

# 2008 FOURTH QUARTER AND ANNUAL REPORT

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Old Bethpage  
Solid Waste Disposal Complex  
Groundwater Treatment Facility

## TOWN OF OYSTER BAY DEPARTMENT OF PUBLIC WORKS SYOSSET, NEW YORK 11791

May 2012



LOCKWOOD  
KESSLER &  
BARTLETT, INC.  
SYOSSET, NEW YORK 11791

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## **1.0 INTRODUCTION**

This document is the Old Bethpage Solid Waste Disposal Complex (OBSWDC) Remedial Action Plan (RAP) Report for the fourth calendar quarter of 2008 and calendar year 2008. This RAP Report was prepared on behalf of the Town of Oyster Bay (Town) by Lockwood, Kessler & Bartlett, Inc. (LKB). It is submitted to the New York State Department of Environmental Conservation (NYSDEC) pursuant to the OBSWDC RAP requirements specified in Appendix A of Consent Decree 83 Civ. 5357.

Section D.1.b (Reporting, Quarterly Reports, Operating Period) of the OBSWDC RAP requires the Town to submit the following information for the ground-water treatment facility quarterly:

- Pumpage records
- Treatment system air and water discharge data
- Treatment system performance records
- Data analysis (trends, position of plume, etc.)
- Modifications to system, including method and dates of approval
- Ground water-quality monitoring data
- Water-level data
- Potentiometric surface maps, as revised
- Records of all system downtime

Section D.2 (Reporting, Annual Operating Report) of the OBSWDC RAP requires the Town to also submit an annual operating report containing a summary and analysis of the information in the quarterly reports, but allows the Town to combine the fourth quarter report for each year and the annual report into one combined report.

The above-listed information is summarized and evaluated in the Sections 2.0 and 3.0 below, first for the fourth quarter of 2008, and then for all of 2008. Copies of the data and records for the fourth quarter of 2008, as well as the monitoring subconsultants' quarterly and annual reports, are provided in Appendices A through G. Conclusions and recommendations based on this RAP Report's findings are provided in Section 4.0.

## **2.0 STATUS OF GROUND-WATER REMEDIATION**

### **2.1 Ground Water-Treatment Facility Operation**

During the fourth quarter of 2008, the ground water-treatment facility was only partially operational on most days, primarily due to a malfunctioning (mostly closed) valve on the line from Recovery Well RW-4 for most of the quarter. Recovery Wells RW-2 and RW-5 were off-line occasionally. Additional limited downtime occurred during repairs and maintenance of the treatment system appurtenances. The average facility flow this quarter, based on continuous, 24-hour-per-day operation, was 708 Gallons per Minute (GPM), which equates to 1.02 million gallons per day. Table 1 provides a summary of facility operation this quarter based on the pumpage records maintained by the Town. A copy of those records is provided in Appendix A.

The ground-water treatment facility daily pumpage for all of 2008 is summarized in Figure 1. As shown in Figure 1, except for a few sporadic outages, the GTF operated at least partially during 2008. The step-like variations in flow rate reflect periods when one or more of the recovery wells was temporarily off-line for maintenance or repairs.

### **2.2 Ground Water-Treatment Facility Monitoring**

During 2008, samples of the facility influent and effluent were collected approximately three times per week, except when the facility was off-line or closed, and analyzed for volatile organic compounds (VOCs) at the on-site laboratory. The facility influent and effluent were also tested weekly for pH, iron, manganese, dissolved oxygen, ammonia and chloride at the on-site laboratory. Monthly samples of influent and effluent were also sent to an outside laboratory for VOC and inorganic/leachate (effluent only) parameter analyses. The monitoring results for the fourth quarter 2008 are provided in Appendix B, and the key findings for this quarter are summarized below:

- Influent Total VOC concentration ranged from 33.8 to 132 ug/L, and averaged 96.7 ug/L.
- Effluent Total VOC concentration ranged from 0.4 to 13.7 ug/L, and averaged 2.8 ug/L.
- Treatment efficiency ranged from 85.3 to 99.6 %, and averaged 97.1 %.
- Effluent VOC concentrations were less than applicable limits except for trichloroethene, which slightly exceeded the 5-ug/L limit in the self-monitoring results on two occasions.
- Effluent inorganic/leachate indicator parameter concentrations were less than applicable limits except for manganese, which often slightly exceeded the 0.6-mg/L limit in the self-monitoring samples. The limit for manganese is aesthetics-based, so these exceedances are not a concern with respect to` public health or the environment.

The influent and effluent Total VOC results for all of 2008 are summarized in Figures 2 and 3, respectively. As shown in Figure 2, influent Total VOC concentrations exhibited a decreasing trend during 2008 and decreased from near 250 ug/L at the beginning of the year to less than 100 ug/L by the end of the fourth quarter. It should be noted that this trend is associated in part with Recovery Well RW-4, which has a relatively high Total VOC concentration, being off-line for most of this quarter. Based on the 2008 self-monitoring results, influent Total VOC concentrations ranged from 33.8 to 239 ug/L, and averaged 1250 ug/L.

As shown in Figure 3, effluent Total VOC concentrations were generally low (e.g., less than 5 ug/L) during the first half of the year, but exhibited a fluctuating pattern with periodic higher concentrations during the second half of 2008. This fluctuation is attributed to the need to acid-rinse the air-stripper internals to remove accumulated iron bacteria deposits. Based on the 2008 self-monitoring results, effluent Total VOC concentrations ranged from 0.1 to 23.5 ug/L, and averaged 2.0 ug/L. The facility's treatment efficiency ranged from 82.2 to 99.9 %, and averaged 98.2 %. The lowest treatment efficiencies occurred only sporadically, and when effluent Total VOC concentrations were highest.

Samples from each of the five recovery wells (RW-1 through RW-5) were collected on an approximately weekly basis during 2008, weather and access conditions permitting, and analyzed for VOCs. The results for the fourth quarter 2008 are provided in Appendix C, and the key findings for this quarter are summarized below:

- Total VOC concentrations in RW-1 ranged from 2.1 to 6.1 ug/L, and averaged 4.4 ug/L.
- Total VOC concentrations in RW-2 ranged from 0.3 to 2.6 ug/L, and averaged 1.3 ug/L.
- Total VOC concentrations in RW-3 ranged from 52 to 152 ug/L, and averaged 69.9 ug/L.
- Total VOC concentrations in RW-4 ranged from 0.9 to 35 ug/L and averaged 11.6 ug/L.
- Total VOC concentrations in RW-5 ranged from 269 to 478 ug/L and averaged 393 ug/L.

The VOC detected at highest concentration in Recovery Wells RW-3 and RW-5 was trichloroethene (TCE), followed by tetrachloroethene (PCE). The concentrations of TCE, PCE and cis-1,2-dichloroethene in these two recovery wells were higher than the 5-ug/L limit for these VOCs. 1,2-dichloroethane, 1,1-dichloroethene and 1,1,1-trichloroethane concentrations in Recovery Well RW-5 also exceeded the 5-ug/L limit for these VOCs. Total VOC concentrations in Recovery Well RW-4 were much lower than usual this quarter, and this is attributed to a malfunctioning electrically-actuated valve, which was replaced once it was discovered.

Total VOC concentrations exhibited an increasing trend in Recovery Well RW-1, a decreasing trend in Recovery Wells RW-2 and RW-4, and generally flat trends in Recovery Wells RW-3 and RW-5 this quarter. Individual VOC concentrations were less than their respective limits in RW-1 and RW-2. However, it should be noted that a portion of the ground water collected by each recovery well enters from its downgradient side. Last quarter's results from Well MW-9D continue to indicate the presence of VOCs downgradient of the Landfill and upgradient of the recovery wellfield.

The 2008 Total VOC, TCE and PCE results for the five recovery wells are summarized in Figures 4, 5 and 6, respectively. Review of these figures indicates that they are generally consistent with the influent Total VOC results summarized in Figure 2. Specifically, Total VOCs, TCE and PCE concentrations are highest in Recovery Well RW-5, followed by Recovery Wells RW-4 and RW-3. Total VOC, TCE and PCE concentrations in Recovery Wells RW-1 and RW-2 are much lower. Review of these figures also indicates that Total VOC, TCE and PCE concentrations in Recovery Well RW-3 were relatively consistent during 2008. Total VOC, TCE and PCE concentrations in Recovery Well RW-4 decreased gradually during the first half of 2008, and then decreased markedly during the second half of 2008. This marked decrease is attributed to a malfunctioning (mostly closed) valve on the discharge line for this well. Total VOC, TCE and PCE concentrations in Recovery Well RW-5, exhibited fluctuating but generally decreasing trends during the first three quarters of 2008, but then leveled off during the fourth quarter of 2008.

To assess emissions from the air stripper stack, the average stack emission concentration of each VOC detected on a regular basis in the facility influent was calculated utilizing the data from the on-site laboratory and the pumpage data maintained by the Town. The results are compared to the stack emissions limits from Table 1 in Appendix A of the Consent Decree in Table 2. As shown in Table 2, VOC concentrations were well below the stack discharge limits this quarter. This finding is consistent with the results of the ambient-air monitoring reported below in Section 3.1, specifically to the fact that elevated levels of VOCs were not detected in the ambient air samples collected this quarter.

The fourth quarter stack emission results are consistent with the results for the previous three quarters of 2008. Specifically, during all third quarter, no VOCs exceeded stack discharge limits, and during the first two quarters of 2008 only 1,1-dichloroethene (1,1-DCE) and/or TCE slightly exceeded their stack limits. Moreover, as noted below in Section 3.1, elevated levels of 1,1-DCE and TCE were not detected in the 2008 ambient-air samples, which is consistent with past modeling results, which indicated that VOC concentrations at the downwind property boundary are lower than the NYSDEC DAR-1 AGCs.

### **2.3 Ground Water-Quality Monitoring**

The fourth quarter 2008 ground-water monitoring round was performed on October 28-31, 2008. A synoptic round of water-level measurements was collected, and the 16 wells required to be monitored were sampled and analyzed for VOCs and the Part 360 leachate indicator and inorganic parameters. The monitoring subconsultant's quarterly report is provided in Appendix D. The VOC results for the fourth quarter of 2008 are summarized by well and parameter group in the table below:

Well Number	Total VOCs	Total VHOs*	Total Aromatics	PCE / TCE
LF-1	0.5	ND	0.5	ND / ND
M-30B-R	ND	ND	ND	ND / ND
MW-5B	ND	ND	ND	ND / ND
MW-6A	ND	ND	ND	ND / ND
MW-6B	ND	ND	ND	ND / ND
MW-6C	3.0	ND	3.0	ND / ND
MW-6E	0.4	ND	0.2	ND / 0.2
MW-6F	ND	ND	ND	ND / ND
MW-7B	ND	ND	ND	ND / ND
MW-8A	9.6	ND	ND	8.9 / 0.7
MW-8B	0.9	ND	ND	0.9 / ND
MW-9B	ND	ND	ND	ND / ND
MW-9C	ND	ND	ND	ND / ND
MW-11A	2.8	1.4	ND	0.5 / 0.9
MW-11B	1.3	ND	ND	ND / 1.3
OBS-1	3.8	2.0	1.1	0.3 / 0.4

**Notes:** Results are in micrograms per Liter (ug/L).

VHO = Volatile Halogenated Organics.

\*Excluding PCE and TCE.

PCE / TCE = Tetrachloroethene / Trichloroethene.

ND = Not Detected.

Results corrected for trip blank contamination (less dichlorobenzenes and vinyl chloride)

Review of the above table indicates that VOCs were at non-detectable or very low levels (i.e., < 5 ug/L) in 15 of these 16 monitoring wells, and that Total VOC concentrations in the other well (MW-8A) is currently less than 10 ug/L. The Total VOC concentration in Well MW-8A is primarily due to PCE, and the concentration of PCE in Well MW-8A exceeded the 5-ug/L Class GA standard for this VOC. The results for Well MW-7B should be considered suspect as this well is believed to have a compromised casing (as evidenced by pumping of sand during purging). Previously, Total VOC concentrations in this well have been relatively high.

Review of the leachate indicator and inorganic parameter results included in Appendix D indicates that most of these parameters were not detected, or only detected sporadically at low concentrations below their respective Class GA standard or guidance value. The highest concentration(s) of each detected parameter, as well as the majority of the exceedances, occurred in wells located directly downgradient of the Landfill and within the capture zone of the Town's recovery wellfield. The specific exceedances noted this quarter are listed below by well and parameter:

- Well LF-1 – Ammonia and total dissolved solids (TDS)
- Well M-30B-R – Sodium
- Well MW-5B – Manganese and sodium
- Well MW-6A – Iron
- Well MW-6B – Ammonia, iron and sodium
- Well MW-6C – Ammonia, iron, sodium and TDS (slight)
- Well MW-6E – Iron, manganese (slight) and sodium
- Well MW-6F – Iron (slight), sodium and TDS
- Well MW-7B – Iron and Sodium
- Well MW-8A – Iron
- Well MW-8B – Manganese and sodium
- Well MW-9B – Sodium
- Well MW-9C – Ammonia and sodium
- Well OBS-1 – Ammonia, manganese and sodium

No exceedances of the Class GA inorganic/leachate indicator parameter standards occurred in Wells MW-11A and MW-11B, which are located downgradient of the capture zone of the Town's recovery wellfield, this quarter. As noted above, the results for Well MW-7B should be considered suspect.

Figures 1 through 6 in Appendix D depict the ground water-flow patterns and plume boundaries within each of the three aquifer zones based on the Town's fourth quarter 2008 monitoring data and water-level data for selected County monitoring wells for the Fireman's Training Center. Review of these figures indicates the following key findings:

- Ground water-flow directions in the shallow (water-table) zone of the aquifer continue to be generally from northwest to southeast, consistent with the regional ground water-flow direction reported by the U.S. Geological Survey in Scientific Investigations Map 3066 (Water-Table and Potentiometric-Surface Altitudes of the Upper Glacial, Magothy, and Lloyd Aquifers beneath Long Island, New York, March-April 2006, Water-Table – SHEET 1 of 4).

- Ground water-flow directions in the intermediate and deep potentiometric zones of the aquifer also continue to be generally from northwest to southeast, except in the vicinity of the capture zone of the Town's recovery wellfield.
- The distribution of Total VOCs in the shallow (water-table) zone of the aquifer is limited to the area immediately downgradient of the Claremont Site (Wells MW-8A, EW-1A and EW-2A).
- The distribution of Total VOCs in the intermediate and deep zones of the aquifer includes the areas downgradient of the Landfill and the Claremont Site, and within the capture zone of the Town's recovery wellfield. As noted in previous RAP reports, based on available data a portion of the VOC plume from the Claremont Site is too far to the north to be captured by the Town's recovery wellfield. Moreover, it should be noted that although Figures 2 through 6 in Appendix D show the plume boundary extending downgradient to Well Cluster MW-11, Total VOC concentrations in these two wells are in fact very low (2.8 ug/L and 1.3 ug/L, respectively) and are not attributed to the Landfill.

Overall, the ground water-monitoring results for this quarter are consistent with the monitoring results for the first three quarters of 2008, which indicated that ground-water quality is continuing to improve in response to the ongoing remediation. The monitoring consultant's annual summary report for 2008 is provided in Appendix E. Review of that report indicates the following additional findings:

- Monitoring Well MW-9D, which is not required to be monitored, was sampled voluntarily by the Town during the third quarter of 2008, in keeping with a previous recommendation.
- Split-samples, provided by SAIC during the each quarter of 2008 for selected Claremont Site monitoring wells, were analyzed for VOCS and the results incorporated into the quarterly reports.
- Water-level elevations in most of the monitoring wells increased during the first half of 2008, but then decreased during the second half of 2008. This pattern is attributed to natural variation in recharge to the aquifer from precipitation, which tends to be higher during the first half of the year. Exceptions occurred for wells located in the immediate vicinity of a recharge basin, which are influenced by mounding, and wells located within the capture zone, which are influenced by long-term pumping. These two influences tend to mask the variations associated with natural recharge from precipitation.
- Vertical hydraulic gradients tended to be downward, which is the natural gradient pattern, at monitoring well clusters located outside the influence of the Town's, the County's, or the Claremont Site's recovery well fields (e.g., Well Cluster MW-11). Vertical hydraulic gradients tend to be upward at well clusters located within the area of influence of one of these well fields (e.g., Well Cluster MW-9). The depth(s) of the upward gradient(s) depends on the screen interval(s) of the recovery well field.
- Figures 1, 2 and 3 in Appendix E show the first quarter total volatile halogenated organics (VHOs), total aromatic hydrocarbons and PCE results, respectively, overlain with the fourth quarter results. As shown in these figures, the approximate extent and distribution of each is similar for the first and fourth quarters of 2008. The majority of the variation shown on the aromatic hydrocarbon plume map reflect the fact that low levels of aromatic hydrocarbons were detected in Well MW-11A during the fourth quarter. It should be noted that although Figures 1 through 3 show the plumes extending downgradient to Well MW-11A, actual VOC concentrations in this well were very low and are not attributed to the Landfill.

- VHO concentrations were non-detectable or very low in the majority of the monitoring wells sampled during 2008, although VHOs had the greatest areal extent of the three parameter groups. VHO concentrations in the monitoring wells were relatively stable 2008.
- Aromatic hydrocarbon concentrations were also non-detectable or very low in the majority of the monitoring wells sampled during 2008. The highest concentrations were detected in Wells MW-6B and MW-6C, and several compounds in Well MW-6B occasionally exceeded their ground water-quality standard. Aromatic hydrocarbons had the smallest areal extent and lowest concentrations of the three parameter groups. In the monitoring wells in which aromatic hydrocarbons were detected, concentrations were also relatively stable.
- PCE concentrations were also non-detectable or very low in the majority of the monitoring wells sampled during 2008, and PCE concentrations were relatively stable. The highest concentrations of PCE were detected in Well MW-8A.

## **3.0 RESULTS OF AMBIENT-AIR AND SOIL-GAS MONITORING**

### **3.1 Ambient Air-Monitoring Results**

The scope of this monitoring entailed quarterly sorbent-tube sampling for VOCs at one upwind and two downwind locations over a 24-hour period during a low/falling barometer, laboratory analysis of the samples, and comparison of the results to the NYSDEC DAR-1 short-term (8-hour) and long-term (annual) guideline concentrations (a.k.a., SGCs and AGCs, respectively). Sample locations were pre-selected based on National Weather Service forecast. Meteorological conditions were monitored during sampling for comparison to forecasted conditions.

The fourth quarter 2008 monitoring round was performed on December 3<sup>rd</sup> and 4<sup>th</sup>, 2008, during a period of forecast south-southwesterly winds. The upwind sample was collected at the golf course south of the Landfill. The downwind samples were collected along the north boundary of the Landfill. A copy of the monitoring subconsultant's quarterly monitoring report is provided in Appendix F.

The downwind samplers were downwind of the Landfill for the entire test period. The barometer fell by a total of 0.17 inches of mercury. A number of VOCs were detected at similar, low concentrations in both the upwind and downwind samples. All VOC detections were much lower than the DAR-1 SGCs. Six VOCs (benzaldehyde, benzene, carbon tetrachloride, chloroform, 1,4-dichlorobenzene and 2/4-ethyltoluene) were detected in at least one sample at concentrations exceeding the DAR-1 AGCs. However, their upwind and downwind concentrations were similar. Based on the results, VOC detections in ambient air this quarter are attributed to background ambient air quality.

Overall, the ambient air-monitoring results for this quarter are consistent with the monitoring results for the first three quarters of 2008. The monitoring consultant's annual summary report for 2008 is provided in Appendix G. Review of this report indicates the following additional findings:

- Thermal inversions, which are unavoidable natural events that result in periods of light to calm winds of variable direction, often occur during the overnight hours, and may influence the results.
- During 2008, no VOCs exceeded the DAR-1 SGCs. The concentrations of five to six VOCs routinely exceeded the DAR-1 AGCs, but upwind and downwind concentrations were similar.

### **3.2 Soil-Gas Quality Monitoring Results**

The scope of this monitoring entailed quarterly sorbent-tube grab-sampling for VOCs at 15 perimeter gas monitoring well locations, including multiple-depth sampling at one location (Well M9), and comparison of the results to the NYSDEC DAR-1 SGCs and AGCs (Note: This is done for informational purposes only, there are no New York State standards for VOCs in soil gas.) The results of this monitoring are included in Appendix F.

The fourth quarter 2008 monitoring round was performed on November 12<sup>th</sup>. All wells were sampled except Well M21, which was not accessible. A number of VOCs were detected at generally low concentrations, in a majority of the soil-gas samples. All VOC detections were much lower than the DAR-1 SGCs, and only eight were detected at a concentration higher than their DAR-1 AGC. Most of these “exceedances” were sporadic and relatively low in magnitude. PCE concentrations increased with depth in Well M9. This trend is attributed to shallow ground-water contamination originating offsite.

Based on the results, overall, VOC concentrations in soil gas are low, and consistent with an old MSW landfill with a perimeter gas collection system, and are not a concern for construction-related excavation, should it be required. Accordingly, the only recommendation this quarter is for the Town to attempt to restore access to Well M21.

### **3.3 Soil-Gas Pressure Monitoring Results**

The scope of this monitoring entailed quarterly field measurement of pressure (vacuum) in 12 gas monitoring wells at three locations around the Landfill utilizing an inclined manometer to verify zero or negative pressure readings in the vicinity of the perimeter landfill gas collection system. The fourth quarter 2008 monitoring round was performed on November 30<sup>th</sup>. The results of this monitoring are included in Appendix F.

Zero to very slightly positive pressure readings were measured in the 12 gas wells at the three locations monitored (PW-1 to PW-3). Based on these results, overall the perimeter land gas collection system is functioning properly and is preventing off-site migration. Overall, these results are consistent with the results of three prior 2008 quarterly monitoring rounds.

#### **4.0 CONCLUSIONS AND RECOMMENDATIONS**

The conclusions of this RAP Report, based on the above information, are:

1. The facility was operated and monitored as fully as possible during 2008 given the need to perform routine maintenance and repairs, diagnose and replace the faulty valve at Recovery Well RW-5, replace well pumps, etc., as needed.
2. The average Total VOC concentration of the facility influent continued to exceed the 50-ug/L Total VOC limit for ground water listed in Appendix A, Table 2 of the Consent Decree; and the concentrations of individual VOCs in certain monitoring wells continued to exceed their respective Class GA standards. Therefore, continued operation of the facility was warranted. It is recognized, however, that the majority of the VOC loading to the facility was associated with the Claremont Site, and possibly other nearby sources of ground-water contamination that are not related to the Landfill. It is also recognized that the decrease in Total VOC concentrations during the fourth quarter is likely attributable to the faulty valve at Recovery Well RW-4, which normally contains relatively high Total VOC concentrations.
3. The average Total VOC concentration of the facility effluent continues to be well below the 100-ug/L Total VOC limit for discharge listed in Appendix A, Table 2 of the Consent Decree. However, the concentrations of TCE in the influent at the facility periodically slightly exceeded the 5-ug/L limit for VOCs. Under normal operation, the air stripper can remove the levels of TCE that entered the facility in 2008. The lower than expected removal is attributed to the need for an acid-wash of the air stripper internals, which should be performed.
4. Except for slight exceedances for 1,1-DCE and/or TCE during the first two quarters, individual VOC levels in the air stripper stack exhaust were much lower than the limits in Appendix A, Table 1 of the Consent Decree. Based on previous dispersion modeling of the stack discharge, the current emissions should not result in an exceedance of the NYSDEC DAR-1 guideline concentrations at the downwind property line. This determination is consistent with ambient air monitoring results, which did not detect elevated site-related levels of VOCs in ambient air.
5. Elevated VOC concentrations continued to be present in Recovery Wells RW-3, RW-4 and RW-5. VOC concentrations in Recovery Wells RW-1 and RW-2 were lower than Consent Decree and Class GA standards. However, a portion of the ground water collected by each recovery well is from its downgradient side. Moreover, the third quarter results for Well MW-9D continue to indicate the presence of VOCs downgradient of the Landfill and upgradient of the recovery wellfield. Therefore, continued operation of Recovery Wells RW-1 and RW-2 is also warranted.
6. Elevated concentrations of certain inorganic/leachate indicator parameters continued to be present to certain wells located downgradient of the Landfill and upgradient of the Town's recovery wellfield. No elevated concentrations of these parameters were detected at Well Cluster MW-11, which is located downgradient of the Town's recovery well field.
7. The results of the ambient-air and soil-gas monitoring performed this quarter continue to indicate that the Landfill is not a significant source of VOCs in ambient air.

Accordingly, this RAP Report recommends the following for the upcoming calendar quarter:

1. Continue to operate and monitor the facility in accordance with the RAP in Appendix A of the Consent Decree, and subsequent related protocols.
2. Perform an acid-rinse of the facility air stripper internals to restore the treatment efficiency to optimal levels.

3. Continue to analyze split-samples from selected Claremont Site monitoring wells for VOCs to provide current ground-water VOC data for these locations.
4. Continue to incorporate water-level data from selected County monitoring wells for the Fireman's Training Center to augment the Town's water-level data for the area.

## **APPENDIX A**

**DAILY OPERATIONS REPORTS  
October through December, 2008**



# TOWN OF CRISTER BAY

DEPARTMENT OF PUBLIC WORKS  
GROUNDWATER TREATMENT FACILITY

## DAILY OPERATIONS WORKSHEET DAY SHIFT

SHIFT DATE: 10-2-08-12  
DATE: 10-2-08

TIME	WELLFIELD OPERATION GALLONS PER MINUTE				AIR STRIPPER OPERATING PARAMETERS				EFFECTUENT FLOW MGALS	SUPERVISOR OPERATOR INITIALS
	WELL 1 FLOW	WELL 2 FLOW	WELL 3 FLOW	WELL 4 FLOW	STRIPPER FLOW GPM	PRESSURE FLOW GPM	BLOWER AIR FLOW CFM	AIR PRESSURE INCHES WC		
7 AM	286	ON	ON	ON	0001	922	NOT WORKING	NOT WORKING	695	Cem/Srk
8 AM	283	NO	NO	NO	1181	913	WORKING	WORKING	45	
9 AM	284	READING	READING	READING	6001	915	*****	*****	90	
10 AM	281	*****	*****	*****	628	0001	*****	*****	134	
11 AM	282	*****	*****	*****	607	0001	*****	*****	176	
12 PM	283	*****	*****	*****	620	912	*****	*****	208	
1 PM	284	*****	*****	*****	1159	913	*****	*****	250	
2 PM	284	*****	*****	*****	685	0001	*****	*****	300	
3 PM										
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

REMARKS

Wells # 2 & 4 Down

NOTES

- 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.
- 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

# TOWN OF CUSTER BAY

DEPARTMENT OF PUBLIC WORKS  
GROUNDWATER TREATMENT FACILITY

## DAILY OPERATIONS WORKSHEET DAY SHIFT

FIELD DATE: 10/2/08

TIME	WELL FLOW OPERATION GALLONS PER MINUTE				AIR STRIPPER OPERATING PARAMETERS							
	WELL #	WELL #	WELL #	WELL #	STRIPPER FLOW GPM	PRESSURE FLOW GPM	BLOWER AIRFLOW CFM	AIR PRESSURE INCHES WG	EFFLUENT FLOW MGALS	SUPERVISOR OPERATOR INITIALS		
7 AM	283	ON	ON	040	874	627	0061	NOT WORKING	1070	Durte		
8 AM	281	NO	NO		868	1158	915	WORKING	033	"		
9 AM	280	READING	READING		864	652	0001	*****	075	"		
10 AM	281	*****	*****		868	646	0038	*****	120	"		
11 AM	282	*****	*****		870	636	0041	*****	164	"		
12 PM	281	*****	*****		870	637	0003	*****	209	"		
1 PM	281	*****	*****		869	634	955	*****	254	"		
2 PM	282	*****	*****		872	629	0001	*****	299	"		
3 PM												
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		

REMARKS

NOTES

- 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.
- 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

FILE ID: 10-4-08-12  
 DATE: 10-4-08

TIME	WELLFIELD OPERATION GALLONS PER MINUTE				AIR STRIPPER OPERATING PARAMETERS							
	WELL #	WELL FLOW	WELL FLOW	WELL FLOW	WELL FLOW	WELL FLOW	STRIPPER FLOW	PRESS FL FLOW	BLOWER AIR FLOW	AIR PRESSURE	EFFLUENT FLOW	SUPERVISOR OPERATOR INITIALS
7 AM	283	ON	ON	875	680	914	NA	NA	NOT WORKING	NOT WORKING	695	cm
8 AM	284	NO	NO	873	642	929	NA	NA	WORKING	WORKING	45	
9 AM	285	READING	READING	875	1127	920	NA	NA	*****	*****	90	
10 AM	287	*****	*****	874	1162	940	NA	NA	*****	*****	130	
11 AM	284	*****	*****	877	1183	918	NA	NA	*****	*****	175	
12 PM	285	*****	*****	870	630	913	NA	NA	*****	*****	210	
1 PM	282	*****	*****	877	636	912	NA	NA	*****	*****	258	
2 PM	283	*****	*****	877	635	911	NA	NA	*****	*****	305	
3 PM												
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**REMARKS**

Wells # 2+4 Down  
 Pressure filter 3 tripped out

**NOTES**

- 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.
- 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.





TOWN OF YSTER BAY  
 DEPARTMENT OF PUBLIC WORKS  
 GROUNDWATER TREATMENT FACILITY

DAILY OPERATIONS WORKSHEET  
 DAY SHIFT

DATE 10/4/08

GAUGE NO.	DOWN NO.	ON READING	ON NO.	ON	000	866	882658	647	8034	NOT WORKING	NOT WORKING	INITIALS
283						870		647	8034		.699	Dwitee
284						869		643	0011		.087	"
282	READING	*****	*****	*****	*****	872		639	919		.129	"
283	READING	*****	*****	*****	*****	874		635	0001		.173	"
284	READING	*****	*****	*****	*****	869		647	0001		.219	"
284	READING	*****	*****	*****	*****	878		628	913		.265	"
284	READING	*****	*****	*****	*****	876		1127	7663		.207	"

NOTES  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

REMARKS

TOWN OF WESTER BAY  
 DEPARTMENT OF PUBLIC WORKS  
 GROUNDWATER TREATMENT FACILITY

DAILY OPERATIONS WORKSHEET  
 DAY SHIFT

DATE 10-9-08

TIME	DOWN NO.	ON NO.	READING	DOWN NO.	ON NO.	READING	PRESSURE		FLOW		OPERATOR
							NA	NA	NA	NA	
7 AM	285				874	624	916	NOT WORKING	705		CEM/BIRD
8 AM	284				875	627	0001	WORKING	80		
9 AM	284				872	1140	914	*****	95		
10 AM	284				873	1134	1667	*****	135		
11 AM	284				874	628	921	*****	178		
12 PM	284				867	648	910	*****	220		
1 PM	282				866	645	0001	*****	265		
2 PM	283				868	644	967	*****	302		
AVERAGE											

NOTES  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

REMARKS  
 wells # 2+4 down



**TOWN OF WESTER BAY  
DEPARTMENT OF PUBLIC WORKS  
GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET  
DAY SHIFT**

DATE 10-11-08

TIME	WELL NO.	DOWN NO.	ON NO.	OFF NO.	PRESSURE (PSI)	FLOW (GPM)	OPERATOR		TOTAL FLOW (GPM)	INITIALS
							NOT WORKING	WORKING		
7 AM	284			02	875	627	0001	NOT WORKING	1055	CEM/BSR
8 AM	285				876	1029	917	WORKING	46	
9 AM	280	READING	READING		870	648	0001	*****	90	
10 AM	283	*****	*****		867	650	983	*****	180	
11 AM	284	*****	*****		873	633	0001	*****	185	
12 PM	285	*****	*****		875	1128	1662	*****	229	
1 PM	284	*****	*****		870	1150	913	*****	273	
2 PM	285	*****	*****		872	1138	934	*****	315	
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 8%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
 Wells # 274 Down.

**TOWN OF WESTER BAY  
DEPARTMENT OF PUBLIC WORKS  
GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET  
DAY SHIFT**

DATE 10-12-08

TIME	DOWN NO.	DOWN READING	ON NO.	ON READING	GAUGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7 AM	282		02	872	628	912											
8 AM	284			870	639	0001											
9 AM	285	READING		873	627	916											
10 AM	284	READING		873	630	915											
11 AM	281			867	1168	911											
12 PM	282			865	642	914											
1 PM	281			868	642	912											
2 PM	283			869	640	910											
3 PM																	
AVERAGE																	

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
 Wells # 2 & 4 Down.

**TOWN OF .STER BAY  
DEPARTMENT OF PUBLIC WORKS  
GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET  
DAY SHIFT**

DATE 10/14/08

TIME	DOWN	ON	ON	ON	618	663	4001	NOT	NOT	FLOW	OPERATOR	METERS	
												NA	NA
7 AM	272	NO	ON	000	618	663	4001	NOT	NOT	1100	Dutfee		
8 AM	274	NO	NO	7	829	633	408	WORKING	WORKING	038	"		
9 AM	274	READING	PENDING		828	648	0004	*****	*****	078	"		
10 AM	275	*****	*****		834	641	899	*****	*****	121	"		
11 AM	274	*****	*****		772	0000	0008	*****	*****	165	"		
12 PM	272	*****	*****		822	1148	937	*****	*****	197	"		
1 PM	272	*****	*****		818	631	977	*****	*****	235	"		
2 PM	273	*****	*****		831	608	933	*****	*****	287	"		
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**NOTES**  
1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
0700 A5-A in hand. A-cant 45-2 did  
7:10 NO BGS ON WHEN bag pump on -  
Agg in hand because Agg 3 did  
7:35-Auto not start and Agg on when stand-by  
pump comes on  
7:40 with A5-a and A5-b in hand  
40 back up to stand by. Had to stop  
in hand Joe turned off auto

which turned sequencer on





















**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 10-25-08

TIME	WELL 100 OPERATION				WELL 101 OPERATION				WELL 102 OPERATION				STRIPPER OPERATING PARAMETERS				SUPERVISOR
	DOWN	ON	FLOW	READING	DOWN	ON	FLOW	READING	DOWN	ON	FLOW	READING	STRIPPER FLOW (GPM)	STRIPPER PRESSURE (PSI)	STRIPPER FLOW (MGALS)	STRIPPER OPERATOR INITIALS	
7 AM	280	ON	280	280	ON	280	280	280	618	855	882	882	NOT WORKING	NOT WORKING	1035	Campbell	
8 AM	281	NO	NO	NO	NO	NO	NO	NO	600	860	1653	1653	WORKING	WORKING	84		
9 AM	279	READING	READING	READING	READING	READING	READING	READING	630	880	885	885	*****	*****	85		
10 AM	281	*****	*****	*****	*****	*****	*****	*****	607	857	885	885	*****	*****	129		
11 AM	280	*****	*****	*****	*****	*****	*****	*****	1149	854	892	892	*****	*****	171		
12 PM	280	*****	*****	*****	*****	*****	*****	*****	636	849	877	877	*****	*****	210		
1 PM	281	*****	*****	*****	*****	*****	*****	*****	636	850	878	878	*****	*****	260		
2 PM	281	*****	*****	*****	*****	*****	*****	*****	610	850	0001	0001	*****	*****	305		
3 PM																	
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
 Wells # 2 & 4 Down.



# TOWN OF OYSTER BAY

DEPARTMENT OF PUBLIC WORKS  
GROUNDWATER TREATMENT FACILITY

## DAILY OPERATIONS WORKSHEET

DAY SHIFT

DATE

10/27/08

TIME	WELL 1				WELL 2				WELL 3				WELL 4				SUPERVISOR/ OPERATOR INITIALS	
	FLOW	DOWN	ON	NO	FLOW	DOWN	ON	NO	FLOW	DOWN	ON	NO	FLOW	DOWN	ON	NO		
7 AM	281	NO	ON	NO	857	NO	ON	NO	611	NO	ON	NO	001	NO	ON	NO	1:037	45377
8 AM	280	NO	ON	NO	855	NO	ON	NO	1156	NO	ON	NO	892	WORKING	ON	NO	036	u
9 AM	279	READING	READING	READING	853	READING	READING	READING	629	READING	READING	READING	901	*****	*****	*****	077	u
10 AM	280	*****	*****	*****	867	*****	*****	*****	618	*****	*****	*****	883	*****	*****	*****	129	u
11 AM	280	*****	*****	*****	853	*****	*****	*****	1154	*****	*****	*****	892	*****	*****	*****	161	u
12 PM	279	*****	*****	*****	853	*****	*****	*****	630	*****	*****	*****	885	*****	*****	*****	206	u
1 PM	280	*****	*****	*****	856	*****	*****	*****	616	*****	*****	*****	918	*****	*****	*****	253	u
2 PM	280	*****	*****	*****	857	*****	*****	*****	1142	*****	*****	*****	896	*****	*****	*****	291	u
3 PM																		
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

REMARKS

NOTES

- 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.
- 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.















**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-11-5-08

TIME	WELL # 10 OPERATION				WELL # 11 OPERATION				WELL # 12 OPERATION				AIR STRIPPER OPERATING PARAMETERS				SUPERVISOR OPERATOR INITIALS
	DOWN FLOW	WELL FLOW	ON	ON	DOWN FLOW	WELL FLOW	ON	ON	DOWN FLOW	WELL FLOW	ON	ON	SYSTEM FLOW GPM	SYSTEM PRESSURE PSI	SYSTEM FLOW GPM	SYSTEM PRESSURE PSI	
7 AM			ON	ON													
8 AM	222	NO	NO	NO	1091	659	6001	WORKING	NOT WORKING	000.							
9 AM	216	READING	READING	READING	1164	1194	1655	*****	*****	25.							
10 AM	221	*****	*****	*****	1084	653	6001	*****	*****	65.							
11 AM	198	*****	*****	*****	1053	1172	889	*****	*****	110.							
12 PM	195	*****	*****	*****	1014	1179	883	*****	*****	162.							
1 PM	197	*****	*****	*****	1057	1150	887	*****	*****	210							
2 PM	194	*****	*****	*****	1061	600	887	*****	*****	263							
3 PM																	
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
 Wells # 4 Down.  
 Well # 7 on AT 12:45.

*cc: [unclear]*































**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE

11-22-08

TIME	INLET FLOW		OUTLET FLOW		STRIPPER FLOW		PRESSURE FILTER FLOW		TOTAL FLOW		OPERATOR		SUPERVISOR	
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	INITIALS	INITIALS	
7 AM	216	216	ON	READY TO	1081	1162	920	NOT WORKING	NOT WORKING	1070	145	Camb	rk	
8 AM	215	215	NO	NO	1077	689	0002	WORKING	WORKING	925				
9 AM	214	214	READING	READING	1074	650	0001	*****	*****	920				
10 AM	216	216	*****	*****	1086	639	925	*****	*****	134				
11 AM	214	214	*****	*****	1075	642	948	*****	*****	135				
12 PM	215	215	*****	*****	1082	1165	897	*****	*****	230				
1 PM	214	214	*****	*****	1083	1164	904	*****	*****	275				
2 PM	215	215	*****	*****	1085	1160	915	*****	*****	320				
3 PM														
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

**NOTES**

- 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.
- 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**

7 211  
8 209  
9 210  
10 212  
11 208  
12 208  
1 210  
2 210  
272





**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 11-25-08

TIME	INLET FLOW		MIDDLE FLOW		OUTLET FLOW		PRESSURE		STRIPPER		SYSTEM FLOW		TOTAL FLOW		SUPERVISOR
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
7 AM	211	DOWN	NO	1067	640	877	NOT WORKING	NOT WORKING	2510	2663	2703	2750	2797	2840	JOE SWANICK
8 AM	210	NO	NO	1087	641	897	WORKING	WORKING	2663	2610	2703	2750	2797	2840	
9 AM	204	READING	READING	1080	1104	903	*****	*****	2610	2653	2703	2750	2797	2840	
10 AM	211	*****	*****	1078	1162	910	*****	*****	2653	2703	2750	2797	2840		
11 AM	212	*****	*****	1080	648	911	*****	*****	2703	2750	2797	2840			
12 PM	210	*****	*****	1079	642	896	*****	*****	2750	2797	2840				
1 PM	210	*****	*****	1076	1160	908	*****	*****	2797	2840					
2 PM	209	*****	*****	1072	1152	901	*****	*****	2840						
3 PM															
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
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**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE

11.27.08

HOLIDAY

TIME	INLET FLOW		OUTLET FLOW		STRIPPER FLOW		STRIPPER PRESSURE		STRIPPER FLOW		STRIPPER PRESSURE		SUPERVISOR INITIALS	
	ON	NO	ON	NO	ON	NO	ON	NO	ON	NO	ON	NO	ON	NO
7 AM	0.0		ON						NOT					
8 AM			NO						WORKING					
9 AM			READING						*****					
10 AM			*****						*****					
11 AM			*****						*****					
12 PM			*****						*****					
1 PM			*****						*****					
2 PM			*****						*****					
3 PM			*****						*****					
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

REMARKS

Plant on Auto  
 THANKSGIVING

NOTES

- 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.
- 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.









**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE

12/2/08

TIME	VALVE POSITION		PRESSURE (PSI)		FLOW (GPM)		TEMPERATURE (°F)		PH		OPERATOR		REMARKS
	ON	DOWN	ON	NO	ON	NO	ON	NO	ON	NO	NAME	INITIALS	
7 AM	210	DOWN	ON	NO	1065	934	660	934	NOT WORKING	NOT WORKING			Surface
8 AM	282	NO	NO	NO	1093	942	1152	942	WORKING	WORKING			044
9 AM	000	READING	READING	READING	000	000	000	000	*****	*****			077
10 AM	000	*****	*****	*****	000	000	000	000	*****	*****			077
11 AM	000	*****	*****	*****	000	000	000	000	*****	*****			077
12 PM	211	*****	*****	*****	1002	939	000	939	*****	*****			108
1 PM	211	*****	*****	*****	1019	928	1192	928	*****	*****			151
2 PM	211	*****	*****	*****	1022	000	653	000	*****	*****			195
3 PM													
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**REMARKS**

WES 3 7 AM  
 8:45 Joe turned 8 AM  
 at plant - 9 AM  
 10 AM  
 11 AM  
 12 PM  
 1 PM  
 2 PM  
 3 PM

**NOTES**

1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.



**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-4-08

TIME	WELL LOCATION		WELL STATUS		WELL DEPTH		WELL TYPE		WELL OPERATING PARAMETERS		SUPERVISOR
	WELL NO.	WELL NAME	ON/OFF	FLY/NO FLY	DEPTH (FT)	TYPE	FLOW (GPM)	PRESSURE (PSI)	NOT WORKING	WORKING	
7 AM	211		ON	NO FLY	1144	655	0001		NOT	WORKING	122. Campbell
8 AM	212		NO	NO FLY	1150	1161	933		WORKING	WORKING	46
9 AM	210		READING	NO FLY	1144	1003	934		*****	*****	94
10 AM	212		*****	NO FLY	1153	663	912		*****	*****	142
11 AM	214		*****	NO FLY	1172	1117	947		*****	*****	189
12 PM	213		*****	NO FLY	1147	654	0001		*****	*****	230
1 PM	211		*****	NO FLY	1152	687	941		*****	*****	277
2 PM	209		*****	NO FLY	1162	1183	932		*****	*****	218
3 PM											
AVERAGE									NA	NA	NA

**NOTES**  
1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**

7 217  
8 213  
9 212  
10 210  
11 112  
12 210  
1 210  
2 210  
3 210

**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-5-08

TIME	ON		OFF		ON	OFF	PRESSURE (PSI)		FLOW (MGD)		NOT WORKING	NOT WORKING	SUPERVISOR OPERATOR INITIALS
	READING	NA	READING	NA			READING	NA	READING	NA			
7 AM	211	NA	211	NA	1127	NA	650	NA	938	NA	NOT WORKING	NA	CERIASNAKE
8 AM	212	NA	212	NA	1135	NA	652	NA	0001	NA	WORKING	NA	
9 AM	211	NA	211	NA	1129	NA	650	NA	920	NA	*****	NA	
10 AM	209	NA	209	NA	1131	NA	660	NA	923	NA	*****	NA	
11 AM	211	NA	211	NA	1135	NA	607	NA	940	NA	*****	NA	
12 PM	209	NA	209	NA	1157	NA	608	NA	933	NA	*****	NA	
1 PM	212	NA	212	NA	1164	NA	0001	NA	937	NA	*****	NA	
2 PM	212	NA	212	NA	1168	NA	1080	NA	906	NA	*****	NA	
3 PM	212	NA	212	NA		NA		NA		NA	*****	NA	
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 3%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**

7-213  
 8-212  
 9-210  
 10-209  
 11-211  
 12-210  
 1-213  
 2-212







**TOWN OF JOYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE

12/10/08

TIME	INLET PRESSURE		INLET FLOW		INLET TEMPERATURE		INLET PH		INLET TDS		INLET CHLORINE		INLET SULFIDE		INLET AMMONIA		INLET NITRATE		INLET OPERATOR INITIALS		
	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	
7 AM	192	NO	114	114	000	000	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888
8 AM	192	NO	114	114	000	000	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888	0888
9 AM	192	READING	110	110	000	000	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981
10 AM	189	*****	110	110	000	000	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915
11 AM	189	*****	110	110	000	000	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915
12 PM	192	*****	110	110	000	000	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915
1 PM	192	*****	110	110	000	000	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915
2 PM	188	*****	110	110	000	000	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915
3 PM	188	*****	110	110	000	000	915	915	915	915	915	915	915	915	915	915	915	915	915	915	915
AVERAGE																					

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
 W 2 2 PM 314  
 8 AM 214  
 9 AM 215  
 10 AM 213  
 11 AM 214  
 Joe reset effluent  
 8 AM 212  
 1 PM 213  
 2 PM 212

**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-11-08

TIME	INLET FLOW		PRESSURE		INLET FLOW		PRESSURE		INLET FLOW		PRESSURE		INLET FLOW		PRESSURE		OPERATOR INITIALS
	NA	NA	ON	NO	NA	NA	ON	NO	NA	NA	ON	NO	NA	NA	ON	NO	
7 AM	188	NO	ON	NO	1065	NA	ON	NO	607	NA	920	NA	NOT WORKING	NA	NA	NA	710. CEM/Bzr/ko
8 AM	189	NO	NO	NO	1067	NA	NO	NO	1166	NA	932	NA	WORKING	NA	NA	NA	45.
9 AM	188	READING	READING	READING	1069	NA	READING	READING	657	NA	940	NA	*****	NA	NA	NA	91.
10 AM	189	*****	*****	*****	1093	NA	*****	*****	1139	NA	928	NA	*****	NA	NA	NA	131.
11 AM	187	*****	*****	*****	1084	NA	*****	*****	1180	NA	916	NA	*****	NA	NA	NA	122.
12 PM	189	*****	*****	*****	1093	NA	*****	*****	1132	NA	938	NA	*****	NA	NA	NA	215.
1 PM	188	*****	*****	*****	1073	NA	*****	*****	0001	NA	926	NA	*****	NA	NA	NA	264
2 PM	189	*****	*****	*****	1072	NA	*****	*****	1151	NA	941	NA	*****	NA	NA	NA	306
3 PM																	
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
 7 212  
 8 211  
 9 210  
 10 213  
 11 214  
 12 215  
 1 216  
 2 214





**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-14-08.

TIME	WELL HEAD PRESSURE		WELL HEAD PRESSURE		AIR STRIPPER OPERATING PARAMETERS		FLOW RATE (GPM)	PRESSURE (PSI)	TEMPERATURE (°F)	OPERATOR INITIALS
	ON	NO	ON	NO	NOT WORKING	WORKING				
7 AM	187	ON	1064	ON	1158	937	NOT WORKING	106J	135	106J, Cembale
8 AM	190	NO	1089		657	941	WORKING	135	178	
9 AM	188	READING	1098		600	930	*****	135	223	
10 AM	185	*****	1072		600	920	*****	135	275	
11 AM	192	*****	1071		1130	972	*****	135	308	
12 PM	189	*****	1066		654	000	*****	135		
1 PM	192	*****	1054		655	000	*****	135		
2 PM	198	*****	1023	↓	656	945	*****	135		
3 PM										
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**NOTES**

- 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.
- 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**

Well # 4 Down  
 7 216  
 8 216  
 9 214  
 10 219  
 11 219  
 12 215  
 1 215  
 2019

**TOWN OF JOYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-15-08

TIME	INLET FLOW		MIDDLE FLOW		OUTLET FLOW		PRESSURE FILTER FLOW		STRIPPER FLOW		EFFLUENT FLOW		SUPERVISOR OPERATOR INITIALS
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
7 AM	190	ON	ON	ON	1065	655	937	NOT WORKING	NOT WORKING	1065	40	Joe Swinnick	
8 AM	191	NO	NO	NO	1066	1130	940	WORKING	WORKING	40			
9 AM	189	READING	READING	READING	1068	1132	941	*****	*****	82			
10 AM	190	*****	*****	*****	1065	1128	942	*****	*****	128			
11 AM	188	*****	*****	*****	1067	650	943	*****	*****	170			
12 PM	188	*****	*****	*****	1062	654	940	*****	*****	265			
1 PM	189	*****	*****	*****	1068	1130	939	*****	*****	263			
2 PM	187	*****	*****	*****	1066	1131	930	*****	*****	300			
3 PM													
AVERAGE													

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**

7	215
8	217
9	216
10	215
11	214
12	215
1	215
2	214

**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-16-08

TIME	WELL OPERATING		WELL STOPPED		WELL OPERATING		WELL STOPPED		WELL OPERATING		WELL STOPPED		SUPERVISOR
	ON	NO	ON	NO	ON	NO	ON	NO	ON	NO	ON	NO	
7 AM	189	NO	ON	NO	1065	1159	937	NOT WORKING	1080	NOT WORKING	Joe Swinnick		
8 AM	190	NO	ON	NO	1063	657	930	WORKING	44	WORKING			
9 AM	188	READING	READING	READING	1064	658	941	*****	88	*****			
10 AM	188	*****	*****	*****	1064	000	000	*****	136	*****			
11 AM	189	*****	*****	*****	1065	1130	942	*****	180	*****			
12 PM	188	*****	*****	*****	1065	655	943	*****	225	*****			
1 PM	187	*****	*****	*****	1064	658	938	*****	278	*****			
2 PM	190	*****	*****	*****	1064	656	945	*****	310	*****			
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**

7 212  
 8 215  
 9 214  
 10 215  
 11 215  
 12 216  
 1 214





**TOWN OF JOYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-19-08

TIME	INLET FLOW (GPM)		OUTLET FLOW (GPM)		DIFFERENCE (%)		PRESSURE (PSI)		TEMPERATURE (°F)		PH		TDS (PPM)		SODIUM (PPM)		CHLORINE (PPM)		SILICA (PPM)		SULFIDE (PPM)		AMBIENT OPERATING PARAMETERS		SUPERVISOR INITIALS	
	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET		
7 AM		DOWN	ON	ON																						
8 AM		NO	NO	NO																						
9 AM		READING	READING	READING																						
10 AM		*****	*****	*****																						
11 AM		*****	*****	*****																						
12 PM		*****	*****	*****																						
1 PM		*****	*****	*****																						
2 PM		*****	*****	*****																						
3 PM		*****	*****	*****																						
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
 Plants Down. on going work  
 AT Golf course.

**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-20-08

TIME	INLET FLOW		OUTLET FLOW		PRESSURE		TEMPERATURE		PH		CHLORINE		OPERATING PARAMETERS		SUPERVISOR	
	GAUGE	UNIT	GAUGE	UNIT	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET		
7 AM		DOWN		ON										NOT		C. B. B. C.
8 AM		NO		NO										WORKING		
9 AM		READING		READING										WORKING		
10 AM		*****		*****										*****		
11 AM		*****		*****										*****		
12 PM		*****		*****										*****		
1 PM		*****		*****										*****		
2 PM		*****		*****										*****		
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 8%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
 PLANT DOWN ON GOING  
 WORK AT STATE PARK  
 Golf course.

**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-22-08

TIME	WELL #1001		WELL #1002		WELL #1003		WELL #1004		WELL #1005		WELL #1006		WELL #1007		WELL #1008		WELL #1009		WELL #1010		SUPERVISOR
	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	
7 AM		ON		ON																	Cem <sup>10-22-08</sup>
8 AM		NO		NO																	
9 AM		READING		READING																	
10 AM		*****		*****																	
11 AM		*****		*****																	
12 PM		*****		*****																	
1 PM		*****		*****																	
2 PM		*****		*****																	
3 PM		*****		*****																	
AVERAGE																					

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
 Plant down on going  
 work at Golf course.



**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12/23/08

TIME	WELL OPERATIONAL		WELL FLOW		WELL PRESSURE		WELL TEMPERATURE		WELL PH		WELL TDS		WELL CHLORINE		WELL SULFIDE		WELL AMMONIA		WELL NITRATE		WELL OPERATOR INITIALS		
	DOWN	ON	NO	NO	READING	READING	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
7 AM		ON		ON																			
8 AM		NO		NO																			
9 AM		READING		READING																			
10 AM		*****		*****																			
11 AM		*****		*****																			
12 PM		*****		*****																			
1 PM		*****		*****																			
2 PM		*****		*****																			
3 PM		*****		*****																			
AVERAGE																							

*Doug Rubin*

**NOTES**

- 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.
- 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**

*Plant closed down since 12/17 because of work done in golf course.*

**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-24-08

TIME	INFLUENT FLOW (MGD)		EFFLUENT FLOW (MGD)		STRIPPER FLOW (MGD)		PRESSURE FILTER FLOW (MGD)		TOTAL FLOW (MGD)		OPERATOR INITIALS
	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	DOWN	ON	
7 AM		ON		ON				NOT			CENB
8 AM	NO	NO		NO				WORKING			
9 AM	READING	READING		READING				*****			
10 AM	*****	*****		*****				*****			
11 AM	*****	*****		*****				*****			
12 PM	*****	*****		*****				*****			
1 PM	*****	*****		*****				*****			
2 PM	*****	*****		*****				*****			
3 PM	*****	*****		*****				*****			
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

**NOTES**

- 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.
- 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**

Plant Down on gain  
 work at Golf course.





**TOWN OF OYSTER BAY**  
 DEPARTMENT OF PUBLIC WORKS  
 GROUNDWATER TREATMENT FACILITY

**DAILY OPERATIONS WORKSHEET**  
 DAY SHIFT

DATE 12-28-08

TIME	VALVE POSITION		PRESSURE		FLOW		TEMPERATURE		PH		ALARM		OPERATOR	
	DOWN	UP	ON	NO	READING	NO	READING	NO	READING	NO	READING	NO	READING	NO
7 AM														
8 AM														
9 AM														
10 AM														
11 AM														
12 PM														
1 PM														
2 PM														
3 PM														
4 PM														
AVERAGE														

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
 Plant Down or going work  
 AT GOLF COURSE.

**TOWN OF OYSTER BAY**  
**DEPARTMENT OF PUBLIC WORKS**  
**GROUNDWATER TREATMENT FACILITY**

**DAILY OPERATIONS WORKSHEET**  
**DAY SHIFT**

DATE 12-29-08

TIME	INLET FLOW		OUTLET FLOW		STRIPPERS OPERATING PARAMETERS		STRIPPERS OPERATING PARAMETERS	STRIPPERS OPERATING PARAMETERS	STRIPPERS OPERATING PARAMETERS
	DOWN	ON	DOWN	ON	NOT WORKING	WORKING			
7 AM									
8 AM									
9 AM									
10 AM									
11 AM									
12 PM									
1 PM									
2 PM									
3 PM									
4 PM									
AVERAGE									

*Day Below.*

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**

**TOWN OF OYSTER BAY**  
 DEPARTMENT OF PUBLIC WORKS  
 GROUNDWATER TREATMENT FACILITY

**DAILY OPERATIONS WORKSHEET**  
 DAY SHIFT

DATE 12-30-08

TIME	INLET FLOW		OUTLET FLOW		PRESSURE		TEMPERATURE		PH		CONDUCTIVITY		DAILY OPERATING PARAMETERS		SUPERVISOR OPERATOR INITIALS
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
7 AM	184	DOWN	ON	ON	∞	1104	617	934	NOT WORKING	NOT WORKING	45	45	DAVID DENTON		
8 AM	172	NO	NO	NO		1135	620	931	WORKING	WORKING	92	92			
9 AM	180	READING	READING	READING		1140	613	930	*****	*****	138	138			
10 AM	181	*****	*****	*****		1139	621	935	*****	*****	185	185			
11 AM	175	*****	*****	*****		1135	615	934	*****	*****	229	229			
12 PM	181	*****	*****	*****		0001	620	930	*****	*****	277	277			
1 PM	176	*****	*****	*****	W	1135	625	935	*****	*****	310	310			
2 PM	178	*****	*****	*****		0001	623	940	*****	*****	360	360			
3 PM															
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

**NOTES**  
 1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 5%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

**REMARKS**  
 7 193  
 8 194  
 9 193  
 10 190  
 11 192  
 12 193  
 1 192  
 2 197.

**TOWN OF OYSTER BAY**  
 DEPARTMENT OF PUBLIC WORKS  
 GROUNDWATER TREATMENT FACILITY

**DAILY OPERATIONS WORKSHEET**  
 DAY SHIFT

DATE 12-31-08

TIME	DOWN		ON		OFF		ON		OFF		ON		OFF		ON		OFF		SUPERVISOR OPERATOR INITIALS	
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
7 AM	190						904	606	928										1057	CEMBSTK
8 AM	172						1149	610	953										48	
9 AM	173						1115	1147	1744										96	
10 AM	165						1101	638	913										140	
11 AM	170						1103	635	920										185	
12 PM																				
1 PM																				
2 PM																				
3 PM																				
AVERAGE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**REMARKS**

7 216  
 8 195  
 9 193  
 10 194  
 11 195  
 12 196  
 1/2 A Day  
 7-11 AM

**NOTES**

1- THE SYSTEM FLOW, STRIPPER FLOW AND PRESSURE FILTER FLOW MUST BE EQUAL WITHIN 8%.  
 2- EFFLUENT FLOW MEASURES THE TOTAL FLOW THROUGH THE FACILITY. OPERATOR SHALL RESET THE GAUGE TO ZERO AT THE BEGINNING OF EACH SHIFT.

