per mole) can be obtained at 70°F and a pressure of 1 atmosphere from parts per million by volume (ppmv) by the following steps:

$$C_{air}(mg/m^3) = \frac{Conc(ppmv)}{10^6} \times \frac{1\ \text{mole air}}{24.1\ \text{L}} \times \frac{1000\ \text{L}}{\text{m}^3} \times \frac{1000\ \text{mg}}{\text{g}} \times MW_X$$

Note: The conversion factor (1 mole air)/(24.1 L) varies with both temperature and pressure. At a pressure of 1 atmosphere and a temperature of 32°F (0°C), the conversion is (1 mole air)/(22.4 L).

Approximate Molecular Weights (MW) in grams/mole of Common Volatile Organic Compounds (VOCs)

Benzene: 78	DCE: 97	TCE: 131
Carbon tetrachloride: 154	Ethylbenzene: 106	Toluene: 92
Chlorobenzene: 113	PCE: 166	Vinyl chloride: 62.5
DCA: 99	TCA: 133	Xylene: 106

Source: "Elements for Effective Management of Operating Pump and Treat Systems", USEPA, December 2002

Table 5-1: Analytical Summary-VOCs in Groundwater

	SITE	IDEM VRP	MW-7													
CONSTITUENT	DATE	Tier II Non-	08/30/05	12/07/06	03/13/07	06/04/07	10/08/07	12/11/07	03/18/08	06/24/08	12/01/08	03/10/09	06/23/09	09/30/09	01/19/10	04/12/10	07/14/10
	RESULT TYPE	Residential	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Trichloroethene	(µg/L)	260	<25	<10	**44.4**	<5.9	<20	<10	<4.0	<4.0	<5.7	<2.5	<2.5	<2.5	<3.3	<1.7	<1.4
1,1,2-Trichloroethane	(µg/L)	50	<25	<10	<5	<5.9	<20	<10	<4.0	<4.0	<5.7	<2.5	<2.5	<2.5	<3.3	<1.7	<1.4
1,1-Dichloroethane	(µg/L)	10,220	<25	<10	6.8	**8.7**	<20	<10	**6.8**	**6.8**	**7.8**	**8.3**	**8.7**	**11**	**7.7**	**6.6**	**6.8**
trans-1,2-Dichloroethene	(µg/L)	2,040	<25	<10	9.3	<5.9	<20	<10	<4.0	<4.0	<5.7	<2.5	<2.5	<2.5	<3.3	<1.7	<1.4
cis-1,2-Dichloroethene	(µg/L)	1,022	**350**	**333**	**678**	**230**	**490**	**230**	**120**	**100**	**110**	**68**	**70**	**90**	**100**	**48**	**51**
Vinyl Chloride	(µg/L)	10	**88**	**167**	**392**	**170**	**140**	**130**	**54**	**71**	**70**	**40**	**39**	**85**	**78**	**51**	**33**
Chloroform	(µg/L)	469	<25	<10	<5	<5.9	<20	<10	<4.0	<4.0	<5.7	<2.5	<2.5	<2.5	<3.3	<1.7	<1.4

Shading = reported constituent concentration exceeds IDEM VRP Tier II Non-Residential Cleanup Goal

BOLD = detected constituent

µg/L = micrograms per liter

NA = not applicable or not available

Table 5-1: Analytical Summary-VOCs in Groundwater

	SITE	IDEM VRP	MW-As														
CONSTITUENT	DATE	Tier II Non-	08/30/05	12/20/06	03/13/07	06/04/07	10/08/07	12/11/07	03/18/08	07/23/08	10/14/08	12/19/08	03/10/09	06/23/09	09/30/09	01/19/10	04/12/10	07/14/10
	RESULT TYPE	Residential	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Trichloroethene	(µg/L)	260	**68**	**74**	**206**	**54**	<10	**16**	**26**	**17**	**10**	**19**	<3.3	**19**	**15**	**13**	**9.4**	**15**
1,1,2-Trichloroethane	(µg/L)	50	<25	<10	<5	<10	<10	<15	<4.0	<4.0	<3.3	<5.0	<3.3	<2.0	<3.3	<5.0	<3.3	<3.3
1,1-Dichloroethane	(µg/L)	10,220	<25	<10	<5	<10	<10	<15	**4.5**	**6.0**	**6.7**	**7.8**	**8.7**	**6.1**	**9.9**	**7.3**	**5.3**	**6.2**
trans-1,2-Dichloroethene	(µg/L)	2,040	<25	<10	**8.9**	<10	<10	<15	<4.0	<4.0	<3.3	<5.0	<3.3	<2.0	<3.3	<5.0	<3.3	<3.3
cis-1,2-Dichloroethene	(µg/L)	1,022	**530**	**392**	**599**	**270**	**290**	**390**	**130**	**120**	**50**	**150**	**73**	**40**	**85**	**150**	**54**	**74**
Vinyl Chloride	(µg/L)	10	**100**	**194**	**381**	**190**	**170**	**200**	**99**	**120**	**94**	**170**	**79**	**58**	**160**	**130**	**110**	**77**
Chloroform	(µg/L)	469	<25	<10	<10	<10	<10	<10	<4.0	<4.0	<3.3	<5.0	<3.3	<2.0	<3.3	<5.0	<3.3	<3.3

Shading = reported constituent concentration exceeds IDEM VRP Tier II Non-Residential Cleanup Goal
BOLD = detected constituent
µg/L = micrograms per liter
NA = not applicable or not available

Table 5-1: Analytical Summary-VOCs in Groundwater

	SITE	IDEM VRP	MW-Ad															
CONSTITUENT	DATE	Tier II Non-	08/30/05	12/20/06	03/13/07	06/07/07	10/08/07	12/11/07	03/18/08	07/23/08	10/14/08	10/14/08	12/19/08	03/10/09	06/23/09	09/30/09	01/19/10	04/12/10	07/14/10
	RESULT TYPE	Residential	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Trichloroethene	(µg/L)	260	<10	<25	<5.0	<11	<10	<14	<11	<12	<14	<10	<5.0	<5.0	<13	<10	28	<9.1	<10
1,1,2-Trichloroethane	(µg/L)	50	<10	<25	<5.0	<11	<10	<14	<11	<12	<14	<10	<5.0	<5.0	<13	<10	<4.0	<9.1	<10
1,1-Dichloroethane	(µg/L)	10,220	<10	<25	<5.0	<11	<10	<14	<11	<12	<14	<10	<5.0	<5.0	<13	<10	<4.0	<9.1	<10
trans-1,2-Dichloroethene	(µg/L)	2,040	**11**	<25	**13.9**	**13**	**10**	**15**	**14**	<12	<14	<10	**6.0**	<5.0	<13	**13**	**5**	<9.1	<10
cis-1,2-Dichloroethene	(µg/L)	1,022	**270**	**394**	**318**	**380**	**300**	**330**	**330**	**280**	**300**	**280**	**150**	**150**	**310**	**330**	**130**	**270**	**310**
Vinyl Chloride	(µg/L)	10	<20	<50	<2.0	<2.0	<2.0	<2.0	<11	<12	<14	<10	<5.0	**55**	<13	<10	<4.0	<9.1	<10
Chloroform	(µg/L)	469	<20	<25	<5.0	<11	<10	<14	<11	<12	<14	<10	<5.0	<5.0	<13	<10	<4.0	<9.1	<10

Shading = reported constituent concentration exceeds IDEM VRP Tier II Non-Residential Cleanup Goal
BOLD = detected constituent
µg/L = micrograms per liter
NA = not applicable or not available

Table 5-1: Analytical Summary-VOCs in Groundwater

	SITE	IDEM VRP	MW-Bs															
CONSTITUENT	DATE	Tier II Non-	08/30/05	12/20/06	03/13/07	06/07/07	10/08/07	12/11/07	03/18/08	07/23/08	07/23/08	10/14/08	12/19/08	03/10/09	06/23/09	09/30/09	01/19/10	04/12/10	07/14/10
	RESULT TYPE	Residential	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Trichloroethene	(µg/L)	260	**140**	**1,020**	**607**	**1,600**	**730**	**1,700**	**780**	**1,200**	**1,100**	**760**	**2,000**	**67**	**950**	**1,500**	**950**	**970**	**1,400**
1,1,2-Trichloroethane	(µg/L)	50	<5	<5	<10	<50	<25	<50	<25	<33	<33	<33	<50	<1.7	<33	<40	<33	<33	<40
1,1-Dichloroethane	(µg/L)	10,220	<5	<5	<10	<50	<25	<50	<25	<33	<33	<33	<50	**2.2**	<33	<40	<33	<33	<40
trans-1,2-Dichloroethene	(µg/L)	2,040	<5	<5	<10	<50	<25	<50	<25	<33	<33	<33	<50	<1.7	<33	<40	<33	<33	<40
cis-1,2-Dichloroethene	(µg/L)	1,022	**95**	**162**	**149**	**170**	**120**	**200**	**92**	**76**	**87**	**63**	**86**	**57**	**43**	**75**	**100**	**52**	**78**
Vinyl Chloride	(µg/L)	10	**17**	**19.5**	**4.4**	<50	<25	<20	<25	<33	<33	<33	<50	**6.8**	<33	<40	<33	<33	<40
Chloroform	(µg/L)	469	<5	<5	<10	<50	<25	<50	<25	<33	<33	<33	<50	<1.7	<33	<40	<33	<33	<40

Shading = reported constituent concentration exceeds IDEM VRP Tier II Non-Residential Cleanup Goal
BOLD = detected constituent
µg/L = micrograms per liter
NA = not applicable or not available

Table 5-1: Analytical Summary-VOCs in Groundwater

	SITE	IDEM VRP	MW-Bd														
CONSTITUENT	DATE	Tier II Non-	08/30/05	12/20/06	03/13/07	06/07/07	10/08/07	12/11/07	03/18/08	07/23/08	10/14/08	12/19/08	03/10/09	06/23/09	09/30/09	01/19/10	04/12/10	07/14/10
	RESULT TYPE	Residential	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Trichloroethene	(µg/L)	260	**29**	<5	<1	<1	**9.2**	**1.3**	<1.0	<1.0	<1.0	**4.2**	**2.8**	<1.0	<1.0	2.6	<1.0	<1.0
1,1,2-Trichloroethane	(µg/L)	50	<5	<5	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane	(µg/L)	10,220	<5	<5	<1	**1.6**	**1.2**	**1.3**	**1.3**	**1.0**	**1.1**	<1.0	<1.0	**1.1**	**1.4**	<1.0	**1.0**	<1.0
trans-1,2-Dichloroethene	(µg/L)	2,040	<5	<5	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	(µg/L)	1,022	**8.6**	**7.1**	**4.4**	**6.7**	**8.6**	**13**	**9.2**	**5.9**	**7.0**	**6.0**	**2.1**	**6.7**	**7.0**	**6.0**	**6.3**	**5.6**
Vinyl Chloride	(µg/L)	10	<10	<10	<0.40	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	**1.8**	<1.0	**1.1**	<1.0	<1.0	<1.0
Chloroform	(µg/L)	469	<5	<5	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Shading = reported constituent concentration exceeds IDEM VRP Tier II Non-Residential Cleanup Goal
BOLD = detected constituent
µg/L = micrograms per liter
NA = not applicable or not available

Table 5-1: Analytical Summary-VOCs in Groundwater

	SITE	IDEM VRP	MW-Cs										
CONSTITUENT	DATE	Tier II Non-	08/30/05	12/20/06	12/20/06	03/13/07	03/13/07	06/07/07	06/07/07	10/08/07	10/08/07	12/11/07	12/11/07
	RESULT TYPE	Residential	Primary	Primary	Duplicate	Primary	Duplicate	Primary	Duplicate	Primary	Duplicate	Primary	Duplicate
Trichloroethene	(µg/L)	260	**3,900**	**6,870**	**8,230**	**5,180**	**5,100**	**3,400**	**3,000**	**1,300**	**1,500**	**4,100**	**4,000**
1,1,2-Trichloroethane	(µg/L)	50	<250	**15.8**	<250	<50	<50	<120	<120	<33	<50	<120	<140
1,1-Dichloroethane	(µg/L)	10,220	<250	<10	<250	<50	<50	<120	<120	<33	<50	<120	<140
trans-1,2-Dichloroethene	(µg/L)	2,040	<250	**17.9**	<250	<50	<50	<120	<120	<33	<50	<120	<140
cis-1,2-Dichloroethene	(µg/L)	1,022	**580**	**812**	**920**	**1,320**	**1,350**	**880**	**840**	**290**	**340**	**580**	**590**
Vinyl Chloride	(µg/L)	10	<500	<10	<500	**65.3**	**69.2**	<120	<120	<33	<50	<120	<140
Chloroform	(µg/L)	469	<250	**10.6**	<250	<50	<50	<120	<120	<33	<50	<120	<140

Shading = reported constituent concentration exceeds IDEM VRP Tier II Non-Residential Cleanup Goal
BOLD = detected constituent
µg/L = micrograms per liter
NA = not applicable or not available

Table 5-1: Analytical Summary-VOCs in Groundwater

	SITE	IDEM VRP	MW-Cs														
CONSTITUENT	DATE	Tier II Non-	03/18/08	03/18/08	07/23/08	10/14/08	12/19/08	12/19/08	03/11/09	06/23/09	06/23/09	09/30/09	09/30/09	01/19/10	04/12/10	04/12/10	07/14/10
	RESULT TYPE	Residential	Primary	Duplicate	Primary	Primary	Primary	Duplicate	Primary	Primary	Duplicate	Primary	Duplicate	Primary	Primary	Duplicate	Primary
Trichloroethene	(µg/L)	260	**1,600**	**1,500**	**4,300**	**3,100**	**5,300**	**4,700**	**2,400**	**2,100**	**2,200**	**2,600**	**2,700**	**2,100**	**2,400**	**2,400**	**2,500**
1,1,2-Trichloroethane	(µg/L)	50	<67	<50	<110	<110	<170	<120	<100	<100	<100	<91	<83	<56	<71	<71	<62
1,1-Dichloroethane	(µg/L)	10,220	<67	<50	<110	<110	<170	<120	<100	<100	<100	<91	<83	<56	<71	<71	<62
trans-1,2-Dichloroethene	(µg/L)	2,040	<67	<50	<110	<110	<170	<120	<100	<100	<100	<91	<83	<56	<71	<71	<62
cis-1,2-Dichloroethene	(µg/L)	1,022	**210**	**180**	**490**	**340**	**580**	**570**	**180**	**160**	**160**	**210**	**220**	**240**	**200**	**190**	**130**
Vinyl Chloride	(µg/L)	10	<67	<50	<110	<110	<170	<120	<100	<100	<100	<91	<83	<56	<71	<71	<62
Chloroform	(µg/L)	469	<67	<50	<110	<110	<170	<120	<100	<100	<100	<91	<83	<56	<71	<71	<62

Shading = reported constituent concentration exceeds IDEM VRP Tier II Non-Residential Cleanup Goal

BOLD = detected constituent

µg/L = micrograms per liter

NA = not applicable or not available

Table 5-1: Analytical Summary-VOCs in Groundwater

	SITE	IDEM VRP	MW-Cd																		
CONSTITUENT	DATE	Tier II Non-	08/30/05	12/20/06	03/13/07	06/07/07	10/08/07	12/11/07	03/18/08	07/23/08	10/15/08	12/19/08	03/11/09	03/11/09	06/23/09	09/30/09	01/19/10	01/19/10	04/12/10	07/14/10	07/14/10
	RESULT TYPE	Residential	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary	Primary	Duplicate	Primary	Primary	Duplicate
Trichloroethene	(µg/L)	260	**22**	<5	**3.2**	**3.3**	**78**	**5.7**	**2.3**	**4.7**	**2.3**	**3.8**	**4.7**	**11.0**	**2.2**	**1.9**	**2.3**	**2.3**	**2.1**	**2.4**	**2.4**
1,1,2-Trichloroethane	(µg/L)	50	<5	<5	<1	<1.7	<3.3	<1.7	<1.0	<1.0	<1.2	<1.0	<1.0	<1.0	<1.0	<1.4	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane	(µg/L)	10,220	<5	<5	**1.3**	<1.7	<3.3	<1.7	**1.2**	**1.2**	<1.2	**1.5**	**1.5**	**1.4**	**1.1**	<1.4	**1.1**	**1.3**	**1.1**	**1.1**	**1.1**
trans-1,2-Dichloroethene	(µg/L)	2,040	<5	<5	**1.2**	<1.7	<3.3	<1.7	**1.1**	**<1.0**	<1.2	<1.0	<1.0	<1.0	<1.0	<1.4	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	(µg/L)	1,022	**45**	**65**	**38**	**42**	**19**	**39**	**39**	**20**	**40**	**25**	**22**	**22**	**38**	**36**	**26**	**34**	**36**	**37**	**37**
Vinyl Chloride	(µg/L)	10	<10	<10	**0.73**	<1.7	<3.3	<1.7	<1.0	<1.0	<1.2	<1.0	<1.0	<1.0	<1.0	<1.4	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	(µg/L)	469	<5	<5	<1	<1.7	<3.3	<1.7	<1.0	<1.0	<1.2	<1.0	<1.0	<1.0	<1.0	<1.4	<1.0	<1.0	<1.0	<1.0	<1.0

Shading = reported constituent concentration exceeds IDEM VRP Tier II Non-Residential Cleanup Goal
BOLD = detected constituent
µg/L = micrograms per liter
NA = not applicable or not available

Prepared by: JPS Date: 08/08/10

Checked by: SDM Date: 08/15/10

Table 5-2: Dissolved Oxygen Measurements

Date	MW-As Primary	MW-Ad Primary	MW-Bs Primary	MW-Bd Primary	MW-Cs Primary	MW-Cd Primary	MW-7 Primary
Januray 24, 2007	12.3	8.7	8.65	8.4	9.4	9.65	NR
March 13, 2007	12.58	8.9	9.00	9.02	10	12.5	NR
June 4, 2007	6.00	6.5	4.00	4.4	6.5	5.5	NR
October 8, 2007	4.50	5	5.00	5.5	6	4.5	NR
December 11, 2007	6.30	1.7	8.80	3.3	OR	5.5	OR
March 18, 2008	3.73	3.92	4.00	11.5	3.74	2.88	11.5
July 23, 2008	6.83	4.84	6.91	6.73	6.25	6.11	6.11
January 19, 2010	0.12 *	-0.05 *	0.35 *	-0.05 *	0.6 *	-0.06 *	0.09 *
July 14, 2010	-0.04 *	2.21 *	0.48 *	1:63 *	3.93 *	2.00 *	-0.02 *

Prepared by: JPS Date: 08/08/10

Checked by: SDM Date: 08/15/10

Table 5-3: Induced Vacuum Measurements

Date	Monitoring Point Designation: / Screened Interval Depth:	MW-As 13-23'	MW-Bs 13-23'	MW-Cs 13-23'
Januray 24, 2007	System Vacuum - 44"	1.75	2.21	2.20
March 13, 2007	System Vacuum - 50"	1.82	2.52	2.50
June 4, 2007	System Vacuum - 47"	1.70	2.30	2.35
October 8, 2007	System Vacuum - 32"	1.50	2.05	2.00
December 11, 2007	System Vacuum - 32"	NA	NA	0.55
March 18, 2008	System Vacuum - 32"	1.55	2.03	1.01
July 23, 2008	System Vacuum - 32"	1.30	2.00	1.70
January 22, 2010	System Vacuum - 36"	0.66	2.10	1.60
April 13, 2010	System Vacuum - 40"	0.68	2.21	1.83
July 14, 2010	System Vacuum - 42"	0.85	2.45	2.08
Distance from Nearest SVE Well (ft.)		25	14	15

Notes: Measurements are Inches of Water, unless otherwise noted.
SVE = Soil Vapor Extraction
ft = feet

Prepared by: JPS Date: 08/08/10

Checked by: SDM Date: 08/15/10

FIGURES

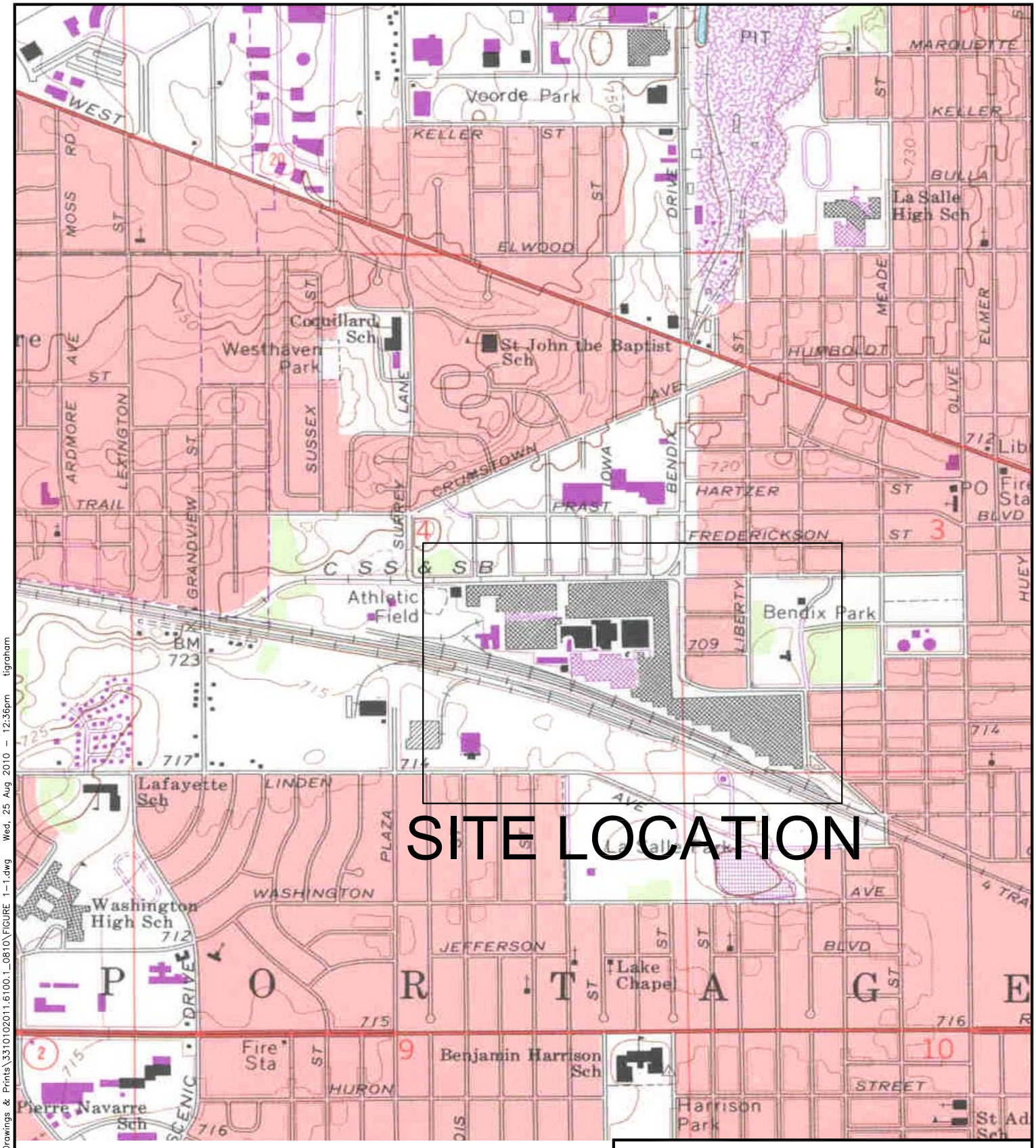


FIGURE 1-1

SITE LOCATION MAP

PILOT WORK PLAN - OFFSITE PLUME
HONEYWELL INDUSTRIAL PLUME
SOUTH BEND, INDIANA

DESIGNED BY		
DRAWN BY		
CHKD. BY		

MACTEC
41 Hughes Drive
Traverse City, MI 49686

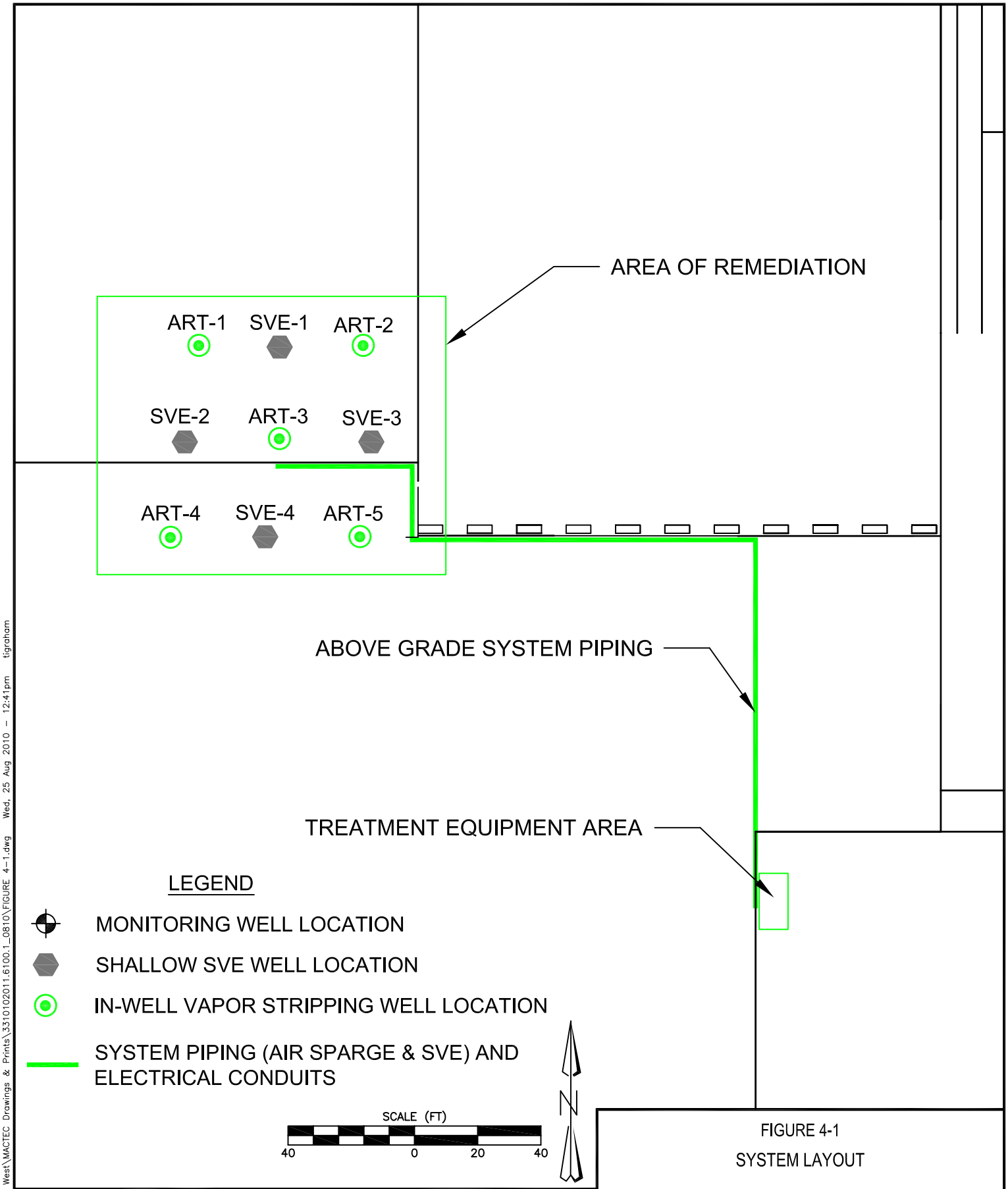


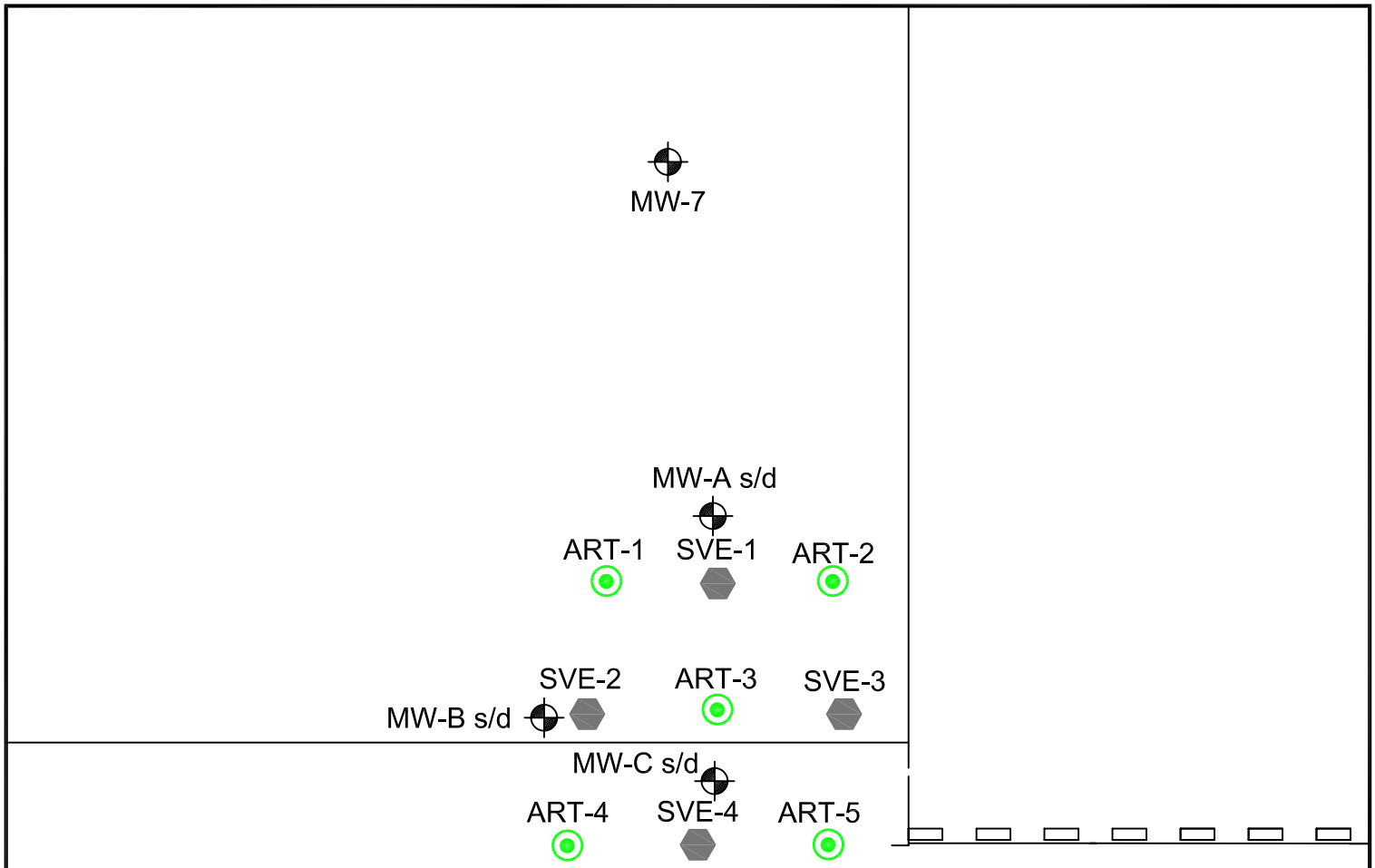
FIGURE 4-1
SYSTEM LAYOUT

AREA 14 WEST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

DESIGNED BY		
DRAWN BY		
CHKD. BY		

MACTEC
41 Hughes Drive
Traverse City, MI 49686

P:\HW - SB Area 14 West\MACTEC Drawings & Prints\33101020011.6100.1_0810\FIGURE 4-1.dwg Wed, 25 Aug 2010 - 12:41pm tigraham



LEGEND

- MONITORING WELL LOCATION
- SHALLOW SVE WELL LOCATION
- IN-WELL VAPOR STRIPPING WELL LOCATION

N

SCALE (FT)

40 0 20 40

FIGURE 5-1

REFERENCE MAP

AREA 14 WEST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

DESIGNED BY		
DRAWN BY		
CHKD. BY		

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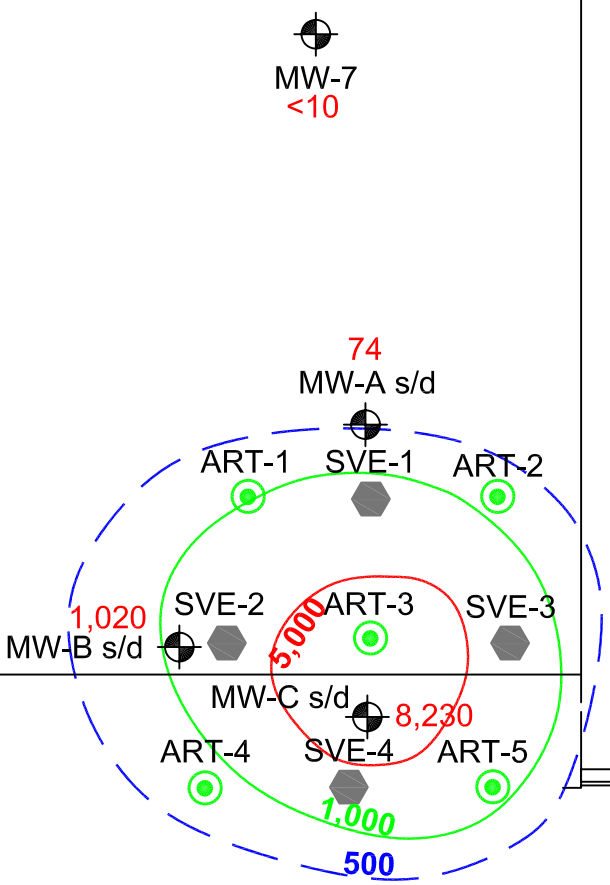

LEGEND

- MONITORING WELL LOCATION
- SHALLOW SVE WELL LOCATION
- IN-WELL VAPOR STRIPPING WELL LOCATION
- 1,020 — HIGHEST TCE CONCENTRATIONS REPORTED AT THIS LOCATION 12/2006 (ug/L)
- ESTIMATED TCE ISO-CONTOUR LINES (ug/L)

N

SCALE (FT)

40 0 20 40

DESIGNED BY		
DRAWN BY		
CHKD. BY		

MACTEC
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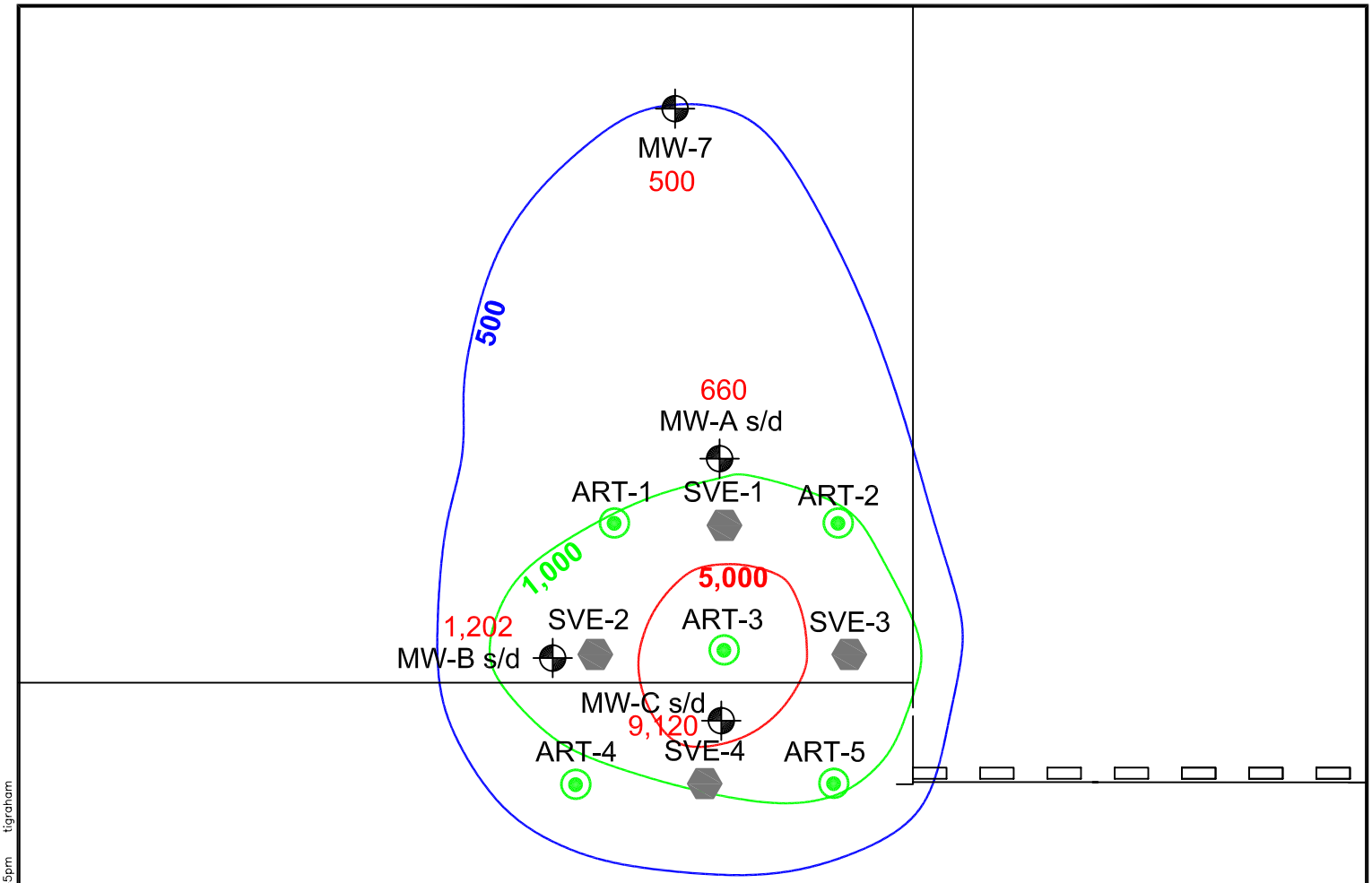
Traverse City, MI 49686

FIGURE 6-1

TCE IN GROUNDWATER
PRIOR TO SYSTEM STARTUP

AREA 14 WEST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

P:\HW - SB Area 14 West\MACTEC Drawings & Prints\33101102011.6100.1_0810\FIGURE 6-1 AND 6-2.dwg Wed, 25 Aug 2010 - 12:45pm tigraham



LEGEND

- MONITORING WELL LOCATION
- SHALLOW SVE WELL LOCATION
- IN-WELL VAPOR STRIPPING WELL LOCATION
- ESTIMATED TOTAL VOC ISO-CONTOUR (ug/L)
- 1,202 HIGHEST TOTAL VOC CONCENTRATION REPIORTED AT LOCATION 12/2006 (ug/L)

N

SCALE (FT)