## **APPENDIX B**

### **FACILITY MONITORING RESULTS October through December, 2008**

Town of Oyster Bay  
 Old Bethpage Landfill Remedial Action Plan  
 Organic Self-Monitoring Results - Fourth Quarter 2008  
 Influent and Effluent Results, in micrograms per Liter

DATE	Total VOC Concentration	Summary of VOCs Detected Most Frequently and/or at Highest Concentrations									Effluent TVOC Concentration
		BENZENE	VCM	PCE	1,1-DCA	TCE	1,2-DCE	1,1-DCE	1,2-DCA	111-TCA	
10/1/2008	<b>123</b>	ND	ND	21.3	0.7	78.2	7.9	5.8	0.5	8.8	0.5
10/3/2008	<b>124</b>	ND	ND	20.9	0.7	78.9	8.0	5.7	0.5	8.8	0.5
10/6/2008	<b>125</b>	ND	ND	23.0	0.7	78.2	8.8	5.5	0.5	7.8	2.5
10/8/2008	<b>132</b>	ND	ND	27.1	0.0	82.9	9.9	4.9	ND	6.8	8.8
10/10/2008	<b>124</b>	ND	ND	23.6	0.8	76.6	9.2	5.6	0.4	8.1	0.9
10/13/2008	<b>124</b>	0.1	0.5	21.8	0.8	77.8	8.4	5.9	0.3	8.6	0.7
10/15/2008	<b>123</b>	0.2	0.5	22.4	0.7	77.1	8.2	5.5	0.6	7.8	1.1
10/17/2008	<b>120</b>	0.2	0.5	22.3	0.7	75.0	7.9	5.3	0.4	7.7	0.5
10/22/2008	<b>101</b>	ND	ND	20.1	ND	63.5	7.9	5.3	ND	4.0	NA
10/27/2008	<b>114</b>	0.1	ND	18.2	ND	78.6	6.8	6.1	ND	3.9	2.1
10/29/2008	<b>118</b>	0.1	ND	18.8	ND	78.8	7.1	6.3	0.3	6.4	8.9
11/3/2008	<b>118</b>	0.1	0.4	18.4	ND	82.5	5.3	5.4	0.2	5.9	1.9
11/5/2008	<b>107</b>	0.1	0.2	16.5	ND	74.9	4.6	5.1	0.2	5.5	0.4
11/7/2008	<b>96.6</b>	0.3	0.3	15.3	ND	66.6	4.3	4.4	0.4	5.0	6.1
11/10/2008	<b>86.0</b>	0.1	0.3	14.2	ND	58.8	4.8	3.8	ND	4.0	0.5
11/12/2008	<b>81.8</b>	0.1	ND	13.7	ND	56.4	4.7	3.5	ND	3.4	0.4
11/14/2008	<b>84.7</b>	0.3	0.3	14.1	ND	57.2	4.8	3.8	0.3	3.9	1.8
11/17/2008	<b>33.8</b>	ND	0.1	2.9	ND	28.3	1.0	0.7	0.2	0.6	1.0
11/19/2008	<b>87.5</b>	0.1	0.4	14.0	ND	57.9	5.7	4.3	0.3	4.8	1.2
11/21/2008	<b>93.3</b>	0.2	0.5	15.1	ND	61.0	5.9	4.4	1.0	5.2	13.7
11/24/2008	<b>79.0</b>	0.1	0.3	13.8	ND	51.3	5.1	3.7	0.2	4.5	1.6
11/26/2008	<b>83.7</b>	0.2	0.5	14.6	ND	52.7	5.6	4.1	0.8	5.2	0.6
12/1/2008	<b>70.9</b>	ND	ND	11.7	ND	45.7	4.5	3.4	1.2	4.4	3.0
12/3/2008	<b>86.9</b>	ND	ND	14.3	ND	56.8	5.4	4.1	1.2	5.1	1.9
12/5/2008	<b>80.8</b>	ND	ND	13.8	ND	52.5	5.0	4.2	0.6	4.7	0.9
12/8/2008	<b>88.1</b>	ND	ND	17.1	ND	55.3	6.5	4.0	1.1	4.1	5.1
12/10/2008	<b>95.2</b>	ND	ND	18.3	ND	61.1	6.8	4.4	0.3	4.3	4.8
12/12/2008	<b>98.1</b>	ND	ND	18.2	ND	63.7	7.0	4.6	0.3	4.3	1.2
12/15/2008	<b>35.8</b>	0.1	0.3	6.8	ND	22.6	2.1	1.5	0.5	1.9	1.1
12/17/2008	<b>78.7</b>	0.2	0.5	14.0	ND	49.1	5.8	4.0	0.8	4.3	1.2
12/29/2008	<b>93.1</b>	ND	ND	25.5	ND	60.6	3.9	3.1	ND	ND	7.7
12/31/2008	<b>87.9</b>	ND	ND	13.9	ND	66.8	4.1	3.1	ND	ND	NA
Averages:	<b>96.7</b>	0.2	0.2	17.1	0.2	63.4	6.0	4.4	0.4	5.3	2.8

Notes:

Bolded values are higher than Consent Decree limit of 50 ug/L total VOCs for ground water.

Effluent concentrations are lower than Consent Decree limit of 100 ug/L total VOCs.

ND = Not Detected.

NA = Not Available.

Town of Oyster Bay  
 Old Bethpage Landfill Remedial Action Plan  
 Inorganic Self-Monitoring Results, October-December 2008

Effluent Results, in milligrams per Liter

Parameter	Limit	Avg. Conc.	10/1/2008	10/8/2008	10/15/2008	10/22/2008	10/29/2008	11/5/2008	11/12/2008	11/19/2008	11/26/2008	12/3/2008	12/10/2008	12/17/2008	12/31/2008
pH	6.5 - 8.5	7.1	7.0	7.1	7.1	7.1	7.0	7.0	7.0	7.0	7.2	7.1	7.1	7.1	7.1
Iron	0.6	0.16	0.16	0.13	0.14	0.14	0.15	0.32	0.13	0.11	0.13	0.18	0.14	0.16	0.13
Manganese	0.6	<b>1.0</b>	0.4	<b>1.8</b>	<b>2.0</b>	0.3	0.3	0.5	<b>0.8</b>	<b>0.8</b>	<b>2.0</b>	<b>1.5</b>	0.4	0.4	<b>0.7</b>
Iron and Manganese	1.0	<b>1.1</b>	0.6	<b>1.9</b>	<b>2.1</b>	0.4	0.5	0.8	0.9	0.9	<b>2.1</b>	<b>1.7</b>	0.5	0.6	0.8
Dissolved Oxygen	No Std.	12.4	12.0	12.9	11.8	11.0	13.0	17.8	12.3	10.6	14.0	10.6	10.5	10.5	13.0
Ammonia	No Std.	6.5	5.8	6.8	6.6	7.8	6.3	3.1	7.7	6.6	7.0	7.2	6.2	6.5	7.3
Chloride	500	148	156	138	150	151	142	130	163	149	165	146	134	150	137

Notes: Limits are ground water discharge limits in NYSDEC TOGS 1.1.1.  
 Bold results exceed limits.

## **APPENDIX C**

### **RECOVERY WELL MONITORING RESULTS October through December, 2008**

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-1 (October 1, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	2.1
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.3
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.9
Dichlorobenzene, o,m&p	9***	0.9
1,1 Dichloroethane	5	0.1
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.5
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.1
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.1
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-1 (October 9, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	4.6
Benzene	1***	0.2
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.5
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.1
Dichlorobenzene, o&p	6***	1.6
Dichlorobenzene, o,m&p	9***	1.6
1,1 Dichloroethane	5	0.1
1,2 Dichloroethane	0.6***	0.1
1,1 Dichloroethene	5***	0.6
cis-1,2 Dichloroethene	5	0.7
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.2
Vinyl Chloride	2	0.3
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-1 (October 17, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	4.5
Benzene	1***	0.2
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.4
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	1.8
Dichlorobenzene, o,m&p	9***	1.8
1,1 Dichloroethane	5	0.2
1,2 Dichloroethane	0.6***	0.2
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.7
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	0.6
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.2
Vinyl Chloride	2	0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-1 (November 10, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	4.9
Benzene	1***	0.2
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.6
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	2.0
Dichlorobenzene, o,m&p	9***	2.6
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.7
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.3
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.3
Vinyl Chloride	2	0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-1 (November 14, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	3.3
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.5
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	1.2
Dichlorobenzene, o,m&p	9***	1.5
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.6
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.2
Vinyl Chloride	2	0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-1 (November 21, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	4.9
Benzene	1***	0.2
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.2
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.1
Dichlorobenzene, o&p	6***	1.7
Dichlorobenzene, o,m&p	9***	2.1
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	0.1
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.7
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	0.6
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.3
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.4
Vinyl Chloride	2	0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-1 (December 5, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	4.0
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.4
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	1.2
Dichlorobenzene, o,m&p	9***	1.4
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	0.1
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.5
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	1.1
Vinyl Chloride	2	0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-1 (December 15, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	5.9
Benzene	1***	0.2
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.8
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.1
Dichlorobenzene, o&p	6***	2.4
Dichlorobenzene, o,m&p	9***	2.9
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.8
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.3
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.6
Vinyl Chloride	2	0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-2 (October 1, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	2.1
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.3
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.9
Dichlorobenzene, o,m&p	9***	0.9
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.5
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.1
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
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Recovery Well RW-2 (October 9, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	2.6
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.4
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	1.2
Dichlorobenzene, o,m&p	9***	1.2
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.6
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.1
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.1
Vinyl Chloride	2	0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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Groundwater Treatment Facility  
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Recovery Well RW-2 (October 15, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	2.0
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.4
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	1.2
Dichlorobenzene, o,m&p	9***	1.2
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.3
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.1
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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Recovery Well RW-2 (November 10, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	0.5
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.2
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.5
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

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Recovery Well RW-2 (November 14, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	1.0
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.5
Dichlorobenzene, o,m&p	9***	0.5
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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# TOWN OF OYSTER BAY

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Recovery Well RW-2 (November 21, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	1.2
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.2
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.2
Dichlorobenzene, o,m&p	9***	0.6
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.3
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.1
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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# TOWN OF OYSTER BAY

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Recovery Well RW-2 (December 5, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	0.9
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.2
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.4
Dichlorobenzene, o,m&p	9***	0.4
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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Recovery Well RW-2 (December 15, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	1.6
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.3
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.8
Dichlorobenzene, o,m&p	9***	0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.4
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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# TOWN OF OYSTER BAY

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Recovery Well RW-3 (October 1, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	152.3
Benzene	1***	0.2
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.5
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.6
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	1.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	9.4
cis-1,2 Dichloroethene	5	12.4
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	30.5
Toluene	5	<0.1
1,1,1 Trichloroethane	5	12.7
Trichloroethylene	5	84.8
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
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Recovery Well RW-3 (October 9, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	51.9
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.4
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.5
Dichlorobenzene, o&p	6***	0.9
Dichlorobenzene, o,m&p	9***	0.9
1,1 Dichloroethane	5	0.5
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	0.3
cis-1,2 Dichloroethene	5	7.9
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	12.6
Toluene	5	<0.1
1,1,1 Trichloroethane	5	0.9
Trichloroethylene	5	27.9
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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# TOWN OF OYSTER BAY

Department of Public Works  
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Recovery Well RW-3 (October 17, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	56.4
Benzene	1***	0.3
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.5
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.5
Dichlorobenzene, o&p	6***	1.0
Dichlorobenzene, o,m&p	9***	1.0
1,1 Dichloroethane	5	0.4
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	0.3
cis-1,2 Dichloroethene	5	7.3
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	16.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	0.9
Trichloroethylene	5	29.0
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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Recovery Well RW-3 (November 10, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	55.7
Benzene	1***	0.3
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.4
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.4
Dichlorobenzene, o&p	6***	0.9
Dichlorobenzene, o,m&p	9***	0.9
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	0.5
cis-1,2 Dichloroethene	5	6.4
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	14.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	0.6
Trichloroethylene	5	32.0
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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# TOWN OF OYSTER BAY

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Recovery Well RW-3 (November 14, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	55.9
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.4
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.6
Dichlorobenzene, o&p	6***	0.9
Dichlorobenzene, o,m&p	9***	0.9
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	0.6
cis-1,2 Dichloroethene	5	6.5
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	14.6
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	32.3
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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# TOWN OF OYSTER BAY

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Recovery Well RW-3 (November 21, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	62.4
Benzene	1***	0.3
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.5
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.6
Dichlorobenzene, o&p	6***	0.7
Dichlorobenzene, o,m&p	9***	0.7
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	0.5
1,1 Dichloroethene	5***	0.5
cis-1,2 Dichloroethene	5	7.8
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	0.3
Tetrachloroethene	5***	13.1
Toluene	5	<0.1
1,1,1 Trichloroethane	5	1.0
Trichloroethylene	5	37.1
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
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Recovery Well RW-3 (December 5, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	54.7
Benzene	1***	0.3
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.6
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.5
Dichlorobenzene, o&p	6***	0.5
Dichlorobenzene, o,m&p	9***	0.5
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	0.3
1,1 Dichloroethene	5***	0.5
cis-1,2 Dichloroethene	5	7.1
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	0.3
Tetrachloroethene	5***	12.6
Toluene	5	<0.1
1,1,1 Trichloroethane	5	0.9
Trichloroethylene	5	31.1
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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# TOWN OF OYSTER BAY

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Recovery Well RW-3 (December 15, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	70.0
Benzene	1***	0.4
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.6
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.4
Dichlorobenzene, o&p	6***	1.1
Dichlorobenzene, o,m&p	9***	1.2
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	0.6
cis-1,2 Dichloroethene	5	8.1
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	0.3
Tetrachloroethene	5***	16.8
Toluene	5	<0.1
1,1,1 Trichloroethane	5	0.7
Trichloroethylene	5	40.9
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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Recovery Well RW-4 (October 1, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	29.0
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.4
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	1
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	24.0
Toluene	5	<0.1
1,1,1 Trichloroethane	5	0.4
Trichloroethylene	5	3.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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# TOWN OF OYSTER BAY

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Recovery Well RW-4 (October 9, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	35.2
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.4
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	1.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	29.7
Toluene	5	<0.1
1,1,1 Trichloroethane	5	0.4
Trichloroethylene	5	3.5
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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# TOWN OF OYSTER BAY

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Recovery Well RW-4 (October 17, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	9.7
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.3
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	8.6
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.8
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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# TOWN OF OYSTER BAY

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Recovery Well RW-4 (November 10, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	7.4
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	6.1
Toluene	5	0.2
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.8
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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# TOWN OF OYSTER BAY

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Recovery Well RW-4 (November 14, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	6.5
Benzene	1***	0.2
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.2
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	5.3
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.7
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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# TOWN OF OYSTER BAY

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Recovery Well RW-4 (November 21, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	0.9
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.6
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.3
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
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Recovery Well RW-4 (December 5, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	1.3
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.8
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.5
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
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Recovery Well RW-4 (December 15, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	2.9
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	1.9
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.8
Vinyl Chloride	2	0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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# TOWN OF OYSTER BAY

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Recovery Well RW-5 (October 1, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	359
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	1.0
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	1.8
1,2 Dichloroethane	0.6***	1.0
1,1 Dichloroethene	5***	18.2
cis-1,2 Dichloroethene	5	18.6
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	50.1
Toluene	5	<0.1
1,1,1 Trichloroethane	5	22.8
Trichloroethylene	5	245
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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# TOWN OF OYSTER BAY

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Recovery Well RW-5 (October 9, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	298
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	1.2
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	1.8
1,2 Dichloroethane	0.6***	1.4
1,1 Dichloroethene	5***	17.0
cis-1,2 Dichloroethene	5	19.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	44.6
Toluene	5	<0.1
1,1,1 Trichloroethane	5	21.4
Trichloroethylene	5	191
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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# TOWN OF OYSTER BAY

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Recovery Well RW-5 (October 17, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	388
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.7
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	1.6
1,2 Dichloroethane	0.6***	1.0
1,1 Dichloroethene	5***	15.9
cis-1,2 Dichloroethene	5	16.3
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	54.4
Toluene	5	<0.1
1,1,1 Trichloroethane	5	20.4
Trichloroethylene	5	278
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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# TOWN OF OYSTER BAY

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Recovery Well RW-5 (November 10, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	297
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.9
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	1.0
1,1 Dichloroethene	5***	17.7
cis-1,2 Dichloroethene	5	14.4
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	1.3
Tetrachloroethene	5***	51.8
Toluene	5	<0.1
1,1,1 Trichloroethane	5	19.1
Trichloroethylene	5	191
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-5 (November 14, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	280
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.6
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	17.9
cis-1,2 Dichloroethene	5	14.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	1.2
Tetrachloroethene	5***	47.8
Toluene	5	<0.1
1,1,1 Trichloroethane	5	19.1
Trichloroethylene	5	179
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-5 (November 21, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	364
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	1.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	1.1
1,2 Dichloroethane	0.6***	3.0
1,1 Dichloroethene	5***	19.3
cis-1,2 Dichloroethene	5	18.5
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	1.6
Tetrachloroethene	5***	45.9
Toluene	5	0.5
1,1,1 Trichloroethane	5	20.8
Trichloroethylene	5	252
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-5 (December 5, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	269
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	1.0
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	1.3
1,2 Dichloroethane	0.6***	2.1
1,1 Dichloroethene	5***	15.5
cis-1,2 Dichloroethene	5	16.9
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	38.7
Toluene	5	<0.1
1,1,1 Trichloroethane	5	16.6
Trichloroethylene	5	177
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-5 (December 15, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	368
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	1.4
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	2.1
1,1 Dichloroethene	5***	16.7
cis-1,2 Dichloroethene	5	16.3
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	1.6
Tetrachloroethene	5***	58.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	19.2
Trichloroethylene	5	252
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

## **APPENDIX D**

**“Quarterly Monitoring Report  
Fourth Quarter 2008 Results  
October through December 2008  
Old Bethpage Landfill  
Old Bethpage, New York”**

**Gannett Fleming, October 2009**

# TOWN OF OYSTER BAY



*Prepared By*  
GANNETT FLEMING  
480 Forest Avenue  
Locust Valley, NY 11560  
Office: 516-671-8440  
Fax: 516-671-3349  
www.gannettfleming.com

*Office Contacts*  
Vincent Frisina, P.E.  
Michael Wagner

*GF Project No.*  
49725.001

## QUARTERLY MONITORING REPORT

### FOURTH QUARTER 2008 RESULTS

### OCTOBER THROUGH DECEMBER 2008

### OLD BETHPAGE LANDFILL

### OLD BETHPAGE, NEW YORK

October 2009

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## **1.0 INTRODUCTION**

This report was prepared at the request of the Town of Oyster Bay to summarize and evaluate the data collected in accordance with the requirements of the Remedial Action Plan (RAP), Appendix I of the 1988 Record of Decision (New York State Department of Environmental Conservation [NYSDEC] and the United States Environmental Protection Agency [USEPA]). The purpose of the quarterly groundwater-monitoring program is to assess the progress of the groundwater cleanup and to determine whether the termination criteria set forth in the RAP have been met.

The groundwater remediation system at the Old Bethpage Landfill became operational on April 1, 1992. Geraghty & Miller initiated monthly hydraulic monitoring approximately 30 days after system start-up and monthly groundwater quality monitoring three months after system start-up. The frequency of hydraulic monitoring was reduced to quarterly beginning with the October 1993 sampling round.

## **2.0 WATER-LEVEL MEASUREMENTS AND MAPPING**

A synoptic round of water-level measurements was taken in monitoring and recovery wells by Gannett Fleming (GF) on October 28, 2008. The depth to water and water-level elevation data are summarized in Table 1. The data was used to create the water table, shallow potentiometric, and deep potentiometric zone groundwater flow maps shown on Figures 1, 2, and 3, respectively. Each map shows the water-level elevation contours, limiting flow lines, and the approximate extent of the volatile organic compound (VOC) plume.

Water-level elevations were measured in recovery wells RW-01, 02, 03, 04, and 05. Water-level elevations in the recovery wells decreased an average of 0.24 feet from the third quarter 2008 reporting period. The groundwater flow maps are presented in Figures 1, 2, and 3.

Water-level elevations in the monitoring wells decreased an average of 0.23 feet from the third quarter reporting period. The greatest change in water-level elevations occurred at monitoring well MW-09B, decreasing by 1.79 feet. The fourth quarter recovery well and monitoring well water-level elevations are summarized in Table 1.

The average system pumpage for the quarter was approximately 736 gallons per minute (gpm). The groundwater treatment facility was off-line intermittently for repairs during the fourth quarter, but the system flow was sufficient to control the VOC plume. The fourth quarter pumpage data and recovery well downtime are summarized in Table 2.

### **3.0 GROUNDWATER SAMPLING AND CONTAMINANT DISTRIBUTION**

Gannett Fleming sampled monitoring wells LF-1, M-30B-R, MW-05B, MW-06A, MW-06B, MW-06C, MW-06E, MW-06F, MW-07B, MW-08A, MW-08B, MW-09B, MW-09C, MW-11A, MW-11B and OBS-1 between October 29 and 31, 2008 in accordance with the *Protocols for Sampling Groundwater under the Old Bethpage Solid Waste Disposal Complex Remedial Action Plan* prepared by Geraghty & Miller. Quality assurance/quality control (QA/QC) samples were analyzed, including one field blank, one field duplicate, and three trip blanks. Samples collected for metals and wet chemistry were analyzed by H2M Laboratories. Samples for VOCs were analyzed by the Town of Oyster Bay Environmental Laboratory. The analytical results are summarized in Tables 3 through 8 and the laboratory data reports are provided in Appendix A.

A dedicated submersible pump, a Grundfos<sup>®</sup> Redi-Flo II pump, or disposable bailer was used to purge and sample each monitoring well. All non-dedicated down-well equipment was cleaned before use and after sampling each well by washing with a laboratory grade detergent solution and rinsing with potable water to minimize the possibility of cross contamination.

Field measurements of pH, temperature, conductivity, and turbidity were collected following the purge of each of three well volumes. Field observations and measurements are documented on the well sampling logs provided in Appendix B.

In addition to the wells sampled by GF, VOC analytical data from Claremont split sampling has been provided by LKB and incorporated the tables and figures presented in this report.

The analytical data was used to create the VOC plume maps shown on Figures 4, 5, and 6. The fourth quarter 2008 analytical data are summarized below and are compared to the third quarter 2008 sampling results.

### **3.1 Volatile Organic Compound Plume**

The extent and distribution of VOCs detected during the third quarter 2008 and fourth quarter 2008 sampling rounds are similar. Total VOC concentrations detected during GF's October round of sampling ranged from less than the laboratory detection limit to 9.6 micrograms per liter ( $\mu\text{g/L}$ ), with the highest concentration found in the sample from MW-08A. The sample from OBS-1 had the next highest total VOC concentration followed in decreasing order by, MW-06C, MW-11A, MW-11B, LF-1, MW-06B, MW-06E, MW-06E, and MW-08B. VOCs were not detected in the samples from M-30B-R, MW-05B, MW-06A, MW-06F, MW-07B, MW-09B, and MW-09C.

#### **3.1.1 Volatile Halogenated Organics (VHO) Group**

Seven (7) VHO compounds (chlorobenzene, chloroform, dichlorobenzene-o,m&p, cis-1,2-dichloroethene, tetrachloroethene, trichloroethylene, and vinyl chloride) were detected during GF's fourth quarter 2008 sampling round. Trichloroethylene was found in 5 of 16 samples. Distribution of VHOs during GF's third quarter 2008 and fourth quarter 2008 sampling rounds are similar. The following table presents concentrations of total VHOs found during GF's third and fourth quarter 2008.

<b>Well</b>	<b>3<sup>rd</sup> Quarter 2008</b>	<b>4<sup>th</sup> Quarter 2008</b>
MW-08A	9.3 $\mu\text{g/L}$	9.6 $\mu\text{g/L}$
OBS-1	6.2 $\mu\text{g/L}$	6.3 $\mu\text{g/L}$
MW-06C	0.6 $\mu\text{g/L}$	3 $\mu\text{g/L}$
MW-11A	5 $\mu\text{g/L}$	2.8 $\mu\text{g/L}$
MW-11B	1.6 $\mu\text{g/L}$	2.1 $\mu\text{g/L}$
LF-1	1.5 $\mu\text{g/L}$	1.4 $\mu\text{g/L}$
MW-06E	1.6 $\mu\text{g/L}$	1.1 $\mu\text{g/L}$
MW-08B	1.4 $\mu\text{g/L}$	0.9 $\mu\text{g/L}$
MW-06B	1.9 $\mu\text{g/L}$	0.6 $\mu\text{g/L}$

VHO concentrations were not found in the samples from the remaining monitoring wells at concentrations exceeding the laboratory detection limit.

Figure 4 illustrates the approximate extent and distribution of total VHOs in groundwater during the fourth quarter 2008 sampling event.

### 3.1.2 Aromatic Hydrocarbons

The extent and distribution of aromatic hydrocarbons during GF's fourth quarter 2008 round are similar compared to the previous monitoring round. Six aromatic hydrocarbons were detected: benzene, n-butylbenzene, chlorobenzene, dichlorobenzene-o,m&p, ethylbenzene, and isopropylbenzene. The sample from monitoring well MW-06C had the highest total aromatic hydrocarbons concentration (4.4 µg/L). The following table shows concentrations of total aromatic hydrocarbons found during GF's third and fourth quarter 2008.

<b>Well</b>	<b>3<sup>rd</sup> Quarter 2008</b>	<b>4<sup>th</sup> Quarter 2008</b>
MW-06C	0.9 µg/L	4.4 µg/L
OBS-1	3 µg/L	3.5 µg/L
LF-1	1.5 µg/L	1.4 µg/L
MW-06B	3.1 µg/L	1.1 µg/L
MW-06E	1.1 µg/L	0.9 µg/L
MW-11B	1.2 µg/L	0.8 µg/L

Total aromatic hydrocarbon levels were not found in the samples from the remaining monitoring wells at concentrations exceeding the laboratory detection limit.

Figure 5 illustrates the approximate extent and distribution of aromatic hydrocarbons during the fourth quarter 2008 sampling event.

### 3.1.3 Tetrachloroethene (PCE)

PCE was found above the detection limits in 4 of the 16 wells sampled. The following table presents the concentrations of PCE found during GF's third and fourth quarter 2008.

<b>Well</b>	<b>3<sup>rd</sup> Quarter 2008</b>	<b>4<sup>th</sup> Quarter 2008</b>
MW-08A	8.7 µg/L	8.9 µg/L
MW-08B	1.1 µg/L	0.9 µg/L
MW-11A	0.6 µg/L	0.5 µg/L
OBS-1	0.4 µg/L	0.3 µg/L

PCE was not found in the remaining monitoring wells at concentrations exceeding the laboratory detection limit.

Figure 6 illustrates the approximate extent and distribution of PCE during the fourth quarter 2008 sampling event.

### **3.2 Inorganic Analyte Plume**

The fourth quarter 2008 sampling results were largely consistent with the concentrations seen historically onsite. Alkalinity, ammonia (as N), bicarbonate (as CaCO<sub>3</sub>), carbonate (as CaCO<sub>3</sub>), chloride, cyanide, hardness (as CaCO<sub>3</sub>), nitrate (as N), phenol and sulfate concentrations for the fourth quarter 2008 were compared to historical data taken for each well from 2006 through 2007. The following table shows instances where the fourth quarter concentration of a leachate parameter was considered outside of the statistical norm:

Well	Constituent	Historic Mean	Standard Deviation ( $\sigma$ )	Historic Mean + 2 $\sigma$	4 <sup>th</sup> Quarter 2008
LF-1	Chloride	166.63	27.47	221.56	234.00
	Hardness	110.75	23.64	158.03	180.00
	Nitrate	0.10	0.00	0.10	0.13
M-30B-R	Chloride	39.55	8.67	56.89	64.80
MW-05B	Alkalinity	37.85	1.63	41.10	45.30
	Bicarbonate	37.85	1.63	41.10	48.00
MW-06F	Ammonia	0.23	0.13	0.49	0.55
	Chloride	165.63	10.70	187.03	206.00
	Nitrate	0.74	0.46	1.66	2.41
MW-07B	Chloride	19.73	1.56	22.85	83.00
	Hardness	24.50	3.45	31.40	90.00
	Nitrate	4.45	0.28	5.00	6.82
MW-09B	Hardness	60.25	8.97	78.19	84.00
	Nitrate	4.84	0.46	5.76	6.37
MW-09C	Sulfate	16.89	0.75	18.39	19.50
MW-11B	Chloride	5.61	0.51	6.63	8.19
	Nitrate	0.75	0.04	0.83	0.86
OBS-1	Chloride	99.44	4.66	108.75	126.00

The leachate parameters in the remaining monitoring wells were found at concentrations which did not exceed the well's historical mean plus two times its standard deviation ( $\sigma$ ).

### **3.3 Quality Assurance/Quality Control**

One duplicate, one field blank, and two trip blank samples were analyzed for QA/QC purposes. The duplicate sample collected from well MW-06E showed good correlation with the primary sample for all parameters. The field blank sample taken on October 31<sup>st</sup> did not report any analyte concentrations above detection limits.

In addition, several VOCs were reported in the October 29<sup>th</sup> and October 30<sup>th</sup> trip blanks. Benzene, n-butylbenzene, dichlorobenzene-o,m&p, and vinyl chloride were all detected at levels near or below the method detection limit. These low levels did not affect the accuracy of the

sample results reported. O-xylene was detected a value of 0.2 µg/L in the October 29<sup>th</sup> trip blank however, it was not detected in any of the samples collected.

## **4.0 FINDINGS**

1. Although the groundwater treatment facility was off-line intermittently for repairs during the fourth quarter, the average estimated system flow of 736 gpm was sufficient to control the VOC plume.
2. The extent and distribution of VHOs, aromatic hydrocarbons, PCE and leachate parameters detected during the third and fourth quarter 2008 sampling rounds are similar.
3. The fourth quarter 2008 leachate sampling results were largely consistent with the concentrations seen historically onsite. Monitoring wells LF-1, M-30B-R, MW-05B, MW-06F, MW-07B, MW-09B, MW-09C, MW-11B, and OBS-1 showed results which were outside expectations based on historical data.

## **5.0 RECOMMENDATIONS**

1. Continue to evaluate water-level trends and assess the operation and maintenance of the monitoring well network in response to local and regional water-level elevations.
2. Continue the quarterly hydraulic monitoring and water-quality sampling to track the effectiveness of the remediation system.

**TABLE 1  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - FOURTH QUARTER 2008**

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
EW-02A	8/26/2008	157.14	91.58		65.56
EW-02A	10/28/2008	157.14	91	0.58	66.14
EW-02B	8/26/2008	157.61	91.8		65.81
EW-02B	10/28/2008	157.61	91.95	-0.15	65.66
EW-02C	8/26/2008	157.54	91.56		65.98
EW-02C	10/28/2008	157.54	91.97	-0.41	65.57
LF-1	8/26/2008	111.40	44.2		67.20
LF-1	10/28/2008	111.40	44.53	-0.33	66.87
LF-2	8/26/2008	118.70	51.96		66.74
LF-2	10/28/2008	118.70	51.8	0.16	66.90
LF-3	8/26/2008	126.50	57.5		69.00
LF-3	10/28/2008	126.50	57.45	0.05	69.05
LF-4	8/26/2008	149.93	NM		NM
LF-4	10/28/2008	149.93	NM	N/A	NM
M-29A-R	8/26/2008	157.50	90.1		67.40
M-29A-R	10/28/2008	157.50	NM	N/A	NM
M-29B	8/26/2008	157.41	NM		NM
M-29B	10/28/2008	157.41	81.54	N/A	75.87

MP - Measuring Point (Typically Top of Casing)

MSL - Mean Sea Level

NM - Not Measured

N/A - Not Applicable

**TABLE 1  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - FOURTH QUARTER 2008**

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
MW-30A	8/26/2008	151.2	NM		NM
MW-30A	10/28/2008	151.2	NM	N/A	NM
M-30B-R	8/26/2008	154.51	85.28		69.23
M-30B-R	10/28/2008	154.51	85.75	-0.47	68.76
MW-05A	8/26/2008	137.13	71.42		65.71
MW-05A	10/28/2008	137.13	72.95	-1.53	64.18
MW-05B	8/26/2008	138.43	72.65		65.78
MW-05B	10/28/2008	138.43	71.71	0.94	66.72
MW-06A	8/26/2008	160.24	94.92		65.32
MW-06A	10/28/2008	160.24	95.05	-0.13	65.19
MW-06B	8/26/2008	160.39	95.15		65.24
MW-06B	10/28/2008	160.39	95.44	-0.29	64.95
MW-06C	8/26/2008	159.99	94.72		65.27
MW-06C	10/28/2008	159.99	95.2	-0.48	64.79
MW-06D	8/26/2008	160.39	95.15		65.24
MW-06D	10/28/2008	160.39	94.75	0.40	65.64
MW-06E	8/26/2008	160.88	95.75		65.13
MW-06E	10/28/2008	160.88	95.16	0.59	65.72

MP - Measuring Point (Typically Top of Casing)

MSL - Mean Sea Level

NM - Not Measured

N/A - Not Applicable

**TABLE 1  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - FOURTH QUARTER 2008**

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
MW-06F	8/26/2008	159.88	95.2		64.68
MW-06F	10/28/2008	159.88	95.95	-0.75	63.93
MW-07A	8/26/2008	148.44	85.84		62.60
MW-07A	10/28/2008	148.44	86.18	-0.34	62.26
MW-07B	8/26/2008	147.94	85.4		62.54
MW-07B	10/28/2008	147.94	86.5	-1.10	61.44
MW-08A	8/26/2008	134.94	69.11		65.83
MW-08A	10/28/2008	134.94	69.55	-0.44	65.39
MW-08B	8/26/2008	134.24	68.15		66.09
MW-08B	10/28/2008	134.24	69.15	-1.00	65.09
MW-08C	8/26/2008	135.72	69.57		66.15
MW-08C	10/28/2008	135.72	69.83	-0.26	65.89
MW-09A	8/26/2008	153.35	88.98		64.37
MW-09A	10/28/2008	153.35	89.91	-0.93	63.44
MW-09B	8/26/2008	153.28	89.1		64.18
MW-09B	10/28/2008	153.28	90.89	-1.79	62.39
MW-09C	8/26/2008	153.53	91.7		61.83
MW-09C	10/28/2008	153.53	91.75	-0.05	61.78

MP - Measuring Point (Typically Top of Casing)

MSL - Mean Sea Level

NM - Not Measured

N/A - Not Applicable

**TABLE 1  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - FOURTH QUARTER 2008**

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
MW-09D	8/26/2008	152.95	91.32		61.63
MW-09D	10/28/2008	152.95	91.15	0.17	61.80
MW-10A	8/26/2008	161.28	95.68		65.60
MW-10A	10/28/2008	161.28	96.08	-0.40	65.20
MW-10B	8/26/2008	161.12	96.33		64.79
MW-10B	10/28/2008	161.12	96.35	-0.02	64.77
MW-10C	8/26/2008	160.27	95.6		64.67
MW-10C	10/28/2008	160.27	95.5	0.10	64.77
MW-10D	8/26/2008	161.17	96.68		64.49
MW-10D	10/28/2008	161.17	96.4	0.28	64.77
MW-11A	8/26/2008	80.19	23.8		56.39
MW-11A	10/28/2008	80.19	23.21	0.59	56.98
MW-11B	8/26/2008	79.91	22.98		56.93
MW-11B	10/28/2008	79.91	23.26	-0.28	56.65
N-9980	8/26/2008	80.46	24.01		56.45
N-9980	10/28/2008	80.46	24.18	-0.17	56.28
OBS-1	8/26/2008	110.61	49.06		61.55
OBS-1	10/28/2008	110.61	49.15	-0.09	61.46

MP - Measuring Point (Typically Top of Casing)

MSL - Mean Sea Level

NM - Not Measured

N/A - Not Applicable

**TABLE 1  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - FOURTH QUARTER 2008**

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
OBS-2	8/26/2008	105.26	NM		NM
OBS-2	10/28/2008	105.26	NM	N/A	NM
RW-01	8/26/2008	110.94	57.2		53.74
RW-01	10/28/2008	110.94	57.36	-0.16	53.58
RW-02	8/26/2008	145.31	83		62.31
RW-02	10/28/2008	145.31	83.2	-0.20	62.11
RW-03	8/26/2008	120.92	71.34		49.58
RW-03	10/28/2008	120.92	71.7	-0.36	49.22
RW-04	8/26/2008	144.82	82.22		62.60
RW-04	10/28/2008	144.82	82.6	-0.38	62.22
RW-05	8/26/2008	149.74	97.1		52.64
RW-05	10/28/2008	149.74	97	-0.10	52.74
TW-1	8/26/2008	121.12	NM		NM
TW-1	10/28/2008	121.12	52.22	N/A	68.90
TW-2	8/26/2008	117.52	50.43		67.09
TW-2	10/28/2008	117.52	50.8	-0.37	66.72
TW-3-R	8/26/2008	133.93	67.29		66.64
TW-3-R	10/28/2008	133.93	67.3	-0.01	66.63

MP - Measuring Point (Typically Top of Casing)

MSL - Mean Sea Level

NM - Not Measured

N/A - Not Applicable

**TABLE 2**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER REMEDIATION SYSTEM PUMPAGE RECORDS**  
**FOURTH QUARTER 2008**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

Date	System Flow (gpm)	Remarks
10/1 to 10/28	862	Recovery Well RW-2 off-line. Recovery Well RW-4 valve mostly closed.
10/29/2009	214	GTF off-line 16 hours to replace RW-4 valve.
10/30 to 11/4	0	GTF off-line to replace RW-4 valve.
11/5/2008	700	GTF off-line 8 hours.
11/6 to 11/9	898	Recovery Well RW-4 off-line.
11/10 to 11/28	1088	GTF on-line.
11/29/2008	534	GTF off-line 14 hr.
11/30/2008	0	GTF off-line.
12/1/2009	621	GTF off-line 10 hr.
12/2/2009	891	GTF off-line 3 hr.
12/3/2009	940	GTF off-line 3 hr.
12/4 to 12/16	1099	GTF on-line.
12/17 to 12/29	0	GTF off-line during valve work in Bethpage State Park.
12/30/2009	1130	GTF on-line.
Average:	736	

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**VOLATILE HALOGENATED ORGANIC COMPOUNDS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	EW-01A	EW-01B	EW-01C	EW-02A	EW-02B
	DATE	Not Sampled	Not Sampled	10/14/2008	10/14/2008	10/14/2008
	TYPE			Primary	Primary	Primary
Bromodichloromethane	(µg/l)			0.3 U	0.3 U	0.3 U
Bromoform	(µg/l)			0.2 U	0.2 U	0.2 U
Carbon tetrachloride	(µg/l)			0.1 U	0.1 U	0.1 U
Chlorobenzene	(µg/l)			0.1 U	0.1 U	0.1 U
Chlorodibromomethane	(µg/l)			0.6 U	0.6 U	0.6 U
Chloroethane	(µg/l)			0.2 U	0.2 U	0.2 U
Chloroform	(µg/l)			0.1 U	0.1 U	0.1 U
Dichlorobenzene, o,m&p	(µg/l)			0.3	0.8 U	0.8 U
Dichlorodifluoromethane	(µg/l)			0.1 U	0.1 U	0.1 U
1,1-Dichloroethane	(µg/l)			0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	(µg/l)			0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	(µg/l)			0.3 U	0.3 U	0.3 U
trans-1,2-Dichloroethene	(µg/l)			0.3 U	0.3 U	0.3 U
cis-1,2-Dichloroethene	(µg/l)			0.2 U	0.3	0.2 U
1,2-Dichloropropane	(µg/l)			0.1 U	0.1 U	0.1 U
Methylene chloride	(µg/l)			0.2 U	0.2 U	0.2 U
Tetrachloroethene	(µg/l)			0.4	1.6	0.7
1,1,1-Trichloroethane	(µg/l)			0.1 U	0.1 U	0.1 U
Trichloroethylene	(µg/l)			0.2 U	0.9	0.2
Vinyl chloride	(µg/l)			0.2 U	0.4	0.2 U
Sum of Constituents	(µg/l)			0.7	3.2	0.9

Notes:

µg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**VOLATILE HALOGENATED ORGANIC COMPOUNDS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	EW-02C	EW-03A	EW-03B	EW-03C	MW-06D
	DATE	10/14/2008	10/14/2008	10/14/2008	10/14/2008	10/14/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Bromodichloromethane	(µg/l)	0.3 U				
Bromoform	(µg/l)	0.2 U				
Carbon tetrachloride	(µg/l)	0.1 U				
Chlorobenzene	(µg/l)	0.1 U				
Chlorodibromomethane	(µg/l)	0.6 U				
Chloroethane	(µg/l)	0.2 U				
Chloroform	(µg/l)	0.1 U				
Dichlorobenzene, o,m&p	(µg/l)	0.8 U				
Dichlorodifluoromethane	(µg/l)	0.1 U				
1,1-Dichloroethane	(µg/l)	0.2 U				
1,1-Dichloroethene	(µg/l)	0.4	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	(µg/l)	0.3 U				
trans-1,2-Dichloroethene	(µg/l)	0.3 U				
cis-1,2-Dichloroethene	(µg/l)	4.4	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	(µg/l)	0.1 U				
Methylene chloride	(µg/l)	0.2 U				
Tetrachloroethene	(µg/l)	0.9	0.2 U	0.2 U	0.4	0.2 U
1,1,1-Trichloroethane	(µg/l)	0.5	0.1 U	0.1 U	0.1 U	0.1 U
Trichloroethylene	(µg/l)	<b>6.5</b>	0.2 U	0.2 U	1.7	0.2 U
Vinyl chloride	(µg/l)	0.2 U				
Sum of Constituents	(µg/l)	12.7	ND	ND	2.1	ND

Notes:

mg/l - micrograms per liter (parts per billion)

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Results appearing bold indicate concentrations greater than the action level

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**VOLATILE HALOGENATED ORGANIC COMPOUNDS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-08C	MW-10B	MW-10C	MW-10D	LF-1
	DATE	10/14/2008	10/14/2008	10/14/2008	10/14/2008	10/31/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Bromodichloromethane	(µg/l)	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Bromoform	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chlorobenzene	(µg/l)	0.1	0.1 U	0.1 U	0.1 U	0.5
Chlorodibromomethane	(µg/l)	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Chloroethane	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroform	(µg/l)	0.1 U	0.1 U	0.2	0.6	0.1 U
Dichlorobenzene, o,m&p	(µg/l)	0.8 U	0.8 U	0.8 U	0.8 U	0.9
Dichlorodifluoromethane	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1-Dichloroethane	(µg/l)	0.2 U	0.2 U	0.3	0.2 U	0.2 U
1,1-Dichloroethene	(µg/l)	0.3 U	0.3 U	3.8	0.3 U	0.3 U
1,2-Dichloroethane	(µg/l)	0.3 U	0.3 U	0.3 U	<b>0.7</b>	0.3 U
trans-1,2-Dichloroethene	(µg/l)	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
cis-1,2-Dichloroethene	(µg/l)	0.2 U	0.2 U	2.7	3.2	0.2 U
1,2-Dichloropropane	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methylene chloride	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	(µg/l)	0.2 U	0.9	<b>18.1</b>	0.7	0.2 U
1,1,1-Trichloroethane	(µg/l)	0.1 U	0.1	4.8	0.3	0.1 U
Trichloroethylene	(µg/l)	0.2 U	0.8	<b>76.1</b>	<b>48.8</b>	0.2 U
Vinyl chloride	(µg/l)	0.2 U	0.2 U	0.2 U	<b>2.1</b>	0.2 U
Sum of Constituents	(µg/l)	0.1	1.8	106	56.4	1.4

Notes:

mg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**VOLATILE HALOGENATED ORGANIC COMPOUNDS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	M-30B-R	MW-05B	MW-06A	MW-06B	MW-06C
	DATE	10/29/2008	10/31/2008	10/30/2008	10/30/2008	10/30/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Bromodichloromethane	(µg/l)	0.3 U				
Bromoform	(µg/l)	0.2 U				
Carbon tetrachloride	(µg/l)	0.1 U				
Chlorobenzene	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	1.4
Chlorodibromomethane	(µg/l)	0.6 U				
Chloroethane	(µg/l)	0.2 U				
Chloroform	(µg/l)	0.1 U				
Dichlorobenzene, o,m&p	(µg/l)	0.8 U	0.8 U	0.8 U	0.6	1.4
Dichlorodifluoromethane	(µg/l)	0.1 U				
1,1-Dichloroethane	(µg/l)	0.2 U				
1,1-Dichloroethene	(µg/l)	0.3 U				
1,2-Dichloroethane	(µg/l)	0.3 U				
trans-1,2-Dichloroethene	(µg/l)	0.3 U				
cis-1,2-Dichloroethene	(µg/l)	0.2 U				
1,2-Dichloropropane	(µg/l)	0.1 U				
Methylene chloride	(µg/l)	0.2 U				
Tetrachloroethene	(µg/l)	0.2 U				
1,1,1-Trichloroethane	(µg/l)	0.1 U				
Trichloroethylene	(µg/l)	0.2 U				
Vinyl chloride	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U	0.2
Sum of Constituents	(µg/l)	ND	ND	ND	0.6	3

Notes:

mg/l - micrograms per liter (parts per billion)

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**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**VOLATILE HALOGENATED ORGANIC COMPOUNDS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-06E	MW-06E	MW-06F	MW-07B	MW-08A
	DATE	10/30/2008	10/30/2008	10/30/2008	10/29/2008	10/30/2008
	TYPE	Primary	Duplicate	Primary	Primary	Primary
Bromodichloromethane	(µg/l)	0.3 U				
Bromoform	(µg/l)	0.2 U				
Carbon tetrachloride	(µg/l)	0.1 U				
Chlorobenzene	(µg/l)	0.2	0.1	0.1 U	0.1 U	0.1 U
Chlorodibromomethane	(µg/l)	0.6 U				
Chloroethane	(µg/l)	0.2 U				
Chloroform	(µg/l)	0.1 U				
Dichlorobenzene, o,m&p	(µg/l)	0.7	0.6	0.8 U	0.8 U	0.8 U
Dichlorodifluoromethane	(µg/l)	0.1 U				
1,1-Dichloroethane	(µg/l)	0.2 U				
1,1-Dichloroethene	(µg/l)	0.3 U				
1,2-Dichloroethane	(µg/l)	0.3 U				
trans-1,2-Dichloroethene	(µg/l)	0.3 U				
cis-1,2-Dichloroethene	(µg/l)	0.2 U				
1,2-Dichloropropane	(µg/l)	0.1 U				
Methylene chloride	(µg/l)	0.2 U				
Tetrachloroethene	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U	<b>8.9</b>
1,1,1-Trichloroethane	(µg/l)	0.1 U				
Trichloroethylene	(µg/l)	0.2	0.2	0.2 U	0.2 U	0.7
Vinyl chloride	(µg/l)	0.2 U				
Sum of Constituents	(µg/l)	1.1	0.9	ND	ND	9.6

Notes:

mg/l - micrograms per liter (parts per billion)

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J - Estimated Value

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**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**VOLATILE HALOGENATED ORGANIC COMPOUNDS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-08B	MW-09B	MW-09C	MW-11A	MW-11B
	DATE	10/30/2008	10/29/2008	10/29/2008	10/29/2008	10/29/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Bromodichloromethane	(µg/l)	0.3 U				
Bromoform	(µg/l)	0.2 U				
Carbon tetrachloride	(µg/l)	0.1 U				
Chlorobenzene	(µg/l)	0.1 U				
Chlorodibromomethane	(µg/l)	0.6 U				
Chloroethane	(µg/l)	0.2 U				
Chloroform	(µg/l)	0.1 U	0.1 U	0.1 U	0.1	0.1 U
Dichlorobenzene, o,m&p	(µg/l)	0.8 U	0.8 U	0.8 U	0.8 U	0.8
Dichlorodifluoromethane	(µg/l)	0.1 U				
1,1-Dichloroethane	(µg/l)	0.2 U				
1,1-Dichloroethene	(µg/l)	0.3 U				
1,2-Dichloroethane	(µg/l)	0.3 U				
trans-1,2-Dichloroethene	(µg/l)	0.3 U				
cis-1,2-Dichloroethene	(µg/l)	0.2 U	0.2 U	0.2 U	1.3	0.2 U
1,2-Dichloropropane	(µg/l)	0.1 U				
Methylene chloride	(µg/l)	0.2 U				
Tetrachloroethene	(µg/l)	0.9	0.2 U	0.2 U	0.5	0.2 U
1,1,1-Trichloroethane	(µg/l)	0.1 U				
Trichloroethylene	(µg/l)	0.2 U	0.2 U	0.2 U	0.9	1.3
Vinyl chloride	(µg/l)	0.2 U				
Sum of Constituents	(µg/l)	0.9	ND	ND	2.8	2.1

Notes:

mg/l - micrograms per liter (parts per billion)

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ND - Not Detected

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**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**VOLATILE HALOGENATED ORGANIC COMPOUNDS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE TYPE	OBS-1 10/31/2008 Primary	Field Blank 10/31/2008 -	Trip Blank 10/29/2008 -	Trip Blank 10/30/2008 -
Bromodichloromethane	(µg/l)	0.3 U	0.3 U	0.3 U	0.3 U
Bromoform	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U
Chlorobenzene	(µg/l)	0.7	0.1 U	0.1 U	0.1 U
Chlorodibromomethane	(µg/l)	0.6 U	0.6 U	0.6 U	0.6 U
Chloroethane	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U
Chloroform	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U
Dichlorobenzene, o,m&p	(µg/l)	2.4	0.8 U	1.3	1.2
Dichlorodifluoromethane	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U
1,1-Dichloroethane	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	(µg/l)	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	(µg/l)	0.3 U	0.3 U	0.3 U	0.3 U
trans-1,2-Dichloroethene	(µg/l)	0.3 U	0.3 U	0.3 U	0.3 U
cis-1,2-Dichloroethene	(µg/l)	2	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U
Methylene chloride	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	(µg/l)	0.3	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U
Trichloroethylene	(µg/l)	0.4	0.2 U	0.2 U	0.2 U
Vinyl chloride	(µg/l)	0.5	0.2 U	0.2 U	1.2
Sum of Constituents	(µg/l)	6.3	ND	1.3	2.4

Notes:

mg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	EW-01A	EW-01B	EW-01C	EW-02A	EW-02B
	DATE TYPE	Not Sampled	Not Sampled	10/14/2008 Primary	10/14/2008 Primary	10/14/2008 Primary
Benzene	(µg/l)			0.1 U	0.1 U	0.1 U
n-Butylbenzene	(µg/l)			0.2	0.1 U	0.1 U
Chlorobenzene	(µg/l)			0.1 U	0.1 U	0.1 U
Dichlorobenzene, o,m&p	(µg/l)			0.3	0.8 U	0.8 U
Ethylbenzene	(µg/l)			0.1 U	0.1 U	0.1 U
Isopropylbenzene	(µg/l)			0.1	0.1 U	0.1 U
Toluene	(µg/l)			0.1 U	0.1 U	0.1 U
m/p-Xylene	(µg/l)			0.2 U	0.2 U	0.2 U
o-Xylene	(µg/l)			1.6 U	1.6 U	1.6 U
Sum of Constituents	(µg/l)	ND	ND	0.6	ND	ND

Notes:

µg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	EW-02C	EW-03A	EW-03B	EW-03C	MW-06D
	DATE	10/14/2008	10/14/2008	10/14/2008	10/14/2008	10/14/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Benzene	(µg/l)	0.1 U				
n-Butylbenzene	(µg/l)	0.1 U				
Chlorobenzene	(µg/l)	0.1 U				
Dichlorobenzene, o,m&p	(µg/l)	0.8 U				
Ethylbenzene	(µg/l)	0.1 U				
Isopropylbenzene	(µg/l)	0.1 U				
Toluene	(µg/l)	0.1 U				
m/p-Xylene	(µg/l)	0.2 U				
o-Xylene	(µg/l)	1.6 U				
Sum of Constituents	(µg/l)	ND	ND	ND	ND	ND

Notes:

µg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-08C	MW-10B	MW-10C	MW-10D	LF-1
	DATE	10/14/2008	10/14/2008	10/14/2008	10/14/2008	10/31/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Benzene	(µg/l)	0.1 U				
n-Butylbenzene	(µg/l)	0.1 U				
Chlorobenzene	(µg/l)	0.1	0.1 U	0.1 U	0.1 U	0.5
Dichlorobenzene, o,m&p	(µg/l)	0.8 U	0.8 U	0.8 U	0.8 U	0.9
Ethylbenzene	(µg/l)	0.1 U				
Isopropylbenzene	(µg/l)	0.1 U				
Toluene	(µg/l)	0.1 U				
m/p-Xylene	(µg/l)	0.2 U				
o-Xylene	(µg/l)	1.6 U				
Sum of Constituents	(µg/l)	0.1	ND	ND	ND	1.4

Notes:

µg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	M-30B-R	MW-05B	MW-06A	MW-06B	MW-06C
	DATE	10/29/2008	10/31/2008	10/30/2008	10/30/2008	10/30/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Benzene	(µg/l)	0.1 U	0.1 U	0.1 U	0.1	0.5
n-Butylbenzene	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	0.2
Chlorobenzene	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	1.4
Dichlorobenzene, o,m&p	(µg/l)	0.8 U	0.8 U	0.8 U	0.6	1.4
Ethylbenzene	(µg/l)	0.1 U	0.1 U	0.1 U	0.2	0.1 U
Isopropylbenzene	(µg/l)	0.1 U	0.1 U	0.1 U	0.2	0.9
Toluene	(µg/l)	0.1 U				
m/p-Xylene	(µg/l)	0.2 U				
o-Xylene	(µg/l)	1.6 U				
Sum of Constituents	(µg/l)	ND	ND	ND		4.4

Notes:

µg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-06E	MW-06E	MW-06F	MW-07B	MW-08A
	DATE	10/30/2008	10/30/2008	10/30/2008	10/29/2008	10/30/2008
	TYPE	Primary	Duplicate	Primary	Primary	Primary
Benzene	(µg/l)	0.1 U				
n-Butylbenzene	(µg/l)	0.1 U				
Chlorobenzene	(µg/l)	0.2	0.1	0.1 U	0.1 U	0.1 U
Dichlorobenzene, o,m&p	(µg/l)	0.7	0.6	0.8 U	0.8 U	0.8 U
Ethylbenzene	(µg/l)	0.1 U				
Isopropylbenzene	(µg/l)	0.1 U				
Toluene	(µg/l)	0.1 U				
m/p-Xylene	(µg/l)	0.2 U				
o-Xylene	(µg/l)	1.6 U				
Sum of Constituents	(µg/l)	0.9	0.7	ND	ND	ND

Notes:

µg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-08B	MW-09B	MW-09C	MW-11A	MW-11B
	DATE	10/30/2008	10/29/2008	10/29/2008	10/29/2008	10/29/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Benzene	(µg/l)	0.1 U				
n-Butylbenzene	(µg/l)	0.1 U				
Chlorobenzene	(µg/l)	0.1 U				
Dichlorobenzene, o,m&p	(µg/l)	0.8 U	0.8 U	0.8 U	0.8 U	0.8
Ethylbenzene	(µg/l)	0.1 U				
Isopropylbenzene	(µg/l)	0.1 U				
Toluene	(µg/l)	0.1 U				
m/p-Xylene	(µg/l)	0.2 U				
o-Xylene	(µg/l)	1.6 U				
Sum of Constituents	(µg/l)	ND	ND	ND	ND	0.8

Notes:

µg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	OBS-1	Field Blank	Trip Blank	Trip Blank	
	DATE	10/31/2008	10/31/2008	10/29/2008	10/30/2008	
	TYPE	Primary	-	-	-	
Benzene	(µg/l)	0.4	0.1 U	0.1 U	0.1	
n-Butylbenzene	(µg/l)	0.1 U	0.1 U	0.1 U	0.2	
Chlorobenzene	(µg/l)	0.7	0.1 U	0.1 U	0.1 U	
Dichlorobenzene, o,m&p	(µg/l)	2.4	0.8 U	1.3	1.2	
Ethylbenzene	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	
Isopropylbenzene	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	
Toluene	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	
m/p-Xylene	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U	
o-Xylene	(µg/l)	1.6 U	1.6 U	<b>7.2</b>	1.6 U	
Sum of Constituents	(µg/l)	3.5	ND	8.5	1.5	ND

Notes:

µg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 5**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**TETRACHLOROETHENE**

**PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive**

**SAMPLE TYPE: Water**

CONSTITUENT	SITE	EW-01A	EW-01B	EW-01C	EW-02A	EW-02B	EW-02C	EW-03A	EW-03B
	DATE	Not Sampled	Not Sampled	10/14/2008	10/14/2008	10/14/2008	10/14/2008	10/14/2008	10/14/2008
	TYPE			Primary	Primary	Primary	Primary	Primary	Primary
Tetrachloroethene	(ug/l)			0.4	1.6	0.7	0.9	0.2 U	0.2 U

CONSTITUENT	SITE	EW-03C	MW-06D	MW-08C	MW-10B	MW-10C	MW-10D	LF-1	M-30B-R
	DATE	10/14/2008	10/14/2008	10/14/2008	10/14/2008	10/14/2008	10/14/2008	10/31/2008	10/29/2008
	TYPE	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Tetrachloroethene	(µg/l)	0.4	0.2 U	0.2 U	0.9	<b>18.1</b>	0.7	0.2 U	0.2 U

CONSTITUENT	SITE	MW-05B	MW-06B	MW-06C	MW-06E	MW-06E	MW-06F	MW-07B	MW-08A
	DATE	10/31/2008	10/30/2008	10/30/2008	10/30/2008	10/30/2008	10/30/2008	10/29/2008	10/30/2008
	TYPE	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary	Primary
Tetrachloroethene	(µg/l)	0.2 U	8.9						

Notes:

µg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 5**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**TETRACHLOROETHENE**

**PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive**

**SAMPLE TYPE: Water**

CONSTITUENT	SITE	MW-08B	MW-09B	MW-09C	MW-11A	MW-11B	OBS-1	Field Blank	Trip Blank
	DATE	10/30/2008	10/29/2008	10/29/2008	10/29/2008	10/29/2008	10/31/2008	10/31/2008	10/29/2008
	TYPE	Primary	Primary	Primary	Primary	Primary	Primary	-	-
Tetrachloroethene	(µg/l)	0.9	0.2 U	0.2 U	0.5	0.2 U	0.3	0.2 U	0.2 U

CONSTITUENT	SITE	Trip Blank
	DATE	10/30/2008
	TYPE	-
Tetrachloroethene	(µg/l)	0.2 U

Notes:

NA – Not Αναλυθηκεδ

U - Analyzed for but not detected

Refer to attached page for additional descriptions of flags, qualifiers and abbreviations

Results appearing bold indicate concentrations greater than the action level

Refer to attached page for additional descriptions of flags, qualifiers and abbreviations

Results appearing bold indicate concentrations greater than the action level

**TABLE 6**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**RECOVERY WELL SAMPLING RESULTS - FOURTH QUARTER 2008**  
**VOLATILE HALOGENATED ORGANIC COMPOUNDS AND**  
**AROMATIC HYDROCARBONS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	RW-01	RW-02	RW-03	RW-04	RW-05
	DATE	10/27/2008	10/27/2008	10/27/2008	10/27/2008	10/27/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Bromodichloromethane	(µg/l)	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Bromoform	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chlorobenzene	(µg/l)	0.4	0.4	0.4	0.1 U	0.1 U
Chlorodibromomethane	(µg/l)	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Chloroethane	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroform	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dichlorobenzene, o,m&p	(µg/l)	1.1	1.2	0.8	0.8 U	0.8 U
Dichlorodifluoromethane	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1-Dichloroethane	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	(µg/l)	0.3 U	0.3 U	0.6	0.3 U	<b>18.7</b>
1,2-Dichloroethane	(µg/l)	0.3 U	0.3 U	0.3 U	0.3 U	<b>0.7</b>
trans-1,2-Dichloroethene	(µg/l)	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
cis-1,2-Dichloroethene	(µg/l)	0.6	0.6	<b>6.8</b>	0.2	<b>14.9</b>
1,2-Dichloropropane	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methylene chloride	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U	1
Tetrachloroethene	(µg/l)	0.2 U	0.2 U	<b>15.8</b>	<b>8.3</b>	<b>49.3</b>
1,1,1-Trichloroethane	(µg/l)	0.1 U	0.1 U	0.1 U	0.1 U	<b>20.2</b>
Trichloroethylene	(µg/l)	0.2	0.2	<b>36.9</b>	1.1	<b>304</b>
Vinyl chloride	(µg/l)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sum of Constituents	(µg/l)	2.3	2.4	61.3	9.6	408.8

Notes:

µg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 6**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**RECOVERY WELL SAMPLING RESULTS - FOURTH QUARTER 2008**  
**VOLATILE HALOGENATED ORGANIC COMPOUNDS AND**  
**AROMATIC HYDROCARBONS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	RW-01	RW-02	RW-03	RW-04	RW-05
	DATE	10/27/2008	10/27/2008	10/27/2008	10/27/2008	10/27/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Benzene	(µg/l)	0.1	0.1	0.3	0.1 U	0.1 U
n-Butylbenzene	(µg/l)	0.1 U				
Chlorobenzene	(µg/l)	0.4	0.4	0.4	0.1 U	0.1 U
Dichlorobenzene, o,m&p	(µg/l)	1.1	1.2	0.8	0.8 U	0.8 U
Ethylbenzene	(µg/l)	0.1 U				
Isopropylbenzene	(µg/l)	0.1 U				
Toluene	(µg/l)	0.1 U				
m/p-Xylene	(µg/l)	0.2 U				
o-Xylene	(µg/l)	1.6 U				
Sum of Constituents	(µg/l)	1.6	1.7	1.5	ND	ND

Notes:

µg/l - micrograms per liter (parts per billion)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	LF-1	M-30B-R	MW-05B	MW-06A	MW-06B
	DATE	10/31/2008	10/29/2008	10/31/2008	10/30/2008	10/30/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Alkalinity, Total (As CaCO <sub>3</sub> )	(mg/l)	188	6	45.3	3.2	164
Aluminum	(mg/l)	NA	0.2 U	0.2 U	0.82	0.2 U
Barium	(mg/l)	NA	0.2 U	0.2 U	0.2 U	0.2 U
Bicarbonate	(mg/l)	188	6	48	3.1	164
Calcium	(mg/l)	NA	8.25	15.7	1.01	2.41
Carbonate	(mg/l)	1 U	1 U	1 U	1 U	1 U
Chloride	(mg/l)	234	64.8	86.6	9.01	103
Chromium	(mg/l)	NA	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent	(mg/l)	NA	0.02 U	0.02 U	0.02 U	0.02 U
Copper	(mg/l)	NA	0.02 U	0.02 U	0.02 U	0.02 U
Cyanide	(mg/l)	10 U				
Hardness (As CaCO <sub>3</sub> )	(mg/l)	180	44	92	25	17
Iron	(mg/l)	NA	0.06	0.04	2.91	1.27
Lead	(µg/l)	NA	5 U	6.61	5 U	5 U
Magnesium	(mg/l)	NA	4.01	8.79	1.59	1.78
Manganese	(mg/l)	NA	0.02 U	5.54	0.02	0.02 U
Mercury	(µg/l)	NA	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	(mg/l)	NA	0.04 U	0.04 U	0.04 U	0.04 U
Nitrate as N	(mg/l)	0.13	3.25	3.55	0.69	0.1 U
Nitrite as N	(mg/l)	0.1 U	0.1 U	0.18	0.1 U	0.1 U
Nitrogen, Ammonia (As N)	(mg/l)	31	0.1 U	0.1 U	0.1 U	39
Nitrogen, Kjeldahl, Total	(mg/l)	31	0.1 U	0.1 U	0.28	40.1
Phenolics, Total Recoverable	(µg/l)	5 U	5 U	5 U	5 U	5 U
Potassium	(mg/l)	NA	2.93	11.1	2.11	35.1
Sodium	(mg/l)	NA	41.9	47.1	6.49	70.9
Sulfate	(mg/l)	12	17.3	20.1	5 U	5 U
Total Dissolved Solids	(mg/l)	508	158	248	39	248
Zinc	(mg/l)	NA	0.02 U	0.02 U	0.03	0.02 U

Notes:

µg/l - micrograms per liter (parts per billion)

mg/l - milligrams per liter (parts per million)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-06C	MW-06E	MW-06ED	MW-06F	MW-07B
	DATE	10/30/2008	10/30/2008	10/30/2008	10/30/2008	10/29/2008
	TYPE	Primary	Primary	Duplicate	Primary	Primary
Alkalinity, Total (As CaCO <sub>3</sub> )	(mg/l)	374	49.2	48	1 U	2.6
Aluminum	(mg/l)	0.2 U	0.2 U	0.2 U	0.2 U	2.17
Barium	(mg/l)	0.2 U	0.2 U	0.2 U	0.21	0.2 U
Bicarbonate	(mg/l)	374	49.2	48	1 U	2.5
Calcium	(mg/l)	13.2	20.8	21.1	36.7	12.4
Carbonate	(mg/l)	1 U	1 U	1 U	1 U	1 U
Chloride	(mg/l)	162	141	145	206	83
Chromium	(mg/l)	0.01 U				
Chromium, Hexavalent	(mg/l)	0.02 U				
Copper	(mg/l)	0.02 U				
Cyanide	(mg/l)	10 U				
Hardness (As CaCO <sub>3</sub> )	(mg/l)	72	72	84	125	90
Iron	(mg/l)	2.49	2.39	2.44	0.35	2.26
Lead	(µg/l)	5 U	5 U	5 U	5 U	5 U
Magnesium	(mg/l)	5.87	9.14	9.31	15.8	9.05
Manganese	(mg/l)	0.03	0.45	0.46	0.11	0.03
Mercury	(µg/l)	0.2 U	0.2 U	0.2 U	0.3	0.2 U
Nickel	(mg/l)	0.04 U				
Nitrate as N	(mg/l)	0.1 U	0.1	0.11	2.41	6.82
Nitrite as N	(mg/l)	0.1 U				
Nitrogen, Ammonia (As N)	(mg/l)	68.3	10.4	10.3	0.55	0.1 U
Nitrogen, Kjeldahl, Total	(mg/l)	95.9	9.77	10.1	0.81	0.12
Phenolics, Total Recoverable	(µg/l)	5 U	5 U	5 U	5 U	5 U
Potassium	(mg/l)	63.2	20.1	20.9	6.47	3.62
Sodium	(mg/l)	145	62.1	64	66.7	43.9
Sulfate	(mg/l)	10.8	25	24.8	5 U	7.05
Total Dissolved Solids	(mg/l)	539	377	361	554	275
Zinc	(mg/l)	0.02 U	0.07	0.06	0.03	0.02 U

Notes:

µg/l - micrograms per liter (parts per billion)

mg/l - milligrams per liter (parts per million)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-08A	MW-08B	MW-09B	MW-09C	MW-11A
	DATE	10/30/2008	10/30/2008	10/29/2008	10/29/2008	10/29/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Alkalinity, Total (As CaCO <sub>3</sub> )	(mg/l)	1 U	1.1	8	38.8	1.1
Aluminum	(mg/l)	1.75	0.2 U	0.2 U	0.2 U	0.2 U
Barium	(mg/l)	0.2 U				
Bicarbonate	(mg/l)	1 U	1.1	8	38.8	1.1
Calcium	(mg/l)	2.31	16.7	14.4	3.61	4.09
Carbonate	(mg/l)	1 U	1 U	1 U	1 U	1 U
Chloride	(mg/l)	8.16	83.8	59.5	71.2	8.75
Chromium	(mg/l)	0.01 U				
Chromium, Hexavalent	(mg/l)	0.02 U				
Copper	(mg/l)	0.02 U				
Cyanide	(mg/l)	10 U				
Hardness (As CaCO <sub>3</sub> )	(mg/l)	64	76	84	32	19
Iron	(mg/l)	4.18	0.04	0.07	0.22	0.02 U
Lead	(µg/l)	8	5 U	5 U	5 U	5 U
Magnesium	(mg/l)	1.42	5.65	6.5	6.24	2.34
Manganese	(mg/l)	0.03	0.76	0.26	0.09	0.02 U
Mercury	(µg/l)	0.2 U				
Nickel	(mg/l)	0.04 U				
Nitrate as N	(mg/l)	0.65	2.28	6.37	0.39	4.3
Nitrite as N	(mg/l)	0.1 U				
Nitrogen, Ammonia (As N)	(mg/l)	0.1 U	0.64	0.83	7.56	0.1 U
Nitrogen, Kjeldahl, Total	(mg/l)	0.55	0.65	0.83	7.77	0.1
Phenolics, Total Recoverable	(µg/l)	5 U	5 U	5 U	5 U	5 U
Potassium	(mg/l)	2.73	13.3	8.13	17.4	1.13
Sodium	(mg/l)	4.93	34.9	41.5	49.8	5.52
Sulfate	(mg/l)	5.32	19.2	23.2	19.5	5 U
Total Dissolved Solids	(mg/l)	39	244	183	191	60
Zinc	(mg/l)	0.04	0.06	0.02 U	0.02 U	0.02 U

Notes:

µg/l - micrograms per liter (parts per billion)

mg/l - milligrams per liter (parts per million)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-11B	OBS-1	Field Blank
	DATE	10/29/2008	10/31/2008	10/31/2008
	TYPE	Primary	Primary	-
Alkalinity, Total (As CaCO <sub>3</sub> )	(mg/l)	1 U	77	1 U
Aluminum	(mg/l)	0.2 U	0.2 U	0.2 U
Barium	(mg/l)	0.2 U	0.2 U	0.2 U
Bicarbonate	(mg/l)	1 U	77	1 U
Calcium	(mg/l)	1.71	21.1	0.2 U
Carbonate	(mg/l)	1 U	1 U	1 U
Chloride	(mg/l)	8.19	126	2 U
Chromium	(mg/l)	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent	(mg/l)	0.02 U	0.02 U	0.02 U
Copper	(mg/l)	0.02 U	0.02 U	0.02 U
Cyanide	(mg/l)	10 U	10 U	10 U
Hardness (As CaCO <sub>3</sub> )	(mg/l)	15	95	5 U
Iron	(mg/l)	0.05	0.08	0.02 U
Lead	(µg/l)	5 U	5 U	5 U
Magnesium	(mg/l)	0.9	15.8	0.2 U
Manganese	(mg/l)	0.02 U	1.42	0.02 U
Mercury	(µg/l)	0.2 U	0.2	0.2 U
Nickel	(mg/l)	0.04 U	0.04 U	0.04 U
Nitrate as N	(mg/l)	0.86	0.15	0.1 U
Nitrite as N	(mg/l)	0.1 U	0.1 U	0.1 U
Nitrogen, Ammonia (As N)	(mg/l)	0.1 U	4.06	0.1 U
Nitrogen, Kjeldahl, Total	(mg/l)	0.1 U	5.62	0.1 U
Phenolics, Total Recoverable	(µg/l)	5 U	5 U	5 U
Potassium	(mg/l)	0.78	10.6	0.2 U
Sodium	(mg/l)	4.69	85.4	0.2 U
Sulfate	(mg/l)	5 U	73.7	5 U
Total Dissolved Solids	(mg/l)	41	386	10 U
Zinc	(mg/l)	0.02 U	0.02 U	0.02 U

Notes:

µg/l - micrograms per liter (parts per billion)

mg/l - milligrams per liter (parts per million)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	LF-1	M-30B-R	MW-05B	MW-06A	MW-06B
	DATE	10/31/2008	10/29/2008	10/31/2008	10/30/2008	10/30/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Aluminum	(mg/l)	NA	0.2 U	0.2 U	0.2 U	0.2 U
Barium	(mg/l)	NA	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	(mg/l)	NA	8.67	15.5	0.99	2.34
Chromium	(mg/l)	NA	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent (Diss.)	(mg/l)	NA	0.02 U	0.02 U	0.02 U	0.02 U
Copper	(mg/l)	NA	0.02 U	0.02 U	0.02 U	0.02 U
Iron	(mg/l)	NA	0.02 U	0.02 U	0.03	0.04
Lead	(µg/l)	NA	5 U	5 U	5 U	5 U
Magnesium	(mg/l)	NA	4.13	8.64	1.37	1.72
Manganese	(mg/l)	NA	0.02 U	5.46	0.02 U	0.02 U
Mercury	(µg/l)	NA	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	(mg/l)	NA	0.04 U	0.04 U	0.04 U	0.04 U
Potassium	(mg/l)	NA	3.05	10.9	2.44	33.5
Sodium	(mg/l)	NA	42.5	46.1	7.47	67.1
Zinc	(mg/l)	NA	0.02 U	0.02 U	0.03	0.02 U

Notes:

µg/l - micrograms per liter (parts per billion)

mg/l - milligrams per liter (parts per million)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-06C	MW-06E	MW-06ED	MW-06F	MW-07B
	DATE	10/30/2008	10/30/2008	10/30/2008	10/30/2008	10/29/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Aluminum	(mg/l)	0.2 U				
Barium	(mg/l)	0.2 U	0.2 U	0.2 U	0.21	0.2 U
Calcium	(mg/l)	12.7	21.2	21.1	36.3	12.6
Chromium	(mg/l)	0.01 U				
Chromium, Hexavalent (Diss.)	(mg/l)	0.02 U				
Copper	(mg/l)	0.02 U				
Iron	(mg/l)	0.05	2.31	2.28	0.29	0.03
Lead	(µg/l)	5 U	5 U	5 U	5 U	5 U
Magnesium	(mg/l)	5.73	9.47	9.33	15.8	9.19
Manganese	(mg/l)	0.03	0.46	0.46	0.11	0.03
Mercury	(µg/l)	0.2 U	0.2 U	0.2 U	0.24	0.2 U
Nickel	(mg/l)	0.04 U				
Potassium	(mg/l)	61.6	21.3	20.6	6.91	3.6
Sodium	(mg/l)	141	65	63.4	66.7	47.3
Zinc	(mg/l)	0.02 U	0.07	0.06	0.03	0.02 U

Notes:

µg/l - micrograms per liter (parts per billion)

mg/l - milligrams per liter (parts per million)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-08A	MW-08B	MW-09B	MW-09C	MW-11A
	DATE	10/30/2008	10/30/2008	10/29/2008	10/29/2008	10/29/2008
	TYPE	Primary	Primary	Primary	Primary	Primary
Aluminum	(mg/l)	0.2 U				
Barium	(mg/l)	0.2 U				
Calcium	(mg/l)	2.16	16.6	13.6	3.67	4.07
Chromium	(mg/l)	0.01 U				
Chromium, Hexavalent (Diss.)	(mg/l)	0.02 U				
Copper	(mg/l)	0.02 U				
Iron	(mg/l)	0.02 U	0.05	0.02 U	0.05	0.02 U
Lead	(µg/l)	5 U	5 U	5 U	5 U	5 U
Magnesium	(mg/l)	1.36	5.64	6.17	6.21	2.27
Manganese	(mg/l)	0.02 U	0.76	0.22	0.09	0.02 U
Mercury	(µg/l)	0.2 U				
Nickel	(mg/l)	0.04 U				
Potassium	(mg/l)	2.82	13.3	7.81	17.7	1.17
Sodium	(mg/l)	5.32	34.9	36.5	49.2	6.11
Zinc	(mg/l)	0.03	0.06	0.02 U	0.02 U	0.02 U

Notes:

µg/l - micrograms per liter (parts per billion)

mg/l - milligrams per liter (parts per million)

NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**GROUNDWATER ANALYTICAL RESULTS - FOURTH QUARTER 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 10/1/2008 to 12/31/2008 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-11B	OBS-1	Field Blank
	DATE	10/29/2008	10/31/2008	10/31/2008
	TYPE	Primary	Primary	-
Aluminum	(mg/l)	0.2 U	0.2 U	0.2 U
Barium	(mg/l)	0.2 U	0.2 U	0.2 U
Calcium	(mg/l)	1.73	21.2	0.21
Chromium	(mg/l)	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent (Diss.)	(mg/l)	0.02 U	0.02 U	0.02 U
Copper	(mg/l)	0.02 U	0.02 U	0.02 U
Iron	(mg/l)	0.02 U	0.06	0.02 U
Lead	(µg/l)	5 U	5 U	5 U
Magnesium	(mg/l)	0.88	15.7	0.2 U
Manganese	(mg/l)	0.02 U	1.48	0.02 U
Mercury	(µg/l)	0.2 U	0.2 U	0.2 U
Nickel	(mg/l)	0.04 U	0.04 U	0.04 U
Potassium	(mg/l)	0.77	10.5	0.2 U
Sodium	(mg/l)	6.17	84.8	0.88
Zinc	(mg/l)	0.02 U	0.02 U	0.02 U

Notes:

µg/l - micrograms per liter (parts per billion)

mg/l - milligrams per liter (parts per million)

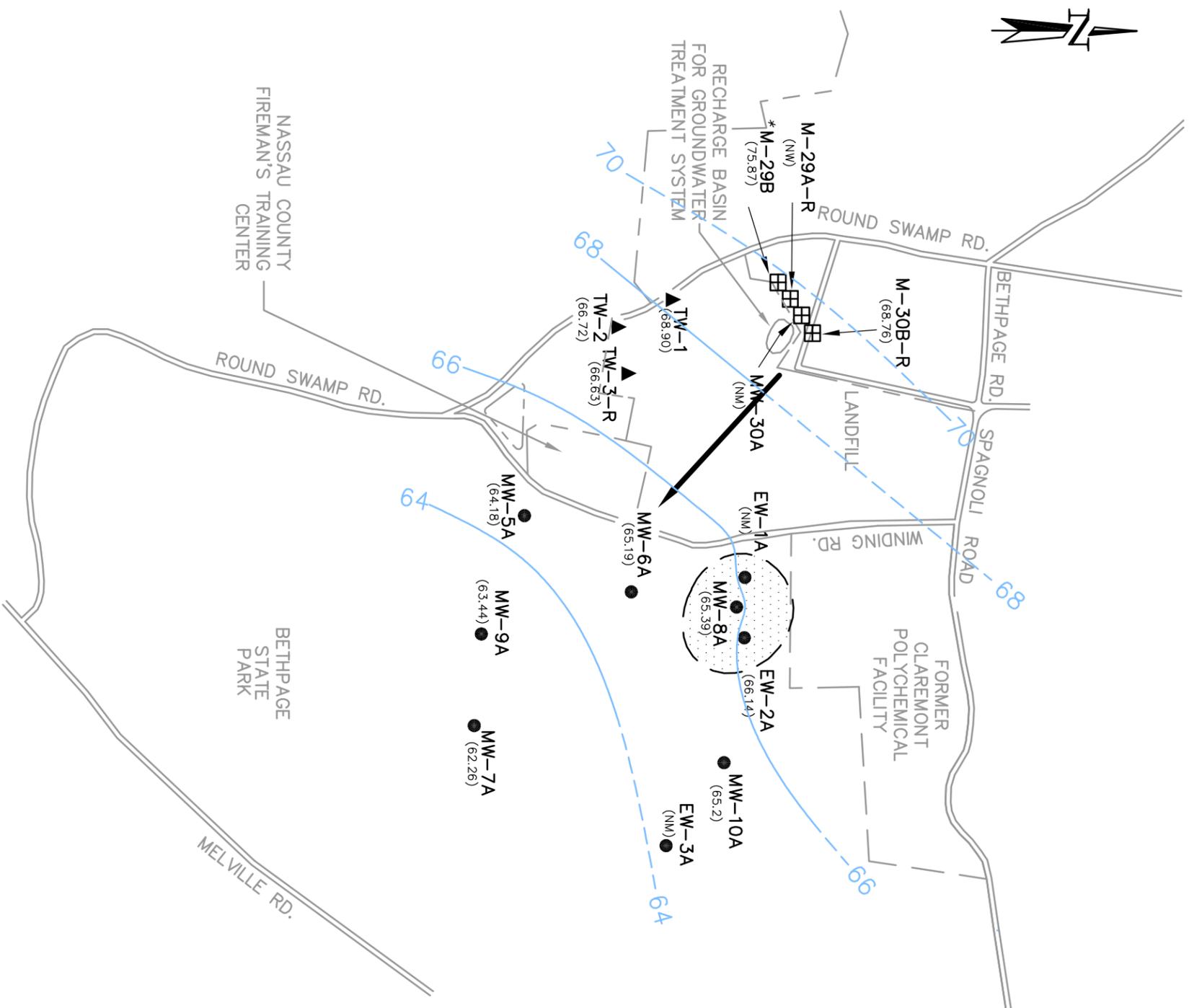
NA - Not Analyzed

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

Results appearing bold indicate concentrations greater than the action level

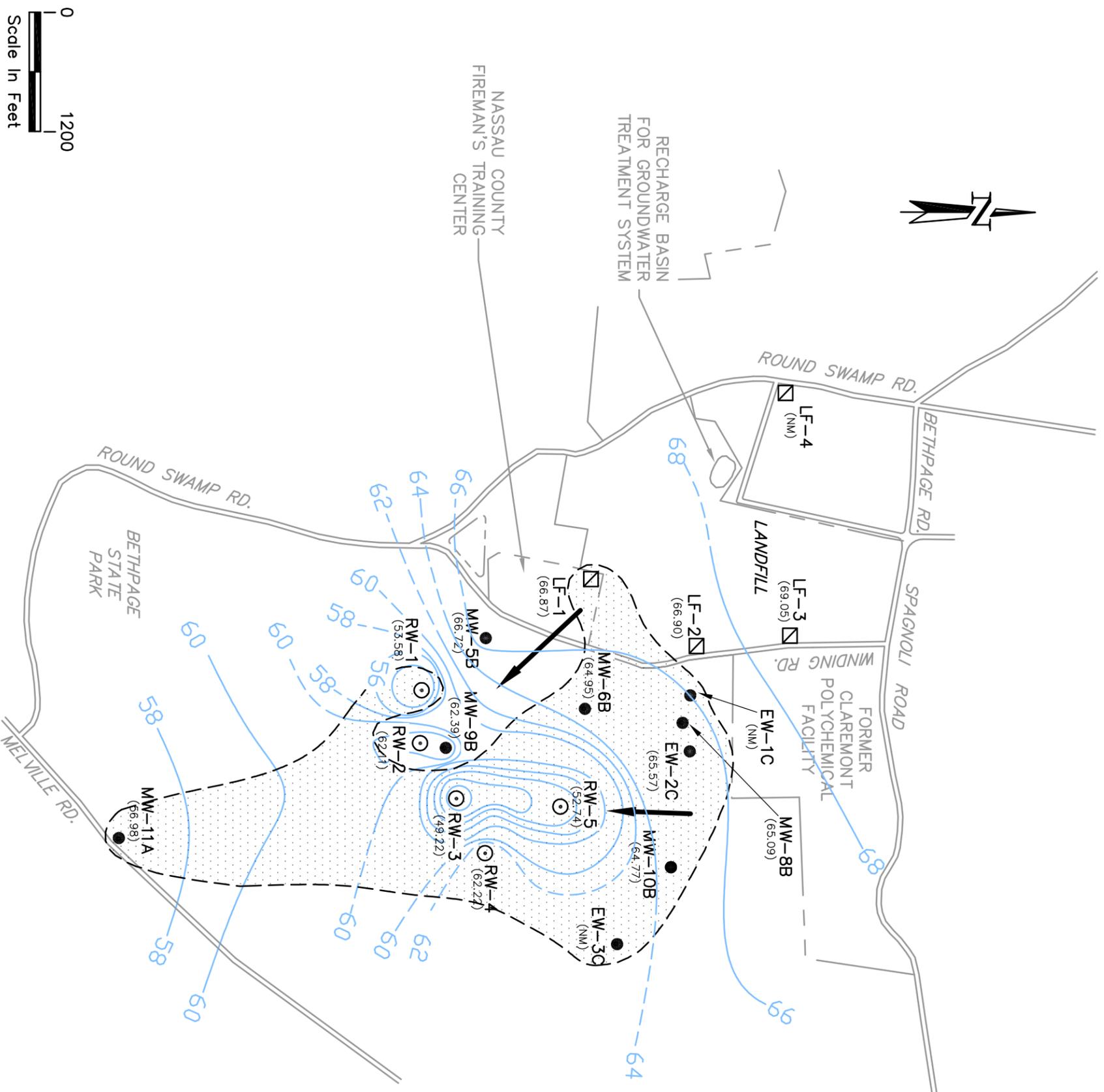


**LEGEND**

- MW-5A (67.28) *Monitoring Well Location And Designation*
- MW-28 (67.28) *Water Level Elevation In Feet Above Mean Sea Level*
- ▲ TW-2 *Phase II Extension Well*
- ▣ M-299A *Upgradient Well*
- *Property Boundary*
- *Groundwater Flow Direction*
- 64 *Line Of Equal Elevation Of The Water Table In Feet Above Mean Sea Level (Dashed Where Inferred)*
- ⊖ *Approximate Extent Of The VOC Plume In Water Table Wells – Fourth Quarter 2008*
- (NM) *Not Measured*
- \* *M-299B were not included in water contours map.*



**WATER TABLE  
FLOW MAP  
FOURTH QUARTER 2008**  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY

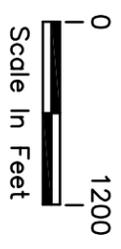


**LEGEND**

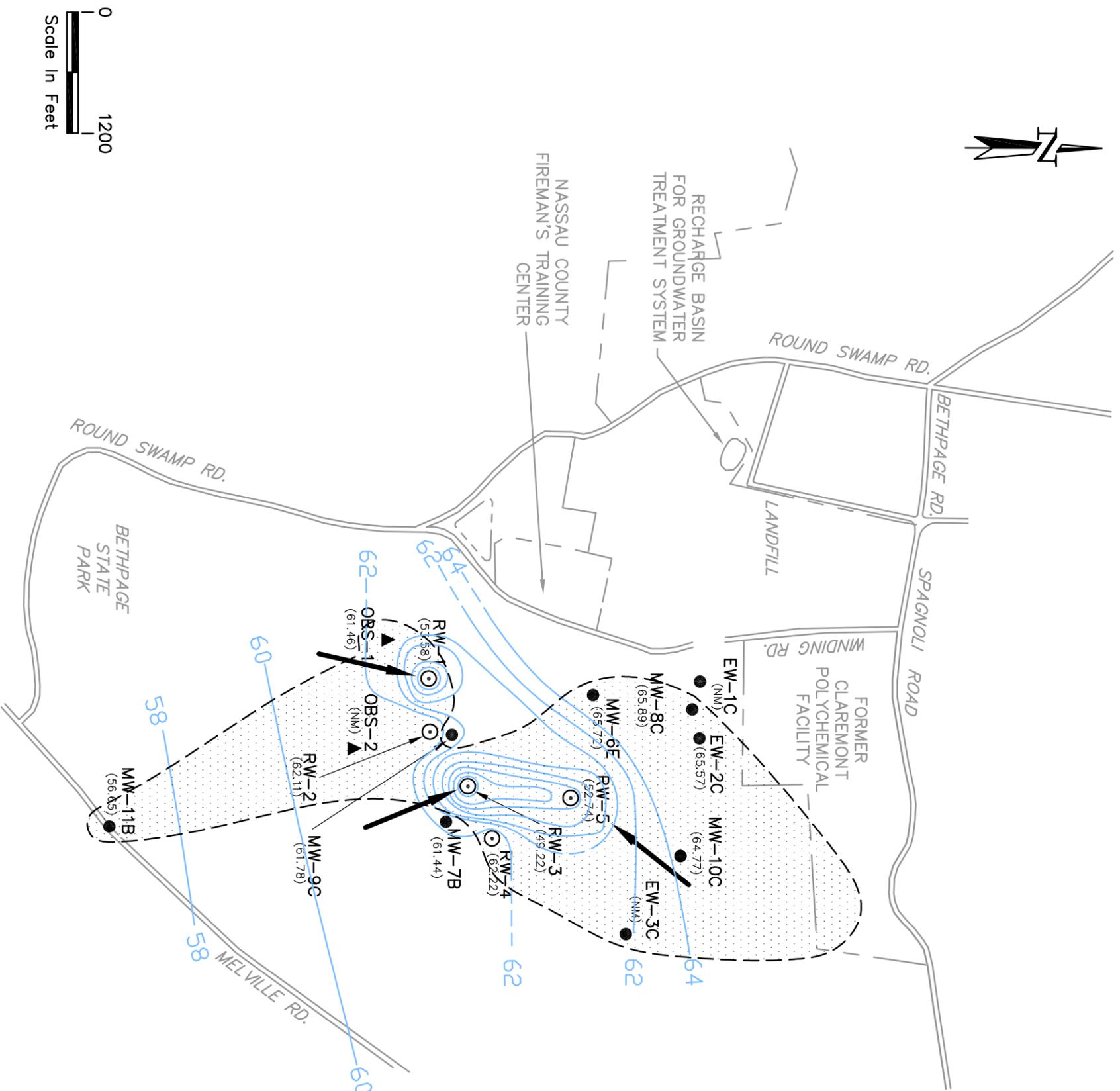
- MW-5B ● Monitoring Well Location And Designation  
(66.17) Water Level Elevation In Feet Above Mean Sea Level
- RW-5 ○ Recovery Well
- LF-2 □ Phase III Well
- Groundwater Flow Direction
- 60 — Line Of Equal Elevation Of The Water Table In Feet Above Mean Sea Level (Dashed Where Inferred)
- - - Property Boundary
- (---) Approximate Extent Of The VOC Plume In Shallow Potentiometric Wells – Fourth Quarter 2008
- (NM) Not Measured

**SHALLOW POTENTIOMETRIC FLOW MAP**

**FOURTH QUARTER 2008**  
 OLD BETHPAGE LANDFILL  
 TOWN OF OYSTER BAY



SN49725B  
 09032009



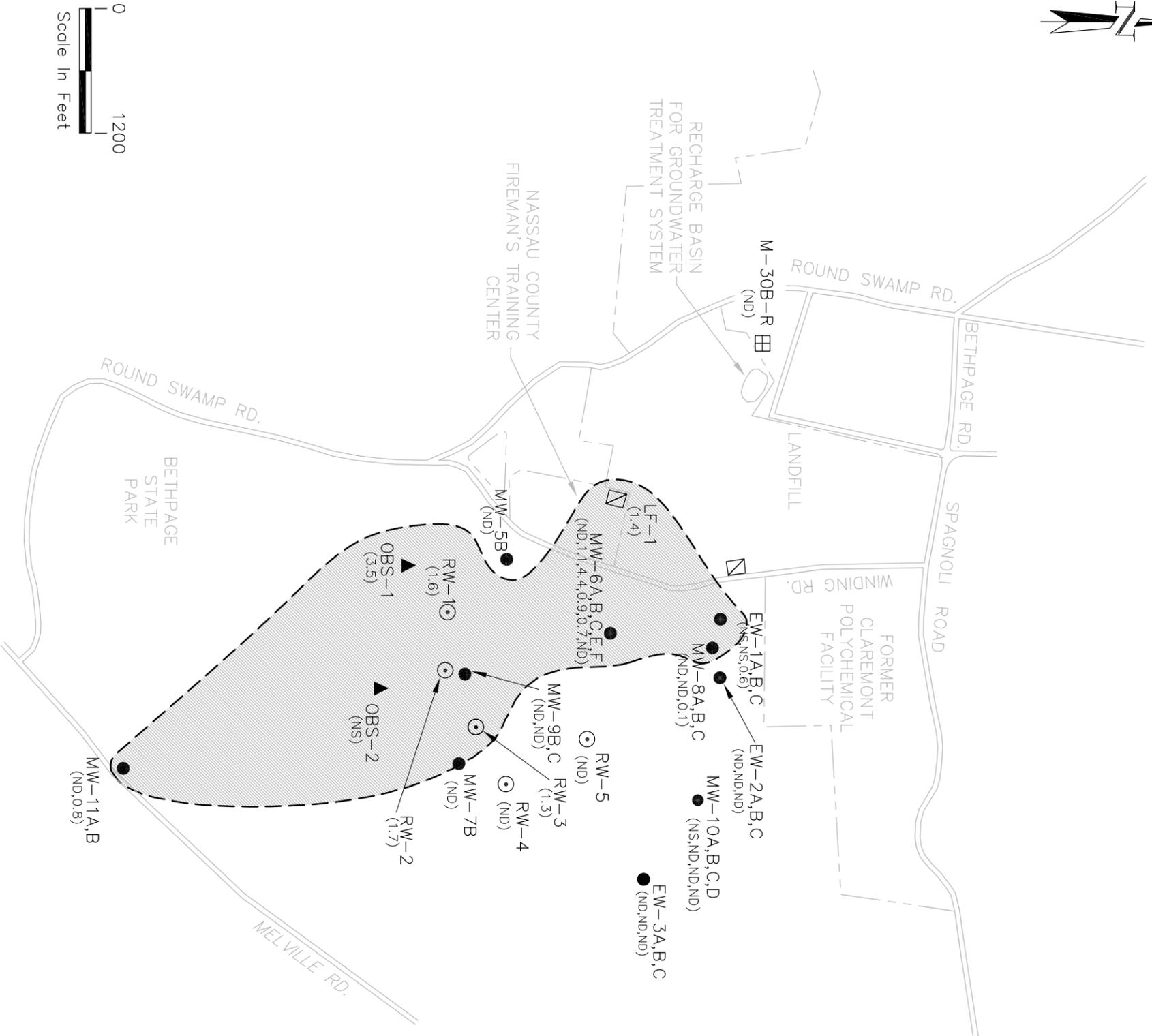
**LEGEND**

- MW-8C ● Monitoring Well Location And Designation  
(66.62) Water Level Elevation In Feet Above Mean Sea Level
- RW-4 ○ Recovery Well
- OBS-2 ▲ Phase II Extension Well
- Property Boundary
- Groundwater Flow Direction
- 58 — Line Of Equal Elevation Of The Water Table In Feet Above Mean Sea Level (Dashed Where Inferred)
- (---) Approximate Extent Of The VOC Plume In Deep Potentiometric Wells – Fourth Quarter 2008.
- (NM) Not Measured

**DEEP POTENTIOMETRIC  
FLOW MAP  
FOURTH QUARTER, 2008**

OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY





**LEGEND**

- MW-5B ● Monitoring Well Location And Total Aromatic Hydrocarbon Concentration, ppb
- RW-4 ⊙ Recovery Well
- OBS-1 ▲ Phase II Extension Well
- LF-1 ▣ Phase III Well
- M-30B-R ⊞ Upgradient Well
- Property Boundary
- ⬤ (shaded area) Approximate Extent Of The Aromatic Hydrocarbon Plume (Plume Extent Based On Fourth Quarter 2008 Data)

(NS) Not Sampled  
(ND) Not Detected

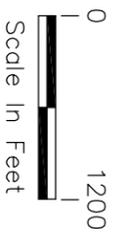
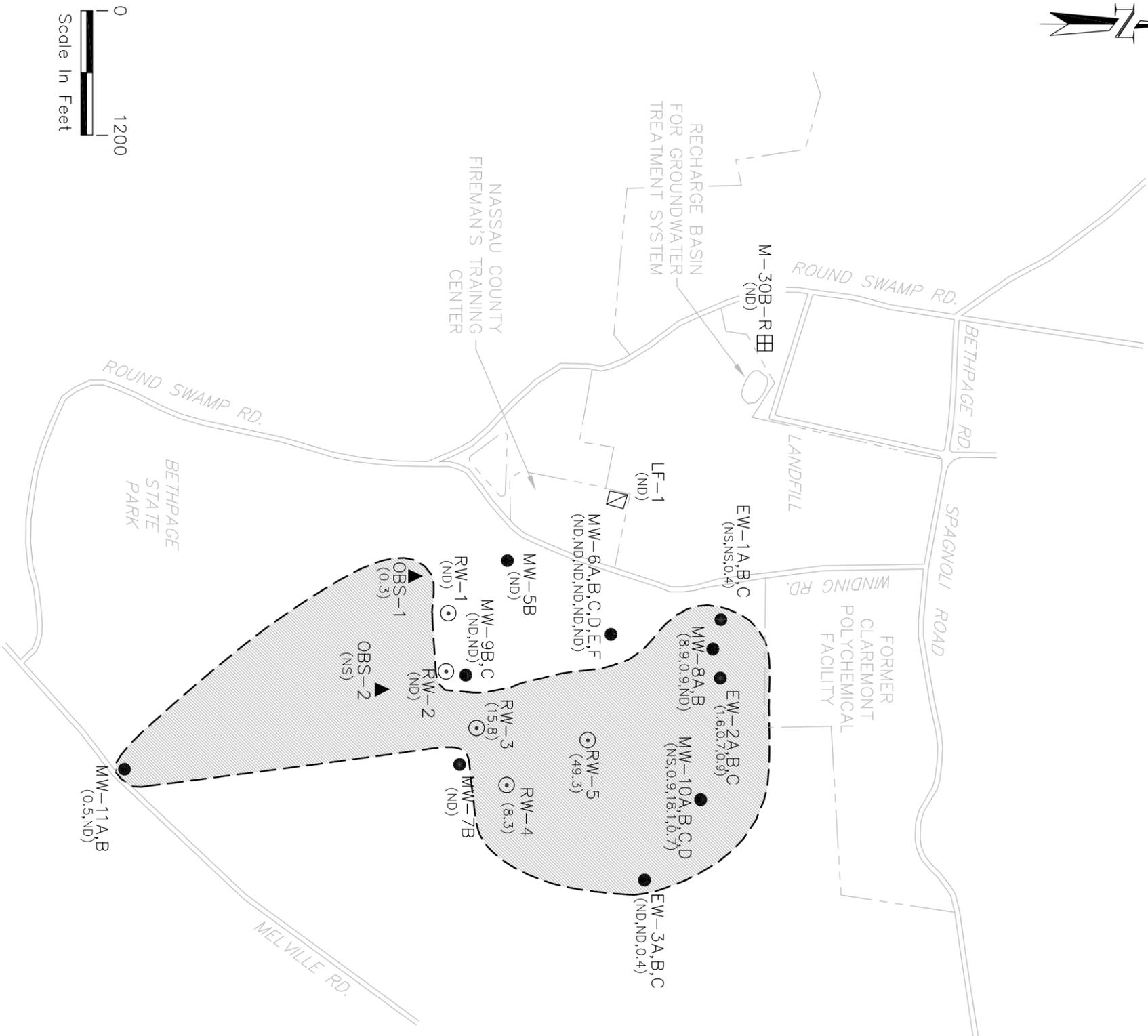
**NOTE**

Plume Contour Is Based On Total Aromatic Hydrocarbon Concentrations In The Monitoring And Recovery Wells.



SN49725E  
09032009

**APPROXIMATE EXTENT  
AND DISTRIBUTION OF TOTAL  
AROMATIC HYDROCARBONS  
FOURTH QUARTER 2008**  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY



SN49725F  
09032009

**LEGEND**

- MW-5B ● Monitoring Well Location And Tetrachloroethene Concentration, ppb (NM)
- RW-4 ○ Recovery Well
- OBS-1 ▲ Phase II Extension Well
- LF-3 ▣ Phase III Well
- M-30B-R ▤ Upgradient Well
- Property Boundary
- ⬢ Approximate Extent Of The Tetrachloroethene Plume
- (NS) Not Sampled
- (ND) Not Detected

**NOTE**

Plume Contour Is Based On Tetrachloroethene Concentrations In The Monitoring And Recovery Wells.

**APPROXIMATE EXTENT AND DISTRIBUTION OF TETRACHLOROETHENE FOURTH QUARTER 2008**

OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY

**APPENDIX A**

**LABORATORY DATA REPORTS**

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



EW-1C (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	1.0
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.3
Dichlorobenzene, o,m&p	9***	0.3
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.4
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	0.1
n-Butylbenzene	5	0.2
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



EW-2A (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	3.2
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.3
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	1.6
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.9
Vinyl Chloride	2	0.4
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



EW-2B (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	0.9
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.7
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

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EW-2C (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	12.7
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	0.4
cis-1,2 Dichloroethene	5	4.4
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.9
Toluene	5	<0.1
1,1,1 Trichloroethane	5	0.5
Trichloroethylene	5	6.5
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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EW-3A (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	0.0
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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EW-3B (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	0.0
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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EW-3C (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	2.1
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.4
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	1.7
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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LF-1 (October 31, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	1.4
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.5
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.9
Dichlorobenzene, o,m&p	9***	0.9
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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# TOWN OF OYSTER BAY

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M-30B-R (October 29, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	<0.5
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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MW-10B (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	1.8
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.9
Toluene	5	<0.1
1,1,1 Trichloroethane	5	0.1
Trichloroethylene	5	0.8
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

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MW-10C (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	106
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.2
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	0.3
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	3.8
cis-1,2 Dichloroethene	5	2.7
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	18.1
Toluene	5	<0.1
1,1,1 Trichloroethane	5	4.8
Trichloroethylene	5	76.1
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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# TOWN OF OYSTER BAY

Department of Public Works  
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MW-10D (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	56.4
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.6
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	0.7
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	3.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.7
Toluene	5	<0.1
1,1,1 Trichloroethane	5	0.3
Trichloroethylene	5	48.8
Vinyl Chloride	2	2.1
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

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\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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MW-11A (October 29, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	2.8
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	1.3
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.5
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.9
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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MW-11B (October 29, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	2.1
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.6
Dichlorobenzene, o,m&p	9***	0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	1.3
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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MW-5B (October 31, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	<0.5
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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MW-6C (October 30, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	4.6
Benzene	1***	0.5
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	1.4
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	1.4
Dichlorobenzene, o,m&p	9***	1.4
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	0.9
n-Butylbenzene	5	0.2
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

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MW-6D (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	0.0
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

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MW-6E (October 30, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	1.1
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.2
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.7
Dichlorobenzene, o,m&p	9***	0.7
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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MW-6F (October 30, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	<0.5
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

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MW-7B (October 29, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	<0.5
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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MW-8A (October 30, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	9.6
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	8.9
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.7
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

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MW-8B (October 30, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	0.9
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.9
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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# TOWN OF OYSTER BAY

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MW-8C (October 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	0.1
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

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MW-9B (October 29, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	<0.5
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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MW-9C (October 29, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	<0.5
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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OBS-1 (October 31, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	6.7
Benzene	1***	0.4
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.7
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	2.4
Dichlorobenzene, o,m&p	9***	2.4
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	2.0
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	0.3
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.4
Vinyl Chloride	2	0.5
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

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Recovery Well RW-1 (October 27, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	2.4
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.4
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	1.1
Dichlorobenzene, o,m&p	9***	1.1
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.6
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

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Recovery Well RW-2 (October 27, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	2.5
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.4
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	1.2
Dichlorobenzene, o,m&p	9***	1.2
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.6
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

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Recovery Well RW-3 (October 27, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	61.6
Benzene	1***	0.3
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.4
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.8
Dichlorobenzene, o,m&p	9***	0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	0.6
cis-1,2 Dichloroethene	5	6.8
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	15.8
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	36.9
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-4 (October 27, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	9.6
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	8.3
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	1.1
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Recovery Well RW-5 (October 27, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	409
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	0.7
1,1 Dichloroethene	5***	18.7
cis-1,2 Dichloroethene	5	14.9
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	1.0
Tetrachloroethene	5***	49.3
Toluene	5	<0.1
1,1,1 Trichloroethane	5	20.2
Trichloroethylene	5	304
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Duplicate (October 30, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	0.9
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.6
Dichlorobenzene, o,m&p	9***	0.6
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Field Blank (October 31, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	<0.5
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	<0.8
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Trip Blank #1 (October 29, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	8.5
Benzene	1***	<0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	<0.3
Dichlorobenzene, o,m&p	9***	1.3
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	<0.2
Xylene, o	5	7.2
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	7.2
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	<0.1
tert-Butylbenzene	5	<0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# TOWN OF OYSTER BAY

Department of Public Works  
Groundwater Treatment Facility  
ORGANICS ANALYSIS REPORT



Trip Blank #2 (October 30, 2008)

Chemical Constituent	Concentration	
	Allowed * (ug/L)	Measured ** (ug/L)
Total VOCs	100	2.8
Benzene	1***	0.1
Bromodichloromethane	50	<0.3
Bromoform	50	<0.2
Carbon Tetrachloride	5	<0.1
Chlorobenzene	5	<0.1
Chlorodibromomethane	50	<0.6
Chloroethane	5	<0.2
Chloroform	7***	<0.1
Dichlorobenzene, o&p	6***	0.9
Dichlorobenzene, o,m&p	9***	1.2
1,1 Dichloroethane	5	<0.2
1,2 Dichloroethane	0.6***	<0.3
1,1 Dichloroethene	5***	<0.3
cis-1,2 Dichloroethene	5	<0.2
trans-1,2 Dichloroethene	5	<0.3
1,2 Dichloropropane	1***	<0.1
Ethylbenzene	5	<0.1
Methylene Chloride	5	<0.2
Tetrachloroethene	5***	<0.2
Toluene	5	<0.1
1,1,1 Trichloroethane	5	<0.1
Trichloroethylene	5	<0.2
Vinyl Chloride	2	1.2
Xylene, o	5	<1.6
Xylene, m&p	10***	<0.2
Xylene, o,m&p	15***	<1.8
Dichlorodifluoromethane	5	<0.1
Isopropylbenzene	5	<0.1
n-Butylbenzene	5	0.2
tert-Butylbenzene	5	0.1

\* Regulatory effluent discharge standards as specified in the Consent Decree and modified by 11/10/88 letter to the Town.

\*\* Compounds exceeding allowable EFFLUENT concentrations are highlighted.

\*\*\* Revised values effective in January, 1998.

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812692-001A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : M-30B-R

Collected : 10/29/2008 9:21:00 AM

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	10/31/2008 12:19 PM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 12:19 PM
Calcium	8.25		1	mg/L	E200.7	10/31/2008 12:19 PM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 12:19 PM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 12:19 PM
Iron	0.06		1	mg/L	E200.7	10/31/2008 12:19 PM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 12:19 PM
Magnesium	4.01		1	mg/L	E200.7	10/31/2008 12:19 PM
Manganese	< 0.02		1	mg/L	E200.7	10/31/2008 12:19 PM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 12:19 PM
Potassium	2.93		1	mg/L	E200.7	10/31/2008 12:19 PM
Sodium	41.9		1	mg/L	E200.7	10/31/2008 12:19 PM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 12:19 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 9:27 AM
Alkalinity, Total (As CaCO3)	6.0		1	mg/L	E310.1	11/10/2008 2:42 PM
Chloride	64.8		5	mg/L	E300.0	11/13/2008 10:25 AM
Sulfate	17.3		1	mg/L	E300.0	11/11/2008 6:36 PM
Cyanide	< 10		1	µg/L	E335.2	11/10/2008 1:12 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:19 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:32 AM
Hardness (As CaCO3)	44.0		2	mg/L	E130.2	11/03/2008 1:04 PM
Bicarbonate	6.0		1	mg/L	M4500-CO2D	11/10/2008 5:00 PM
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	E350.1	10/31/2008 2:52 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/30/2008 3:39 PM
Nitrate as N	3.25		10	mg/L	E353.2	11/11/2008 1:54 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/12/2008 9:40 AM
Total Dissolved Solids	158		1	mg/L	E160.1	11/05/2008 8:37 AM
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	E351.2	11/14/2008 12:13 PM

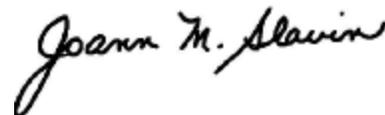
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812692-001B**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-30B-R

Collected : 10/29/2008 9:21:00 AM

Dissolved

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

CC

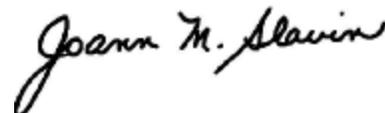
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	10/31/2008 10:33 AM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 10:33 AM
Calcium	8.67		1	mg/L	E200.7	10/31/2008 10:33 AM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 10:33 AM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 10:33 AM
Iron	< 0.02		1	mg/L	E200.7	10/31/2008 10:33 AM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 10:33 AM
Magnesium	4.13		1	mg/L	E200.7	10/31/2008 10:33 AM
Manganese	< 0.02		1	mg/L	E200.7	10/31/2008 10:33 AM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 10:33 AM
Potassium	3.05		1	mg/L	E200.7	10/31/2008 10:33 AM
Sodium	42.5		1	mg/L	E200.7	10/31/2008 10:33 AM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 10:33 AM
Mercury	< 0.20		1	ug/L	E245.1	10/31/2008 10:37 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:50 AM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008



Laboratory Manager

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812692-002A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-11A

Collected : 10/29/2008 11:12:00 AM

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	10/31/2008 12:47 PM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 12:47 PM
Calcium	4.09		1	mg/L	E200.7	10/31/2008 12:47 PM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 12:47 PM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 12:47 PM
Iron	< 0.02		1	mg/L	E200.7	10/31/2008 12:47 PM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 12:47 PM
Magnesium	2.34		1	mg/L	E200.7	10/31/2008 12:47 PM
Manganese	< 0.02		1	mg/L	E200.7	10/31/2008 12:47 PM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 12:47 PM
Potassium	1.13		1	mg/L	E200.7	10/31/2008 12:47 PM
Sodium	5.52		1	mg/L	E200.7	10/31/2008 12:47 PM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 12:47 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 9:30 AM
Alkalinity, Total (As CaCO3)	1.1		1	mg/L	E310.1	11/10/2008 2:47 PM
Chloride	8.75		1	mg/L	E300.0	11/11/2008 6:50 PM
Sulfate	< 5.00		1	mg/L	E300.0	11/11/2008 6:50 PM
Cyanide	< 10		1	µg/L	E335.2	11/10/2008 1:13 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:20 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:33 AM
Hardness (As CaCO3)	19.0		1	mg/L	E130.2	11/03/2008 1:06 PM
Bicarbonate	1.1		1	mg/L	M4500-CO2D	11/10/2008 5:01 PM
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	E350.1	10/31/2008 2:53 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/30/2008 3:42 PM
Nitrate as N	4.30		5	mg/L	E353.2	11/11/2008 1:55 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/12/2008 9:50 AM
Total Dissolved Solids	60		1	mg/L	E160.1	11/05/2008 8:39 AM
Nitrogen, Kjeldahl, Total	0.10		1	mg/L	E351.2	11/14/2008 12:14 PM

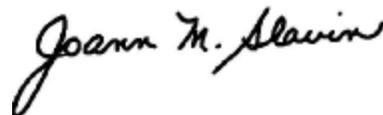
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812692-002B**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-11A

Collected : 10/29/2008 11:12:00 AM

Dissolved

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

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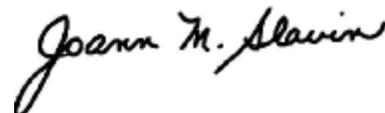
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	10/31/2008 11:01 AM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 11:01 AM
Calcium	4.07		1	mg/L	E200.7	10/31/2008 11:01 AM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 11:01 AM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 11:01 AM
Iron	< 0.02		1	mg/L	E200.7	10/31/2008 11:01 AM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 11:01 AM
Magnesium	2.27		1	mg/L	E200.7	10/31/2008 11:01 AM
Manganese	< 0.02		1	mg/L	E200.7	10/31/2008 11:01 AM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 11:01 AM
Potassium	1.17		1	mg/L	E200.7	10/31/2008 11:01 AM
Sodium	6.11		1	mg/L	E200.7	10/31/2008 11:01 AM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 11:01 AM
Mercury	< 0.20		1	ug/L	E245.1	10/31/2008 10:39 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:51 AM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008



Laboratory Manager

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812692-003A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-11B

Collected : 10/29/2008 11:15:00 AM

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	10/31/2008 12:54 PM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 12:54 PM
Calcium	1.71		1	mg/L	E200.7	10/31/2008 12:54 PM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 12:54 PM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 12:54 PM
Iron	0.05		1	mg/L	E200.7	10/31/2008 12:54 PM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 12:54 PM
Magnesium	0.90		1	mg/L	E200.7	10/31/2008 12:54 PM
Manganese	< 0.02		1	mg/L	E200.7	10/31/2008 12:54 PM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 12:54 PM
Potassium	0.78		1	mg/L	E200.7	10/31/2008 12:54 PM
Sodium	4.69		1	mg/L	E200.7	10/31/2008 12:54 PM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 12:54 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 9:32 AM
Alkalinity, Total (As CaCO3)	< 1.0		1	mg/L	E310.1	11/10/2008 2:52 PM
Chloride	8.19		1	mg/L	E300.0	11/11/2008 7:03 PM
Sulfate	< 5.00		1	mg/L	E300.0	11/11/2008 7:03 PM
Cyanide	< 10		1	µg/L	E335.2	11/10/2008 1:14 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:21 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:34 AM
Hardness (As CaCO3)	15.0		1	mg/L	E130.2	11/03/2008 1:08 PM
Bicarbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:02 PM
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	E350.1	10/31/2008 2:54 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/30/2008 3:44 PM
Nitrate as N	0.86		2	mg/L	E353.2	11/11/2008 1:56 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/12/2008 10:00 AM
Total Dissolved Solids	41		1	mg/L	E160.1	11/05/2008 8:41 AM
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	E351.2	11/14/2008 12:15 PM

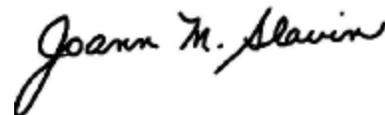
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812692-003B**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-11B

Collected : 10/29/2008 11:15:00 AM

Dissolved

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

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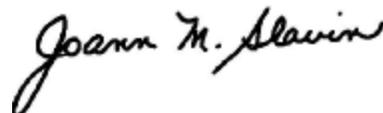
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	10/31/2008 11:08 AM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 11:08 AM
Calcium	1.73		1	mg/L	E200.7	10/31/2008 11:08 AM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 11:08 AM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 11:08 AM
Iron	< 0.02		1	mg/L	E200.7	10/31/2008 11:08 AM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 11:08 AM
Magnesium	0.88		1	mg/L	E200.7	10/31/2008 11:08 AM
Manganese	< 0.02		1	mg/L	E200.7	10/31/2008 11:08 AM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 11:08 AM
Potassium	0.77		1	mg/L	E200.7	10/31/2008 11:08 AM
Sodium	6.17		1	mg/L	E200.7	10/31/2008 11:08 AM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 11:08 AM
Mercury	< 0.20		1	ug/L	E245.1	10/31/2008 10:40 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:52 AM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008



Laboratory Manager

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812692-004A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-7B

Collected : 10/29/2008 12:45:00 PM

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	2.17		1	mg/L	E200.7	10/31/2008 1:29 PM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 1:29 PM
Calcium	12.4		1	mg/L	E200.7	10/31/2008 1:29 PM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 1:29 PM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 1:29 PM
Iron	2.26		1	mg/L	E200.7	10/31/2008 1:29 PM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 1:29 PM
Magnesium	9.05		1	mg/L	E200.7	10/31/2008 1:29 PM
Manganese	0.03		1	mg/L	E200.7	10/31/2008 1:29 PM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 1:29 PM
Potassium	3.62		1	mg/L	E200.7	10/31/2008 1:29 PM
Sodium	43.9		1	mg/L	E200.7	10/31/2008 1:29 PM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 1:29 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 9:33 AM
Alkalinity, Total (As CaCO3)	2.6		1	mg/L	E310.1	11/10/2008 2:57 PM
Chloride	83.0		5	mg/L	E300.0	11/11/2008 7:30 PM
Sulfate	7.05		1	mg/L	E300.0	11/11/2008 7:17 PM
Cyanide	< 10		1	µg/L	E335.2	11/10/2008 1:15 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:22 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:35 AM
Hardness (As CaCO3)	90.0		5	mg/L	E130.2	11/03/2008 1:10 PM
Bicarbonate	2.5		1	mg/L	M4500-CO2D	11/10/2008 5:03 PM
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	E350.1	10/31/2008 3:01 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/30/2008 3:45 PM
Nitrate as N	6.82		10	mg/L	E353.2	11/11/2008 1:58 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/12/2008 10:10 AM
Total Dissolved Solids	275		1	mg/L	E160.1	11/05/2008 8:43 AM
Nitrogen, Kjeldahl, Total	0.12		1	mg/L	E351.2	11/14/2008 12:16 PM

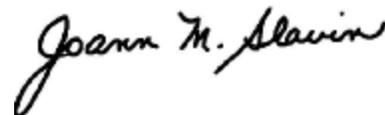
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812692-004B**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-7B

Collected : 10/29/2008 12:45:00 PM

Dissolved

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

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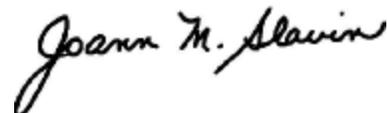
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	10/31/2008 11:16 AM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 11:16 AM
Calcium	12.6		1	mg/L	E200.7	10/31/2008 11:16 AM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 11:16 AM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 11:16 AM
Iron	0.03		1	mg/L	E200.7	10/31/2008 11:16 AM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 11:16 AM
Magnesium	9.19		1	mg/L	E200.7	10/31/2008 11:16 AM
Manganese	0.03		1	mg/L	E200.7	10/31/2008 11:16 AM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 11:16 AM
Potassium	3.60		1	mg/L	E200.7	10/31/2008 11:16 AM
Sodium	47.3		1	mg/L	E200.7	10/31/2008 11:16 AM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 11:16 AM
Mercury	< 0.20		1	ug/L	E245.1	10/31/2008 10:46 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:53 AM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008



Laboratory Manager

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812692-005A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-9C

Collected : 10/29/2008 1:57:00 PM

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	10/31/2008 1:36 PM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 1:36 PM
Calcium	3.61		1	mg/L	E200.7	10/31/2008 1:36 PM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 1:36 PM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 1:36 PM
Iron	0.21		1	mg/L	E200.7	10/31/2008 1:36 PM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 1:36 PM
Magnesium	6.24		1	mg/L	E200.7	10/31/2008 1:36 PM
Manganese	0.09		1	mg/L	E200.7	10/31/2008 1:36 PM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 1:36 PM
Potassium	17.4		1	mg/L	E200.7	10/31/2008 1:36 PM
Sodium	49.8		1	mg/L	E200.7	10/31/2008 1:36 PM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 1:36 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 9:35 AM
Alkalinity, Total (As CaCO3)	38.8		4	mg/L	E310.1	11/10/2008 3:02 PM
Chloride	71.2		5	mg/L	E300.0	11/11/2008 7:58 PM
Sulfate	19.5		1	mg/L	E300.0	11/11/2008 7:44 PM
Cyanide	< 10		1	µg/L	E335.2	11/10/2008 1:16 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:23 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:36 AM
Hardness (As CaCO3)	32.0		2	mg/L	E130.2	11/03/2008 1:12 PM
Bicarbonate	38.8		1	mg/L	M4500-CO2D	11/10/2008 5:04 PM
Nitrogen, Ammonia (As N)	7.56		5	mg/L	E350.1	10/31/2008 3:02 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/30/2008 3:46 PM
Nitrate as N	0.39		2	mg/L	E353.2	11/11/2008 1:59 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/12/2008 10:20 AM
Total Dissolved Solids	191		1	mg/L	E160.1	11/05/2008 8:45 AM
Nitrogen, Kjeldahl, Total	7.77		5	mg/L	E351.2	11/14/2008 12:18 PM

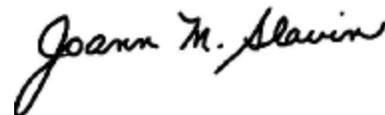
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Attn To : JAMES BYRNE, P.E.

Lab No. : **0812692-005B**

### Sample Information...

Type : Groundwater

Origin:

Client ID. : MW-9C

Collected : 10/29/2008 1:57:00 PM

Dissolved

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	10/31/2008 11:44 AM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 11:44 AM
Calcium	3.67		1	mg/L	E200.7	10/31/2008 11:44 AM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 11:44 AM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 11:44 AM
Iron	0.05		1	mg/L	E200.7	10/31/2008 11:44 AM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 11:44 AM
Magnesium	6.21		1	mg/L	E200.7	10/31/2008 11:44 AM
Manganese	0.09		1	mg/L	E200.7	10/31/2008 11:44 AM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 11:44 AM
Potassium	17.7		1	mg/L	E200.7	10/31/2008 11:44 AM
Sodium	49.2		1	mg/L	E200.7	10/31/2008 11:44 AM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 11:44 AM
Mercury	< 0.20		1	ug/L	E245.1	10/31/2008 10:49 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:54 AM

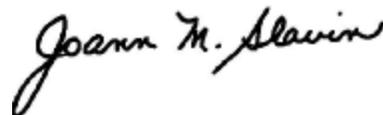
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812692-006A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-9B

Collected : 10/29/2008 2:40:00 PM

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	10/31/2008 1:45 PM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 1:45 PM
Calcium	14.4		1	mg/L	E200.7	10/31/2008 1:45 PM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 1:45 PM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 1:45 PM
Iron	0.07		1	mg/L	E200.7	10/31/2008 1:45 PM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 1:45 PM
Magnesium	6.50		1	mg/L	E200.7	10/31/2008 1:45 PM
Manganese	0.26		1	mg/L	E200.7	10/31/2008 1:45 PM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 1:45 PM
Potassium	8.13		1	mg/L	E200.7	10/31/2008 1:45 PM
Sodium	41.5		1	mg/L	E200.7	10/31/2008 1:45 PM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 1:45 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 9:37 AM
Alkalinity, Total (As CaCO3)	8.0		1	mg/L	E310.1	11/10/2008 3:10 PM
Chloride	59.5		5	mg/L	E300.0	11/11/2008 8:25 PM
Sulfate	23.2		1	mg/L	E300.0	11/11/2008 8:11 PM
Cyanide	< 10		1	µg/L	E335.2	11/10/2008 1:17 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:24 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:37 AM
Hardness (As CaCO3)	84.0		4	mg/L	E130.2	11/03/2008 1:14 PM
Bicarbonate	8.0		1	mg/L	M4500-CO2D	11/10/2008 5:05 PM
Nitrogen, Ammonia (As N)	0.83		1	mg/L	E350.1	10/31/2008 3:03 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/30/2008 3:47 PM
Nitrate as N	6.37		5	mg/L	E353.2	11/11/2008 2:00 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/12/2008 10:30 AM
Total Dissolved Solids	183		1	mg/L	E160.1	11/05/2008 8:47 AM
Nitrogen, Kjeldahl, Total	0.83		1	mg/L	E351.2	11/14/2008 12:19 PM

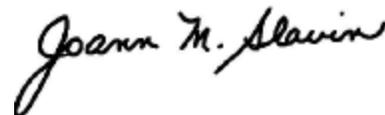
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Attn To : JAMES BYRNE, P.E.