40 0 20 40

FIGURE 6-2

TOTAL VOCs IN GROUNDWATER
PRIOR TO SYSTEM STARTUP

AREA 14 WEST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

DESIGNED BY		
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CHKD. BY		

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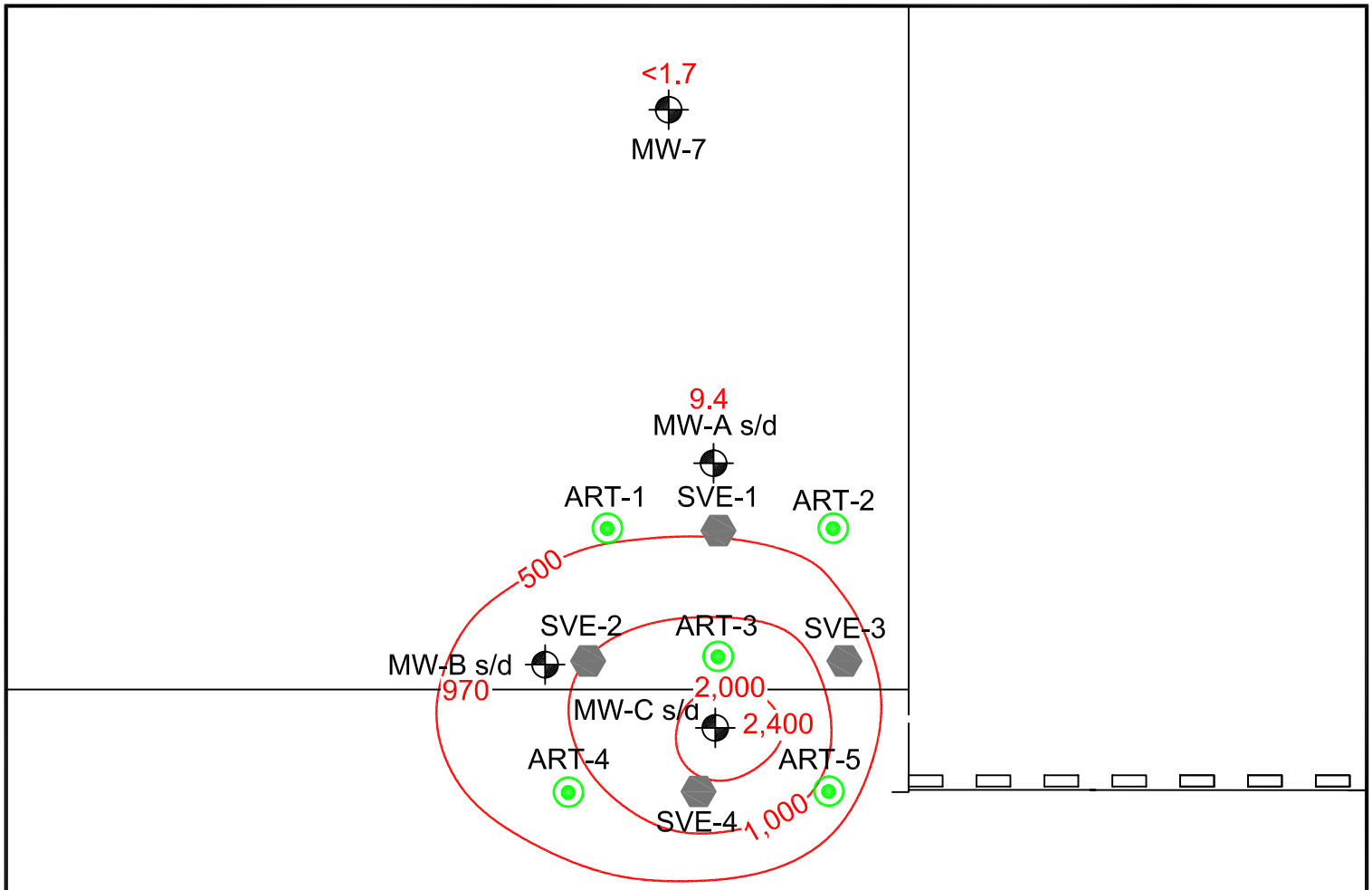
41 Hughes Drive
Traverse City, MI 49686

P:\HW - SB Area 14 West\MACTEC Drawings & Prints\33101102011.6100.1_0810\FIGURE 6-1 AND 6-2.dwg Wed, 25 Aug 2010 - 12:45pm tigraham



LEGEND

- MONITORING WELL LOCATION
- SHALLOW SVE WELL LOCATION
- IN-WELL VAPOR STRIPPING WELL LOCATION
- ESTIMATED TCE IN GROUNDWATER CONTOUR APRIL 2010 (ug/L)
- 970 HIGHEST TOTAL CONCENTRATIONS REPORTED AT LOCATION APRIL 2010 (ug/L)

N

SCALE (FT)

40 0 20 40

FIGURE 6-3

TCE IN GROUNDWATER APRIL 2010

AREA 14 WEST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

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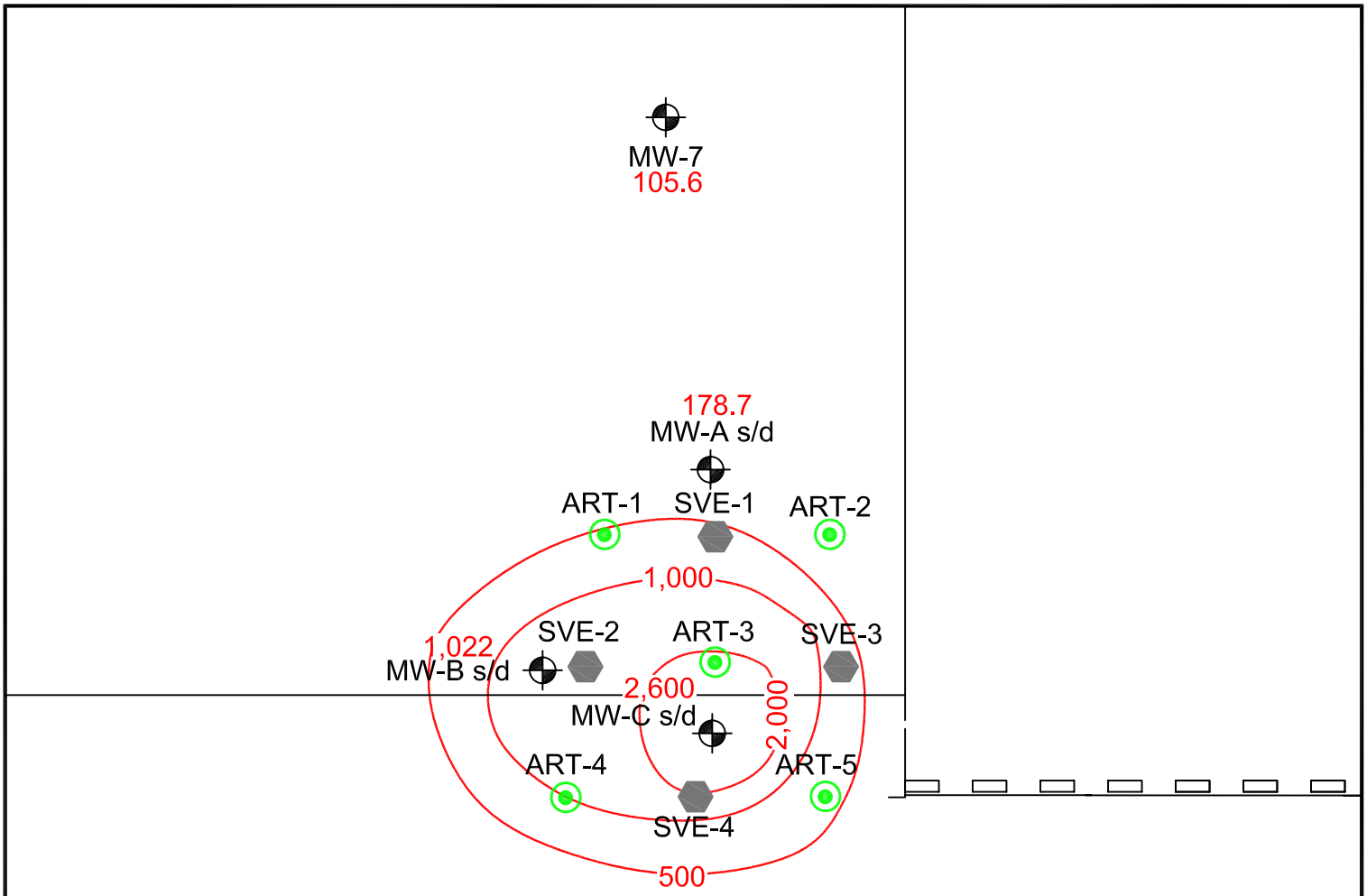
Traverse City, MI 49686



LEGEND

- MONITORING WELL LOCATION
- SHALLOW SVE WELL LOCATION
- IN-WELL VAPOR STRIPPING WELL LOCATION
- ESTIMATED TOTAL VOC ISO-CONTOURS (ug/L)
- 823 HIGHEST TOTAL VOC CONCENTRATION REPORTED AT LOCATION APRIL 2010 (ug/L)

N

SCALE (FT)

40 0 20 40

FIGURE 6-4

TOTAL VOCs IN GROUNDWATER APRIL 2010

AREA 14 WEST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

DESIGNED BY		
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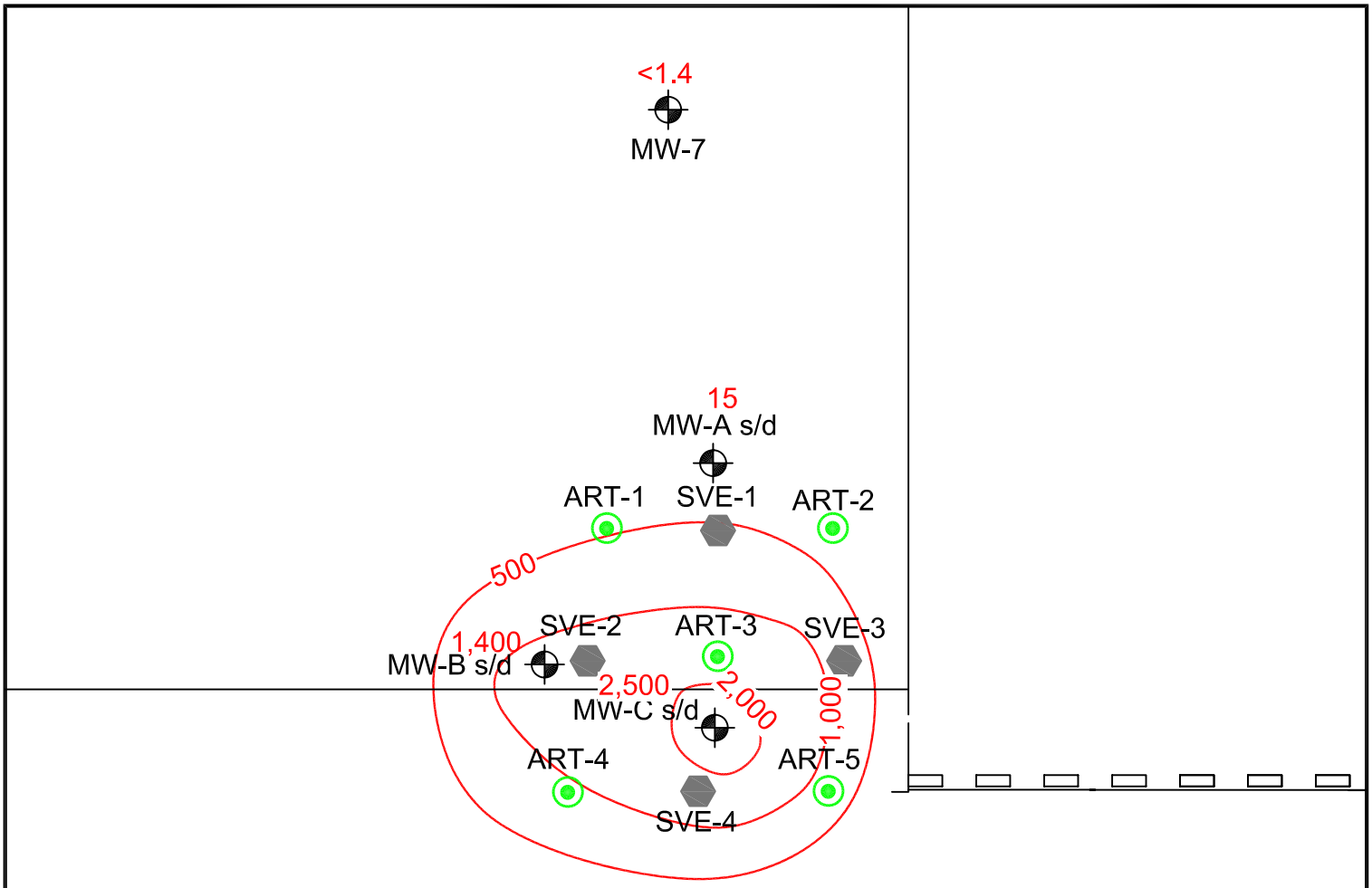
Traverse City, MI 49686



LEGEND

- MONITORING WELL LOCATION
- SHALLOW SVE WELL LOCATION
- IN-WELL VAPOR STRIPPING WELL LOCATION
- ESTIMATED TCE ISO-CONTOURS (ug/L)
- 2,630 HIGHEST TCE CONCENTRATION REPORTED AT LOCATION JULY 2010 (ug/L)

N

SCALE (FT)

40 0 20 40

FIGURE 6-5

TCE IN GROUNDWATER JULY 2010

AREA 14 WEST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

DESIGNED BY		
DRAWN BY		
CHKD. BY		

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41 Hughes Drive
Traverse City, MI 49686

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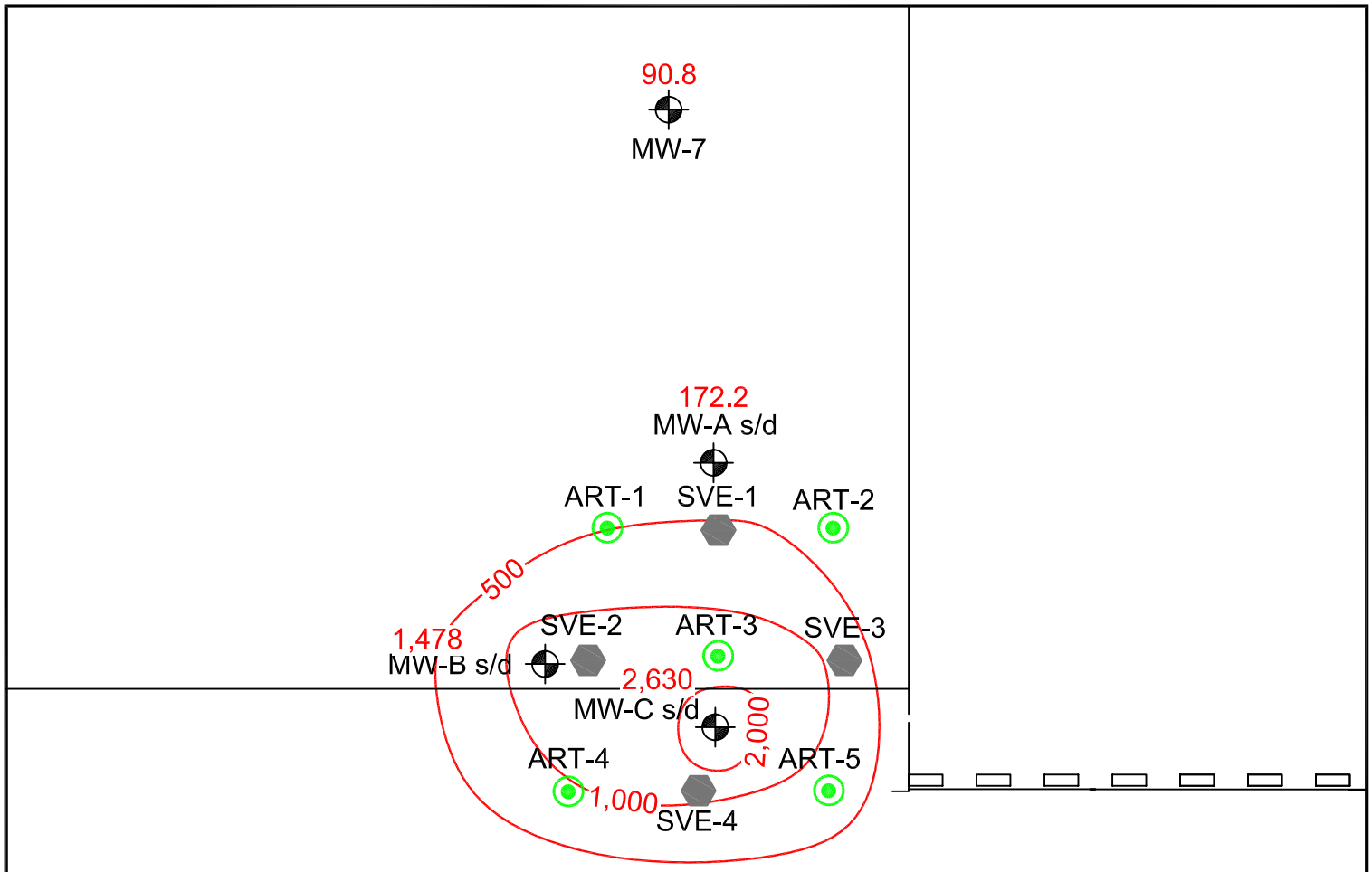

LEGEND

- MONITORING WELL LOCATION
- SHALLOW SVE WELL LOCATION
- IN-WELL VAPOR STRIPPING WELL LOCATION
- ESTIMATED TCE ISO-CONTOURS (ug/L)
- 2,630 HIGHEST TCE CONCENTRATION REPORTED AT LOCATION JULY 2010 (ug/L)

N

SCALE (FT)

40 0 20 40

FIGURE 6-6

TOTAL VOCs IN GROUNDWATER JULY 2010

AREA 14 WEST
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

DESIGNED BY		
DRAWN BY		
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Traverse City, MI 49686

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CHARTS

Chart 4-1
Weekly Removal Rates
Area 14 West - Honeweyll Industrial Complex
South Bend, Indiana

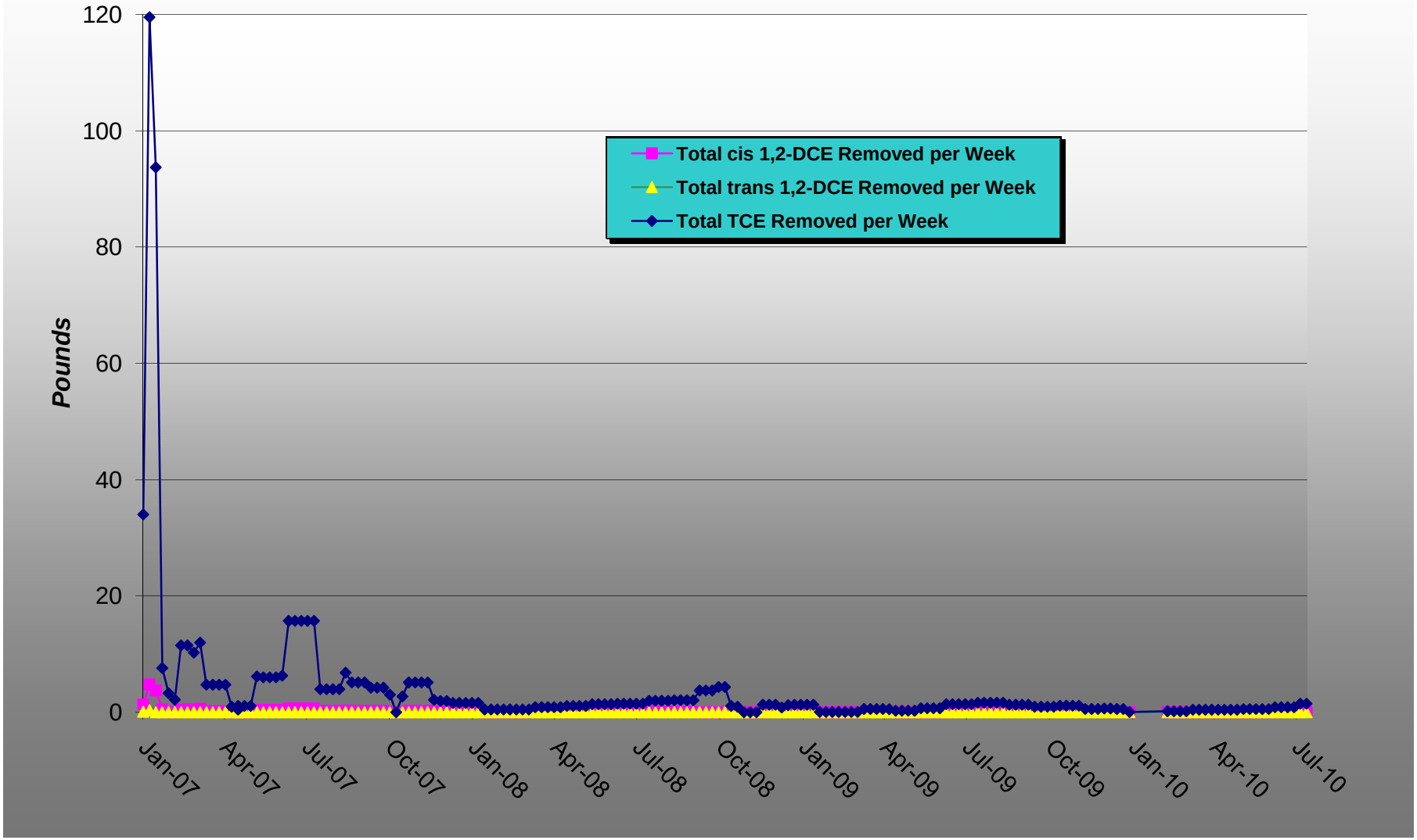


Chart 4-2
Total Mass of TCE Removed by the System
Area 14 West - Honeywell Industrial Complex
South Bend, Indiana

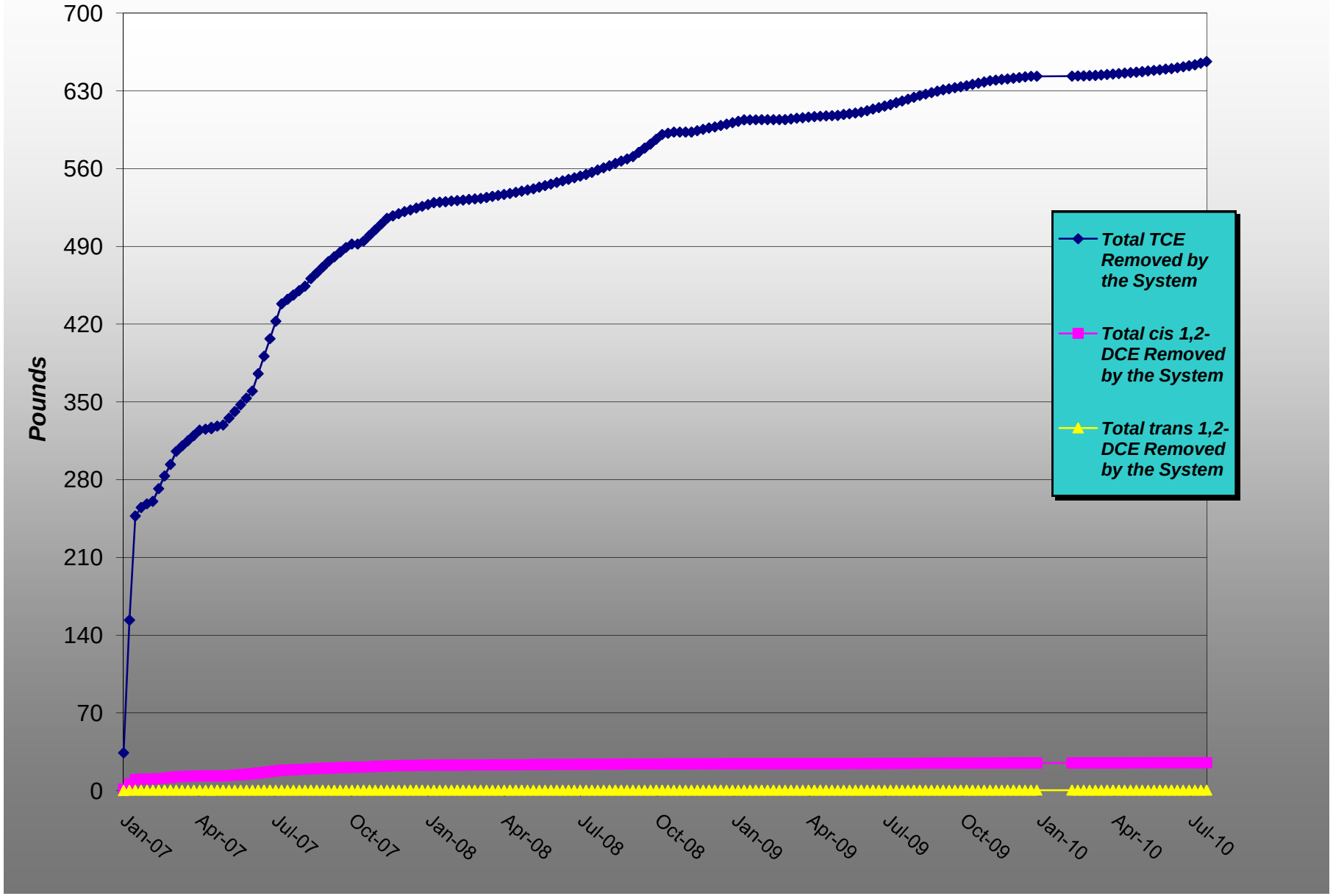


Chart 5-1
MW-As VOC Trends
Area 14 West - Honeywell Industrial Complex
South Bend, Indiana

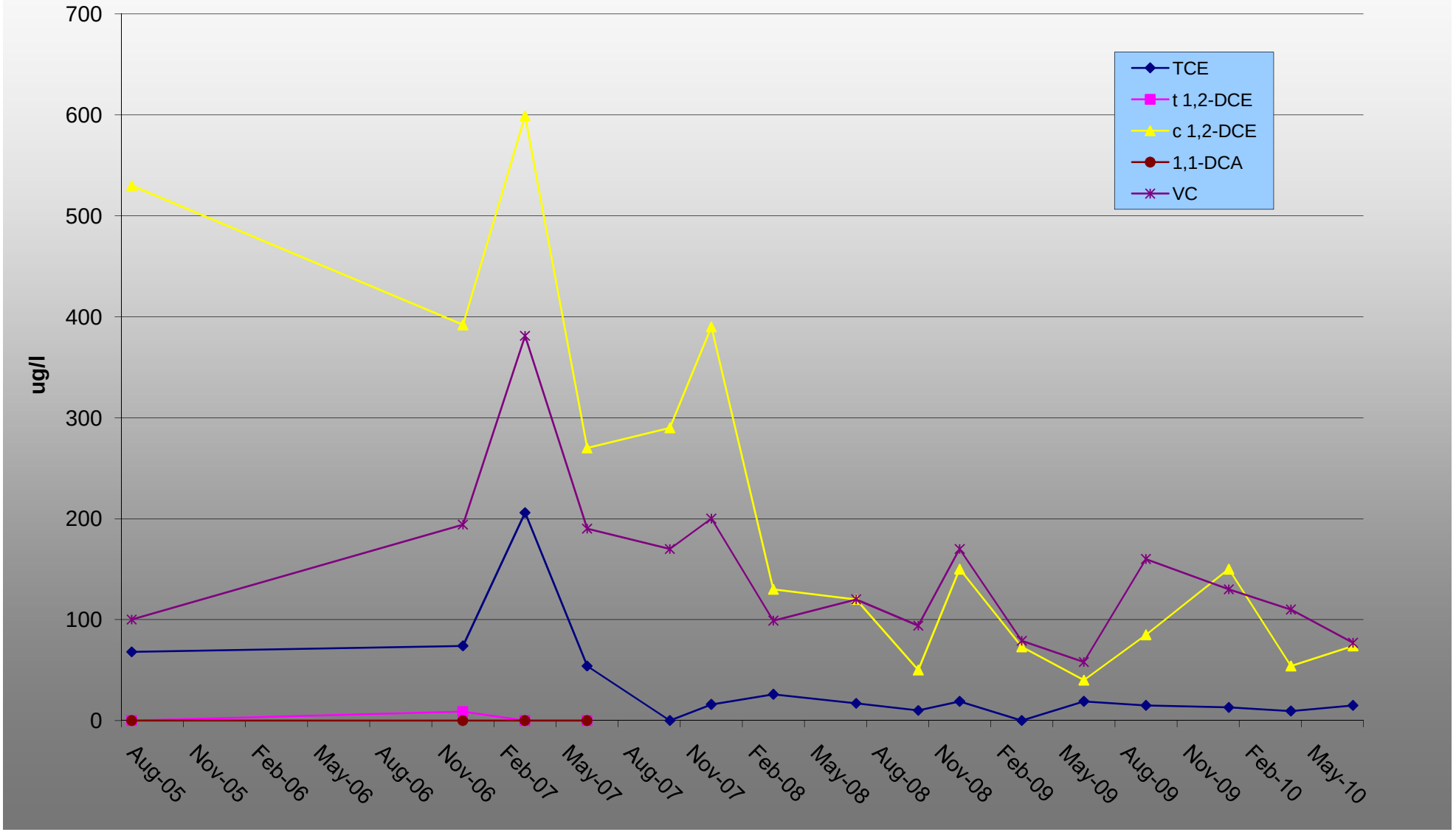


Chart 5-2
MW-Ad VOC Trends
Area 14 West - Honeweyll Industrial Complex
South Bend, Indiana

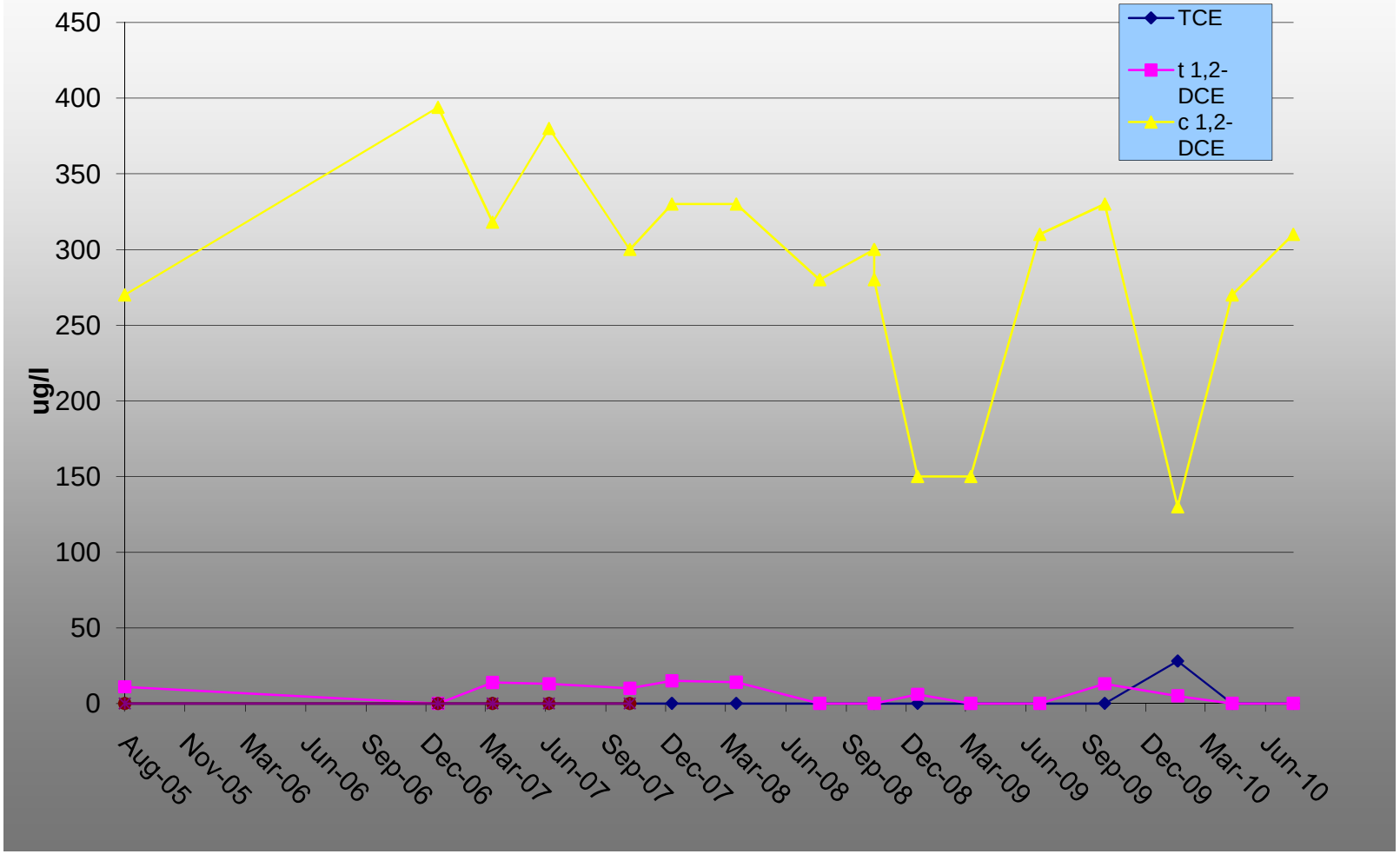


Chart 5-3
MW-Bs VOC Trends
Area 14 West - Honeywell Industrial Complex
South Bend, Indiana

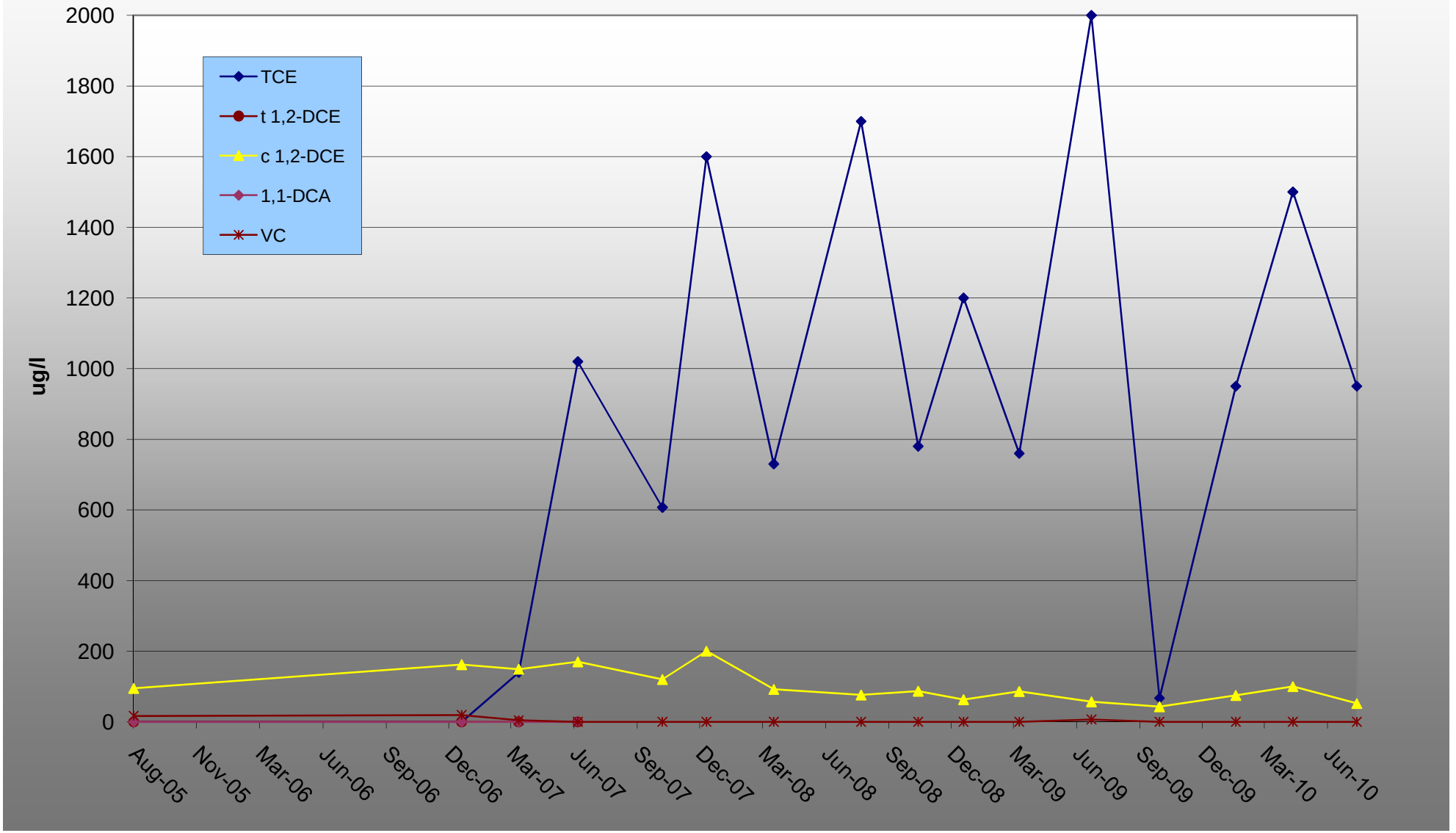


Chart 5-4
MW-Bd VOC Trends
Area 14 West - Honeweyll Industrial Complex
South Bend, Indiana

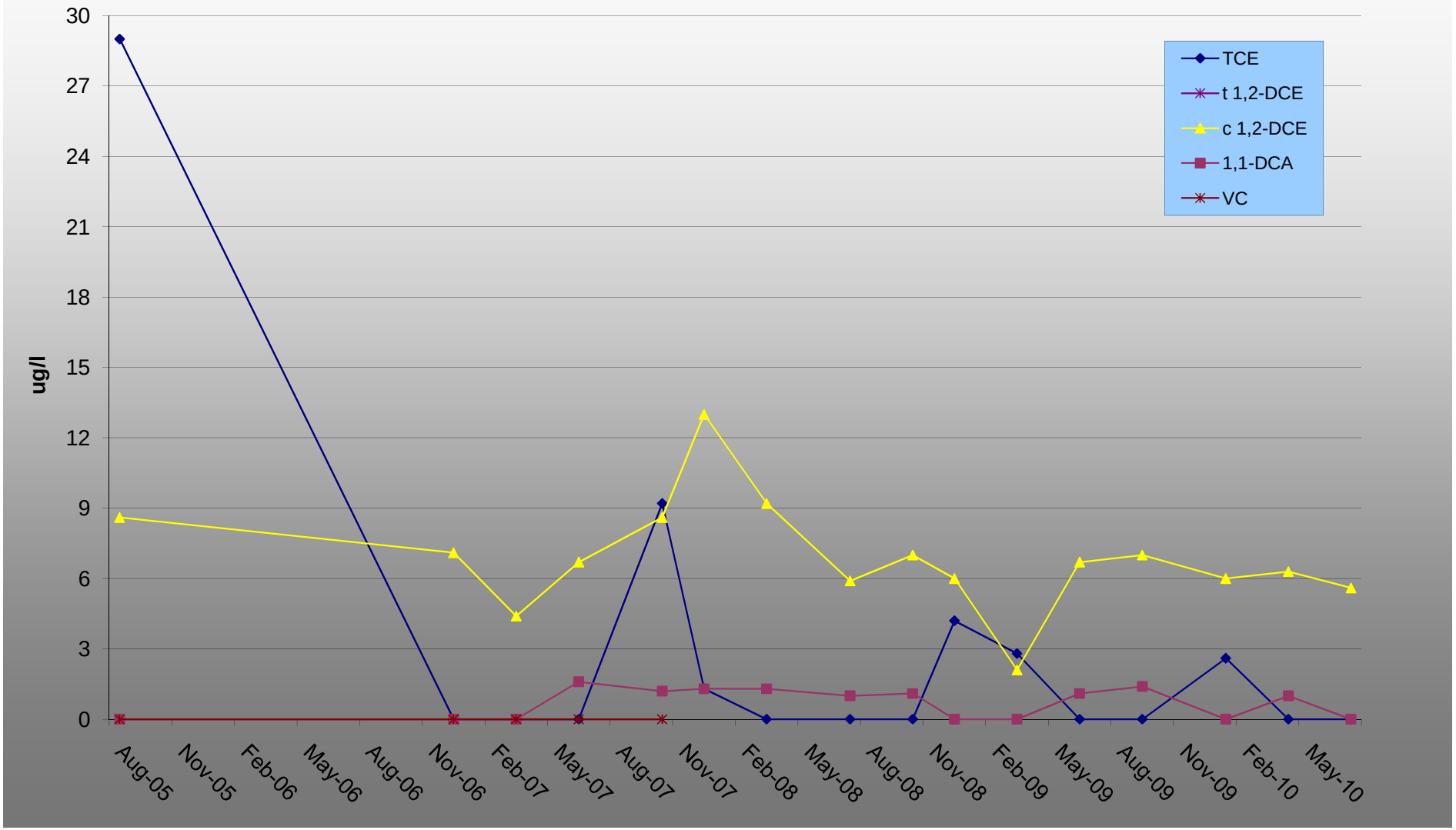


Chart 5-5
MW-Cs VOC Trends
Area 14 West - Honeywell Industrial Complex
South Bend, Indiana

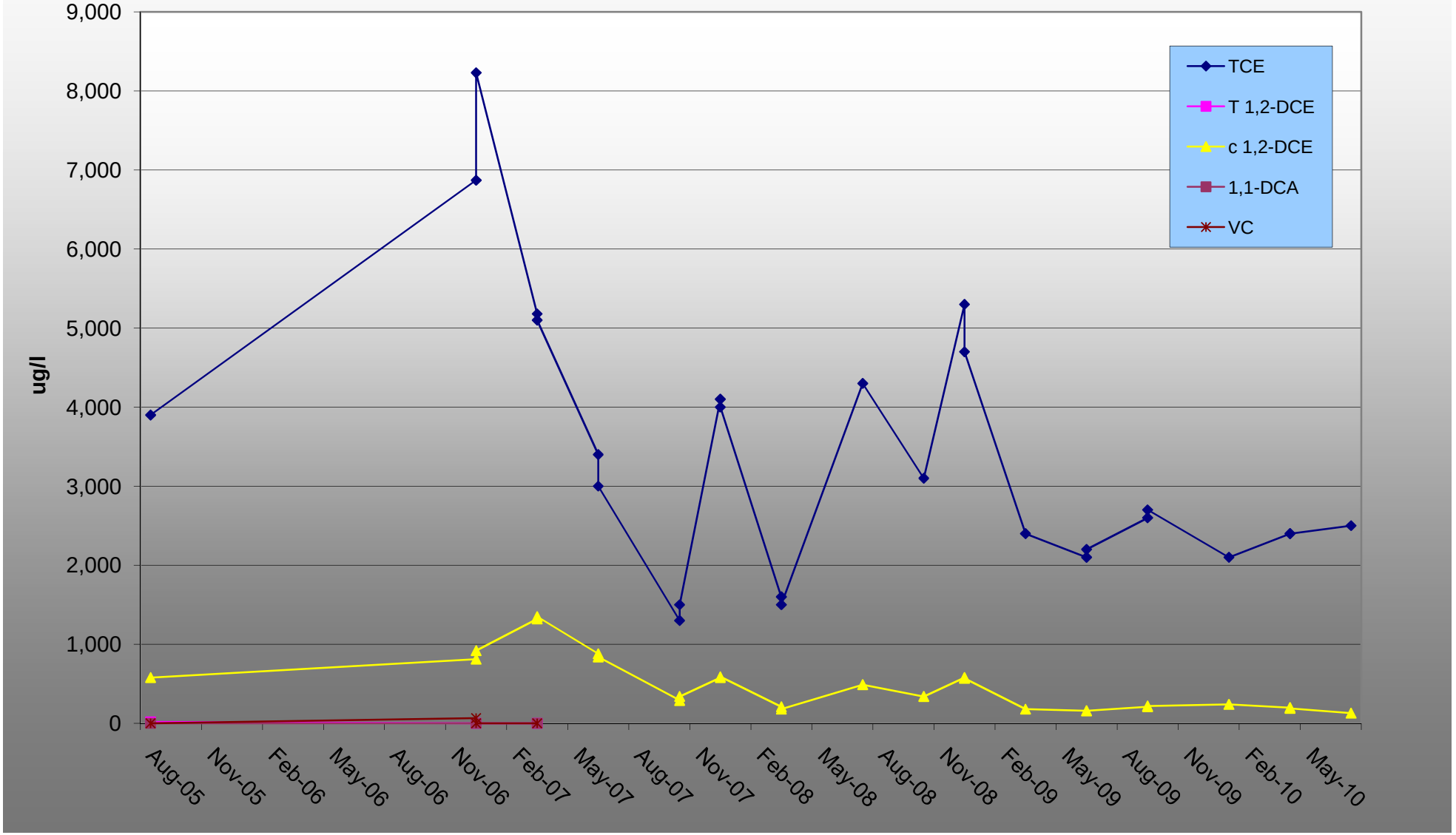


Chart 5-6
MW-Cd VOC Trends
Area 14 West - Honeywell Industrial Complex
South Bend, Indiana

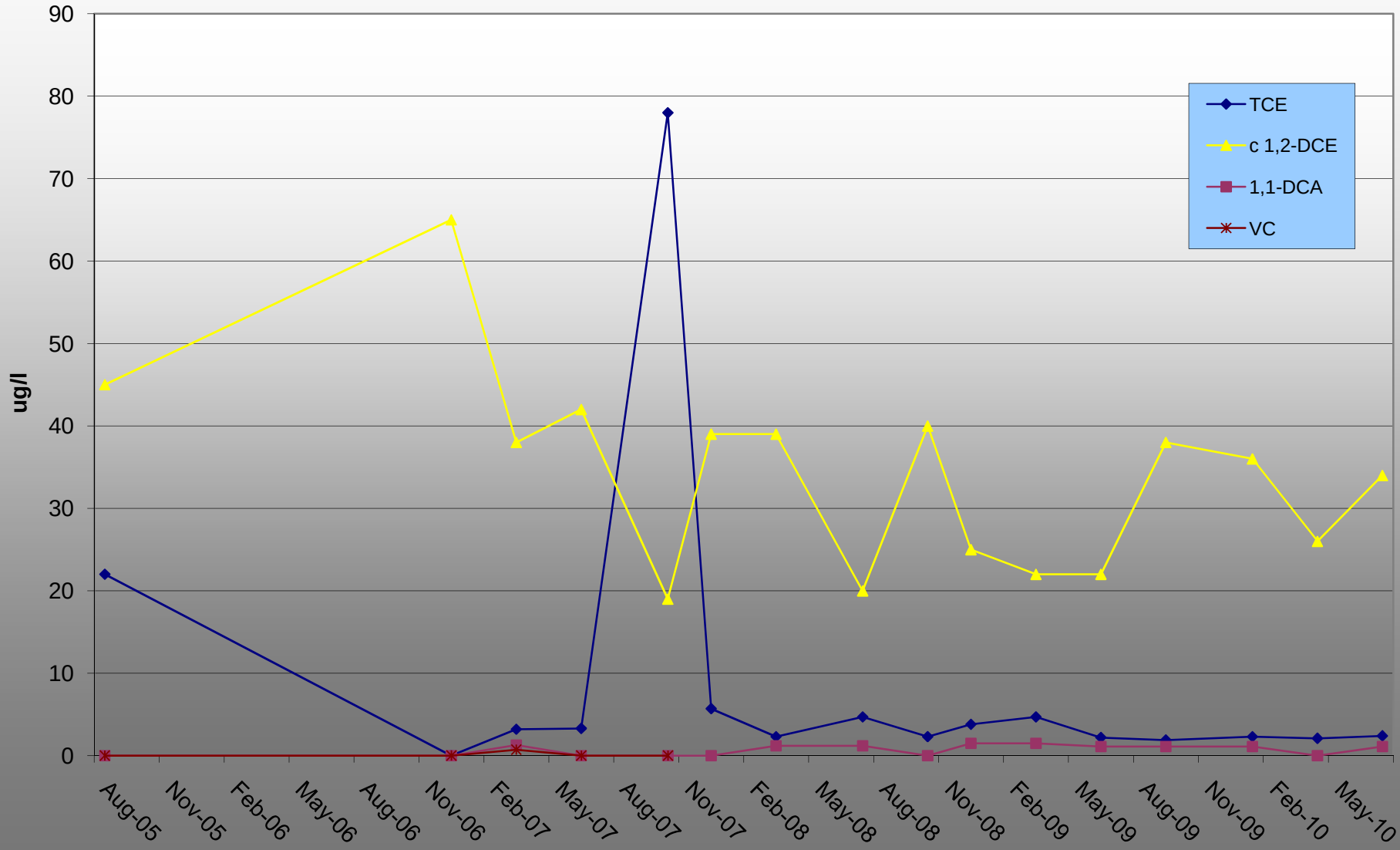
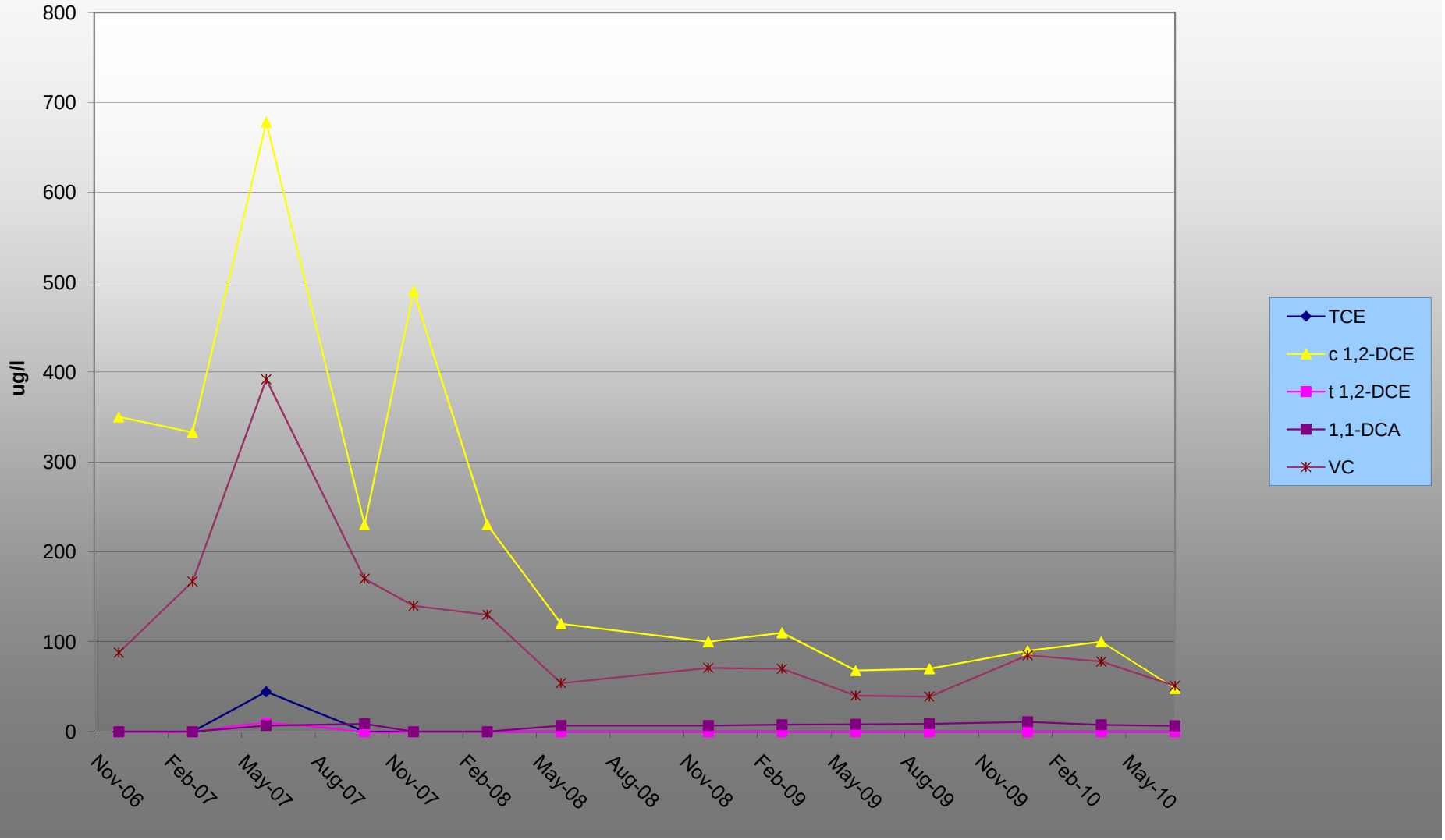


Chart 5-7
MW-7 VOC Trends
Area 14 West - Honeywell Industrial Complex
South Bend, Indiana



APPENDIX A

SITE INSPECTION REPORTS

SITE INSPECTION REPORT
Area 14 WEST - Treatment System
Honeywell Industrial Complex

Personnel: Palmer Andresen

Date: 2/24/2010
Arrival Time: 11:30
Departure Time: NDC
Weather: Cloudy 25°

Reason for Visit:
Specify: Week 4 End of Month

Treatment System Area

Compressor Status: found off line/ put on line

Compressor Pressure (PSI): 102
Compressor Temperature (F): 172°F
Hour Meter Reading: 21322

Line Pressure (psi): 27
Line Temperature (F): ?

Total Flow (scfm): ?
In-line Filters : OK
Knock Out Tank Level: 0

Gallons Drained 0

Blower Status: found off line/ put on line
SVE 65"/67" ART 55"/67"

Blower Temperature (F): 100°F/104°F
Total Flow (scfm): ?/218
Line Vacuum (in water): 65"/67"

Carbon Vapor Pacs: SV462 Lead
SV32 intermediate

After Heat Exchanger
Line Pressure : 8"/10"
Line Temperature (F): 44°F/70°F
Between Vapor Pacs
Line Pressure : 0 / 6"
Line Temperature (F): NA

Plant 1 Treatment Area

Observations: try to warm up bed, found off- restarted- collected (2) air/gas samples, called Nick R. at 9:00 AM- will check out EW-4 and then come back. Returned at 9:45 AM and got CFM from 64 CFM to 224 CFM

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	14	4	On	NDC	NDC	NDC
2	15	4	On	NDC	NDC	NDC
3	15.5	4	On	NDC	NDC	NDC
4	18	4	On	NDC	NDC	NDC
5	18.5	3.8	On	NDC	NDC	NDC

MACTEC
Engineering & Consulting, Inc.

SITE INSPECTION REPORT
Area 14 WEST - Treatment System
Honeywell Industrial Complex

Personnel: Plamer Andresen

Date: 3/31/2010
Arrival Time: 8:15
Departure Time: NDC
Weather: Clear 44°

Reason for Visit:
Specify: Week 5 End of Month

Treatment System Area

Compressor Status: On Line
Compressor Pressure (PSI): 102
Compressor Temperature (F): 183°F
Hour Meter Reading: 22161

Line Pressure (psi): 28
Line Temperature (F): ?

Total Flow (scfm): ?
In-line Filters : OK
Knock Out Tank Level: 0
Gallons Drained 0

Blower Status: on line
SVE 40" ART 85" H2O
Blower Temperature (F): 118°F
Total Flow (scfm): 240
Line Vacuum (in water): 40"

Carbon Vapor Pacs: SV462 Lead
SV32 intermediate
After Heat Exchanger NDA
Line Pressure : 15"
Line Temperature (F): 90°F
Between Vapor Pacs
Line Pressure : 9"
Line Temperature (F): NA

Plant 1 Treatment Area

Observations: Collected (2) air/gas samples

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	12	3.4	On	NDC	NDC	NDC
2	12	3.4	On	NDC	NDC	NDC
3	14	3.4	On	NDC	NDC	NDC
4	16	3.4	On	NDC	NDC	NDC
5	18.5	3.4	On	NDC	NDC	NDC

MACTEC
Engineering & Consulting, Inc.

SITE INSPECTION REPORT
Area 14 WEST - Treatment System
Honeywell Industrial Complex

Personnel: Ron Mead

Date: 4/28/2010
Arrival Time: 7:35
Departure Time: NDC
Weather: Sunny 45°

Reason for Visit:
Specify: End of Month

Treatment System Area

Compressor Status: On Line

Compressor Pressure (PSI): 102
Compressor Temperature (F): 172°F
Hour Meter Reading: 22698

Line Pressure (psi): 30
Line Temperature (F): ?

Total Flow (scfm): ?
In-line Filters : OK
Knock Out Tank Level: 0

Gallons Drained 0

Blower Status: on line
SVE 42" ART 86" H2O

Blower Temperature (F): 100°F
Total Flow (scfm): 214
Line Vacuum (in water): 78"

Carbon Vapor Pacs: SV462 Lead
SV32 intermediate

After Heat Exchanger NDA
Line Pressure : 10"
Line Temperature (F): 78°F
Between Vapor Pacs
Line Pressure : 6"
Line Temperature (F): NA

Plant 1 Treatment Area

Observations: Collected (2) air/gas samples

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	13.5	3.2	On	NDC	NDC	NDC
2	16	3.05	On	NDC	NDC	NDC
3	16	3.01	On	NDC	NDC	NDC
4	18	3.01	On	NDC	NDC	NDC
5	17	3.2	On	NDC	NDC	NDC

MACTEC
Engineering & Consulting, Inc.

SITE INSPECTION REPORT
Area 14 WEST - Treatment System
Honeywell Industrial Complex

Personnel: Ron Mead

Date: 5/27/2010
Arrival Time: 8:32
Departure Time: NDC
Weather: Sunny 74°

Reason for Visit:
Specify: End of Month

Treatment System Area

Compressor Status: On Line

Compressor Pressure (PSI): 102
Compressor Temperature (F): 189°F
Hour Meter Reading: 23326

Line Pressure (psi): NDC
Line Temperature (F): ?

Total Flow (scfm): ?
In-line Filters : OK
Knock Out Tank Level: 0

Gallons Drained 0

Blower Status: on line
SVE 40" ART 82" H2O

Blower Temperature (F): 139°F
Total Flow (scfm): 210
Line Vacuum (in water): 100"

Carbon Vapor Pacs: SV462 Lead
SV32 intermediate

After Heat Exchanger
Line Pressure : 12"
Line Temperature (F): 89°F
Between Vapor Pacs
Line Pressure : 7"
Line Temperature (F): NA

Plant 1 Treatment Area

Observations: Collected (2) air/gas samples, fould blower off
re-started at MACTEC's request

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	12	3.1	On	NDC	NDC	NDC
2	13	3	bulb burn	NDC	NDC	NDC
3	14.5	3.1	On	NDC	NDC	NDC
4	16.5	3	On	NDC	NDC	NDC
5	18	3.1	On	NDC	NDC	NDC

MACTEC
Engineering & Consulting, Inc.

SITE INSPECTION REPORT
Area 14 WEST - Treatment System
Honeywell Industrial Complex

Personnel: Palmer Andresen

Date: 6/30/2010
Arrival Time: 7:33
Departure Time: NDC
Weather: Clear 49°

Reason for Visit:
Specify: Week 5

Treatment System Area

Compressor Status: found off line
removed air filter and cleaned debris
reset and put back on line

Compressor Pressure (PSI): 94
Compressor Temperature (F): 176°F
Hour Meter Reading: 23848

Line Pressure (psi): 33
Line Temperature (F): ?

Total Flow (scfm): ?
In-line Filters : OK
Knock Out Tank Level: 0

Gallons Drained 0

Blower Status: on line
SVE 40" ART 84" H2O

Blower Temperature (F): 124°F
Total Flow (scfm): ?
Line Vacuum (in water): 42"

Carbon Vapor Pacs: SV462 Lead
SV32 intermediate

After Heat Exchanger NDA
Line Pressure : 16"
Line Temperature (F): 84°
Between Vapor Pacs
Line Pressure : 8"
Line Temperature (F): ?

Plant 1 Treatment Area

Observations: collected (2) air/gas samples

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	15	3.6	On	NDC	NDC	NDC
2	16	3.4	On	NDC	NDC	NDC
3	17	3.4	On	NDC	NDC	NDC
4	19	3.4	On	NDC	NDC	NDC
5	18.5	3.4	On	NDC	NDC	NDC

MACTEC
Engineering & Consulting, Inc.

SITE INSPECTION REPORT
Area 14 WEST - Treatment System
Honeywell Industrial Complex

Personnel: Palmer Andresen

Date: 7/28/2010
Arrival Time: 9:30
Departure Time: NDC
Weather: Clear

Reason for Visit:
Specify: Week 4 End of Month

Treatment System Area

Compressor Status: found off line-tripped
Re-set and Re-started

Compressor Pressure (PSI): 99
Compressor Temperature (F): 183°F
Hour Meter Reading: 23856

Line Pressure (psi): 33
Line Temperature (F): ?

Total Flow (scfm): ?
In-line Filters : OK
Knock Out Tank Level: 0

Gallons Drained 0

Blower Status: on line
SVE 40" ART 85" H2O

Blower Temperature (F): 140°F
Total Flow (scfm): ?
Line Vacuum (in water): 40"

Carbon Vapor Pacs: SV462 Lead
SV32 intermediate

After Heat Exchanger NDC
Line Pressure : 17"
Line Temperature (F): 104°F
Between Vapor Pacs
Line Pressure : 9"
Line Temperature (F): N/A

Plant 1 Treatment Area

Observations: Collected (2) air/gas Samples. Found QCT tripped. Cleared & restarted air compressor.

	SPARGE LINE		RECIRCULATION PUMP		SVE LINE	
Well ID	Pressure (psi)	Flow Rate (scfm)	Pump	SVE Valves	Vacuum	Flow Rate (scfm)
1	14	3.6	On line	NDC	NDC	NDC
2	15	3.4	On line	NDC	NDC	NDC
3	16	3.4	On line	NDC	NDC	NDC
4	18	3	On Line	NDC	NDC	NDC
5	18	3.2	On Line	NDC	NDC	NDC

MACTEC
Engineering & Consulting, Inc.

APPENDIX B

ANALYTICAL REPORTS – AIR SAMPLES

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend - West

Lot #: H0B250408

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

March 3, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0B250408

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LEAD WEST 02/24/10 09:50 001				
1,1-Dichloroethane	0.00096 J	0.0036	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.016	0.0036	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0014 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.0018	0.0091	ppm(v/v)	EPA-2 TO-14A
	Qualifiers: J,B			
Toluene	0.0052	0.0036	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.23	0.0036	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	0.0036	0.0036	ppm(v/v)	EPA-2 TO-14A
INTERMEDIATE WEST 02/24/10 09:56 002				
Methylene chloride	0.0018	0.0091	ppm(v/v)	EPA-2 TO-14A
	Qualifiers: J,B			
Toluene	0.0068	0.0036	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	0.0021 J	0.0036	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	0.0041	0.0036	ppm(v/v)	EPA-2 TO-14A
o-Xylene	0.0013 J	0.0036	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0B250408

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0B250408

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LV26W	001	LEAD WEST	02/24/10	09:50
LV26X	002	INTERMEDIATE WEST	02/24/10	09:56

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
HOB250408

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

The samples were received on 02/25/10 in Tedlar bags and analyzed within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: LEAD WEST

GC/MS Volatiles

Lot-Sample #...: H0B250408-001 Work Order #...: LV26W1AA Matrix.....: AIR
Date Sampled...: 02/24/10 09:50 Date Received..: 02/25/10
Prep Date.....: 02/26/10 Analysis Date..: 02/26/10
Prep Batch #...: 0060124
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	ND	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	0.00096 J	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	0.016	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	0.0014 J	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	0.0018 J,B	0.0091	ppm(v/v)
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	0.0052	0.0036	ppm(v/v)
1,1,1-Trichloroethane	ND	0.0036	ppm(v/v)
Trichloroethene	0.23	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	0.0036	0.0036	ppm(v/v)
o-Xylene	ND	0.0036	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

MACTEC Engineering and Consulting Inc

Client Sample ID: INTERMEDIATE WEST

GC/MS Volatiles

Lot-Sample #...: H0B250408-002 Work Order #...: LV26X1AA Matrix.....: AIR
Date Sampled...: 02/24/10 09:56 Date Received..: 02/25/10
Prep Date.....: 02/26/10 Analysis Date..: 02/26/10
Prep Batch #...: 0060124
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	ND	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	ND	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	**0.0018 J,B**	**0.0091**	**ppm(v/v)**
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	**0.0068**	**0.0036**	**ppm(v/v)**
1,1,1-Trichloroethane	ND	0.0036	ppm(v/v)
Trichloroethene	ND	0.0036	ppm(v/v)
Vinyl chloride	**0.0021 J**	**0.0036**	**ppm(v/v)**
m-Xylene & p-Xylene	**0.0041**	**0.0036**	**ppm(v/v)**
o-Xylene	**0.0013 J**	**0.0036**	**ppm(v/v)**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0B250408
MB Lot-Sample #: H0C010000-124

Work Order #...: LV6HH1AA
Prep Date.....: 02/26/10
Prep Batch #...: 0060124

Matrix.....: AIR

Analysis Date..: 02/26/10
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.000047 J	0.00050	ppm(v/v)	EPA-2 TO-14A
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0B250408 Work Order #...: LV6HH1AC Matrix.....: AIR
LCS Lot-Sample#: H0C010000-124
Prep Date.....: 02/26/10 Analysis Date..: 02/26/10
Prep Batch #...: 0060124
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	103	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	107	(70 - 130)	EPA-2 TO-14A
Chloroethane	106	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	106	(70 - 130)	EPA-2 TO-14A
Methylene chloride	107	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	105	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	101	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	100	(70 - 130)	EPA-2 TO-14A
Chloroform	96	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	97	(70 - 130)	EPA-2 TO-14A
Benzene	91	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	95	(70 - 130)	EPA-2 TO-14A
Trichloroethene	106	(70 - 130)	EPA-2 TO-14A
Toluene	86	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	87	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	84	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	85	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	83	(70 - 130)	EPA-2 TO-14A
o-Xylene	79	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: H0B250408 Work Order #...: LV6HH1AC Matrix.....: AIR
LCS Lot-Sample#: H0C010000-124
Prep Date.....: 02/26/10 Analysis Date..: 02/26/10
Prep Batch #...: 0060124
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	0.0025	0.0026	ppm(v/v)	103	EPA-2 TO-14A
Vinyl chloride	0.0025	0.0027	ppm(v/v)	107	EPA-2 TO-14A
Chloroethane	0.0025	0.0026	ppm(v/v)	106	EPA-2 TO-14A
1,1-Dichloroethene	0.0025	0.0027	ppm(v/v)	106	EPA-2 TO-14A
Methylene chloride	0.0025	0.0027	ppm(v/v)	107	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0025	0.0026	ppm(v/v)	105	EPA-2 TO-14A
1,1-Dichloroethane	0.0025	0.0025	ppm(v/v)	101	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.0025	0.0025	ppm(v/v)	100	EPA-2 TO-14A
Chloroform	0.0025	0.0024	ppm(v/v)	96	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0025	0.0024	ppm(v/v)	97	EPA-2 TO-14A
Benzene	0.0025	0.0023	ppm(v/v)	91	EPA-2 TO-14A
Carbon tetrachloride	0.0025	0.0024	ppm(v/v)	95	EPA-2 TO-14A
Trichloroethene	0.0025	0.0027	ppm(v/v)	106	EPA-2 TO-14A
Toluene	0.0025	0.0021	ppm(v/v)	86	EPA-2 TO-14A
Tetrachloroethene	0.0025	0.0022	ppm(v/v)	87	EPA-2 TO-14A
Chlorobenzene	0.0025	0.0021	ppm(v/v)	84	EPA-2 TO-14A
Ethylbenzene	0.0025	0.0021	ppm(v/v)	85	EPA-2 TO-14A
m-Xylene & p-Xylene	0.0050	0.0042	ppm(v/v)	83	EPA-2 TO-14A
o-Xylene	0.0025	0.0020	ppm(v/v)	79	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HOB250408

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 2/24/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie McKinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N)	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	2/24/10	9:50	Air		1		X	
Intermediate West		9:56	Air		1		X	
Lead East		7:55	Air		1		X	
Intermediate East		8:01	Air		1		X	
								NO CUSTODY SEALS
								RECEIVED AT AMBIENT
								TEMP BND 2-25-10
								1 BOX VRSA
								1Z4388780151668142

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Palmer Engreson	Peerless Midwest	2/24/10 2:05		Peerless-Midwest	2/24/10 2:20 PM
	Peerless-Midwest	2/24/10		TA	2-25-10 10:25

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: KDB2501408

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)				☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	NA
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)				☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?				☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?				☑ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?				☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?				☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?				☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?				☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?				☐ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?				☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?				☐ Incomplete information	
12. For 1613B water samples is pH<9?				If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?				☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)				☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?				☐ 15a Incomplete information	
16. Is the matrix of the samples noted?				☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?				☐ 15a Incomplete information	
18. Is the client and project name/# identified?				☐ 15a Incomplete information	
19. Was the sampler identified on the COC?					

Quote #: 75525 PM Instructions: NA

Sample Receiving Associate: [signature] Date: 2-25-10

QA026R21.doc, 090409

Original Chain of Custody Documentation

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HOB250408

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 2/24/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie Mckinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below _____			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Samples	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	2/24/10	9:50	Air		1		X	
Intermediate West		9:56	Air		1		X	
Lead East		7:55	Air		1		X	
Intermediate East	↓	8:01	Air		1		X	
								NO CUSTODY SEALS
								RECEIVED AT AMBIENT
								TEMP AND 2-25-10
								FEDEX USA
								1243887801516681142

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Palmer Engreson	Peerless Midwest	2/24/10 2:05		Peerless-Midwest	2/24/10 2:20 PM
	Peerless-Midwest	2/24/10		Company: TA	Date/Time: 2-25-10 10:25
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H0D010404

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

April 6, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0D010404

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LEAD WEST 03/31/10 08:25 001				
Chloroform	0.0017 J	0.0036	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	0.0025 J	0.0036	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.032	0.0036	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0029 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.0022 J	0.0091	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	0.0011 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Toluene	0.0054	0.0036	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0010 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.52	0.0036	ppm(v/v)	EPA-2 TO-14A
INTERMEDIATE WEST 03/31/10 08:30 002				
Methylene chloride	0.0027 J	0.0091	ppm(v/v)	EPA-2 TO-14A
Toluene	0.0091	0.0036	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	0.0038	0.0036	ppm(v/v)	EPA-2 TO-14A
o-Xylene	0.0013 J	0.0036	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0D010404

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0D010404

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LXD7T	001	LEAD WEST	03/31/10	08:25
LXD7V	002	INTERMEDIATE WEST	03/31/10	08:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H0D010404

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

The samples were received on 04/01/10 in Tedlar bags and analyzed within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: LEAD WEST

GC/MS Volatiles

Lot-Sample #...: H0D010404-001 Work Order #...: LXD7T1AA Matrix.....: AIR
Date Sampled...: 03/31/10 08:25 Date Received..: 04/01/10
Prep Date.....: 04/01/10 Analysis Date..: 04/02/10
Prep Batch #...: 0091291
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	0.0017 J	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	0.0025 J	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	0.032	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	0.0029 J	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	0.0022 J	0.0091	ppm(v/v)
Tetrachloroethene	0.0011 J	0.0036	ppm(v/v)
Toluene	0.0054	0.0036	ppm(v/v)
1,1,1-Trichloroethane	0.0010 J	0.0036	ppm(v/v)
Trichloroethene	0.52	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0036	ppm(v/v)
o-Xylene	ND	0.0036	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

MACTEC Engineering and Consulting Inc

Client Sample ID: INTERMEDIATE WEST

GC/MS Volatiles

Lot-Sample #...: H0D010404-002 Work Order #...: LXD7V1AA Matrix.....: AIR
Date Sampled...: 03/31/10 08:30 Date Received..: 04/01/10
Prep Date.....: 04/01/10 Analysis Date..: 04/02/10
Prep Batch #...: 0091291
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	ND	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	ND	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	**0.0027 J**	**0.0091**	**ppm(v/v)**
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	**0.0091**	**0.0036**	**ppm(v/v)**
1,1,1-Trichloroethane	ND	0.0036	ppm(v/v)
Trichloroethene	ND	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	**0.0038**	**0.0036**	**ppm(v/v)**
o-Xylene	**0.0013 J**	**0.0036**	**ppm(v/v)**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0D010404 Work Order #...: LXE5J1AA Matrix.....: AIR
MB Lot-Sample #: H0D010000-291

Prep Date.....: 04/01/10
Analysis Date..: 04/01/10 Prep Batch #...: 0091291
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0D010404 Work Order #...: LXE5J1AC Matrix.....: AIR
LCS Lot-Sample#: H0D010000-291
Prep Date.....: 04/01/10 Analysis Date..: 04/01/10
Prep Batch #...: 0091291
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	97	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	97	(70 - 130)	EPA-2 TO-14A
Chloroethane	99	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	86	(70 - 130)	EPA-2 TO-14A
Methylene chloride	83	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	101	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	94	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	93	(70 - 130)	EPA-2 TO-14A
Chloroform	94	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	96	(70 - 130)	EPA-2 TO-14A
Benzene	89	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	94	(70 - 130)	EPA-2 TO-14A
Trichloroethene	87	(70 - 130)	EPA-2 TO-14A
Toluene	98	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	91	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	96	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	101	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	101	(70 - 130)	EPA-2 TO-14A
o-Xylene	100	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

H0D010404

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 3-31-10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie Meldaney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below			
(231)922-9055 FAX	☐ 2 weeks			SDG No.
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	3/31/10	8:25A	Air		1		X	
Intermediate West	3/31/10	8:30A	Air		1		X	
Lead East	3/31/10	7:58A	Air		1		X	
Intermediate East	3/31/10	8:10A	Air		1		X	NO CUSTODY SEALS
								RECEIVED AT AMBIENT
								TEMP RCVD 4-1-10
								1 BOX UPS#
								12,438 878 01 5554 9084

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ______

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal *(A fee may be assessed if samples are retained longer than 1 month)*
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ______ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Peerless Midwest	3/31/10 13:05	[signature]	Peerless-Midwest	3/31/10 13:05
[signature]	Peerless-Midwest	3/31/10 13:27	[signature]	TA	4-1-10 10:15

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: H0D010404

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)				☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	NA
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)				☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?				☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?				☑ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?				☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?				☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?				☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?				☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?				☐ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?				☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?				☐ Incomplete information	
12. For 1613B water samples is pH<9?				If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?				☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)				☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?				☐ 15a Incomplete information	
16. Is the matrix of the samples noted?				☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?				☐ 15a Incomplete information	
18. Is the client and project name/# identified?				☐ 15a Incomplete information	
19. Was the sampler identified on the COC?					

Quote #: 75525 PM Instructions: NA

Sample Receiving Associate: _____ Date: 4-1-10

QA026R21.doc, 090409

Original Chain of Custody Documentation

STL Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HODD104024

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 3-31-10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie Mckinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			SDG No.
(231)922-9050 Phone	TAT if different from Below			
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N)	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	3/31/10	8:25A	Air		1		X	
Intermediate West	3/31/10	8:30A	Air		1		X	
Lead East	3/31/10	7:58A	Air		1		X	
Intermediate East	3/31/10	8:10A	Air		1		X	
								NO CUSTODY SEALS
								RECEIVED AT AMBIENT
								TEMP ASSD 4-1-10
								1 BOX UPS#
								1Z4388780151549084

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Palmer Andersen	Peerless Midwest	3/31/10 13:05		Peerless-Midwest	3/31/10 13:05
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Peerless-Midwest	3/31/10 17:27		TA	4-1-10 10:15
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H0D290413

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

May 6, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0D290413

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LEAD WEST 04/28/10 07:40 001				
1,1-Dichloroethane	0.0023 J	0.012	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.030	0.012	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0031 J	0.012	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.0055 J	0.030	ppm(v/v)	EPA-2 TO-14A
Toluene	0.064	0.012	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.60	0.012	ppm(v/v)	EPA-2 TO-14A
INTERMEDIATE WEST 04/28/10 07:40 002				
Methylene chloride	0.0020 J	0.0091	ppm(v/v)	EPA-2 TO-14A
Toluene	0.049	0.0036	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.021	0.0036	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0D290413

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0D290413

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L0PFC	001	LEAD WEST	04/28/10	07:40
L0PFD	002	INTERMEDIATE WEST	04/28/10	07:40

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H0D290413

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

Intermediate West was received on 4/29/10 in a Tedlar bag and analyzed within 72 hours of sampling.