Lab No. : **0812692-006B**

### Sample Information...

Type : Groundwater

Origin:

Client ID. : **MW-9B**

Collected : 10/29/2008 2:40:00 PM

Dissolved

Received : 10/29/2008 3:03:00 PM

Collected By : G&F99

Copy : **Original**

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	10/31/2008 11:57 AM
Barium	< 0.20		1	mg/L	E200.7	10/31/2008 11:57 AM
Calcium	13.6		1	mg/L	E200.7	10/31/2008 11:57 AM
Chromium	< 0.01		1	mg/L	E200.7	10/31/2008 11:57 AM
Copper	< 0.02		1	mg/L	E200.7	10/31/2008 11:57 AM
Iron	< 0.02		1	mg/L	E200.7	10/31/2008 11:57 AM
Lead	< 5.00		1	µg/L	E200.7	10/31/2008 11:57 AM
Magnesium	6.17		1	mg/L	E200.7	10/31/2008 11:57 AM
Manganese	0.22		1	mg/L	E200.7	10/31/2008 11:57 AM
Nickel	< 0.04		1	mg/L	E200.7	10/31/2008 11:57 AM
Potassium	7.81		1	mg/L	E200.7	10/31/2008 11:57 AM
Sodium	36.5		1	mg/L	E200.7	10/31/2008 11:57 AM
Zinc	< 0.02		1	mg/L	E200.7	10/31/2008 11:57 AM
Mercury	< 0.20		1	ug/L	E245.1	10/31/2008 10:51 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/30/2008 6:55 AM

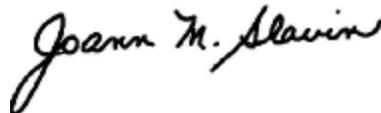
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-001A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-8B

Collected : 10/30/2008 11:23:00 AM

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 3:41 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 3:41 PM
Calcium	16.7		1	mg/L	E200.7	11/04/2008 3:41 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 3:41 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 3:41 PM
Iron	0.04		1	mg/L	E200.7	11/04/2008 3:41 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 3:41 PM
Magnesium	5.65		1	mg/L	E200.7	11/04/2008 3:41 PM
Manganese	0.76		1	mg/L	E200.7	11/04/2008 3:41 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 3:41 PM
Potassium	13.3		1	mg/L	E200.7	11/04/2008 3:41 PM
Sodium	34.9		1	mg/L	E200.7	11/04/2008 3:41 PM
Zinc	0.06		1	mg/L	E200.7	11/04/2008 3:41 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 9:56 AM
Alkalinity, Total (As CaCO3)	1.1		1	mg/L	E310.1	11/10/2008 6:40 PM
Chloride	83.8		10	mg/L	E300.0	11/14/2008 1:07 AM
Sulfate	19.2		1	mg/L	E300.0	11/11/2008 9:32 PM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:11 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:25 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:04 AM
Hardness (As CaCO3)	76.0		4	mg/L	E130.2	11/03/2008 1:16 PM
Bicarbonate	1.1		1	mg/L	M4500-CO2D	11/10/2008 5:06 PM
Nitrogen, Ammonia (As N)	0.63		1	mg/L	E350.1	10/31/2008 3:23 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/31/2008 5:05 PM
Nitrate as N	2.28		5	mg/L	E353.2	11/13/2008 2:30 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 10:10 AM
Total Dissolved Solids	244		1	mg/L	E160.1	11/06/2008 7:04 AM
Nitrogen, Kjeldahl, Total	0.65		1	mg/L	E351.2	11/14/2008 12:20 PM

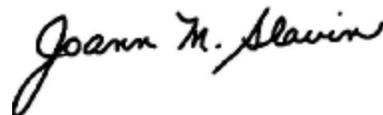
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-001B**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-8B

Collected : 10/30/2008 11:23:00 AM

Dissolved

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

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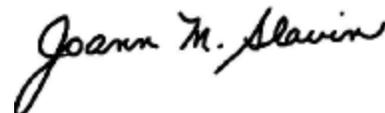
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 1:41 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 1:41 PM
Calcium	16.6		1	mg/L	E200.7	11/04/2008 1:41 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 1:41 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 1:41 PM
Iron	0.05		1	mg/L	E200.7	11/04/2008 1:41 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 1:41 PM
Magnesium	5.64		1	mg/L	E200.7	11/04/2008 1:41 PM
Manganese	0.75		1	mg/L	E200.7	11/04/2008 1:41 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 1:41 PM
Potassium	13.3		1	mg/L	E200.7	11/04/2008 1:41 PM
Sodium	34.9		1	mg/L	E200.7	11/04/2008 1:41 PM
Zinc	0.06		1	mg/L	E200.7	11/04/2008 1:41 PM
Mercury	< 0.20		1	ug/L	E245.1	11/03/2008 9:51 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:40 AM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008



Laboratory Manager

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-002A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-8A

Collected : 10/30/2008 11:55:00 AM

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	1.75		1	mg/L	E200.7	11/04/2008 4:38 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 4:38 PM
Calcium	2.31		1	mg/L	E200.7	11/04/2008 4:38 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 4:38 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 4:38 PM
Iron	4.18		1	mg/L	E200.7	11/04/2008 4:38 PM
Lead	8.00		1	µg/L	E200.7	11/04/2008 4:38 PM
Magnesium	1.42		1	mg/L	E200.7	11/04/2008 4:38 PM
Manganese	0.03		1	mg/L	E200.7	11/04/2008 4:38 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 4:38 PM
Potassium	2.73		1	mg/L	E200.7	11/04/2008 4:38 PM
Sodium	4.93		1	mg/L	E200.7	11/04/2008 4:38 PM
Zinc	0.04		1	mg/L	E200.7	11/04/2008 4:38 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 9:58 AM
Alkalinity, Total (As CaCO3)	< 1.0		1	mg/L	E310.1	11/10/2008 6:44 PM
Chloride	8.16		1	mg/L	E300.0	11/11/2008 9:46 PM
Sulfate	5.32		1	mg/L	E300.0	11/11/2008 9:46 PM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:12 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:26 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:06 AM
Hardness (As CaCO3)	64.0		4	mg/L	E130.2	11/03/2008 1:18 PM
Bicarbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:07 PM
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	E350.1	10/31/2008 3:24 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/31/2008 5:11 PM
Nitrate as N	0.65		5	mg/L	E353.2	11/13/2008 2:31 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 10:15 AM
Total Dissolved Solids	39		1	mg/L	E160.1	11/06/2008 7:06 AM
Nitrogen, Kjeldahl, Total	0.54		1	mg/L	E351.2	11/14/2008 12:21 PM

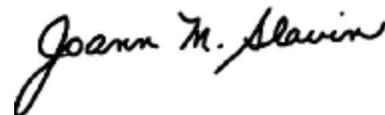
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-002B**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-8A

Collected : 10/30/2008 11:55:00 AM

Dissolved

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

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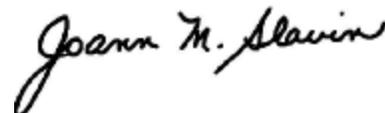
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 2:12 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 2:12 PM
Calcium	2.16		1	mg/L	E200.7	11/04/2008 2:12 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 2:12 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 2:12 PM
Iron	< 0.02		1	mg/L	E200.7	11/04/2008 2:12 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 2:12 PM
Magnesium	1.36		1	mg/L	E200.7	11/04/2008 2:12 PM
Manganese	< 0.02		1	mg/L	E200.7	11/04/2008 2:12 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 2:12 PM
Potassium	2.82		1	mg/L	E200.7	11/04/2008 2:12 PM
Sodium	5.32		1	mg/L	E200.7	11/04/2008 2:12 PM
Zinc	0.03		1	mg/L	E200.7	11/04/2008 2:12 PM
Mercury	< 0.20		1	ug/L	E245.1	11/03/2008 9:53 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:42 AM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008



Laboratory Manager

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-003A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-6B

Collected : 10/30/2008 12:38:00 PM

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 4:46 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 4:46 PM
Calcium	2.41		1	mg/L	E200.7	11/04/2008 4:46 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 4:46 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 4:46 PM
Iron	1.27		1	mg/L	E200.7	11/04/2008 4:46 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 4:46 PM
Magnesium	1.78		1	mg/L	E200.7	11/04/2008 4:46 PM
Manganese	< 0.02		1	mg/L	E200.7	11/04/2008 4:46 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 4:46 PM
Potassium	35.1		1	mg/L	E200.7	11/04/2008 4:46 PM
Sodium	70.9		1	mg/L	E200.7	11/04/2008 4:46 PM
Zinc	< 0.02		1	mg/L	E200.7	11/04/2008 4:46 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 9:59 AM
Alkalinity, Total (As CaCO3)	164		10	mg/L	E310.1	11/10/2008 6:50 PM
Chloride	103		5	mg/L	E300.0	11/11/2008 10:26 PM
Sulfate	< 5.00		1	mg/L	E300.0	11/11/2008 10:12 PM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:13 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:27 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:08 AM
Hardness (As CaCO3)	17.0		1	mg/L	E130.2	11/03/2008 1:20 PM
Bicarbonate	164		1	mg/L	M4500-CO2D	11/10/2008 5:08 PM
Nitrogen, Ammonia (As N)	39.0		50	mg/L	E350.1	10/31/2008 3:25 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/31/2008 5:13 PM
Nitrate as N	< 0.10		1	mg/L	E353.2	11/13/2008 2:32 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 10:20 AM
Total Dissolved Solids	248		1	mg/L	E160.1	11/06/2008 7:08 AM
Nitrogen, Kjeldahl, Total	40.1		10	mg/L	E351.2	11/14/2008 12:22 PM

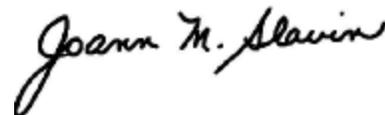
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-003B**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-6B

Collected : 10/30/2008 12:38:00 PM

Dissolved

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

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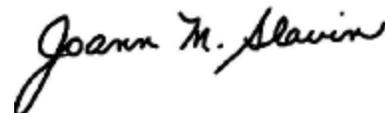
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 2:19 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 2:19 PM
Calcium	2.34		1	mg/L	E200.7	11/04/2008 2:19 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 2:19 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 2:19 PM
Iron	0.04		1	mg/L	E200.7	11/04/2008 2:19 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 2:19 PM
Magnesium	1.72		1	mg/L	E200.7	11/04/2008 2:19 PM
Manganese	< 0.02		1	mg/L	E200.7	11/04/2008 2:19 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 2:19 PM
Potassium	33.5		1	mg/L	E200.7	11/04/2008 2:19 PM
Sodium	67.1		1	mg/L	E200.7	11/04/2008 2:19 PM
Zinc	< 0.02		1	mg/L	E200.7	11/04/2008 2:19 PM
Mercury	< 0.20		1	ug/L	E245.1	11/03/2008 9:56 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:44 AM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008



Laboratory Manager

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-004A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-6A

Collected : 10/30/2008 12:52:00 PM

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	0.82		1	mg/L	E200.7	11/04/2008 4:53 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 4:53 PM
Calcium	1.01		1	mg/L	E200.7	11/04/2008 4:53 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 4:53 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 4:53 PM
Iron	2.91		1	mg/L	E200.7	11/04/2008 4:53 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 4:53 PM
Magnesium	1.59		1	mg/L	E200.7	11/04/2008 4:53 PM
Manganese	0.02		1	mg/L	E200.7	11/04/2008 4:53 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 4:53 PM
Potassium	2.11		1	mg/L	E200.7	11/04/2008 4:53 PM
Sodium	6.49		1	mg/L	E200.7	11/04/2008 4:53 PM
Zinc	0.03		1	mg/L	E200.7	11/04/2008 4:53 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 10:01 AM
Alkalinity, Total (As CaCO3)	3.2		1	mg/L	E310.1	11/10/2008 7:00 PM
Chloride	9.01		1	mg/L	E300.0	11/11/2008 10:39 PM
Sulfate	< 5.00		1	mg/L	E300.0	11/11/2008 10:39 PM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:14 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:28 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:10 AM
Hardness (As CaCO3)	25.0		1	mg/L	E130.2	11/03/2008 1:22 PM
Bicarbonate	3.1		1	mg/L	M4500-CO2D	11/10/2008 5:09 PM
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	E350.1	10/31/2008 3:26 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/31/2008 5:14 PM
Nitrate as N	0.69		2	mg/L	E353.2	11/13/2008 2:33 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 10:25 AM
Total Dissolved Solids	39		1	mg/L	E160.1	11/06/2008 7:10 AM
Nitrogen, Kjeldahl, Total	0.28		1	mg/L	E351.2	11/14/2008 12:23 PM

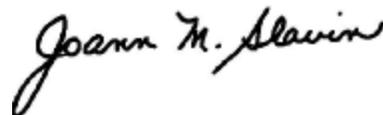
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-004B**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-6A

Collected : 10/30/2008 12:52:00 PM

Dissolved

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

CC

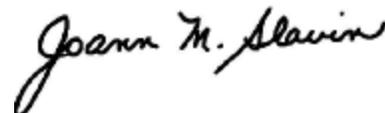
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 2:27 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 2:27 PM
Calcium	0.99		1	mg/L	E200.7	11/04/2008 2:27 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 2:27 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 2:27 PM
Iron	0.03		1	mg/L	E200.7	11/04/2008 2:27 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 2:27 PM
Magnesium	1.37		1	mg/L	E200.7	11/04/2008 2:27 PM
Manganese	< 0.02		1	mg/L	E200.7	11/04/2008 2:27 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 2:27 PM
Potassium	2.44		1	mg/L	E200.7	11/04/2008 2:27 PM
Sodium	7.47		1	mg/L	E200.7	11/04/2008 2:27 PM
Zinc	0.03		1	mg/L	E200.7	11/04/2008 2:27 PM
Mercury	< 0.20		1	ug/L	E245.1	11/03/2008 9:58 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:46 AM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008



Laboratory Manager

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-005A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-6E

Collected : 10/30/2008 1:34:00 PM

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 5:01 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 5:01 PM
Calcium	20.8		1	mg/L	E200.7	11/04/2008 5:01 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 5:01 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 5:01 PM
Iron	2.39		1	mg/L	E200.7	11/04/2008 5:01 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 5:01 PM
Magnesium	9.14		1	mg/L	E200.7	11/04/2008 5:01 PM
Manganese	0.45		1	mg/L	E200.7	11/04/2008 5:01 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 5:01 PM
Potassium	20.1		1	mg/L	E200.7	11/04/2008 5:01 PM
Sodium	62.1		1	mg/L	E200.7	11/04/2008 5:01 PM
Zinc	0.07		1	mg/L	E200.7	11/04/2008 5:01 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 10:03 AM
Alkalinity, Total (As CaCO3)	49.2		4	mg/L	E310.1	11/10/2008 7:05 PM
Chloride	141		10	mg/L	E300.0	11/12/2008 12:00 AM
Sulfate	25.0		1	mg/L	E300.0	11/11/2008 11:47 PM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:15 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:29 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:12 AM
Hardness (As CaCO3)	72.0		4	mg/L	E130.2	11/03/2008 1:24 PM
Bicarbonate	49.2		1	mg/L	M4500-CO2D	11/10/2008 5:10 PM
Nitrogen, Ammonia (As N)	10.4		20	mg/L	E350.1	10/31/2008 3:28 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/31/2008 5:15 PM
Nitrate as N	0.10		1	mg/L	E353.2	11/13/2008 2:35 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 10:30 AM
Total Dissolved Solids	377		1	mg/L	E160.1	11/06/2008 7:12 AM
Nitrogen, Kjeldahl, Total	9.77		10	mg/L	E351.2	11/14/2008 12:24 PM

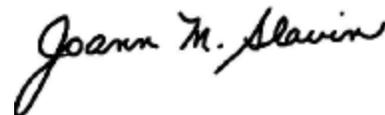
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-005B**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-6E

Collected : 10/30/2008 1:34:00 PM

Dissolved

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 2:56 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 2:56 PM
Calcium	21.2		1	mg/L	E200.7	11/04/2008 2:56 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 2:56 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 2:56 PM
Iron	2.31		1	mg/L	E200.7	11/04/2008 2:56 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 2:56 PM
Magnesium	9.47		1	mg/L	E200.7	11/04/2008 2:56 PM
Manganese	0.46		1	mg/L	E200.7	11/04/2008 2:56 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 2:56 PM
Potassium	21.3		1	mg/L	E200.7	11/04/2008 2:56 PM
Sodium	65.0		1	mg/L	E200.7	11/04/2008 2:56 PM
Zinc	0.07		1	mg/L	E200.7	11/04/2008 2:56 PM
Mercury	< 0.20		1	ug/L	E245.1	11/03/2008 9:59 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:48 AM

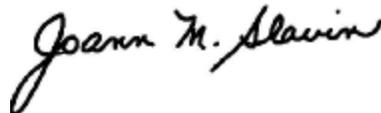
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-006A**

Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-6F

Collected : 10/30/2008 1:58:00 PM

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 5:08 PM
Barium	0.21		1	mg/L	E200.7	11/04/2008 5:08 PM
Calcium	36.7		1	mg/L	E200.7	11/04/2008 5:08 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 5:08 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 5:08 PM
Iron	0.35		1	mg/L	E200.7	11/04/2008 5:08 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 5:08 PM
Magnesium	15.8		1	mg/L	E200.7	11/04/2008 5:08 PM
Manganese	0.11		1	mg/L	E200.7	11/04/2008 5:08 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 5:08 PM
Potassium	6.47		1	mg/L	E200.7	11/04/2008 5:08 PM
Sodium	66.7		1	mg/L	E200.7	11/04/2008 5:08 PM
Zinc	0.03		1	mg/L	E200.7	11/04/2008 5:08 PM
Mercury	0.3		1	ug/L	E245.1	10/31/2008 10:05 AM
Alkalinity, Total (As CaCO3)	< 1.0		1	mg/L	E310.1	11/10/2008 7:30 PM
Chloride	206		5	mg/L	E300.0	11/12/2008 12:28 AM
Sulfate	< 5.00		1	mg/L	E300.0	11/12/2008 12:14 AM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:16 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:30 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:14 AM
Hardness (As CaCO3)	125		5	mg/L	E130.2	11/03/2008 1:26 PM
Bicarbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:11 PM
Nitrogen, Ammonia (As N)	0.54		1	mg/L	E350.1	10/31/2008 3:29 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/31/2008 5:16 PM
Nitrate as N	2.41		5	mg/L	E353.2	11/13/2008 2:36 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 10:35 AM
Total Dissolved Solids	554		1	mg/L	E160.1	11/06/2008 7:14 AM
Nitrogen, Kjeldahl, Total	0.81		1	mg/L	E351.2	11/14/2008 12:24 PM

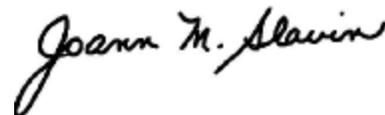
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Attn To : JAMES BYRNE, P.E.

Lab No. : **0812742-006B**

### Sample Information...

Type : Groundwater

Origin:

Client ID. : MW-6F

Collected : 10/30/2008 1:58:00 PM

Dissolved

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 3:04 PM
Barium	0.21		1	mg/L	E200.7	11/04/2008 3:04 PM
Calcium	36.3		1	mg/L	E200.7	11/04/2008 3:04 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 3:04 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 3:04 PM
Iron	0.29		1	mg/L	E200.7	11/04/2008 3:04 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 3:04 PM
Magnesium	15.8		1	mg/L	E200.7	11/04/2008 3:04 PM
Manganese	0.11		1	mg/L	E200.7	11/04/2008 3:04 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 3:04 PM
Potassium	6.91		1	mg/L	E200.7	11/04/2008 3:04 PM
Sodium	66.7		1	mg/L	E200.7	11/04/2008 3:04 PM
Zinc	0.03		1	mg/L	E200.7	11/04/2008 3:04 PM
Mercury	0.24		1	ug/L	E245.1	11/03/2008 10:01 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:50 AM

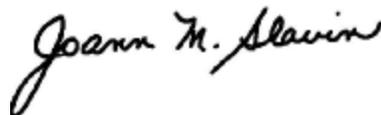
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-007A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-6C

Collected : 10/30/2008 2:33:00 PM

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

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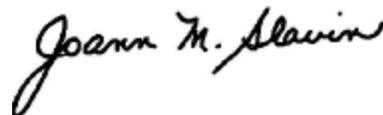
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 5:15 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 5:15 PM
Calcium	13.2		1	mg/L	E200.7	11/04/2008 5:15 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 5:15 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 5:15 PM
Iron	2.49		1	mg/L	E200.7	11/04/2008 5:15 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 5:15 PM
Magnesium	5.87		1	mg/L	E200.7	11/04/2008 5:15 PM
Manganese	0.03		1	mg/L	E200.7	11/04/2008 5:15 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 5:15 PM
Potassium	63.2		1	mg/L	E200.7	11/04/2008 5:15 PM
Sodium	145		1	mg/L	E200.7	11/04/2008 5:15 PM
Zinc	< 0.02		1	mg/L	E200.7	11/04/2008 5:15 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 10:07 AM
Alkalinity, Total (As CaCO3)	374		20	mg/L	E310.1	11/10/2008 7:34 PM
Chloride	162		5	mg/L	E300.0	11/12/2008 12:55 AM
Sulfate	10.8		1	mg/L	E300.0	11/12/2008 12:42 AM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:17 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:31 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:16 AM
Hardness (As CaCO3)	72.0		4	mg/L	E130.2	11/03/2008 1:28 PM
Bicarbonate	374		1	mg/L	M4500-CO2D	11/10/2008 5:12 PM
Nitrogen, Ammonia (As N)	68.3		100	mg/L	E350.1	10/31/2008 3:48 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/31/2008 5:18 PM
Nitrate as N	< 0.10		1	mg/L	E353.2	11/13/2008 2:37 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 10:40 AM
Total Dissolved Solids	539		1	mg/L	E160.1	11/06/2008 7:16 AM
Nitrogen, Kjeldahl, Total	95.9		100	mg/L	E351.2	11/14/2008 12:33 PM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Attn To : JAMES BYRNE, P.E.

Lab No. : **0812742-007B**

### Sample Information...

Type : Groundwater

Origin:

Client ID. : MW-6C

Collected : 10/30/2008 2:33:00 PM

Dissolved

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 3:11 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 3:11 PM
Calcium	12.7		1	mg/L	E200.7	11/04/2008 3:11 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 3:11 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 3:11 PM
Iron	0.05		1	mg/L	E200.7	11/04/2008 3:11 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 3:11 PM
Magnesium	5.73		1	mg/L	E200.7	11/04/2008 3:11 PM
Manganese	0.03		1	mg/L	E200.7	11/04/2008 3:11 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 3:11 PM
Potassium	61.6		1	mg/L	E200.7	11/04/2008 3:11 PM
Sodium	141		1	mg/L	E200.7	11/04/2008 3:11 PM
Zinc	< 0.02		1	mg/L	E200.7	11/04/2008 3:11 PM
Mercury	< 0.20		1	ug/L	E245.1	11/03/2008 10:06 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:52 AM

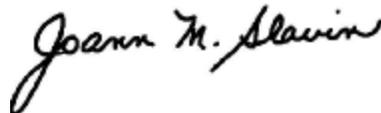
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812742-008A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : DUP 103008

Collected : 10/30/2008 8:00:00 AM

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

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<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 5:23 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 5:23 PM
Calcium	21.1		1	mg/L	E200.7	11/04/2008 5:23 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 5:23 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 5:23 PM
Iron	2.44		1	mg/L	E200.7	11/04/2008 5:23 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 5:23 PM
Magnesium	9.31		1	mg/L	E200.7	11/04/2008 5:23 PM
Manganese	0.46		1	mg/L	E200.7	11/04/2008 5:23 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 5:23 PM
Potassium	20.9		1	mg/L	E200.7	11/04/2008 5:23 PM
Sodium	64.0		1	mg/L	E200.7	11/04/2008 5:23 PM
Zinc	0.06		1	mg/L	E200.7	11/04/2008 5:23 PM
Mercury	< 0.2		1	ug/L	E245.1	10/31/2008 10:09 AM
Alkalinity, Total (As CaCO3)	48.0		4	mg/L	E310.1	11/10/2008 7:44 PM
Chloride	145		10	mg/L	E300.0	11/14/2008 1:21 AM
Sulfate	24.8		1	mg/L	E300.0	11/12/2008 1:09 AM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:18 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:32 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:18 AM
Hardness (As CaCO3)	84.0		4	mg/L	E130.2	11/03/2008 1:30 PM
Bicarbonate	48.0		1	mg/L	M4500-CO2D	11/10/2008 5:13 PM
Nitrogen, Ammonia (As N)	10.3		20	mg/L	E350.1	10/31/2008 3:37 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	10/31/2008 5:19 PM
Nitrate as N	0.11		1	mg/L	E353.2	11/13/2008 2:41 PM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 10:45 AM
Total Dissolved Solids	361		1	mg/L	E160.1	11/06/2008 7:18 AM
Nitrogen, Kjeldahl, Total	10.1		10	mg/L	E351.2	11/14/2008 12:26 PM

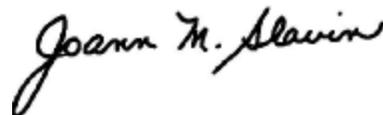
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Attn To : JAMES BYRNE, P.E.

Lab No. : **0812742-008B**

### Sample Information...

Type : Groundwater

Origin:

Client ID. : **DUP 103008**

Collected : 10/30/2008 8:00:00 AM

Dissolved

Received : 10/30/2008 3:15:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/04/2008 3:19 PM
Barium	< 0.20		1	mg/L	E200.7	11/04/2008 3:19 PM
Calcium	21.1		1	mg/L	E200.7	11/04/2008 3:19 PM
Chromium	< 0.01		1	mg/L	E200.7	11/04/2008 3:19 PM
Copper	< 0.02		1	mg/L	E200.7	11/04/2008 3:19 PM
Iron	2.28		1	mg/L	E200.7	11/04/2008 3:19 PM
Lead	< 5.00		1	µg/L	E200.7	11/04/2008 3:19 PM
Magnesium	9.33		1	mg/L	E200.7	11/04/2008 3:19 PM
Manganese	0.46		1	mg/L	E200.7	11/04/2008 3:19 PM
Nickel	< 0.04		1	mg/L	E200.7	11/04/2008 3:19 PM
Potassium	20.6		1	mg/L	E200.7	11/04/2008 3:19 PM
Sodium	63.4		1	mg/L	E200.7	11/04/2008 3:19 PM
Zinc	0.06		1	mg/L	E200.7	11/04/2008 3:19 PM
Mercury	< 0.20		1	ug/L	E245.1	11/03/2008 10:08 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	10/31/2008 8:54 AM

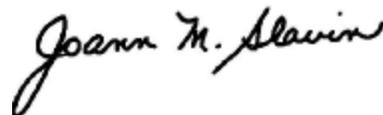
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/25/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812769-001A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-5B

Collected : 10/31/2008 10:13:00 AM

Received : 10/31/2008 1:00:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/06/2008 2:19 PM
Barium	< 0.20		1	mg/L	E200.7	11/06/2008 2:19 PM
Calcium	15.7		1	mg/L	E200.7	11/06/2008 2:19 PM
Chromium	< 0.01		1	mg/L	E200.7	11/06/2008 2:19 PM
Copper	< 0.02		1	mg/L	E200.7	11/06/2008 2:19 PM
Iron	0.04		1	mg/L	E200.7	11/06/2008 2:19 PM
Lead	6.61		1	µg/L	E200.7	11/06/2008 2:19 PM
Magnesium	8.79		1	mg/L	E200.7	11/06/2008 2:19 PM
Manganese	5.54		1	mg/L	E200.7	11/06/2008 2:19 PM
Nickel	< 0.04		1	mg/L	E200.7	11/06/2008 2:19 PM
Potassium	11.1		1	mg/L	E200.7	11/06/2008 2:19 PM
Sodium	47.1		1	mg/L	E200.7	11/06/2008 2:19 PM
Zinc	< 0.02		1	mg/L	E200.7	11/06/2008 2:19 PM
Mercury	< 0.2		1	ug/L	E245.1	11/03/2008 10:16 AM
Alkalinity, Total (As CaCO3)	45.3		2	mg/L	E310.1	11/10/2008 7:52 PM
Chloride	86.6		5	mg/L	E300.0	11/13/2008 8:49 AM
Sulfate	20.1		1	mg/L	E300.0	11/13/2008 8:36 AM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:23 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:33 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	11/01/2008 7:24 AM
Hardness (As CaCO3)	92.0		4	mg/L	E130.2	11/03/2008 1:32 PM
Bicarbonate	48.0		1	mg/L	M4500-CO2D	11/10/2008 5:14 PM
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	E350.1	11/06/2008 3:29 PM
Nitrite as N	0.18		1	mg/L	E353.2	11/01/2008 10:51 AM
Nitrate as N	3.55		5	mg/L	E353.2	11/15/2008 11:20 AM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 10:50 AM
Total Dissolved Solids	248		1	mg/L	E160.1	11/06/2008 7:34 AM
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	E351.2	11/19/2008 2:41 PM

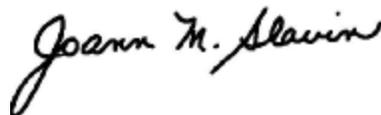
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/24/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812769-001B**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : MW-5B

Collected : 10/31/2008 10:13:00 AM

Dissolved

Received : 10/31/2008 1:00:00 PM

Collected By : G&F99

Copy : **Original**

CC

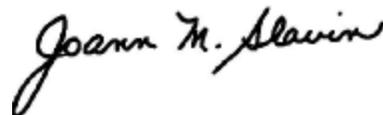
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/06/2008 2:48 PM
Barium	< 0.20		1	mg/L	E200.7	11/06/2008 2:48 PM
Calcium	15.5		1	mg/L	E200.7	11/06/2008 2:48 PM
Chromium	< 0.01		1	mg/L	E200.7	11/06/2008 2:48 PM
Copper	< 0.02		1	mg/L	E200.7	11/06/2008 2:48 PM
Iron	< 0.02		1	mg/L	E200.7	11/06/2008 2:48 PM
Lead	< 5.00		1	µg/L	E200.7	11/06/2008 2:48 PM
Magnesium	8.64		1	mg/L	E200.7	11/06/2008 2:48 PM
Manganese	5.46		1	mg/L	E200.7	11/06/2008 2:48 PM
Nickel	< 0.04		1	mg/L	E200.7	11/06/2008 2:48 PM
Potassium	10.9		1	mg/L	E200.7	11/06/2008 2:48 PM
Sodium	46.1		1	mg/L	E200.7	11/06/2008 2:48 PM
Zinc	< 0.02		1	mg/L	E200.7	11/06/2008 2:48 PM
Mercury	< 0.20		1	ug/L	E245.1	11/03/2008 10:10 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	11/01/2008 7:37 AM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/24/2008



Laboratory Manager

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812769-002A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : OBS-1

Collected : 10/31/2008 11:05:00 AM

Received : 10/31/2008 1:00:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/06/2008 3:17 PM
Barium	< 0.20		1	mg/L	E200.7	11/06/2008 3:17 PM
Calcium	21.1		1	mg/L	E200.7	11/06/2008 3:17 PM
Chromium	< 0.01		1	mg/L	E200.7	11/06/2008 3:17 PM
Copper	< 0.02		1	mg/L	E200.7	11/06/2008 3:17 PM
Iron	0.08		1	mg/L	E200.7	11/06/2008 3:17 PM
Lead	< 5.00		1	µg/L	E200.7	11/06/2008 3:17 PM
Magnesium	15.8		1	mg/L	E200.7	11/06/2008 3:17 PM
Manganese	1.42		1	mg/L	E200.7	11/06/2008 3:17 PM
Nickel	< 0.04		1	mg/L	E200.7	11/06/2008 3:17 PM
Potassium	10.6		1	mg/L	E200.7	11/06/2008 3:17 PM
Sodium	85.4		1	mg/L	E200.7	11/06/2008 3:17 PM
Zinc	< 0.02		1	mg/L	E200.7	11/06/2008 3:17 PM
Mercury	0.2		1	ug/L	E245.1	11/03/2008 10:18 AM
Alkalinity, Total (As CaCO3)	77.0		4	mg/L	E310.1	11/10/2008 7:59 PM
Chloride	126		5	mg/L	E300.0	11/13/2008 9:03 AM
Sulfate	73.7		5	mg/L	E300.0	11/13/2008 9:03 AM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:24 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:34 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	11/01/2008 7:25 AM
Hardness (As CaCO3)	95.0		5	mg/L	E130.2	11/03/2008 1:34 PM
Bicarbonate	77.0		1	mg/L	M4500-CO2D	11/10/2008 5:15 PM
Nitrogen, Ammonia (As N)	4.06		5	mg/L	E350.1	11/06/2008 3:33 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	11/01/2008 10:52 AM
Nitrate as N	0.14		1	mg/L	E353.2	11/15/2008 11:21 AM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 10:55 AM
Total Dissolved Solids	386		1	mg/L	E160.1	11/06/2008 7:36 AM
Nitrogen, Kjeldahl, Total	5.62		10	mg/L	E351.2	11/19/2008 2:42 PM

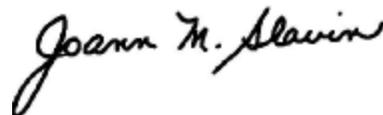
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/24/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812769-002B**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : **OBS-1**

Collected : 10/31/2008 11:05:00 AM

Dissolved

Received : 10/31/2008 1:00:00 PM

Collected By : G&F99

Copy : **Original**

CC

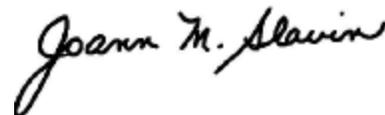
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/06/2008 3:25 PM
Barium	< 0.20		1	mg/L	E200.7	11/06/2008 3:25 PM
Calcium	21.2		1	mg/L	E200.7	11/06/2008 3:25 PM
Chromium	< 0.01		1	mg/L	E200.7	11/06/2008 3:25 PM
Copper	< 0.02		1	mg/L	E200.7	11/06/2008 3:25 PM
Iron	0.06		1	mg/L	E200.7	11/06/2008 3:25 PM
Lead	< 5.00		1	µg/L	E200.7	11/06/2008 3:25 PM
Magnesium	15.7		1	mg/L	E200.7	11/06/2008 3:25 PM
Manganese	1.48		1	mg/L	E200.7	11/06/2008 3:25 PM
Nickel	< 0.04		1	mg/L	E200.7	11/06/2008 3:25 PM
Potassium	10.5		1	mg/L	E200.7	11/06/2008 3:25 PM
Sodium	84.8		1	mg/L	E200.7	11/06/2008 3:25 PM
Zinc	< 0.02		1	mg/L	E200.7	11/06/2008 3:25 PM
Mercury	< 0.20		1	ug/L	E245.1	11/03/2008 10:12 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	11/01/2008 7:38 AM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/24/2008



Laboratory Manager

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812769-003A**

### Sample Information...

Type : Groundwater

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : LF-1

Collected : 10/31/2008 11:50:00 AM

Received : 10/31/2008 1:00:00 PM

Collected By : G&F99

Copy : **Original**

CC

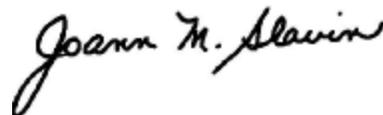
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Alkalinity, Total (As CaCO3)	188		5	mg/L	E310.1	11/10/2008 8:06 PM
Chloride	234		10	mg/L	E300.0	11/13/2008 9:57 AM
Sulfate	12.0		1	mg/L	E300.0	11/13/2008 9:44 AM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:25 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:35 PM
Hardness (As CaCO3)	180		10	mg/L	E130.2	11/03/2008 1:36 PM
Bicarbonate	188		1	mg/L	M4500-CO2D	11/10/2008 5:16 PM
Nitrogen, Ammonia (As N)	31.0		20	mg/L	E350.1	11/17/2008 3:57 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	11/01/2008 10:53 AM
Nitrate as N	0.13		1	mg/L	E353.2	11/15/2008 11:23 AM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 11:00 AM
Total Dissolved Solids	508		2	mg/L	E160.1	11/06/2008 7:38 AM
Nitrogen, Kjeldahl, Total	31.0		10	mg/L	E351.2	11/19/2008 2:43 PM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/24/2008



Laboratory Manager

# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOHID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Lab No. : **0812769-004A**

### Sample Information...

Type : Field Blank

Attn To : JAMES BYRNE, P.E.

Origin:

Client ID. : FIELD BLANK

Collected : 10/31/2008 8:00:00 AM

Received : 10/31/2008 1:00:00 PM

Collected By : G&F99

Copy : **Original**

CC

<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/06/2008 3:32 PM
Barium	< 0.20		1	mg/L	E200.7	11/06/2008 3:32 PM
Calcium	< 0.20		1	mg/L	E200.7	11/06/2008 3:32 PM
Chromium	< 0.01		1	mg/L	E200.7	11/06/2008 3:32 PM
Copper	< 0.02		1	mg/L	E200.7	11/06/2008 3:32 PM
Iron	< 0.02		1	mg/L	E200.7	11/06/2008 3:32 PM
Lead	< 5.00		1	µg/L	E200.7	11/06/2008 3:32 PM
Magnesium	< 0.20		1	mg/L	E200.7	11/06/2008 3:32 PM
Manganese	< 0.02		1	mg/L	E200.7	11/06/2008 3:32 PM
Nickel	< 0.04		1	mg/L	E200.7	11/06/2008 3:32 PM
Potassium	< 0.20		1	mg/L	E200.7	11/06/2008 3:32 PM
Sodium	< 0.20		1	mg/L	E200.7	11/06/2008 3:32 PM
Zinc	< 0.02		1	mg/L	E200.7	11/06/2008 3:32 PM
Mercury	< 0.2		1	ug/L	E245.1	11/03/2008 10:20 AM
Alkalinity, Total (As CaCO3)	< 1.0		1	mg/L	E310.1	11/10/2008 8:30 PM
Chloride	< 2.00		1	mg/L	E300.0	11/13/2008 10:11 AM
Sulfate	< 5.00		1	mg/L	E300.0	11/13/2008 10:11 AM
Cyanide	< 10		1	µg/L	E335.2	11/12/2008 1:26 PM
Carbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:36 PM
Chromium, Hexavalent	< 0.02		1	mg/L	M3500-Cr D	11/01/2008 7:26 AM
Hardness (As CaCO3)	< 5.0		1	mg/L	E130.2	11/03/2008 1:42 PM
Bicarbonate	< 1.0		1	mg/L	M4500-CO2D	11/10/2008 5:17 PM
Nitrogen, Ammonia (As N)	< 0.10		1	mg/L	E350.1	11/06/2008 3:35 PM
Nitrite as N	< 0.10		1	mg/L	E353.2	11/01/2008 10:54 AM
Nitrate as N	< 0.10		1	mg/L	E353.2	11/15/2008 11:24 AM
Phenolics, Total Recoverable	< 5.0		1	µg/L	E420.1	11/21/2008 11:05 AM
Total Dissolved Solids	< 10		1	mg/L	E160.1	11/06/2008 7:44 AM
Nitrogen, Kjeldahl, Total	< 0.10		1	mg/L	E351.2	11/19/2008 2:43 PM

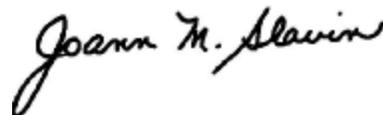
Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/24/2008

Laboratory Manager



# H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747  
(631) 694-3040 . FAX: (631) 420-8436 NYSDOH ID# 10478

## LABORATORY RESULTS

TOWN OF OYSTER BAY  
150 MILLER PLACE  
SYOSSET, NY 11791

Attn To : JAMES BYRNE, P.E.

Lab No. : **0812769-004B**

### Sample Information...

Type : Field Blank

Origin:

Client ID. : FIELD BLANK

Collected : 10/31/2008 8:00:00 AM

Dissolved

Received : 10/31/2008 1:00:00 PM

Collected By : G&F99

Copy : **Original**

CC

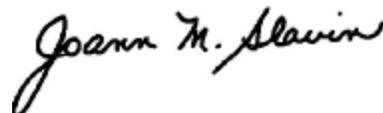
<u>Parameter(s)</u>	<u>Results</u>	<u>Qualifier</u>	<u>D.F.</u>	<u>Units</u>	<u>Method Number</u>	<u>Analyzed</u>
Aluminum	< 0.20		1	mg/L	E200.7	11/06/2008 3:39 PM
Barium	< 0.20		1	mg/L	E200.7	11/06/2008 3:39 PM
Calcium	0.21		1	mg/L	E200.7	11/06/2008 3:39 PM
Chromium	< 0.01		1	mg/L	E200.7	11/06/2008 3:39 PM
Copper	< 0.02		1	mg/L	E200.7	11/06/2008 3:39 PM
Iron	< 0.02		1	mg/L	E200.7	11/06/2008 3:39 PM
Lead	< 5.00		1	µg/L	E200.7	11/06/2008 3:39 PM
Magnesium	< 0.20		1	mg/L	E200.7	11/06/2008 3:39 PM
Manganese	< 0.02		1	mg/L	E200.7	11/06/2008 3:39 PM
Nickel	< 0.04		1	mg/L	E200.7	11/06/2008 3:39 PM
Potassium	< 0.20		1	mg/L	E200.7	11/06/2008 3:39 PM
Sodium	0.88		1	mg/L	E200.7	11/06/2008 3:39 PM
Zinc	< 0.02		1	mg/L	E200.7	11/06/2008 3:39 PM
Mercury	< 0.20		1	ug/L	E245.1	11/03/2008 10:14 AM
Chromium, Hexavalent (Diss.)	< 0.02		1	mg/L	M3500-Cr D	11/01/2008 7:39 AM

Qualifiers: E - Value above quantitation range

D - Results for Dilution

D.F. = Dilution Factor

Date Reported : 11/24/2008



Laboratory Manager

**APPENDIX B**

**FOURTH QUARTER GROUNDWATER SAMPLING LOGS**

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	LF-1/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well LF-1		
SAMPLE I.D. NO.	LF-1	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/31/2008	TIME	1150
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	44.53	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	6.0	INCHES	
TOTAL WELL DEPTH	102	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	Dedicated 4" Submersible Pump		
PURGING RATE	12	GAL/ MIN	PURGING TIME 22 MIN
NO. CASING VOLUMES REMOVED	3	GALLONS	273
WELL DRAWDOWN/ RECOVERY	Good		
SAMPLE APPEARANCE	Clear		
ODORS OBSERVED	None		
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	1356	pH 7.45	DO (mg/l) Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	19.7	TURBIDITY (NTU) 3.12	ORP (mV) Not Measured
SAMPLES ANALYZED FOR	Leachate Parameters		
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/31/2008		

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	7.41	7.43	7.45
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	1369	1373	1356
TEMPERATURE ( $^{\circ}\text{C}$ )	19.5	19.6	19.7
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	13.20	4.33	3.12
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	M-30B-R/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well M-30B-R		
SAMPLE I.D. NO.	M-30B-R	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/29/2008	TIME	921
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	85.75	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	2.0	INCHES	
TOTAL WELL DEPTH	123	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	2" Submersible Pump				
PURGING RATE	2	GAL/ MIN	PURGING TIME	10	MIN
NO. CASING VOLUMES REMOVED	3		GALLONS	19	
WELL DRAWDOWN/ RECOVERY	Good				
SAMPLE APPEARANCE	Clear				
ODORS OBSERVED	None				
CONDUCTIVITY ( $\mu\text{S/cm}$ )	366	pH	7.90	DO (mg/l)	Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	14.0	TURBIDITY (NTU)	7.60	ORP (mV)	Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody				
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/29/2008				

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	8.70	8.60	7.90
CONDUCTIVITY ( $\mu\text{S/cm}$ )	373	365	366
TEMPERATURE ( $^{\circ}\text{C}$ )	13.3	13.8	14.0
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	25.00	11.00	7.60
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-05B/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-05B		
SAMPLE I.D. NO.	MW-05B	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/31/2008	TIME	1013
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	71.71	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	117	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	2" Submersible Pump				
PURGING RATE	10	GAL/ MIN	PURGING TIME	9	MIN
NO. CASING VOLUMES REMOVED	3		GALLONS	90	
WELL DRAWDOWN/ RECOVERY	Good				
SAMPLE APPEARANCE	Clear				
ODORS OBSERVED	None				
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	531	pH	7.71	DO (mg/l)	Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	14.1	TURBIDITY (NTU)	3.27	ORP (mV)	Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody				
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/31/2008				

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	8.13	7.18	7.71
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	575	534	531
TEMPERATURE ( $^{\circ}\text{C}$ )	13.0	14.5	14.1
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	6.54	4.20	3.27
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-06A/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-06A		
SAMPLE I.D. NO.	MW-06A	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/30/2008	TIME	1252
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	95.05	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	107	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	1000 mL Disposable Bailer				
PURGING RATE	=	GAL/ MIN	PURGING TIME = MIN		
NO. CASING VOLUMES REMOVED	3	GALLONS	26		
WELL DRAWDOWN/ RECOVERY	Good				
SAMPLE APPEARANCE	Turbid				
ODORS OBSERVED	None				
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	74	pH	7.73	DO (mg/l)	Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	16.4	TURBIDITY (NTU)	70.30	ORP (mV)	Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody				
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/30/2008				

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	7.44	7.63	7.73
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	81	70	74
TEMPERATURE ( $^{\circ}\text{C}$ )	16.3	16.1	16.4
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	30.80	71.30	70.30
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-06B/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-06B		
SAMPLE I.D. NO.	MW-06B	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/30/2008	TIME	1225
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	95.44	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	135	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	Dedicated 4" Submersible Pump				
PURGING RATE	8	GAL/ MIN	PURGING TIME	9	MIN
NO. CASING VOLUMES REMOVED	3	GALLONS	75		
WELL DRAWDOWN/ RECOVERY	Good				
SAMPLE APPEARANCE	Clear				
ODORS OBSERVED	None				
CONDUCTIVITY ( $\mu\text{S/cm}$ )	953	pH	7.81	DO (mg/l)	Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	16.1	TURBIDITY (NTU)	5.13	ORP (mV)	Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody				
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/30/2008				

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	6.99	7.67	7.81
CONDUCTIVITY ( $\mu\text{S/cm}$ )	1000	948	953
TEMPERATURE ( $^{\circ}\text{C}$ )	15.2	16.5	16.1
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	12.60	7.03	5.13
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-06C/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-06C		
SAMPLE I.D. NO.	MW-06C	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/30/2008	TIME	1433
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	95.20	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	161	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	2" Submersible Pump		
PURGING RATE	7	GAL/ MIN	PURGING TIME 19 MIN
NO. CASING VOLUMES REMOVED	3	GALLONS	134
WELL DRAWDOWN/ RECOVERY	Good		
SAMPLE APPEARANCE	Clear		
ODORS OBSERVED	None		
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	1726	pH 7.97	DO (mg/l) Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	15.6	TURBIDITY (NTU) 5.16	ORP (mV) Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody		
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/30/2008		

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	7.08	7.33	7.97
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	922	1380	1726
TEMPERATURE ( $^{\circ}\text{C}$ )	17.2	14.6	15.6
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	9.18	20.40	5.16
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-06E/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-06E		
SAMPLE I.D. NO.	MW-06E	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/30/2008	TIME	1334
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	95.16	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	251	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	Dedicated 4" Submersible Pump				
PURGING RATE	6	GAL/ MIN	PURGING TIME 50 MIN		
NO. CASING VOLUMES REMOVED	3	GALLONS	300		
WELL DRAWDOWN/ RECOVERY	Good				
SAMPLE APPEARANCE	Clear				
ODORS OBSERVED	None				
CONDUCTIVITY ( $\mu\text{S/cm}$ )	780	pH	6.25	DO (mg/l)	Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	16.6	TURBIDITY (NTU)	2.72	ORP (mV)	Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody				
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/30/2008				

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	6.26	6.64	6.25
CONDUCTIVITY ( $\mu\text{S/cm}$ )	870	833	780
TEMPERATURE ( $^{\circ}\text{C}$ )	14.6	14.0	16.6
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	14.50	4.53	2.72
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-06F/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-06F		
SAMPLE I.D. NO.	MW-06F	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/30/2008	TIME	1358
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	95.95	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	350	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	2" Submersible Pump		
PURGING RATE	6	GAL/ MIN	PURGING TIME 90 MIN
NO. CASING VOLUMES REMOVED	3	GALLONS	500
WELL DRAWDOWN/ RECOVERY	Good		
SAMPLE APPEARANCE	Clear		
ODORS OBSERVED	None		
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	896	pH 5.08	DO (mg/l) Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	17.6	TURBIDITY (NTU) 2.93	ORP (mV) Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody		
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/30/2008		

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	5.71	5.43	5.08
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	817	862	896
TEMPERATURE ( $^{\circ}\text{C}$ )	17.2	16.2	17.6
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	7.26	2.83	2.93
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-07B/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-07B		
SAMPLE I.D. NO.	MW-07B	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/29/2008	TIME	1245
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	86.50	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	131	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	Dedicated 4" Submersible Pump		
PURGING RATE	2	GAL/ MIN	PURGING TIME 21 MIN
NO. CASING VOLUMES REMOVED	3	GALLONS	32
WELL DRAWDOWN/ RECOVERY	Good		
SAMPLE APPEARANCE	Clear		
ODORS OBSERVED	None		
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	500	pH 4.99	DO (mg/l) Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	11.5	TURBIDITY (NTU) 96.10	ORP (mV) Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody		
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/29/2008		

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	4.97	5.01	4.99
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	522	504	500
TEMPERATURE ( $^{\circ}\text{C}$ )	10.6	12.1	11.5
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	80.00	53.60	96.10
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-08A/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-08A		
SAMPLE I.D. NO.	MW-08A	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/30/2008	TIME	1155
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	69.55	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	81	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	5600 mL Disposable Bailer				
PURGING RATE	=	GAL/ MIN	PURGING TIME = MIN		
NO. CASING VOLUMES REMOVED	3	GALLONS	24		
WELL DRAWDOWN/ RECOVERY	Good				
SAMPLE APPEARANCE	Turbid				
ODORS OBSERVED	None				
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	86	pH	4.45	DO (mg/l)	Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	12.6	TURBIDITY (NTU)	157.00	ORP (mV)	Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody				
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/30/2008				

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	5.00	4.31	4.45
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	86	76	86
TEMPERATURE ( $^{\circ}\text{C}$ )	11.0	11.7	12.6
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	18.20	150.00	157.00
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-08B/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-08B		
SAMPLE I.D. NO.	MW-08B	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/30/2008	TIME	1123
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	69.15	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	161	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	2" Submersible Pump		
PURGING RATE	6	GAL/ MIN	PURGING TIME 31 MIN
NO. CASING VOLUMES REMOVED	3	GALLONS	188
WELL DRAWDOWN/ RECOVERY	A		
SAMPLE APPEARANCE	Clear		
ODORS OBSERVED	None		
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	476	pH 4.79	DO (mg/l) Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	13.9	TURBIDITY (NTU) 3.30	ORP (mV) Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody		
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/30/2008		

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	6.29	5.06	4.79
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	475	479	476
TEMPERATURE ( $^{\circ}\text{C}$ )	14.5	12.9	13.9
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	3.49	3.96	3.30
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-09B/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-09B		
SAMPLE I.D. NO.	MW-09B	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/29/2008	TIME	1440
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	90.89	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	169	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	2" Submersible Pump		
PURGING RATE	7	GAL/ MIN	PURGING TIME 23 MIN
NO. CASING VOLUMES REMOVED	3	GALLONS	148
WELL DRAWDOWN/ RECOVERY	A		
SAMPLE APPEARANCE	Clear		
ODORS OBSERVED	None		
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	431	pH 6.97	DO (mg/l) Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	13.1	TURBIDITY (NTU) 4.77	ORP (mV) Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody		
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/29/2008		

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	7.30	7.00	6.97
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	410	435	431
TEMPERATURE ( $^{\circ}\text{C}$ )	14.8	12.9	13.1
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	6.65	4.90	4.77
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-09C/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-09C		
SAMPLE I.D. NO.	MW-09C	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/29/2008	TIME	1357
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	91.75	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	227	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	2" Submersible Pump		
PURGING RATE	8	GAL/ MIN	PURGING TIME 30 MIN
NO. CASING VOLUMES REMOVED	3	GALLONS	240
WELL DRAWDOWN/ RECOVERY	Good		
SAMPLE APPEARANCE	Clear		
ODORS OBSERVED	None		
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	532	pH 7.22	DO (mg/l) Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	14.2	TURBIDITY (NTU) 8.99	ORP (mV) Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody		
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/29/2008		

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	6.55	7.06	7.22
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	512	526	532
TEMPERATURE ( $^{\circ}\text{C}$ )	14.0	14.0	14.2
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	9.34	11.90	8.99
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-11A/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-11A		
SAMPLE I.D. NO.	MW-11A	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/29/2008	TIME	1112
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	23.21	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	141	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	2" Submersible Pump		
PURGING RATE	6	GAL/ MIN	PURGING TIME 39 MIN
NO. CASING VOLUMES REMOVED	3	GALLONS	238
WELL DRAWDOWN/ RECOVERY	Good		
SAMPLE APPEARANCE	Clear		
ODORS OBSERVED	None		
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	102	pH 4.50	DO (mg/l) Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	9.4	TURBIDITY (NTU) 3.10	ORP (mV) Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody		
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/29/2008		

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	7.04	4.55	4.50
CONDUCTIVITY ( $\mu\text{S}/\text{cm}$ )	101	106	102
TEMPERATURE ( $^{\circ}\text{C}$ )	10.5	9.3	9.4
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	2.60	3.20	3.10
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	MW-11B/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well MW-11B		
SAMPLE I.D. NO.	MW-11B	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/29/2008	TIME	1115
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	23.26	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	241	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	Dedicated 4" Submersible Pump		
PURGING RATE	10	GAL/ MIN	PURGING TIME 44 MIN
NO. CASING VOLUMES REMOVED	3	GALLONS	437
WELL DRAWDOWN/ RECOVERY	Good		
SAMPLE APPEARANCE	Clear		
ODORS OBSERVED	None		
CONDUCTIVITY ( $\mu\text{S/cm}$ )	64	pH 4.38	DO (mg/l) Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	10.2	TURBIDITY (NTU) 1.20	ORP (mV) Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody		
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/29/2008		

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	5.90	5.10	4.38
CONDUCTIVITY ( $\mu\text{S/cm}$ )	59	63	64
TEMPERATURE ( $^{\circ}\text{C}$ )	10.6	9.9	10.2
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	3.50	1.70	1.20
ORP (mV)	Not Measured	Not Measured	Not Measured

# GANNETT FLEMING ENGINEERS, P.C.

480 Forest Avenue  
Locust Valley, New York 11560

CLIENT/ PROJECT NO.	Town of Oyster Bay / 49725.001		
WELL NO./ OWNER	OBS-1/ Town of Oyster Bay		
SAMPLING POINT	Monitoring Well OBS-1		
SAMPLE I.D. NO.	OBS-1	SAMPLED BY	MN/MW/CA
DATE SAMPLED	10/31/2008	TIME	1105
WELL USE	Groundwater Monitoring		
STATIC WATER ELEV.	49.15	FT. BELOW MEASURING POINT	TOC
WELL DIAMETER	4.0	INCHES	
TOTAL WELL DEPTH	195	FT. BELOW MEASURING POINT	TOC

## SAMPLING INFORMATION

PURGING METHOD	Dedicated 4" Submersible Pump		
PURGING RATE	10	GAL/ MIN	PURGING TIME 30 MIN
NO. CASING VOLUMES REMOVED	3	GALLONS	292
WELL DRAWDOWN/ RECOVERY	Good		
SAMPLE APPEARANCE	Clear		
ODORS OBSERVED	None		
CONDUCTIVITY ( $\mu\text{S/cm}$ )	837	pH 6.63	DO (mg/l) Not Measured
TEMPERATURE ( $^{\circ}\text{C}$ )	14.7	TURBIDITY (NTU) 4.46	ORP (mV) Not Measured
SAMPLES ANALYZED FOR	See Chain of Custody		
LABORATORY/ DATE SHIPPED	H2M Labs, Inc. and TOB DPW Lab - 10/31/2008		

## COMMENTS, LOCATION SKETCH, WELL-HEAD SKETCH, ETC.

	<u>1<sup>st</sup> VOLUME</u>	<u>2<sup>nd</sup> VOLUME</u>	<u>3<sup>rd</sup> VOLUME</u>
PH	7.78	6.69	6.63
CONDUCTIVITY ( $\mu\text{S/cm}$ )	821	836	837
TEMPERATURE ( $^{\circ}\text{C}$ )	13.5	14.5	14.7
DO (mg/l)	Not Measured	Not Measured	Not Measured
TURBIDITY (NTU)	3.57	3.03	4.46
ORP (mV)	Not Measured	Not Measured	Not Measured

**APPENDIX C**

**GROUNDWATER SAMPLING PROTOCOLS**

PROTOCOLS FOR SAMPLING GROUNDWATER UNDER THE  
OLD BETHPAGE SOLID WATER DISPOSAL COMPLEX  
REMEDIAL ACTION PLAN

Equipment

Generator	Distilled Water
Extension Cord	Polyethylene Tubing
Water Level Meter (M-Scope) or	Rags
Steel Tape and Chalk	MICRO™ Laboratory Cleaner
Sample/Discharge Fitting	Sample Containers
Beakers	(Including duplicate
Graduated Bucker	field and trip blanks)
Gloves (Latex Nitrile or	Plastic Sheeting
equivalent)	Flow-through Cell
Nylon or Polypropylene Cord	Conductivity Meter
Cooler with Ice	Thermometer
Teflon Tape	Scrub Brush
PVC Bailer	Grundfos® Stainless Steel Submersible
	Pump

Procedure: Wells equipped with permanent submersible pumps.

1. Unlock the well and measure the depth to water to the hundredth of a foot with a water level meter (m-scope) or steel tape and chalk. Record this measurement on the Water Sampling Log and calculate the amount of water standing in the well.
2. Lay plastic sheeting down around well. Clean the sample/discharge fitting and the flow-through cell in 2% MICRO™ solution and rinse with distilled water.

3. Connect the sample/discharge fitting to the flow-through cell. Connect this assemblage to the riser pipe. Use Teflon tape where needed. Start generator and plug extension cord in: connect extension cord to the pump power cable. Record the time pumping began on the Water Sampling Log.
4. Close the valve on the fitting to the flow-through cell. Using the other valve, adjust the pumping rate so that it does not continuously draw down to the pump intake (consult sampling logs from previous sampling rounds for pumping rates). Periodically measure the flow rate using a graduated bucket. Record pumping rate on the Water Sampling Log.
5. Pump three times the amount of standing water from the well. If necessary, evacuate Well No 8B by pumping dry three times allowing time for recovery between each pumping. Water pumped from Well No. 6B is to be discharged away from the well to prevent possible contamination of the less contaminated water table zone tapped by Well No. 6A. A minimum of 100 feet of polyethylene tubing will be used to direct discharge away from the well cluster. Note: the flow through cell is not used to sample Well No. 6B. Label and tape the sample containers.
6. When the wells is nearly ready for sampling, put on protective gloves and open the valve to the flow-through cell. Insert thermometer, pH 4 and 7 buffers, and the conductivity electrode into the flow-through cell and allow a few minutes for thermal equilibration. Read and record temperature; set pH and conductivity meters with buffers. Remove vials containing buffers and insert pH electrode into the flow-through cell. Record pH, temperature, and conductivity on Water Sampling Log.
7. Adjust valve so that flow from the sample discharge (polyethylene tubing) is a trickle. Fill VOC vials making sure that there are no trapped air bubbles, and place in a cooler with ice.
8. Fill remaining containers and place in a cooler with ice. Note: do not rinse bottles with sample water before filling, as some bottles contain preservative.

9. Complete Water Sampling Log and Chain-of-Custody Form. Affix Chain-of-Custody Seal to cooler.
10. Remove sample/discharge fitting and flow-through cell, replace all plugs, and lock the well. Discard plastic sheeting and gloves. Deliver samples to laboratory as soon as possible. Obtain signature from receiver at laboratory on Chain-of-Custody Form.

Procedure: Wells not equipped with a permanent submersible pump.