Lead West was received on 4/29/10 in a Tedlar bag and transferred into Summa Canisters within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: LEAD WEST

GC/MS Volatiles

Lot-Sample #...: H0D290413-001 Work Order #...: L0PFC1AA Matrix.....: AIR
Date Sampled...: 04/28/10 07:40 Date Received..: 04/29/10
Prep Date.....: 04/29/10 Analysis Date..: 04/29/10
Prep Batch #...: 0120118
Dilution Factor: 60 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.012	ppm(v/v)
Carbon tetrachloride	ND	0.012	ppm(v/v)
Chlorobenzene	ND	0.012	ppm(v/v)
Chloroethane	ND	0.012	ppm(v/v)
Chloroform	ND	0.012	ppm(v/v)
Chloromethane	ND	0.030	ppm(v/v)
1,1-Dichloroethane	0.0023 J	0.012	ppm(v/v)
cis-1,2-Dichloroethene	0.030	0.012	ppm(v/v)
trans-1,2-Dichloroethene	0.0031 J	0.012	ppm(v/v)
1,1-Dichloroethene	ND	0.012	ppm(v/v)
Ethylbenzene	ND	0.012	ppm(v/v)
Methylene chloride	0.0055 J	0.030	ppm(v/v)
Tetrachloroethene	ND	0.012	ppm(v/v)
Toluene	0.064	0.012	ppm(v/v)
1,1,1-Trichloroethane	ND	0.012	ppm(v/v)
Trichloroethene	0.60	0.012	ppm(v/v)
Vinyl chloride	ND	0.012	ppm(v/v)
m-Xylene & p-Xylene	ND	0.012	ppm(v/v)
o-Xylene	ND	0.012	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

MACTEC Engineering and Consulting Inc

Client Sample ID: INTERMEDIATE WEST

GC/MS Volatiles

Lot-Sample #...: H0D290413-002 Work Order #...: L0PFD1AA Matrix.....: AIR
Date Sampled...: 04/28/10 07:40 Date Received..: 04/29/10
Prep Date.....: 04/29/10 Analysis Date..: 04/29/10
Prep Batch #...: 0120118
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	ND	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	ND	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	0.0020 J	0.0091	ppm(v/v)
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	0.049	0.0036	ppm(v/v)
1,1,1-Trichloroethane	ND	0.0036	ppm(v/v)
Trichloroethene	0.021	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0036	ppm(v/v)
o-Xylene	ND	0.0036	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0D290413 Work Order #...: L0RLW1AA Matrix.....: AIR
MB Lot-Sample #: H0D300000-118

Prep Date.....: 04/29/10
Analysis Date..: 04/29/10 Prep Batch #...: 0120118
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0D290413 Work Order #...: L0RLW1AC Matrix.....: AIR
LCS Lot-Sample#: H0D300000-118
Prep Date.....: 04/29/10 Analysis Date..: 04/29/10
Prep Batch #...: 0120118
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	103	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	99	(70 - 130)	EPA-2 TO-14A
Chloroethane	93	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	100	(70 - 130)	EPA-2 TO-14A
Methylene chloride	88	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	98	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	95	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	95	(70 - 130)	EPA-2 TO-14A
Chloroform	95	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	102	(70 - 130)	EPA-2 TO-14A
Benzene	94	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	86	(70 - 130)	EPA-2 TO-14A
Trichloroethene	92	(70 - 130)	EPA-2 TO-14A
Toluene	93	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	95	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	99	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	103	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	104	(70 - 130)	EPA-2 TO-14A
o-Xylene	102	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: H0D290413 Work Order #...: L0RLW1AC Matrix.....: AIR
LCS Lot-Sample#: H0D300000-118
Prep Date.....: 04/29/10 Analysis Date..: 04/29/10
Prep Batch #...: 0120118
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	0.010	0.010	ppm(v/v)	103	EPA-2 TO-14A
Vinyl chloride	0.010	0.0099	ppm(v/v)	99	EPA-2 TO-14A
Chloroethane	0.010	0.0093	ppm(v/v)	93	EPA-2 TO-14A
1,1-Dichloroethene	0.010	0.010	ppm(v/v)	100	EPA-2 TO-14A
Methylene chloride	0.010	0.0088	ppm(v/v)	88	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.010	0.0098	ppm(v/v)	98	EPA-2 TO-14A
1,1-Dichloroethane	0.010	0.0095	ppm(v/v)	95	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.010	0.0095	ppm(v/v)	95	EPA-2 TO-14A
Chloroform	0.010	0.0095	ppm(v/v)	95	EPA-2 TO-14A
1,1,1-Trichloroethane	0.010	0.010	ppm(v/v)	102	EPA-2 TO-14A
Benzene	0.010	0.0094	ppm(v/v)	94	EPA-2 TO-14A
Carbon tetrachloride	0.010	0.0086	ppm(v/v)	86	EPA-2 TO-14A
Trichloroethene	0.010	0.0092	ppm(v/v)	92	EPA-2 TO-14A
Toluene	0.010	0.0093	ppm(v/v)	93	EPA-2 TO-14A
Tetrachloroethene	0.010	0.0095	ppm(v/v)	95	EPA-2 TO-14A
Chlorobenzene	0.010	0.0099	ppm(v/v)	99	EPA-2 TO-14A
Ethylbenzene	0.010	0.010	ppm(v/v)	103	EPA-2 TO-14A
m-Xylene & p-Xylene	0.020	0.021	ppm(v/v)	104	EPA-2 TO-14A
o-Xylene	0.010	0.010	ppm(v/v)	102	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

H0D290413

Chain of Custody Record

STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 4/28/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Lach/Jamie Meldaney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT If different from Below			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N)	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	4/28/10	7:10	Air		1		X	
Intermediate West		7:40	Air		1		X	
Lead East		7:25	Air		1		X	BOX REC'D AMBIENT
Intermediate East	↓	7:25	Air		1		X	UPS # 1Z 485 878 01 5760 5920
								NO CUSTODY SEAL, TS 4/29/10

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company: Peerless Midwest	Date/Time: 4/28/10 12:24PM	Received by:	Company: Peerless-Midwest	Date/Time: 4/28/10 12:04PM
Relinquished by:	Company: Peerless-Midwest	Date/Time: 4/28/10 12:26	Received by:	Company: TA KNOX.	Date/Time: 4/29/10 10:00
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: 320290413

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	NA
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)			✓	☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		✓		☒ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	✓			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?	✓		✓	☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?			✓	☐ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ 15a Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ 15a Incomplete information	
18. Is the client and project name/# identified?	✓			☐ 15a Incomplete information	
19. Was the sampler identified on the COC?		✓			

Quote #: 15525 PM Instructions: NA

Sample Receiving Associate: Dee Smith Date: 4/29/10

QA026R21.doc, 090409

Test America - Knoxville ---- Air Canister Dilution Log

Lot Number: *H0D290413*

Initial Can Pressure							Subsequent Dilutions											
Analyst/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can #	Pres. upon receipt (-in or + psig)	Adj. Initial Pres. (-in or + psig)	Analyst/Date	I / S	Pbarr (in)	Initial Pres. Pi (in)	Final Pres. Pf (psig)	First InCan Final Pres. Pf (psig)	Second In-can Final Pres. Pf (psig)	Third InCan Final Pres. Pf (psig)	Serial Dilution Can #	Vol (mL)	Final Pres. Pf (psig)	Comments
MLC 4-29-10	1446	28.93	L0PFC	0073											0073	100	0.0	
			L0PFD															

Original Chain of Custody Documentation

STL Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HOD290413

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 4/28/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie Mckinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below _____			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N)	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	4/28/10	7:40	Air		1		X	
Intermediate West		7:40	Air		1		X	
Lead East		7:25	Air		1		X	BOX REC'D AMBIENT
Intermediate East	↓	7:25	Air		1		X	UPS # 1Z 4938 87[illegible] 01 5176 5920
								NO CUSTODY SEAL, TS 4/29/10

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Peerless Midwest	4/28/10 12:[illegible]		Peerless-Midwest	4/28/10 12:04 PM
	Peerless-Midwest	4/28/10 12:[illegible] PM		TA KNOX.	4/29/10 10:00

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H0E280408

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

June 9, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0E280408

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LEAD WEST 05/27/10 09:23 001				
Chloroform	0.0025 J	0.012	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	0.0026 J	0.012	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.030	0.012	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.033	0.031	ppm(v/v)	EPA-2 TO-14A
Toluene	0.067	0.012	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.76	0.012	ppm(v/v)	EPA-2 TO-14A
INTERMEDIATE WEST 05/27/10 09:25 002				
Benzene	0.0011 J	0.0040	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.022	0.010	ppm(v/v)	EPA-2 TO-14A
Toluene	0.069	0.0040	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.0026 J	0.0040	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0E280408

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0E280408

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L17FJ	001	LEAD WEST	05/27/10	09:23
L17FK	002	INTERMEDIATE WEST	05/27/10	09:25

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H0E280408

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

The samples were received on 5/28/10 in Tedlar bags and transferred into Summa Canisters within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: LEAD WEST

GC/MS Volatiles

Lot-Sample #...: H0E280408-001 Work Order #...: L17FJ1AA Matrix.....: AIR
Date Sampled...: 05/27/10 09:23 Date Received..: 05/28/10
Prep Date.....: 06/01/10 Analysis Date..: 06/01/10
Prep Batch #...: 0153108
Dilution Factor: 61.97 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.012	ppm(v/v)
Carbon tetrachloride	ND	0.012	ppm(v/v)
Chlorobenzene	ND	0.012	ppm(v/v)
Chloroethane	ND	0.012	ppm(v/v)
Chloroform	0.0025 J	0.012	ppm(v/v)
Chloromethane	ND	0.031	ppm(v/v)
1,1-Dichloroethane	0.0026 J	0.012	ppm(v/v)
cis-1,2-Dichloroethene	0.030	0.012	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.012	ppm(v/v)
1,1-Dichloroethene	ND	0.012	ppm(v/v)
Ethylbenzene	ND	0.012	ppm(v/v)
Methylene chloride	0.033	0.031	ppm(v/v)
Tetrachloroethene	ND	0.012	ppm(v/v)
Toluene	0.067	0.012	ppm(v/v)
1,1,1-Trichloroethane	ND	0.012	ppm(v/v)
Trichloroethene	0.76	0.012	ppm(v/v)
Vinyl chloride	ND	0.012	ppm(v/v)
m-Xylene & p-Xylene	ND	0.012	ppm(v/v)
o-Xylene	ND	0.012	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

MACTEC Engineering and Consulting Inc

Client Sample ID: INTERMEDIATE WEST

GC/MS Volatiles

Lot-Sample #...: H0E280408-002 Work Order #...: L17FK1AA Matrix.....: AIR
Date Sampled...: 05/27/10 09:25 Date Received..: 05/28/10
Prep Date.....: 06/01/10 Analysis Date..: 06/01/10
Prep Batch #...: 0153108
Dilution Factor: 20 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	0.0011 J	0.0040	ppm(v/v)
Carbon tetrachloride	ND	0.0040	ppm(v/v)
Chlorobenzene	ND	0.0040	ppm(v/v)
Chloroethane	ND	0.0040	ppm(v/v)
Chloroform	ND	0.0040	ppm(v/v)
Chloromethane	ND	0.010	ppm(v/v)
1,1-Dichloroethane	ND	0.0040	ppm(v/v)
cis-1,2-Dichloroethene	ND	0.0040	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.0040	ppm(v/v)
1,1-Dichloroethene	ND	0.0040	ppm(v/v)
Ethylbenzene	ND	0.0040	ppm(v/v)
Methylene chloride	0.022	0.010	ppm(v/v)
Tetrachloroethene	ND	0.0040	ppm(v/v)
Toluene	0.069	0.0040	ppm(v/v)
1,1,1-Trichloroethane	ND	0.0040	ppm(v/v)
Trichloroethene	0.0026 J	0.0040	ppm(v/v)
Vinyl chloride	ND	0.0040	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0040	ppm(v/v)
o-Xylene	ND	0.0040	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	94	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0E280408 Work Order #...: L2CFT1AA Matrix.....: AIR
MB Lot-Sample #: H0F020000-108

Prep Date.....: 06/01/10
Analysis Date..: 06/01/10 Prep Batch #...: 0153108
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	92	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0E280408 Work Order #...: L2CFT1AC Matrix.....: AIR
LCS Lot-Sample#: H0F020000-108
Prep Date.....: 06/01/10 Analysis Date..: 06/01/10
Prep Batch #...: 0153108
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	99	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	94	(70 - 130)	EPA-2 TO-14A
Chloroethane	89	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	85	(70 - 130)	EPA-2 TO-14A
Methylene chloride	75	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	100	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	87	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	86	(70 - 130)	EPA-2 TO-14A
Chloroform	87	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	108	(70 - 130)	EPA-2 TO-14A
Benzene	79	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	117	(70 - 130)	EPA-2 TO-14A
Trichloroethene	87	(70 - 130)	EPA-2 TO-14A
Toluene	84	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	99	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	96	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	96	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	99	(70 - 130)	EPA-2 TO-14A
o-Xylene	98	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: H0E280408 Work Order #...: L2CFT1AC Matrix.....: AIR
LCS Lot-Sample#: H0F020000-108
Prep Date.....: 06/01/10 Analysis Date..: 06/01/10
Prep Batch #...: 0153108
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	0.010	0.0099	ppm(v/v)	99	EPA-2 TO-14A
Vinyl chloride	0.010	0.0094	ppm(v/v)	94	EPA-2 TO-14A
Chloroethane	0.010	0.0089	ppm(v/v)	89	EPA-2 TO-14A
1,1-Dichloroethene	0.010	0.0085	ppm(v/v)	85	EPA-2 TO-14A
Methylene chloride	0.010	0.0075	ppm(v/v)	75	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.010	0.010	ppm(v/v)	100	EPA-2 TO-14A
1,1-Dichloroethane	0.010	0.0087	ppm(v/v)	87	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.010	0.0086	ppm(v/v)	86	EPA-2 TO-14A
Chloroform	0.010	0.0087	ppm(v/v)	87	EPA-2 TO-14A
1,1,1-Trichloroethane	0.010	0.011	ppm(v/v)	108	EPA-2 TO-14A
Benzene	0.010	0.0079	ppm(v/v)	79	EPA-2 TO-14A
Carbon tetrachloride	0.010	0.012	ppm(v/v)	117	EPA-2 TO-14A
Trichloroethene	0.010	0.0087	ppm(v/v)	87	EPA-2 TO-14A
Toluene	0.010	0.0084	ppm(v/v)	84	EPA-2 TO-14A
Tetrachloroethene	0.010	0.0099	ppm(v/v)	99	EPA-2 TO-14A
Chlorobenzene	0.010	0.0096	ppm(v/v)	96	EPA-2 TO-14A
Ethylbenzene	0.010	0.0096	ppm(v/v)	96	EPA-2 TO-14A
m-Xylene & p-Xylene	0.020	0.020	ppm(v/v)	99	EPA-2 TO-14A
o-Xylene	0.010	0.0098	ppm(v/v)	98	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

1-10E280408

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 5/27/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie McKinney	Carrier:	24000609-0
41 Hughes Drive	Analysis Turnaround Time			
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below ______			
(231)922-9055 FAX	☐ 2 weeks			SDG No.
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	5/27/2010	9:23 AM	Air		1		X	
Intermediate West	5/27/2010	9:25 AM	Air		1		X	
Lead East	5/27/2010	10:55 AM	Air		1		X	
Intermediate East	5/27/2010	10:58 AM	Air		1		X	

1 BOX RECD AMBIENT
UPS 1Z E4358 82 80150099 8663
NO CUSTODY SEAL
TS 5/28/10

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ______

Possible Hazard Identification
☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For ______ Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Peerless Midwest	5/27/10 2:06	[signature]	Peerless-Midwest	5/27/10 2:06 PM
[signature]	Peerless-Midwest	5/27/10 2:42	[signature]	TA KNOX	5/28/10 10:00

11

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: 410280408

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	NA
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)			✓	☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		✓		☐ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	✓			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?	✓		✓	☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?			✓	☐ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ 15a Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ 15a Incomplete information	
18. Is the client and project name/# identified?	✓	✓		☐ 15a Incomplete information	
19. Was the sampler identified on the COC?		✓			

Quote #: 13525 PM Instructions: NA

Sample Receiving Associate: David Smith Date: 5/26/10

QA026R21.doc, 090409

Test America - Knoxville ---- Air Canister Dilution Log

Lot Number: *H0E280408*

Initial Can Pressure							Subsequent Dilutions											
Analyst/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can #	Pres. upon receipt (-in or + psig)	Adj. Initial Pres. (-in or + psig)	Analyst/Date	I / S	Pbarr (in)	Initial Pres. Pi (in)	Final Pres. Pf (psig)	First InCan Final Pres. Pf (psig)	Second In-can Final Pres. Pf (psig)	Third InCan Final Pres. Pf (psig)	Serial Dilution Can #	Vol (mL)	Final Pres. Pf (psig)	Comments
DDF 5-27-10	1105	28.84	L17FJ	0181	+1										0181	300	+1.2	8663
"	"	"	L17FK	12433											12433	"	+1.1	"

Original Chain of Custody Documentation

STL Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

1-JOE:280408

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 5/27/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie Mckinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below ____			
(231)922-9055 FAX	☐ 2 weeks			SDG No.
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	5/27/2010	9:23 AM	Air		1		X	
Intermediate West	5/27/2010	9:25 AM	Air		1		X	
Lead East	5/27/2010	10:55 AM	Air		1		X	
Intermediate East	5/27/2010	10:58 AM	Air		1		X	

1 BOX FIELD AMBIENT
UPS 1Z 4338 8280 1 5099 8663
NO CUSTODY SEAL
TS 5/28/10

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For ____ Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Peerless Midwest	5/27/10 2:06	[signature]	Peerless-Midwest	5/27/10 2:06 PM
[signature]	Peerless-Midwest	5/27/10 2:42	[signature]	TA KNOX	5/28/10 10:00

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H0G010428

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

July 14, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0G010428

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LEAD WEST 06/30/10 07:55 001				
Chloroform	0.0026 J	0.0066	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	0.0031 J	0.0066	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.037	0.0066	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0049 J	0.0066	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.022 B	0.016	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	0.0018 J	0.0066	ppm(v/v)	EPA-2 TO-14A
Toluene	0.024	0.0066	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0020 J	0.0066	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	1.0	0.0066	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0G010428

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0G010428

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L3MP6	001	LEAD WEST	06/30/10	07:55

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H0G010428

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

Tedlar bag Intermediate West was received with very low sample volume for analysis. Upon consultation with the client, the sample was cancelled.

Sample Lead West was received on 7/1/10 in a Tedlar bag and transferred into a Summa Canister within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: LEAD WEST

GC/MS Volatiles

Lot-Sample #...: H0G010428-001 Work Order #...: L3MP61AA Matrix.....: AIR
Date Sampled...: 06/30/10 07:55 Date Received..: 07/01/10
Prep Date.....: 07/07/10 Analysis Date..: 07/07/10
Prep Batch #...: 0189148
Dilution Factor: 32.85 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0066	ppm(v/v)
Carbon tetrachloride	ND	0.0066	ppm(v/v)
Chlorobenzene	ND	0.0066	ppm(v/v)
Chloroethane	ND	0.0066	ppm(v/v)
Chloroform	0.0026 J	0.0066	ppm(v/v)
Chloromethane	ND	0.016	ppm(v/v)
1,1-Dichloroethane	0.0031 J	0.0066	ppm(v/v)
cis-1,2-Dichloroethene	0.037	0.0066	ppm(v/v)
trans-1,2-Dichloroethene	0.0049 J	0.0066	ppm(v/v)
1,1-Dichloroethene	ND	0.0066	ppm(v/v)
Ethylbenzene	ND	0.0066	ppm(v/v)
Methylene chloride	0.022 B	0.016	ppm(v/v)
Tetrachloroethene	0.0018 J	0.0066	ppm(v/v)
Toluene	0.024	0.0066	ppm(v/v)
1,1,1-Trichloroethane	0.0020 J	0.0066	ppm(v/v)
Trichloroethene	1.0	0.0066	ppm(v/v)
Vinyl chloride	ND	0.0066	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0066	ppm(v/v)
o-Xylene	ND	0.0066	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0G010428 Work Order #...: L3WW61AA Matrix.....: AIR
MB Lot-Sample #: H0G080000-148

Prep Date.....: 07/07/10
Analysis Date..: 07/07/10 Prep Batch #...: 0189148
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.000084 J	0.00050	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0G010428 Work Order #...: L3WW61AC Matrix.....: AIR
LCS Lot-Sample#: H0G080000-148
Prep Date.....: 07/07/10 Analysis Date..: 07/07/10
Prep Batch #...: 0189148
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	110	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	104	(70 - 130)	EPA-2 TO-14A
Chloroethane	102	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	105	(70 - 130)	EPA-2 TO-14A
Methylene chloride	98	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	102	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	102	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	103	(70 - 130)	EPA-2 TO-14A
Chloroform	100	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	99	(70 - 130)	EPA-2 TO-14A
Benzene	99	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	99	(70 - 130)	EPA-2 TO-14A
Trichloroethene	102	(70 - 130)	EPA-2 TO-14A
Toluene	102	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	102	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	105	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	106	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	104	(70 - 130)	EPA-2 TO-14A
o-Xylene	102	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: H0G010428 Work Order #...: L3WW61AC Matrix.....: AIR
LCS Lot-Sample#: H0G080000-148
Prep Date.....: 07/07/10 Analysis Date..: 07/07/10
Prep Batch #...: 0189148
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	0.0050	0.0055	ppm(v/v)	110	EPA-2 TO-14A
Vinyl chloride	0.0050	0.0052	ppm(v/v)	104	EPA-2 TO-14A
Chloroethane	0.0050	0.0051	ppm(v/v)	102	EPA-2 TO-14A
1,1-Dichloroethene	0.0050	0.0052	ppm(v/v)	105	EPA-2 TO-14A
Methylene chloride	0.0050	0.0049	ppm(v/v)	98	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0050	0.0051	ppm(v/v)	102	EPA-2 TO-14A
1,1-Dichloroethane	0.0050	0.0051	ppm(v/v)	102	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.0050	0.0051	ppm(v/v)	103	EPA-2 TO-14A
Chloroform	0.0050	0.0050	ppm(v/v)	100	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0050	0.0049	ppm(v/v)	99	EPA-2 TO-14A
Benzene	0.0050	0.0049	ppm(v/v)	99	EPA-2 TO-14A
Carbon tetrachloride	0.0050	0.0050	ppm(v/v)	99	EPA-2 TO-14A
Trichloroethene	0.0050	0.0051	ppm(v/v)	102	EPA-2 TO-14A
Toluene	0.0050	0.0051	ppm(v/v)	102	EPA-2 TO-14A
Tetrachloroethene	0.0050	0.0051	ppm(v/v)	102	EPA-2 TO-14A
Chlorobenzene	0.0050	0.0053	ppm(v/v)	105	EPA-2 TO-14A
Ethylbenzene	0.0050	0.0053	ppm(v/v)	106	EPA-2 TO-14A
m-Xylene & p-Xylene	0.010	0.010	ppm(v/v)	104	EPA-2 TO-14A
o-Xylene	0.0050	0.0051	ppm(v/v)	102	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Chain of Custody Record

H0G010428

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 6/30/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loch/Jamie McKinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name: Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	6/30/10	7:55	Air		1		X	
Intermediate West	6/30/10	8:10	Air		1		X	
Lead East			Air		1		X	
Intermediate East			Air		1		X	1 box
								No custody seals
								rec. at ambient temp.
								UPS #
								1Z438 0780 1497 9956 9

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____________

Possible Hazard Identification

☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ________ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Peerless Midwest	6/30/10 13:30	[signature]	Peerless-Midwest	6/30/10 13:30
[signature]	Peerless-Midwest	6/30/10 17:3[illegible]	[signature]	TA	7/1/10 9:45

10

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: 440601428

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☑ 1g Other:	4a. 1G, DID NOT RECEIVE EAST SAMPLES
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)			✓	☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		✓		☑ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	✓			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?			✓	☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?			✓	☐ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ 15a Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ 15a Incomplete information	
18. Is the client and project name/# identified?	✓			☐ 15a Incomplete information	
19. Was the sampler identified on the COC?		✓			

Quote #: 70525 PM Instructions: NA

Sample Receiving Associate: David Warden Date: 7/1/10

QA026R21.doc, 090409

Test America - Knoxville ---- Air Canister Dilution Log

Lot Number: *H0G010428*

Initial Can Pressure							Subsequent Dilutions											
Analyst/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can #	Pres. upon receipt (-in or + psig)	Adj. Initial Pres. (-in or + psig)	Analyst/Date	I / S	Pbarr (in)	Initial Pres. Pi (in)	Final Pres. Pf (psig)	First InCan Final Pres. Pf (psig)	Second In-can Final Pres. Pf (psig)	Third InCan Final Pres. Pf (psig)	[1]Serial Dilution Can #	Vol. (mL)	Final Pres. Pf (psig)	Comments
DDF 7-2-10	1245	29.11	L3MP6	12838	-24.4	-10.9												8718
"	12		L3MP8	~~12638~~	~~-24.4~~	~~-10.9~~												~~8718~~

DDF 7-2-10

DDF 7-2-10

Original Chain of Custody Documentation

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HDG010428

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 6/30/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie McKinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below _____			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	6/30/10	7:55	Air		1		X	
Intermediate West	6/30/10	8:10	Air		1		X	
Lead East			Air		1		X	
Intermediate East			Air		1		X	1 box no custody seals rec. at ambient temp. ups #
								1Z438878014979569

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Palmer Andersen	Peerless Midwest	6/30/10 13:30		Peerless-Midwest	6/30/10 13:30
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Peerless-Midwest	6/30/10 17:30	David Murchu	TA	7/1/10 9:45
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H0G080415

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

July 20, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0G080415

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
INTERMEDIATE WEST 07/07/10 14:15 001				
Benzene	0.0011 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.0049	0.0091	ppm(v/v)	EPA-2 TO-14A
	Qualifiers: J,B			
Toluene	0.015	0.0036	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	0.0012 J	0.0036	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0G080415

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0G080415

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L3WWJ	001	INTERMEDIATE WEST	07/07/10	14:15

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H0G080415

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Samples Lead West, Lead East and Intermediate East were not received, but was listed on the chain of custody documentation.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

The sample was received on 7/8/10 in a Tedlar bag and analyzed within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: INTERMEDIATE WEST

GC/MS Volatiles

Lot-Sample #...: H0G080415-001 Work Order #...: L3WWJ1AA Matrix.....: AIR
Date Sampled...: 07/07/10 14:15 Date Received..: 07/08/10
Prep Date.....: 07/08/10 Analysis Date..: 07/09/10
Prep Batch #...: 0189269
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	0.0011 J	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	ND	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	ND	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
trans-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	0.0049 J,B	0.0091	ppm(v/v)
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	0.015	0.0036	ppm(v/v)
1,1,1-Trichloroethane	ND	0.0036	ppm(v/v)
Trichloroethene	0.0012 J	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0036	ppm(v/v)
o-Xylene	ND	0.0036	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0G080415 Work Order #...: L3XKQ1AA Matrix.....: AIR
MB Lot-Sample #: H0G080000-269

Prep Date.....: 07/08/10
Analysis Date..: 07/08/10 Prep Batch #...: 0189269
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	**0.000049 J**	**0.00050**	**ppm(v/v)**	**EPA-2 TO-14A**
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0G080415 Work Order #...: L3XKQ1AC Matrix.....: AIR
LCS Lot-Sample#: H0G080000-269
Prep Date.....: 07/08/10 Analysis Date..: 07/08/10
Prep Batch #...: 0189269
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	104	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	98	(70 - 130)	EPA-2 TO-14A
Chloroethane	97	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	82	(70 - 130)	EPA-2 TO-14A
Methylene chloride	81	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	95	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	86	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	83	(70 - 130)	EPA-2 TO-14A
Chloroform	81	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	87	(70 - 130)	EPA-2 TO-14A
Benzene	86	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	104	(70 - 130)	EPA-2 TO-14A
Trichloroethene	96	(70 - 130)	EPA-2 TO-14A
Toluene	78	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	90	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	86	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	81	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	84	(70 - 130)	EPA-2 TO-14A
o-Xylene	82	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: H0G080415 Work Order #...: L3XKQ1AC Matrix.....: AIR
LCS Lot-Sample#: H0G080000-269
Prep Date.....: 07/08/10 Analysis Date..: 07/08/10
Prep Batch #...: 0189269
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	0.0050	0.0052	ppm(v/v)	104	EPA-2 TO-14A
Vinyl chloride	0.0050	0.0049	ppm(v/v)	98	EPA-2 TO-14A
Chloroethane	0.0050	0.0049	ppm(v/v)	97	EPA-2 TO-14A
1,1-Dichloroethene	0.0050	0.0041	ppm(v/v)	82	EPA-2 TO-14A
Methylene chloride	0.0050	0.0040	ppm(v/v)	81	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0050	0.0048	ppm(v/v)	95	EPA-2 TO-14A
1,1-Dichloroethane	0.0050	0.0043	ppm(v/v)	86	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.0050	0.0042	ppm(v/v)	83	EPA-2 TO-14A
Chloroform	0.0050	0.0040	ppm(v/v)	81	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0050	0.0044	ppm(v/v)	87	EPA-2 TO-14A
Benzene	0.0050	0.0043	ppm(v/v)	86	EPA-2 TO-14A
Carbon tetrachloride	0.0050	0.0052	ppm(v/v)	104	EPA-2 TO-14A
Trichloroethene	0.0050	0.0048	ppm(v/v)	96	EPA-2 TO-14A
Toluene	0.0050	0.0039	ppm(v/v)	78	EPA-2 TO-14A
Tetrachloroethene	0.0050	0.0045	ppm(v/v)	90	EPA-2 TO-14A
Chlorobenzene	0.0050	0.0043	ppm(v/v)	86	EPA-2 TO-14A
Ethylbenzene	0.0050	0.0040	ppm(v/v)	81	EPA-2 TO-14A
m-Xylene & p-Xylene	0.010	0.0084	ppm(v/v)	84	EPA-2 TO-14A
o-Xylene	0.0050	0.0041	ppm(v/v)	82	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HDG D8D415

Chain of Custody Record

STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 7/7/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie McKinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West			Air		1		X	
Intermediate West	7/7/10	14:15	Air		1		X	
Lead East			Air		1		X	1 box
Intermediate East			Air		1		X	no custody seal
								rec. at ambient temp
								UPS #
								1Z4388780151281738

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Palmer Andreasen	Peerless Midwest	7/7/10 15:10		Peerless-Midwest	7/7/10 15:10
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Peerless-Midwest	7/8/10 15:51	David Kuhn	TA	7/8/10 9:45
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: HDG080415

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☑ 1g Other:	1a. 1g, ONLY RECEIVED INTERMEDIATE WEST SAMPLES
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)			✓	☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		✓		☑ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	✓			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?			✓	☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?			✓	☐ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ 15a Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ 15a Incomplete information	
18. Is the client and project name/# identified?	✓			☐ 15a Incomplete information	
19. Was the sampler identified on the COC?		✓			

Quote #: 73525 PM Instructions: NA

Sample Receiving Associate: [signature] Date: 7/8/10

QA026R21.doc, 090409

Original Chain of Custody Documentation

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HDG 080415

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date: 7/7/10	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie Mckinney	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			SDG No.
(231)922-9050 Phone	TAT if different from Below ____			
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West			Air		1		X	
Intermediate West	7/1/10	14:15	Air		1		X	
Lead East			Air		1		X	1 box
Intermediate East			Air		1		X	no custody seal
								rec. at ambient temp.
								UPS #
								1Z438878015128173 8

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Palmer Andreasen	Peerless Midwest	7/7/10 15:10		Peerless-Midwest	7/7/10 15:10
Relinquished by:	Company: Peerless-Midwest	Date/Time: 7/8/10 15:57	Received by: David Myrtle	Company: TA	Date/Time: 7/8/10 9:45
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend - WEST

Lot #: H0G290416

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney
Project Manager

August 2, 2010

EXECUTIVE SUMMARY - Detection Highlights

H0G290416

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LEAD WEST 07/28/10 09:45 001				
Chloroform	0.0047 J	0.022	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	0.0052 J	0.022	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.066	0.022	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0068 J	0.022	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.0092 J	0.056	ppm(v/v)	EPA-2 TO-14A
Toluene	0.031	0.022	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0036 J	0.022	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	1.7	0.022	ppm(v/v)	EPA-2 TO-14A
INTERMEDIATE WEST 07/28/10 09:55 002				
cis-1,2-Dichloroethene	0.0015 J	0.0036	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	0.0017 J	0.0091	ppm(v/v)	EPA-2 TO-14A
Toluene	0.0038	0.0036	ppm(v/v)	EPA-2 TO-14A

ANALYTICAL METHODS SUMMARY

H0G290416

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO14 A (Low Level)	EPA-2 TO-14A

References:

EPA-2 "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H0G290416

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L4TWX	001	LEAD WEST	07/28/10	09:45
L4TW0	002	INTERMEDIATE WEST	07/28/10	09:55

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE
H0G290416

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

EPA methods TO-14 and TO-14A specify that the relative accuracy of the field sampler or sample delivery system must meet 90-110% for a standard at 8ppbv/v. The laboratory control sample (LCS) summary data in this report is evaluated against alternate acceptance criteria based on the laboratory procedure for methods TO-14 and TO-14A. Please refer to the LCS summary report for the actual observed recoveries and acceptance criteria for the LCS.

The samples were received on 7/2910 in Tedlar bags. Sample LEAD WEST was transferred into a Summa Canister and sample INTERMEDIATE WEST was analyzed directly from the bag within 72 hours of sampling.

MACTEC Engineering and Consulting Inc

Client Sample ID: LEAD WEST

GC/MS Volatiles

Lot-Sample #...: H0G290416-001 Work Order #...: L4TWX1AA Matrix.....: AIR
Date Sampled...: 07/28/10 09:45 Date Received..: 07/29/10
Prep Date.....: 07/29/10 Analysis Date..: 07/29/10
Prep Batch #...: 0210419
Dilution Factor: 111.38 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.022	ppm(v/v)
Carbon tetrachloride	ND	0.022	ppm(v/v)
Chlorobenzene	ND	0.022	ppm(v/v)
Chloroethane	ND	0.022	ppm(v/v)
Chloroform	**0.0047 J**	**0.022**	**ppm(v/v)**
Chloromethane	ND	0.056	ppm(v/v)
1,1-Dichloroethane	**0.0052 J**	**0.022**	**ppm(v/v)**
cis-1,2-Dichloroethene	**0.066**	**0.022**	**ppm(v/v)**
trans-1,2-Dichloroethene	**0.0068 J**	**0.022**	**ppm(v/v)**
1,1-Dichloroethene	ND	0.022	ppm(v/v)
Ethylbenzene	ND	0.022	ppm(v/v)
Methylene chloride	**0.0092 J**	**0.056**	**ppm(v/v)**
Tetrachloroethene	ND	0.022	ppm(v/v)
Toluene	**0.031**	**0.022**	**ppm(v/v)**
1,1,1-Trichloroethane	**0.0036 J**	**0.022**	**ppm(v/v)**
Trichloroethene	**1.7**	**0.022**	**ppm(v/v)**
Vinyl chloride	ND	0.022	ppm(v/v)
m-Xylene & p-Xylene	ND	0.022	ppm(v/v)
o-Xylene	ND	0.022	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

MACTEC Engineering and Consulting Inc

Client Sample ID: INTERMEDIATE WEST

GC/MS Volatiles

Lot-Sample #...: H0G290416-002 Work Order #...: L4TW01AA Matrix.....: AIR
Date Sampled...: 07/28/10 09:55 Date Received..: 07/29/10
Prep Date.....: 07/29/10 Analysis Date..: 07/29/10
Prep Batch #...: 0210419
Dilution Factor: 18.18 Method.....: EPA-2 TO-14A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.0036	ppm(v/v)
Carbon tetrachloride	ND	0.0036	ppm(v/v)
Chlorobenzene	ND	0.0036	ppm(v/v)
Chloroethane	ND	0.0036	ppm(v/v)
Chloroform	ND	0.0036	ppm(v/v)
Chloromethane	ND	0.0091	ppm(v/v)
1,1-Dichloroethane	ND	0.0036	ppm(v/v)
cis-1,2-Dichloroethene	**0.0015 J**	**0.0036**	**ppm(v/v)**
trans-1,2-Dichloroethene	ND	0.0036	ppm(v/v)
1,1-Dichloroethene	ND	0.0036	ppm(v/v)
Ethylbenzene	ND	0.0036	ppm(v/v)
Methylene chloride	**0.0017 J**	**0.0091**	**ppm(v/v)**
Tetrachloroethene	ND	0.0036	ppm(v/v)
Toluene	**0.0038**	**0.0036**	**ppm(v/v)**
1,1,1-Trichloroethane	ND	0.0036	ppm(v/v)
Trichloroethene	ND	0.0036	ppm(v/v)
Vinyl chloride	ND	0.0036	ppm(v/v)
m-Xylene & p-Xylene	ND	0.0036	ppm(v/v)
o-Xylene	ND	0.0036	ppm(v/v)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(60 - 140)

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: H0G290416 Work Order #...: L4V711AA Matrix.....: AIR
MB Lot-Sample #: H0G290000-419

Prep Date.....: 07/29/10
Analysis Date..: 07/29/10 Prep Batch #...: 0210419
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Ethylbenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Toluene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
o-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
m-Xylene & p-Xylene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Carbon tetrachloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chlorobenzene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloroform	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Chloromethane	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
cis-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
trans-1,2-Dichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Methylene chloride	ND	0.00050	ppm(v/v)	EPA-2 TO-14A
Tetrachloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
1,1,1-Trichloroethane	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Trichloroethene	ND	0.00020	ppm(v/v)	EPA-2 TO-14A
Vinyl chloride	ND	0.00020	ppm(v/v)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: H0G290416 Work Order #...: L4V711AC Matrix.....: AIR
LCS Lot-Sample#: H0G290000-419
Prep Date.....: 07/29/10 Analysis Date..: 07/29/10
Prep Batch #...: 0210419
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Chloromethane	105	(60 - 140)	EPA-2 TO-14A
Vinyl chloride	98	(70 - 130)	EPA-2 TO-14A
Chloroethane	103	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethene	100	(70 - 130)	EPA-2 TO-14A
Methylene chloride	98	(70 - 130)	EPA-2 TO-14A
trans-1,2-Dichloroethene	101	(70 - 130)	EPA-2 TO-14A
1,1-Dichloroethane	100	(70 - 130)	EPA-2 TO-14A
cis-1,2-Dichloroethene	103	(70 - 130)	EPA-2 TO-14A
Chloroform	100	(70 - 130)	EPA-2 TO-14A
1,1,1-Trichloroethane	102	(70 - 130)	EPA-2 TO-14A
Benzene	107	(70 - 130)	EPA-2 TO-14A
Carbon tetrachloride	120	(70 - 130)	EPA-2 TO-14A
Trichloroethene	110	(70 - 130)	EPA-2 TO-14A
Toluene	109	(70 - 130)	EPA-2 TO-14A
Tetrachloroethene	107	(70 - 130)	EPA-2 TO-14A
Chlorobenzene	110	(70 - 130)	EPA-2 TO-14A
Ethylbenzene	116	(70 - 130)	EPA-2 TO-14A
m-Xylene & p-Xylene	116	(70 - 130)	EPA-2 TO-14A
o-Xylene	116	(70 - 130)	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	106	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: H0G290416 Work Order #...: L4V711AC Matrix.....: AIR
LCS Lot-Sample#: H0G290000-419
Prep Date.....: 07/29/10 Analysis Date..: 07/29/10
Prep Batch #...: 0210419
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	0.0050	0.0053	ppm(v/v)	105	EPA-2 TO-14A
Vinyl chloride	0.0050	0.0049	ppm(v/v)	98	EPA-2 TO-14A
Chloroethane	0.0050	0.0052	ppm(v/v)	103	EPA-2 TO-14A
1,1-Dichloroethene	0.0050	0.0050	ppm(v/v)	100	EPA-2 TO-14A
Methylene chloride	0.0050	0.0049	ppm(v/v)	98	EPA-2 TO-14A
trans-1,2-Dichloroethene	0.0050	0.0050	ppm(v/v)	101	EPA-2 TO-14A
1,1-Dichloroethane	0.0050	0.0050	ppm(v/v)	100	EPA-2 TO-14A
cis-1,2-Dichloroethene	0.0050	0.0052	ppm(v/v)	103	EPA-2 TO-14A
Chloroform	0.0050	0.0050	ppm(v/v)	100	EPA-2 TO-14A
1,1,1-Trichloroethane	0.0050	0.0051	ppm(v/v)	102	EPA-2 TO-14A
Benzene	0.0050	0.0053	ppm(v/v)	107	EPA-2 TO-14A
Carbon tetrachloride	0.0050	0.0060	ppm(v/v)	120	EPA-2 TO-14A
Trichloroethene	0.0050	0.0055	ppm(v/v)	110	EPA-2 TO-14A
Toluene	0.0050	0.0055	ppm(v/v)	109	EPA-2 TO-14A
Tetrachloroethene	0.0050	0.0054	ppm(v/v)	107	EPA-2 TO-14A
Chlorobenzene	0.0050	0.0055	ppm(v/v)	110	EPA-2 TO-14A
Ethylbenzene	0.0050	0.0058	ppm(v/v)	116	EPA-2 TO-14A
m-Xylene & p-Xylene	0.010	0.012	ppm(v/v)	116	EPA-2 TO-14A
o-Xylene	0.0050	0.0058	ppm(v/v)	116	EPA-2 TO-14A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	106	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

HOG290416

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date:	COC No:
MACTEC Engineering and Consulting Inc.	Tel/Fax: 231 922-9050	Lab Contact: Mark Loeb/Jamie McInnes	Carrier:	
41 Hughes Drive	Analysis Turnaround Time			24000609-0
Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below ____			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N)	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	7/28/10	9:45	Air		1		X	1 BOX RECD AMBIENT
Intermediate West		9:55	Air		1		X	UPS#
Lead East		10:10	Air		1		X	1Z438878014001,2495
Intermediate East		10:20	Air		1		X	NO CUSTODY SEAL
								TB 7/29/10

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification
☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Pamela Cundiff	Peerless Midwest	7-28-10 14:00		Peerless-Midwest	7/28/10 14:00
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Peerless-Midwest	7/28/10 16:30		TA KNOXVILLE	7/29/10 10:00
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: H0G290416

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	√			☐ 1a Do not match COC ☐ 1b Incomplete information ☐ 1c Marking smeared ☐ 1d Label torn ☐ 1e No label ☐ 1f COC not received ☐ 1g Other:	NA
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6 °C)			√	☐ 2a Temp Blank = _____ ☐ 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?			√	☐ 3a Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?		√		☒ 4a Not present ☐ 4b Not intact ☐ 4c Other:	
5. Were all of the samples listed on the COC received?	√			☐ 5a Samples received-not on COC ☐ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	√			☐ 6a Leaking ☐ 6b Broken	
7. Were VOA samples received without headspace?			√	☐ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	√			☐ 8a Improper container	
9. Did you check for residual chlorine, if necessary?			√	☐ 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	√			☐ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?			√	☐ Incomplete information	
12. For 1613B water samples is pH<9?			√	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	√			☐ 13a Leaking ☐ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	√			☐ 14a Not relinquished	
15. Are tests/parameters listed for each sample?	√			☐ 15a Incomplete information	
16. Is the matrix of the samples noted?	√			☐ 15a Incomplete information	
17. Is the date/time of sample collection noted?	√			☐ 15a Incomplete information	
18. Is the client and project name/# identified?	√			☐ 15a Incomplete information	
19. Was the sampler identified on the COC?		√			

Quote #: 75525 PM Instructions: _____

Sample Receiving Associate: Qia Smith Date: 7/29/10

QA026R21.doc, 090409

Test America - Knoxville ---- Air Canister Dilution Log

Lot Number: *H0G290416*

Initial Can Pressure							Subsequent Dilutions											
Analyst/Date	Tedlar Bag Time	Pbarr (in)	Sample ID	Can #	Pres. upon receipt (-in or + psig)	Adj. Initial Pres. (-in or + psig)	Analyst/Date	I / S	Pbarr (in)	Initial Pres. Pi (in)	Final Pres. Pf (psig)	First InCan Final Pres. Pf (psig)	Second In-can Final Pres. Pf (psig)	Third InCan Final Pres. Pf (psig)	Serial Dilution Can #	Vol (mL)	Final Pres. Pf (psig)	Comments
MP 3/29/13	1819	28.84	L4TWX	04738	-25.1	+12.2												8755
			L4TW0															

Original Chain of Custody Documentation

STL Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

HOG290416

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: Nick Rogers	Date:	COC No:
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Traverse City, MI 49686	Calendar (C) or Work Days (W) 14			
(231)922-9050 Phone	TAT if different from Below _____			SDG No.
(231)922-9055 FAX	☐ 2 weeks			
Project Name:Honeywell South Bend	☐ 1 week			
Site: Area 14	☐ 2 days			
P O # 4779250 STL	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N)	Chlorinated VOCs TO-14	Sample Specific Notes:
Lead West	7/28/10	9:45	Air		1		X	1 BOX REC'D AMBIENT
Intermediate West		9:55	Air		1		X	UPS #
Lead East		10:10	Air		1		X	1Z438878014901,2195
Intermediate East	↓	10:20	Air		1		X	NO CUSTODY SEAL
								TB 7/29/10

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Thomas Ondrejcin	Peerless Midwest	7-28-10 14:00		Peerless-Midwest	7/28/10 14:00
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Peerless-Midwest	7/28/10 14:29		TA KNOXVILLE	7/29/10 10:00
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