1. Wells that are not equipped with permanent submersible pumps will be evacuated with a submersible pump or PVC bailer, and sampled with PVC bailer.
2. Open the Well and clean off any surficial dirt from protective casing. Remove well cap.
3. Measure the depth to water to the hundredth of a foot with a water level recorder (m-scope) or steel tape and chalk. Record this measurement on the Water Sampling Log, and calculate the amount of water standing in the well.
4. Lay plastic sheeting down around well. Label and tape the sample containers.
5. Disassemble the bailer, if appropriate, and immerse the bailer and/or submersible pump in a 2% solution of MICRO™, or pour the solution in and over the bailer/pump. Scrub the bailer/pump with a brush to remove surficial contaminants. Rinse the bailer/pump with copious amounts of distilled water. Wear clean gloves when handling a clean bailer/pump.
6. Reassemble the bailer and place on the plastic sheeting. Attach an appropriate length of nylon or polypropylene cord to the bailer using a secure knot. Tie loose end of cord to well casing. Attach the appropriate lengths of nylon or polypropylene cord and polyethylene tubing to the submersible pump. New cord and tubing will be used at each well.

7. If a bailer is being used to evacuate the well, lower the bailer into the well and into the water column gradually, to minimize turbulence. Allow the bailer to sink and become fully submerged. Recover the bailer from the well and empty into the graduated bucket. If the submersible pump is being used to evacuate the well, lower the pump below the water table, secure the safety line, and plug into generator.
8. Bail/pump three times the amount of standing water from the well or bail/pump well dry and allow to recover. Bailer cord can be held in hand or laid on plastic sheeting while bailing. Following evacuation, pull pump out of well slowly while pump is still operating. This will ensure that any water remaining above the pump has been evacuated from the well.
9. All samples for wells without dedicated pumps will be collected with a PVC bailer. Slowly lower clean bailer into well to minimize turbulence. Fill the 40-ml vials for VOCs analysis insuring that there are no air bubbles. Place vials in cooler with ice.
10. Fill remaining sample containers and place in cooler with ice. Note: do not rinse containers with sample, as some containers contain preservatives.
11. Lock well. Discard cord, tubing, gloves, and sheeting.
12. Fill out remaining data on Water Sampling Log and complete Chain-of-Custody Form. Affix Chain-of-Custody Seal to cooler. Deliver samples to the lab as soon as possible and obtain receiver's signature on Chain-of-Custody Form.

Procedure: (Field Blank and Trip Blank)

1. Label and tape one of the 40-ml vials filled with lab water as "Trip Blank", and store unopened in a cooler on ice. One trip blank will accompany each day's samples.

2. Label and tape one of the empty 40-ml vials as “Field Blank” and store it and the remaining two 40-ml vials filled with lab water, unopened with the other empty sample containers.
3. On the last day of sampling, two Field Blanks will be collected by running the two vials of lab water through (1) the sample/discharge fitting and (2) the bailer used in the sampling round (the fitting and bailer will be decontaminated prior to sample collection following the identical procedure used between sampling different wells). Make sure that there is no trapped air bubbles in the sample vial. Place blank in cooler with ice.
4. Complete Water Sampling Log and Chain-of-Custody Form. Affix Chain-of-Custody Seal to cooler.
5. Deliver samples to laboratory as soon as possible. Obtain signature from receiver at laboratory on Chain-of-Custody Form.

## **APPENDIX E**

**“2008 Annual Monitoring Report  
January through December 2008  
Old Bethpage Landfill  
Old Bethpage, New York”**

**Gannett Fleming, December 2009**

# TOWN OF OYSTER BAY



*Prepared By*  
GANNETT FLEMING  
480 Forest Avenue  
Locust Valley, NY 11560  
Office: 516-671-8440  
Fax: 516-671-3349  
www.gannettfleming.com

*Office Contacts*  
Vincent Frisina, P.E.  
Jessica Ferngren  
Michael Nahmias

*GF Project No.*  
49725

## 2008 ANNUAL MONITORING REPORT

### JANUARY THROUGH DECEMBER 2008 OLD BETHPAGE LANDFILL OLD BETHPAGE, NEW YORK

December 2009



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<u>No.</u>	<u>Description</u>
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## APPENDIX A

<u>No.</u>	<u>Description</u>
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## APPENDIX B

<u>No.</u>	<u>Description</u>
Figure 1	Total Volatile Halogenated Organics – Water Table - 2008
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## **1.0 INTRODUCTION**

This report summarizes the groundwater monitoring activities for 2008 at the Old Bethpage Solid Waste Disposal Complex (OBSWDC). The 2008 monitoring period covers the fifteenth year of operation of the Old Bethpage Landfill Groundwater Treatment Facility (GTF). Quarterly groundwater monitoring was performed in accordance with the requirements of the Remedial Action Plan (RAP) in Appendix I of the 1988 Record of Decision issued by the New York State Department of Environmental Conservation (NYSDEC) and the United States Environmental Protection Agency (USEPA).

The OBSWDC groundwater remediation system began operating on April 1, 1992. Geraghty & Miller, Inc. initiated monthly hydraulic monitoring approximately 30 days after system start-up, with the frequency reduced to quarterly beginning with the October 1993 round. The 2008 sampling program consisted of four synoptic rounds of water-level measurements to assess the effectiveness of the hydraulic control created by the recovery well network, and four rounds of groundwater sampling at 16 monitoring wells to track changes in groundwater quality over time. At the request of Lockwood, Kessler and Bartlett (LKB), monitoring well MW-9D was also sampled during the third quarter sampling round.

## **2.0 WATER-LEVEL MEASUREMENTS AND MAPPING**

A synoptic round of water-level measurements was recorded in monitoring and recovery wells by Gannett Fleming at the start of each monitoring event. The depth to water and water-level elevation data are summarized in Table 1. These data were used to create the water table, shallow potentiometric, and deep potentiometric zone groundwater flow maps for each quarter as provided in Appendix A. Each map shows the water-level elevation contours, limiting flow lines, and the approximate aerial extent of the volatile organic compound (VOC) plume.

Monitoring well water level elevations decreased an average of 0.31 feet during this annual monitoring period. The recovery system was operating at its full capacity during 2008, except for the Groundwater Treatment Facility and recovery wells being off-line intermittently for repairs. The annual pumpage data are summarized in Table 2.

Regional groundwater flow at the water table and in the shallow and deep potentiometric zones is southeasterly. The shallow and deep potentiometric groundwater flows toward the recovery wells in the capture zone area. The GTF effluent is discharged to Recharge Basin #1, which causes localized water table mounding beneath the basin. The mounding has not affected the overall regional hydraulic gradient or flow direction.

### **3.0 GROUNDWATER SAMPLING AND CONTAMINANT DISTRIBUTION**

Gannett Fleming sampled monitoring wells M-30B-R, MW-5B (excluding the first quarter due to a pump malfunction), MW-6A, MW-6B, MW-6C, MW-6E, MW-6F, MW-7B (excluding the first quarter due to a pump malfunction), MW-8A, MW-8B, MW-9B (excluding the first quarter due to a pump malfunction), MW-9C, MW-11A, MW-11B, OBS-1 and LF-1 during the first, second, third and fourth quarters of 2008 in accordance with the *Protocols for Sampling Groundwater Under the Old Bethpage Solid Waste Disposal Complex Remedial Action Plan* prepared by Geraghty & Miller, Inc. At the request of LKB, monitoring well MW-9D was sampled during the third quarter sampling round. Field blanks and field duplicates were collected by Gannett Fleming environmental scientists and analyzed for quality assurance/quality control (QA/QC) purposes. Trip blanks were prepared by the laboratory for QA/QC purposes. The samples collected for VOC analysis, were analyzed by the Town of Oyster Bay Environmental Laboratory as requested by LKB. Metals and leachate parameters in the samples were analyzed by H2M Laboratories. The quarterly analytical results are summarized in Tables 3 through 8. Raw laboratory data and well sampling logs are included in the quarterly reports prepared by Gannett Fleming.

A dedicated submersible pump, a two-inch Grundfos pump, or a dedicated bailer were used to purge and sample the monitoring wells. All non-dedicated down well equipment was cleaned before use and after sampling each well by washing with laboratory-grade detergent solution and rinsing with potable water to minimize the possibility of cross contamination.

Recovery well analytical data, provided quarterly by the Town of Oyster Bay Department of Public Works, are summarized in Table 6. The monitoring well and recovery well databases were combined to create yearly summary plume maps shown on Figures 1 through 3. Groundwater flow maps were completed for each quarter of 2008 and have been included as Appendix A.

In addition to the wells sampled by GF, VOC analytical data from Claremont split sampling has been provided by LKB and incorporated the tables and figures presented in this report.

### **3.1 Volatile Organic Compound Plume**

The VOCs are divided into three groups: volatile halogenated hydrocarbons (VHOs), volatile aromatic hydrocarbons, and tetrachloroethene (PCE). Changes in chemical constituent concentrations between the first and fourth quarter sampling rounds are discussed below. The trend of concentrations of contaminants in the water table, shallow potentiometric and deep potentiometric zones are presented in Appendix B, figures 1 through 9. All VOC data for 2008 has been summarized in tables 3 through 6.

#### **3.1.1 Volatile Halogenated Compounds (VHO) Group**

Nineteen VHO compounds were detected during 2008. The location and monitoring round during which the highest concentration was reported are listed on the table below. Please note that dichlorobenzene-o,m&p and chlorobenzene were included in the VHO totals on the tables and figures for all quarters in 2008.

<b><u>Compound</u></b>	<b><u>Peak Concentration (in parts per billion)</u></b>	<b><u>Quarter</u></b>	<b><u>Location</u></b>
Bromodichloromethane	0.2	2nd	MW-07B
Bromoform	0.6	2nd	LF-01
Chlorobenzene	1.4	4th	MW-06C
Chlorodibromomethane	0.1	3rd	MW-11B
Chloroethane	1.7	3rd	MW-09D
Chloroform	0.2	<i>Several</i>	<i>Multiple</i>
Dichlorobenzene, o,m&p	3.9	2nd	OBS-1
Dichlorodifluoromethane	2.9	3rd	MW-09D
1,1-Dichloroethane	3.1	3rd	MW-09D
1,1-Dichloroethene	2.8	3rd	MW-06F
1,2-Dichloroethane	0.2	3rd	MW-11B

<u>Compound</u>	<u>Peak Concentration (in parts per billion)</u>	<u>Quarter</u>	<u>Location</u>
trans-1,2-dichloroethene	0.2	3rd	MW-09D
cis-1,2-Dichloroethene	3.3	3rd	MW-09D
1,2-Dichloropropane	0.3	2nd	MW-07B
Methylene Chloride	0.1	3rd	MW-09D
Tetrachloroethene	9.4	3rd	MW-06F
1,1,1-Trichloroethane	3.3	3rd	MW-06F
Trichloroethylene	25.1	3rd	MW-06F
Vinyl chloride	1.2	3rd	MW-09D

Total VHO concentrations decreased through 2008 in monitoring wells LF-1 (2.1 ppb to 1.4 ppb), M-30B-R (0.8 ppb to non-detect), MW-05B (0.4 ppb to non-detect), MW-06B (4.0 ppb to 0.6 ppb), MW-06E (4.0 ppb to 1.1 ppb), MW-07B (4.5 ppb to non-detect), MW-08A (12.2 ppb to 9.6 ppb), MW-08B (4.0 ppb to 0.9 ppb), MW-09B (0.4 ppb to non-detect), MW-09C (0.8 ppb to non-detect), MW-11A (3.6 ppb to 2.8 ppb), and OBS-1 (9.9 ppb to 6.3 ppb). Concentrations of VHOs also decreased in MW-09D when compared to third quarter of 2007 (22.1 ppb to 18.0 ppb). Concentrations of VHOs increased during 2008 in MW-06C (2.5 ppb to 3.0 ppb) and MW-11B (Non-detect to 2.1 ppb). VHO concentrations spiked in MW-06F from non-detect in the first quarter to 42.5 ppb in the third quarter and decreased back to non-detect in the fourth quarter. VHO concentrations remained at less than the laboratory reporting limit in well MW-06A for all samples collected in 2008.

For the year, concentrations of VHOs remained low in the water table, shallow potentiometric zone, and deep potentiometric zone, except for an increase in concentrations during the third quarter sampling event for MW-6F. This third quarter sampling event could be considered an anomaly.

### 3.1.2 Aromatic Hydrocarbons

Seven aromatic hydrocarbons were detected during the 2008 monitoring period. The location and monitoring round during which the highest concentration of each compound was reported are listed below. Please note, tert-butylbenzene was not included in the totals for aromatic hydrocarbons in all 2008 figures and tables.

<u>Compound</u>	<u>Peak Concentration (in parts per billion)</u>	<u>Quarter</u>	<u>Location</u>
Benzene	2.8	3rd	MW-09D
n-Butylbenzene	0.3	1st	<i>Several</i>
Chlorobenzene	1.4	4th	MW-06C
Dichlorobenzene, o,m&p	3.9	2nd	OBS-1
Isopropylbenzene	1.3	3rd	MW-09D
Toluene	0.1	1st	MW-06C
o-Xylene	2.8	2nd	MW-05B

Total aromatic hydrocarbon concentrations decreased through 2008 in monitoring wells LF-1 (2.7 ppb to 1.4 ppb), M-30B-R (1.2 ppb to non-detect), MW-05B (3.2 ppb to non-detect), MW-06B (5.0 ppb to 1.1 ppb), MW-06E (4.6 ppb to 0.9 ppb), MW-07B (0.8 ppb to non-detect), MW-09B (1.5 ppb to non-detect), MW-09C (0.8 ppb to non-detect), MW-11A (0.1 ppb to non-detect), and OBS-1 (5.4 ppb to 3.5 ppb). Concentrations of aromatic hydrocarbons also decreased in MW-09D when compared to third quarter of 2007 (11.6 ppb to 7.4 ppb). Concentrations of aromatic hydrocarbons increased during 2008 in MW-06C (3.4 ppb to 4.4 ppb) and MW-11B (non-detect to 0.8 ppb). Aromatic hydrocarbon concentrations spiked in MW-06F and MW-08B from non-detect in the first quarter to 0.8 ppb and 1.6 ppb respectively in the second quarter. However, both wells decreased back to non-detect levels in the third and fourth quarters. Aromatic hydrocarbon concentrations remained at less than the laboratory reporting limit in wells MW-06A and MW-08A from the first through the fourth quarter sampling rounds.

Aromatic hydrocarbons concentrations were not detected or remained low at the water table. Aromatic hydrocarbon concentrations in the shallow and deep potentiometric zones generally decreased or remained at less than the laboratory reporting limit between the first and fourth quarter monitoring rounds. Figure 2 shows the distribution of aromatic hydrocarbons during 2008. Concentrations of total aromatic hydrocarbons in each potentiometric zone are shown in Figures 4 through 6 in Appendix B.

### 3.1.3 Tetrachloroethene

Tetrachloroethene was detected at the highest concentration of 11.6 parts per billion during the first quarter sampling round in well MW-08A.

Tetrachloroethene concentrations decreased through 2008 in monitoring wells MW-06C (0.1 ppb to non-detect ppb), MW-06E (0.2 ppb to non-detect), MW-07B (0.3 ppb to non-detect), MW-08A (11.6 ppb to 8.9 ppb), MW-08B (1.4 ppb to 0.9 ppb), MW-11A (0.6 ppb to 0.5 ppb) and OBS-1 (0.6 ppb to 0.3 ppb). Concentrations of tetrachloroethene also decreased in MW-09D when compared to third quarter of 2007 (1.6 ppb to 1.4 ppb). Tetrachloroethene concentrations spiked in MW-06F from non-detect in the first and second quarter to 9.4 in the third quarter and decreased back to non-detect in the fourth quarter. Tetrachloroethene concentrations remained at less than the laboratory reporting limit in wells LF-1, M-30B-R, MW-05B, MW-06A, MW-06B, MW-09B, MW-09C, and MW-11B from the first through the fourth quarter sampling rounds.

Tetrachloroethene was reported at concentrations exceeding the New York State Water Quality Guidance Value of 5.0 ppb in wells MW-06F (1<sup>st</sup> quarter) and MW-08A (all quarters). Tetrachloroethene was not detected or the concentrations remained low in all other water table, shallow and deep potentiometric wells.

Historically, samples collected from monitoring well MW-07B have had the highest concentrations of tetrachloroethene in the affected area. In 2008, concentrations of tetrachloroethene have remained at low concentrations or were not detected by the laboratory. A table below shows historic levels of tetrachloroethene concentrations in well MW-07B.

**Historic Tetrachloroethene Concentrations in MW-07B**

<b>Year/Quarter</b>	<b>First</b>	<b>Second</b>	<b>Third</b>	<b>Fourth</b>
<b>2004</b>	165.2	222.0	145.7	80.8
<b>2005</b>	122.0	266.0	91.0	64.0
<b>2006</b>	66.9	80.3	50.9	61.3
<b>2007</b>	72.3	78.3	NS	NS
<b>2008</b>	NS	0.3	ND	ND

NS – Not Sampled

ND – Non-Detect Concentration

Figure 3 shows the distribution of tetrachloroethene during 2008. Concentrations of tetrachloroethene in each potentiometric zone are shown in Figures 7 through 9 in Appendix B.

### **3.2 Inorganic Analyte Plume**

The 2008 inorganic compound data show little change in the extent and concentration of leachate parameters over time. The highest leachate parameter concentrations were reported in decreasing order in the samples from wells LF-1, MW-06E, MW-06C, OBS-1, MW-06F, and MW-06B.

## **4.0 FINDINGS**

1. The average system pumpage in 2008 appeared sufficient to control the VOC plume.
2. Localized water table mounding beneath Recharge Basin #1 was caused by the discharge of the GTF effluent to the basin.
3. Concentrations of VHOs increased in MW-06C and MW-11B. Total VHO concentrations decreased in monitoring wells LF-1, M-30B-R, MW-05B, MW-06B, MW-06E, MW-07B, MW-08A, MW-08B, MW-09B, MW-09C, MW-09D (compared to third quarter 2007), MW-11A, and OBS-1. VHO concentrations spiked in MW-06F in the third quarter and decreased to historically average concentrations in the fourth quarter. VHO concentrations remained at less than the laboratory reporting limit in well MW-06A from the first through the fourth quarter sampling rounds. Please note that MW-05B, MW-07B and MW-09B were not sampled during the first quarter.
4. Concentrations of aromatic hydrocarbons increased during 2008 in MW-06C and MW-11B. Aromatic hydrocarbon concentrations decreased in monitoring wells LF-1, M-30B-R, MW-05B, MW-06B, MW-06E, MW-07B, MW-09B, MW-09C, MW-09D (compared to third quarter 2007), MW-11A, and OBS-1. Aromatic hydrocarbon concentrations increased slightly in MW-06F and MW-08B in the second quarter and decreased to non-detect concentrations in the third and fourth quarters. Aromatic hydrocarbon concentrations remained at less than the laboratory reporting limit in wells MW-06A and MW-08A from the first through the fourth quarter sampling rounds. Please note that MW-05B, MW-07B, and MW-09B were not sampled during the first quarter due to non-operational dedicated pumps in these wells.
5. Tetrachloroethene concentrations decreased in monitoring wells MW-06C, MW-06E, MW-07B, MW-08A, MW-08B, MW-09D (compared to third quarter 2007), MW-11A, and OBS-1.
  1. Tetrachloroethene concentrations spiked in MW-06F in the third quarter and decreased

back to non-detect concentrations in the fourth quarter. Tetrachloroethene concentrations remained at less than the laboratory reporting limit in wells LF-1, M-30B-R, MW-05B, MW-06A, MW-06B, MW-09B, MW-09C and MW-11B for the first through the fourth quarter sampling rounds. Please note that MW-05B, MW-07B and MW-09B were not sampled during the first quarter.

6. Tetrachloroethene concentrations in monitoring well MW-07B has decreased by orders of magnitude from the second quarter 2007 to second quarter 2008 sampling rounds. MW-07B was not sampled from the third quarter 2007 to the first quarter 2008 sampling rounds due to dedicated submersible pump malfunction. Once the dedicated pump was removed, GF set tubing for and used a submersible Grunfos pump for sampling. During sample collection, GF encountered sediment-laden groundwater that caused the Grunfos pump to shutdown on numerous occasions during the purging process. On October 29, 2008, GF measured the depth to bottom in MW-07B to be 131 feet below the top of the casing. This was a change of over 100 feet from the original depth to bottom of 236 feet below the top of casing.
7. The distribution and concentration of inorganic compounds show little overall change in the extent and concentration of leachate parameters during 2008.
8. Monitoring well OBS-2 was not sampled during the third and fourth quarter because it has been destroyed.

## **5.0 RECOMMENDATIONS**

1. Continued pumping to assure hydraulic control as per the system design.
2. Continue the quarterly groundwater monitoring program to track changes in water quality conditions over time and to assess the groundwater remediation system effectiveness.
3. Continue to evaluate trends in water levels.
4. Monitor tetrachloroethene concentrations in monitoring well MW-07B to evaluate whether or not the well is drawing water from the contaminate plume. Continue monitoring the depth to bottom of MW-07B to determine if the well screen has collapsed or if the well has been filled in. Reinstall the well if necessary.
5. Reinstall monitoring well OBS-2.

**TABLES**

**TABLE 1  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - ANNUAL 2008**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
EW-02A	1/28/2008	157.14	91.43		65.71
EW-02A	5/19/2008	157.14	90.28	1.15	66.86
EW-02A	8/26/2008	157.14	91.58	-1.30	65.56
EW-02A	10/28/2008	157.14	91.00	0.58	66.14
EW-02B	1/28/2008	157.61	91.59		66.02
EW-02B	5/19/2008	157.61	90.51	1.08	67.10
EW-02B	8/26/2008	157.61	91.80	-1.29	65.81
EW-02B	10/28/2008	157.61	91.95	-0.15	65.66
EW-02C	1/28/2008	157.54	91.37		66.17
EW-02C	5/19/2008	157.54	90.42	0.95	67.12
EW-02C	8/26/2008	157.54	91.56	-1.14	65.98
EW-02C	10/28/2008	157.54	91.97	-0.41	65.57
LF-1	1/28/2008	111.40	43.85		67.55
LF-1	5/19/2008	111.40	43.23	0.62	68.17
LF-1	8/26/2008	111.40	44.20	-0.97	67.20
LF-1	10/28/2008	111.40	44.53	-0.33	66.87
LF-2	1/28/2008	118.70	51.50		67.20
LF-2	5/19/2008	118.70	50.71	0.79	67.99
LF-2	8/26/2008	118.70	51.96	-1.25	66.74
LF-2	10/28/2008	118.70	51.80	0.16	66.90
LF-3	1/28/2008	126.50	57.02		69.48
LF-3	5/19/2008	126.50	56.40	0.62	70.10
LF-3	8/26/2008	126.50	57.50	-1.10	69.00
LF-3	10/28/2008	126.50	57.45	0.05	69.05

MP - Measuring Point (Typically Top of Casing)

MSL - Mean Sea Level

NM - Not Measured

N/A - Not Applicable

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TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - ANNUAL 2008**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
LF-4	1/28/2008	149.93	N/A		N/A
LF-4	5/19/2008	149.93	N/A	N/A	N/A
LF-4	8/26/2008	149.93	N/A	N/A	N/A
LF-4	10/28/2008	149.93	N/A	N/A	N/A
M-29A-R	1/28/2008	157.50	89.34		68.16
M-29A-R	5/19/2008	157.50	88.80	0.54	68.70
M-29A-R	8/26/2008	157.50	90.10	-1.30	67.40
M-29A-R	10/28/2008	157.50	N/A	N/A	N/A
M-29B	1/28/2008	157.41	82.82		74.59
M-29B	5/19/2008	157.41	81.80	1.02	75.61
M-29B	8/26/2008	157.41	N/A	N/A	N/A
M-29B	10/28/2008	157.41	81.54	N/A	75.87
M-30B-R	1/28/2008	154.51	84.67		69.84
M-30B-R	5/19/2008	154.51	84.09	0.58	70.42
M-30B-R	8/26/2008	154.51	85.28	-1.19	69.23
M-30B-R	10/28/2008	154.51	85.75	-0.47	68.76
MW-05A	1/28/2008	137.13	69.85		67.28
MW-05A	5/19/2008	137.13	70.80	-0.95	66.33
MW-05A	8/26/2008	137.13	71.42	-0.62	65.71
MW-05A	10/28/2008	137.13	72.95	-1.53	64.18
MW-05B	1/28/2008	138.43	72.26		66.17
MW-05B	5/19/2008	138.43	71.52	0.74	66.91
MW-05B	8/26/2008	138.43	72.65	-1.13	65.78
MW-05B	10/28/2008	138.43	71.71	0.94	66.72

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**TABLE 1  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - ANNUAL 2008**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
MW-06A	1/28/2008	160.24	94.48		65.76
MW-06A	5/19/2008	160.24	93.78	0.70	66.46
MW-06A	8/26/2008	160.24	94.92	-1.14	65.32
MW-06A	10/28/2008	160.24	95.05	-0.13	65.19
MW-06B	1/28/2008	160.39	94.91		65.48
MW-06B	5/19/2008	160.39	93.99	0.92	66.40
MW-06B	8/26/2008	160.39	95.15	-1.16	65.24
MW-06B	10/28/2008	160.39	95.44	-0.29	64.95
MW-06C	1/28/2008	159.99	94.22		65.77
MW-06C	5/19/2008	159.99	93.51	0.71	66.48
MW-06C	8/26/2008	159.99	94.72	-1.21	65.27
MW-06C	10/28/2008	159.99	95.20	-0.48	64.79
MW-06D	1/28/2008	160.39	94.62		65.77
MW-06D	5/19/2008	160.39	93.94	0.68	66.45
MW-06D	8/26/2008	160.39	95.15	-1.21	65.24
MW-06D	10/28/2008	160.39	94.75	0.40	65.64
MW-06E	1/28/2008	160.88	95.56		65.32
MW-06E	5/19/2008	160.88	94.55	1.01	66.33
MW-06E	8/26/2008	160.88	95.75	-1.20	65.13
MW-06E	10/28/2008	160.88	95.16	0.59	65.72
MW-06F	1/28/2008	159.88	94.67		65.21
MW-06F	5/19/2008	159.88	93.97	0.70	65.91
MW-06F	8/26/2008	159.88	95.20	-1.23	64.68
MW-06F	10/28/2008	159.88	95.95	-0.75	63.93

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TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - ANNUAL 2008**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
MW-07A	1/28/2008	148.44	86.12		62.32
MW-07A	5/19/2008	148.44	84.95	1.17	63.49
MW-07A	8/26/2008	148.44	85.84	-0.89	62.60
MW-07A	10/28/2008	148.44	86.18	-0.34	62.26
MW-07B	1/28/2008	147.94	85.89		62.05
MW-07B	5/19/2008	147.94	84.97	0.92	62.97
MW-07B	8/26/2008	147.94	85.40	-0.43	62.54
MW-07B	10/28/2008	147.94	86.50	-1.10	61.44
MW-08A	1/28/2008	134.94	69.05		65.89
MW-08A	5/19/2008	134.94	68.95	0.10	65.99
MW-08A	8/26/2008	134.94	69.11	-0.16	65.83
MW-08A	10/28/2008	134.94	69.55	-0.44	65.39
MW-08B	1/28/2008	134.24	67.85		66.39
MW-08B	5/19/2008	134.24	66.96	0.89	67.28
MW-08B	8/26/2008	134.24	68.15	-1.19	66.09
MW-08B	10/28/2008	134.24	69.15	-1.00	65.09
MW-08C	1/28/2008	135.72	69.10		66.62
MW-08C	5/19/2008	135.72	68.85	0.25	66.87
MW-08C	8/26/2008	135.72	69.57	-0.72	66.15
MW-08C	10/28/2008	135.72	69.83	-0.26	65.89
MW-09A	1/28/2008	153.35	89.44		63.91
MW-09A	5/19/2008	153.35	88.62	0.82	64.73
MW-09A	8/26/2008	153.35	88.98	-0.36	64.37
MW-09A	10/28/2008	153.35	89.91	-0.93	63.44

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TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - ANNUAL 2008**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
MW-09B	1/28/2008	153.28	90.45		62.83
MW-09B	5/19/2008	153.28	89.74	0.71	63.54
MW-09B	8/26/2008	153.28	89.10	0.64	64.18
MW-09B	10/28/2008	153.28	90.89	-1.79	62.39
MW-09C	1/28/2008	153.53	91.00		62.53
MW-09C	5/19/2008	153.53	90.55	0.45	62.98
MW-09C	8/26/2008	153.53	91.70	-1.15	61.83
MW-09C	10/28/2008	153.53	91.75	-0.05	61.78
MW-09D	1/28/2008	152.95	90.78		62.17
MW-09D	5/19/2008	152.95	90.03	0.75	62.92
MW-09D	8/26/2008	152.95	91.32	-1.29	61.63
MW-09D	10/28/2008	152.95	91.15	0.17	61.80
MW-10A	1/28/2008	161.28	95.88		65.40
MW-10A	5/19/2008	161.28	95.05	0.83	66.23
MW-10A	8/26/2008	161.28	95.68	-0.63	65.60
MW-10A	10/28/2008	161.28	96.08	-0.40	65.20
MW-10B	1/28/2008	161.12	96.15		64.97
MW-10B	5/19/2008	161.12	95.25	0.90	65.87
MW-10B	8/26/2008	161.12	96.33	-1.08	64.79
MW-10B	10/28/2008	161.12	96.35	-0.02	64.77
MW-10C	1/28/2008	160.27	95.22		65.05
MW-10C	5/19/2008	160.27	94.34	0.88	65.93
MW-10C	8/26/2008	160.27	95.60	-1.26	64.67
MW-10C	10/28/2008	160.27	95.50	0.10	64.77

MP - Measuring Point (Typically Top of Casing)

MSL - Mean Sea Level

NM - Not Measured

N/A - Not Applicable

**TABLE 1  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - ANNUAL 2008**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
MW-10D	1/28/2008	161.17	96.17		65.00
MW-10D	5/19/2008	161.17	95.30	0.87	65.87
MW-10D	8/26/2008	161.17	96.68	-1.38	64.49
MW-10D	10/28/2008	161.17	96.40	0.28	64.77
MW-11A	1/28/2008	80.19	23.52		56.67
MW-11A	5/19/2008	80.19	21.90	1.62	58.29
MW-11A	8/26/2008	80.19	23.80	-1.90	56.39
MW-11A	10/28/2008	80.19	23.21	0.59	56.98
MW-11B	1/28/2008	79.91	23.58		56.33
MW-11B	5/19/2008	79.91	21.78	1.80	58.13
MW-11B	8/26/2008	79.91	22.98	-1.20	56.93
MW-11B	10/28/2008	79.91	23.26	-0.28	56.65
N-9980	1/28/2008	80.46	24.55		55.91
N-9980	5/19/2008	80.46	22.92	1.63	57.54
N-9980	8/26/2008	80.46	24.01	-1.09	56.45
N-9980	10/28/2008	80.46	24.18	-0.17	56.28
OBS-1	1/28/2008	110.61	48.84		61.77
OBS-1	5/19/2008	110.61	47.60	1.24	63.01
OBS-1	8/26/2008	110.61	49.06	-1.46	61.55
OBS-1	10/28/2008	110.61	49.15	-0.09	61.46
OBS-2	1/28/2008	105.26	N/A		N/A
OBS-2	5/19/2008	105.26	N/A	N/A	N/A
OBS-2	8/26/2008	105.26	N/A	N/A	N/A
OBS-2	10/28/2008	105.26	N/A	N/A	N/A

MP - Measuring Point (Typically Top of Casing)

MSL - Mean Sea Level

NM - Not Measured

N/A - Not Applicable

**TABLE 1  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - ANNUAL 2008**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
RW-01	1/28/2008	110.94	56.89		54.05
RW-01	5/19/2008	110.94	55.78	1.11	55.16
RW-01	8/26/2008	110.94	57.20	-1.42	53.74
RW-01	10/28/2008	110.94	57.36	-0.16	53.58
RW-02	1/28/2008	145.31	82.73		62.58
RW-02	5/19/2008	145.31	81.95	0.78	63.36
RW-02	8/26/2008	145.31	83.00	-1.05	62.31
RW-02	10/28/2008	145.31	83.20	-0.20	62.11
RW-03	1/28/2008	120.92	58.39		62.53
RW-03	5/19/2008	120.92	69.84	-11.45	51.08
RW-03	8/26/2008	120.92	71.34	-1.50	49.58
RW-03	10/28/2008	120.92	71.70	-0.36	49.22
RW-04	1/28/2008	144.82	N/A		N/A
RW-04	5/19/2008	144.82	82.28	N/A	62.54
RW-04	8/26/2008	144.82	82.22	0.06	62.60
RW-04	10/28/2008	144.82	82.60	-0.38	62.22
RW-05	1/28/2008	149.74	N/A		N/A
RW-05	5/19/2008	149.74	N/A	N/A	N/A
RW-05	8/26/2008	149.74	97.10	N/A	52.64
RW-05	10/28/2008	149.74	97.00	0.10	52.74
TW-1	1/28/2008	121.12	52.00		69.12
TW-1	5/19/2008	121.12	50.57	1.43	70.55
TW-1	8/26/2008	121.12	N/A	N/A	N/A
TW-1	10/28/2008	121.12	52.22	N/A	68.90

MP - Measuring Point (Typically Top of Casing)

MSL - Mean Sea Level

NM - Not Measured

N/A - Not Applicable

**TABLE 1  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**WATER LEVEL MEASUREMENTS - ANNUAL 2008**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>SITE</b>	<b>DATE</b>	<b>MP ELEVATION (feet)</b>	<b>DEPTH TO WATER (feet)</b>	<b>DELTA WATER ELEV. (feet)</b>	<b>WATER ELEVATION (feet)</b>
TW-2	1/28/2008	117.52	53.88		63.64
TW-2	5/19/2008	117.52	50.57	3.31	66.95
TW-2	8/26/2008	117.52	50.43	0.14	67.09
TW-2	10/28/2008	117.52	50.80	-0.37	66.72
TW-3-R	1/28/2008	133.93	66.66		67.27
TW-3-R	5/19/2008	133.93	65.97	0.69	67.96
TW-3-R	8/26/2008	133.93	67.29	-1.32	66.64
TW-3-R	10/28/2008	133.93	67.30	-0.01	66.63

MP - Measuring Point (Typically Top of Casing)

MSL - Mean Sea Level

NM - Not Measured

N/A - Not Applicable

**TABLE 2  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**GROUNDWATER REMEDIATION SYSTEM PUMPAGE RECORDS - ANNUAL 2008**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

Date	System Flow (gpm)	Remarks
01/1/08-01/2/08	620	RW-2 & RW-3 off-line.
01/03/08	572	RW-2 & RW-3 off-line, GTF off-line 2 hr.
01/4/08-01/30/08	623	RW-2 & RW-3 off-line.
01/31/08	413	RW-2 & RW-3 off-line, GTF off-line 8 hr.
02/1/08-02/6/08	626	RW-2 & RW-3 off-line.
02/07/08	600	RW-2 & RW-3 off-line, GTF off-line 1 hr.
02/08/08	675	RW-2 off-line, RW-3 off-line 11.5 hr.
02/9/08-02/17/08	860	RW-2 off-line.
02/18/08	654	RW-2 off-line, GTF off-line 5 hr.
02/19/08	854	RW-2 off-line.
02/20/08	819	RW-2 off-line, GTF off-line 1 hr.
02/21/08-03/10/08	844	RW-2 off-line.
03/11/08	562	RW-2 off-line, GTF off-line 8 hr.
03/12/08-03/13/08	847	RW-2 off-line.
03/14/08	776	RW-2 off-line, GTF off-line 2 hr.
03/15/08-03/31/08	862	RW-2 off-line.
First Quarter Average:	746	
04/1/08-04/3/08	861	RW-2 off-line.
04/04/08	807	RW-1 off-line 7 hr., RW-2 off-line.
04/05/08	609	RW-1 and RW-2 off-line.
04/06/08	683	RW-1 off-line 15 hr., RW-2 off-line.
04/7/08-04/15/08	859	RW-2 off-line.
04/16/08	720	RW-1 off-line 10 hr., RW-off-line, GTF off-line 1 hr.
04/17/08	743	RW-1 off-line 10 hr., RW-2 off-line.
04/18/08	836	RW-2 off-line.
04/19/08	746	RW-2 off-line, GTF off-line 3.5 hr..
04/20/08-04/27/08	871	RW-2 off-line.
04/28/08	290	RW-2 off-line 6 hr., GTF-off-line 18 hr.
04/29/08	312	RW-2 off-line 6 hr., GTF-off-line 13 hr.
04/30/08-06/11/08	873	RW-2 off-line.
06/12/08	767	RW-1 off-line 13 hr., RW-2 off-line,
06/13/08	544	RW-1 and RW-2 off-line, GTF off-line 3 hr.
06/14/08-06/15/08	635	RW-1 and RW-2 off-line.
06/16/08	55	RW-1 and RW-2 off-line, GTF off-line 31.5 hr.
06/17/08-06/18/08	0	GTF off-line.
06/19/08	439	RW-2 off-line, RW-1, 3, 4 & 5 off-line 10.5 hr.
06/20/08	728	RW-2 off-line, GTF off-line 2 hr.
06/21/08-06/25/08	910	RW-2 off-line.
06/26/08	606	RW-2 off-line, GTF off-line 9 hr.
06/27/08	253	RW-2 off-line, GTF off-line 15.5 hr.
06/28/08-06/30/08	904	RW-2 off-line.
Second Quarter Average:	797	

**TABLE 2  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**GROUNDWATER REMEDIATION SYSTEM PUMPAGE RECORDS - ANNUAL 2008**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

Date	System Flow (gpm)	Remarks
07/1/08-07/26/08	891	RW-2 off-line.
07/27/08	684	RW-2 off-line, RW-3 off-line 8 hr., RW-5 off-line 11hr.
07/28/08	348	RW-2, 3 and 5 off-line.
07/29/08	550	RW-2 off-line, RW-3 off-line 12 hr., RW-5 off-line 16 hr.
07/30/08-07/31/08	892	RW-2 off-line.
08/01/08	821	RW-1 off-line 7 hr., RW-2 off-line.
8/2/08-8/5/08	880	RW-2 off-line.
08/06/08	838	RW-2 off-line, GTF off-line 1 hr.
08/07/08	679	RW-1 off-line 1 hr., RW-2 off-line, GTF off-line 4 hr.
08/08/08	819	RW-2 off-line, RW-4 off-line 11 hr., GTF off-line 1.5 hr.
08/9/08-08/18/08	872	RW-2 off-line.
08/19/08	812	RW-2 off-line, GTF-off-line 1 hr.
08/20/08-08/21/08	858	RW-2 off-line.
08/22/08	845	RW-1 off-line 3 hr., RW-2 off-line.
08/23/08	546	RW-1 off-line 15 hr., RW-2 off-line, GTF off-line 6 hr.
08/24/08-08/26/08	861	RW-2 off-line.
08/27/08	392	RW-2 off-line 10.5 hr., GTF off-line 13.5 hr.
08/28/08	240	RW-4 off-line 9 hr., GTF off-line 15 hr.
08/29/08	862	RW-4 off-line.
08/30/08	633	RW-1 off-line 19 hr., RW-4 off-line, GTF off-line 0.5 hr.
08/31/08	602	RW-1 & 4 off-line.
09/01/08	348	RW-1 & 4 off-line, RW-5 off-line 20 hr.
09/02/08	615	RW-1 & 5 off-line 11 hr., RW-2 & 4 off-line.
09/03/08	498	RW-1 off-line 11 hr., RW-2 off-line, RW-4 off-line 3.5 hr., RW-5 off-line 2 hr., GTF off-line 6 hr.
09/04/08	871	RW-2 off-line.
09/05/08	688	RW-2 off-line, GTF off-line 5 hr.
09/6/08-09/8/08	898	RW-2 off-line.
09/09/08	781	RW-2 off-line, GTF off-line 3 hr.
09/10/08	840	RW-2 off-line.
09/11/08	631	RW-2 off-line, GTF off-line 5 hr.
09/12/08	419	RW-2 off-line, GTF off-line 12 hr.
09/13/08	594	RW-2 off-line, GTF off-line 7 hr.
09/14/08	834	RW-2 off-line.
09/15/08	780	RW-2 off-line, GTF off-line 1 hr.
09/16/08	759	RW-2 off-line, GTF off-line 3 hr.
09/17/08	839	RW-2 off-line.
09/18/08	834	RW-2 off-line, GTF off-line 1 hr.
09/19/08-09/23/08	830	RW-2 off-line.
09/24/08	672	RW-2 off-line, GTF off-line 5 hr.
09/25/08	841	RW-2 off-line.
09/26/08	823	RW-2 off-line, GTF off-line 1 hr.
09/27/08-09/28/08	836	RW-2 off-line.
09/29/08	790	RW-2 off-line, RW-5 off-line 3 hr.
09/30/08	785	RW-2 off-line, RW-5 off-line 3 hr.
Third Quarter Average:	803	

**TABLE 2  
TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL**

**GROUNDWATER REMEDIATION SYSTEM PUMPAGE RECORDS - ANNUAL 2008**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

Date	System Flow (gpm)	Remarks
10/1 to 10/28	862	Recovery Well RW-2 off-line. Recovery Well RW-4 valve mostly closed.
10/29/2009	214	GTF off-line 16 hours to replace RW-4 valve.
10/30 to 11/4	0	GTF off-line to replace RW-4 valve.
11/5/2008	700	GTF off-line 8 hours.
11/6 to 11/9	898	Recovery Well RW-4 off-line.
11/10 to 11/28	1088	GTF on-line.
11/29/2008	534	GTF off-line 14 hr.
11/30/2008	0	GTF off-line.
12/1/2009	621	GTF off-line 10 hr.
12/2/2009	891	GTF off-line 3 hr.
12/3/2009	940	GTF off-line 3 hr.
12/4 to 12/16	1099	GTF on-line.
12/17 to 12/29	0	GTF off-line during valve work in Bethpage State Park.
12/30/2009	1130	GTF on-line.
Fourth Quarter Average:	736	

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	LF-1 1/30/2008	LF-1 5/22/2008	LF-1 8/29/2008	LF-1 10/31/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.6	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.8	1.2	0.6	0.5
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	1.3 J	1.7	0.9	0.9
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.1 U
Trichloroethylene	0.5 U	0.5 U	0.5 U	0.2 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Sum of Constituents	2.1	3.5	1.5	1.4

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	M-30B-R 1/29/2008	M-30B-R 5/20/2008	M-30B-R 8/29/2008	M-30B-R 10/29/2008
Bromodichloromethane	0.5 U	0.1 J	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.1 J	0.5 U	0.1 U
Dichlorobenzene, o,m&p	0.8 J	1 J	0.5 U	0.8 U
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.1 J	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.1 U
Trichloroethylene	0.5 U	0.5	0.5 U	0.2 U
Vinyl Thloride	0.5 U	0.1 J	0.5 U	0.2 U
Sum of Constituents	0.8	1.9	ND	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-05B Not Sampled	MW-05B 6/18/2008	MW-05B 8/29/2008	MW-05B 10/31/2008
Bromodichloromethane		0.5 U	0.5 U	0.3 U
Bromoform		0.5 U	0.5 U	0.2 U
Carbon Tetrachloride		0.5 U	0.5 U	0.1 U
Chlorobenzene		0.5 U	0.5 U	0.1 U
Chlorodibromomethane		0.5 U	0.5 U	0.6 U
Chloroethane		0.5 U	0.5 U	0.2 U
Chloroform		0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p		0.4 J	0.5 U	0.8 U
Dichlorodifluoromethane		0.5 U	0.5 U	0.1 U
1,1-Dichloroethane		0.5 U	0.5 U	0.2 U
1,1-Dichloroethene		0.5 U	0.5 U	0.3 U
1,2-Dichloroethane		0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene		0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene		0.5 U	0.5 U	0.2 U
1,2-Dichloropropane		0.5 U	0.5 U	0.1 U
Methylene Chloride		0.5 U	0.5 U	0.2 U
Tetrachloroethene		0.5 U	0.5 U	0.2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.1 U
Trichloroethylene		0.5 U	0.5 U	0.2 U
Vinyl Chloride		0.5 U	0.5 U	0.2 U
Sum of Constituents		0.4	ND	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-06A 1/31/2008	MW-06A 5/21/2008	MW-06A 8/28/2008	MW-06A 10/30/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	0.5 U	0.5 U	0.5 U	0.8 U
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.1 U
Trichloroethylene	0.5 U	0.5 U	0.5 U	0.2 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Sum of Constituents	ND	ND	ND	ND

Notes:

All concentrations in micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-06B 1/30/2008	MW-06B 5/21/2008	MW-06B 8/28/2008	MW-06B 10/30/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.8	0.1 J	0.5 U	0.1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	3.2 J	1.1 J	1.9	0.6
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.1 U
Trichloroethylene	0.5 U	0.5 U	0.5 U	0.2 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Sum of Constituents	4.0	1.2	1.9	0.6

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-06C 1/31/2008	MW-06C 5/21/2008	MW-06C 8/28/2008	MW-06C 10/30/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.8	0.2 J	0.2 J	1.4
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	1.6	0.4 J	0.4 J	1.4
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.1 J	0.5 U	0.5 U	0.2 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.1 U
Trichloroethylene	0.5 U	0.5 U	0.5 U	0.2 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.2
Sum of Constituents	2.5	0.6	0.6	3.0

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-06E 1/30/2008	MW-06E DUP 1/30/2008	MW-06E 5/21/2008	MW-06E DUP 5/21/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	1.2	1.3	0.7	0.7
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorobenzene, o,m&p	2.2 J	2.5 J	2.6	2.5
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.2 J	0.2 J	0.5 U	0.2 J
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.2 J	0.2 J	0.2 J	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethylene	0.2 J	0.2 J	0.3 J	0.2 J
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U
Sum of Constituents	4.0	4.4	3.8	3.6

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-6F DUP 8/28/2009	MW-06E 8/28/2009	MW-06E 10/30/2008	MW-06E DUP 10/30/2008
Bromodichloromethane	0.5 U	0.5 U	0.3 U	0.3 U
Bromoform	0.5 U	0.5 U	0.2 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.1 U	0.1 U
Chlorobenzene	0.3 J	0.2 J	0.2	0.1
Chlorodibromomethane	0.5 U	0.5 U	0.6 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.2 U	0.2 U
Chloroform	0.5 U	0.5 U	0.1 U	0.1 U
Dichlorobenzene, o,m&p	0.8 J	0.9 J	0.7	0.6
Dichlorodifluoromethane	0.5 U	0.5 U	0.1 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.2 U	0.2 U
1,1-Dichloroethene	2.6	0.5 U	0.3 U	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.3 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.3 U	0.3 U
cis-1,2-Dichloroethene	1.6	0.2 J	0.2 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.1 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.2 U	0.2 U
Tetrachloroethene	<b>9.9</b>	0.1 J	0.2 U	0.2 U
1,1,1-Trichloroethane	2.9	0.5 U	0.1 U	0.1 U
Trichloroethylene	<b>24.5</b>	0.2 J	0.2	0.2
Vinyl Chloride	0.5 U	0.5 U	0.2 U	0.2 U
Sum of Constituents	42.6	1.6	1.1	0.9

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-06F 1/31/2008	MW-06F 5/21/2008	MW-06F 8/28/2008	MW-06F 10/30/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	0.5 U	0.8 J	0.5 U	0.8 U
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	2.8	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	0.5 U	0.1 J	1.9	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.5 U	0.5 U	<b>9.4</b>	0.2 U
1,1,1-Trichloroethane	0.5 U	0.5 U	3.3	0.1 U
Trichloroethylene	0.5 U	0.1 J	<b>25.1</b>	0.2 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Sum of Constituents	ND	1.0	42.5	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-07B Not Sampled	MW-07B 6/18/2008	MW-07B 8/27/2008	MW-07B 10/29/2008
Bromodichloromethane		0.2 J	0.5 U	0.3 U
Bromoform		0.5 U	0.5 U	0.2 U
Carbon Tetrachloride		0.5 U	0.5 U	0.1 U
Chlorobenzene		0.5 U	0.5 U	0.1 U
Chlorodibromomethane		0.5 U	0.5 U	0.6 U
Chloroethane		0.5 U	0.5 U	0.2 U
Chloroform		0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p		0.7 J	0.5 U	0.8 U
Dichlorodifluoromethane		0.5 U	0.5 U	0.1 U
1,1-Dichloroethane		0.5 U	0.5 U	0.2 U
1,1-Dichloroethene		0.1 J	0.5 U	0.3 U
1,2-Dichloroethane		0.1 J	0.5 U	0.3 U
trans-1,2-Dichloroethene		0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene		0.5 U	0.5 U	0.2 U
1,2-Dichloropropane		0.3 J	0.5 U	0.1 U
Methylene Chloride		0.5 U	0.5 U	0.2 U
Tetrachloroethene		0.3 J	0.5 U	0.2 U
1,1,1-Trichloroethane		0.1 J	0.5 U	0.1 U
Trichloroethylene		2.7	0.5 U	0.2 U
Vinyl Chloride		0.5 U	0.5 U	0.2 U
Sum of Constituents		4.5	ND	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-08A 1/31/2008	MW-08A 5/22/2008	MW-08A 8/28/2008	MW-08A 10/30/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	0.5 U	0.5 U	0.5 U	0.8 U
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	<b>11.6</b>	<b>10.1</b>	<b>8.7</b>	<b>8.9</b>
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.1 U
Trichloroethylene	0.6	0.7	0.6	0.7
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Sum of Constituents	12.2	10.8	9.3	9.6

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-08B 1/31/2008	MW-08B 5/22/2008	MW-08B 8/28/2008	MW-08B 10/30/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	1.2	0.5 U	0.5 U	0.1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	2.2 J	0.5 U	0.5 U	0.8 U
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	0.2 J	0.5 U	0.5 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.2 J	0.8	1.1	0.9
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.1 U
Trichloroethylene	0.2 J	0.5 U	0.3 J	0.2 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Sum of Constituents	4	0.8	1.4	0.9

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-09B Not Sampled	MW-09B 6/18/2008	MW-09B 8/27/2008	MW-09B 10/29/2008
Bromodichloromethane		0.5 U	0.5 U	0.3 U
Bromoform		0.5 U	0.5 U	0.2 U
Carbon Tetrachloride		0.5 U	0.5 U	0.1 U
Chlorobenzene		0.5 U	0.2 J	0.1 U
Chlorodibromomethane		0.5 U	0.5 U	0.6 U
Chloroethane		0.5 U	0.5 U	0.2 U
Chloroform		0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p		0.3 J	0.9 J	0.8 U
Dichlorodifluoromethane		0.5 U	0.5 U	0.1 U
1,1-Dichloroethane		0.5 U	0.5 U	0.2 U
1,1-Dichloroethene		0.5 U	0.5 U	0.3 U
1,2-Dichloroethane		0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene		0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene		0.5 U	0.2 J	0.2 U
1,2-Dichloropropane		0.5 U	0.5 U	0.1 U
Methylene Chloride		0.5 U	0.5 U	0.2 U
Tetrachloroethene		0.5 U	0.1 J	0.2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.1 U
Trichloroethylene		0.1 J	0.2 J	0.2 U
Vinyl Chloride		0.5 U	0.5 U	0.2 U
Sum of Constituents		0.4	1.6	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

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J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-09C 1/29/2008	MW-09C 6/18/2008	MW-09C 8/27/2008	MW-09C 10/29/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	0.8 J	0.3 J	0.5 U	0.8 U
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.1 U
Trichloroethylene	0.5 U	0.5 U	0.5 U	0.2 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Sum of Constituents	0.8	0.3	ND	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-11A 1/29/2008	MW-11A 5/20/2008	MW-11A 8/27/2008	MW-11A 10/29/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.5 U	0.2 J	0.5 U	0.1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.1 J	0.5 U	0.5	0.2 U
Chloroform	0.2 J	0.2 J	0.2 J	0.1
Dichlorobenzene, o,m&p	0.5 U	0.5 U	0.3 J	0.8 U
Dichlorodifluoromethane	0.1 J	0.5 U	0.5	0.1 U
1,1-Dichloroethane	0.1 J	0.1 J	0.1 J	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	1.5	1.6	1.5	1.3
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.6	0.6	0.6	0.5
1,1,1-Trichloroethane	0.1 J	0.1 J	0.2 J	0.1 U
Trichloroethylene	0.9	0.8	0.9	0.9
Vinyl Chloride	0.5 U	0.5 U	0.2 J	0.2 U
Sum of Constituents	3.6	3.6	5.0	2.8

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-11B 1/29/2008	MW-11B 5/20/2008	MW-11B 8/27/2008	MW-11B 10/29/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.1 U
Chlorodibromomethane	0.5 U	0.5 U	0.1 J	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.5 U	0.1 J	0.1 U
Dichlorobenzene, o,m&p	0.5 U	0.5 U	1.2 J	0.8
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.2 J	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.1 U
Trichloroethylene	0.5 U	0.5 U	0.5 U	1.3
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Sum of Constituents	ND	ND	1.6	2.1

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	OBS-1 1/30/2008	OBS-1 5/20/2008	OBS-1 8/27/2008	OBS-1 10/29/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	1.2	1.3	0.6	0.7
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.2 J	0.5 U	0.1 U
Dichlorobenzene, o,m&p	3.4	3.9	2.1	2.4
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.3 J	0.2 J	0.1 J	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.1 J	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	3.3	2.4	2.1	2.0
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.6	0.4 J	0.4 J	0.3
1,1,1-Trichloroethane	0.5 U	0.1 J	0.5 U	0.1 U
Trichloroethylene	0.4 J	0.4 J	0.3 J	0.4
Vinyl Chloride	0.7	0.7	0.6	0.5
Sum of Constituents	9.9	9.7	6.2	6.3

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-09D 8/27/2008	FIELD BLANK 1/31/2008	FIELD BLANK 5/22/2008	FIELD BLANK 8/29/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.9	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	1.7	0.5 U	0.5 U	0.5 U
Chloroform	0.2 J	0.5 U	0.5 U	0.5 U
Dichlorobenzene, o,m&p	0.9	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	2.9	1.5	0.5 U	0.5 U
1,1-Dichloroethane	3.1	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.2 J	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.1 J	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.2 J	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	3.4	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.2 J	0.5 U	0.5 U	0.5 U
Methylene Chloride	0.1 J	0.5 U	0.5 U	0.5 U
Tetrachloroethene	1.4	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.2 J	0.5 U	0.5 U	0.5 U
Trichloroethylene	1.3	0.5 U	0.5 U	0.5 U
Vinyl Chloride	1.2	0.5 U	0.5 U	0.5 U
Sum of Constituents	16.8	1.5	ND	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	FIELD BLANK 10/31/2008	TRIP BLANK 1/29/2008	TRIP BLANK 1/30/2008	TRIP BLANK 1/31/2008
Bromodichloromethane	0.3 U	0.2 J	0.5 U	0.5 U
Bromoform	0.2 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.1 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.1 U	0.2 J	0.5 U	0.5 U
Chlorodibromomethane	0.6 U	0.2 J	0.5 U	0.5 U
Chloroethane	0.2 U	0.5 U	0.5 U	0.5 U
Chloroform	0.1 U	0.5 U	0.5 U	0.5 U
Dichlorobenzene, o,m&p	0.8 U	2.9	0.5 U	0.4 J
Dichlorodifluoromethane	0.1 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.2 U	0.2 J	0.5 U	0.5 U
1,1-Dichloroethene	0.3 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.3 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.3 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.2 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.1 U	0.1 J	0.5 U	0.5 U
Methylene Chloride	0.2 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.2 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.1 U	0.5 U	0.5 U	0.5 U
Trichloroethylene	0.2 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.2 U	0.5 U	0.5 U	0.5 U
Sum of Constituents	ND	3.8	ND	0.4

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	TRIP BLANK 5/20/2008	TRIP BLANK 5/21/2008	TRIP BLANK 5/22/2008	TRIP BLANK 6/18/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorobenzene, o,m&p	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethylene	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.5 U
Sum of Constituents	ND	ND	ND	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	TRIP BLANK 8/27/2008	TRIP BLANK 8/28/2008	TRIP BLANK 8/29/2008	TRIP BLANK 10/29/2008
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.3 U
Bromoform	0.5 U	0.5 U	0.5 U	0.2 U
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.1 U
Chlorodibromomethane	0.5 U	0.5 U	0.5 U	0.6 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.2 U
Chloroform	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	0.5 U	0.5 U	0.5 U	1.3
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.1 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.3 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.3 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.1 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Tetrachloroethene	0.6	0.5 U	0.5 U	0.2 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.1 U
Trichloroethylene	1.2	0.5 U	0.5 U	0.2 U
Vinyl Chloride	0.5 U	0.5 U	0.5 U	0.2 U
Sum of Constituents	1.8	ND	ND	1.3

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 3**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**VOLATILE HALOGENATED ORGANICS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	TRIP BLANK 10/30/2008			
Bromodichloromethane	0.3 U			
Bromoform	0.2 U			
Carbon Tetrachloride	0.1 U			
Chlorobenzene	0.1 U			
Chlorodibromomethane	0.6 U			
Chloroethane	0.2 U			
Chloroform	0.1 U			
Dichlorobenzene, o,m&p	1.2			
Dichlorodifluoromethane	0.1 U			
1,1-Dichloroethane	0.2 U			
1,1-Dichloroethene	0.3 U			
1,2-Dichloroethane	0.3 U			
trans-1,2-Dichloroethene	0.3 U			
cis-1,2-Dichloroethene	0.2 U			
1,2-Dichloropropane	0.1 U			
Methylene Chloride	0.2 U			
Tetrachloroethene	0.2 U			
1,1,1-Trichloroethane	0.1 U			
Trichloroethylene	0.2 U			
Vinyl Chloride	1.2			
Sum of Constituents	2.4			

Notes:

All concentrations in micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS – 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	LF-1 1/30/2008	LF-1 5/22/2008	LF-1 8/29/2008	LF-1 10/31/2008	M-30B-R 1/29/2008	M-30B-R 5/20/2008	M-30B-R 8/29/2008	M-30B-R 10/29/2008
Benzene	0.1 J	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
n-Butylbenzene	0.3 J	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.8	1.2	0.6	0.5	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	1.3 J	1.7	0.9	0.9	0.8 J	1.0 J	0.5 U	0.8 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Isopropylbenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.1 J	0.5 U	0.5 U	0.1 U
Toluene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
m/p-Xylene	0.5 U	0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U
o-Xylene	0.2 J	0.5 U	0.5 U	1.6 U	0.3 J	0.5 U	0.5 U	1.6 U
Sum of Constituents	2.7	2.9	1.5	1.4	1.2	1.0	ND	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS – 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-05B Not Sampled	MW-05B 6/18/2008	MW-05B 8/29/2008	MW-05B 10/31/2008	MW-06A 1/31/2008	MW-06A 5/21/2008	MW-06A 8/28/2008	MW-06A 10/30/2008
Benzene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
n-Butylbenzene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p		0.4 J	0.5 U	0.8 U	0.5 U	0.5 U	0.5 U	0.8 U
Ethylbenzene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Isopropylbenzene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Toluene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
m/p-Xylene		0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U
o-Xylene		2.8	0.5 U	1.6 U	0.5 U	0.5 U	0.5 U	1.6 U
Sum of Constituents		3.2	ND	ND	ND	ND	ND	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS – 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-06B 1/30/2008	MW-06B 5/21/2008	MW-06B 8/28/2008	MW-06B 10/30/2008	MW-06C 1/31/2008	MW-06C 5/21/2008	MW-06C 8/28/2008	MW-06C 10/30/2008
Benzene	0.1 J	0.5 U	0.5 U	0.1	0.2 J	0.1 J	0.5 U	0.5
n-Butylbenzene	0.3 J	0.5 U	0.5 U	0.1 U	0.2 J	0.5 U	0.5 U	0.2
Chlorobenzene	0.8	0.1 J	0.5 U	0.1 U	0.8	0.2 J	0.2 J	1.4
Dichlorobenzene, o,m&p	3.2 J	1.1 J	1.9	0.6	1.6	0.4 J	0.4 J	1.4
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.2	0.5 U	0.5 U	0.5 U	0.1 U
Isopropylbenzene	0.4 J	0.5 U	0.5 U	0.2	0.4 J	0.5 U	0.5 U	0.9
Toluene	0.5 U	0.5 U	0.5 U	0.1 U	0.1 J	0.5 U	0.5 U	0.1 U
m/p-Xylene	0.5 U	0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U
o-Xylene	0.2 J	0.5 U	1.2	1.6 U	0.1 J	0.5 U	0.3 J	1.6 U
Sum of Constituents	5.0	1.2	3.1	1.1	3.4	0.7	0.9	4.4