APPENDIX C

GROUNDWATER SAMPLE RECORD SHEETS

MACTEC

Sample No.: MW-7 04 10
Sample Date: 12-Apr-10
Sample Time: 15:15

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 14:50 Activity End: 15:20
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 18.20 feet using _____ (from top of well casing) (measuring device)
Water Depth: 14.75 feet using _____ (from top of well casing) (measuring device)
Historical Well Depth: _____ feet (from ground surface)
Protective Casing Stickup: _____ feet (for above-ground surface)
Protect. Casing Well Casing Difference: _____ feet
Floating Product Thickness: _____ feet using _____ (measuring device)
Well Condition: Good
Measuring Device Decontamination Procedure: *Alconox & DI Rinse*
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet: 3.45

	.041 gal/ft (1 in)
	.09 gal/ft (1.5 in)
X	.16 gal/ft (2 in)
	.65 gal/ft (4 in)
	2.6 gal/ft (8 in)

0.6 X 3 casing volumes = 1.7 gallons to purge

Purge Method: Peristaltic

Purge Vol. (gal)	0.50	1.00	1.50	2.00
Time (Min.)	15:05	15:11	15:15	15:19
Temperature (C°)	13.30	12.70	12.40	12.30
pH (Units)	6.49	6.87	7.23	7.14
Conductivity at 25°C (mS/cm)	1179.00	1196.00	1185.00	1185.00
ORP (mV)	-50.00	-65.00	-70.00	-64.00
Turb (NTU)	862.00	846.80	840.90	839.40
DO (%)	-	-	-	-

Total Volume Purged: 2.60 gallons
Water Appearance (describe color, clarity odor:): slightly cloudy

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic
Sample Water Appearance (color, clarity, odor): slightly cloudy

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print): James Staley
SIGNATURE: _____

Notes: (1) *Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) *Describe sequence of purging/sampling including equipment type and decontamination method.*

MACTEC

Sample No.: MW-As 04 10
Sample Date: 12-Apr-10
Sample Time: 15:50

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 15:25 Activity End: 15:58
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 22.50 feet using ____ (from top of well casing) (measuring device)
Water Depth: 14.91 feet using ____ (from top of well casing) (measuring device)
Historical Well Depth: ____ feet (from ground surface)
Protective Casing Stickup: ____ feet (for above-ground surface)
Protect. Casing Well Casing Difference: ____ feet
Floating Product Thickness: ____ feet using ____ (measuring device)
Well Condition: Good
Measuring Device Decontamination Procedure: Alconox & DI Rinse
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column 7.59 feet

	.041 gal/ft (1 in)
	.09 gal/ft (1.5 in)
X	.16 gal/ft (2 in)
	.65 gal/ft (4 in)
	2.6 gal/ft (8 in)

1.2 X 3 casing volumes = 3.7 gallons to purge

Purge Method: Peristaltic

Purge Vol. (gal)	1.00	2.00	3.00	4.00
Time (Min.)	15:35	15:41	15:44	15:49
Temperature (C°)	12.90	12.50	12.20	12.30
pH (Units)	6.91	7.03	6.97	6.99
Conductivity at 25°C (mS/cm)	1245.00	1271.00	1278.00	1285.00
ORP (mV)	-81.00	-99.00	-104.00	-103.00
Turb (NTU)	892.60	906.80	909.40	918.20
DO (%)	-	-	-	-

Total Volume Purged: 4.50 gallons
Water Appearance (describe color, clarity odor:): slightly cloudy

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic
Sample Water Appearance (color, clarity, odor): slightly cloudy

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print): James Staley
SIGNATURE: ____

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-Ad 04 10
Sample Date: 12-Apr-10
Sample Time: 16:04

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 15:32 Activity End: 16:06
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 47.60 (from top of well casing) feet using _____ (measuring device) Water Depth: 14.82 (from top of well casing) feet using _____ (measuring device)

Historical Well Depth: _____ (from ground surface) feet Protective Casing Stickup: _____ (for above-ground surface) feet Protect. Casing Well Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____ (measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: *Alconox & DI Rinse*
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet		.041 gal/ft (1 in)
		.09 gal/ft (1.5 in)
	X	.16 gal/ft (2 in)
		.65 gal/ft (4 in)
		2.6 gal/ft (8 in)

32.78 ***5.3***

X 3 casing volumes = 16.0 gallons to purge

Purge Method: Disposable Bailer

Purge Vol. (gal)	4.00	8.00	12.00	16.00
Time (Min.)	15:39	15:47	15:56	15:59
Temperature (C°)	13.40	13.40	13.30	13.50
pH (Units)	7.05	6.98	6.95	6.92
Conductivity at 25°C (mS/cm)	1539.00	2214.00	2197.00	2197.00
ORP (mV)	-62.00	-68.00	-108.00	-108.00
Turb (NTU)	1104.00	1604.00	1607.00	1607.00
DO (%)	-	-	-	-

Total Volume Purged: 16.00 gallons

Water Appearance (describe color, clarity odor:): orange

SAMPLING PROCEDURES

Sampling Procedure: Disposable Bailer

Sample Water Appearance (color, clarity, odor): cloudy

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) James Staley

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-Bs 04 10
Sample Date: 12-Apr-10
Sample Time: 16:42

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 16:15 Activity End: 16:45
Weather: Indoors,0
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 22.50 feet using _____ (from top of well casing) (measuring device)
Water Depth: 14.93 feet using _____ (from top of well casing) (measuring device)
Historical Well Depth: _____ feet (from ground surface)
Protective Casing Stickup: _____ feet (for above-ground surface)
Protect. Casing Well Casing Difference: _____ feet
Floating Product Thickness: _____ feet using _____ (measuring device)
Well Condition: Good
Measuring Device Decontamination Procedure: *Alconox & DI Rinse*
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet		.041 gal/ft (1 in)				
		.09 gal/ft (1.5 in)				
	X	.16 gal/ft (2 in)	X	3	casing volumes =	3.7 gallons to purge
		.65 gal/ft (4 in)	*1.2*			
7.57		2.6 gal/ft (8 in)				

Purge Method: Peristaltic

Purge Vol. (gal)	0.90	1.80	2.70	3.60
Time (Min.)	16:25	16:32	16:37	16:40
Temperature (C°)	13.10	12.80	12.70	12.30
pH (Units)	7.14	7.03	6.97	7.08
Conductivity at 25°C (mS/cm)	1296.00	1295.00	1317.00	1316.00
ORP (mV)	119.00	62.00	30.00	-21.00
Turb (NTU)	914.30	921.20	937.30	934.20
DO (%)	-	-	-	-

Total Volume Purged: 4.00 gallons
Water Appearance (describe color, clarity odor:) Slightly cloudy

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic
Sample Water Appearance (color, clarity, odor): Slightly cloudy

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	*Y*	*N*
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) James Staley
SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-Bd 04 10
Sample Date: 12-Apr-10
Sample Time: 16:52

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 16:15 Activity End: 16:55
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 46.00 (from top of well casing) feet using _____ (measuring device) Water Depth: 14.89 (from top of well casing) feet using _____ (measuring device)

Historical Well Depth: _____ (from ground surface) feet Protective Casing Stickup: _____ (for above-ground surface) feet Protect. Casing Well Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____ (measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column 31.11 feet

	.041 gal/ft (1 in)
	.09 gal/ft (1.5 in)
X	.16 gal/ft (2 in)
	.65 gal/ft (4 in)
	2.6 gal/ft (8 in)

5.1 X 3 casing volumes = 15.2 gallons to purge

Purge Method: Disposable Bailer

Purge Vol. (gal)	3.75	7.50	11.25	14.90
Time (Min.)	16:30	16:39	16:45	16:50
Temperature (C°)	13.30	13.20	13.30	13.30
pH (Units)	7.43	7.05	7.08	7.14
Conductivity at 25°C (mS/cm)	171.00	1223.00	1239.00	1239.00
ORP (mV)	81.00	-77.00	-81.00	-69.00
Turb (NTU)	111.10	874.00	879.20	879.20
DO (%)	-	-	-	-

Total Volume Purged 15.00 gallons

Water Appearance (describe color, clarity odor:) Slightly cloudy

SAMPLING PROCEDURES

Sampling Procedure: Disposable Bailer

Sample Water Appearance (color, clarity, odor): Slightly cloudy

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) James Staley

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-Cs 04 10
Sample Date: 12-Apr-10
Sample Time: 17:43

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 17:00 Activity End: 18:10
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 22.80 feet using _____ (measuring device) (from top of well casing)
Water Depth: 14.69 feet using _____ (measuring device) (from top of well casing)
Historical Well Depth: _____ feet (from ground surface)
Protective Casing Stickup: _____ feet (for above-ground surface)
Protect. Casing Well Casing Difference: _____ feet
Floating Product Thickness: _____ feet using _____ (measuring device)
Well Condition: Good
Measuring Device Decontamination Procedure: **Alconox & DI Rinse**
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet: **8.11**

	.041 gal/ft (1 in)	
	.09 gal/ft (1.5 in)	
X	.16 gal/ft (2 in)	**1.3**
	.65 gal/ft (4 in)	
	2.6 gal/ft (8 in)	

X 3 casing volumes = 4.0 gallons to purge

Purge Method: Peristaltic

Purge Vol. (gal)	1.00	2.00	3.00	4.00
Time (Min.)	17:18	17:22	17:33	17:36
Temperature (C°)	11.60	11.60	11.70	11.40
pH (Units)	7.08	7.13	7.09	7.08
Conductivity at 25°C (mS/cm)	1480.00	1520.00	1495.00	1496.00
ORP (mV)	83.00	93.00	-22.00	11.00
Turb (NTU)	1063.00	1089.00	1073.00	1073.00
DO (%)	-	-	-	-

Total Volume Purged: 4.00 gallons
Water Appearance (describe color, clarity odor:): Slightly cloudy

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic
Sample Water Appearance (color, clarity, odor): Slightly cloudy

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

MW-100 = Duplicate Sample

NAME (Print) James Staley
SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-Cd 04 10
Sample Date: 12-Apr-10
Sample Time: 17:48

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JPS/BMW
Activity Start: 17:00 Activity End: 18:05
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 53.80 feet using _____ Water Depth: 14.88 feet using _____
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet (from ground surface) Protective Casing Stickup: _____ feet (for above-ground surface) Protect. Casing Well Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____ (measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet				
		.041 gal/ft (1 in)		
		.09 gal/ft (1.5 in)		
	X	.16 gal/ft (2 in)	X 3 casing volumes = 19.1 gallons to purge	
		.65 gal/ft (4 in)	***6.4***	
38.92		2.6 gal/ft (8 in)		

Purge Method: Disposable Bailer

Purge Vol. (gal)	4.70	9.40	13.60	18.30
Time (Min.)	17:16	17:23	17:31	17:36
Temperature (C°)	12.90	13.10	13.00	12.80
pH (Units)	7.06	7.02	7.00	7.04
Conductivity at 25°C (mS/cm)	1137.00	1294.00	1328.00	1336.00
ORP (mV)	81.00	-65.00	-75.00	-59.00
Turb (NTU)	881.80	-	945.00	953.50
DO (%)	-	-	-	-

Total Volume Purged 19.00 gallons

Water Appearance (describe color, clarity odor:) Orange

SAMPLING PROCEDURES

Sampling Procedure: Disposable Bailer

Sample Water Appearance (color, clarity, odor): Slight Orange

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	*Y*	*N*
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) James Staley

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-7 07 10
Sample Date: 14-Jul-10
Sample Time: 8:58

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JLD/JPS
Activity Start: 8:33 Activity End: 8:58
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 18.20 feet using _____ (measuring device) Water Depth: 14.64 feet using _____ (measuring device)
(from top of well casing) (from top of well casing)

Historical Well Depth: _____ feet (from ground surface) Protective Casing Stickup: _____ feet (for above-ground surface) Protect. Casing Well Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____ (measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet		.041 gal/ft (1 in)
		.09 gal/ft (1.5 in)
	X	.16 gal/ft (2 in)
		.65 gal/ft (4 in)
		2.6 gal/ft (8 in)

3.56 ***0.6***

X 3 casing volumes = 1.7 gallons to purge

Purge Method: Peristaltic

Purge Vol. (gal)	1.00	2.00	3.00	4.00
Time (Min.)	8:40	8:44	8:52	8:56
Temperature (C°)	13.64	13.44	13.42	13.44
pH (Units)	6.81	6.83	6.84	6.84
Conductivity at 25°C (mS/cm)	0.94	0.93	0.93	0.93
ORP (mV)	-66.00	-63.00	-62.00	-62.00
Turb (NTU)	6.96	2.87	2.74	2.98
DO (%)	0.06	-0.01	-0.02	-0.02

Total Volume Purged: 4.00 gallons

Water Appearance (describe color, clarity odor:): clear

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): -

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print): Jeff Doerr

SIGNATURE: _____

Notes: (1) *Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) *Describe sequence of purging/sampling including equipment type and decontamination method.*

MACTEC

Sample No.: MW-As 07 10
Sample Date: 14-Jul-10
Sample Time: 9:25

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JLD/JPS
Activity Start: 9:00 Activity End: 9:30
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 22.50 feet using _____ Water Depth: 14.78 feet using _____
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet (from ground surface) Protective Casing Stickup: _____ feet (for above-ground surface) Protect. Casing Well Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____ (measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: *Alconox & DI Rinse*
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet: 7.72

	.041 gal/ft (1 in)
	.09 gal/ft (1.5 in)
X	.16 gal/ft (2 in)
	.65 gal/ft (4 in)
	2.6 gal/ft (8 in)

1.3 X 3 casing volumes = 3.8 gallons to purge

Purge Method: Peristaltic

	1.00	2.00	3.00	4.00
Time (Min.)	9:07	9:12	9:17	9:24
Temperature (C°)	14.18	14.10	14.10	13.96
pH (Units)	6.87	6.87	6.87	6.87
Conductivity at 25°C (mS/cm)	0.99	1.00	1.00	1.00
ORP (mV)	-85.00	-85.00	-85.00	-84.00
Turb (NTU)	42.84	42.80	18.29	13.96
DO (%)	0.03	-0.01	-0.03	-0.04

Total Volume Purged: 4.00 gallons
Water Appearance (describe color, clarity odor:): clear, no odor

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic
Sample Water Appearance (color, clarity, odor): -

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) Jeff Doerr
SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-Ad 07 10
Sample Date: 14-Jul-10
Sample Time: 10:10

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JLD/JPS
Activity Start: 9:35 Activity End: 10:15
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 47.60 feet using _____ (measuring device) Water Depth: 14.74 feet using _____ (measuring device)
(from top of well casing) (from top of well casing)

Historical Well Depth: _____ feet (from ground surface) Protective Casing Stickup: _____ feet (for above-ground surface) Protect. Casing Well Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____ (measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet						
		.041 gal/ft (1 in)				
		.09 gal/ft (1.5 in)				
	X	.16 gal/ft (2 in)	X	3	casing volumes =	16.1 gallons to purge
		.65 gal/ft (4 in)	***5.4***			
32.86		2.6 gal/ft (8 in)				

Purge Method: Disposable Bailer

Purge Vol. (gal)	4.00	8.00	12.00	16.00
Time (Min.)	9:43	9:52	10:01	10:09
Temperature (C°)	13.78	13.80	13.71	13.81
pH (Units)	7.25	6.78	6.82	6.81
Conductivity at 25°C (mS/cm)	1.24	1.65	1.70	1.70
ORP (mV)	-39.00	-59.00	-65.00	-70.00
Turb (NTU)	156.20	54.51	33.12	21.92
DO (%)	4.62	3.66	1.82	2.21

Total Volume Purged: 16.00 gallons
Water Appearance (describe color, clarity odor:): clear

SAMPLING PROCEDURES

Sampling Procedure: Disposable Bailer
Sample Water Appearance (color, clarity, odor): -

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print): Jeff Doerr
SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-Bs 07 10
Sample Date: 14-Jul-10
Sample Time: 10:40

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JLD/JPS
Activity Start: 10:20 Activity End: 10:42
Weather: Indoors,0
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 22.50 feet using _____ (from top of well casing) (measuring device)
Water Depth: 14.79 feet using _____ (from top of well casing) (measuring device)
Historical Well Depth: _____ feet (from ground surface)
Protective Casing Stickup: _____ feet (for above-ground surface)
Protect. Casing Well Casing Difference: ____ feet
Floating Product Thickness: _____ feet using _____ (measuring device)
Well Condition: Good
Measuring Device Decontamination Procedure: *Alconox & DI Rinse*
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet		.041 gal/ft (1 in)
		.09 gal/ft (1.5 in)
	X	.16 gal/ft (2 in)
		.65 gal/ft (4 in)
7.71		2.6 gal/ft (8 in)

X 1.3 X 3 casing volumes = 3.8 gallons to purge

Purge Method: Peristaltic

Purge Vol. (gal)	1.00	2.00	3.00	4.00
Time (Min.)	10:24	10:29	10:37	10:39
Temperature (C°)	14.91	14.58	14.64	14.57
pH (Units)	7.01	6.95	6.94	6.93
Conductivity at 25°C (mS/cm)	0.96	0.96	0.97	0.98
ORP (mV)	8.00	32.00	32.00	31.00
Turb (NTU)	4.20	5.01	3.26	3.35
DO (%)	1.88	1.02	0.63	0.48

Total Volume Purged 4.00 gallons
Water Appearance (describe color, clarity odor:) clear

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic
Sample Water Appearance (color, clarity, odor): clear

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) Jeff Doerr
SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-Bd 07 10
Sample Date: 14-Jul-10
Sample Time: 11:05

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JLD/JPS
Activity Start: 10:46 Activity End: 11:10
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 46.00 feet using _____ (measuring device) (from top of well casing)
Water Depth: 14.76 feet using _____ (measuring device) (from top of well casing)
Historical Well Depth: _____ feet (from ground surface)
Protective Casing Stickup: _____ feet (for above-ground surface)
Protect. Casing Well Casing Difference: _____ feet
Floating Product Thickness: _____ feet using _____ (measuring device)
Well Condition: Good
Measuring Device Decontamination Procedure: *Alconox & DI Rinse*
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet: *31.24*

	.041 gal/ft (1 in)	
	.09 gal/ft (1.5 in)	
X	.16 gal/ft (2 in)	*5.1*
	.65 gal/ft (4 in)	
	2.6 gal/ft (8 in)	

X 3 casing volumes = 15.3 gallons to purge

Purge Method: Disposable Bailer

Purge Vol. (gal)	4.00	8.00	12.00	15.00
Time (Min.)	10:49	10:53	10:56	10:59
Temperature (C°)	13.78	13.53	13.61	13.89
pH (Units)	7.14	6.97	6.97	6.94
Conductivity at 25°C (mS/cm)	0.98	0.99	0.99	1.00
ORP (mV)	-73.00	-60.00	-63.00	-60.00
Turb (NTU)	31.64	21.86	13.49	13.89
DO (%)	3.04	2.40	3.08	1.63

Total Volume Purged: 15.00 gallons
Water Appearance (describe color, clarity odor:) -

SAMPLING PROCEDURES

Sampling Procedure: Disposable Bailer
Sample Water Appearance (color, clarity, odor): -

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) Jeff Doerr
SIGNATURE:

Notes: (1) *Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) *Describe sequence of purging/sampling including equipment type and decontamination method.*

MACTEC

Sample No.: MW-Cs 07 10
Sample Date: 14-Jul-10
Sample Time: 12:38

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JLD/JPS
Activity Start: 12:00 Activity End: 12:40
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 22.80 feet using _____ (measuring device) Water Depth: 14.55 feet using _____ (measuring device)
(from top of well casing) (from top of well casing)

Historical Well Depth: _____ feet (from ground surface) Protective Casing Stickup: _____ feet (for above-ground surface) Protect. Casing Well Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____ (measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: *Alconox & DI Rinse*
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet: *8.25*

	.041 gal/ft (1 in)
	.09 gal/ft (1.5 in)
X	.16 gal/ft (2 in)
	.65 gal/ft (4 in)
	2.6 gal/ft (8 in)

1.3

X 3 casing volumes = 4.0 gallons to purge

Purge Method: Peristaltic

Purge Vol. (gal)	1.00	2.00	3.00	4.00
Time (Min.)	12:19	12:24	12:30	12:36
Temperature (C°)	14.26	13.95	13.92	13.95
pH (Units)	7.16	7.15	7.12	7.10
Conductivity at 25°C (mS/cm)	1.12	1.11	1.12	1.12
ORP (mV)	160.00	188.00	211.00	219.00
Turb (NTU)	3.46	2.19	2.50	3.87
DO (%)	4.31	4.31	4.10	3.93

Total Volume Purged: 4.00 gallons

Water Appearance (describe color, clarity odor:) -

SAMPLING PROCEDURES

Sampling Procedure: Peristaltic

Sample Water Appearance (color, clarity, odor): -

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

-

NAME (Print) Jeff Doerr

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

MACTEC

Sample No.: MW-Cd 07 10
Sample Date: 14-Jul-10
Sample Time: 13:20

SITE/SAMPLE LOCATION

Site Name: Honeywell South Bend Project No.: 3310090039
Personnel Present: JLD/JPS
Activity Start: 12:46 Activity End: 13:25
Weather: Indoors,
Well Type and Location: 2" Flushmount - Area 14 West

WATER LEVEL/WELL DATA

Well Depth: 53.80 feet using _____ (measuring device) Water Depth: 14.73 feet using _____ (measuring device)
(from top of well casing) (from top of well casing)

Historical Well Depth: _____ feet (from ground surface) Protective Casing Stickup: _____ feet (for above-ground surface) Protect. Casing Well Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____ (measuring device)

Well Condition: Good
Measuring Device Decontamination Procedure: ***Alconox & DI Rinse***
PI Meter ID: na Ambient Air: na ppm Well Mouth: na ppm

PURGING PROCEDURES

Height of Water Column feet: ***39.07***

	.041 gal/ft (1 in)	
	.09 gal/ft (1.5 in)	
X	.16 gal/ft (2 in)	***6.4***
	.65 gal/ft (4 in)	
	2.6 gal/ft (8 in)	

X 3 casing volumes = 19.1 gallons to purge

Purge Method: Disposable Bailer

Purge Vol. (gal)	4.50	9.00	13.50	18.75
Time (Min.)	12:52	12:57	13:06	13:18
Temperature (C°)	13.67	13.60	13.50	13.58
pH (Units)	7.11	6.90	6.94	6.93
Conductivity at 25°C (mS/cm)	1.00	1.04	1.06	1.07
ORP (mV)	157.00	-46.00	-62.00	-62.00
Turb (NTU)	38.23	27.78	47.98	58.63
DO (%)	4.03	1.74	2.14	2.00

Total Volume Purged: 19.00 gallons

Water Appearance (describe color, clarity odor:) -

SAMPLING PROCEDURES

Sampling Procedure: Disposable Bailer

Sample Water Appearance (color, clarity, odor): -

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260B	3 40 ml VOA		HCL/	Y	N
				/		
				/		
				/		
				/		

OTHER OBSERVATIONS

MW-101 = Duplicate Sample

NAME (Print) Jeff Doerr

SIGNATURE: _____

Notes: *(1) Described whether well was locked and the condition of the protective casing and concrete collar.*
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

APPENDIX D

ANALYTICAL REPORTS – GROUNDWATER SAMPLES

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

RECEIVED
APR 23 2010
By________

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

HONEYWELL SOUTH BEND A14W

Lot #: A0D140433

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Approved for release.
Mark J. Loeb
Project Manager II
4/21/2010 3:27 PM

Mark J. Loeb
Project Manager
mark.loeb@testamericainc.com

SCANNED
10042 TestAmerica A14W 90039

April 21, 2010

ACCREDITED IN ACCORDANCE WITH nelac

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

CASE NARRATIVE

A0D140433

The following report contains the analytical results for eight water samples and one quality control sample submitted to TestAmerica North Canton by MACTEC Engineering & Consulting, Inc. from the Honeywell South Bend A14W Site. The samples were received April 14, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Christopher J. Kapanowski, Nick Rogers, and Steven Murray on April 20, 2010. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Mark J. Loeb, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.4°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The matrix spike/matrix spike duplicate(s) for batch(es) 0109163 and 0110149 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

2-Chloroethyl-vinyl ether cannot be reliably recovered in an acid preserved sample.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A0D140433

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-7 0410 04/12/10 15:15 001				
1,1-Dichloroethane	6.6	1.7	ug/L	SW846 8260B
cis-1,2-Dichloroethene	48	1.7	ug/L	SW846 8260B
Vinyl chloride	51	1.7	ug/L	SW846 8260B
MW-AS 0410 04/12/10 15:50 002				
1,1-Dichloroethane	5.3	3.3	ug/L	SW846 8260B
cis-1,2-Dichloroethene	54	3.3	ug/L	SW846 8260B
Trichloroethene	9.4	3.3	ug/L	SW846 8260B
Vinyl chloride	110	3.3	ug/L	SW846 8260B
MW-AD 0410 04/12/10 16:04 003				
cis-1,2-Dichloroethene	270	9.1	ug/L	SW846 8260B
MW-BS 0410 04/12/10 16:42 004				
cis-1,2-Dichloroethene	52	33	ug/L	SW846 8260B
Trichloroethene	970	33	ug/L	SW846 8260B
MW-BD 0410 04/12/10 16:52 005				
1,1-Dichloroethane	1.0	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	6.3	1.0	ug/L	SW846 8260B
MW-CS 0410 04/12/10 17:43 006				
cis-1,2-Dichloroethene	200	71	ug/L	SW846 8260B
Trichloroethene	2400	71	ug/L	SW846 8260B
MW-CD 0410 04/12/10 17:48 007				
1,1-Dichloroethane	1.1	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	36	1.0	ug/L	SW846 8260B
Trichloroethene	2.1	1.0	ug/L	SW846 8260B
MW-100 0410 A14W 04/12/10 008				
cis-1,2-Dichloroethene	190	71	ug/L	SW846 8260B
Trichloroethene	2400	71	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A0D140433

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A0D140433

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LXXP7	001	MW-7 0410	04/12/10	15:15
LXXQH	002	MW-AS 0410	04/12/10	15:50
LXXQK	003	MW-AD 0410	04/12/10	16:04
LXXQM	004	MW-BS 0410	04/12/10	16:42
LXXQP	005	MW-BD 0410	04/12/10	16:52
LXXQR	006	MW-CS 0410	04/12/10	17:43
LXXQV	007	MW-CD 0410	04/12/10	17:48
LXXQ0	008	MW-100 0410 A14W	04/12/10	
LXXQ3	009	TRIP BLANK	04/12/10	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-7 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-001 Work Order #...: LXXP71AA Matrix.....: WG
Date Sampled...: 04/12/10 15:15 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 1.67 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	17	ug/L
Acrolein	ND	33	ug/L
Acrylonitrile	ND	33	ug/L
Benzene	ND	1.7	ug/L
Bromobenzene	ND	1.7	ug/L
Bromochloromethane	ND	1.7	ug/L
Bromodichloromethane	ND	1.7	ug/L
Bromoform	ND	1.7	ug/L
Bromomethane	ND	1.7	ug/L
Methyl ethyl ketone	ND	17	ug/L
n-Butylbenzene	ND	1.7	ug/L
sec-Butylbenzene	ND	1.7	ug/L
tert-Butylbenzene	ND	1.7	ug/L
Carbon disulfide	ND	1.7	ug/L
Carbon tetrachloride	ND	1.7	ug/L
Chlorobenzene	ND	1.7	ug/L
Chlorodibromomethane	ND	1.7	ug/L
Chloroethane	ND	1.7	ug/L
2-Chloroethyl vinyl ether	ND	17	ug/L
Chloroform	ND	1.7	ug/L
1-Chlorohexane	ND	1.7	ug/L
Chloromethane	ND	1.7	ug/L
2-Chlorotoluene	ND	1.7	ug/L
4-Chlorotoluene	ND	1.7	ug/L
Cyclohexanone	ND	33	ug/L
1,2-Dibromoethane	ND	1.7	ug/L
Dibromomethane	ND	1.7	ug/L
1,2-Dichlorobenzene	ND	1.7	ug/L
1,3-Dichlorobenzene	ND	1.7	ug/L
1,4-Dichlorobenzene	ND	1.7	ug/L
trans-1,4-Dichloro-2-butene	ND	1.7	ug/L
Dichlorodifluoromethane	ND	1.7	ug/L
1,1-Dichloroethane	6.6	1.7	ug/L
1,2-Dichloroethane	ND	1.7	ug/L
1,1-Dichloroethene	ND	1.7	ug/L
cis-1,2-Dichloroethene	48	1.7	ug/L
trans-1,2-Dichloroethene	ND	1.7	ug/L
Dichlorofluoromethane	ND	3.3	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-7 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-001 Work Order #...: LXXP71AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.7	ug/L
1,3-Dichloropropane	ND	1.7	ug/L
2,2-Dichloropropane	ND	1.7	ug/L
1,1-Dichloropropene	ND	1.7	ug/L
cis-1,3-Dichloropropene	ND	1.7	ug/L
trans-1,3-Dichloropropene	ND	1.7	ug/L
Ethylbenzene	ND	1.7	ug/L
Diethyl ether	ND	3.3	ug/L
Ethyl methacrylate	ND	1.7	ug/L
Trichlorofluoromethane	ND	1.7	ug/L
n-Heptane	ND	1.7	ug/L
Hexachlorobutadiene	ND	1.7	ug/L
2-Hexanone	ND	17	ug/L
Iodomethane	ND	1.7	ug/L
Isopropylbenzene	ND	1.7	ug/L
p-Isopropyltoluene	ND	1.7	ug/L
Methylene chloride	ND	1.7	ug/L
Methyl methacrylate	ND	3.3	ug/L
Naphthalene	ND	1.7	ug/L
n-Propylbenzene	ND	1.7	ug/L
Styrene	ND	1.7	ug/L
1,1,1,2-Tetrachloroethane	ND	1.7	ug/L
1,1,2,2-Tetrachloroethane	ND	1.7	ug/L
Tetrachloroethene	ND	1.7	ug/L
Tetrahydrofuran	ND	8.4	ug/L
Toluene	ND	1.7	ug/L
1,2,3-Trichlorobenzene	ND	1.7	ug/L
1,2,4-Trichloro-benzene	ND	1.7	ug/L
1,1,1-Trichloroethane	ND	1.7	ug/L
1,1,2-Trichloroethane	ND	1.7	ug/L
Trichloroethene	ND	1.7	ug/L
1,2,3-Trichloropropane	ND	1.7	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.7	ug/L
1,2,4-Trimethylbenzene	ND	1.7	ug/L
1,3,5-Trimethylbenzene	ND	1.7	ug/L
Vinyl acetate	ND	3.3	ug/L
Vinyl chloride	51	1.7	ug/L
o-Xylene	ND	1.7	ug/L
m-Xylene & p-Xylene	ND	3.3	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	3.3	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-7 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-001 Work Order #...: LXXP71AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	17	ug/L
Methyl tert-butyl ether (MTBE)	ND	8.4	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	85	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-AS 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-002 Work Order #...: LXXQH1AA Matrix.....: WG
Date Sampled...: 04/12/10 15:50 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 3.33 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	33	ug/L
Acrolein	ND	67	ug/L
Acrylonitrile	ND	67	ug/L
Benzene	ND	3.3	ug/L
Bromobenzene	ND	3.3	ug/L
Bromochloromethane	ND	3.3	ug/L
Bromodichloromethane	ND	3.3	ug/L
Bromoform	ND	3.3	ug/L
Bromomethane	ND	3.3	ug/L
Methyl ethyl ketone	ND	33	ug/L
n-Butylbenzene	ND	3.3	ug/L
sec-Butylbenzene	ND	3.3	ug/L
tert-Butylbenzene	ND	3.3	ug/L
Carbon disulfide	ND	3.3	ug/L
Carbon tetrachloride	ND	3.3	ug/L
Chlorobenzene	ND	3.3	ug/L
Chlorodibromomethane	ND	3.3	ug/L
Chloroethane	ND	3.3	ug/L
2-Chloroethyl vinyl ether	ND	33	ug/L
Chloroform	ND	3.3	ug/L
1-Chlorohexane	ND	3.3	ug/L
Chloromethane	ND	3.3	ug/L
2-Chlorotoluene	ND	3.3	ug/L
4-Chlorotoluene	ND	3.3	ug/L
Cyclohexanone	ND	67	ug/L
1,2-Dibromoethane	ND	3.3	ug/L
Dibromomethane	ND	3.3	ug/L
1,2-Dichlorobenzene	ND	3.3	ug/L
1,3-Dichlorobenzene	ND	3.3	ug/L
1,4-Dichlorobenzene	ND	3.3	ug/L
trans-1,4-Dichloro-2-butene	ND	3.3	ug/L
Dichlorodifluoromethane	ND	3.3	ug/L
1,1-Dichloroethane	5.3	3.3	ug/L
1,2-Dichloroethane	ND	3.3	ug/L
1,1-Dichloroethene	ND	3.3	ug/L
cis-1,2-Dichloroethene	54	3.3	ug/L
trans-1,2-Dichloroethene	ND	3.3	ug/L
Dichlorofluoromethane	ND	6.7	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-AS 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-002 Work Order #...: LXXQH1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	3.3	ug/L
1,3-Dichloropropane	ND	3.3	ug/L
2,2-Dichloropropane	ND	3.3	ug/L
1,1-Dichloropropene	ND	3.3	ug/L
cis-1,3-Dichloropropene	ND	3.3	ug/L
trans-1,3-Dichloropropene	ND	3.3	ug/L
Ethylbenzene	ND	3.3	ug/L
Diethyl ether	ND	6.7	ug/L
Ethyl methacrylate	ND	3.3	ug/L
Trichlorofluoromethane	ND	3.3	ug/L
n-Heptane	ND	3.3	ug/L
Hexachlorobutadiene	ND	3.3	ug/L
2-Hexanone	ND	33	ug/L
Iodomethane	ND	3.3	ug/L
Isopropylbenzene	ND	3.3	ug/L
p-Isopropyltoluene	ND	3.3	ug/L
Methylene chloride	ND	3.3	ug/L
Methyl methacrylate	ND	6.7	ug/L
Naphthalene	ND	3.3	ug/L
n-Propylbenzene	ND	3.3	ug/L
Styrene	ND	3.3	ug/L
1,1,1,2-Tetrachloroethane	ND	3.3	ug/L
1,1,2,2-Tetrachloroethane	ND	3.3	ug/L
Tetrachloroethene	ND	3.3	ug/L
Tetrahydrofuran	ND	17	ug/L
Toluene	ND	3.3	ug/L
1,2,3-Trichlorobenzene	ND	3.3	ug/L
1,2,4-Trichloro-benzene	ND	3.3	ug/L
1,1,1-Trichloroethane	ND	3.3	ug/L
1,1,2-Trichloroethane	ND	3.3	ug/L
Trichloroethene	9.4	3.3	ug/L
1,2,3-Trichloropropane	ND	3.3	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	3.3	ug/L
1,2,4-Trimethylbenzene	ND	3.3	ug/L
1,3,5-Trimethylbenzene	ND	3.3	ug/L
Vinyl acetate	ND	6.7	ug/L
Vinyl chloride	110	3.3	ug/L
o-Xylene	ND	3.3	ug/L
m-Xylene & p-Xylene	ND	6.7	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	6.7	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-AS 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-002 Work Order #...: LXXQH1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	33	ug/L
Methyl tert-butyl ether (MTBE)	ND	17	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	85	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-AD 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-003 Work Order #...: LXXQK1AA Matrix.....: WG
Date Sampled...: 04/12/10 16:04 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 9.09 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	91	ug/L
Acrolein	ND	180	ug/L
Acrylonitrile	ND	180	ug/L
Benzene	ND	9.1	ug/L
Bromobenzene	ND	9.1	ug/L
Bromochloromethane	ND	9.1	ug/L
Bromodichloromethane	ND	9.1	ug/L
Bromoform	ND	9.1	ug/L
Bromomethane	ND	9.1	ug/L
Methyl ethyl ketone	ND	91	ug/L
n-Butylbenzene	ND	9.1	ug/L
sec-Butylbenzene	ND	9.1	ug/L
tert-Butylbenzene	ND	9.1	ug/L
Carbon disulfide	ND	9.1	ug/L
Carbon tetrachloride	ND	9.1	ug/L
Chlorobenzene	ND	9.1	ug/L
Chlorodibromomethane	ND	9.1	ug/L
Chloroethane	ND	9.1	ug/L
2-Chloroethyl vinyl ether	ND	91	ug/L
Chloroform	ND	9.1	ug/L
1-Chlorohexane	ND	9.1	ug/L
Chloromethane	ND	9.1	ug/L
2-Chlorotoluene	ND	9.1	ug/L
4-Chlorotoluene	ND	9.1	ug/L
Cyclohexanone	ND	180	ug/L
1,2-Dibromoethane	ND	9.1	ug/L
Dibromomethane	ND	9.1	ug/L
1,2-Dichlorobenzene	ND	9.1	ug/L
1,3-Dichlorobenzene	ND	9.1	ug/L
1,4-Dichlorobenzene	ND	9.1	ug/L
trans-1,4-Dichloro-2-butene	ND	9.1	ug/L
Dichlorodifluoromethane	ND	9.1	ug/L
1,1-Dichloroethane	ND	9.1	ug/L
1,2-Dichloroethane	ND	9.1	ug/L
1,1-Dichloroethene	ND	9.1	ug/L
cis-1,2-Dichloroethene	270	9.1	ug/L
trans-1,2-Dichloroethene	ND	9.1	ug/L
Dichlorofluoromethane	ND	18	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-AD 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-003 Work Order #...: LXXQK1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	9.1	ug/L
1,3-Dichloropropane	ND	9.1	ug/L
2,2-Dichloropropane	ND	9.1	ug/L
1,1-Dichloropropene	ND	9.1	ug/L
cis-1,3-Dichloropropene	ND	9.1	ug/L
trans-1,3-Dichloropropene	ND	9.1	ug/L
Ethylbenzene	ND	9.1	ug/L
Diethyl ether	ND	18	ug/L
Ethyl methacrylate	ND	9.1	ug/L
Trichlorofluoromethane	ND	9.1	ug/L
n-Heptane	ND	9.1	ug/L
Hexachlorobutadiene	ND	9.1	ug/L
2-Hexanone	ND	91	ug/L
Iodomethane	ND	9.1	ug/L
Isopropylbenzene	ND	9.1	ug/L
p-Isopropyltoluene	ND	9.1	ug/L
Methylene chloride	ND	9.1	ug/L
Methyl methacrylate	ND	18	ug/L
Naphthalene	ND	9.1	ug/L
n-Propylbenzene	ND	9.1	ug/L
Styrene	ND	9.1	ug/L
1,1,1,2-Tetrachloroethane	ND	9.1	ug/L
1,1,2,2-Tetrachloroethane	ND	9.1	ug/L
Tetrachloroethene	ND	9.1	ug/L
Tetrahydrofuran	ND	45	ug/L
Toluene	ND	9.1	ug/L
1,2,3-Trichlorobenzene	ND	9.1	ug/L
1,2,4-Trichloro-benzene	ND	9.1	ug/L
1,1,1-Trichloroethane	ND	9.1	ug/L
1,1,2-Trichloroethane	ND	9.1	ug/L
Trichloroethene	ND	9.1	ug/L
1,2,3-Trichloropropane	ND	9.1	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	9.1	ug/L
1,2,4-Trimethylbenzene	ND	9.1	ug/L
1,3,5-Trimethylbenzene	ND	9.1	ug/L
Vinyl acetate	ND	18	ug/L
Vinyl chloride	ND	9.1	ug/L
o-Xylene	ND	9.1	ug/L
m-Xylene & p-Xylene	ND	18	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	18	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-AD 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-003 Work Order #...: LXXQK1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	91	ug/L
Methyl tert-butyl ether (MTBE)	ND	45	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	85	(76 - 110)
4-Bromofluorobenzene	84	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BS 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-004 Work Order #...: LXXQM1AA Matrix.....: WG
Date Sampled...: 04/12/10 16:42 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 33.33 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	330	ug/L
Acrolein	ND	670	ug/L
Acrylonitrile	ND	670	ug/L
Benzene	ND	33	ug/L
Bromobenzene	ND	33	ug/L
Bromochloromethane	ND	33	ug/L
Bromodichloromethane	ND	33	ug/L
Bromoform	ND	33	ug/L
Bromomethane	ND	33	ug/L
Methyl ethyl ketone	ND	330	ug/L
n-Butylbenzene	ND	33	ug/L
sec-Butylbenzene	ND	33	ug/L
tert-Butylbenzene	ND	33	ug/L
Carbon disulfide	ND	33	ug/L
Carbon tetrachloride	ND	33	ug/L
Chlorobenzene	ND	33	ug/L
Chlorodibromomethane	ND	33	ug/L
Chloroethane	ND	33	ug/L
2-Chloroethyl vinyl ether	ND	330	ug/L
Chloroform	ND	33	ug/L
1-Chlorohexane	ND	33	ug/L
Chloromethane	ND	33	ug/L
2-Chlorotoluene	ND	33	ug/L
4-Chlorotoluene	ND	33	ug/L
Cyclohexanone	ND	670	ug/L
1,2-Dibromoethane	ND	33	ug/L
Dibromomethane	ND	33	ug/L
1,2-Dichlorobenzene	ND	33	ug/L
1,3-Dichlorobenzene	ND	33	ug/L
1,4-Dichlorobenzene	ND	33	ug/L
trans-1,4-Dichloro-2-butene	ND	33	ug/L
Dichlorodifluoromethane	ND	33	ug/L
1,1-Dichloroethane	ND	33	ug/L
1,2-Dichloroethane	ND	33	ug/L
1,1-Dichloroethene	ND	33	ug/L
cis-1,2-Dichloroethene	52	33	ug/L
trans-1,2-Dichloroethene	ND	33	ug/L
Dichlorofluoromethane	ND	67	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BS 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-004 Work Order #...: LXXQM1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	33	ug/L
1,3-Dichloropropane	ND	33	ug/L
2,2-Dichloropropane	ND	33	ug/L
1,1-Dichloropropene	ND	33	ug/L
cis-1,3-Dichloropropene	ND	33	ug/L
trans-1,3-Dichloropropene	ND	33	ug/L
Ethylbenzene	ND	33	ug/L
Diethyl ether	ND	67	ug/L
Ethyl methacrylate	ND	33	ug/L
Trichlorofluoromethane	ND	33	ug/L
n-Heptane	ND	33	ug/L
Hexachlorobutadiene	ND	33	ug/L
2-Hexanone	ND	330	ug/L
Iodomethane	ND	33	ug/L
Isopropylbenzene	ND	33	ug/L
p-Isopropyltoluene	ND	33	ug/L
Methylene chloride	ND	33	ug/L
Methyl methacrylate	ND	67	ug/L
Naphthalene	ND	33	ug/L
n-Propylbenzene	ND	33	ug/L
Styrene	ND	33	ug/L
1,1,1,2-Tetrachloroethane	ND	33	ug/L
1,1,2,2-Tetrachloroethane	ND	33	ug/L
Tetrachloroethene	ND	33	ug/L
Tetrahydrofuran	ND	170	ug/L
Toluene	ND	33	ug/L
1,2,3-Trichlorobenzene	ND	33	ug/L
1,2,4-Trichloro-benzene	ND	33	ug/L
1,1,1-Trichloroethane	ND	33	ug/L
1,1,2-Trichloroethane	ND	33	ug/L
Trichloroethene	970	33	ug/L
1,2,3-Trichloropropane	ND	33	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	33	ug/L
1,2,4-Trimethylbenzene	ND	33	ug/L
1,3,5-Trimethylbenzene	ND	33	ug/L
Vinyl acetate	ND	67	ug/L
Vinyl chloride	ND	33	ug/L
o-Xylene	ND	33	ug/L
m-Xylene & p-Xylene	ND	67	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	67	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BS 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-004 Work Order #...: LXXQM1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	330	ug/L
Methyl tert-butyl ether (MTBE)	ND	170	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BD 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-005 Work Order #...: LXXQP1AA Matrix.....: WG
Date Sampled...: 04/12/10 16:52 Date Received..: 04/14/10
Prep Date.....: 04/19/10 Analysis Date..: 04/19/10
Prep Batch #...: 0110149
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	1.0	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	6.3	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BD 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-005 Work Order #...: LXXQP1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
o-Xylene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BD 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-005 Work Order #...: LXXQP1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CS 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-006 Work Order #...: LXXQR1AA Matrix.....: WG
Date Sampled...: 04/12/10 17:43 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 71.43 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	710	ug/L
Acrolein	ND	1400	ug/L
Acrylonitrile	ND	1400	ug/L
Benzene	ND	71	ug/L
Bromobenzene	ND	71	ug/L
Bromochloromethane	ND	71	ug/L
Bromodichloromethane	ND	71	ug/L
Bromoform	ND	71	ug/L
Bromomethane	ND	71	ug/L
Methyl ethyl ketone	ND	710	ug/L
n-Butylbenzene	ND	71	ug/L
sec-Butylbenzene	ND	71	ug/L
tert-Butylbenzene	ND	71	ug/L
Carbon disulfide	ND	71	ug/L
Carbon tetrachloride	ND	71	ug/L
Chlorobenzene	ND	71	ug/L
Chlorodibromomethane	ND	71	ug/L
Chloroethane	ND	71	ug/L
2-Chloroethyl vinyl ether	ND	710	ug/L
Chloroform	ND	71	ug/L
1-Chlorohexane	ND	71	ug/L
Chloromethane	ND	71	ug/L
2-Chlorotoluene	ND	71	ug/L
4-Chlorotoluene	ND	71	ug/L
Cyclohexanone	ND	1400	ug/L
1,2-Dibromoethane	ND	71	ug/L
Dibromomethane	ND	71	ug/L
1,2-Dichlorobenzene	ND	71	ug/L
1,3-Dichlorobenzene	ND	71	ug/L
1,4-Dichlorobenzene	ND	71	ug/L
trans-1,4-Dichloro-2-butene	ND	71	ug/L
Dichlorodifluoromethane	ND	71	ug/L
1,1-Dichloroethane	ND	71	ug/L
1,2-Dichloroethane	ND	71	ug/L
1,1-Dichloroethene	ND	71	ug/L
cis-1,2-Dichloroethene	200	71	ug/L
trans-1,2-Dichloroethene	ND	71	ug/L
Dichlorofluoromethane	ND	140	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CS 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-006 Work Order #...: LXXQR1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	71	ug/L
1,3-Dichloropropane	ND	71	ug/L
2,2-Dichloropropane	ND	71	ug/L
1,1-Dichloropropene	ND	71	ug/L
cis-1,3-Dichloropropene	ND	71	ug/L
trans-1,3-Dichloropropene	ND	71	ug/L
Ethylbenzene	ND	71	ug/L
Diethyl ether	ND	140	ug/L
Ethyl methacrylate	ND	71	ug/L
Trichlorofluoromethane	ND	71	ug/L
n-Heptane	ND	71	ug/L
Hexachlorobutadiene	ND	71	ug/L
2-Hexanone	ND	710	ug/L
Iodomethane	ND	71	ug/L
Isopropylbenzene	ND	71	ug/L
p-Isopropyltoluene	ND	71	ug/L
Methylene chloride	ND	71	ug/L
Methyl methacrylate	ND	140	ug/L
Naphthalene	ND	71	ug/L
n-Propylbenzene	ND	71	ug/L
Styrene	ND	71	ug/L
1,1,1,2-Tetrachloroethane	ND	71	ug/L
1,1,2,2-Tetrachloroethane	ND	71	ug/L
Tetrachloroethene	ND	71	ug/L
Tetrahydrofuran	ND	360	ug/L
Toluene	ND	71	ug/L
1,2,3-Trichlorobenzene	ND	71	ug/L
1,2,4-Trichloro-benzene	ND	71	ug/L
1,1,1-Trichloroethane	ND	71	ug/L
1,1,2-Trichloroethane	ND	71	ug/L
Trichloroethene	**2400**	**71**	**ug/L**
1,2,3-Trichloropropane	ND	71	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	71	ug/L
1,2,4-Trimethylbenzene	ND	71	ug/L
1,3,5-Trimethylbenzene	ND	71	ug/L
Vinyl acetate	ND	140	ug/L
Vinyl chloride	ND	71	ug/L
o-Xylene	ND	71	ug/L
m-Xylene & p-Xylene	ND	140	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	140	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CS 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-006 Work Order #...: LXXQR1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	710	ug/L
Methyl tert-butyl ether (MTBE)	ND	360	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CD 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-007 Work Order #...: LXXQV1AA Matrix.....: WG
Date Sampled...: 04/12/10 17:48 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	1.1	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	36	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CD 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-007 Work Order #...: LXXQV1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	2.1	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
o-Xylene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CD 0410