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS – 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-06E 1/30/2008	MW-06E DUP 1/30/2008	MW-06E 5/21/2008	MW-06E DUP 5/21/2008	MW-6F DUP 8/28/2009	MW-06E 8/28/2009	MW-06E 10/30/2008	MW-06E DUP 10/30/2008
Benzene	0.3 J	0.4 J	0.1 J	0.1 J	0.5 U	0.5 U	0.1 U	0.1 U
n-Butylbenzene	0.3 J	0.3 J	0.2 J	0.2 J	0.5 U	0.5 U	0.1 U	0.1 U
Chlorobenzene	1.2	1.3	0.7	0.7	0.3 J	0.2 J	0.2	0.1
Dichlorobenzene, o,m&p	2.2 J	2.5 J	2.6	2.5	0.8 J	0.9 J	0.7	0.6
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 U	0.1 U
Isopropylbenzene	0.4 J	0.4 J	0.2 J	0.2 J	0.5 U	0.5 U	0.1 U	0.1 U
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 U	0.1 U
m/p-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 U	0.2 U
o-Xylene	0.2 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1.6 U	1.6 U
Sum of Constituents	4.6	5.1	3.8	3.7	1.1	1.1	0.9	0.7

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS – 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-06F 1/31/2008	MW-06F 5/21/2008	MW-06F 8/28/2008	MW-06F 10/30/2008	MW-07B Not Sampled	MW-07B 6/18/2008	MW-07B 8/27/2008	MW-07B 10/29/2008
Benzene	0.5 U	0.5 U	0.5 U	0.1 U		0.1 J	0.5 U	0.1 U
n-Butylbenzene	0.5 U	0.5 U	0.5 U	0.1 U		0.5 U	0.5 U	0.1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.1 U		0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	0.5 U	0.8 J	0.5 U	0.8 U		0.7 J	0.5 U	0.8 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.1 U		0.5 U	0.5 U	0.1 U
Isopropylbenzene	0.5 U	0.5 U	0.5 U	0.1 U		0.5 U	0.5 U	0.1 U
Toluene	0.5 U	0.5 U	0.5 U	0.1 U		0.5 U	0.5 U	0.1 U
m/p-Xylene	0.5 U	0.5 U	0.5 +	0.2 U		0.5 U	0.5 U	0.2 U
o-Xylene	0.5 U	0.5 U	0.5 U	1.6 U		0.5 U	0.5 U	1.6 U
Sum of Constituents	ND	0.8	ND	ND		0.8	ND	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS – 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-08A 1/31/2008	MW-08A 5/22/2008	MW-08A 8/28/2008	MW-08A 10/30/2008	MW-08B 1/31/2008	MW-08B 5/22/2008	MW-08B 8/28/2008	MW-08B 10/30/2008
Benzene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
n-Butylbenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	0.5 U	0.5 U	0.5 U	0.8 U	0.5 U	0.5 U	0.5 U	0.8 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Isopropylbenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Toluene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
m/p-Xylene	0.5 U	0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U
o-Xylene	0.5 U	0.5 U	0.5 U	1.6 U	0.5 U	1.6	0.5 U	1.6 U
Sum of Constituents	ND	ND	ND	ND	ND	1.6	ND	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS – 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-09B Not Sampled	MW-09B 6/18/2008	MW-09B 8/27/2008	MW-09B 10/29/2008	MW-09C 1/29/2008	MW-09C 6/18/2008	MW-09C 8/27/2008	MW-09C 10/29/2008
Benzene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
n-Butylbenzene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p		0.3 J	0.5 U	0.8 U	0.8 J	0.3 J	0.5 U	0.8 U
Ethylbenzene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Isopropylbenzene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Toluene		0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
m/p-Xylene		0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U
o-Xylene		1.2	0.5 U	1.6 U	0.5 U	0.3 J	0.5 U	1.6 U
Sum of Constituents		1.5	ND	ND	0.8	0.6	ND	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS – 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-11A 1/29/2008	MW-11A 5/20/2008	MW-11A 8/27/2008	MW-11A 10/29/2008	MW-11B 1/29/2008	MW-11B 5/20/2008	MW-11B 8/27/2008	MW-11B 10/29/2008
Benzene	0.5 U	0.5 U	0.1 J	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
n-Butylbenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Chlorobenzene	0.5 U	0.2 J	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Dichlorobenzene, o,m&p	0.5 U	0.5 U	0.3 J	0.8 U	0.5 U	0.5 U	1.2 J	0.8
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Isopropylbenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
Toluene	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.1 U
m/p-Xylene	0.5 U	0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U
o-Xylene	0.1 J	0.5 U	0.5 U	1.6 U	0.5 U	0.5 U	0.5 U	1.6 U
Sum of Constituents	0.1	0.2	0.4	ND	ND	ND	1.2	0.8

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS – 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	MW-09D 8/27/2008	OBS-1 1/30/2008	OBS-1 5/20/2008	OBS-1 8/27/2008	OBS-1 10/29/2008
Benzene	2.8	0.6	0.6	0.3 J	0.4
n-Butylbenzene	0.5 U	0.5 U	0.2 J	0.5 U	0.1 U
Chlorobenzene	0.9	1.2	1.3	0.6	0.7
Dichlorobenzene, o,m&p	0.9	3.4	3.9	2.1	2.4
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.1 U
Isopropylbenzene	1.3	0.5 U	0.5 U	0.5 U	0.1 U
Toluene	0.5 U	0.5 U	0.5 U	0.5 U	0.1 U
m/p-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.2 U
o-Xylene	1.5	0.2 J	0.2 J	0.5 U	1.6 U
Sum of Constituents	7.4	5.4	6.2	3.0	3.5

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS – 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	FIELD BLANK 1/31/2008	FIELD BLANK 5/22/2008	FIELD BLANK 8/29/2008	FIELD BLANK 10/31/2008	TRIP BLANK 1/29/2008	TRIP BLANK 1/30/2008	TRIP BLANK 1/31/2008	TRIP BLANK 5/20/2008
Benzene	0.2 J	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Butylbenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.8	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.2 J	0.5 U	0.5 U	0.5 U
Dichlorobenzene, o,m&p	0.5 U	0.5 U	0.5 U	0.8 U	2.9	0.5 U	0.4 J	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.1 J	0.5 U	0.5 U	0.5 U
Isopropylbenzene	0.5 U	0.5 U	0.5 U	0.1 U	0.3 J	0.5 U	0.5 U	0.5 U
Toluene	0.2 J	0.2 J	0.5 U	0.1 U	0.1 J	0.5 U	0.5 U	0.5 U
m/p-Xylene	0.5 U	0.5 U	0.5 U	0.2 U	0.1 J	0.5 U	0.5 U	0.5 U
o-Xylene	0.3 J	0.5 U	0.5 U	1.6 U	0.3 J	0.5 U	0.5 U	0.5 U
Sum of Constituents	0.7	0.2	ND	ND	4.8	ND	0.4	ND

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 4**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS – 2008**  
**AROMATIC HYDROCARBONS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	TRIP BLANK 5/21/2008	TRIP BLANK 5/22/2008	TRIP BLANK 6/18/2008	TRIP BLANK 8/27/2008	TRIP BLANK 8/28/2008	TRIP BLANK 8/29/2008	TRIP BLANK 10/29/2008	TRIP BLANK 10/30/2008
Benzene	0.5 U	0.1 U	0.1					
n-Butylbenzene	0.5 U	0.1 U	0.2					
Chlorobenzene	0.5 U	0.1 U	0.1 U					
Dichlorobenzene, o,m&p	0.5 U	1.3	1.2					
Ethylbenzene	0.5 U	0.1 U	0.1 U					
Isopropylbenzene	0.5 U	0.1 U	0.1 U					
Toluene	0.5 U	0.1 U	0.1 U					
m/p-Xylene	0.5 U	0.2 U	0.2 U					
o-Xylene	0.5 U	7.2	1.6 U					
Sum of Constituents	ND	ND	ND	ND	ND	ND	8.5	1.5

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 5**

**TOWN OF OYSTER BAY  
 OLD BETHPAGE LANDFILL  
 ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008  
 TETRACHLOROETHENE**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE ID:	LF-1	LF-1	LF-1	LF-1	M-30B-R	M-30B-R	M-30B-R	M-30B-R
DATE:	1/30/2008	5/22/2008	8/29/2008	10/31/2008	1/29/2008	5/20/2008	8/29/2008	10/29/2008
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U
SAMPLE ID:	MW-05B	MW-05B	MW-05B	MW-05B	MW-06A	MW-06A	MW-06A	MW-06A
DATE:	Not Sampled	6/18/2008	8/29/2008	10/31/2008	1/31/2008	5/21/2008	8/28/2008	10/30/2008
Tetrachloroethene		0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.2 U
SAMPLE ID:	MW-06B	MW-06B	MW-06B	MW-06B	MW-06C	MW-06C	MW-06C	MW-06C
DATE:	1/30/2008	5/21/2008	8/28/2008	10/30/2008	1/31/2008	5/21/2008	8/28/2008	10/30/2008
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.2 U	0.1 J	0.5 U	0.5 U	0.2 U

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 5**

**TOWN OF OYSTER BAY  
 OLD BETHPAGE LANDFILL  
 ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008  
 TETRACHLOROETHENE**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE ID:	MW-06E	MW-06E DUP	MW-06E	MW-06E DUP	MW-06E	MW-06F DUP	MW-06E	MW-06E DUP
DATE:	1/30/2008	1/30/2008	5/21/2008	5/21/2008	8/28/2008	8/28/2008	10/30/2008	10/30/2008
Tetrachloroethene	0.2 J	0.2 J	0.2 J	0.5 U	0.1 J	<b>9.9</b>	0.2 U	0.2 U
SAMPLE ID:	MW-06F	MW-06F	MW-06F	MW-06F	MW-07B	MW-07B	MW-07B	MW-07B
DATE:	1/31/2008	5/21/2008	8/28/2008	10/30/2008	Not Sampled	6/18/2008	8/27/2008	10/29/2008
Tetrachloroethene	0.5 U	0.5 U	<b>9.4</b>	0.2 U		0.3 J	0.5 U	0.2 U
SAMPLE ID:	MW-08A	MW-08A	MW-08A	MW-08A	MW-08B	MW-08B	MW-08B	MW-08B
DATE:	1/31/2008	5/22/2008	8/28/2008	10/30/2008	1/31/2008	5/22/2008	8/28/2008	10/30/2008
Tetrachloroethene	<b>11.6</b>	<b>10.1</b>	<b>8.7</b>	<b>8.9</b>	1.4	0.8	1.1	0.9

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 5**

**TOWN OF OYSTER BAY  
 OLD BETHPAGE LANDFILL  
 ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008  
 TETRACHLOROETHENE**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE ID:	MW-09B	MW-09B	MW-09B	MW-09B	MW-09C	MW-09C	MW-09C	MW-09C
DATE:	Not Sampled	6/18/2008	8/27/2008	10/29/2008	1/29/2008	6/18/2008	8/27/2008	10/29/2008
Tetrachloroethene		0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U
SAMPLE ID:	MW-11A	MW-11A	MW-11A	MW-11A	MW-11B	MW-11B	MW-11B	MW-11B
DATE:	1/29/2008	5/20/2008	8/27/2008	10/29/2008	1/29/2008	5/20/2008	8/27/2008	10/29/2008
Tetrachloroethene	0.6	0.6	0.6	0.5	0.5 U	0.5 U	0.5 U	0.2 U
SAMPLE ID:	MW-09D	OBS-1	OBS-1	OBS-1	OBS-1			
DATE:	8/27/2008	1/30/2008	5/20/2008	8/29/2008	10/31/2008			
Tetrachloroethene	1.4	0.6	0.4 J	0.4 J	0.3			

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 5**

**TOWN OF OYSTER BAY  
 OLD BETHPAGE LANDFILL  
 ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008  
 TETRACHLOROETHENE**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE ID: DATE:	FIELD BLANK 1/31/2008	FIELD BLANK 5/22/2008	FIELD BLANK 8/29/2008	FIELD BLANK 10/31/2008	TRIP BLANK 1/29/2008	TRIP BLANK 1/30/2008	TRIP BLANK 1/31/2008	TRIP BLANK 5/20/2008
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U
SAMPLE ID: DATE:	TRIP BLANK 5/21/2008	TRIP BLANK 5/22/2008	TRIP BLANK 6/18/2008	TRIP BLANK 8/27/2008	TRIP BLANK 8/28/2008	TRIP BLANK 8/29/2008	TRIP BLANK 10/29/2008	TRIP BLANK 10/30/2008
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.6	0.5 U	0.5 U	0.2 U	0.2 U

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

TABLE 6

**TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL  
ANNUAL RECOVERY WELL SAMPLING RESULTS - 2008  
VOLATILE ORGANIC COMPOUNDS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	RW-1 1/18/2008	RW-2 Not Sampled	RW-3 1/18/2008	RW-4 1/18/2008	RW-5 1/18/2008
Bromodichloromethane	0.5 U		0.5 U	0.5 U	0.5 U
Bromoform	0.5 U		0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.5 U		0.5 U	0.5 U	0.5 U
Chlorobenzene	0.8		1.1	0.5 U	0.5 U
Chlorodibromomethane	0.5 U		0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U		0.5 U	0.5 U	0.5 U
Chloroform	0.5 U		0.1 J	1.6	0.8
Dichlorobenzene, o,m&p	1.7		2.0	0.5 U	0.5 U
Dichlorodifluoromethane	0.5 U		0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.1 J		0.5 U	0.4 J	1.5
1,1-Dichloroethene	0.5 U		0.2 J	4.2	<b>21.3</b>
1,2-Dichloroethane	0.5 U		0.5 U	0.1 J	<b>1.5</b>
trans-1,2-Dichloroethene	0.5 U		0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.9		1.8	<b>31.2</b>	<b>21.0</b>
1,2-Dichloropropane	0.5 U		0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U		0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.1 J		<b>7.0</b>	<b>26.8</b>	<b>70.4</b>
1,1,1-Trichloroethane	0.5 U		0.1 J	<b>5.5</b>	<b>22.5</b>
Trichloroethylene	0.2 J		<b>6.2</b>	<b>192.0</b>	<b>284.0</b>
Vinyl chloride	0.1 J		0.5 U	0.5 U	0.5 U
Benzene	0.2 J		0.5	0.5 U	0.5 U
n-Butylbenzene	0.5 U		0.5 U	0.5 U	0.5 U
Chlorobenzene	0.8		1.1	0.5 U	0.5 U
Dichlorobenzene, o,m&p	1.7		2.0	0.5 U	0.5 U
Ethylbenzene	0.5 U		0.5 U	0.5 U	0.5 U
Isopropylbenzene	0.5 U		0.5 U	0.5 U	0.5 U
Toluene	0.5 U		0.5 U	0.5 U	0.5 U
m/p-Xylene	0.5 U		0.5 U	0.5 U	0.5 U
o-Xylene	0.1 J		0.2 J	0.5 U	0.5 U
Total VOCs	6.7		22.3	261.8	423.0

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

TABLE 6

**TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL  
ANNUAL RECOVERY WELL SAMPLING RESULTS - 2008  
VOLATILE ORGANIC COMPOUNDS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	RW-1 39584.0	RW-2 Not Sampled	RW-3 39584.0	RW-4 39584.0	RW-5 39584.0
Bromodichloromethane	0.5 U		0.5 U	0.5 U	0.5 U
Bromoform	0.5 U		0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.5 U		0.5 U	0.5 U	0.5 U
Chlorobenzene	0.8		0.5	0.5 U	0.5 U
Chlorodibromomethane	0.5 U		0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U		0.5 U	0.5 U	0.5 U
Chloroform	0.5 U		0.4 J	1.4	1.1
Dichlorobenzene, o,m&p	1.6		1.1	0.5 U	0.5 U
Dichlorodifluoromethane	0.5 U		0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U		0.3 J	0.2 J	1.8
1,1-Dichloroethene	0.5 U		0.5	1.7	<b>19.3</b>
1,2-Dichloroethane	0.5 U		0.5 U	0.2 J	<b>2.2</b>
trans-1,2-Dichloroethene	0.5 U		0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.7		<b>6.8</b>	<b>24.2</b>	<b>20.1</b>
1,2-Dichloropropane	0.5 U		0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U		0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.1 J		<b>12.0</b>	<b>28.1</b>	<b>50.4</b>
1,1,1-Trichloroethane	0.5 U		0.9	3.2	<b>25.9</b>
Trichloroethylene	0.1 J		<b>29.0</b>	<b>106.0</b>	<b>253.0</b>
Vinyl chloride	0.2 J		0.5 U	0.5 U	0.5 U
Benzene	0.2 J		0.4 J	0.5 U	0.5 U
n-Butylbenzene	0.5 U		0.5 U	0.5 U	0.5 U
Chlorobenzene	0.8		0.5	0.5 U	0.5 U
Dichlorobenzene, o,m&p	1.6		1.1	0.5 U	0.5 U
Ethylbenzene	0.5 U		0.5 U	0.5 U	0.5 U
Isopropylbenzene	0.5 U		0.5 U	0.5 U	0.5 U
Toluene	0.5 U		0.5 U	0.5 U	0.5 U
m/p-Xylene	0.5 U		0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U		0.5 U	0.5 U	0.5 U
Total VOCs	6.1		53.5	165.0	373.8

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

TABLE 6

**TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL  
ANNUAL RECOVERY WELL SAMPLING RESULTS - 2008  
VOLATILE ORGANIC COMPOUNDS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	RW-1 39675.0	RW-2 39675.0	RW-3 39675.0	RW-4 39675.0	RW-5 39675.0
Bromodichloromethane	0.5 U				
Bromoform	0.5 U				
Carbon tetrachloride	0.5 U				
Chlorobenzene	0.5	0.3	0.3	0.5 U	0.5 U
Chlorodibromomethane	0.5 U				
Chloroethane	0.5 U				
Chloroform	0.5 U	0.5 U	0.4	1.0	1.1
Dichlorobenzene, o,m&p	1.1	0.9	0.8	0.5 U	0.5 U
Dichlorodifluoromethane	0.5 U				
1,1-Dichloroethane	0.1	0.1	0.3	0.1	1.7
1,1-Dichloroethene	0.5 U	0.5 U	0.2	1.1	<b>17.2</b>
1,2-Dichloroethane	0.5 U	0.5 U	0.1	0.5 U	<b>1.4</b>
trans-1,2-Dichloroethene	0.5 U				
cis-1,2-Dichloroethene	0.7	0.6	<b>6.0</b>	<b>15.7</b>	<b>17.4</b>
1,2-Dichloropropane	0.5 U				
Methylene chloride	0.5 U				
Tetrachloroethene	0.2	0.1	<b>12.1</b>	<b>24.3</b>	<b>53.7</b>
1,1,1-Trichloroethane	0.5 U	0.5 U	0.6	2.0	<b>21.6</b>
Trichloroethylene	0.2	0.1	<b>34.4</b>	<b>79.5</b>	<b>263.0</b>
Vinyl chloride	0.2	0.1	0.5 U	0.5 U	0.5 U
Benzene	0.3	0.1	0.3	0.5 U	0.5 U
n-Butylbenzene	0.5 U				
Chlorobenzene	0.5	0.3	0.3	0.5 U	0.5 U
Dichlorobenzene, o,m&p	1.1	0.9	0.8	0.5 U	0.5 U
Ethylbenzene	0.5 U				
Isopropylbenzene	0.5 U				
Toluene	0.5 U				
m/p-Xylene	0.5 U				
o-Xylene	0.5 U				
Total VOCs	4.9	3.5	56.6	123.7	377.1

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

TABLE 6

**TOWN OF OYSTER BAY  
OLD BETHPAGE LANDFILL  
ANNUAL RECOVERY WELL SAMPLING RESULTS - 2008  
VOLATILE ORGANIC COMPOUNDS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

SAMPLE DESIGNATION: DATE:	RW-1	RW-2	RW-3	RW-4	RW-5
Bromodichloromethane	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Bromoform	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chlorobenzene	0.4	0.4	0.4	0.1 U	0.1 U
Chlorodibromomethane	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Chloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroform	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dichlorobenzene, o,m&p	1.1	1.2	0.8	0.8 U	0.8 U
Dichlorodifluoromethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.3 U	0.3 U	0.6	0.3 U	<b>18.7</b>
1,2-Dichloroethane	0.3 U	0.3 U	0.3 U	0.3 U	<b>0.7</b>
trans-1,2-Dichloroethene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
cis-1,2-Dichloroethene	0.6	0.6	<b>6.8</b>	0.2	<b>14.9</b>
1,2-Dichloropropane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methylene chloride	0.2 U	0.2 U	0.2 U	0.2 U	1.0
Tetrachloroethene	0.2 U	0.2 U	<b>15.8</b>	<b>8.3</b>	<b>49.3</b>
1,1,1-Trichloroethane	0.1 U	0.1 U	0.1 U	0.1 U	<b>20.2</b>
Trichloroethylene	0.2	0.2	<b>36.9</b>	1.1	<b>304.0</b>
Vinyl chloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzene	0.1	0.1	0.3	0.1 U	0.1 U
n-Butylbenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chlorobenzene	0.4	0.4	0.4	0.1 U	0.1 U
Dichlorobenzene, o,m&p	1.1	1.2	0.8	0.8 U	0.8 U
Ethylbenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Isopropylbenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Toluene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
m/p-Xylene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
o-Xylene	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Total VOCs	3.9	4.1	62.8	9.6	408.8

Notes:

All concentrations in micrograms per liter (µg/L) or parts per billion (ppb)

ND - Not Detected

J - Estimated Value

U - Analyzed for but not detected

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

CONSTITUENT	SITE DATE	LF-1 1/30/2008	LF-1 5/22/2008	LF-1 8/29/2008	LF-1 10/31/2008	M-30B-R 1/29/2008	M-30B-R 5/20/2008	M-30B-R 8/29/2008	M-30B-R 10/29/2008
Alkalinity, Total (As CaCO <sub>3</sub> )		141	194	178	188	11.8	9.4	8.8	6
Aluminum		NA	NA	NA	NA	0.2 U	0.23	0.2 U	0.2 U
Barium		NA	NA	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U
Bicarbonate		141	194	177	188	11.8	9.3	8.8	6
Calcium		NA	NA	NA	NA	12.4	7.62	8.91	8.25
Carbonate		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloride		204	211	220	234	84.2	45.6	68.6	64.8
Chromium		NA	NA	NA	NA	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		NA	NA	NA	NA	0.02 U	0.02 U	0.02 U	0.02 U
Copper		NA	NA	NA	NA	0.02 U	0.02 U	0.02 U	0.02 U
Cyanide		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hardness (As CaCO <sub>3</sub> )		114	136	120	180	56	40	38	44
Iron		NA	NA	NA	NA	0.23	0.35	0.08	0.06
Lead		NA	NA	NA	NA	5 U	5 U	5 U	5 U
Magnesium		NA	NA	NA	NA	6.46	3.75	4.52	4.01
Manganese		NA	NA	NA	NA	0.02 U	0.02 U	0.02 U	0.02 U
Mercury		NA	NA	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U
Nickel		NA	NA	NA	NA	0.04 U	0.04 U	0.04 U	0.04 U
Nitrate as N		0.1 U	0.1 U	0.1 U	0.13	2.58	2.43	3.76	3.25
Nitrite as N		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Ammonia (As N)		18.8	25.3	27.9	31	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Kjeldahl, Total		21	24.6	25.6	31	0.1 U	0.23	0.1 U	0.1 U
Phenolics, Total Recoverable		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Potassium		NA	NA	NA	NA	3.73	2.69	3.22	2.93
Sodium		NA	NA	NA	NA	46.9	32	47.5	41.9
Sulfate		28.5	14	16.4	12	17.6	21.3	22.6	17.3
Total Dissolved Solids		534	476	510	508	228	126	185	158
Zinc		NA	NA	NA	NA	0.02 U	0.02 U	0.02 U	0.02 U

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury, cyanide, lead and phenolics are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per billion (ppb)

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

CONSTITUENT	SITE DATE	MW-05B Not Sampled	MW-05B 6/18/2008	MW-05B 8/29/2008	MW-05B 10/31/2008	MW-06A 1/31/2008	MW-06A 5/21/2008	MW-06A 8/28/2008	MW-06A 10/30/2008
Alkalinity, Total (As CaCO <sub>3</sub> )			42.4	42.8	45.3	3.4	3.2	3.2	3.2
Aluminum			0.2 U	0.2 U	0.2 U	0.83	0.65	0.36	0.82
Barium			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bicarbonate			42.4	42.8	48	3.3	3.1	3.2	3.1
Calcium			14.8	14.6	15.7	2.11	4.4	1.07	1.01
Carbonate			1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloride			73.2	81.6	86.6	36.8	82.5	11.8	9.01
Chromium			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent			0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper			0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Cyanide			10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hardness (As CaCO <sub>3</sub> )			78	80	92	24	46	22	25
Iron			0.06	0.06	0.04	3.05	2.27	1.49	2.91
Lead			5 U	5 U	6.61	5 U	5 U	5 U	5 U
Magnesium			9.26	8.8	8.79	3.82	9.71	1.35	1.59
Manganese			5.47	5.21	5.54	0.06	0.09	0.02 U	0.02
Mercury			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel			0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Nitrate as N			3.1	2.9	3.55	2.78	5.06	0.6	0.69
Nitrite as N			0.22	0.1 U	0.18	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Ammonia (As N)			0.1 U	0.1 U	0.1 U	0.17	0.34	0.15	0.1 U
Nitrogen, Kjeldahl, Total			0.11	0.1 U	0.1 U	0.25	0.67	0.3	0.28
Phenolics, Total Recoverable			5 U	5 U	5 U	5 U	5 U	5 U	5 U
Potassium			10.8	10.4	11.1	2.47	5.69	2.09	2.11
Sodium			46.8	45.2	47.1	21.1	40.7	8.17	6.49
Sulfate			19.5	20.3	20.1	5 U	7.79	5 U	5 U
Total Dissolved Solids			254	229	248	93	188	49	39
Zinc			0.02 U	0.02 U	0.02 U	0.02	0.02 U	0.03	0.03

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury, cyanide, lead and phenolics are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per billion (ppb)

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

CONSTITUENT	SITE DATE	MW-06B 1/30/2008	MW-06B 5/21/2008	MW-06B 8/28/2008	MW-06B 10/30/2008	MW-06C 1/31/2008	MW-06C 5/21/2008	MW-06C 8/28/2008	MW-06C 10/30/2008
Alkalinity, Total (As CaCO <sub>3</sub> )		197	75.8	111	164	189	69.6	127	374
Aluminum		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Barium		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bicarbonate		197	75.8	111	164	189	69.6	127	374
Calcium		1.85	1.26	1.66	2.41	4.96	7.71	4.49	13.2
Carbonate		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloride		68.9	82.5	94.7	103	108	82.2	84.3	162
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Cyanide		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hardness (As CaCO <sub>3</sub> )		11	12	19	17	28	32	56	72
Iron		1.03	0.87	1.06	1.27	1.27	1.98	3.98	2.49
Lead		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Magnesium		1.28	0.87	1.21	1.78	2.66	3.34	2.59	5.87
Manganese		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.03	0.02	0.03
Mercury		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Nitrate as N		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrite as N		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Ammonia (As N)		41.7	25.6	36.7	39	33.6	16.9	27.9	68.3
Nitrogen, Kjeldahl, Total		45	26.9	31.6	40.1	35.7	16.7	23.6	95.9
Phenolics, Total Recoverable		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Potassium		29.9	23.8	28.8	35.1	32.1	20.5	27.4	63.2
Sodium		54.6	45.1	52.8	70.9	84.1	61.6	65.5	145
Sulfate		5 U	5 U	6.12	5 U	25 U	16.6	17.9	10.8
Total Dissolved Solids		256	166	207	248	311	208	253	539
Zinc		0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.02 U	0.49	0.02 U

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury, cyanide, lead and phenolics are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per billion (ppb)

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

CONSTITUENT	SITE DATE	MW-06E 1/30/2008	MW-06E DUP 1/30/2008	MW-06E 5/21/2008	MW-06E DUP 5/21/2008	MW-6C DUP 8/28/2009	MW-06E 8/28/2009	MW-06E 10/30/2008	MW-06E DUP 10/30/2008
Alkalinity, Total (As CaCO <sub>3</sub> )		175	176	85.2	88.5	104	61.4	49.2	48
Aluminum		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Barium		0.2 U	0.2 U	0.21	0.2	0.2 U	0.2 U	0.2 U	0.2 U
Bicarbonate		175	176	85.1	88.5	103	61.4	49.2	48
Calcium		29.2	29	27.9	27.2	4.37	21.4	20.8	21.1
Carbonate		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloride		243	242	201	202	86.9	160	141	145
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Cyanide		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hardness (As CaCO <sub>3</sub> )		121	146	120	118	28	88	72	84
Iron		6.25	6.2	3.79	3.72	3.87	2.53	2.39	2.44
Lead		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Magnesium		13.4	13.3	12.5	12.2	2.52	9.48	9.14	9.31
Manganese		0.73	0.73	0.63	0.61	0.02	0.48	0.45	0.46
Mercury		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Nitrate as N		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1	0.11
Nitrite as N		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Ammonia (As N)		35.8	36.1	1.83	18.6	27.9	14.2	10.4	10.3
Nitrogen, Kjeldahl, Total		39.2	39.6	19.8	18.6	25.3	11.9	9.77	10.1
Phenolics, Total Recoverable		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Potassium		41.3	41.5	29.1	28.3	26.4	22.5	20.1	20.9
Sodium		109	109	84.6	83	63.5	67.3	62.1	64
Sulfate		20.4	20.4	18.5	18.8	18.1	21.9	25	24.8
Total Dissolved Solids		582	546	438	427	254	420	377	361
Zinc		0.04	0.04	0.03	0.03	0.46	0.04	0.07	0.06

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury, cyanide, lead and phenolics are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per billion (ppb)

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

CONSTITUENT	SITE DATE	MW-06F 1/31/2008	MW-06F 5/21/2008	MW-06F 8/28/2008	MW-06F 10/30/2008	MW-07B Not Sampled	MW-07B 6/18/2008	MW-07B 8/27/2008	MW-07B 10/29/2008
Alkalinity, Total (As CaCO <sub>3</sub> )		1 U	1 U	5	1 U		1 U	2.6	2.6
Aluminum		0.2 U	0.2 U	0.2 U	0.2 U		1.04	0.97	2.17
Barium		0.2 U	0.2	0.2 U	0.21		0.2 U	0.2 U	0.2 U
Bicarbonate		1 U	1 U	5	1 U		1 U	2.6	2.5
Calcium		34.3	35.3	34.6	36.7		5.96	14.6	12.4
Carbonate		1 U	1 U	1 U	1 U		1 U	1 U	1 U
Chloride		188	198	196	206		12.1	79.2	83
Chromium		0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U
Copper		0.02 U	0.02 U	0.02 U	0.02 U		0.02	0.02 U	0.02 U
Cyanide		10 U	10 U	10 U	10 U		10 U	10 U	10 U
Hardness (As CaCO <sub>3</sub> )		144	142	150	125		60	70	90
Iron		0.1	0.14	3.85	0.35		2.49	2.25	2.26
Lead		5 U	5 U	5 U	5 U		10.5	5.39	5 U
Magnesium		14.1	15	14.7	15.8		3.62	9.8	9.05
Manganese		0.09	0.09	0.12	0.11		0.09	0.04	0.03
Mercury		0.4	0.3	0.2 U	0.3		0.2 U	0.2 U	0.2 U
Nickel		0.04 U	0.04 U	0.04 U	0.04 U		0.04 U	0.04 U	0.04 U
Nitrate as N		1.46	1.86	0.1 U	2.41		4.05	4.28	6.82
Nitrite as N		0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
Nitrogen, Ammonia (As N)		0.36	0.44	0.4	0.55		0.1 U	0.1 U	0.1 U
Nitrogen, Kjeldahl, Total		0.39	0.69	1.14	0.81		2.37	0.18	0.12
Phenolics, Total Recoverable		5 U	5 U	5 U	5 U		5 U	5 U	5 U
Potassium		4.22	4.73	5.16	6.47		2.49	3.79	3.62
Sodium		52.7	58.8	57.3	66.7		9.17	26.4	43.9
Sulfate		5 U	5 U	5 U	5 U		10.5	6.51	7.05
Total Dissolved Solids		450	452	577	554		152	252	275
Zinc		0.03	0.04	0.03	0.03		0.02 U	0.02 U	0.02 U

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury, cyanide, lead and phenolics are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per billion (ppb)

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

CONSTITUENT	SITE DATE	MW-08A 1/31/2008	MW-08A 5/22/2008	MW-08A 8/28/2008	MW-08A 10/30/2008	MW-08B 1/31/2008	MW-08B 5/22/2008	MW-08B 8/28/2008	MW-08B 10/30/2008
Alkalinity, Total (As CaCO <sub>3</sub> )		7.2	2	21.3	1 U	1 U	1 U	3	1.1
Aluminum		0.47	1.06	0.82	1.75	0.2 U	0.2 U	0.2 U	0.2 U
Barium		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bicarbonate		7.2	2	21.3	1 U	1 U	1 U	3	1.1
Calcium		9.01	3.04	8.66	2.31	18.8	18.1	17.6	16.7
Carbonate		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloride		28.9	12.8	40.5	8.16	106	103	95.1	83.8
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Cyanide		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hardness (As CaCO <sub>3</sub> )		24	20	48	64	70	50	68	76
Iron		0.87	2.51	1.81	4.18	0.03	0.04	0.03	0.04
Lead		5 U	5.37	5 U	8	5 U	5 U	5 U	5 U
Magnesium		4.99	1.77	5.08	1.42	6.55	6.34	5.91	5.65
Manganese		0.06	0.03	0.06	0.03	0.89	0.85	0.78	0.76
Mercury		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Nitrate as N		2.68	1.39	3.3	0.65	1.98	2.09	2.16	2.28
Nitrite as N		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Ammonia (As N)		0.13	0.1 U	0.1 U	0.1 U	0.86	0.76	0.7	0.64
Nitrogen, Kjeldahl, Total		0.74	0.45	0.55	0.55	0.91	1.29	0.94	0.65
Phenolics, Total Recoverable		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Potassium		6.3	4.32	6.72	2.73	13	13.7	13.6	13.3
Sodium		28.3	6.91	23.1	4.93	37.8	39.2	37.4	34.9
Sulfate		16.5	6.76	25.8	5.32	21.5	21.6	21.6	19.2
Total Dissolved Solids		97	56	170	39	241	219	264	244
Zinc		0.02 U	0.05	0.02 U	0.04	0.07	0.07	0.06	0.06

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury, cyanide, lead and phenolics are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per billion (ppb)

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

CONSTITUENT	SITE DATE	MW-09B Not Sampled	MW-09B 6/18/2008	MW-09B 8/27/2008	MW-09B 10/29/2008	MW-09C 1/29/2008	MW-09C 6/18/2008	MW-09C 8/27/2008	MW-09C 10/29/2008
Alkalinity, Total (As CaCO <sub>3</sub> )			15.2	10.4	8	40.6	36.7	34.5	38.8
Aluminum			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Barium			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bicarbonate			15.2	10.4	8	40.6	36.7	34.5	38.8
Calcium			16	12.8	14.4	2.6	3.14	3.83	3.61
Carbonate			1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloride			77.8	65.5	59.5	6.68	86.7	81.6	71.2
Chromium			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent			0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper			0.03	0.04	0.02 U	0.02 U	0.02 U	0.07	0.02 U
Cyanide			10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hardness (As CaCO <sub>3</sub> )			52	60	84	24	30	36	32
Iron			0.2	0.22	0.07	0.1	0.2	3.22	0.22
Lead			5 U	5 U	5 U	5 U	5 U	7.22	5 U
Magnesium			6.45	6.1	6.5	4.8	5.48	6.03	6.24
Manganese			0.2	0.28	0.26	0.06	0.08	0.1	0.09
Mercury			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2	0.2 U
Nickel			0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Nitrate as N			3	4.3	6.37	0.1	0.15	0.78	0.39
Nitrite as N			0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Ammonia (As N)			2.16	1.83	0.83	9.6	7.9	6.91	7.56
Nitrogen, Kjeldahl, Total			1.72	1.87	0.83	10.3	7.47	5.79	7.77
Phenolics, Total Recoverable			5 U	5 U	5 U	5 U	5 U	5 U	5 U
Potassium			10.4	8.31	8.13	17	17.9	16.1	17.4
Sodium			48	37.2	41.5	47	49	47.8	49.8
Sulfate			24.4	22.1	23.2	5 U	18.9	18.4	19.5
Total Dissolved Solids			227	189	183	213	193	181	191
Zinc			0.05	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.02 U

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury, cyanide, lead and phenolics are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per billion (ppb)

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

CONSTITUENT	SITE DATE	MW-11A 1/29/2008	MW-11A 5/20/2008	MW-11A 8/27/2008	MW-11A 10/29/2008	MW-11B 1/29/2008	MW-11B 5/20/2008	MW-11B 8/27/2008	MW-11B 10/29/2008
Alkalinity, Total (As CaCO <sub>3</sub> )		1 U	1 U	1.2	1.1	1 U	1.6	1	1 U
Aluminum		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Barium		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bicarbonate		1 U	1 U	1.2	1.1	1 U	1.6	1	1 U
Calcium		3.94	3.79	3.66	4.09	1.45	1.53	1.6	1.71
Carbonate		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloride		9.23	9.1	8.9	8.75	9.2	7.45	8.21	8.19
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01	0.01 U	0.01 U
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Cyanide		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hardness (As CaCO <sub>3</sub> )		20	30	16	19	6	16	17	15
Iron		0.02 U	0.15	0.02 U	0.02 U	0.08	0.1	0.09	0.05
Lead		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Magnesium		2.16	2.1	2.13	2.34	0.71	0.78	0.86	0.9
Manganese		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Mercury		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel		0.04 U	0.15	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Nitrate as N		4.08	4.4	4.1	4.3	0.75	0.79	0.81	0.86
Nitrite as N		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Ammonia (As N)		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Kjeldahl, Total		0.1 U	0.15	0.1 U	0.1	0.1 U	0.1 U	0.24	0.1 U
Phenolics, Total Recoverable		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Potassium		0.97	0.99	1.26	1.13	0.63	0.72	0.99	0.78
Sodium		4.78	5.09	5.04	5.52	3.81	4.37	4.51	4.69
Sulfate		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Total Dissolved Solids		90	44	70	60	56	35	29	41
Zinc		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury, cyanide, lead and phenolics are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per billion (ppb)

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

CONSTITUENT	SITE DATE	MW-09D 8/27/2008	OBS-1 1/30/2008	OBS-1 5/20/2008	OBS-1 8/27/2008	OBS-1 10/29/2008
Alkalinity, Total (As CaCO <sub>3</sub> )		1.1	61.4	94.5	78.6	77
Aluminum		0.42	0.2 U	0.2 U	0.2 U	0.2 U
Barium		0.27	0.2 U	0.2 U	0.2 U	0.2 U
Bicarbonate		1.1	61.4	94.5	78.6	77
Calcium		19.2	23.2	21.9	21.1	21.1
Carbonate		1 U	1 U	1 U	1 U	1 U
Chloride		254	118	120	119	126
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Cyanide		10 U	10 U	10 U	10 U	10 U
Hardness (As CaCO <sub>3</sub> )		105	126	120	110	95
Iron		0.98	0.14	0.08	0.07	0.08
Lead		5 U	5 U	5 U	5 U	5 U
Magnesium		15.8	17	15.9	15.4	15.8
Manganese		0.2	1.67	1.59	1.42	1.42
Mercury		1.2	0.2 U	0.2 U	0.2 U	0.2
Nickel		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Nitrate as N		0.1 U	0.1 U	0.1 U	0.1 U	0.15
Nitrite as N		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen, Ammonia (As N)		1.21	5.84	5.92	6.52	4.06
Nitrogen, Kjeldahl, Total		2.16	6.64	5.95	6.16	5.62
Phenolics, Total Recoverable		5 U	5 U	5 U	5 U	5 U
Potassium		5.37	9.04	9.48	10	10.6
Sodium		102	72.7	74	78.6	85.4
Sulfate		5 U	82.6	81.1	75.2	73.7
Total Dissolved Solids		525	396	339	409	386
Zinc		0.07	0.02 U	0.02 U	0.02 U	0.02 U

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury, cyanide, lead and phenolics are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per billion (ppb)

**TABLE 7**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**TOTAL (UNFILTERED) METALS AND LEACHATE INDICATORS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>CONSTITUENT</b>	<b>SITE DATE</b>	FIELD BLANK 1/31/2008	FIELD BLANK 5/22/2008	FIELD BLANK 6/18/2008	FIELD BLANK 8/29/2008	FIELD BLANK 10/31/2008
Alkalinity, Total (As CaCO <sub>3</sub> )		1 U	1 U	1 U	1 U	1 U
Aluminum		0.2 U				
Barium		0.2 U				
Bicarbonate		1 U	1 U	1 U	1 U	1 U
Calcium		0.2 U				
Carbonate		1 U	1 U	1 U	1 U	1 U
Chloride		2 U	2 U	2 U	2 U	2 U
Chromium		0.01 U				
Chromium, Hexavalent		0.02 U				
Copper		0.02 U				
Cyanide		10 U				
Hardness (As CaCO <sub>3</sub> )		5 U	5 U	5 U	5 U	5 U
Iron		0.1	0.02 U	0.04	0.02 U	0.02 U
Lead		5 U	5 U	5 U	5 U	5 U
Magnesium		0.2 U				
Manganese		0.02 U				
Mercury		0.2 U				
Nickel		0.04 U				
Nitrate as N		0.1 U				
Nitrite as N		0.1 U				
Nitrogen, Ammonia (As N)		0.1 U				
Nitrogen, Kjeldahl, Total		0.1 U				
Phenolics, Total Recoverable		5 U	5 U	5 U	5 U	5 U
Potassium		0.2 U	0.38	0.38	0.32	0.2 U
Sodium		0.2 U				
Sulfate		5 U	5 U	5 U	5 U	5 U
Total Dissolved Solids		10 U				
Zinc		0.02 U				

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury, cyanide, lead and phenolics are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per billion (ppb)

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>CONSTITUENT</b>	<b>SITE DATE</b>	LF-1 1/30/2008	LF-1 5/22/2008	LF-1 8/29/2008	LF-1 10/31/2008	M-30B-R 1/29/2008	M-30B-R 5/20/2008	M-30B-R 8/29/2008	M-30B-R 10/29/2008
Aluminum		NA	NA	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U
Barium		NA	NA	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U
Calcium		NA	NA	NA	NA	11.5	7.61	8.53	8.67
Chromium		NA	NA	NA	NA	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		NA	NA	NA	NA	0.02 U	0.02 U	0.02 U	0.02 U
Copper		NA	NA	NA	NA	0.02 U	0.02 U	0.02 U	0.02 U
Iron		NA	NA	NA	NA	0.04	0.04	0.03	0.02 U
Lead		NA	NA	NA	NA	5 U	5 U	5 U	5 U
Magnesium		NA	NA	NA	NA	5.94	3.72	4.31	4.13
Manganese		NA	NA	NA	NA	0.02 U	0.02 U	0.02 U	0.02 U
Mercury		NA	NA	NA	NA	0.2 U	0.2 U	0.2 U	0.2 U
Nickel		NA	NA	NA	NA	0.04 U	0.04 U	0.04 U	0.04 U
Potassium		NA	NA	NA	NA	3.48	2.65	3.11	3.05
Sodium		NA	NA	NA	NA	43.5	31.9	46.1	42.5
Zinc		NA	NA	NA	NA	0.02	0.02 U	0.02 U	0.02 U

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury and Lead are reported in micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per million (ppm)

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>CONSTITUENT</b>	<b>SITE DATE</b>	MW-05B Not Sampled	MW-05B 6/18/2008	MW-05B 8/29/2008	MW-05B 10/31/2008	MW-06A 1/31/2008	MW-06A 5/21/2008	MW-06A 8/28/2008	MW-06A 10/30/2008
Aluminum			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Barium			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium			15.4	14.7	15.5	2.19	4.49	1.03	0.99
Chromium			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent			0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper			0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Iron			0.02	0.02 U	0.02 U	0.02 U	0.05	0.02 U	0.03
Lead			5 U	5 U	5 U	5 U	5 U	5 U	5 U
Magnesium			9.47	8.75	8.64	3.75	9.57	1.29	1.37
Manganese			5.59	5.23	5.46	0.05	0.09	0.02 U	0.02 U
Mercury			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel			0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Potassium			10.7	10.3	10.9	2.55	5.78	2.5	2.44
Sodium			47.1	44.8	46.1	21.9	40.8	9.47	7.47
Zinc			0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.03

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury and Lead are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per million (ppm)

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>CONSTITUENT</b>	<b>SITE DATE</b>	MW-06B 1/30/2008	MW-06B 5/21/2008	MW-06B 8/28/2008	MW-06B 10/30/2008	MW-06C 1/31/2008	MW-06C 5/21/2008	MW-06C 8/28/2008	MW-06C 10/30/2008
Aluminum		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Barium		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium		1.88	1.15	1.68	2.34	5.03	7.57	4.38	12.7
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Iron		0.07	0.04	0.08	0.04	0.03	0.02 U	0.07	0.05
Lead		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Magnesium		1.3	0.8	1.2	1.72	2.69	3.35	2.5	5.73
Manganese		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.03	0.02	0.03
Mercury		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Potassium		31	22.6	30.9	33.5	33.1	20.8	27.6	61.6
Sodium		56.1	42.5	55	67.1	86.2	61.1	64.4	141
Zinc		0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury and Lead are reported in micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per million (ppm)

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>CONSTITUENT</b>	<b>SITE DATE</b>	MW-06E 1/30/2008	MW-06E DUP 1/30/2008	MW-06E 5/21/2008	MW-06E DUP 5/21/2008	MW-6C DUP 8/28/2009	MW-06E 8/28/2009	MW-06E 10/30/2008	MW-06E DUP 10/30/2008
Aluminum		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Barium		0.2 U	0.2 U	0.21	0.2	0.2 U	0.2 U	0.2 U	0.2 U
Calcium		29.1	29.2	27.6	27.1	4.18	20.6	21.2	21.1
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Iron		3.81	4.02	3.25	3.2	0.04	2.37	2.31	2.28
Lead		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Magnesium		13.2	13.3	12.3	12.1	2.43	9.12	9.47	9.33
Manganese		0.72	0.73	0.62	0.61	0.02 U	0.48	0.46	0.46
Mercury		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Potassium		42	42.3	28.4	28	27.5	22.9	21.3	20.6
Sodium		110	111	84.1	82.4	64.2	66.5	65	63.4
Zinc		0.03	0.03	0.07	0.03	0.02 U	0.04	0.07	0.06

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury and Lead are reported in micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per million (ppm)

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>CONSTITUENT</b>	<b>SITE DATE</b>	MW-06F 1/31/2008	MW-06F 5/21/2008	MW-06F 8/28/2008	MW-06F 10/30/2008	MW-07B Not Sampled	MW-07B 6/18/2008	MW-07B 8/27/2008	MW-07B 10/29/2008
Aluminum		0.2 U	0.2 U	0.2 U	0.2 U		0.2 U	0.2 U	0.2 U
Barium		0.2 U	0.2	0.2 U	0.21		0.2 U	0.2 U	0.2 U
Calcium		34.6	35.8	32.9	36.3		4.11	14.4	12.6
Chromium		0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U
Copper		0.02 U	0.02 U	0.02 U	0.02 U		0.02 U	0.02 U	0.02 U
Iron		0.1	0.14	3.36	0.29		0.12	0.03	0.03
Lead		5 U	5 U	5 U	5 U		5 U	5 U	5 U
Magnesium		14.1	15.2	14.1	15.8		2.7	9.72	9.19
Manganese		0.09	0.09	0.12	0.11		0.11	0.03	0.03
Mercury		0.27	0.21	0.2 U	0.24		0.2 U	0.2 U	0.2 U
Nickel		0.04 U	0.04 U	0.04 U	0.04 U		0.04 U	0.04 U	0.04 U
Potassium		4.52	5.02	5.2	6.91		2.26	3.84	3.6
Sodium		53.8	59.6	56.1	66.7		9.23	27.2	47.3
Zinc		0.03	0.04	0.03	0.03		0.03	0.02 U	0.02 U

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury and Lead are reported in micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per million (ppm)

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>CONSTITUENT</b>	<b>SITE DATE</b>	MW-08A 1/31/2008	MW-08A 5/22/2008	MW-08A 8/28/2008	MW-08A 10/30/2008	MW-08B 1/31/2008	MW-08B 5/22/2008	MW-08B 8/28/2008	MW-08B 10/30/2008
Aluminum		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Barium		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium		5.32	3.04	11.9	2.16	18.6	17.7	16.8	16.6
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Iron		0.02 U	0.02	0.02	0.02 U	0.02 U	0.02 U	0.03	0.05
Lead		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Magnesium		2.9	1.74	6.78	1.36	6.42	6.16	5.68	5.64
Manganese		0.04	0.03	0.07	0.02 U	0.87	0.83	0.74	0.76
Mercury		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Potassium		4.19	4.41	8.91	2.82	13	13.3	13.7	13.3
Sodium		15.8	7.38	30.5	5.32	37.5	38.1	36.8	34.9
Zinc		0.02 U	0.02 U	0.02	0.03	0.07	0.07	0.07	0.06

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury and Lead are reported in micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per million (ppm)

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>CONSTITUENT</b>	<b>SITE DATE</b>	MW-09B Not Sampled	MW-09B 6/18/2008	MW-09B 8/27/2008	MW-09B 10/29/2008	MW-09C 1/29/2008	MW-09C 6/18/2008	MW-09C 8/27/2008	MW-09C 10/29/2008
Aluminum			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Barium			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium			13	12.3	13.6	2.68	4.31	3.8	3.67
Chromium			0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent			0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper			0.02	0.02 U	0.02 U	0.03	0.02 U	0.02 U	0.02 U
Iron			0.06	0.02 U	0.02 U	0.61	0.06	0.03	0.05
Lead			5 U	5 U	5 U	5.38	5 U	5 U	5 U
Magnesium			6.27	5.91	6.17	4.39	5.52	5.83	6.21
Manganese			0.21	0.27	0.22	0.05	0.08	0.1	0.09
Mercury			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel			0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Potassium			9.95	8.51	7.81	15.5	18.3	16.3	17.7
Sodium			42.7	36.8	36.5	43.4	51.2	47.8	49.2
Zinc			0.02 U	0.02 U	0.02 U	0.05	0.02	0.02	0.02 U

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury and Lead are reported in micrograms per liter (µg/L) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per million (ppm)

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>CONSTITUENT</b>	<b>SITE DATE</b>	MW-11A 1/29/2008	MW-11A 5/20/2008	MW-11A 8/27/2008	MW-11A 10/29/2008	MW-11B 1/29/2008	MW-11B 5/20/2008	MW-11B 8/27/2008	MW-11B 10/29/2008
Aluminum		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Barium		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium		3.92	3.91	3.81	4.07	1.55	1.97	1.6	1.73
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Iron		0.02	0.04	0.03	0.02 U	0.08	0.03	0.02 U	0.02 U
Lead		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Magnesium		2.15	2.18	2.22	2.27	0.79	1.06	0.84	0.88
Manganese		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.03	0.02 U	0.02 U
Mercury		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Potassium		1.01	1.06	1.36	1.17	0.89	0.86	1.03	0.77
Sodium		4.88	5.45	5.5	6.11	4.54	5.89	4.54	6.17
Zinc		0.02	0.02	0.02	0.02 U	0.03	0.02 U	0.02 U	0.02 U

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury and Lead are reported in micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per million (ppm)

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>CONSTITUENT</b>	<b>SITE DATE</b>	MW-09D 8/27/2008	OBS-1 1/30/2008	OBS-1 5/20/2008	OBS-1 8/27/2008	OBS-1 10/29/2008			
Aluminum		0.46	0.2 U	0.38	0.2 U	0.2 U			
Barium		0.27	0.2 U	0.2 U	0.2 U	0.2 U			
Calcium		19.1	22	21.8	20.9	21.2			
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U			
Chromium, Hexavalent		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U			
Copper		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U			
Iron		0.94	0.07	0.11	0.06	0.06			
Lead		5 U	5 U	5 U	5 U	5 U			
Magnesium		15.6	15.9	15.8	15.3	15.7			
Manganese		0.2	1.56	1.57	1.43	1.48			
Mercury		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U			
Nickel		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U			
Potassium		5.58	8.69	9.51	9.86	10.5			
Sodium		103	69.7	74.2	78	84.8			
Zinc		0.08	0.02	0.02	0.02 U	0.02 U			

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury and Lead are reported in micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per million (ppm)

**TABLE 8**  
**TOWN OF OYSTER BAY**  
**OLD BETHPAGE LANDFILL**  
**ANNUAL GROUNDWATER ANALYTICAL RESULTS - 2008**  
**DISSOLVED (FILTERED) METALS**

PERIOD: From 1/1/2008 to 12/31/2008 - Inclusive

<b>CONSTITUENT</b>	<b>SITE DATE</b>	FIELD BLANK 1/31/2008	FIELD BLANK 5/22/2008	FIELD BLANK 6/18/2008	FIELD BLANK 8/29/2008	FIELD BLANK 10/31/2008
Aluminum		0.2 U				
Barium		0.2 U				
Calcium		0.2 U	0.2 U	0.2 U	0.2 U	0.21
Chromium		0.01 U				
Chromium, Hexavalent		0.02 U				
Copper		0.02 U				
Iron		0.02 U				
Lead		5 U	5 U	5 U	5 U	5 U
Magnesium		0.2 U				
Manganese		0.02 U				
Mercury		0.2 U				
Nickel		0.04 U				
Potassium		0.2 U	0.68	0.39	0.31	0.2 U
Sodium		0.21	0.2 U	0.2 U	0.2 U	0.88
Zinc		0.02 U				

Notes:

NA - Not analyzed

J - Estimated Value

U - Analyzed for but not detected

Mercury and Lead are reported in micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion (ppb)

All other constituents are reported in milligrams per liter (mg/L) or parts per million (ppm)

**FIGURES**

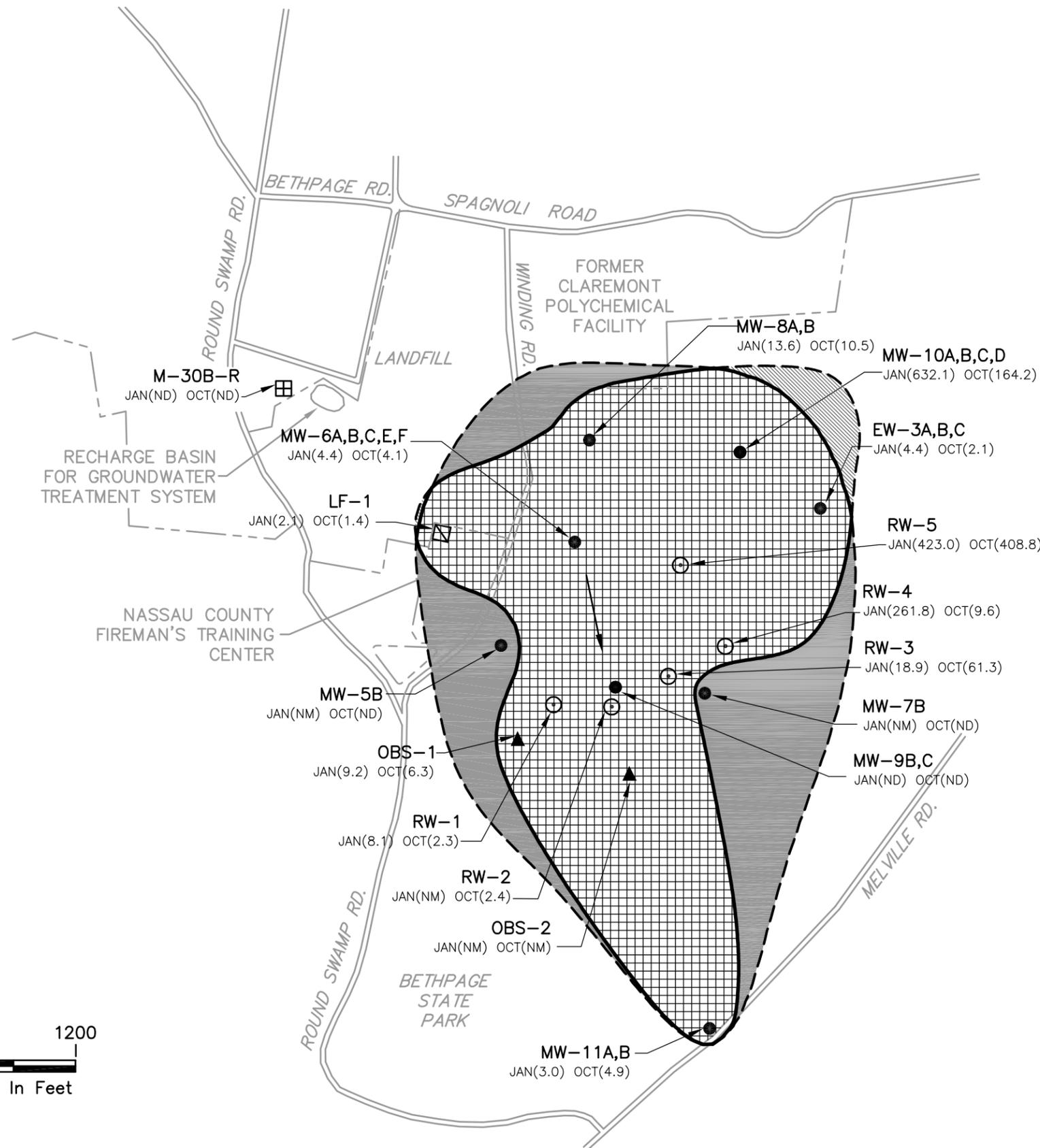


**LEGEND**

- MW-5B (0.1) ● MONITORING WELL LOCATION AND TOTAL VOLATILE HALOGENATED ORGANICS CONCENTRATION, PPB
- RW-4 ⊙ RECOVERY WELL
- OBS-1 ▲ PHASE II EXTENSION WELL
- LF-3 ▣ PHASE III WELL
- M-30B-R ⊞ UPGRADIENT WELL
- (NM) NOT MEASURED
- (ND) NOT DETECTED
- PROPERTY BOUNDARY
- ← MIGRATION
- ▨ JANUARY 2008 APPROXIMATE AREAL EXTENT OF THE VOLATILE HALOGENATED ORGANICS PLUME
- ▩ OCTOBER 2008 APPROXIMATE AREAL EXTENT OF THE VOLATILE HALOGENATED ORGANICS PLUME
- ▧ OVERLAP OF APPROXIMATE AREAL EXTENT OF THE VOLATILE HALOGENATED ORGANICS FOR JANUARY AND OCTOBER OF 2008

**NOTE:**  
 PLUME CONTOUR IS BASED ON TOTAL VOLATILE HALOGENATED ORGANICS CONCENTRATIONS IN THE MONITORING AND RECOVERY WELLS. PLUME LIMITS BASED ON MOST RECENT AVAILABLE DATA AS NOTED.

**APPROXIMATE EXTENT  
 AND DISTRIBUTION OF TOTAL  
 VOLATILE HALOGENATED ORGANICS  
 ANNUAL 2008  
 OLD BETHPAGE LANDFILL  
 TOWN OF OYSTER BAY**



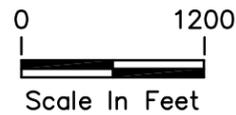
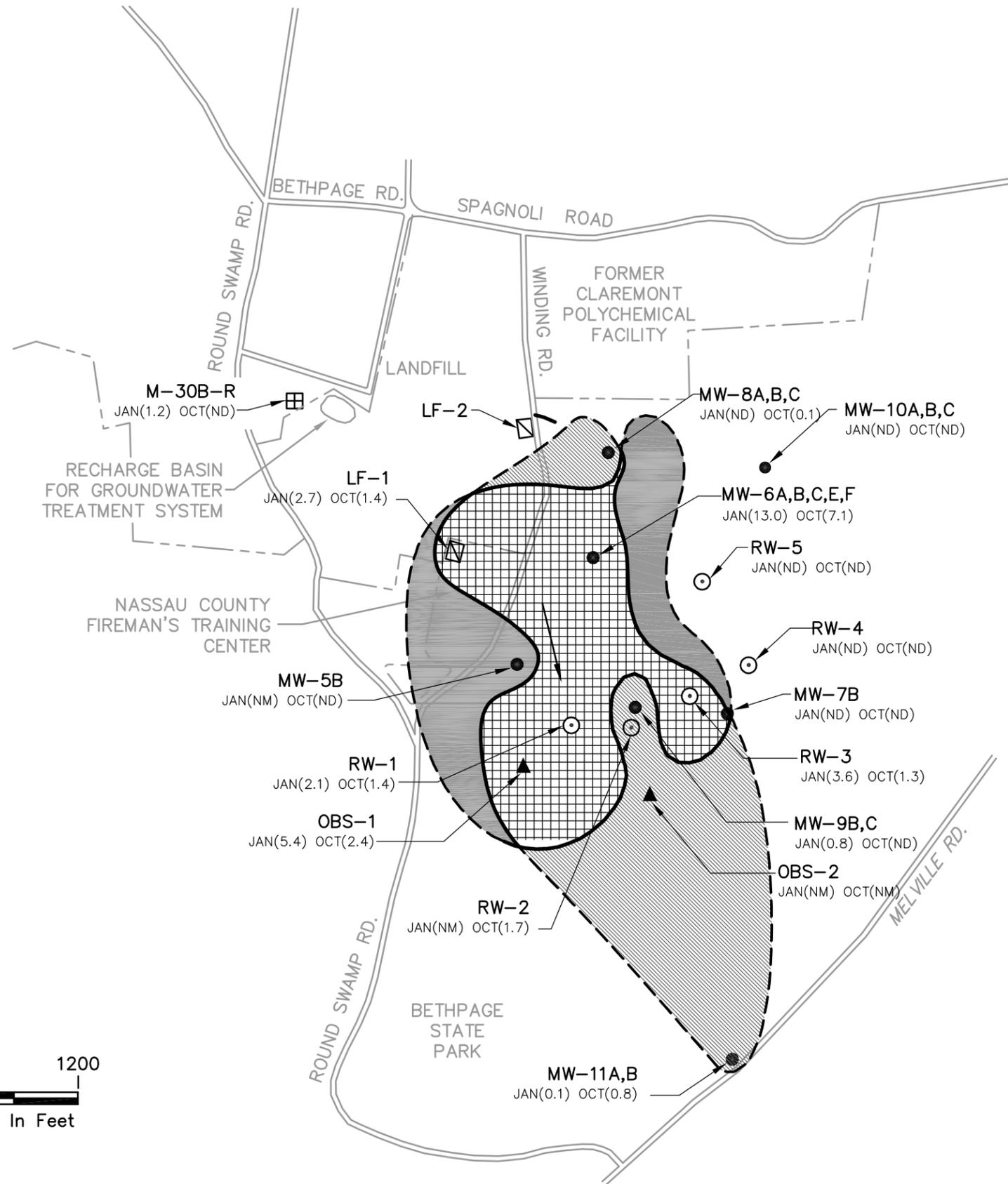


**LEGEND**

- MW-5B (0.1) ● MONITORING WELL LOCATION AND TOTAL AROMATIC HYDROCARBON CONCENTRATION, PPB
- RW-4 ⊙ RECOVERY WELL
- OBS-1 ▲ PHASE II EXTENSION WELL
- LF-3 □ PHASE III WELL
- M-30B-R ⊞ UPGRADIENT WELL
- (NM) NOT MEASURED
- (ND) NOT DETECTED
- PROPERTY BOUNDARY
- ← MIGRATION
- ▨ JANUARY 2008 APPROXIMATE AREAL EXTENT OF THE AROMATIC HYDROCARBON PLUME
- ▩ OCTOBER 2008 APPROXIMATE AREAL EXTENT OF THE AROMATIC HYDROCARBON PLUME
- ▧ OVERLAP OF APPROXIMATE AREAL EXTENT OF THE AROMATIC HYDROCARBON PLUME FOR JANUARY AND OCTOBER OF 2008

**NOTE:**

PLUME CONTOUR IS BASED ON TOTAL AROMATIC HYDROCARBON CONCENTRATIONS IN THE MONITORING AND RECOVERY WELLS. PLUME LIMITS BASED ON MOST RECENT AVAILABLE DATA AS NOTED.



**APPROXIMATE EXTENT  
AND DISTRIBUTION OF TOTAL  
AROMATIC HYDROCARBONS  
ANNUAL 2008  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY**

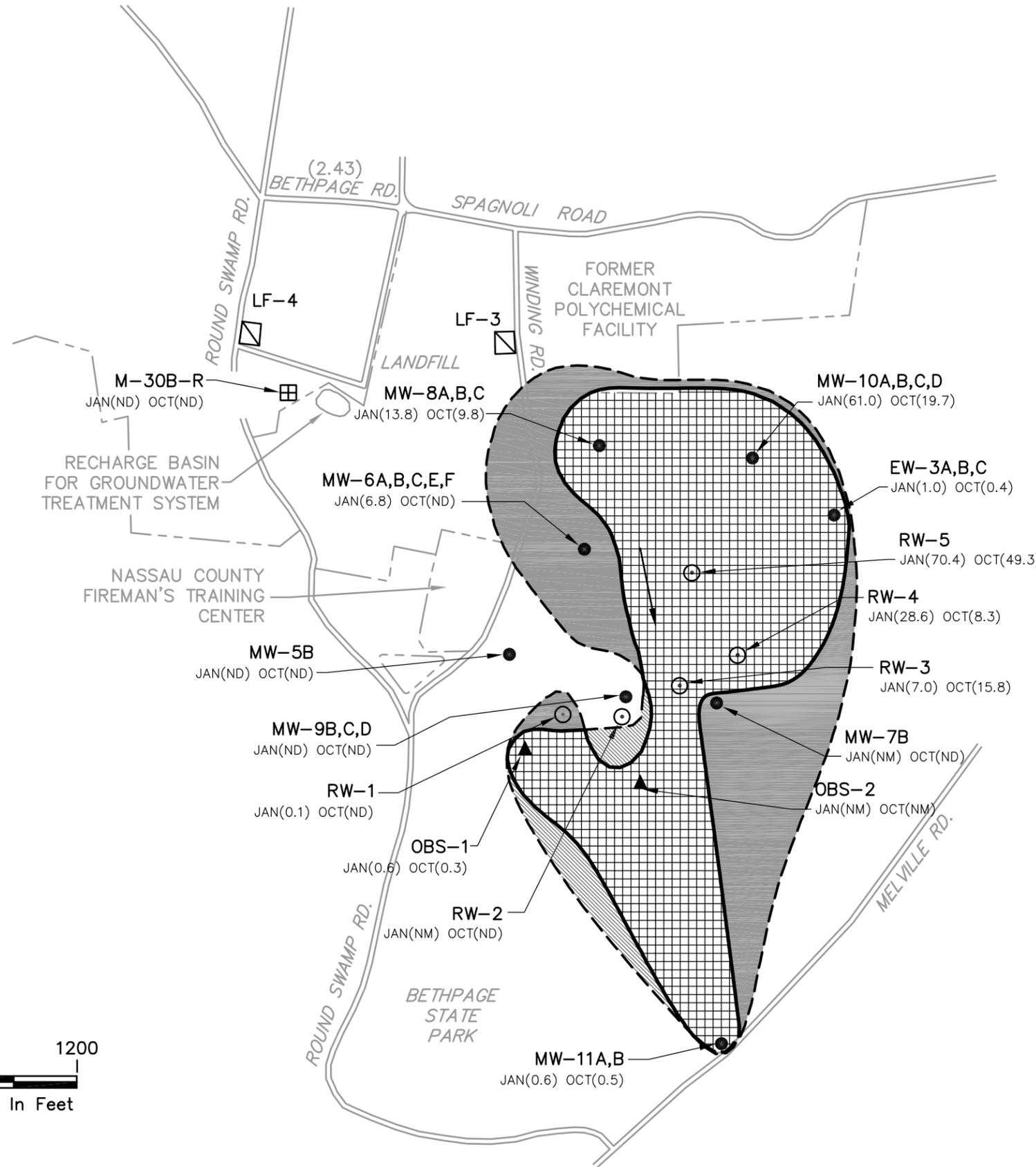


**LEGEND**

- MW-5B (0.1) ● MONITORING WELL LOCATION AND TOTAL TETRACHLOROETHENE CONCENTRATION, PPB
- RW-4 ○ RECOVERY WELL
- OBS-1 ▲ PHASE II EXTENSION WELL
- LF-3 □ PHASE III WELL
- M-30B-R ⊞ UPGRADIENT WELL
- (NM) NOT MEASURED
- (ND) NOT DETECTED
- PROPERTY BOUNDARY
- ← MIGRATION
- (solid) JANUARY 2008 APPROXIMATE AREAL EXTENT OF THE TETRACHLOROETHENE PLUME
- (hatched) OCTOBER 2008 APPROXIMATE AREAL EXTENT OF THE TETRACHLOROETHENE PLUME
- (grid) OVERLAP OF APPROXIMATE AREAL EXTENT OF THE TETRACHLOROETHENE PLUME FOR JANUARY AND OCTOBER OF 2008

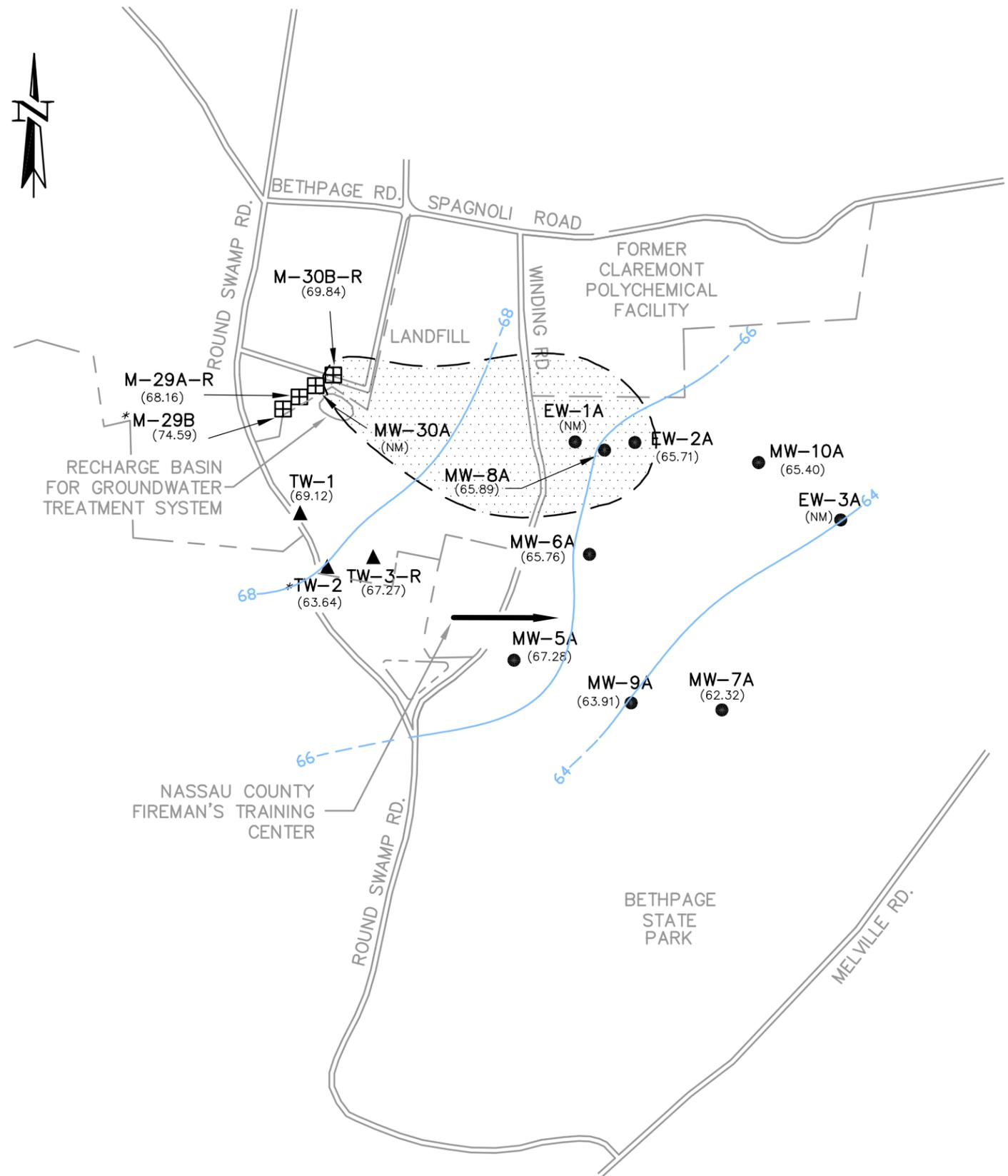
**NOTE:**

PLUME CONTOUR IS BASED ON TOTAL TETRACHLOROETHENE CONCENTRATIONS IN THE MONITORING AND RECOVERY WELLS. PLUME LIMITS BASED ON MOST RECENT AVAILABLE DATA AS NOTED.



**APPROXIMATE EXTENT  
AND DISTRIBUTION  
OF TETRACHLOROETHENE  
ANNUAL 2008  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY**

**APPENDIX A**  
**QUARTERLY GROUNDWATER FLOW MAPS**

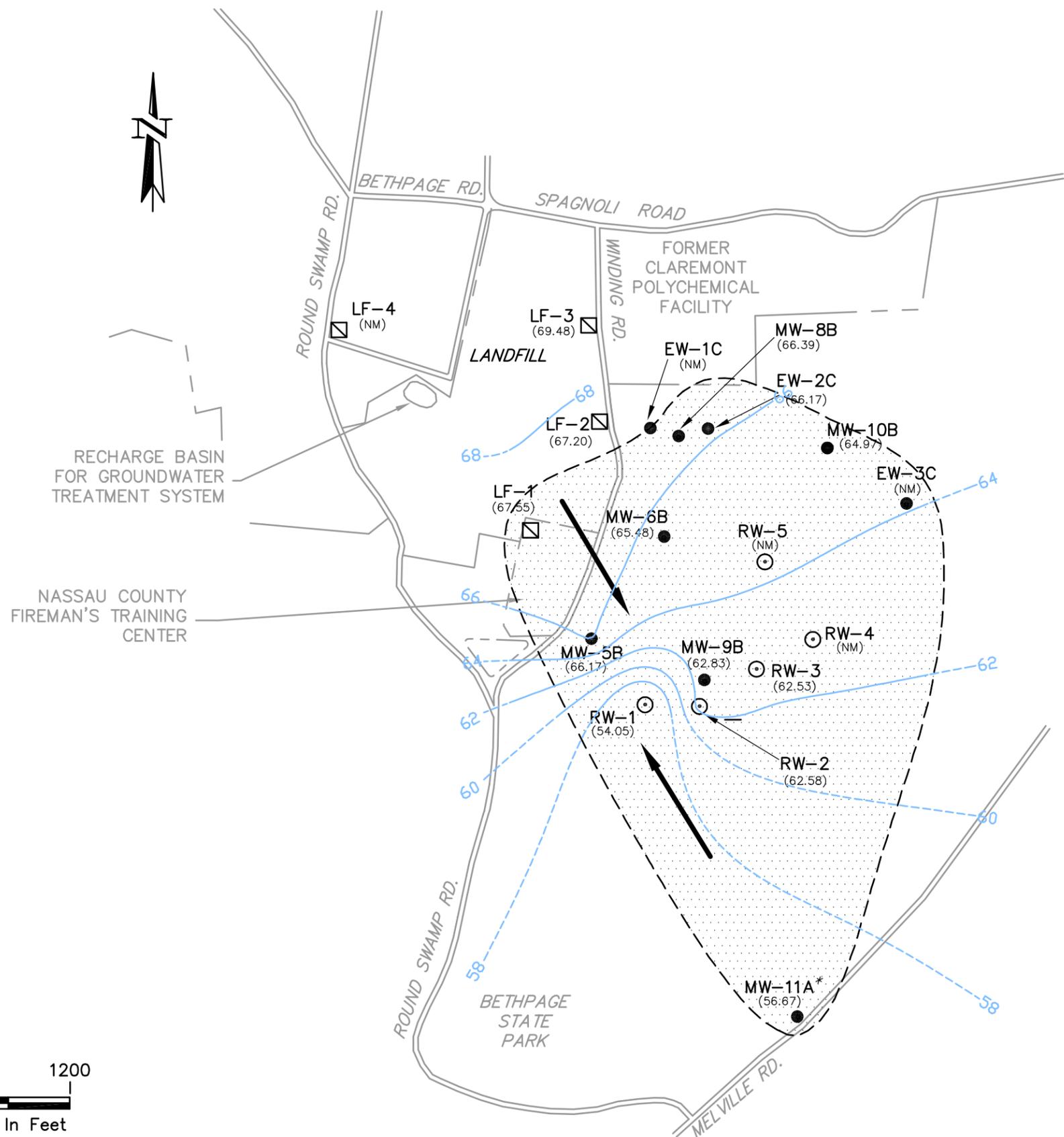


**LEGEND**

- MW-5A ● Monitoring Well Location And Designation  
Water Level Elevation In Feet Above Mean Sea Level
- TW-2 ▲ Phase II Extension Well
- M-29A ▣ Upgradient Well
- Property Boundary
- Groundwater Flow Direction
- 56— Line Of Equal Elevation Of The Water Table In Feet Above Mean Sea Level (Dashed Where Inferred)
- Approximate Extent Of The VOC Plume In Water Table Wells – First Quarter 2008
- (NM) Not Measured
- \* TW-2 and M-29B were not included in water contours map. Water levels appear to be anomalous and may reflect perched cona

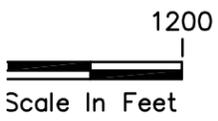


**WATER TABLE  
FLOW MAP  
FIRST QUARTER 2008**  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY

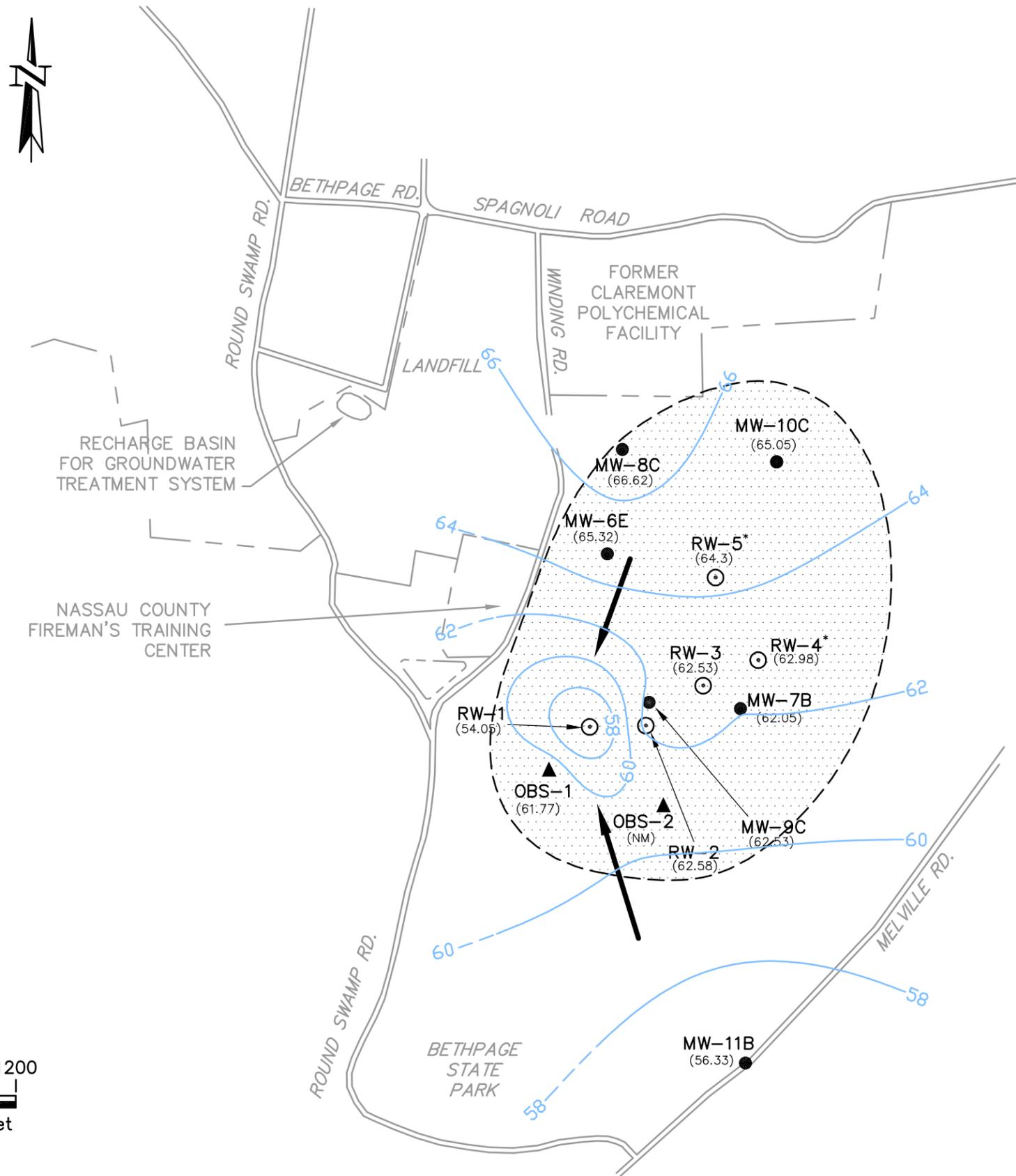


**LEGEND**

- MW-5B (66.17) ● Monitoring Well Location And Designation  
Water Level Elevation In Feet  
Above Mean Sea Level
- RW-5 ⊙ Recovery Well
- LF-2 ◻ Phase III Well
- Groundwater Flow Direction
- 56— Line Of Equal Elevation Of The Water Table  
In Feet Above Mean Sea Level (Dashed  
Where Inferred)
- - - Property Boundary
- ⋯ Approximate Extent Of The VOC Plume  
In Shallow Potentiometric Wells – First Quarter 2008
- (NM) Not Measured
- \* Well MW-11A is screened just below the shallow potentiometric zone, value is therefore an estimate.



**SHALLOW POTENTIOMETRIC  
FLOW MAP  
FIRST QUARTER 2008  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY**

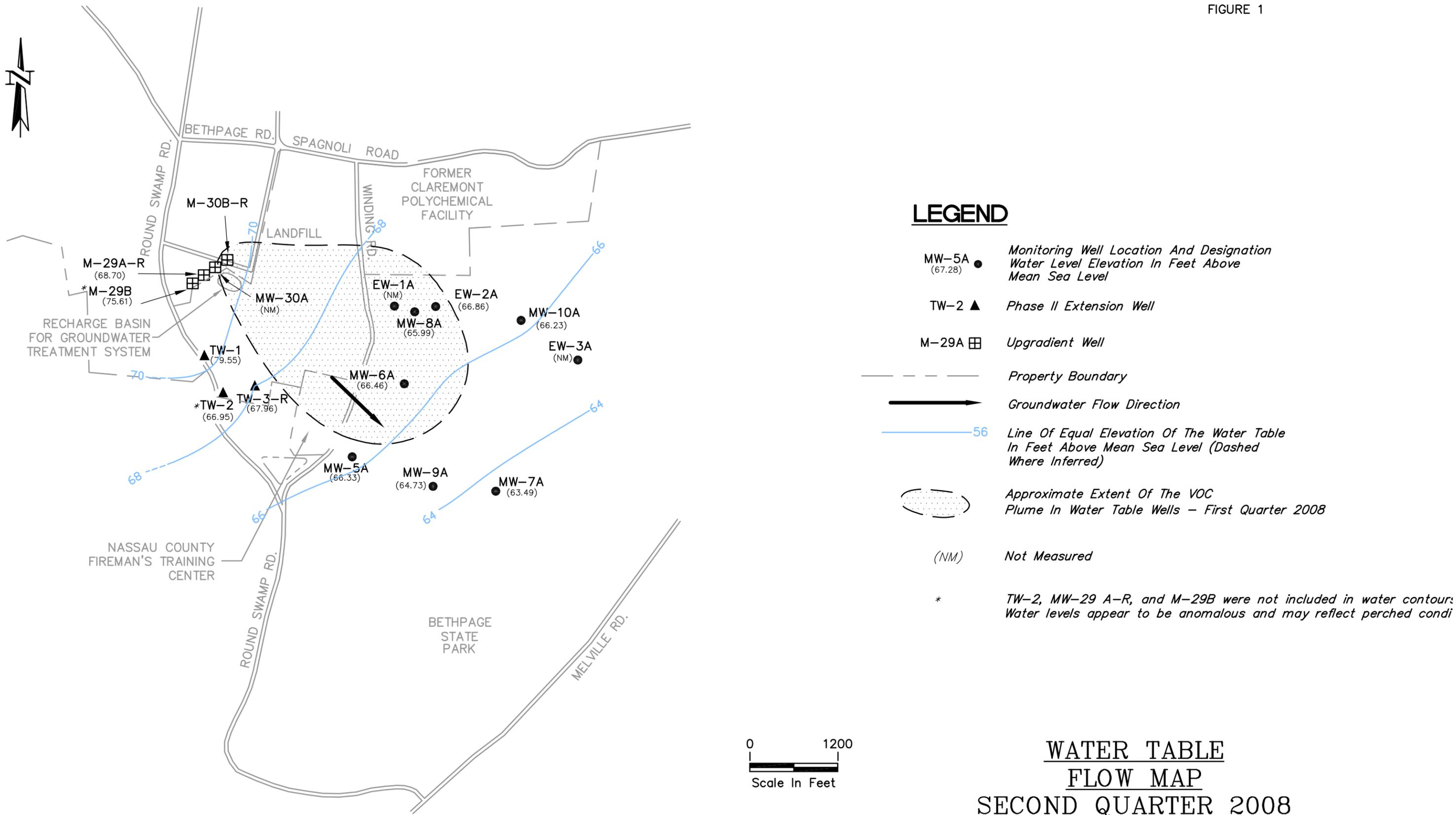


**LEGEND**

- MW-8C (66.62) ● Monitoring Well Location And Designation  
Water Level Elevation In Feet Above  
Mean Sea Level
- RW-4 ⊙ Recovery Well
- OBS-2 ▲ Phase II Extension Well
- Property Boundary
- Groundwater Flow Direction
- 56 Line Of Equal Elevation Of The Water Table  
In Feet Above Mean Sea Level (Dashed  
Where Inferred)
- Approximate Extent Of The VOC Plume  
In Deep Potentiometric Wells – First Quarter 2008.
- (NM) Not Measured
- \* Groundwater level measurement based on  
2007 4th quarter reading.

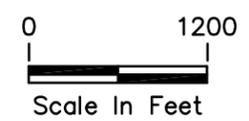
**DEEP POTENTIOMETRIC  
FLOW MAP  
FIRST QUARTER, 2008**  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY

0 1200  
Scale In Feet

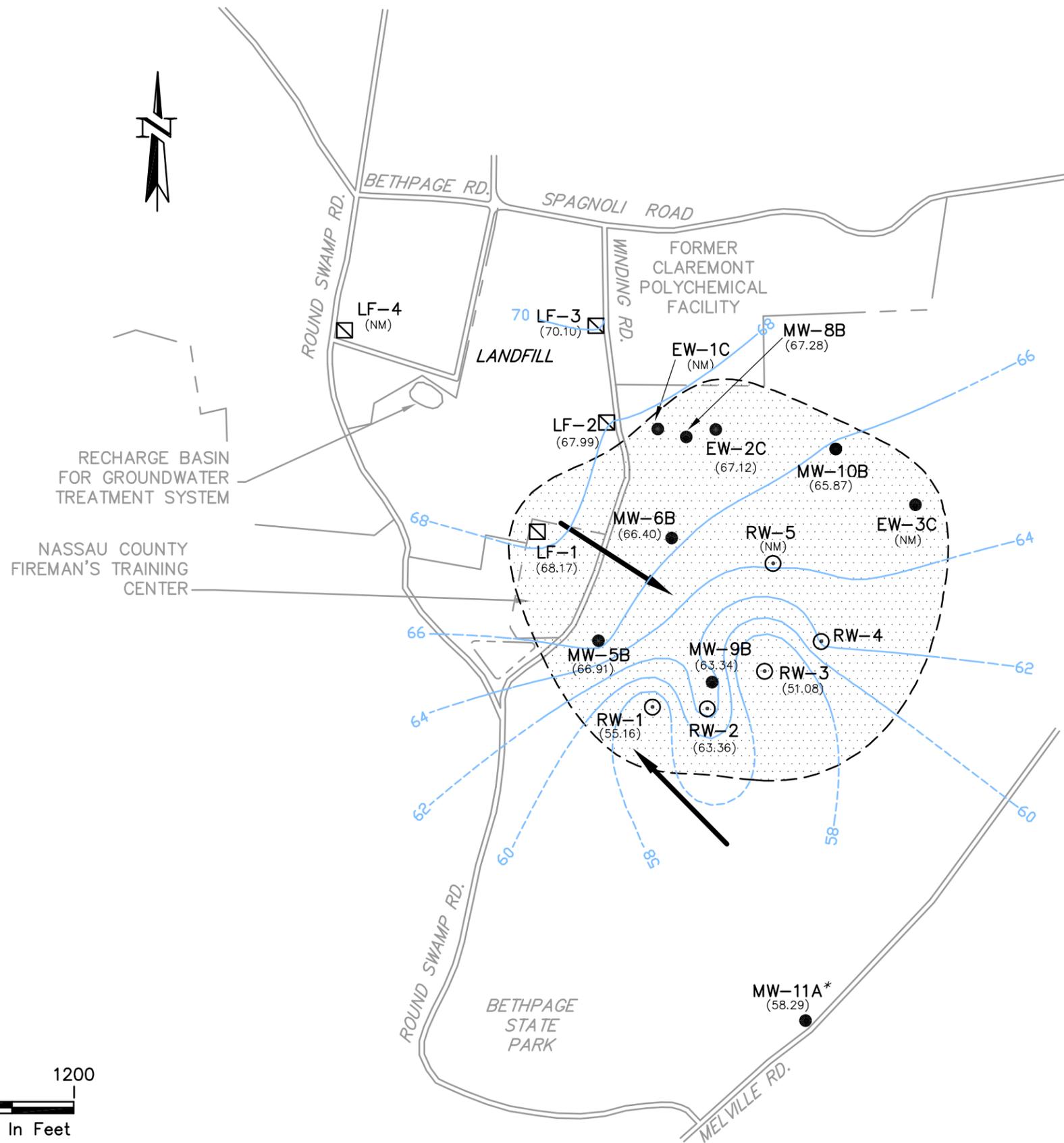


**LEGEND**

- MW-5A ● Monitoring Well Location And Designation  
Water Level Elevation In Feet Above Mean Sea Level
- TW-2 ▲ Phase II Extension Well
- M-29A ▣ Upgradient Well
- Property Boundary
- Groundwater Flow Direction
- 56 Line Of Equal Elevation Of The Water Table In Feet Above Mean Sea Level (Dashed Where Inferred)
- ⬭ Approximate Extent Of The VOC Plume In Water Table Wells – First Quarter 2008
- (NM) Not Measured
- \* TW-2, MW-29 A-R, and M-29B were not included in water contours. Water levels appear to be anomalous and may reflect perched conditions.



**WATER TABLE  
FLOW MAP  
SECOND QUARTER 2008  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY**



### LEGEND

MW-5B ● (66.17) *Monitoring Well Location And Designation  
Water Level Elevation In Feet  
Above Mean Sea Level*

RW-5 ⊙ *Recovery Well*

LF-2 ◻ *Phase III Well*

→ *Groundwater Flow Direction*

— 56 — *Line Of Equal Elevation Of The Water Table  
In Feet Above Mean Sea Level (Dashed  
Where Inferred)*

- - - *Property Boundary*

◌ *Approximate Extent Of The VOC Plume  
In Shallow Potentiometric Wells - First Quarter 2008*

(NM) *Not Measured*

\* *Well MW-11A is screened below the shallow potentiometric zone  
therefore this result is an approximate.*

## SHALLOW POTENTIOMETRIC FLOW MAP

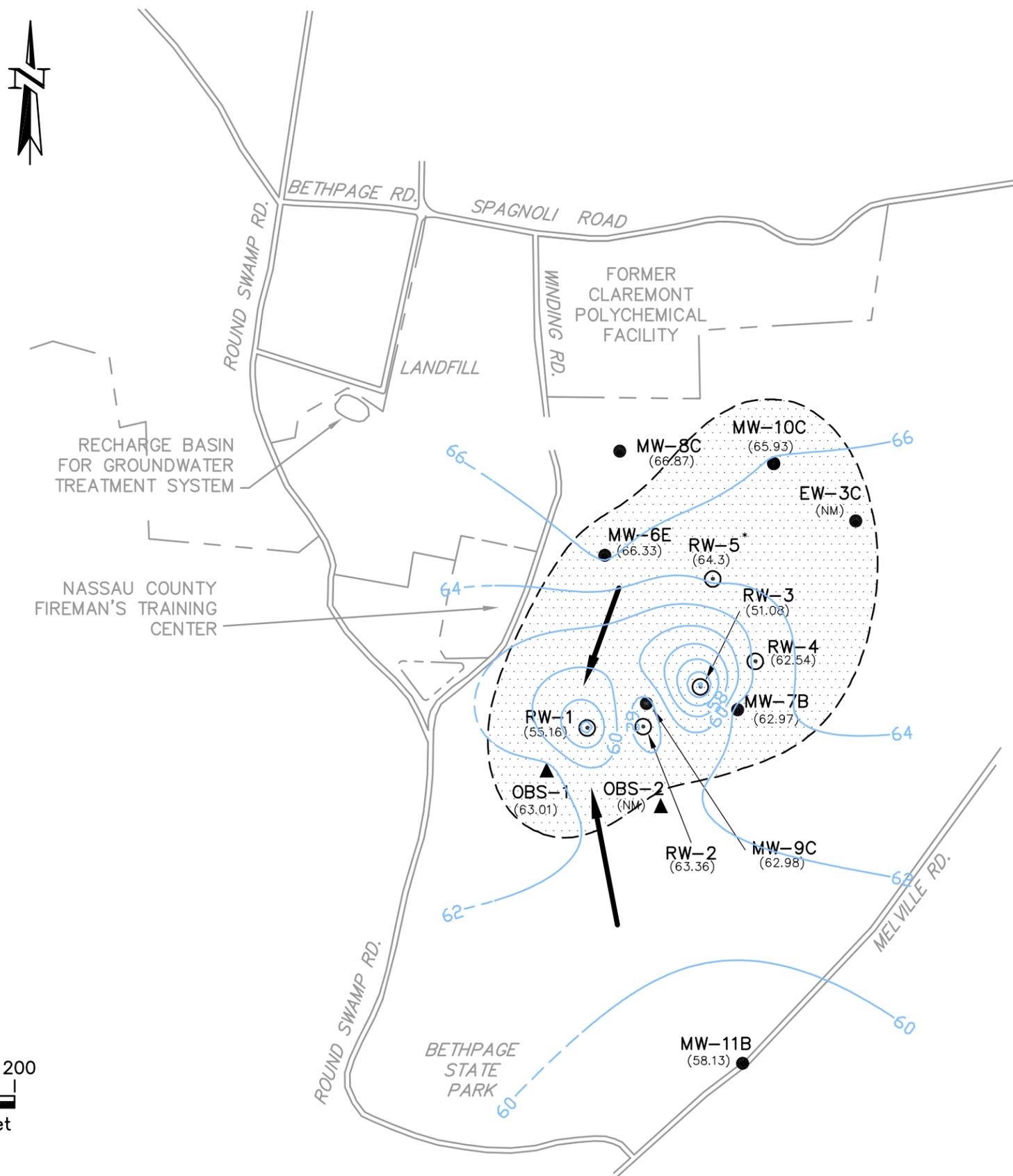
### SECOND QUARTER 2008

OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY



1200

Scale In Feet



**LEGEND**

MW-8C ● Monitoring Well Location And Designation  
(66.62) Water Level Elevation In Feet Above Mean Sea Level

RW-4 ⊙ Recovery Well

OBS-2 ▲ Phase II Extension Well

--- Property Boundary

→ Groundwater Flow Direction

— 56 Line Of Equal Elevation Of The Water Table In Feet Above Mean Sea Level (Dashed Where Inferred)

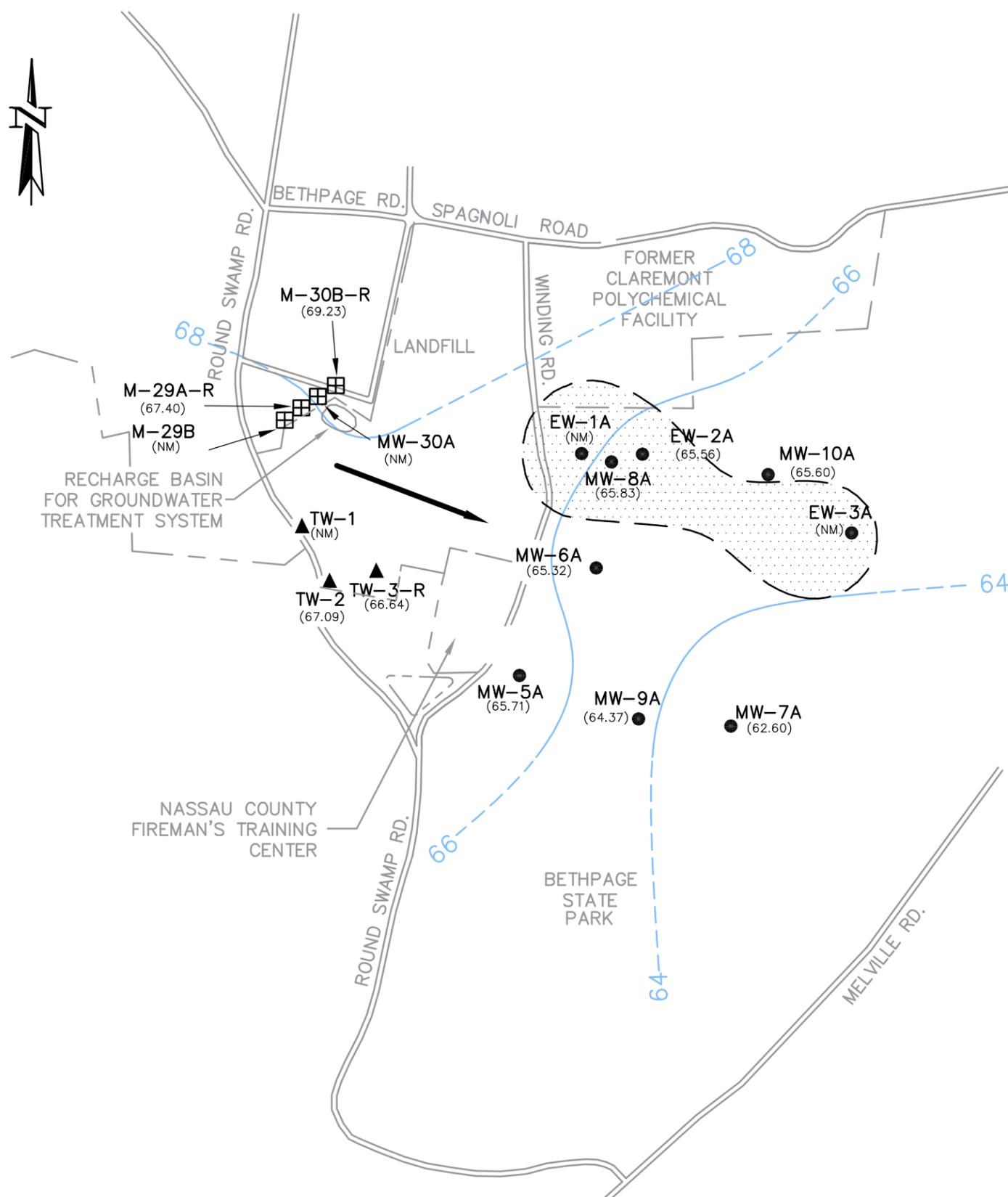
○ Approximate Extent Of The VOC Plume In Deep Potentiometric Wells – First Quarter 2008.

(NM) Not Measured

\* Groundwater level measurement based on 2007 4th quarter reading.



**DEEP POTENTIOMETRIC  
FLOW MAP  
SECOND QUARTER, 2008**  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY

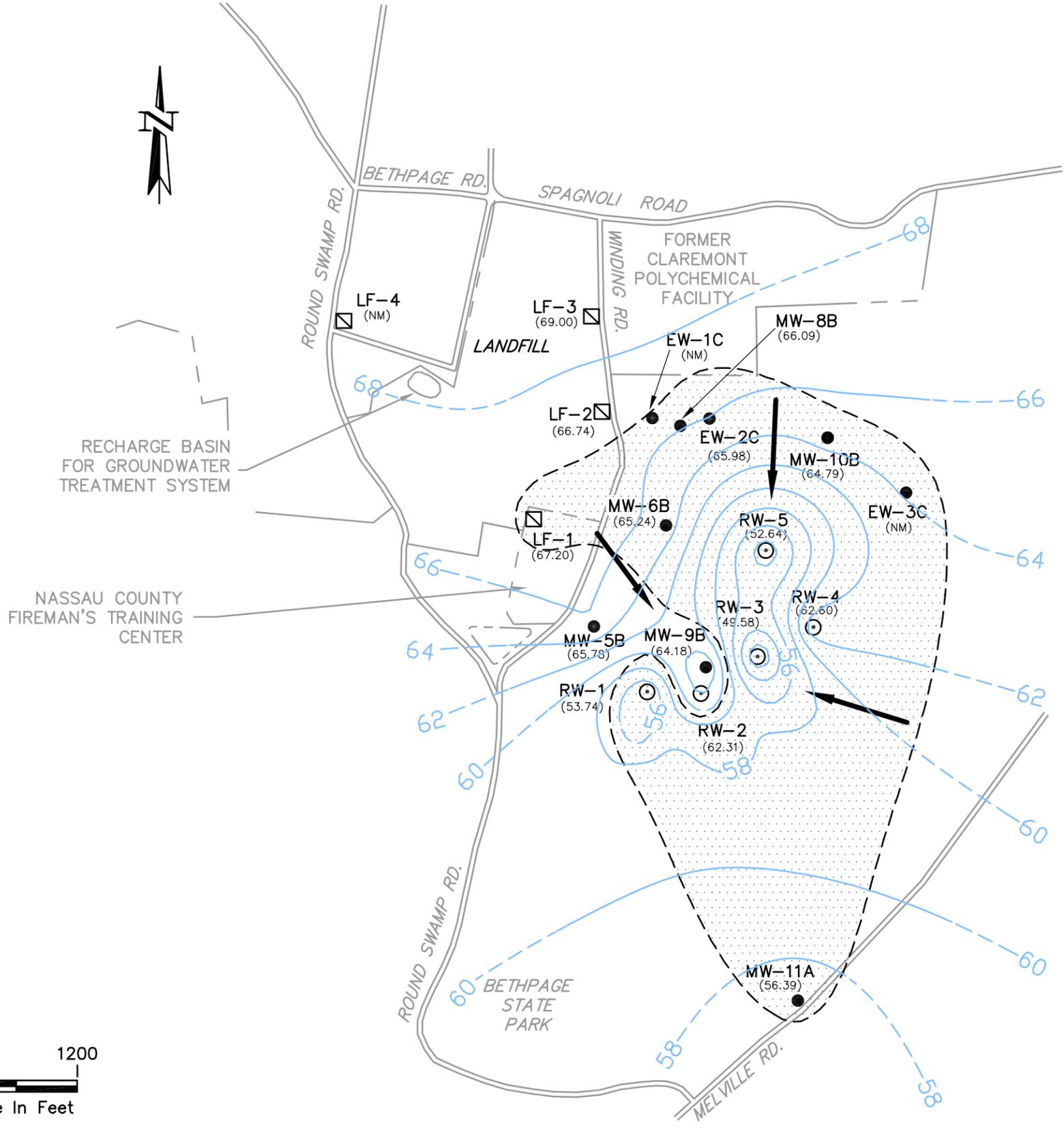


**LEGEND**

- MW-5A ● Monitoring Well Location And Designation  
Water Level Elevation In Feet Above Mean Sea Level
- TW-2 ▲ Phase II Extension Well
- M-29A ▣ Upgradient Well
- Property Boundary
- Groundwater Flow Direction
- 64 Line Of Equal Elevation Of The Water Table In Feet Above Mean Sea Level (Dashed Where Inferred)
- Approximate Extent Of The VOC Plume In Water Table Wells – Third Quarter 2008
- (NM) Not Measured

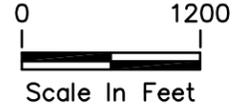


**WATER TABLE  
FLOW MAP  
THIRD QUARTER 2008**  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY

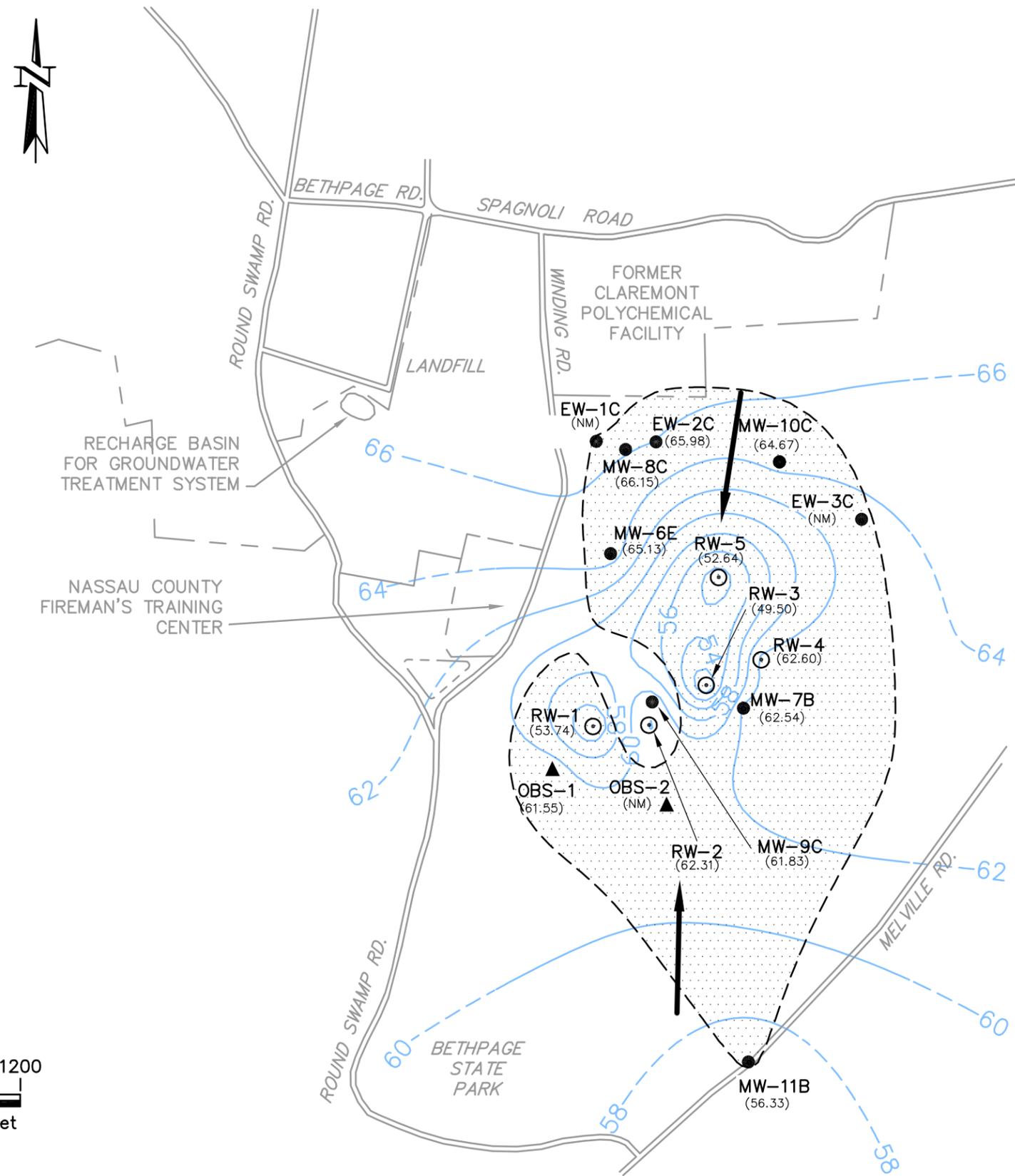


**LEGEND**

- MW-5B (66.17) ● Monitoring Well Location And Designation  
Water Level Elevation In Feet  
Above Mean Sea Level
- RW-5 ⊙ Recovery Well
- LF-2 ◻ Phase III Well
- Groundwater Flow Direction
- 62 — Line Of Equal Elevation Of The Water Table  
In Feet Above Mean Sea Level (Dashed  
Where Inferred)
- - - - Property Boundary
- ⋯ Approximate Extent Of The VOC Plume  
In Shallow Potentiometric Wells - Third Quarter 2008
- (NM) Not Measured



**SHALLOW POTENTIOMETRIC  
FLOW MAP  
THIRD QUARTER 2008**  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY



**LEGEND**

MW-8C ● Monitoring Well Location And Designation  
(66.62) Water Level Elevation In Feet Above  
Mean Sea Level

RW-4 ⊙ Recovery Well

OBS-2 ▲ Phase II Extension Well

--- Property Boundary

→ Groundwater Flow Direction

— 62 Line Of Equal Elevation Of The Water Table  
In Feet Above Mean Sea Level (Dashed  
Where Inferred)

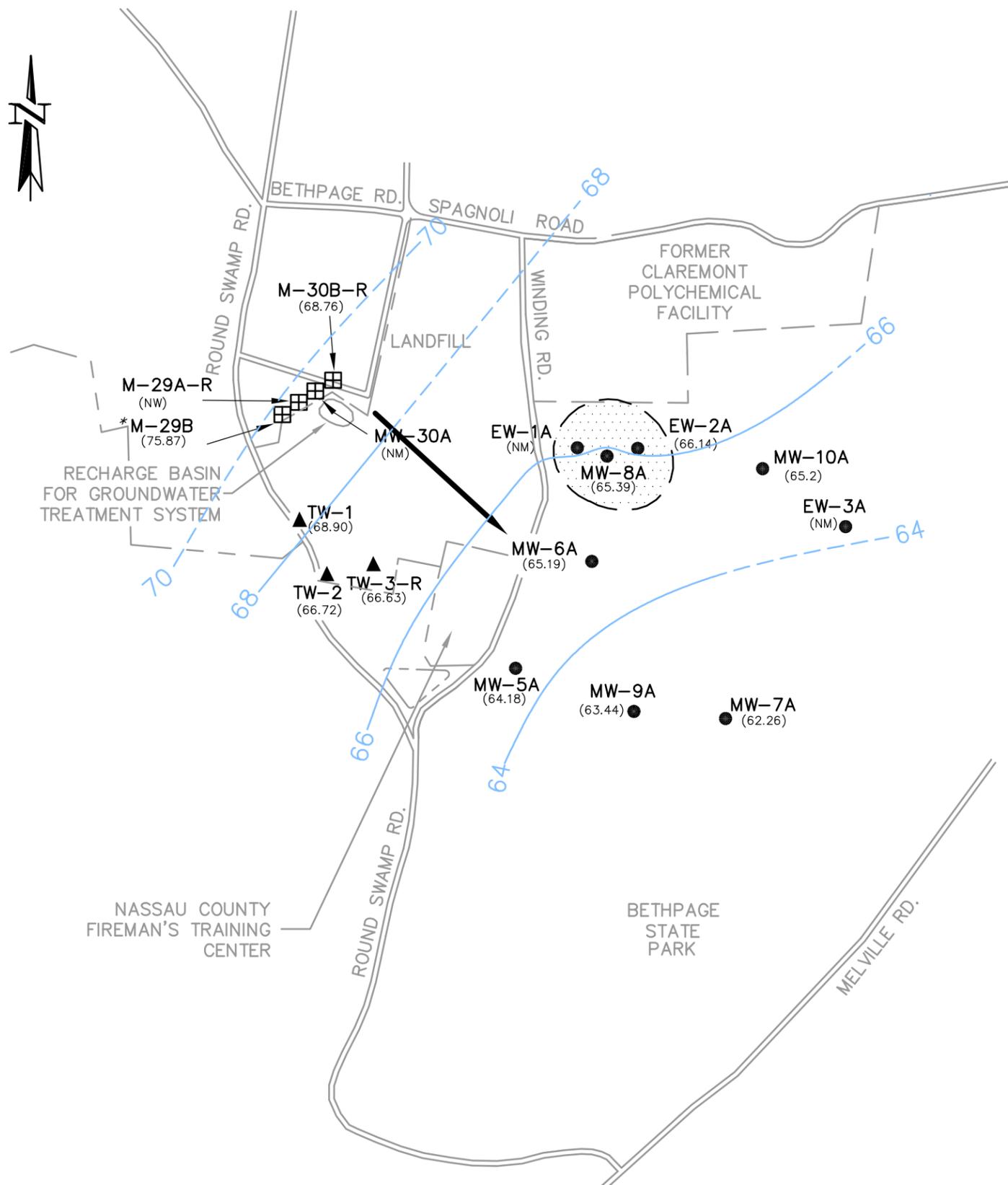
⊖ Approximate Extent Of The VOC Plume  
In Deep Potentiometric Wells – Third Quarter 2008.

(NM) Not Measured



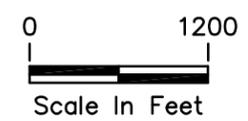
**DEEP POTENTIOMETRIC  
FLOW MAP  
THIRD QUARTER, 2008**

OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY

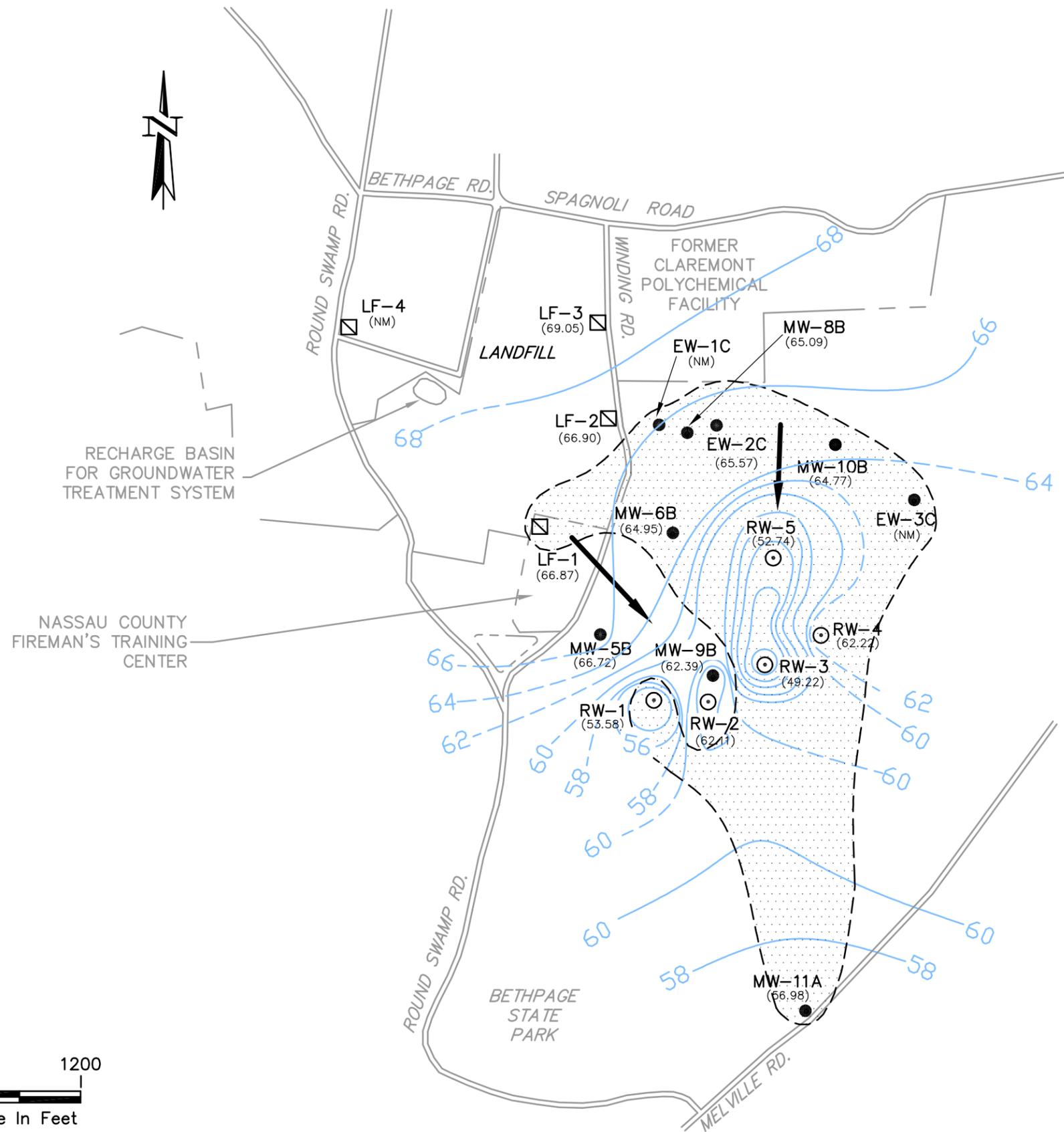


**LEGEND**

- MW-5A ● (67.28) Monitoring Well Location And Designation  
Water Level Elevation In Feet Above Mean Sea Level
- TW-2 ▲ (66.72) Phase II Extension Well
- M-29A ▣ (75.87) Upgradient Well
- - - - - Property Boundary
- Groundwater Flow Direction
- 64 — Line Of Equal Elevation Of The Water Table In Feet Above Mean Sea Level (Dashed Where Inferred)
- ⬭ Approximate Extent Of The VOC Plume In Water Table Wells – Fourth Quarter 2008
- (NM) Not Measured
- \* M-29B were not included in water contours map.