GC/MS Volatiles

Lot-Sample #...: A0D140433-007 Work Order #...: LXXQV1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	86	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-100 0410 A14W

GC/MS Volatiles

Lot-Sample #...: A0D140433-008 Work Order #...: LXXQ01AA Matrix.....: WG
Date Sampled...: 04/12/10 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 71.43 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	710	ug/L
Acrolein	ND	1400	ug/L
Acrylonitrile	ND	1400	ug/L
Benzene	ND	71	ug/L
Bromobenzene	ND	71	ug/L
Bromochloromethane	ND	71	ug/L
Bromodichloromethane	ND	71	ug/L
Bromoform	ND	71	ug/L
Bromomethane	ND	71	ug/L
Methyl ethyl ketone	ND	710	ug/L
n-Butylbenzene	ND	71	ug/L
sec-Butylbenzene	ND	71	ug/L
tert-Butylbenzene	ND	71	ug/L
Carbon disulfide	ND	71	ug/L
Carbon tetrachloride	ND	71	ug/L
Chlorobenzene	ND	71	ug/L
Chlorodibromomethane	ND	71	ug/L
Chloroethane	ND	71	ug/L
2-Chloroethyl vinyl ether	ND	710	ug/L
Chloroform	ND	71	ug/L
1-Chlorohexane	ND	71	ug/L
Chloromethane	ND	71	ug/L
2-Chlorotoluene	ND	71	ug/L
4-Chlorotoluene	ND	71	ug/L
Cyclohexanone	ND	1400	ug/L
1,2-Dibromoethane	ND	71	ug/L
Dibromomethane	ND	71	ug/L
1,2-Dichlorobenzene	ND	71	ug/L
1,3-Dichlorobenzene	ND	71	ug/L
1,4-Dichlorobenzene	ND	71	ug/L
trans-1,4-Dichloro-2-butene	ND	71	ug/L
Dichlorodifluoromethane	ND	71	ug/L
1,1-Dichloroethane	ND	71	ug/L
1,2-Dichloroethane	ND	71	ug/L
1,1-Dichloroethene	ND	71	ug/L
cis-1,2-Dichloroethene	190	71	ug/L
trans-1,2-Dichloroethene	ND	71	ug/L
Dichlorofluoromethane	ND	140	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-100 0410 A14W

GC/MS Volatiles

Lot-Sample #...: A0D140433-008 Work Order #...: LXXQ01AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	71	ug/L
1,3-Dichloropropane	ND	71	ug/L
2,2-Dichloropropane	ND	71	ug/L
1,1-Dichloropropene	ND	71	ug/L
cis-1,3-Dichloropropene	ND	71	ug/L
trans-1,3-Dichloropropene	ND	71	ug/L
Ethylbenzene	ND	71	ug/L
Diethyl ether	ND	140	ug/L
Ethyl methacrylate	ND	71	ug/L
Trichlorofluoromethane	ND	71	ug/L
n-Heptane	ND	71	ug/L
Hexachlorobutadiene	ND	71	ug/L
2-Hexanone	ND	710	ug/L
Iodomethane	ND	71	ug/L
Isopropylbenzene	ND	71	ug/L
p-Isopropyltoluene	ND	71	ug/L
Methylene chloride	ND	71	ug/L
Methyl methacrylate	ND	140	ug/L
Naphthalene	ND	71	ug/L
n-Propylbenzene	ND	71	ug/L
Styrene	ND	71	ug/L
1,1,1,2-Tetrachloroethane	ND	71	ug/L
1,1,2,2-Tetrachloroethane	ND	71	ug/L
Tetrachloroethene	ND	71	ug/L
Tetrahydrofuran	ND	360	ug/L
Toluene	ND	71	ug/L
1,2,3-Trichlorobenzene	ND	71	ug/L
1,2,4-Trichloro-benzene	ND	71	ug/L
1,1,1-Trichloroethane	ND	71	ug/L
1,1,2-Trichloroethane	ND	71	ug/L
Trichloroethene	**2400**	**71**	**ug/L**
1,2,3-Trichloropropane	ND	71	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	71	ug/L
1,2,4-Trimethylbenzene	ND	71	ug/L
1,3,5-Trimethylbenzene	ND	71	ug/L
Vinyl acetate	ND	140	ug/L
Vinyl chloride	ND	71	ug/L
o-Xylene	ND	71	ug/L
m-Xylene & p-Xylene	ND	140	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	140	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-100 0410 A14W

GC/MS Volatiles

Lot-Sample #...: A0D140433-008 Work Order #...: LXXQ01AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	710	ug/L
Methyl tert-butyl ether (MTBE)	ND	360	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A0D140433-009 Work Order #...: LXXQ31AA Matrix.....: WQ
Date Sampled...: 04/12/10 Date Received..: 04/14/10
Prep Date.....: 04/19/10 Analysis Date..: 04/19/10
Prep Batch #...: 0110149
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A0D140433-009 Work Order #...: LXXQ31AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
o-Xylene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A0D140433-009 Work Order #...: LXXQ31AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	83	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

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QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX6J41AA Matrix.....: WATER
MB Lot-Sample #: A0D190000-163

Prep Date.....: 04/16/10
Analysis Date..: 04/16/10 Prep Batch #...: 0109163
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Acrolein	ND	20	ug/L	SW846 8260B
Acrylonitrile	ND	20	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
2-Chloroethyl vinyl ether	ND	10	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1-Chlorohexane	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexanone	ND	20	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX6J41AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Diethyl ether	ND	2.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
n-Heptane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Iodomethane	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Methyl methacrylate	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX6J41AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX7QV1AA Matrix.....: WATER
MB Lot-Sample #: A0D200000-149

Prep Date.....: 04/19/10
Analysis Date..: 04/19/10 Prep Batch #...: 0110149
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Acrolein	ND	20	ug/L	SW846 8260B
Acrylonitrile	ND	20	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
2-Chloroethyl vinyl ether	ND	10	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1-Chlorohexane	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexanone	ND	20	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX7QV1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Diethyl ether	ND	2.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
n-Heptane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Iodomethane	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Methyl methacrylate	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX7QV1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX6J41AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D190000-163 LX6J41AD-LCSD
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloromethane	92	(48 - 123)			SW846 8260B
	91	(48 - 123)	0.81	(0-30)	SW846 8260B
Bromomethane	108	(64 - 129)			SW846 8260B
	103	(64 - 129)	4.7	(0-30)	SW846 8260B
Vinyl chloride	100	(61 - 120)			SW846 8260B
	99	(61 - 120)	0.19	(0-30)	SW846 8260B
Chloroethane	53 a	(66 - 126)			SW846 8260B
	58 a	(66 - 126)	8.9	(0-30)	SW846 8260B
Methylene chloride	83	(78 - 118)			SW846 8260B
	81	(78 - 118)	2.1	(0-30)	SW846 8260B
Acetone	95	(22 - 200)			SW846 8260B
	100	(22 - 200)	5.6	(0-95)	SW846 8260B
Carbon disulfide	80	(73 - 139)			SW846 8260B
	79	(73 - 139)	1.2	(0-30)	SW846 8260B
1,1-Dichloroethene	96	(63 - 130)			SW846 8260B
	94	(63 - 130)	1.8	(0-20)	SW846 8260B
1,1-Dichloroethane	96	(86 - 123)			SW846 8260B
	95	(86 - 123)	0.96	(0-30)	SW846 8260B
Chloroform	98	(84 - 128)			SW846 8260B
	97	(84 - 128)	1.5	(0-30)	SW846 8260B
1,2-Dichloroethane	112	(79 - 136)			SW846 8260B
	112	(79 - 136)	0.55	(0-30)	SW846 8260B
Methyl ethyl ketone	102	(28 - 237)			SW846 8260B
	103	(28 - 237)	0.88	(0-65)	SW846 8260B
1,1,1-Trichloroethane	93	(78 - 140)			SW846 8260B
	93	(78 - 140)	0.24	(0-30)	SW846 8260B
Carbon tetrachloride	93	(75 - 149)			SW846 8260B
	92	(75 - 149)	0.97	(0-30)	SW846 8260B
Bromodichloromethane	94	(87 - 130)			SW846 8260B
	95	(87 - 130)	0.96	(0-30)	SW846 8260B
1,2-Dichloropropane	96	(82 - 115)			SW846 8260B
	95	(82 - 115)	0.23	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	88	(84 - 130)			SW846 8260B
	85	(84 - 130)	3.4	(0-30)	SW846 8260B
Trichloroethene	96	(75 - 122)			SW846 8260B
	93	(75 - 122)	2.9	(0-20)	SW846 8260B
Chlorodibromomethane	87	(81 - 138)			SW846 8260B
	87	(81 - 138)	0.11	(0-30)	SW846 8260B
1,1,2-Trichloroethane	95	(83 - 122)			SW846 8260B
	95	(83 - 122)	0.69	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX6J41AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D190000-163 LX6J41AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**93**	**(80 - 116)**			**SW846 8260B**
	93	**(80 - 116)**	**0.18**	**(0-20)**	**SW846 8260B**
trans-1,3-Dichloropropene	91	(84 - 130)			SW846 8260B
	89	(84 - 130)	1.8	(0-30)	SW846 8260B
Bromoform	81	(76 - 150)			SW846 8260B
	78	(76 - 150)	4.0	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	100	(78 - 141)			SW846 8260B
	101	(78 - 141)	1.6	(0-32)	SW846 8260B
2-Hexanone	100	(35 - 200)			SW846 8260B
	102	(35 - 200)	2.0	(0-52)	SW846 8260B
Tetrachloroethene	97	(88 - 113)			SW846 8260B
	95	(88 - 113)	2.4	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	84 a	(85 - 118)			SW846 8260B
	85	(85 - 118)	1.8	(0-30)	SW846 8260B
Toluene	**99**	**(74 - 119)**			**SW846 8260B**
	99	**(74 - 119)**	**0.56**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**95**	**(76 - 117)**			**SW846 8260B**
	93	**(76 - 117)**	**1.8**	**(0-20)**	**SW846 8260B**
Ethylbenzene	101	(86 - 116)			SW846 8260B
	99	(86 - 116)	1.8	(0-30)	SW846 8260B
Styrene	104	(85 - 117)			SW846 8260B
	102	(85 - 117)	1.5	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	91	(85 - 113)			SW846 8260B
	90	(85 - 113)	1.2	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	95	(80 - 120)			SW846 8260B
	93	(80 - 120)	2.6	(0-30)	SW846 8260B
Dichlorodifluoromethane	82	(70 - 130)			SW846 8260B
	80	(70 - 130)	1.6	(0-30)	SW846 8260B
Trichlorofluoromethane	132 a	(70 - 130)			SW846 8260B
	126	(70 - 130)	4.0	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	102	(70 - 130)			SW846 8260B
	98	(70 - 130)	3.6	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	91	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.17	(0-30)	SW846 8260B
1,2-Dibromoethane	95	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.5	(0-30)	SW846 8260B
Isopropylbenzene	93	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.020	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX6J41AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D190000-163 LX6J41AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	93	(70 - 130)			SW846 8260B
	94	(70 - 130)	1.4	(0-30)	SW846 8260B
1,4-Dichlorobenzene	92	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.65	(0-30)	SW846 8260B
1,2-Dichlorobenzene	92	(70 - 130)			SW846 8260B
	94	(70 - 130)	1.9	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	69 a	(70 - 130)			SW846 8260B
	75	(70 - 130)	8.1	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	92	(70 - 130)			SW846 8260B
	100	(70 - 130)	7.9	(0-30)	SW846 8260B
o-Xylene	103	(70 - 130)			SW846 8260B
	102	(70 - 130)	1.2	(0-30)	SW846 8260B
m-Xylene & p-Xylene	103	(70 - 130)			SW846 8260B
	101	(70 - 130)	1.9	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	97	(70 - 130)			SW846 8260B
	92	(70 - 130)	5.2	(0-30)	SW846 8260B
Acrolein	119	(50 - 130)			SW846 8260B
	118	(50 - 130)	0.070	(0-30)	SW846 8260B
Vinyl acetate	122	(70 - 130)			SW846 8260B
	123	(70 - 130)	0.46	(0-30)	SW846 8260B
Acrylonitrile	95	(50 - 130)			SW846 8260B
	94	(50 - 130)	0.67	(0-30)	SW846 8260B
Bromobenzene	89	(70 - 130)			SW846 8260B
	92	(70 - 130)	3.4	(0-30)	SW846 8260B
Bromochloromethane	93	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.8	(0-30)	SW846 8260B
n-Butylbenzene	93	(70 - 130)			SW846 8260B
	96	(70 - 130)	3.6	(0-30)	SW846 8260B
sec-Butylbenzene	93	(70 - 130)			SW846 8260B
	95	(70 - 130)	2.1	(0-30)	SW846 8260B
tert-Butylbenzene	104	(70 - 130)			SW846 8260B
	106	(70 - 130)	2.6	(0-30)	SW846 8260B
2-Chlorotoluene	92	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.88	(0-30)	SW846 8260B
4-Chlorotoluene	93	(70 - 130)			SW846 8260B
	95	(70 - 130)	1.6	(0-30)	SW846 8260B
Dibromomethane	103	(70 - 130)			SW846 8260B
	103	(70 - 130)	0.33	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX6J41AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D190000-163 LX6J41AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	98	(70 - 130)			SW846 8260B
	96	(70 - 130)	2.7	(0-30)	SW846 8260B
2,2-Dichloropropane	89	(70 - 130)			SW846 8260B
	84	(70 - 130)	5.9	(0-30)	SW846 8260B
1,1-Dichloropropene	100	(70 - 130)			SW846 8260B
	98	(70 - 130)	1.4	(0-30)	SW846 8260B
Hexachlorobutadiene	86	(70 - 130)			SW846 8260B
	89	(70 - 130)	3.1	(0-30)	SW846 8260B
Iodomethane	83	(70 - 130)			SW846 8260B
	81	(70 - 130)	2.2	(0-30)	SW846 8260B
p-Isopropyltoluene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.9	(0-30)	SW846 8260B
Naphthalene	86	(70 - 130)			SW846 8260B
	94	(70 - 130)	9.0	(0-30)	SW846 8260B
n-Propylbenzene	91	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.39	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	89	(70 - 130)			SW846 8260B
	88	(70 - 130)	1.7	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	93	(70 - 130)			SW846 8260B
	101	(70 - 130)	8.8	(0-30)	SW846 8260B
1,2,3-Trichloropropane	101	(70 - 130)			SW846 8260B
	98	(70 - 130)	2.9	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	97	(70 - 130)			SW846 8260B
	100	(70 - 130)	3.3	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	88	(70 - 130)			SW846 8260B
	90	(70 - 130)	2.0	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(73 - 122)
	87	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
	99	(61 - 128)
Toluene-d8	94	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	108	(74 - 116)
	106	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX7QV1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D200000-149 LX7QV1AD-LCSD
Prep Date.....: 04/19/10 Analysis Date..: 04/19/10
Prep Batch #...: 0110149
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloromethane	119	(48 - 123)			SW846 8260B
	101	(48 - 123)	16	(0-30)	SW846 8260B
Bromomethane	92	(64 - 129)			SW846 8260B
	93	(64 - 129)	0.20	(0-30)	SW846 8260B
Vinyl chloride	110	(61 - 120)			SW846 8260B
	106	(61 - 120)	3.4	(0-30)	SW846 8260B
Chloroethane	97	(66 - 126)			SW846 8260B
	96	(66 - 126)	1.2	(0-30)	SW846 8260B
Methylene chloride	99	(78 - 118)			SW846 8260B
	97	(78 - 118)	2.1	(0-30)	SW846 8260B
Acetone	97	(22 - 200)			SW846 8260B
	98	(22 - 200)	0.84	(0-95)	SW846 8260B
Carbon disulfide	111	(73 - 139)			SW846 8260B
	107	(73 - 139)	3.5	(0-30)	SW846 8260B
1,1-Dichloroethene	113	(63 - 130)			SW846 8260B
	109	(63 - 130)	3.8	(0-20)	SW846 8260B
1,1-Dichloroethane	102	(86 - 123)			SW846 8260B
	101	(86 - 123)	0.77	(0-30)	SW846 8260B
Chloroform	97	(84 - 128)			SW846 8260B
	99	(84 - 128)	2.5	(0-30)	SW846 8260B
1,2-Dichloroethane	99	(79 - 136)			SW846 8260B
	99	(79 - 136)	0.44	(0-30)	SW846 8260B
Methyl ethyl ketone	89	(28 - 237)			SW846 8260B
	92	(28 - 237)	3.5	(0-65)	SW846 8260B
1,1,1-Trichloroethane	104	(78 - 140)			SW846 8260B
	104	(78 - 140)	0.23	(0-30)	SW846 8260B
Carbon tetrachloride	105	(75 - 149)			SW846 8260B
	103	(75 - 149)	1.9	(0-30)	SW846 8260B
Bromodichloromethane	102	(87 - 130)			SW846 8260B
	102	(87 - 130)	0.060	(0-30)	SW846 8260B
1,2-Dichloropropane	101	(82 - 115)			SW846 8260B
	105	(82 - 115)	3.3	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	88	(84 - 130)			SW846 8260B
	91	(84 - 130)	2.7	(0-30)	SW846 8260B
Trichloroethene	100	(75 - 122)			SW846 8260B
	99	(75 - 122)	0.84	(0-20)	SW846 8260B
Chlorodibromomethane	90	(81 - 138)			SW846 8260B
	87	(81 - 138)	3.5	(0-30)	SW846 8260B
1,1,2-Trichloroethane	94	(83 - 122)			SW846 8260B
	94	(83 - 122)	0.49	(0-30)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX7QV1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D200000-149 LX7QV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	100	(80 - 116)			SW846 8260B
	100	(80 - 116)	0.37	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	93	(84 - 130)			SW846 8260B
	89	(84 - 130)	4.3	(0-30)	SW846 8260B
Bromoform	90	(76 - 150)			SW846 8260B
	84	(76 - 150)	7.6	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	90	(78 - 141)			SW846 8260B
	93	(78 - 141)	2.4	(0-32)	SW846 8260B
2-Hexanone	94	(35 - 200)			SW846 8260B
	90	(35 - 200)	4.3	(0-52)	SW846 8260B
Tetrachloroethene	102	(88 - 113)			SW846 8260B
	101	(88 - 113)	1.2	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	95	(85 - 118)			SW846 8260B
	97	(85 - 118)	1.4	(0-30)	SW846 8260B
Toluene	103	(74 - 119)			SW846 8260B
	98	(74 - 119)	4.8	(0-20)	SW846 8260B
Chlorobenzene	97	(76 - 117)			SW846 8260B
	98	(76 - 117)	0.51	(0-20)	SW846 8260B
Ethylbenzene	95	(86 - 116)			SW846 8260B
	92	(86 - 116)	2.5	(0-30)	SW846 8260B
Styrene	93	(85 - 117)			SW846 8260B
	94	(85 - 117)	0.53	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	102	(85 - 113)			SW846 8260B
	101	(85 - 113)	0.99	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	101	(80 - 120)			SW846 8260B
	105	(80 - 120)	3.2	(0-30)	SW846 8260B
Dichlorodifluoromethane	99	(70 - 130)			SW846 8260B
	90	(70 - 130)	9.4	(0-30)	SW846 8260B
Trichlorofluoromethane	119	(70 - 130)			SW846 8260B
	116	(70 - 130)	2.0	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	119	(70 - 130)			SW846 8260B
	114	(70 - 130)	4.7	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	107	(70 - 130)			SW846 8260B
	115	(70 - 130)	7.7	(0-30)	SW846 8260B
1,2-Dibromoethane	101	(70 - 130)			SW846 8260B
	97	(70 - 130)	3.6	(0-30)	SW846 8260B
Isopropylbenzene	93	(70 - 130)			SW846 8260B
	90	(70 - 130)	2.8	(0-30)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX7QV1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D200000-149 LX7QV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	102	(70 - 130)			SW846 8260B
	102	(70 - 130)	0.45	(0-30)	SW846 8260B
1,4-Dichlorobenzene	100	(70 - 130)			SW846 8260B
	99	(70 - 130)	1.7	(0-30)	SW846 8260B
1,2-Dichlorobenzene	103	(70 - 130)			SW846 8260B
	100	(70 - 130)	2.5	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	87	(70 - 130)			SW846 8260B
	91	(70 - 130)	4.7	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	99	(70 - 130)			SW846 8260B
	97	(70 - 130)	2.1	(0-30)	SW846 8260B
o-Xylene	96	(70 - 130)			SW846 8260B
	94	(70 - 130)	2.2	(0-30)	SW846 8260B
m-Xylene & p-Xylene	94	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.8	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	105	(70 - 130)			SW846 8260B
	120	(70 - 130)	13	(0-30)	SW846 8260B
Acrolein	107	(50 - 130)			SW846 8260B
	110	(50 - 130)	2.6	(0-30)	SW846 8260B
Vinyl acetate	113	(70 - 130)			SW846 8260B
	115	(70 - 130)	1.3	(0-30)	SW846 8260B
Acrylonitrile	96	(50 - 130)			SW846 8260B
	98	(50 - 130)	1.6	(0-30)	SW846 8260B
Bromobenzene	102	(70 - 130)			SW846 8260B
	103	(70 - 130)	0.89	(0-30)	SW846 8260B
Bromochloromethane	100	(70 - 130)			SW846 8260B
	100	(70 - 130)	0.26	(0-30)	SW846 8260B
n-Butylbenzene	100	(70 - 130)			SW846 8260B
	98	(70 - 130)	1.0	(0-30)	SW846 8260B
sec-Butylbenzene	96	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.92	(0-30)	SW846 8260B
tert-Butylbenzene	92	(70 - 130)			SW846 8260B
	91	(70 - 130)	0.80	(0-30)	SW846 8260B
2-Chlorotoluene	107	(70 - 130)			SW846 8260B
	107	(70 - 130)	0.31	(0-30)	SW846 8260B
4-Chlorotoluene	103	(70 - 130)			SW846 8260B
	105	(70 - 130)	1.6	(0-30)	SW846 8260B
Dibromomethane	101	(70 - 130)			SW846 8260B
	102	(70 - 130)	0.79	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX7QV1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0D200000-149 LX7QV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	99	(70 - 130)			SW846 8260B
	99	(70 - 130)	0.43	(0-30)	SW846 8260B
2,2-Dichloropropane	106	(70 - 130)			SW846 8260B
	105	(70 - 130)	0.75	(0-30)	SW846 8260B
1,1-Dichloropropene	104	(70 - 130)			SW846 8260B
	103	(70 - 130)	0.74	(0-30)	SW846 8260B
Hexachlorobutadiene	97	(70 - 130)			SW846 8260B
	91	(70 - 130)	6.7	(0-30)	SW846 8260B
Iodomethane	107	(70 - 130)			SW846 8260B
	107	(70 - 130)	0.21	(0-30)	SW846 8260B
p-Isopropyltoluene	97	(70 - 130)			SW846 8260B
	97	(70 - 130)	0.14	(0-30)	SW846 8260B
Naphthalene	88	(70 - 130)			SW846 8260B
	82	(70 - 130)	7.6	(0-30)	SW846 8260B
n-Propylbenzene	100	(70 - 130)			SW846 8260B
	99	(70 - 130)	0.86	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	98	(70 - 130)			SW846 8260B
	94	(70 - 130)	4.4	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	95	(70 - 130)			SW846 8260B
	89	(70 - 130)	7.0	(0-30)	SW846 8260B
1,2,3-Trichloropropane	104	(70 - 130)			SW846 8260B
	107	(70 - 130)	3.0	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	98	(70 - 130)			SW846 8260B
	97	(70 - 130)	0.71	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	95	(70 - 130)			SW846 8260B
	96	(70 - 130)	0.67	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(73 - 122)
	102	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
	99	(61 - 128)
Toluene-d8	90	(76 - 110)
	103	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	109	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LXXM31AC-MS Matrix.....: WATER
MS Lot-Sample #: A0D140426-001 LXXM31AD-MSD
Date Sampled...: 04/13/10 10:20 Date Received..: 04/14/10
Prep Date.....: 04/16/10 Analysis Date..: 04/16/10
Prep Batch #...: 0109163
Dilution Factor: 5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	95	(62 - 130)			SW846 8260B
	95	(62 - 130)	0.67	(0-20)	SW846 8260B
Chloromethane	97	(40 - 137)			SW846 8260B
	98	(40 - 137)	1.8	(0-39)	SW846 8260B
Bromomethane	118	(55 - 145)			SW846 8260B
	114	(55 - 145)	2.9	(0-30)	SW846 8260B
Vinyl chloride	100	(88 - 126)			SW846 8260B
	99	(88 - 126)	0.76	(0-30)	SW846 8260B
Chloroethane	70	(59 - 142)			SW846 8260B
	75	(59 - 142)	7.7	(0-30)	SW846 8260B
Methylene chloride	79 a	(82 - 115)			SW846 8260B
	82	(82 - 115)	4.2	(0-30)	SW846 8260B
Acetone	105	(45 - 128)			SW846 8260B
	100	(45 - 128)	5.0	(0-30)	SW846 8260B
Carbon disulfide	79	(69 - 138)			SW846 8260B
	79	(69 - 138)	0.09	(0-41)	SW846 8260B
1,1-Dichloroethane	96	(88 - 127)			SW846 8260B
	97	(88 - 127)	0.99	(0-30)	SW846 8260B
Chloroform	98	(83 - 141)			SW846 8260B
	99	(83 - 141)	1.1	(0-30)	SW846 8260B
1,2-Dichloroethane	112	(71 - 160)			SW846 8260B
	109	(71 - 160)	2.2	(0-30)	SW846 8260B
Methyl ethyl ketone	103	(71 - 123)			SW846 8260B
	103	(71 - 123)	0.34	(0-30)	SW846 8260B
1,1,1-Trichloroethane	93	(71 - 162)			SW846 8260B
	98	(71 - 162)	5.3	(0-30)	SW846 8260B
Carbon tetrachloride	89	(63 - 176)			SW846 8260B
	93	(63 - 176)	3.5	(0-30)	SW846 8260B
Bromodichloromethane	93	(80 - 146)			SW846 8260B
	97	(80 - 146)	3.4	(0-30)	SW846 8260B
1,2-Dichloropropane	95	(87 - 114)			SW846 8260B
	95	(87 - 114)	0.69	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	80 a	(82 - 130)			SW846 8260B
	82	(82 - 130)	1.9	(0-30)	SW846 8260B
Trichloroethene	81	(62 - 130)			SW846 8260B
	74	(62 - 130)	1.7	(0-20)	SW846 8260B
Chlorodibromomethane	83	(71 - 158)			SW846 8260B
	85	(71 - 158)	3.3	(0-30)	SW846 8260B
1,1,2-Trichloroethane	94	(86 - 129)			SW846 8260B
	95	(86 - 129)	0.88	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LXXM31AC-MS Matrix.....: WATER
MS Lot-Sample #: A0D140426-001 LXXM31AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	92	(78 - 118)			SW846 8260B
	93	(78 - 118)	1.9	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	81	(73 - 147)			SW846 8260B
	89	(73 - 147)	9.0	(0-30)	SW846 8260B
Bromoform	77	(58 - 176)			SW846 8260B
	82	(58 - 176)	6.0	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	100	(82 - 135)			SW846 8260B
	103	(82 - 135)	3.0	(0-30)	SW846 8260B
2-Hexanone	98	(81 - 128)			SW846 8260B
	104	(81 - 128)	5.7	(0-30)	SW846 8260B
Tetrachloroethene	89	(85 - 121)			SW846 8260B
	96	(85 - 121)	6.9	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	84 a	(88 - 116)			SW846 8260B
	90	(88 - 116)	6.8	(0-30)	SW846 8260B
Toluene	96	(70 - 119)			SW846 8260B
	98	(70 - 119)	2.2	(0-20)	SW846 8260B
Chlorobenzene	91	(76 - 117)			SW846 8260B
	94	(76 - 117)	2.4	(0-20)	SW846 8260B
Ethylbenzene	97	(86 - 132)			SW846 8260B
	98	(86 - 132)	1.3	(0-30)	SW846 8260B
Styrene	101	(83 - 120)			SW846 8260B
	103	(83 - 120)	1.8	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	88	(87 - 114)			SW846 8260B
	92	(87 - 114)	3.3	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	92	(85 - 116)			SW846 8260B
	91	(85 - 116)	0.89	(0-30)	SW846 8260B
Dichlorodifluoromethane	74	(70 - 130)			SW846 8260B
	78	(70 - 130)	5.2	(0-30)	SW846 8260B
Trichlorofluoromethane	129	(70 - 130)			SW846 8260B
	130	(70 - 130)	0.60	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	92	(70 - 130)			SW846 8260B
	98	(70 - 130)	6.7	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	90	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.1	(0-30)	SW846 8260B
1,2-Dibromoethane	92	(70 - 130)			SW846 8260B
	96	(70 - 130)	4.6	(0-30)	SW846 8260B
Isopropylbenzene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.8	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LXXM31AC-MS Matrix.....: WATER
MS Lot-Sample #: A0D140426-001 LXXM31AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	93	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.98	(0-30)	SW846 8260B
1,4-Dichlorobenzene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.2	(0-30)	SW846 8260B
1,2-Dichlorobenzene	92	(70 - 130)			SW846 8260B
	94	(70 - 130)	2.3	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	73	(70 - 130)			SW846 8260B
	79	(70 - 130)	8.1	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	92	(70 - 130)			SW846 8260B
	96	(70 - 130)	4.1	(0-30)	SW846 8260B
o-Xylene	98	(70 - 130)			SW846 8260B
	105	(70 - 130)	6.7	(0-30)	SW846 8260B
m-Xylene & p-Xylene	98	(70 - 130)			SW846 8260B
	101	(70 - 130)	2.3	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acrolein	120	(50 - 130)			SW846 8260B
	125	(50 - 130)	3.8	(0-30)	SW846 8260B
Acrylonitrile	94	(50 - 130)			SW846 8260B
	96	(50 - 130)	1.8	(0-30)	SW846 8260B
Vinyl acetate	121	(70 - 130)			SW846 8260B
	128	(70 - 130)	6.0	(0-30)	SW846 8260B
Bromobenzene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.1	(0-30)	SW846 8260B
Bromochloromethane	90	(70 - 130)			SW846 8260B
	90	(70 - 130)	0.02	(0-30)	SW846 8260B
n-Butylbenzene	88	(70 - 130)			SW846 8260B
	90	(70 - 130)	1.6	(0-30)	SW846 8260B
sec-Butylbenzene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.5	(0-30)	SW846 8260B
tert-Butylbenzene	101	(70 - 130)			SW846 8260B
	105	(70 - 130)	3.2	(0-30)	SW846 8260B
2-Chlorotoluene	88	(70 - 130)			SW846 8260B
	92	(70 - 130)	3.6	(0-30)	SW846 8260B
4-Chlorotoluene	94	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.26	(0-30)	SW846 8260B
Dibromomethane	105	(70 - 130)			SW846 8260B
	103	(70 - 130)	2.2	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LXXM31AC-MS Matrix.....: WATER
MS Lot-Sample #: A0D140426-001 LXXM31AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	94	(70 - 130)			SW846 8260B
	97	(70 - 130)	3.9	(0-30)	SW846 8260B
2,2-Dichloropropane	84	(70 - 130)			SW846 8260B
	84	(70 - 130)	0.10	(0-30)	SW846 8260B
1,1-Dichloropropene	96	(70 - 130)			SW846 8260B
	100	(70 - 130)	3.9	(0-30)	SW846 8260B
Hexachlorobutadiene	83	(70 - 130)			SW846 8260B
	87	(70 - 130)	4.3	(0-30)	SW846 8260B
Iodomethane	83	(70 - 130)			SW846 8260B
	84	(70 - 130)	0.99	(0-30)	SW846 8260B
p-Isopropyltoluene	89	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.4	(0-30)	SW846 8260B
Naphthalene	86	(70 - 130)			SW846 8260B
	93	(70 - 130)	7.4	(0-30)	SW846 8260B
n-Propylbenzene	88	(70 - 130)			SW846 8260B
	91	(70 - 130)	3.0	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	83	(70 - 130)			SW846 8260B
	86	(70 - 130)	3.3	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	94	(70 - 130)			SW846 8260B
	101	(70 - 130)	7.1	(0-30)	SW846 8260B
1,2,3-Trichloropropane	103	(70 - 130)			SW846 8260B
	105	(70 - 130)	1.4	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	96	(70 - 130)			SW846 8260B
	98	(70 - 130)	1.8	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	86	(70 - 130)			SW846 8260B
	89	(70 - 130)	3.9	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(73 - 122)
	86	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	96	(61 - 128)
Toluene-d8	92	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	106	(74 - 116)
	108	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX14V1AH-MS Matrix.....: WATER
MS Lot-Sample #: A0D150524-002 LX14V1AJ-MSD
Date Sampled...: 04/14/10 11:07 Date Received..: 04/15/10
Prep Date.....: 04/19/10 Analysis Date..: 04/19/10
Prep Batch #...: 0110149
Dilution Factor: 3.33