**WATER TABLE  
FLOW MAP  
FOURTH QUARTER 2008**  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY



### LEGEND

MW-5B ● (66.17) *Monitoring Well Location And Designation  
Water Level Elevation In Feet  
Above Mean Sea Level*

RW-5 ⊙ *Recovery Well*

LF-2 ◻ *Phase III Well*

→ *Groundwater Flow Direction*

—60— *Line Of Equal Elevation Of The Water Table  
In Feet Above Mean Sea Level (Dashed  
Where Inferred)*

- - - *Property Boundary*

⋯ *Approximate Extent Of The VOC Plume  
In Shallow Potentiometric Wells – Fourth Quarter 2008*

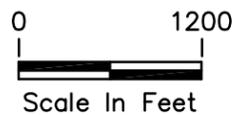
(NM) *Not Measured*

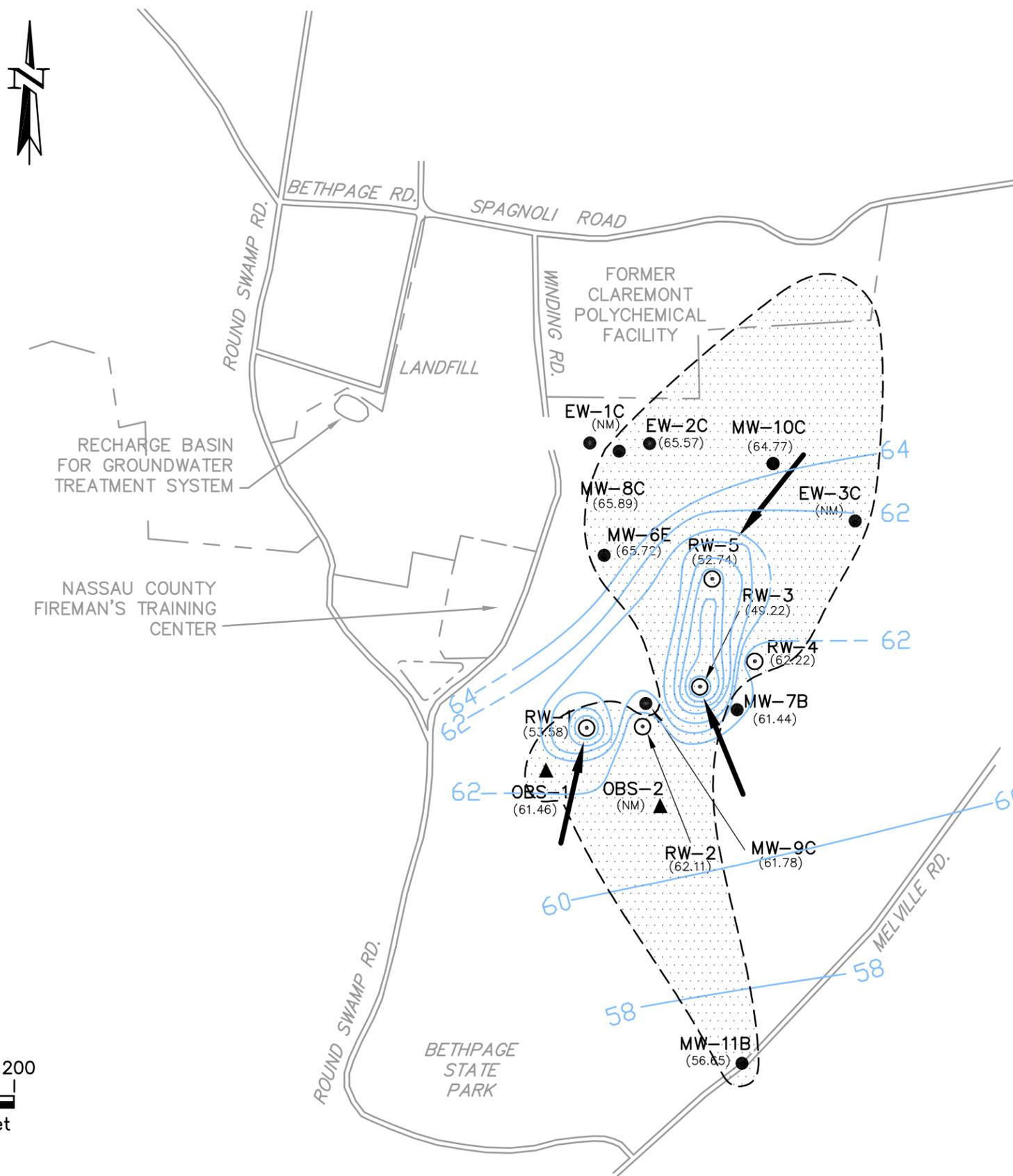
## SHALLOW POTENTIOMETRIC

## FLOW MAP

## FOURTH QUARTER 2008

OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY





**LEGEND**

MW-8C (66.62) ● Monitoring Well Location And Designation  
Water Level Elevation In Feet Above  
Mean Sea Level

RW-4 ⊙ Recovery Well

OBS-2 ▲ Phase II Extension Well

--- Property Boundary

→ Groundwater Flow Direction

— 58 Line Of Equal Elevation Of The Water Table  
In Feet Above Mean Sea Level (Dashed  
Where Inferred)

⊖ Approximate Extent Of The VOC Plume  
In Deep Potentiometric Wells – Fourth Quarter 2008.

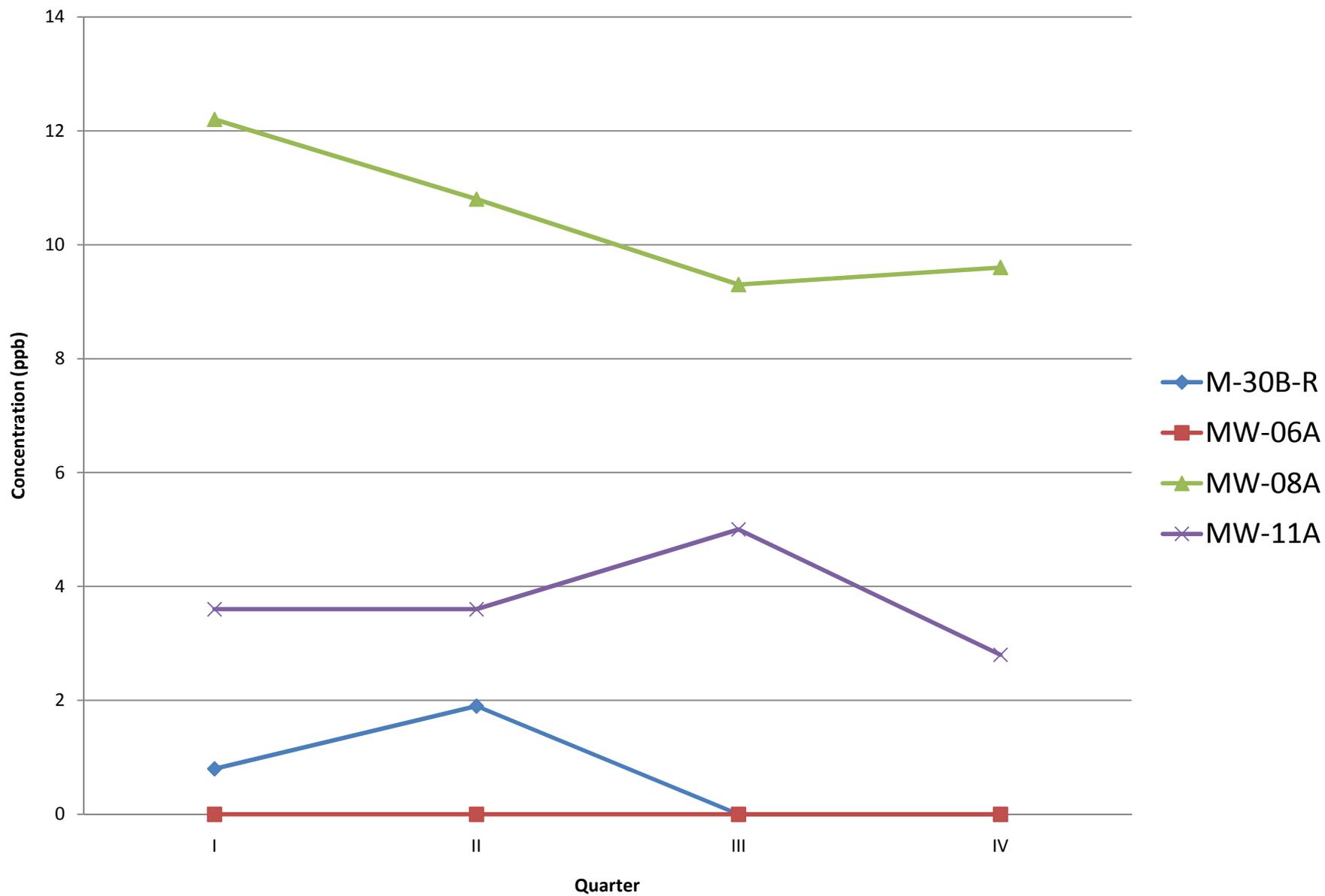
(NM) Not Measured



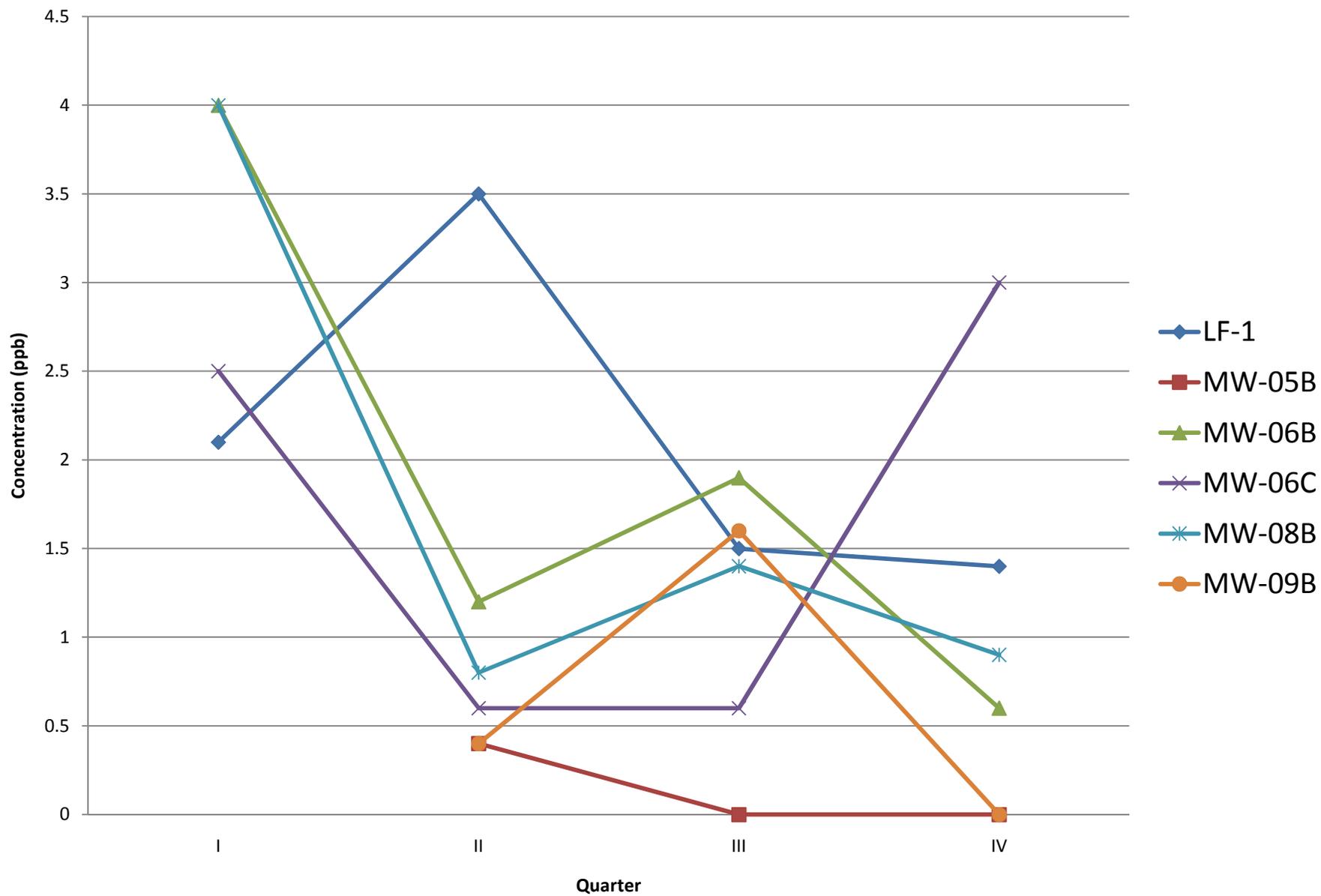
**DEEP POTENTIOMETRIC  
FLOW MAP  
FOURTH QUARTER, 2008**  
OLD BETHPAGE LANDFILL  
TOWN OF OYSTER BAY

**APPENDIX B**  
**CONTAMINATE CONCENTRATION CHARTS**

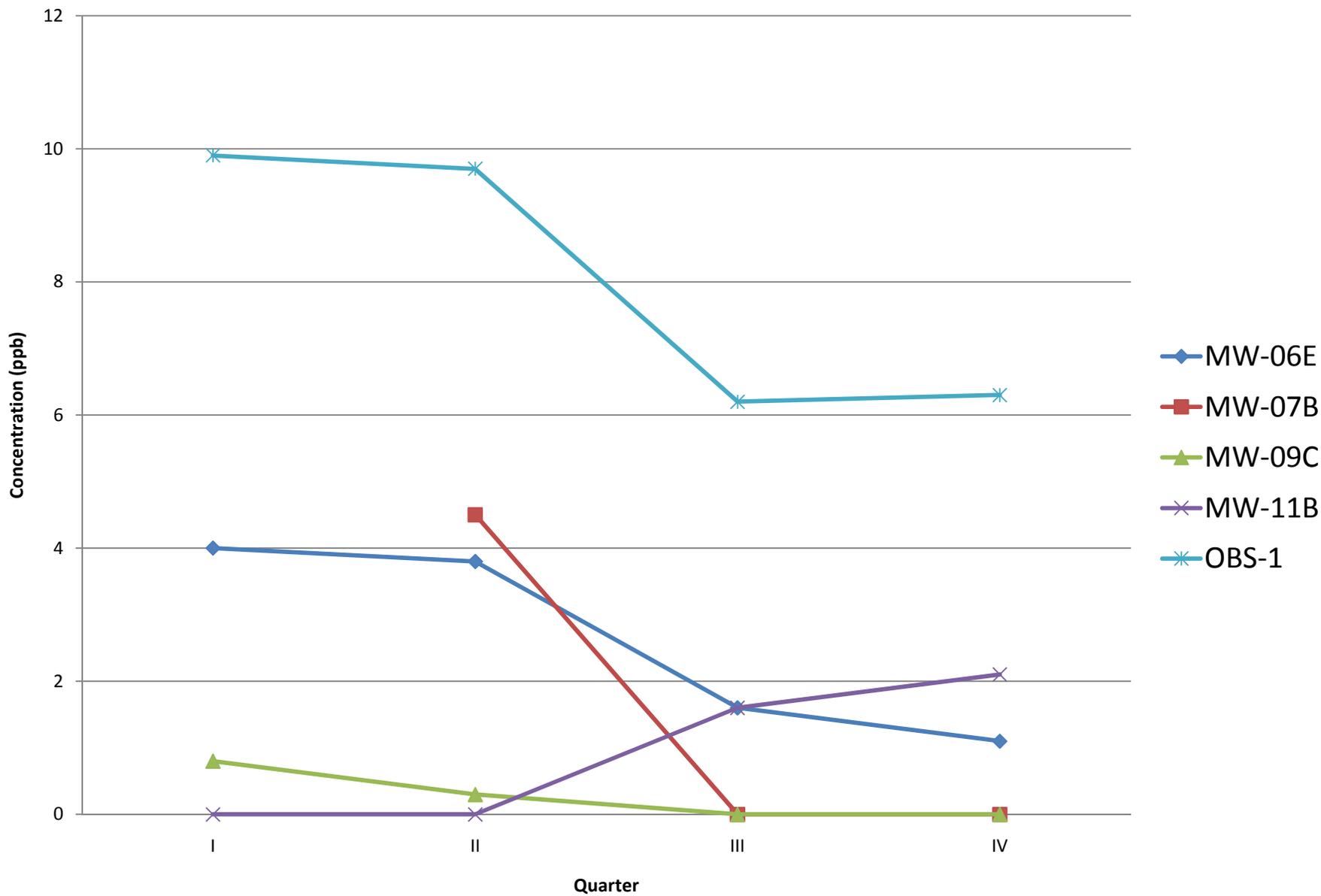
**Figure 1. Total Volatile Halogenated Organics - Water Table**



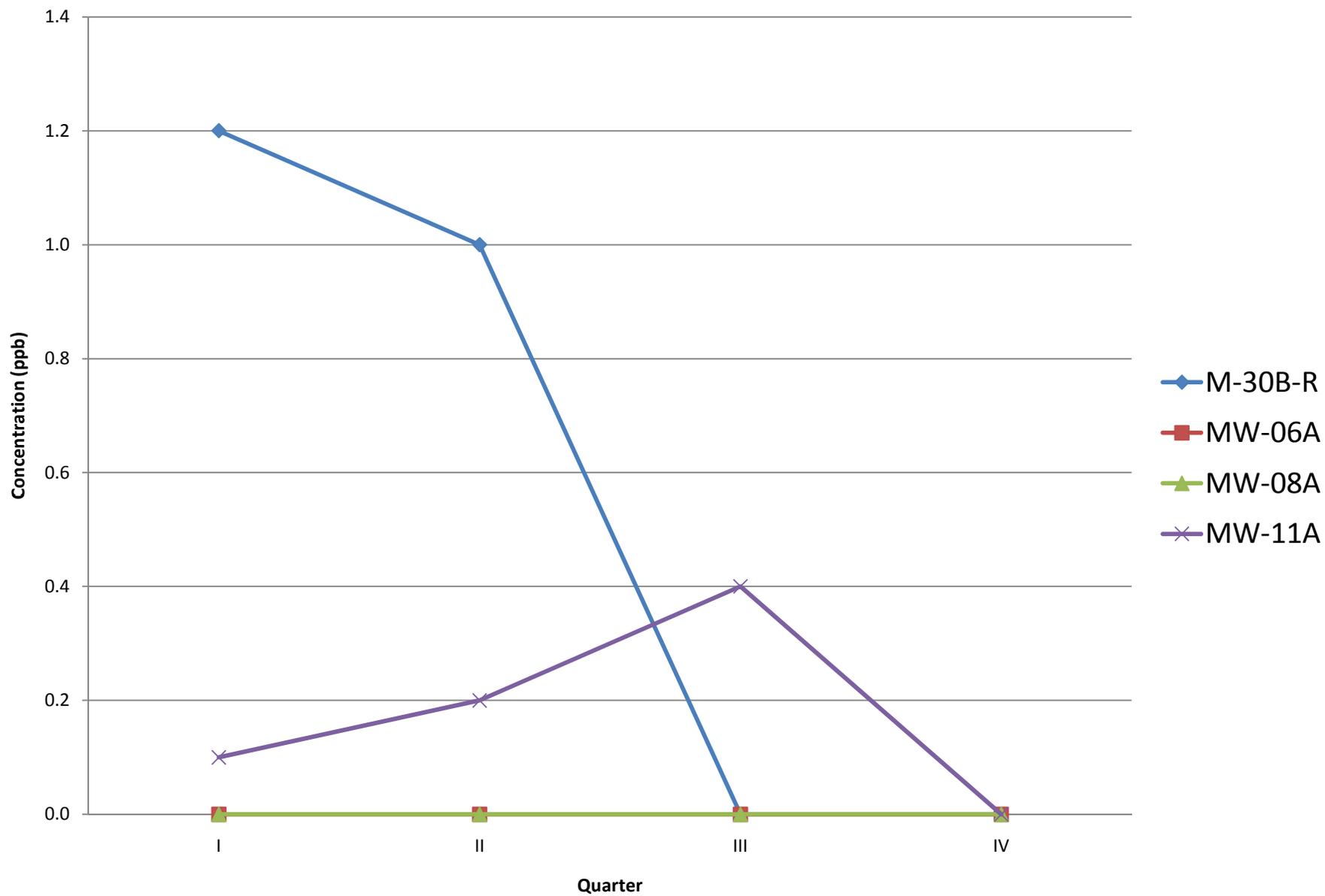
**Figure 2. Total Volatile Halogenated Organics - Shallow Potentiometric Zone**



**Figure 3. Total Volatile Halogenated Organics - Deep Potentiometric Zone**



**Figure 4. Total Aromatic Hydrocarbons - Water Table**



**Figure 5. Total Aromatic Hydrocarbons - Shallow Potentiometric Zone**

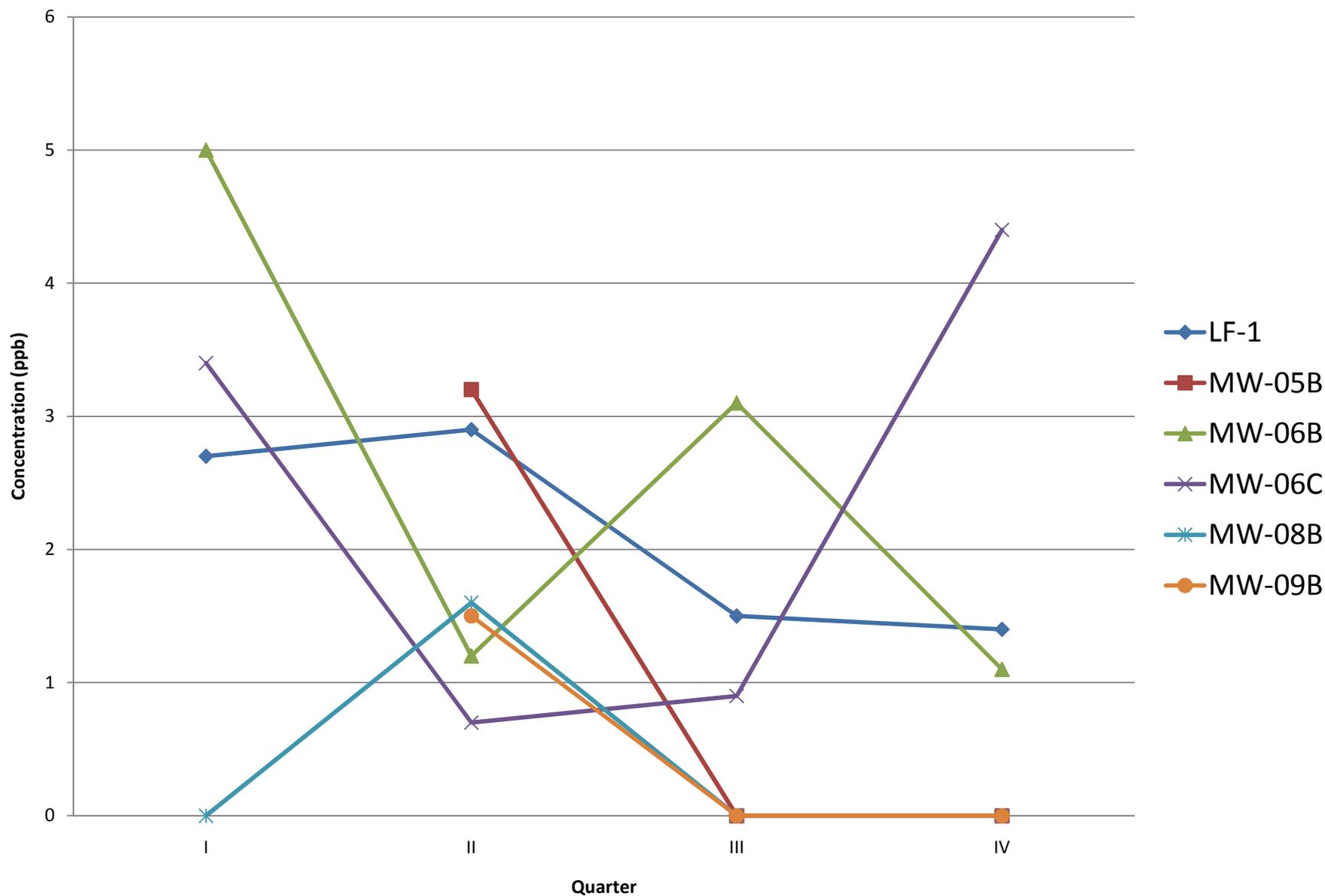


Figure 6. Total Aromatic Hydrocarbons - Deep Potentiometric Zone

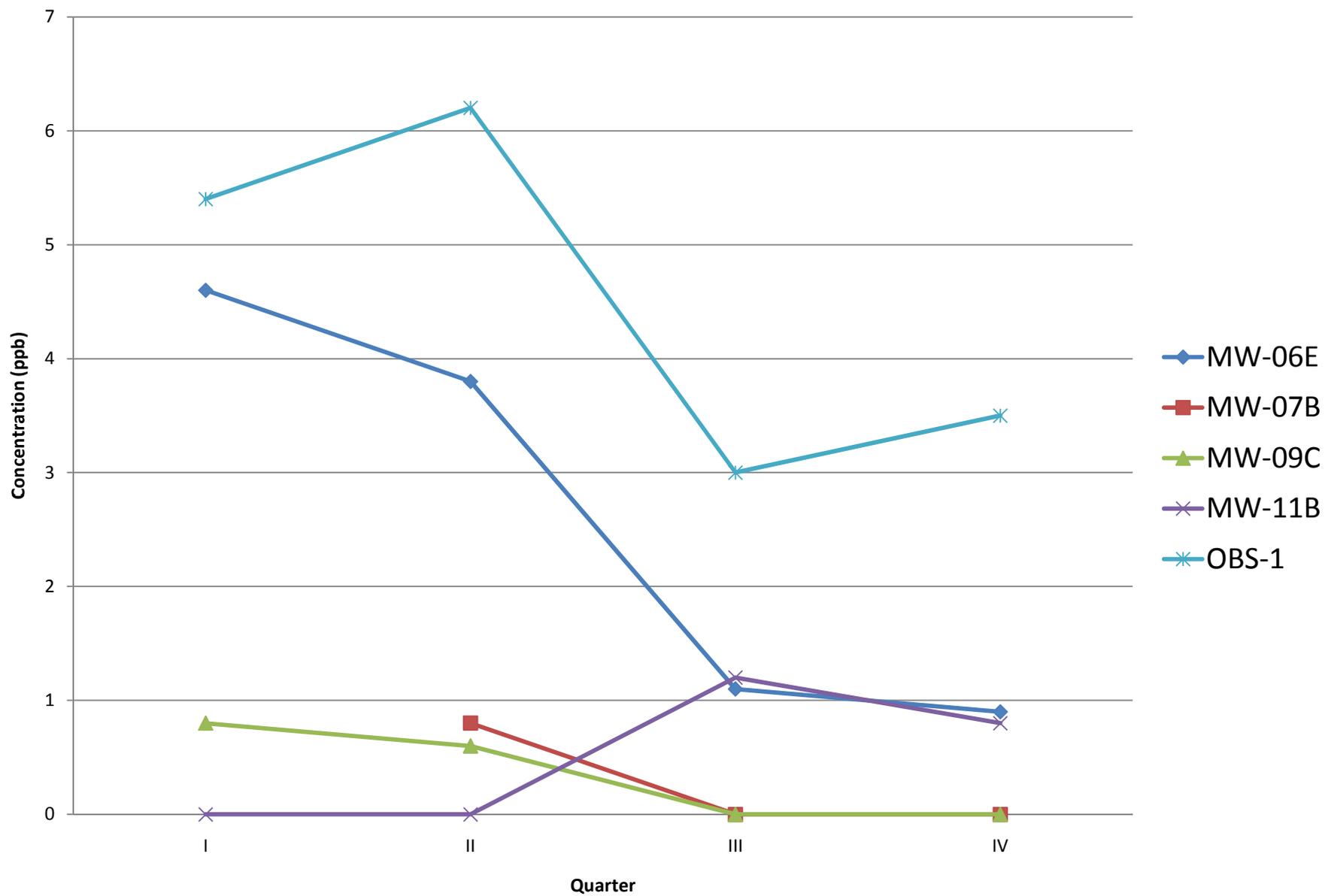
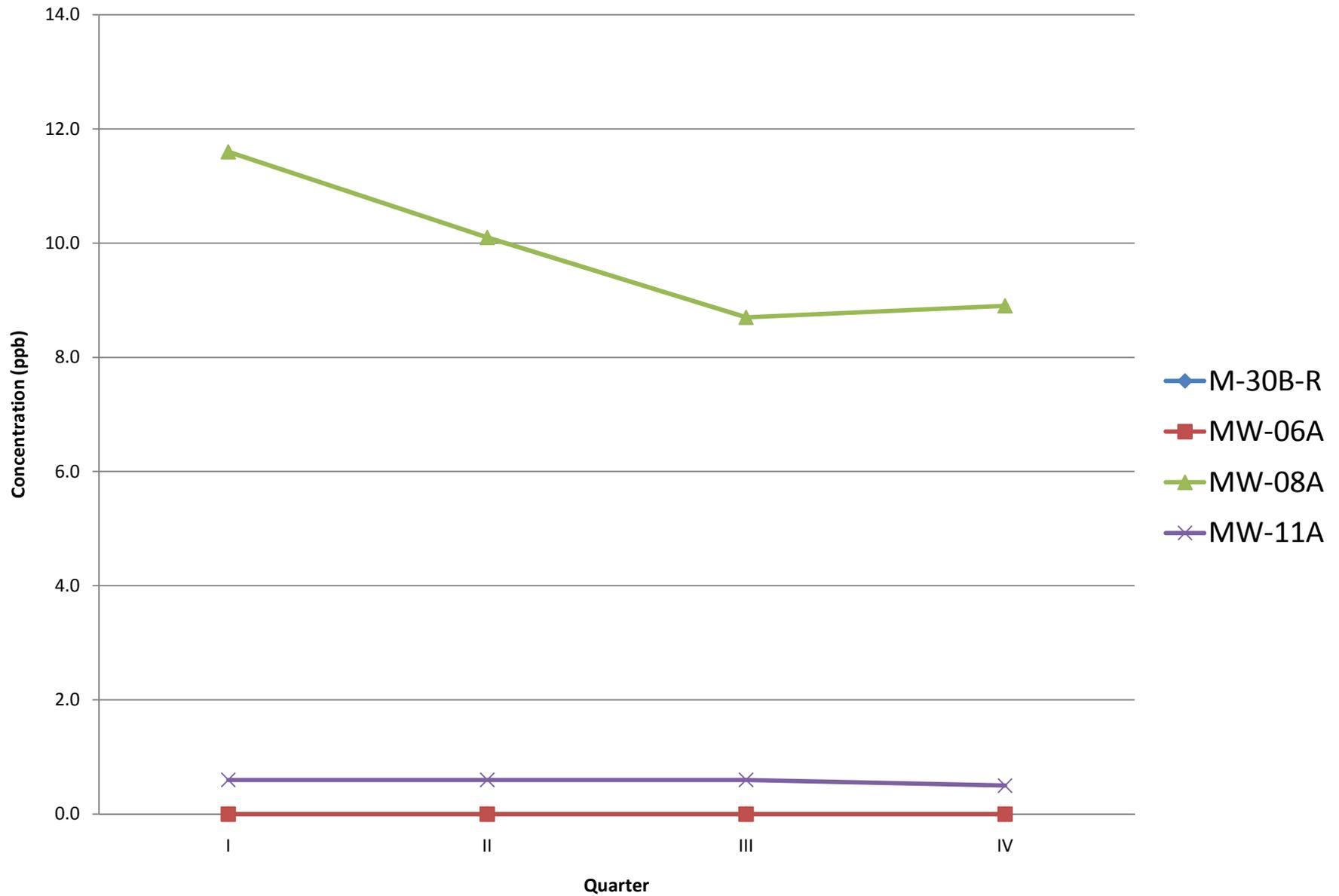


Figure 7. Tetrachloroethylene - Water Table



**Figure 8. Tetrachloroethylene - Shallow Potentiometric Zone**

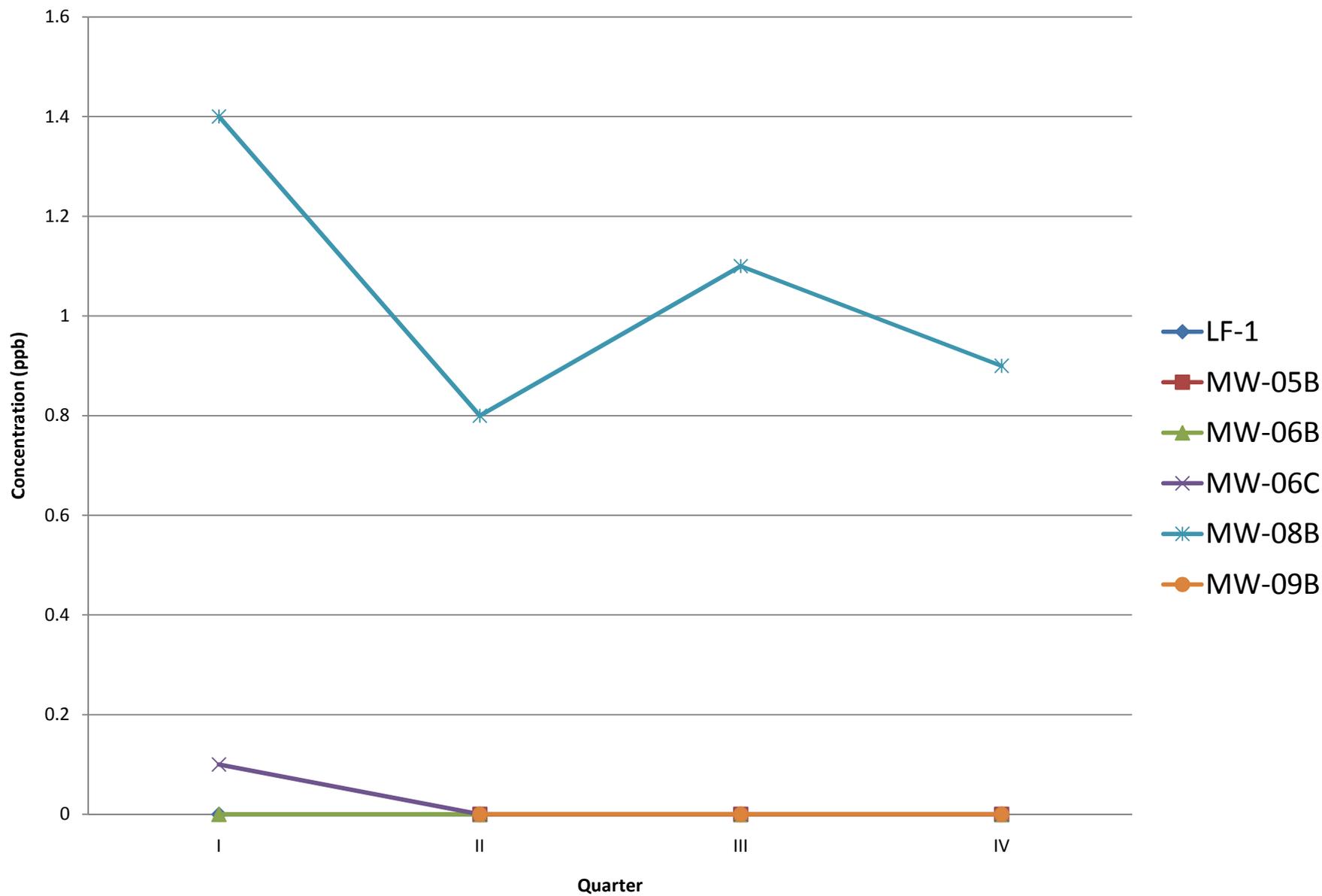
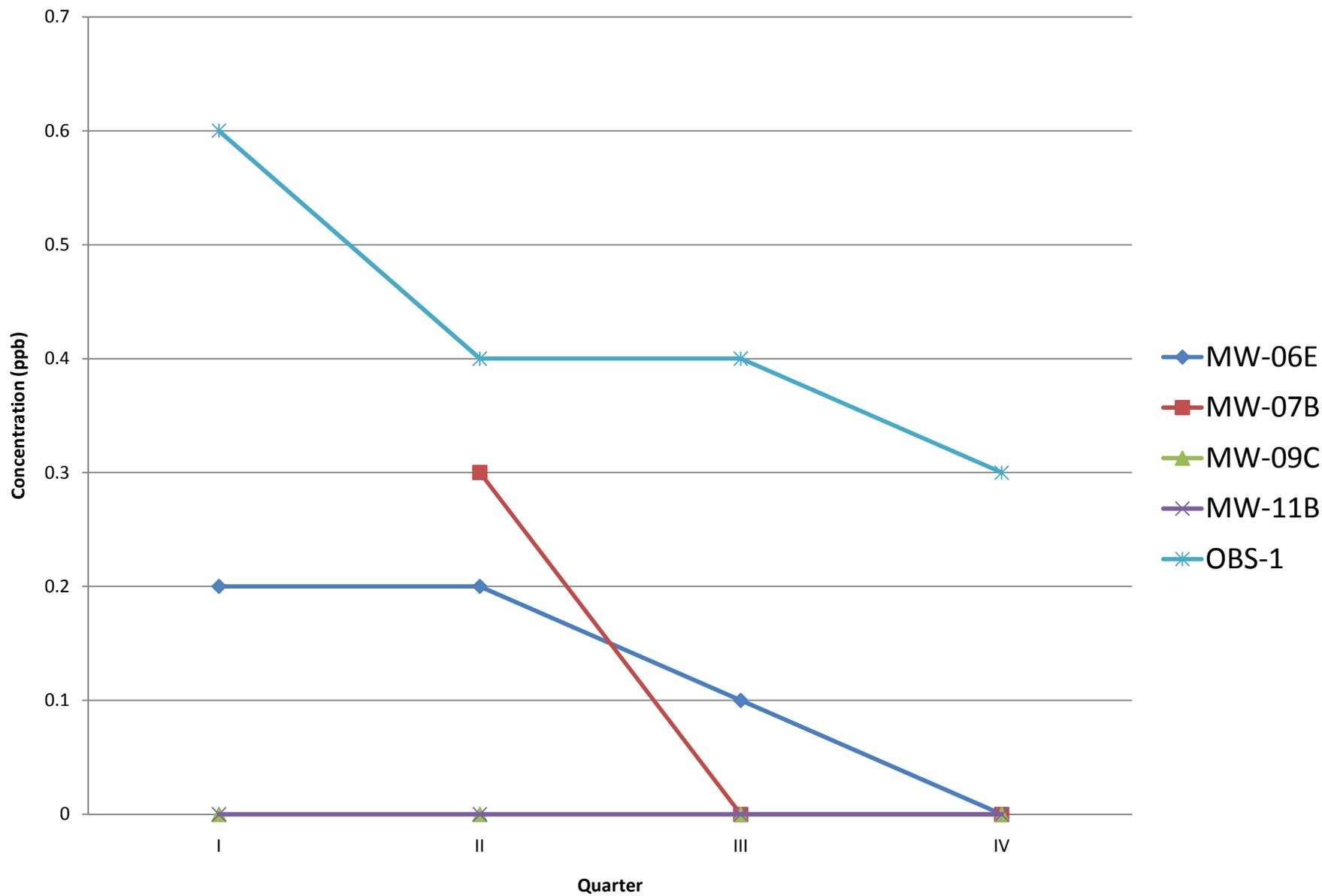


Figure 9. Tetrachloroethylene - Deep Potentiometric Zone



## **APPENDIX F**

**“Town of Oyster Bay, Old Bethpage Solid Waste Disposal Complex  
Ambient Air Quality Survey and Soil Gas Quality Survey  
2008 Fourth Quarter Report”**

**RTP Environmental Associates, Inc.  
February 2009**

**TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX  
AMBIENT AIR QUALITY SURVEY  
AND  
SOIL GAS QUALITY SURVEY  
2008 Fourth Quarter Report**

Prepared for:

Town of Oyster Bay  
Department of Public Works  
Syosset, New York

Prepared by:



RTP Environmental Associates, Inc.  
400 Post Avenue  
Westbury, New York

**February 2009**

**TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX  
AMBIENT AIR QUALITY SURVEY AND SOIL GAS QUALITY SURVEY**

2008 Fourth Quarter Report

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2.2 Ambient Air and Soil Gas Sampling	
2.2.1 General Scope	2
2.2.2 Modified VOST Sampler	7
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APPENDICES:

- A - Meteorological Monitoring Data
- B - Chronology - Ambient Air, Soil Gas and Well Pressure Sampling Events
- C - Analytical Results
- D - Field Data Forms
- E - Equipment Calibrations

**TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX  
AMBIENT AIR QUALITY SURVEY AND SOIL GAS QUALITY SURVEY**

2008 Fourth Quarter Report

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**TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX  
AMBIENT AIR QUALITY SURVEY AND SOIL GAS QUALITY SURVEY**

2008 Fourth Quarter Report

**1.0 INTRODUCTION**

RTP Environmental Associates, Inc. (RTP) was contracted by the Town of Oyster Bay (Town) to perform the sampling and analysis of ambient air, soil gas and soil gas pressure in areas at and surrounding the Old Bethpage Landfill at the Old Bethpage Solid Waste Disposal Complex (OBSWDC). The general scope of the program was defined in the Remedial Action Plan (RAP) Attachment 2 of the Final Consent Decree. Since the Consent Decree was not explicit as to the specific methodology and testing protocols to be followed, RTP, in conjunction with the Town, Lockwood, Kessler & Bartlett (LKB), the New York State Department of Environmental Conservation (NYSDEC) and analytical laboratories, developed a complete protocol and analysis strategy for meeting the general requirements stipulated by the Consent Decree.

As stipulated in the Consent Decree, the ambient air quality, soil gas quality and soil gas pressure were to be monitored at several positions around the landfill. The samples were to be analyzed according to the protocol and the results were to be tabulated. Four sampling events were conducted during each of the previous years of the program and four (4) monitoring events have been scheduled for 2008.

This report contains the results obtained during the fourth quarter sampling event of the 2008 monitoring program. The sampling occurred on December 3 and 4, 2008 when the forecasted meteorology was expected to be within protocol requirements. Sections 2.0 and 3.0 of this report contain the sampling protocol and investigation methodology for air and soil gas, including sample collection, sample handling and analytical procedures applied for this program. Section 4.0 provides a discussion of results. Section 5.0 contains the soil gas pressure sampling procedures and test results. Section 6.0 contains the summary and conclusions for this sampling effort. Appendices containing supporting data and analyses are attached.

## 2.0 METHODOLOGY AND PROTOCOLS

### 2.1 Program Definition

In conformance with the Remedial Action Plan (RAP) Attachment 2 of the Consent Decree (83 CIV 5357), the Town of Oyster Bay initiated an investigation of the ambient air quality and soil gas quality in the vicinity of the Old Bethpage Landfill. This report provides data and analyses for four of the components listed in the RAP: (1) ambient air sampling; (2) 30-inch deep subsurface gas sampling; (3) subsurface gas sampling at various depths; and (4) soil gas pressure readings. The ambient air, soil gas and well pressure sampling procedures used during the field event, in general, follow those developed during the second year of sampling.

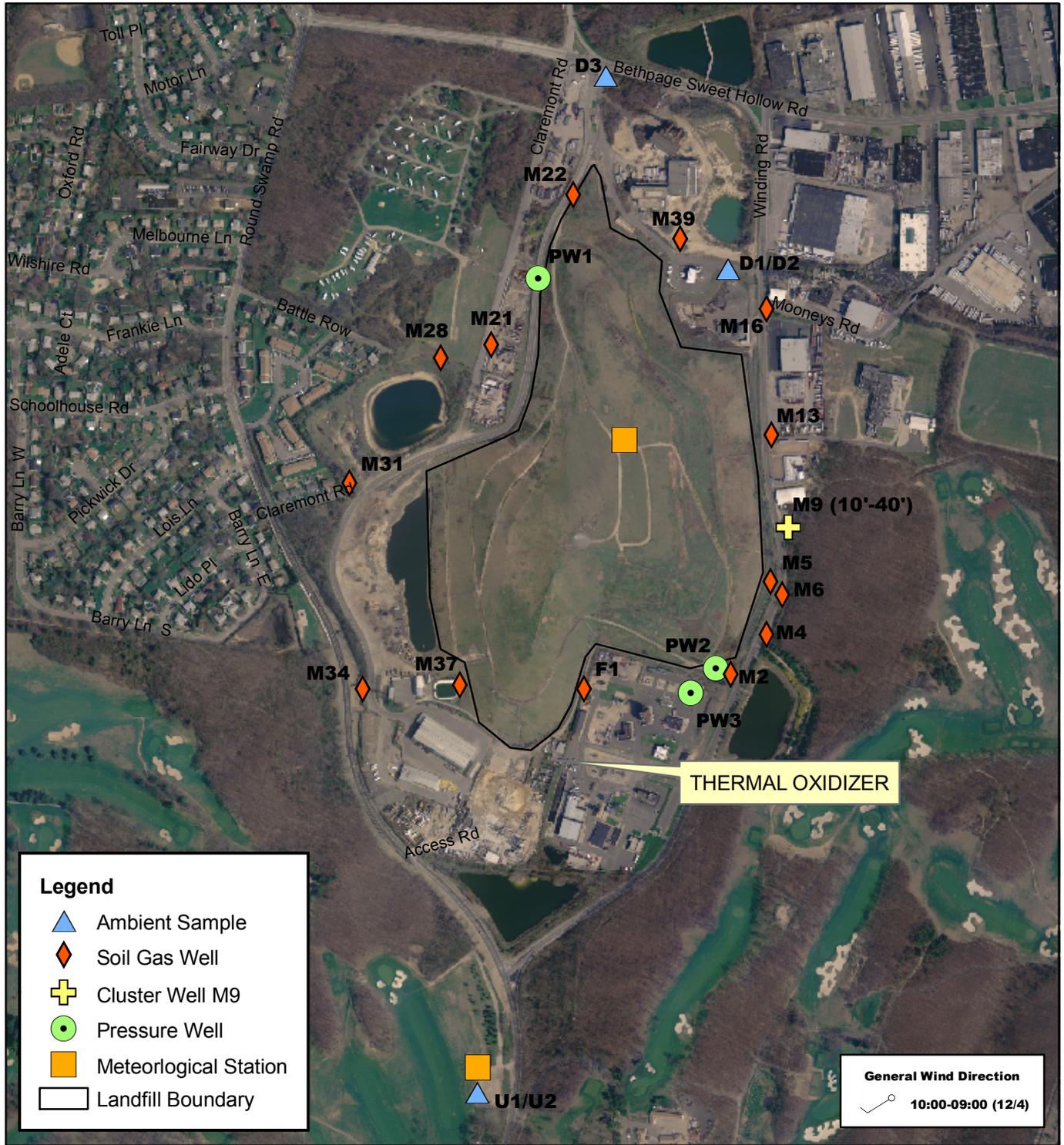
The primary objective of the sampling program is to examine the ambient air concentrations of trace volatile organic compounds (VOCs) in the vicinity of the Old Bethpage Landfill. During the 2008 fourth quarter sampling event, five ambient air Volatile Organic Sampling Train (VOST) samples were collected over a 24-hour period at three locations; two collocated samplers located at one upwind location, two collocated samplers located at one downwind location and another sampler located at an additional location downwind of the Old Bethpage Landfill. Short-term (approximately ten minute) subsurface soil gas samples were collected at 14 of the 15 locations specified in the Consent Decree. A sample was not collected at soil gas well M21 due to the construction of a concrete wall, making the well location no longer accessible. Soil gas well M21 has not been sampled since the third quarter 2003 sampling event. Soil gas pressure readings were taken at three locations. All of these locations are provided in Figure 2.1.

The program also involves the collection of meteorological data from two locations, one atop the landfill and another at the upwind sampling location. This data is used to specifically define the meteorological conditions existing during ambient air and subsurface soil gas sampling events and during the soil gas pressure measurement period. Information regarding meteorological data is provided as Section 2.3 of this report.

### 2.2 Ambient Air and Soil Gas Sampling

#### 2.2.1 General Scope

Three (3) of the four (4) components of the RAP relate to air quality and soil gas quality. The first RAP component states ambient air samples are to be collected over a 24-hour period at three (3) locations around



IMAGERY SOURCE: NYSGIS CLEARINGHOUSE

FIGURE 2.1

FOURTH QUARTER 2008 AMBIENT AIR AND  
SOIL GAS MONITORING LOCATIONS  
TOWN OF OYSTER BAY LANDFILL  
BETHPAGE, NEW YORK

0 375 750 1,500 Feet



RTP Environmental Associates, Inc.  
400 Post Avenue  
Westbury, NY 11590  
P:(516) 333-4526 F:(516) 333-4571

the landfill. Additionally, the RAP states that samples should be collected quarterly during the initial year of the program and be analyzed for VOCs. Sampling is to continue on a quarterly basis, unless the monitoring program is modified by a change to the Consent Decree. The sample collection program has been modified as discussed in the previous quarterly reports. Changes were made to the ambient air sampling scope stated in the RAP to account for site geometry. The selected ambient air sampling locations for this quarter (U1/2, D1/2 and D3) are shown in Figure 2.1. All ambient air samplers were set to run concurrently for a 24-hour period. Samplers U1 and U2 (U1/2) were collocated upwind of the landfill and set to operate at 0.25 liters per minute (Lpm). Samplers D1 and D2 (D1/2) were collocated downwind of the landfill and also set to operate at 0.25 Lpm. Additionally, sampler D3 was located downwind of the landfill and was set to operate at 0.25 Lpm. All samplers were set to sample at a volumetric rate of 0.25 Lpm to minimize problems related to potential breakthrough and mass loading limits on the sorbent cartridges. This sampling rate also provides an acceptable analytical sensitivity for the target compounds relative to the ambient air guideline values.

The second RAP component requires the collection and analysis of subsurface gas samples from fourteen (14) 30-inch deep wells at individual locations surrounding the landfill on a quarterly basis. The 2008 monitoring program includes the quarterly collection of these soil gas samples. All 30-inch wells listed in the Consent Decree were sampled during this 2008 fourth quarter sampling event, except soil gas well M21. These included well locations M2, M4, M5, M6, M13, M16, M22, M28, M31, M34, M37, M39 and F1 as identified in Figure 2.1. Soil gas well M21 was inaccessible due to a wall along Claremont Road that precluded access during the time of sampling. The sampling methodology used in the previous sampling events was utilized for this effort.

The third RAP component requires subsurface gas samples to be collected from 10, 20, 30 and 40 foot depths at the M9 cluster well as shown in Figure 2.1. Sampling has been required on a quarterly basis since the initial year of the program from the four depths at the cluster well and all subsequent sampling efforts. The 2008 monitoring program includes the quarterly sampling from all four depths at cluster well M9.

As in the initial year of sampling, a modified VOST method had been applied as the sampling procedure. The modified VOST approach was elected for several reasons:

- Due to the volatility of many organic compounds, standard absorbent cartridges for ambient air sampling may miss several compounds at ambient temperatures. By cooling the absorbent cartridges to less than 68°F, the modified method would likely allow the cartridges to capture compounds that might normally go undetected.

- Using a VOST cartridge series would provide data directly compatible within the Supplemental Gas Monitoring Program being performed as part of the Consent Decree.
- A methodology for the collection of large volumes was developed to identify low VOC concentrations in ambient air.
- Large volumes of ambient air are necessary because of the analytical limitations posed by standard gas chromatograph-mass spectrographic (GC/MS) methods.
- Evacuated canister methods were reviewed in the initial year and deemed unacceptable because of low total volume capacity, potential leaks and contamination.
- The potential problems associated with whole-air sample bags and glass bulb methods were deemed unacceptable, and therefore, were avoided.
- The VOST series cartridges are applicable for both ambient air and soil gas monitoring.

The VOCs that can be evaluated using the modified VOST methodology are presented in Table 2.1 along with their corresponding New York State Department of Environmental Conservation (NYSDEC) ambient short-term and annual (SGC and AGC) air guideline concentrations. The target compound list (TCL) for the 2008 monitoring program is consistent with the VOC constituents being evaluated in the thermal oxidizer testing portion of the Consent Decree. Decane was added as a targeted tentatively identified compound (TIC) during the 2003 monitoring program. In September 2007, the NYSDEC air guideline concentrations were revised. A previous revision had been published in December of 2003. There are still no SGCs for 1,1,2,2-tetrachloroethane or decane.

Four (4) TCL compounds currently do not have assigned AGC values, and as such, an Interim AGC value was assigned to these compounds using NYSDEC DAR-1 policy guidance. The compounds benzaldehyde, chloroethyl vinyl ether, dibromochloromethane and 2/4 ethyltoluene (total) have been assigned an Interim AGC value of  $0.1 \mu\text{g}/\text{m}^3$ , which represents the DAR-1 Moderate Toxicity “de minimis” limit. The most up-to-date AGC/SGC guidelines (updated in September 2007) are applied in this report.



TABLE 2.1  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

PROGRAM TARGET COMPOUND LIST  
AND NYSDEC AMBIENT AIR GUIDELINE CONCENTRATIONS

FOURTH QUARTER 2008

NOTES:

\* AGC/SGC Values updated September 2007 and still current as of February 2009.

TOXICITY (T):

- (H) HIGH Toxicity Contaminant.
- (M) MODERATE Toxicity Contaminant.
- (L) LOW Toxicity Contaminant.

WHO (W), Source of AGC/SGC Assignment:

- (A) AGC/SGC based upon NYSDEC "Analogy".
- (D) NYSDEC derived AGC/SGC.
- (E) AGC based upon EPA IRIS data (RFC or Unit Risk).
- (H) NYSDOH derived AGC/SGC.
- (T) AGC based upon AGCIH TLV.
- (Z) SGC is based on AGCIH STEL.
- (d) No AGC is available, and therefore, the DAR-1 Moderate Toxicity "de minimis" limit was assigned.
- (----) There is no SGC for this compound.

-----codes-----

111111

123456789012345:

codes, (Position 1):

- (U) AGC equivalent to "one in a million risk".

codes, (Position 3):

- (H) FEDERAL HAP identified by 1990 CAAA.

codes, (Positions 4 & 5):

- (A) AGCIH Human Carcinogen.
- (B) AGCIH Suspected Human Carcinogen.
- (C) AGCIH Ceiling Limit.
- (G) AGCIH Simple Asphyxiant.
- (I) Refer to AGCIH Handbook.
- (K) Multiple TLVs assigned in AGCIH Handbook.

codes, (Position 8):

- (Q) REFERENCED AGC adjusted for elemental assignment.

codes, (Position 9):

- (Q) REFERENCED SGC adjusted for elemental assignment.

codes, (Position 10):

- (R) AGC ASSIGNED TO REFERENCED COMPOUND.

codes, (Position 11):

- (R) SGC ASSIGNED TO REFERENCED COMPOUND.

codes, (Position 12):

- (Q) AGC ASSIGNED AS DIFFERENT ELEMENT(s) & ADJUSTED.

codes, (Position 13):

- (Q) SGC ASSIGNED AS DIFFERENT ELEMENT(s) & ADJUSTED.

codes, (Position 14):

- (M) REFERENCED AGC adjusted for MOLECULAR WEIGHTS.

codes, (Position 15):

- (M) REFERENCED SGC adjusted for MOLECULAR WEIGHTS.

### 2.2.2 Modified VOST Sampler

The VOST is one of three EPA methods identified to collect VOCs from point sources. A schematic diagram of the principal components of the standard VOST is shown in Figure 2.2. The VOST consists of a quartz or glass lined probe with a glass wool particulate plug, an isolation valve, an ice water cooled gas coiled condenser with a thermocouple placed at the outlet to monitor gas stream temperature, a pre-conditioned primary sorbent cartridge containing Tenax, an empty impinger for potential condensate collection, a fourth ice water cooled glass straight condenser, a pre-conditioned secondary sorbent cartridge containing Tenax and Anasorb<sup>®</sup> 747, a synthetic based carbon (3:1 by volume; approximately 1 gram of each), a silica gel drying tube, a calibrated rotameter, a sampling pump, a dry gas meter and a water circulation pump. Petroleum-based charcoal was utilized in the secondary sorbent cartridge in previous sampling events; however, during the last few years and for this quarterly event, Anasorb<sup>®</sup> 747, a synthetic-based carbon, was used rather than the petroleum-based charcoal. This change in sorbent material was based on USEPA recommendations after conducting a study testing various specifications of VOST test method charcoal.

The standard VOST is not designed for field portable ambient air monitoring. It is designed to extract and concentrate volatile organic compounds with boiling points less than or equal to one-hundred degrees Centigrade (100°C) from stack gas effluents. The major difficulties with using a standard VOST in the field for ambient air quality work are the power requirements, setup and assembly problems and the potential breakage of glassware. As such, RTP modified the EPA standard VOST unit to make it portable and to account for air flow volumes necessary to achieve the analytical sensitivity required in both ambient air and subsurface soil gas sampling programs that are required by the Consent Decree. These VOST modifications include the use of a Teflon lined sampling cane, a pre-conditioned primary sorbent Tenax cartridge, an empty glass impinger for potential condensate collection, a pre-conditioned secondary sorbent Tenax and synthetic-based carbon (Tenax/Anasorb<sup>®</sup>) cartridge, a sealed T-connection port for monitoring back-pressure across the sorbent cartridges, an in-line calibrated rotameter, a flow splitter, a personal sampling pump, a gel cell power supply, an insulated container, an ice pack and a high-low thermometer to measure the temperature extremes. Figure 2.3 illustrates the RTP modified VOST. An SKC sampling pump, portable battery backup and rotameter were used instead of the standard VOST flow controlled sampling pump and dry gas meter. Packed ice and a condensate impinger were used instead of the circulating ice water through two condensers in the EPA reference method.

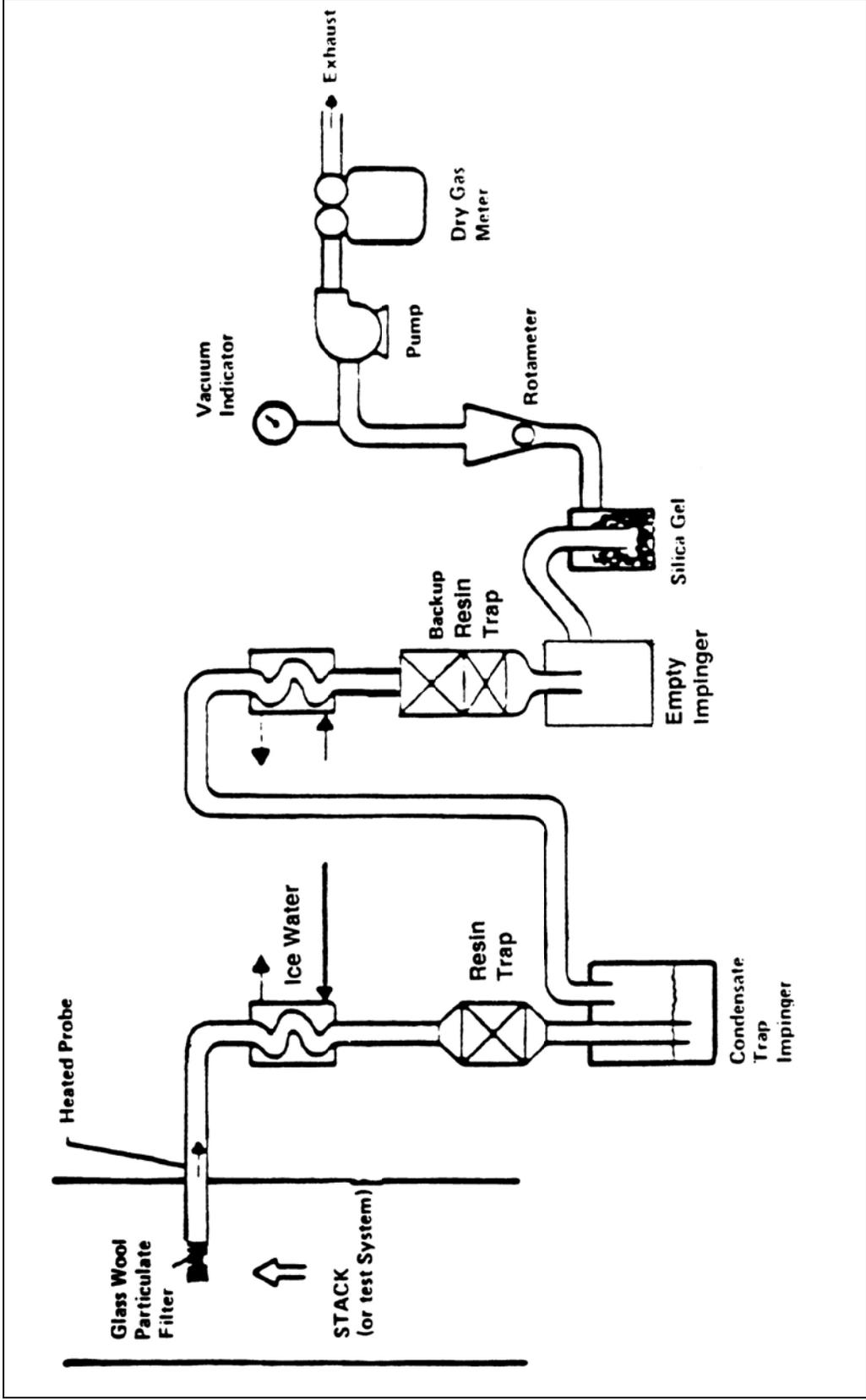
During the 2008 fourth quarter field event, a pre-conditioned Tenax cartridge and Tenax/Anasorb<sup>®</sup> cartridge in series were used for the ambient air samplers and were set to run at a flow rate of 0.25 Lpm. The VOST

FIGURE 2.2

TOWN OF OYSTER BAY  
SOLID WASTE DISPOSAL FACILITY

SCHEMATIC OF EPA REFERENCED VOLATILE ORGANIC  
SAMPLING TRAIN (VOST)

FOURTH QUARTER 2008



Source: <http://www.epa.gov/epaoswer/hazwaste/test/ndis/0030.pdf>