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	112	(62 - 130)			SW846 8260B
	101	(62 - 130)	11	(0-20)	SW846 8260B
Chloromethane	96	(40 - 137)			SW846 8260B
	84	(40 - 137)	13	(0-39)	SW846 8260B
Bromomethane	79	(55 - 145)			SW846 8260B
	71	(55 - 145)	10	(0-30)	SW846 8260B
Vinyl chloride	110	(88 - 126)			SW846 8260B
	92	(88 - 126)	14	(0-30)	SW846 8260B
Chloroethane	94	(59 - 142)			SW846 8260B
	86	(59 - 142)	9.2	(0-30)	SW846 8260B
Methylene chloride	96	(82 - 115)			SW846 8260B
	90	(82 - 115)	6.3	(0-30)	SW846 8260B
Acetone	82	(45 - 128)			SW846 8260B
	72	(45 - 128)	13	(0-30)	SW846 8260B
Carbon disulfide	115	(69 - 138)			SW846 8260B
	104	(69 - 138)	9.7	(0-41)	SW846 8260B
1,1-Dichloroethane	105	(88 - 127)			SW846 8260B
	98	(88 - 127)	6.2	(0-30)	SW846 8260B
Chloroform	99	(83 - 141)			SW846 8260B
	93	(83 - 141)	6.9	(0-30)	SW846 8260B
1,2-Dichloroethane	97	(71 - 160)			SW846 8260B
	97	(71 - 160)	0.39	(0-30)	SW846 8260B
Methyl ethyl ketone	97	(71 - 123)			SW846 8260B
	88	(71 - 123)	9.1	(0-30)	SW846 8260B
1,1,1-Trichloroethane	101	(71 - 162)			SW846 8260B
	95	(71 - 162)	6.2	(0-30)	SW846 8260B
Carbon tetrachloride	103	(63 - 176)			SW846 8260B
	94	(63 - 176)	9.2	(0-30)	SW846 8260B
Bromodichloromethane	104	(80 - 146)			SW846 8260B
	103	(80 - 146)	1.1	(0-30)	SW846 8260B
1,2-Dichloropropane	100	(87 - 114)			SW846 8260B
	99	(87 - 114)	0.59	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	84	(82 - 130)			SW846 8260B
	80 a	(82 - 130)	4.2	(0-30)	SW846 8260B
Trichloroethene	95	(62 - 130)			SW846 8260B
	95	(62 - 130)	0.36	(0-20)	SW846 8260B
Chlorodibromomethane	94	(71 - 158)			SW846 8260B
	95	(71 - 158)	0.76	(0-30)	SW846 8260B
1,1,2-Trichloroethane	99	(86 - 129)			SW846 8260B
	98	(86 - 129)	1.1	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX14V1AH-MS Matrix.....: WATER
MS Lot-Sample #: A0D150524-002 LX14V1AJ-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	97	(78 - 118)			SW846 8260B
	94	(78 - 118)	2.6	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	87	(73 - 147)			SW846 8260B
	88	(73 - 147)	0.40	(0-30)	SW846 8260B
Bromoform	95	(58 - 176)			SW846 8260B
	92	(58 - 176)	3.4	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	94	(82 - 135)			SW846 8260B
	85	(82 - 135)	10	(0-30)	SW846 8260B
2-Hexanone	99	(81 - 128)			SW846 8260B
	95	(81 - 128)	4.4	(0-30)	SW846 8260B
Tetrachloroethene	99	(85 - 121)			SW846 8260B
	97	(85 - 121)	2.0	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	104	(88 - 116)			SW846 8260B
	104	(88 - 116)	0.48	(0-30)	SW846 8260B
Toluene	97	(70 - 119)			SW846 8260B
	96	(70 - 119)	0.38	(0-20)	SW846 8260B
Chlorobenzene	96	(76 - 117)			SW846 8260B
	96	(76 - 117)	0.49	(0-20)	SW846 8260B
Ethylbenzene	89	(86 - 132)			SW846 8260B
	86	(86 - 132)	3.3	(0-30)	SW846 8260B
Styrene	88	(83 - 120)			SW846 8260B
	84	(83 - 120)	3.9	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	112	(87 - 114)			SW846 8260B
	78 a	(87 - 114)	7.7	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	108	(85 - 116)			SW846 8260B
	100	(85 - 116)	4.4	(0-30)	SW846 8260B
Dichlorodifluoromethane	82	(70 - 130)			SW846 8260B
	75	(70 - 130)	9.1	(0-30)	SW846 8260B
Trichlorofluoromethane	104	(70 - 130)			SW846 8260B
	90	(70 - 130)	15	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	113	(70 - 130)			SW846 8260B
	100	(70 - 130)	12	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	97	(70 - 130)			SW846 8260B
	101	(70 - 130)	4.1	(0-30)	SW846 8260B
1,2-Dibromoethane	102	(70 - 130)			SW846 8260B
	101	(70 - 130)	0.50	(0-30)	SW846 8260B
Isopropylbenzene	76	(70 - 130)			SW846 8260B
	75	(70 - 130)	2.1	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX14V1AH-MS Matrix.....: WATER
MS Lot-Sample #: A0D150524-002 LX14V1AJ-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	95	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.74	(0-30)	SW846 8260B
1,4-Dichlorobenzene	94	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.96	(0-30)	SW846 8260B
1,2-Dichlorobenzene	95	(70 - 130)			SW846 8260B
	92	(70 - 130)	3.4	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	102	(70 - 130)			SW846 8260B
	102	(70 - 130)	0.06	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	75	(70 - 130)			SW846 8260B
	79	(70 - 130)	4.5	(0-30)	SW846 8260B
o-Xylene	87	(70 - 130)			SW846 8260B
	85	(70 - 130)	2.7	(0-30)	SW846 8260B
m-Xylene & p-Xylene	87	(70 - 130)			SW846 8260B
	84	(70 - 130)	2.7	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acrolein	98	(50 - 130)			SW846 8260B
	89	(50 - 130)	9.8	(0-30)	SW846 8260B
Acrylonitrile	102	(50 - 130)			SW846 8260B
	93	(50 - 130)	9.1	(0-30)	SW846 8260B
Vinyl acetate	101	(70 - 130)			SW846 8260B
	114	(70 - 130)	12	(0-30)	SW846 8260B
Bromobenzene	101	(70 - 130)			SW846 8260B
	101	(70 - 130)	0.52	(0-30)	SW846 8260B
Bromochloromethane	101	(70 - 130)			SW846 8260B
	94	(70 - 130)	7.6	(0-30)	SW846 8260B
n-Butylbenzene	88	(70 - 130)			SW846 8260B
	87	(70 - 130)	1.5	(0-30)	SW846 8260B
sec-Butylbenzene	85	(70 - 130)			SW846 8260B
	85	(70 - 130)	0.08	(0-30)	SW846 8260B
tert-Butylbenzene	89	(70 - 130)			SW846 8260B
	90	(70 - 130)	0.83	(0-30)	SW846 8260B
2-Chlorotoluene	101	(70 - 130)			SW846 8260B
	99	(70 - 130)	1.6	(0-30)	SW846 8260B
4-Chlorotoluene	99	(70 - 130)			SW846 8260B
	97	(70 - 130)	1.3	(0-30)	SW846 8260B
Dibromomethane	107	(70 - 130)			SW846 8260B
	103	(70 - 130)	3.9	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D140433 Work Order #...: LX14V1AH-MS Matrix.....: WATER
MS Lot-Sample #: A0D150524-002 LX14V1AJ-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	100	(70 - 130)			SW846 8260B
	100	(70 - 130)	0.72	(0-30)	SW846 8260B
2,2-Dichloropropane	91	(70 - 130)			SW846 8260B
	88	(70 - 130)	2.8	(0-30)	SW846 8260B
1,1-Dichloropropene	98	(70 - 130)			SW846 8260B
	95	(70 - 130)	3.4	(0-30)	SW846 8260B
Hexachlorobutadiene	74	(70 - 130)			SW846 8260B
	73	(70 - 130)	1.3	(0-30)	SW846 8260B
Iodomethane	103	(70 - 130)			SW846 8260B
	93	(70 - 130)	10	(0-30)	SW846 8260B
p-Isopropyltoluene	88	(70 - 130)			SW846 8260B
	87	(70 - 130)	1.3	(0-30)	SW846 8260B
Naphthalene	71	(70 - 130)			SW846 8260B
	77	(70 - 130)	7.9	(0-30)	SW846 8260B
n-Propylbenzene	94	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.66	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	93	(70 - 130)			SW846 8260B
	92	(70 - 130)	0.87	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	71	(70 - 130)			SW846 8260B
	74	(70 - 130)	4.2	(0-30)	SW846 8260B
1,2,3-Trichloropropane	110	(70 - 130)			SW846 8260B
	115	(70 - 130)	4.4	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	91	(70 - 130)			SW846 8260B
	90	(70 - 130)	0.78	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	87	(70 - 130)			SW846 8260B
	87	(70 - 130)	1.0	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	97	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
	99	(61 - 128)
Toluene-d8	99	(76 - 110)
	103	(76 - 110)
4-Bromofluorobenzene	103	(74 - 116)
	104	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

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TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
MACTEC	Steve Murray	4/13/10	145772
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
41 Hughes Drive	(231) 922-9050		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
Traverse City / MI / 49686	James Staley	Mark Loeb	
Project Name and Location (State)	**Carrier/Waybill Number**		
Honeywell South Bend A14W			
Contract/Purchase Order/Quote No.			
51332860			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8260 VOCs	Special Instructions/ Conditions of Receipt
MW-7 0410	4/12/10	1515		X						3			X	
MW-A$_S$ 0410		1550		X						3			X	
MW-A$_D$ 0410		1604		X						3			X	
MW-B$_S$ 0410		1642		X						3			X	
MW-B$_D$ 0410		1657		X						3			X	
MW-C$_S$ 0410		1743		X						3			X	
MW-C$_D$ 0410		1748		X						3			X	
MW-100 0410 A14W	↓	—		X						3			X	
Trip Blank	—	—		X						1			X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By	Date	Time	1. Received By	Date	Time
[signature]	4/13/10	17:20	[signature]	4/14/10	915
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Cooler Receipt Form/Narrative — **Lot Number: 410404 33**

North Canton Facility

Client Mactec Project _____ By: _____ (Signature)

Cooler Received on 4-14-10 Opened on 4-14-10

FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____

TestAmerica Cooler # 241-878 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 2 Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt 1.4 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐ _____
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☑ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☑
10. Were correct bottle(s) used for the test(s) indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☑ No ☐ Were VOAs on the COC? Yes ☑ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

_____

_____

_____

_____

_____

_____

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 121709-HNO_3; Sulfuric Acid Lot# 121709-H_2SO_4; Sodium Hydroxide Lot# 100108 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-$(CH_3COO)_2ZN$/NaOH.* What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

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END OF REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

RECEIVED AUG 01 2010

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

HONEYWELL SOUTH BEND-AREA 14 W

Lot #: A0G150463

Steven Murray

Mactec Engineering & Consultan
41 Hughes Drive
Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

SCANNED 100728 TestAmerica 1/4W 70039

Approved for release.
Mark J. Loeb
Project Manager II
7/28/2010 5:51 PM

Mark J. Loeb
Project Manager
mark.loeb@testamericainc.com

July 28, 2010

ACCREDITED IN ACCORDANCE WITH nelac

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

CASE NARRATIVE

A0G150463

The following report contains the analytical results for eight water samples submitted to TestAmerica North Canton by MACTEC Engineering & Consulting, Inc. from the HONEYWELL SOUTH BEND-AREA 14 W Site. The samples were received July 15, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Christopher J. Kapanowski, Nick Rogers, and Steven Murray on July 27, 2010. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Mark J. Loeb, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.7°C.

GC/MS VOLATILES

The matrix spike/matrix spike duplicate(s) for batch(es) 0207354 and 0207251 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A0G150463

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-7 07 10 07/14/10 08:58 001				
1,1-Dichloroethane	6.8	1.4	ug/L	SW846 8260B
cis-1,2-Dichloroethene	51	1.4	ug/L	SW846 8260B
Vinyl chloride	33	1.4	ug/L	SW846 8260B
MW-AS 07 10 07/14/10 09:25 002				
1,1-Dichloroethane	6.2	3.3	ug/L	SW846 8260B
cis-1,2-Dichloroethene	74	3.3	ug/L	SW846 8260B
Vinyl chloride	77	3.3	ug/L	SW846 8260B
Trichloroethene	15	3.3	ug/L	SW846 8260B
MW-AD 07 10 07/14/10 10:10 003				
cis-1,2-Dichloroethene	310	10	ug/L	SW846 8260B
MW-BS 07 10 07/14/10 10:40 004				
cis-1,2-Dichloroethene	78	40	ug/L	SW846 8260B
Trichloroethene	1400	40	ug/L	SW846 8260B
MW-BD 07 10 07/14/10 11:05 005				
cis-1,2-Dichloroethene	5.6	1.0	ug/L	SW846 8260B
MW-CS 07 10 07/14/10 12:38 006				
cis-1,2-Dichloroethene	130	62	ug/L	SW846 8260B
Trichloroethene	2500	62	ug/L	SW846 8260B
MW-CD 07 10 07/14/10 13:20 007				
1,1-Dichloroethane	1.1	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	37	1.0	ug/L	SW846 8260B
Trichloroethene	2.4	1.0	ug/L	SW846 8260B
MW-101 07 10-14 WEST 07/14/10 008				
1,1-Dichloroethane	1.1	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	37	1.0	ug/L	SW846 8260B
Trichloroethene	2.4	1.0	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A0G150463

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A0G150463

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L374K	001	MW-7 07 10	07/14/10	08:58
L374N	002	MW-AS 07 10	07/14/10	09:25
L374P	003	MW-AD 07 10	07/14/10	10:10
L374Q	004	MW-BS 07 10	07/14/10	10:40
L374R	005	MW-BD 07 10	07/14/10	11:05
L374T	006	MW-CS 07 10	07/14/10	12:38
L374V	007	MW-CD 07 10	07/14/10	13:20
L374W	008	MW-101 07 10-14 WEST	07/14/10	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-7 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-001 Work Order #...: L374K1AA Matrix.....: WG
Date Sampled...: 07/14/10 08:58 Date Received..: 07/15/10
Prep Date.....: 07/24/10 Analysis Date..: 07/24/10
Prep Batch #...: 0207251
Dilution Factor: 1.43 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	14	ug/L
Acrolein	ND	29	ug/L
Acrylonitrile	ND	29	ug/L
Benzene	ND	1.4	ug/L
Bromobenzene	ND	1.4	ug/L
Bromochloromethane	ND	1.4	ug/L
Bromodichloromethane	ND	1.4	ug/L
Bromoform	ND	1.4	ug/L
Bromomethane	ND	1.4	ug/L
Methyl ethyl ketone	ND	14	ug/L
n-Butylbenzene	ND	1.4	ug/L
sec-Butylbenzene	ND	1.4	ug/L
tert-Butylbenzene	ND	1.4	ug/L
Carbon disulfide	ND	1.4	ug/L
Carbon tetrachloride	ND	1.4	ug/L
Chlorobenzene	ND	1.4	ug/L
Chlorodibromomethane	ND	1.4	ug/L
Chloroethane	ND	1.4	ug/L
2-Chloroethyl vinyl ether	ND	14	ug/L
Chloroform	ND	1.4	ug/L
Chloromethane	ND	1.4	ug/L
2-Chlorotoluene	ND	1.4	ug/L
4-Chlorotoluene	ND	1.4	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.9	ug/L
1,2-Dibromoethane	ND	1.4	ug/L
Dibromomethane	ND	1.4	ug/L
1,2-Dichlorobenzene	ND	1.4	ug/L
1,3-Dichlorobenzene	ND	1.4	ug/L
1,4-Dichlorobenzene	ND	1.4	ug/L
trans-1,4-Dichloro-2-butene	ND	1.4	ug/L
Dichlorodifluoromethane	ND	1.4	ug/L
1,1-Dichloroethane	6.8	1.4	ug/L
1,2-Dichloroethane	ND	1.4	ug/L
cis-1,2-Dichloroethene	51	1.4	ug/L
trans-1,2-Dichloroethene	ND	1.4	ug/L
1,1-Dichloroethene	ND	1.4	ug/L
Dichlorofluoromethane	ND	2.9	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-7 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-001 Work Order #...: L374K1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.4	ug/L
1,3-Dichloropropane	ND	1.4	ug/L
2,2-Dichloropropane	ND	1.4	ug/L
cis-1,3-Dichloropropene	ND	1.4	ug/L
trans-1,3-Dichloropropene	ND	1.4	ug/L
1,1-Dichloropropene	ND	1.4	ug/L
Ethylbenzene	ND	1.4	ug/L
Diethyl ether	ND	2.9	ug/L
Ethyl methacrylate	ND	1.4	ug/L
Hexachlorobutadiene	ND	1.4	ug/L
2-Hexanone	ND	14	ug/L
Iodomethane	ND	1.4	ug/L
Isopropylbenzene	ND	1.4	ug/L
p-Isopropyltoluene	ND	1.4	ug/L
Methylene chloride	ND	1.4	ug/L
Methyl methacrylate	ND	2.9	ug/L
4-Methyl-2-pentanone (MIBK)	ND	14	ug/L
Methyl tert-butyl ether (MTBE)	ND	7.2	ug/L
Naphthalene	ND	1.4	ug/L
n-Propylbenzene	ND	1.4	ug/L
Styrene	ND	1.4	ug/L
1,1,1,2-Tetrachloroethane	ND	1.4	ug/L
1,1,2,2-Tetrachloroethane	ND	1.4	ug/L
Tetrachloroethene	ND	1.4	ug/L
Tetrahydrofuran	ND	7.2	ug/L
Toluene	ND	1.4	ug/L
1,2,3-Trichlorobenzene	ND	1.4	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.4	ug/L
1,2,4-Trimethylbenzene	ND	1.4	ug/L
1,3,5-Trimethylbenzene	ND	1.4	ug/L
Vinyl acetate	ND	2.9	ug/L
Vinyl chloride	33	1.4	ug/L
m-Xylene & p-Xylene	ND	2.9	ug/L
o-Xylene	ND	1.4	ug/L
Cyclohexanone	ND	29	ug/L
Trichlorofluoromethane	ND	1.4	ug/L
Trichloroethene	ND	1.4	ug/L
1,2,4-Trichloro-benzene	ND	1.4	ug/L
1,1,1-Trichloroethane	ND	1.4	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-7 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-001 Work Order #...: L374K1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	1.4	ug/L
1,2,3-Trichloropropane	ND	1.4	ug/L
1-Chlorohexane	ND	1.4	ug/L
n-Heptane	ND	1.4	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	116	(73 - 122)
1,2-Dichloroethane-d4	119	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-AS 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-002 Work Order #...: L374N1AA Matrix.....: WG
Date Sampled...: 07/14/10 09:25 Date Received..: 07/15/10
Prep Date.....: 07/24/10 Analysis Date..: 07/24/10
Prep Batch #...: 0207251
Dilution Factor: 3.33 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	33	ug/L
Acrolein	ND	67	ug/L
Acrylonitrile	ND	67	ug/L
Benzene	ND	3.3	ug/L
Bromobenzene	ND	3.3	ug/L
Bromochloromethane	ND	3.3	ug/L
Bromodichloromethane	ND	3.3	ug/L
Bromoform	ND	3.3	ug/L
Bromomethane	ND	3.3	ug/L
Methyl ethyl ketone	ND	33	ug/L
n-Butylbenzene	ND	3.3	ug/L
sec-Butylbenzene	ND	3.3	ug/L
tert-Butylbenzene	ND	3.3	ug/L
Carbon disulfide	ND	3.3	ug/L
Carbon tetrachloride	ND	3.3	ug/L
Chlorobenzene	ND	3.3	ug/L
Chlorodibromomethane	ND	3.3	ug/L
Chloroethane	ND	3.3	ug/L
2-Chloroethyl vinyl ether	ND	33	ug/L
Chloroform	ND	3.3	ug/L
Chloromethane	ND	3.3	ug/L
2-Chlorotoluene	ND	3.3	ug/L
4-Chlorotoluene	ND	3.3	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	6.7	ug/L
1,2-Dibromoethane	ND	3.3	ug/L
Dibromomethane	ND	3.3	ug/L
1,2-Dichlorobenzene	ND	3.3	ug/L
1,3-Dichlorobenzene	ND	3.3	ug/L
1,4-Dichlorobenzene	ND	3.3	ug/L
trans-1,4-Dichloro-2-butene	ND	3.3	ug/L
Dichlorodifluoromethane	ND	3.3	ug/L
1,1-Dichloroethane	6.2	3.3	ug/L
1,2-Dichloroethane	ND	3.3	ug/L
cis-1,2-Dichloroethene	74	3.3	ug/L
trans-1,2-Dichloroethene	ND	3.3	ug/L
1,1-Dichloroethene	ND	3.3	ug/L
Dichlorofluoromethane	ND	6.7	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-AS 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-002 Work Order #...: L374N1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	3.3	ug/L
1,3-Dichloropropane	ND	3.3	ug/L
2,2-Dichloropropane	ND	3.3	ug/L
cis-1,3-Dichloropropene	ND	3.3	ug/L
trans-1,3-Dichloropropene	ND	3.3	ug/L
1,1-Dichloropropene	ND	3.3	ug/L
Ethylbenzene	ND	3.3	ug/L
Diethyl ether	ND	6.7	ug/L
Ethyl methacrylate	ND	3.3	ug/L
Hexachlorobutadiene	ND	3.3	ug/L
2-Hexanone	ND	33	ug/L
Iodomethane	ND	3.3	ug/L
Isopropylbenzene	ND	3.3	ug/L
p-Isopropyltoluene	ND	3.3	ug/L
Methylene chloride	ND	3.3	ug/L
Methyl methacrylate	ND	6.7	ug/L
4-Methyl-2-pentanone (MIBK)	ND	33	ug/L
Methyl tert-butyl ether (MTBE)	ND	17	ug/L
Naphthalene	ND	3.3	ug/L
n-Propylbenzene	ND	3.3	ug/L
Styrene	ND	3.3	ug/L
1,1,1,2-Tetrachloroethane	ND	3.3	ug/L
1,1,2,2-Tetrachloroethane	ND	3.3	ug/L
Tetrachloroethene	ND	3.3	ug/L
Tetrahydrofuran	ND	17	ug/L
Toluene	ND	3.3	ug/L
1,2,3-Trichlorobenzene	ND	3.3	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	3.3	ug/L
1,2,4-Trimethylbenzene	ND	3.3	ug/L
1,3,5-Trimethylbenzene	ND	3.3	ug/L
Vinyl acetate	ND	6.7	ug/L
Vinyl chloride	77	3.3	ug/L
m-Xylene & p-Xylene	ND	6.7	ug/L
o-Xylene	ND	3.3	ug/L
Cyclohexanone	ND	67	ug/L
Trichlorofluoromethane	ND	3.3	ug/L
Trichloroethene	15	3.3	ug/L
1,2,4-Trichloro-benzene	ND	3.3	ug/L
1,1,1-Trichloroethane	ND	3.3	ug/L

(Continued on next page)

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Client Sample ID: MW-AS 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-002 Work Order #...: L374N1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	3.3	ug/L
1,2,3-Trichloropropane	ND	3.3	ug/L
1-Chlorohexane	ND	3.3	ug/L
n-Heptane	ND	3.3	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	115	(73 - 122)
1,2-Dichloroethane-d4	116	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-AD 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-003 Work Order #...: L374P1AA Matrix.....: WG
Date Sampled...: 07/14/10 10:10 Date Received..: 07/15/10
Prep Date.....: 07/24/10 Analysis Date..: 07/24/10
Prep Batch #...: 0207251
Dilution Factor: 10 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	100	ug/L
Acrolein	ND	200	ug/L
Acrylonitrile	ND	200	ug/L
Benzene	ND	10	ug/L
Bromobenzene	ND	10	ug/L
Bromochloromethane	ND	10	ug/L
Bromodichloromethane	ND	10	ug/L
Bromoform	ND	10	ug/L
Bromomethane	ND	10	ug/L
Methyl ethyl ketone	ND	100	ug/L
n-Butylbenzene	ND	10	ug/L
sec-Butylbenzene	ND	10	ug/L
tert-Butylbenzene	ND	10	ug/L
Carbon disulfide	ND	10	ug/L
Carbon tetrachloride	ND	10	ug/L
Chlorobenzene	ND	10	ug/L
Chlorodibromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
2-Chloroethyl vinyl ether	ND	100	ug/L
Chloroform	ND	10	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	10	ug/L
4-Chlorotoluene	ND	10	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	20	ug/L
1,2-Dibromoethane	ND	10	ug/L
Dibromomethane	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
trans-1,4-Dichloro-2-butene	ND	10	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	10	ug/L
1,2-Dichloroethane	ND	10	ug/L
cis-1,2-Dichloroethene	310	10	ug/L
trans-1,2-Dichloroethene	ND	10	ug/L
1,1-Dichloroethene	ND	10	ug/L
Dichlorofluoromethane	ND	20	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-AD 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-003 Work Order #...: L374P1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	10	ug/L
1,3-Dichloropropane	ND	10	ug/L
2,2-Dichloropropane	ND	10	ug/L
cis-1,3-Dichloropropene	ND	10	ug/L
trans-1,3-Dichloropropene	ND	10	ug/L
1,1-Dichloropropene	ND	10	ug/L
Ethylbenzene	ND	10	ug/L
Diethyl ether	ND	20	ug/L
Ethyl methacrylate	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
2-Hexanone	ND	100	ug/L
Iodomethane	ND	10	ug/L
Isopropylbenzene	ND	10	ug/L
p-Isopropyltoluene	ND	10	ug/L
Methylene chloride	ND	10	ug/L
Methyl methacrylate	ND	20	ug/L
4-Methyl-2-pentanone (MIBK)	ND	100	ug/L
Methyl tert-butyl ether (MTBE)	ND	50	ug/L
Naphthalene	ND	10	ug/L
n-Propylbenzene	ND	10	ug/L
Styrene	ND	10	ug/L
1,1,1,2-Tetrachloroethane	ND	10	ug/L
1,1,2,2-Tetrachloroethane	ND	10	ug/L
Tetrachloroethene	ND	10	ug/L
Tetrahydrofuran	ND	50	ug/L
Toluene	ND	10	ug/L
1,2,3-Trichlorobenzene	ND	10	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L
1,2,4-Trimethylbenzene	ND	10	ug/L
1,3,5-Trimethylbenzene	ND	10	ug/L
Vinyl acetate	ND	20	ug/L
Vinyl chloride	ND	10	ug/L
m-Xylene & p-Xylene	ND	20	ug/L
o-Xylene	ND	10	ug/L
Cyclohexanone	ND	200	ug/L
Trichlorofluoromethane	ND	10	ug/L
Trichloroethene	ND	10	ug/L
1,2,4-Trichloro-benzene	ND	10	ug/L
1,1,1-Trichloroethane	ND	10	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-AD 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-003 Work Order #...: L374P1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	10	ug/L
1-Chlorohexane	ND	10	ug/L
n-Heptane	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	115	(73 - 122)
1,2-Dichloroethane-d4	119	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BS 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-004 Work Order #...: L374Q1AA Matrix.....: WG
Date Sampled...: 07/14/10 10:40 Date Received..: 07/15/10
Prep Date.....: 07/24/10 Analysis Date..: 07/24/10
Prep Batch #...: 0207251
Dilution Factor: 40 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	400	ug/L
Acrolein	ND	800	ug/L
Acrylonitrile	ND	800	ug/L
Benzene	ND	40	ug/L
Bromobenzene	ND	40	ug/L
Bromochloromethane	ND	40	ug/L
Bromodichloromethane	ND	40	ug/L
Bromoform	ND	40	ug/L
Bromomethane	ND	40	ug/L
Methyl ethyl ketone	ND	400	ug/L
n-Butylbenzene	ND	40	ug/L
sec-Butylbenzene	ND	40	ug/L
tert-Butylbenzene	ND	40	ug/L
Carbon disulfide	ND	40	ug/L
Carbon tetrachloride	ND	40	ug/L
Chlorobenzene	ND	40	ug/L
Chlorodibromomethane	ND	40	ug/L
Chloroethane	ND	40	ug/L
2-Chloroethyl vinyl ether	ND	400	ug/L
Chloroform	ND	40	ug/L
Chloromethane	ND	40	ug/L
2-Chlorotoluene	ND	40	ug/L
4-Chlorotoluene	ND	40	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	80	ug/L
1,2-Dibromoethane	ND	40	ug/L
Dibromomethane	ND	40	ug/L
1,2-Dichlorobenzene	ND	40	ug/L
1,3-Dichlorobenzene	ND	40	ug/L
1,4-Dichlorobenzene	ND	40	ug/L
trans-1,4-Dichloro-2-butene	ND	40	ug/L
Dichlorodifluoromethane	ND	40	ug/L
1,1-Dichloroethane	ND	40	ug/L
1,2-Dichloroethane	ND	40	ug/L
cis-1,2-Dichloroethene	78	40	ug/L
trans-1,2-Dichloroethene	ND	40	ug/L
1,1-Dichloroethene	ND	40	ug/L
Dichlorofluoromethane	ND	80	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BS 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-004 Work Order #...: L374Q1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	40	ug/L
1,3-Dichloropropane	ND	40	ug/L
2,2-Dichloropropane	ND	40	ug/L
cis-1,3-Dichloropropene	ND	40	ug/L
trans-1,3-Dichloropropene	ND	40	ug/L
1,1-Dichloropropene	ND	40	ug/L
Ethylbenzene	ND	40	ug/L
Diethyl ether	ND	80	ug/L
Ethyl methacrylate	ND	40	ug/L
Hexachlorobutadiene	ND	40	ug/L
2-Hexanone	ND	400	ug/L
Iodomethane	ND	40	ug/L
Isopropylbenzene	ND	40	ug/L
p-Isopropyltoluene	ND	40	ug/L
Methylene chloride	ND	40	ug/L
Methyl methacrylate	ND	80	ug/L
4-Methyl-2-pentanone (MIBK)	ND	400	ug/L
Methyl tert-butyl ether (MTBE)	ND	200	ug/L
Naphthalene	ND	40	ug/L
n-Propylbenzene	ND	40	ug/L
Styrene	ND	40	ug/L
1,1,1,2-Tetrachloroethane	ND	40	ug/L
1,1,2,2-Tetrachloroethane	ND	40	ug/L
Tetrachloroethene	ND	40	ug/L
Tetrahydrofuran	ND	200	ug/L
Toluene	ND	40	ug/L
1,2,3-Trichlorobenzene	ND	40	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	40	ug/L
1,2,4-Trimethylbenzene	ND	40	ug/L
1,3,5-Trimethylbenzene	ND	40	ug/L
Vinyl acetate	ND	80	ug/L
Vinyl chloride	ND	40	ug/L
m-Xylene & p-Xylene	ND	80	ug/L
o-Xylene	ND	40	ug/L
Cyclohexanone	ND	800	ug/L
Trichlorofluoromethane	ND	40	ug/L
Trichloroethene	1400	40	ug/L
1,2,4-Trichloro-benzene	ND	40	ug/L
1,1,1-Trichloroethane	ND	40	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BS 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-004 Work Order #...: L374Q1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	40	ug/L
1,2,3-Trichloropropane	ND	40	ug/L
1-Chlorohexane	ND	40	ug/L
n-Heptane	ND	40	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(73 - 122)
1,2-Dichloroethane-d4	120	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BD 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-005 Work Order #...: L374R1AA Matrix.....: WG
Date Sampled...: 07/14/10 11:05 Date Received..: 07/15/10
Prep Date.....: 07/25/10 Analysis Date..: 07/25/10
Prep Batch #...: 0207354
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	5.6	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BD 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-005 Work Order #...: L374R1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-BD 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-005 Work Order #...: L374R1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	115	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CS 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-006 Work Order #...: L374T1AA Matrix.....: WG
Date Sampled...: 07/14/10 12:38 Date Received..: 07/15/10
Prep Date.....: 07/24/10 Analysis Date..: 07/24/10
Prep Batch #...: 0207251
Dilution Factor: 62.5 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	620	ug/L
Acrolein	ND	1200	ug/L
Acrylonitrile	ND	1200	ug/L
Benzene	ND	62	ug/L
Bromobenzene	ND	62	ug/L
Bromochloromethane	ND	62	ug/L
Bromodichloromethane	ND	62	ug/L
Bromoform	ND	62	ug/L
Bromomethane	ND	62	ug/L
Methyl ethyl ketone	ND	620	ug/L
n-Butylbenzene	ND	62	ug/L
sec-Butylbenzene	ND	62	ug/L
tert-Butylbenzene	ND	62	ug/L
Carbon disulfide	ND	62	ug/L
Carbon tetrachloride	ND	62	ug/L
Chlorobenzene	ND	62	ug/L
Chlorodibromomethane	ND	62	ug/L
Chloroethane	ND	62	ug/L
2-Chloroethyl vinyl ether	ND	620	ug/L
Chloroform	ND	62	ug/L
Chloromethane	ND	62	ug/L
2-Chlorotoluene	ND	62	ug/L
4-Chlorotoluene	ND	62	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	120	ug/L
1,2-Dibromoethane	ND	62	ug/L
Dibromomethane	ND	62	ug/L
1,2-Dichlorobenzene	ND	62	ug/L
1,3-Dichlorobenzene	ND	62	ug/L
1,4-Dichlorobenzene	ND	62	ug/L
trans-1,4-Dichloro-2-butene	ND	62	ug/L
Dichlorodifluoromethane	ND	62	ug/L
1,1-Dichloroethane	ND	62	ug/L
1,2-Dichloroethane	ND	62	ug/L
cis-1,2-Dichloroethene	130	62	ug/L
trans-1,2-Dichloroethene	ND	62	ug/L
1,1-Dichloroethene	ND	62	ug/L
Dichlorofluoromethane	ND	120	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CS 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-006 Work Order #...: L374T1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	62	ug/L
1,3-Dichloropropane	ND	62	ug/L
2,2-Dichloropropane	ND	62	ug/L
cis-1,3-Dichloropropene	ND	62	ug/L
trans-1,3-Dichloropropene	ND	62	ug/L
1,1-Dichloropropene	ND	62	ug/L
Ethylbenzene	ND	62	ug/L
Diethyl ether	ND	120	ug/L
Ethyl methacrylate	ND	62	ug/L
Hexachlorobutadiene	ND	62	ug/L
2-Hexanone	ND	620	ug/L
Iodomethane	ND	62	ug/L
Isopropylbenzene	ND	62	ug/L
p-Isopropyltoluene	ND	62	ug/L
Methylene chloride	ND	62	ug/L
Methyl methacrylate	ND	120	ug/L
4-Methyl-2-pentanone (MIBK)	ND	620	ug/L
Methyl tert-butyl ether (MTBE)	ND	310	ug/L
Naphthalene	ND	62	ug/L
n-Propylbenzene	ND	62	ug/L
Styrene	ND	62	ug/L
1,1,1,2-Tetrachloroethane	ND	62	ug/L
1,1,2,2-Tetrachloroethane	ND	62	ug/L
Tetrachloroethene	ND	62	ug/L
Tetrahydrofuran	ND	310	ug/L
Toluene	ND	62	ug/L
1,2,3-Trichlorobenzene	ND	62	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	62	ug/L
1,2,4-Trimethylbenzene	ND	62	ug/L
1,3,5-Trimethylbenzene	ND	62	ug/L
Vinyl acetate	ND	120	ug/L
Vinyl chloride	ND	62	ug/L
m-Xylene & p-Xylene	ND	120	ug/L
o-Xylene	ND	62	ug/L
Cyclohexanone	ND	1200	ug/L
Trichlorofluoromethane	ND	62	ug/L
Trichloroethene	2500	62	ug/L
1,2,4-Trichloro-benzene	ND	62	ug/L
1,1,1-Trichloroethane	ND	62	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CS 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-006 Work Order #...: L374T1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	62	ug/L
1,2,3-Trichloropropane	ND	62	ug/L
1-Chlorohexane	ND	62	ug/L
n-Heptane	ND	62	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(73 - 122)
1,2-Dichloroethane-d4	118	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CD 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-007 Work Order #...: L374V1AA Matrix.....: WG
Date Sampled...: 07/14/10 13:20 Date Received..: 07/15/10
Prep Date.....: 07/25/10 Analysis Date..: 07/25/10
Prep Batch #...: 0207354
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	1.1	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	37	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CD 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-007 Work Order #...: L374V1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Trichloroethene	2.4	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-CD 07 10

GC/MS Volatiles

Lot-Sample #...: A0G150463-007 Work Order #...: L374V1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	113	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-101 07 10-14 WEST

GC/MS Volatiles

Lot-Sample #...: A0G150463-008 Work Order #...: L374W1AA Matrix.....: WG
Date Sampled...: 07/14/10 Date Received..: 07/15/10
Prep Date.....: 07/25/10 Analysis Date..: 07/25/10
Prep Batch #...: 0207354
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Methyl ethyl ketone	ND	10	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chlorodibromomethane	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
2-Chloroethyl vinyl ether	ND	10	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	1.1	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	37	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Dichlorofluoromethane	ND	2.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-101 07 10-14 WEST

GC/MS Volatiles

Lot-Sample #...: A0G150463-008 Work Order #...: L374W1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2-Dichloropropane	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Diethyl ether	ND	2.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Iodomethane	ND	1.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Methyl methacrylate	ND	2.0	ug/L
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Tetrahydrofuran	ND	5.0	ug/L
Toluene	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
1,3,5-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Cyclohexanone	ND	20	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Trichloroethene	2.4	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L

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MACTEC Engineering and Consulting Inc

Client Sample ID: MW-101 07-10-14 WEST

GC/MS Volatiles

Lot-Sample #...: A0G150463-008 Work Order #...: L374W1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2-Trichloroethane	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1-Chlorohexane	ND	1.0	ug/L
n-Heptane	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(73 - 122)
1,2-Dichloroethane-d4	113	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4NML1AA Matrix.....: WATER
MB Lot-Sample #: A0G260000-251

Prep Date.....: 07/24/10
Analysis Date..: 07/24/10 Prep Batch #...: 0207251
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
Acrolein	ND	20	ug/L	SW846 8260B
Acrylonitrile	ND	20	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4NML1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
2-Chloroethyl vinyl ether	ND	10	ug/L	SW846 8260B
1-Chlorohexane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexanone	ND	20	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Diethyl ether	ND	2.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
n-Heptane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
Iodomethane	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl methacrylate	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4NML1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	115	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4N3H1AA Matrix.....: WATER
MB Lot-Sample #: A0G260000-354

Prep Date.....: 07/25/10
Analysis Date..: 07/25/10 Prep Batch #...: 0207354
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Methyl ethyl ketone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4N3H1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/L	SW846 8260B
Acrolein	ND	20	ug/L	SW846 8260B
Acrylonitrile	ND	20	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
2-Chloroethyl vinyl ether	ND	10	ug/L	SW846 8260B
1-Chlorohexane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Cyclohexanone	ND	20	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L	SW846 8260B
Dichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Diethyl ether	ND	2.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
n-Heptane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
Iodomethane	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methyl methacrylate	ND	2.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	5.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4N3H1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	116	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4NML1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-251 L4NML1AD-LCSD
Prep Date.....: 07/24/10 Analysis Date..: 07/24/10
Prep Batch #...: 0207251
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloromethane	84	(48 - 123)			SW846 8260B
	85	(48 - 123)	1.6	(0-30)	SW846 8260B
Bromomethane	94	(64 - 129)			SW846 8260B
	93	(64 - 129)	1.9	(0-30)	SW846 8260B
Vinyl chloride	81	(61 - 120)			SW846 8260B
	79	(61 - 120)	1.8	(0-30)	SW846 8260B
Chloroethane	88	(66 - 126)			SW846 8260B
	89	(66 - 126)	0.61	(0-30)	SW846 8260B
Methylene chloride	95	(78 - 118)			SW846 8260B
	95	(78 - 118)	0.19	(0-30)	SW846 8260B
Acetone	81	(22 - 200)			SW846 8260B
	82	(22 - 200)	1.5	(0-95)	SW846 8260B
Carbon disulfide	98	(73 - 139)			SW846 8260B
	98	(73 - 139)	0.69	(0-30)	SW846 8260B
1,1-Dichloroethene	98	(63 - 130)			SW846 8260B
	97	(63 - 130)	1.3	(0-20)	SW846 8260B
1,1-Dichloroethane	97	(86 - 123)			SW846 8260B
	98	(86 - 123)	1.6	(0-30)	SW846 8260B
Chloroform	103	(84 - 128)			SW846 8260B
	101	(84 - 128)	1.8	(0-30)	SW846 8260B
1,2-Dichloroethane	110	(79 - 136)			SW846 8260B
	108	(79 - 136)	1.3	(0-30)	SW846 8260B
Methyl ethyl ketone	90	(28 - 237)			SW846 8260B
	92	(28 - 237)	1.6	(0-65)	SW846 8260B
1,1,1-Trichloroethane	108	(78 - 140)			SW846 8260B
	105	(78 - 140)	3.0	(0-30)	SW846 8260B
Carbon tetrachloride	117	(75 - 149)			SW846 8260B
	115	(75 - 149)	1.7	(0-30)	SW846 8260B
Bromodichloromethane	106	(87 - 130)			SW846 8260B
	102	(87 - 130)	3.5	(0-30)	SW846 8260B
1,2-Dichloropropane	91	(82 - 115)			SW846 8260B
	90	(82 - 115)	1.2	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	89	(84 - 130)			SW846 8260B
	89	(84 - 130)	0.34	(0-30)	SW846 8260B
Trichloroethene	105	(75 - 122)			SW846 8260B
	102	(75 - 122)	3.0	(0-20)	SW846 8260B
Chlorodibromomethane	103	(81 - 138)			SW846 8260B
	110	(81 - 138)	6.5	(0-30)	SW846 8260B
1,1,2-Trichloroethane	92	(83 - 122)			SW846 8260B
	95	(83 - 122)	3.9	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4NML1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-251 L4NML1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	92	(80 - 116)			SW846 8260B
	90	(80 - 116)	2.3	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	93	(84 - 130)			SW846 8260B
	96	(84 - 130)	3.3	(0-30)	SW846 8260B
Bromoform	102	(76 - 150)			SW846 8260B
	110	(76 - 150)	7.6	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	104	(78 - 141)			SW846 8260B
	107	(78 - 141)	2.8	(0-32)	SW846 8260B
2-Hexanone	103	(35 - 200)			SW846 8260B
	111	(35 - 200)	7.6	(0-52)	SW846 8260B
Tetrachloroethene	103	(88 - 113)			SW846 8260B
	108	(88 - 113)	4.6	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	92	(85 - 118)			SW846 8260B
	95	(85 - 118)	3.5	(0-30)	SW846 8260B
Toluene	92	(74 - 119)			SW846 8260B
	94	(74 - 119)	2.0	(0-20)	SW846 8260B
Chlorobenzene	93	(76 - 117)			SW846 8260B
	94	(76 - 117)	1.2	(0-20)	SW846 8260B
Ethylbenzene	96	(86 - 116)			SW846 8260B
	99	(86 - 116)	3.6	(0-30)	SW846 8260B
Styrene	94	(85 - 117)			SW846 8260B
	95	(85 - 117)	1.0	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	94	(85 - 113)			SW846 8260B
	97	(85 - 113)	3.4	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	99	(80 - 120)			SW846 8260B
	98	(80 - 120)	0.67	(0-30)	SW846 8260B
Dichlorodifluoromethane	89	(70 - 130)			SW846 8260B
	87	(70 - 130)	2.2	(0-30)	SW846 8260B
Trichlorofluoromethane	104	(70 - 130)			SW846 8260B
	100	(70 - 130)	3.7	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	122	(70 - 130)			SW846 8260B
	123	(70 - 130)	0.63	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	96	(70 - 130)			SW846 8260B
	98	(70 - 130)	2.7	(0-30)	SW846 8260B
1,2-Dibromoethane	98	(70 - 130)			SW846 8260B
	104	(70 - 130)	6.4	(0-30)	SW846 8260B
Isopropylbenzene	93	(70 - 130)			SW846 8260B
	93	(70 - 130)	0.50	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4NML1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-251 L4NML1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	96	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.0	(0-30)	SW846 8260B
1,4-Dichlorobenzene	97	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.9	(0-30)	SW846 8260B
1,2-Dichlorobenzene	94	(70 - 130)			SW846 8260B
	92	(70 - 130)	2.6	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	93	(70 - 130)			SW846 8260B
	98	(70 - 130)	5.1	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	95	(70 - 130)			SW846 8260B
	93	(70 - 130)	2.3	(0-30)	SW846 8260B
o-Xylene	96	(70 - 130)			SW846 8260B
	96	(70 - 130)	0.15	(0-30)	SW846 8260B
m-Xylene & p-Xylene	95	(70 - 130)			SW846 8260B
	97	(70 - 130)	2.3	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	98	(70 - 130)			SW846 8260B
	97	(70 - 130)	1.0	(0-30)	SW846 8260B
Acrolein	94	(50 - 130)			SW846 8260B
	97	(50 - 130)	2.4	(0-30)	SW846 8260B
Vinyl acetate	114	(70 - 130)			SW846 8260B
	113	(70 - 130)	1.3	(0-30)	SW846 8260B
Acrylonitrile	94	(50 - 130)			SW846 8260B
	96	(50 - 130)	2.7	(0-30)	SW846 8260B
Bromobenzene	103	(70 - 130)			SW846 8260B
	104	(70 - 130)	1.2	(0-30)	SW846 8260B
Bromochloromethane	106	(70 - 130)			SW846 8260B
	105	(70 - 130)	0.37	(0-30)	SW846 8260B
n-Butylbenzene	93	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.4	(0-30)	SW846 8260B
sec-Butylbenzene	95	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.65	(0-30)	SW846 8260B
tert-Butylbenzene	96	(70 - 130)			SW846 8260B
	88	(70 - 130)	7.8	(0-30)	SW846 8260B
2-Chlorotoluene	97	(70 - 130)			SW846 8260B
	93	(70 - 130)	3.2	(0-30)	SW846 8260B
4-Chlorotoluene	96	(70 - 130)			SW846 8260B
	94	(70 - 130)	2.5	(0-30)	SW846 8260B
Dibromomethane	102	(70 - 130)			SW846 8260B
	107	(70 - 130)	5.2	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4NML1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-251 L4NML1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	96	(70 - 130)			SW846 8260B
	98	(70 - 130)	2.4	(0-30)	SW846 8260B
2,2-Dichloropropane	103	(70 - 130)			SW846 8260B
	98	(70 - 130)	4.6	(0-30)	SW846 8260B
1,1-Dichloropropene	96	(70 - 130)			SW846 8260B
	97	(70 - 130)	1.4	(0-30)	SW846 8260B
Hexachlorobutadiene	79	(70 - 130)			SW846 8260B
	83	(70 - 130)	4.8	(0-30)	SW846 8260B
Iodomethane	118	(70 - 130)			SW846 8260B
	119	(70 - 130)	0.14	(0-30)	SW846 8260B
p-Isopropyltoluene	100	(70 - 130)			SW846 8260B
	97	(70 - 130)	2.5	(0-30)	SW846 8260B
Naphthalene	82	(70 - 130)			SW846 8260B
	81	(70 - 130)	0.49	(0-30)	SW846 8260B
n-Propylbenzene	100	(70 - 130)			SW846 8260B
	101	(70 - 130)	0.45	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	99	(70 - 130)			SW846 8260B
	101	(70 - 130)	2.2	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	88	(70 - 130)			SW846 8260B
	88	(70 - 130)	0.29	(0-30)	SW846 8260B
1,2,3-Trichloropropane	101	(70 - 130)			SW846 8260B
	98	(70 - 130)	3.2	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	98	(70 - 130)			SW846 8260B
	98	(70 - 130)	0.58	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	96	(70 - 130)			SW846 8260B
	96	(70 - 130)	0.46	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
	107	(73 - 122)
1,2-Dichloroethane-d4	113	(61 - 128)
	119	(61 - 128)
Toluene-d8	101	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)
	103	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4N3H1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-354 L4N3H1AD-LCSD
Prep Date.....: 07/25/10 Analysis Date..: 07/25/10
Prep Batch #...: 0207354
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1,2-Trichloro-1,2,2-trifluoroethane	111	(70 - 130)			SW846 8260B
	111	(70 - 130)	0.14	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	95	(70 - 130)			SW846 8260B
	100	(70 - 130)	4.6	(0-30)	SW846 8260B
1,2-Dibromoethane	93	(70 - 130)			SW846 8260B
	100	(70 - 130)	7.1	(0-30)	SW846 8260B
Isopropylbenzene	92	(70 - 130)			SW846 8260B
	97	(70 - 130)	4.7	(0-30)	SW846 8260B
1,3-Dichlorobenzene	95	(70 - 130)			SW846 8260B
	95	(70 - 130)	0.0	(0-30)	SW846 8260B
1,4-Dichlorobenzene	97	(70 - 130)			SW846 8260B
	94	(70 - 130)	2.9	(0-30)	SW846 8260B
1,2-Dichlorobenzene	94	(70 - 130)			SW846 8260B
	96	(70 - 130)	2.1	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	109	(70 - 130)			SW846 8260B
	110	(70 - 130)	0.68	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	93	(70 - 130)			SW846 8260B
	91	(70 - 130)	2.6	(0-30)	SW846 8260B
o-Xylene	95	(70 - 130)			SW846 8260B
	99	(70 - 130)	4.2	(0-30)	SW846 8260B
m-Xylene & p-Xylene	94	(70 - 130)			SW846 8260B
	99	(70 - 130)	5.2	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	92	(70 - 130)			SW846 8260B
	99	(70 - 130)	8.0	(0-30)	SW846 8260B
Acrolein	78	(50 - 130)			SW846 8260B
	98	(50 - 130)	22	(0-30)	SW846 8260B
Vinyl acetate	85	(70 - 130)			SW846 8260B
	77	(70 - 130)	10	(0-30)	SW846 8260B
Acrylonitrile	93	(50 - 130)			SW846 8260B
	107	(50 - 130)	14	(0-30)	SW846 8260B
Bromobenzene	102	(70 - 130)			SW846 8260B
	100	(70 - 130)	1.9	(0-30)	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4N3H1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-354 L4N3H1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromochloromethane	101	(70 - 130)			SW846 8260B
	113	(70 - 130)	11	(0-30)	SW846 8260B
n-Butylbenzene	86	(70 - 130)			SW846 8260B
	89	(70 - 130)	3.1	(0-30)	SW846 8260B
sec-Butylbenzene	91	(70 - 130)			SW846 8260B
	93	(70 - 130)	1.8	(0-30)	SW846 8260B
tert-Butylbenzene	88	(70 - 130)			SW846 8260B
	93	(70 - 130)	5.6	(0-30)	SW846 8260B
2-Chlorotoluene	96	(70 - 130)			SW846 8260B
	95	(70 - 130)	1.2	(0-30)	SW846 8260B
4-Chlorotoluene	93	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.20	(0-30)	SW846 8260B
Dibromomethane	101	(70 - 130)			SW846 8260B
	107	(70 - 130)	5.6	(0-30)	SW846 8260B
1,3-Dichloropropane	95	(70 - 130)			SW846 8260B
	97	(70 - 130)	1.7	(0-30)	SW846 8260B
2,2-Dichloropropane	86	(70 - 130)			SW846 8260B
	92	(70 - 130)	7.6	(0-30)	SW846 8260B
1,1-Dichloropropene	95	(70 - 130)			SW846 8260B
	103	(70 - 130)	8.2	(0-30)	SW846 8260B
Hexachlorobutadiene	77	(70 - 130)			SW846 8260B
	80	(70 - 130)	3.7	(0-30)	SW846 8260B
Iodomethane	118	(70 - 130)			SW846 8260B
	122	(70 - 130)	3.4	(0-30)	SW846 8260B
p-Isopropyltoluene	98	(70 - 130)			SW846 8260B
	97	(70 - 130)	0.39	(0-30)	SW846 8260B
Naphthalene	78	(70 - 130)			SW846 8260B
	80	(70 - 130)	2.7	(0-30)	SW846 8260B
n-Propylbenzene	99	(70 - 130)			SW846 8260B
	99	(70 - 130)	0.59	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	97	(70 - 130)			SW846 8260B
	103	(70 - 130)	5.9	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	86	(70 - 130)			SW846 8260B
	84	(70 - 130)	3.3	(0-30)	SW846 8260B
1,2,3-Trichloropropane	103	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.33	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	95	(70 - 130)			SW846 8260B
	99	(70 - 130)	4.2	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	94	(70 - 130)			SW846 8260B
	94	(70 - 130)	0.53	(0-30)	SW846 8260B
Chloromethane	83	(48 - 123)			SW846 8260B
	89	(48 - 123)	7.5	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4N3H1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-354 L4N3H1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromomethane	79	(64 - 129)			SW846 8260B
	101	(64 - 129)	24	(0-30)	SW846 8260B
Vinyl chloride	82	(61 - 120)			SW846 8260B
	81	(61 - 120)	0.69	(0-30)	SW846 8260B
Chloroethane	82	(66 - 126)			SW846 8260B
	90	(66 - 126)	9.6	(0-30)	SW846 8260B
Methylene chloride	93	(78 - 118)			SW846 8260B
	99	(78 - 118)	5.5	(0-30)	SW846 8260B
Acetone	87	(22 - 200)			SW846 8260B
	107	(22 - 200)	21	(0-95)	SW846 8260B
Carbon disulfide	94	(73 - 139)			SW846 8260B
	98	(73 - 139)	4.6	(0-30)	SW846 8260B
1,1-Dichloroethene	97	(63 - 130)			SW846 8260B
	101	(63 - 130)	3.8	(0-20)	SW846 8260B
1,1-Dichloroethane	94	(86 - 123)			SW846 8260B
	100	(86 - 123)	6.2	(0-30)	SW846 8260B
Chloroform	97	(84 - 128)			SW846 8260B
	106	(84 - 128)	8.8	(0-30)	SW846 8260B
1,2-Dichloroethane	106	(79 - 136)			SW846 8260B
	112	(79 - 136)	5.6	(0-30)	SW846 8260B
Methyl ethyl ketone	85	(28 - 237)			SW846 8260B
	98	(28 - 237)	15	(0-65)	SW846 8260B
1,1,1-Trichloroethane	100	(78 - 140)			SW846 8260B
	108	(78 - 140)	8.3	(0-30)	SW846 8260B
Carbon tetrachloride	109	(75 - 149)			SW846 8260B
	117	(75 - 149)	7.0	(0-30)	SW846 8260B
Bromodichloromethane	101	(87 - 130)			SW846 8260B
	106	(87 - 130)	5.6	(0-30)	SW846 8260B
1,2-Dichloropropane	89	(82 - 115)			SW846 8260B
	93	(82 - 115)	4.7	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	85	(84 - 130)			SW846 8260B
	88	(84 - 130)	3.1	(0-30)	SW846 8260B
Trichloroethene	104	(75 - 122)			SW846 8260B
	109	(75 - 122)	4.7	(0-20)	SW846 8260B
Chlorodibromomethane	108	(81 - 138)			SW846 8260B
	111	(81 - 138)	2.5	(0-30)	SW846 8260B
1,1,2-Trichloroethane	89	(83 - 122)			SW846 8260B
	95	(83 - 122)	6.0	(0-30)	SW846 8260B
Benzene	88	(80 - 116)			SW846 8260B
	95	(80 - 116)	7.8	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	91	(84 - 130)			SW846 8260B
	93	(84 - 130)	2.1	(0-30)	SW846 8260B

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4N3H1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A0G260000-354 L4N3H1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Bromoform	100	(76 - 150)			SW846 8260B
	114	(76 - 150)	13	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIBK	98	(78 - 141)			SW846 8260B
	103	(78 - 141)	4.6	(0-32)	SW846 8260B
2-Hexanone	98	(35 - 200)			SW846 8260B
	106	(35 - 200)	7.6	(0-52)	SW846 8260B
Tetrachloroethene	101	(88 - 113)			SW846 8260B
	104	(88 - 113)	3.6	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	86	(85 - 118)			SW846 8260B
	85	(85 - 118)	1.1	(0-30)	SW846 8260B
Toluene	90	(74 - 119)			SW846 8260B
	93	(74 - 119)	2.9	(0-20)	SW846 8260B
Chlorobenzene	94	(76 - 117)			SW846 8260B
	99	(76 - 117)	5.4	(0-20)	SW846 8260B
Ethylbenzene	96	(86 - 116)			SW846 8260B
	102	(86 - 116)	6.1	(0-30)	SW846 8260B
Styrene	94	(85 - 117)			SW846 8260B
	101	(85 - 117)	6.9	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	92	(85 - 113)			SW846 8260B
	103	(85 - 113)	11	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	97	(80 - 120)			SW846 8260B
	102	(80 - 120)	5.0	(0-30)	SW846 8260B
Dichlorodifluoromethane	78	(70 - 130)			SW846 8260B
	75	(70 - 130)	4.0	(0-30)	SW846 8260B
Trichlorofluoromethane	95	(70 - 130)			SW846 8260B
	104	(70 - 130)	8.8	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(73 - 122)
	111	(73 - 122)
1,2-Dichloroethane-d4	117	(61 - 128)
	116	(61 - 128)
Toluene-d8	103	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	103	(74 - 116)
	104	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4GVQ1AC-MS Matrix.....: WATER
MS Lot-Sample #: A0G210500-002 L4GVQ1AD-MSD
Date Sampled...: 07/20/10 15:55 Date Received..: 07/21/10
Prep Date.....: 07/24/10 Analysis Date..: 07/24/10
Prep Batch #...: 0207251
Dilution Factor: 25

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	96	(62 - 130)			SW846 8260B
	95	(62 - 130)	1.2	(0-20)	SW846 8260B
Chloromethane	85	(40 - 137)			SW846 8260B
	90	(40 - 137)	5.7	(0-39)	SW846 8260B
Bromomethane	99	(55 - 145)			SW846 8260B
	83	(55 - 145)	18	(0-30)	SW846 8260B
Vinyl chloride	82 a	(88 - 126)			SW846 8260B
	83 a	(88 - 126)	1.1	(0-30)	SW846 8260B
Chloroethane	89	(59 - 142)			SW846 8260B
	90	(59 - 142)	1.6	(0-30)	SW846 8260B
Methylene chloride	99	(82 - 115)			SW846 8260B
	97	(82 - 115)	2.0	(0-30)	SW846 8260B
Acetone	84	(45 - 128)			SW846 8260B
	88	(45 - 128)	4.1	(0-30)	SW846 8260B
Carbon disulfide	98	(69 - 138)			SW846 8260B
	96	(69 - 138)	2.1	(0-41)	SW846 8260B
1,1-Dichloroethane	99	(88 - 127)			SW846 8260B
	97	(88 - 127)	2.1	(0-30)	SW846 8260B
Chloroform	104	(83 - 141)			SW846 8260B
	101	(83 - 141)	2.5	(0-30)	SW846 8260B
1,2-Dichloroethane	111	(71 - 160)			SW846 8260B
	112	(71 - 160)	0.98	(0-30)	SW846 8260B
Methyl ethyl ketone	88	(71 - 123)			SW846 8260B
	88	(71 - 123)	0.07	(0-30)	SW846 8260B
1,1,1-Trichloroethane	105	(71 - 162)			SW846 8260B
	105	(71 - 162)	0.44	(0-30)	SW846 8260B
Carbon tetrachloride	120	(63 - 176)			SW846 8260B
	108	(63 - 176)	2.8	(0-30)	SW846 8260B
Bromodichloromethane	105	(80 - 146)			SW846 8260B
	103	(80 - 146)	2.6	(0-30)	SW846 8260B
1,2-Dichloropropane	91	(87 - 114)			SW846 8260B
	88	(87 - 114)	3.2	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	84	(82 - 130)			SW846 8260B
	86	(82 - 130)	2.4	(0-30)	SW846 8260B
Trichloroethene	98	(62 - 130)			SW846 8260B
	98	(62 - 130)	0.36	(0-20)	SW846 8260B
Chlorodibromomethane	110	(71 - 158)			SW846 8260B
	105	(71 - 158)	4.8	(0-30)	SW846 8260B
1,1,2-Trichloroethane	93	(86 - 129)			SW846 8260B
	92	(86 - 129)	0.49	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4GVQ1AC-MS Matrix.....: WATER
MS Lot-Sample #: A0G210500-002 L4GVQ1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	93	(78 - 118)			SW846 8260B
	90	(78 - 118)	2.9	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	94	(73 - 147)			SW846 8260B
	93	(73 - 147)	1.3	(0-30)	SW846 8260B
Bromoform	105	(58 - 176)			SW846 8260B
	101	(58 - 176)	4.2	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	97	(82 - 135)			SW846 8260B
	100	(82 - 135)	2.6	(0-30)	SW846 8260B
2-Hexanone	99	(81 - 128)			SW846 8260B
	99	(81 - 128)	0.54	(0-30)	SW846 8260B
Tetrachloroethene	103	(85 - 121)			SW846 8260B
	97	(85 - 121)	5.3	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	95	(88 - 116)			SW846 8260B
	92	(88 - 116)	3.6	(0-30)	SW846 8260B
Toluene	94	(70 - 119)			SW846 8260B
	90	(70 - 119)	3.5	(0-20)	SW846 8260B
Chlorobenzene	98	(76 - 117)			SW846 8260B
	91	(76 - 117)	7.3	(0-20)	SW846 8260B
Ethylbenzene	100	(86 - 132)			SW846 8260B
	92	(86 - 132)	8.4	(0-30)	SW846 8260B
Styrene	97	(83 - 120)			SW846 8260B
	92	(83 - 120)	5.5	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	99	(87 - 114)			SW846 8260B
	97	(87 - 114)	1.8	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	100	(85 - 116)			SW846 8260B
	96	(85 - 116)	4.0	(0-30)	SW846 8260B
Dichlorodifluoromethane	78	(70 - 130)			SW846 8260B
	84	(70 - 130)	7.0	(0-30)	SW846 8260B
Trichlorofluoromethane	103	(70 - 130)			SW846 8260B
	101	(70 - 130)	1.9	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	108	(70 - 130)			SW846 8260B
	118	(70 - 130)	9.4	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	95	(70 - 130)			SW846 8260B
	98	(70 - 130)	2.5	(0-30)	SW846 8260B
1,2-Dibromoethane	99	(70 - 130)			SW846 8260B
	99	(70 - 130)	0.16	(0-30)	SW846 8260B
Isopropylbenzene	94	(70 - 130)			SW846 8260B
	87	(70 - 130)	7.9	(0-30)	SW846 8260B

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4GVQ1AC-MS Matrix.....: WATER
MS Lot-Sample #: A0G210500-002 L4GVQ1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	97	(70 - 130)			SW846 8260B
	91	(70 - 130)	6.7	(0-30)	SW846 8260B
1,4-Dichlorobenzene	98	(70 - 130)			SW846 8260B
	91	(70 - 130)	7.2	(0-30)	SW846 8260B
1,2-Dichlorobenzene	98	(70 - 130)			SW846 8260B
	90	(70 - 130)	9.1	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	103	(70 - 130)			SW846 8260B
	110	(70 - 130)	6.7	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	98	(70 - 130)			SW846 8260B
	94	(70 - 130)	4.1	(0-30)	SW846 8260B
o-Xylene	99	(70 - 130)			SW846 8260B
	89	(70 - 130)	10	(0-30)	SW846 8260B
m-Xylene & p-Xylene	98	(70 - 130)			SW846 8260B
	90	(70 - 130)	8.9	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	0.0 a	(70 - 130)			SW846 8260B
	0.0 a	(70 - 130)	0.0	(0-30)	SW846 8260B
Acrolein	94	(50 - 130)			SW846 8260B
	97	(50 - 130)	3.8	(0-30)	SW846 8260B
Acrylonitrile	93	(50 - 130)			SW846 8260B
	92	(50 - 130)	1.2	(0-30)	SW846 8260B
Vinyl acetate	107	(70 - 130)			SW846 8260B
	110	(70 - 130)	2.8	(0-30)	SW846 8260B
Bromobenzene	105	(70 - 130)			SW846 8260B
	97	(70 - 130)	8.3	(0-30)	SW846 8260B
Bromochloromethane	111	(70 - 130)			SW846 8260B
	109	(70 - 130)	1.7	(0-30)	SW846 8260B
n-Butylbenzene	88	(70 - 130)			SW846 8260B
	82	(70 - 130)	7.0	(0-30)	SW846 8260B
sec-Butylbenzene	97	(70 - 130)			SW846 8260B
	86	(70 - 130)	12	(0-30)	SW846 8260B
tert-Butylbenzene	96	(70 - 130)			SW846 8260B
	85	(70 - 130)	12	(0-30)	SW846 8260B
2-Chlorotoluene	100	(70 - 130)			SW846 8260B
	90	(70 - 130)	10	(0-30)	SW846 8260B
4-Chlorotoluene	94	(70 - 130)			SW846 8260B
	91	(70 - 130)	4.0	(0-30)	SW846 8260B
Dibromomethane	108	(70 - 130)			SW846 8260B
	107	(70 - 130)	0.80	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4GVQ1AC-MS Matrix.....: WATER
MS Lot-Sample #: A0G210500-002 L4GVQ1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	99	(70 - 130)			SW846 8260B
	94	(70 - 130)	4.3	(0-30)	SW846 8260B
2,2-Dichloropropane	91	(70 - 130)			SW846 8260B
	87	(70 - 130)	4.3	(0-30)	SW846 8260B
1,1-Dichloropropene	97	(70 - 130)			SW846 8260B
	93	(70 - 130)	4.6	(0-30)	SW846 8260B
Hexachlorobutadiene	82	(70 - 130)			SW846 8260B
	73	(70 - 130)	12	(0-30)	SW846 8260B
Iodomethane	122	(70 - 130)			SW846 8260B
	121	(70 - 130)	0.72	(0-30)	SW846 8260B
p-Isopropyltoluene	99	(70 - 130)			SW846 8260B
	90	(70 - 130)	9.5	(0-30)	SW846 8260B
Naphthalene	83	(70 - 130)			SW846 8260B
	81	(70 - 130)	2.7	(0-30)	SW846 8260B
n-Propylbenzene	104	(70 - 130)			SW846 8260B
	91	(70 - 130)	13	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	106	(70 - 130)			SW846 8260B
	100	(70 - 130)	5.2	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	91	(70 - 130)			SW846 8260B
	87	(70 - 130)	4.9	(0-30)	SW846 8260B
1,2,3-Trichloropropane	104	(70 - 130)			SW846 8260B
	98	(70 - 130)	6.5	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	99	(70 - 130)			SW846 8260B
	91	(70 - 130)	7.9	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	98	(70 - 130)			SW846 8260B
	89	(70 - 130)	10	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
	108	(73 - 122)
1,2-Dichloroethane-d4	111	(61 - 128)
	112	(61 - 128)
Toluene-d8	103	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4EG11AC-MS Matrix.....: WATER
MS Lot-Sample #: A0G200425-101 L4EG11AD-MSD
Date Sampled...: 07/13/10 15:25 Date Received..: 07/19/10
Prep Date.....: 07/25/10 Analysis Date..: 07/25/10
Prep Batch #...: 0207354
Dilution Factor: 166.67

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	91	(62 - 130)			SW846 8260B
	92	(62 - 130)	1.3	(0-20)	SW846 8260B
Chloromethane	84	(40 - 137)			SW846 8260B
	86	(40 - 137)	2.1	(0-39)	SW846 8260B
Bromomethane	95	(55 - 145)			SW846 8260B
	74	(55 - 145)	24	(0-30)	SW846 8260B
Vinyl chloride	74 a	(88 - 126)			SW846 8260B
	79 a	(88 - 126)	6.7	(0-30)	SW846 8260B
Chloroethane	90	(59 - 142)			SW846 8260B
	81	(59 - 142)	11	(0-30)	SW846 8260B
Methylene chloride	95	(82 - 115)			SW846 8260B
	92	(82 - 115)	3.2	(0-30)	SW846 8260B
Acetone	92	(45 - 128)			SW846 8260B
	105	(45 - 128)	13	(0-30)	SW846 8260B
Carbon disulfide	88	(69 - 138)			SW846 8260B
	88	(69 - 138)	0.71	(0-41)	SW846 8260B
1,1-Dichloroethane	92	(88 - 127)			SW846 8260B
	94	(88 - 127)	2.1	(0-30)	SW846 8260B
Chloroform	98	(83 - 141)			SW846 8260B
	100	(83 - 141)	1.7	(0-30)	SW846 8260B
1,2-Dichloroethane	110	(71 - 160)			SW846 8260B
	109	(71 - 160)	0.92	(0-30)	SW846 8260B
Methyl ethyl ketone	88	(71 - 123)			SW846 8260B
	92	(71 - 123)	3.9	(0-30)	SW846 8260B
1,1,1-Trichloroethane	101	(71 - 162)			SW846 8260B
	101	(71 - 162)	0.01	(0-30)	SW846 8260B
Carbon tetrachloride	103	(63 - 176)			SW846 8260B
	105	(63 - 176)	1.7	(0-30)	SW846 8260B
Bromodichloromethane	99	(80 - 146)			SW846 8260B
	102	(80 - 146)	2.3	(0-30)	SW846 8260B
1,2-Dichloropropane	87	(87 - 114)			SW846 8260B
	88	(87 - 114)	1.5	(0-30)	SW846 8260B
cis-1,3-Dichloropropene	79 a	(82 - 130)			SW846 8260B
	79 a	(82 - 130)	1.1	(0-30)	SW846 8260B
Trichloroethene	103	(62 - 130)			SW846 8260B
	100	(62 - 130)	1.2	(0-20)	SW846 8260B
Chlorodibromomethane	101	(71 - 158)			SW846 8260B
	102	(71 - 158)	1.2	(0-30)	SW846 8260B
1,1,2-Trichloroethane	88	(86 - 129)			SW846 8260B
	90	(86 - 129)	2.2	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4EG11AC-MS Matrix.....: WATER
MS Lot-Sample #: A0G200425-101 L4EG11AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	88	(78 - 118)			SW846 8260B
	88	(78 - 118)	0.21	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	83	(73 - 147)			SW846 8260B
	85	(73 - 147)	2.3	(0-30)	SW846 8260B
Bromoform	99	(58 - 176)			SW846 8260B
	102	(58 - 176)	2.6	(0-30)	SW846 8260B
4-Methyl-2-pentanone (MIB	94	(82 - 135)			SW846 8260B
	97	(82 - 135)	4.0	(0-30)	SW846 8260B
2-Hexanone	91	(81 - 128)			SW846 8260B
	95	(81 - 128)	4.4	(0-30)	SW846 8260B
Tetrachloroethene	87	(85 - 121)			SW846 8260B
	90	(85 - 121)	4.1	(0-30)	SW846 8260B
1,1,2,2-Tetrachloroethane	85 a	(88 - 116)			SW846 8260B
	86 a	(88 - 116)	1.8	(0-30)	SW846 8260B
Toluene	84	(70 - 119)			SW846 8260B
	85	(70 - 119)	1.4	(0-20)	SW846 8260B
Chlorobenzene	84	(76 - 117)			SW846 8260B
	90	(76 - 117)	7.8	(0-20)	SW846 8260B
Ethylbenzene	81 a	(86 - 132)			SW846 8260B
	87	(86 - 132)	6.9	(0-30)	SW846 8260B
Styrene	83	(83 - 120)			SW846 8260B
	89	(83 - 120)	7.1	(0-30)	SW846 8260B
cis-1,2-Dichloroethene	102	(87 - 114)			SW846 8260B
	95	(87 - 114)	2.0	(0-30)	SW846 8260B
trans-1,2-Dichloroethene	90	(85 - 116)			SW846 8260B
	91	(85 - 116)	1.2	(0-30)	SW846 8260B
Dichlorodifluoromethane	70	(70 - 130)			SW846 8260B
	71	(70 - 130)	0.16	(0-30)	SW846 8260B
Trichlorofluoromethane	98	(70 - 130)			SW846 8260B
	95	(70 - 130)	3.2	(0-30)	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	103	(70 - 130)			SW846 8260B
	104	(70 - 130)	0.73	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	93	(70 - 130)			SW846 8260B
	97	(70 - 130)	3.7	(0-30)	SW846 8260B
1,2-Dibromoethane	91	(70 - 130)			SW846 8260B
	92	(70 - 130)	0.36	(0-30)	SW846 8260B
Isopropylbenzene	76	(70 - 130)			SW846 8260B
	82	(70 - 130)	7.9	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4EG11AC-MS Matrix.....: WATER
MS Lot-Sample #: A0G200425-101 L4EG11AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichlorobenzene	82	(70 - 130)			SW846 8260B
	85	(70 - 130)	3.5	(0-30)	SW846 8260B
1,4-Dichlorobenzene	82	(70 - 130)			SW846 8260B
	87	(70 - 130)	5.8	(0-30)	SW846 8260B
1,2-Dichlorobenzene	82	(70 - 130)			SW846 8260B
	91	(70 - 130)	11	(0-30)	SW846 8260B
1,2-Dibromo-3-chloro-propane	90	(70 - 130)			SW846 8260B
	113	(70 - 130)	22	(0-30)	SW846 8260B
1,2,4-Trichloro-benzene	83	(70 - 130)			SW846 8260B
	98	(70 - 130)	17	(0-30)	SW846 8260B
o-Xylene	83	(70 - 130)			SW846 8260B
	89	(70 - 130)	6.8	(0-30)	SW846 8260B
m-Xylene & p-Xylene	81	(70 - 130)			SW846 8260B
	87	(70 - 130)	7.8	(0-30)	SW846 8260B
2-Chloroethyl vinyl ether	9.0 a	(70 - 130)			SW846 8260B
	7.3 a	(70 - 130)	20	(0-30)	SW846 8260B
Acrolein	94	(50 - 130)			SW846 8260B
	101	(50 - 130)	7.6	(0-30)	SW846 8260B
Acrylonitrile	94	(50 - 130)			SW846 8260B
	97	(50 - 130)	3.9	(0-30)	SW846 8260B
Vinyl acetate	114	(70 - 130)			SW846 8260B
	110	(70 - 130)	3.6	(0-30)	SW846 8260B
Bromobenzene	88	(70 - 130)			SW846 8260B
	88	(70 - 130)	0.23	(0-30)	SW846 8260B
Bromochloromethane	109	(70 - 130)			SW846 8260B
	108	(70 - 130)	1.6	(0-30)	SW846 8260B
n-Butylbenzene	70	(70 - 130)			SW846 8260B
	75	(70 - 130)	7.3	(0-30)	SW846 8260B
sec-Butylbenzene	74	(70 - 130)			SW846 8260B
	78	(70 - 130)	6.2	(0-30)	SW846 8260B
tert-Butylbenzene	74	(70 - 130)			SW846 8260B
	80	(70 - 130)	8.0	(0-30)	SW846 8260B
2-Chlorotoluene	81	(70 - 130)			SW846 8260B
	80	(70 - 130)	0.49	(0-30)	SW846 8260B
4-Chlorotoluene	80	(70 - 130)			SW846 8260B
	77	(70 - 130)	3.6	(0-30)	SW846 8260B
Dibromomethane	100	(70 - 130)			SW846 8260B
	103	(70 - 130)	3.1	(0-30)	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0G150463 Work Order #...: L4EG11AC-MS Matrix.....: WATER
MS Lot-Sample #: A0G200425-101 L4EG11AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,3-Dichloropropane	90	(70 - 130)			SW846 8260B
	92	(70 - 130)	1.5	(0-30)	SW846 8260B
2,2-Dichloropropane	72	(70 - 130)			SW846 8260B
	73	(70 - 130)	1.6	(0-30)	SW846 8260B
1,1-Dichloropropene	85	(70 - 130)			SW846 8260B
	87	(70 - 130)	1.9	(0-30)	SW846 8260B
Hexachlorobutadiene	64 a	(70 - 130)			SW846 8260B
	77	(70 - 130)	19	(0-30)	SW846 8260B
Iodomethane	118	(70 - 130)			SW846 8260B
	119	(70 - 130)	1.2	(0-30)	SW846 8260B
p-Isopropyltoluene	78	(70 - 130)			SW846 8260B
	85	(70 - 130)	9.3	(0-30)	SW846 8260B
Naphthalene	72	(70 - 130)			SW846 8260B
	90	(70 - 130)	22	(0-30)	SW846 8260B
n-Propylbenzene	80	(70 - 130)			SW846 8260B
	81	(70 - 130)	1.4	(0-30)	SW846 8260B
1,1,1,2-Tetrachloroethane	93	(70 - 130)			SW846 8260B
	97	(70 - 130)	5.0	(0-30)	SW846 8260B
1,2,3-Trichlorobenzene	76	(70 - 130)			SW846 8260B
	92	(70 - 130)	19	(0-30)	SW846 8260B
1,2,3-Trichloropropane	92	(70 - 130)			SW846 8260B
	98	(70 - 130)	6.5	(0-30)	SW846 8260B
1,2,4-Trimethylbenzene	82	(70 - 130)			SW846 8260B
	86	(70 - 130)	4.4	(0-30)	SW846 8260B
1,3,5-Trimethylbenzene	79	(70 - 130)			SW846 8260B
	83	(70 - 130)	5.9	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(73 - 122)
	112	(73 - 122)
1,2-Dichloroethane-d4	116	(61 - 128)
	115	(61 - 128)
Toluene-d8	101	(76 - 110)
	103	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	105	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

North Canton
4101 Shuffel Street, N. W.
North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Steve Murray	Site Contact: James Staley	Date: 7/14/10	COC No:
Company: MACTEC Engineering and Consulting, Inc.	Tel/Fax: (231) 922-9050	Lab Contact: Mark Loeb	Carrier:	2 of 3 COCs
Address: 41 Hughes Drive	Analysis Turnaround Time			Job No.
City/State/Zip: Traverse City, Michigan 49686	Calendar (C) or Work Days (W) _____			
(231) 922-9050 Phone	TAT if different from Below _____			SDG No.
(231) 922-9055 FAX	■ 2 weeks			
Project Name: Honeywell South Bend - Area 14 West	☐ 1 week			
Site: South Bend	☐ 2 days			
P O #: 5133286	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N)	VOCs - 8260 B														Sample Specific Notes:
MW-7 07 10	7/14/10	8:58	VOA/Grab	Water	3	N	X														
MW-As 07 10		9:25	VOA/Grab	Water	3	N	X														
MW-Ad 07 10		10:10	VOA/Grab	Water	3	N	X														
MW-Bs 07 10		10:40	VOA/Grab	Water	3	N	X														
MW-Bd 07 10		11:05	VOA/Grab	Water	3	N	X														
MW-Cs 07 10		12:38	VOA/Grab	Water	3	N	X														
MW-Cd 07 10		13:20	VOA/Grab	Water	3	N	X														
MW-101 07 10 - 14 West	↓	—	VOA/Grab	Water	3	N	X														

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
■ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	MACTEC	7/14/10		TA/NC	7/15/10 9:15AM
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 240-17463
North Canton Facility

Client Mactec Project _____ By: _____
Cooler Received on 7/15/10 Opened on 7/15/10 (Signature)
FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____
TestAmerica Cooler # 241-820 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 2 Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other _____
6. Cooler temperature upon receipt 1.7 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐ _____
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☒
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM MJ Date 7/15/10 by AM via Verbal ☐ Voice Mail ☒ Other ☐
Concerning #15

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) 1x40ml MW-8d 0710 were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 051010-HNO_3; Sulfuric Acid Lot# 121709-H_2SO_4; Sodium Hydroxide Lot# 100108 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-$(CH_3COO)_2ZN/NaOH$.* What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT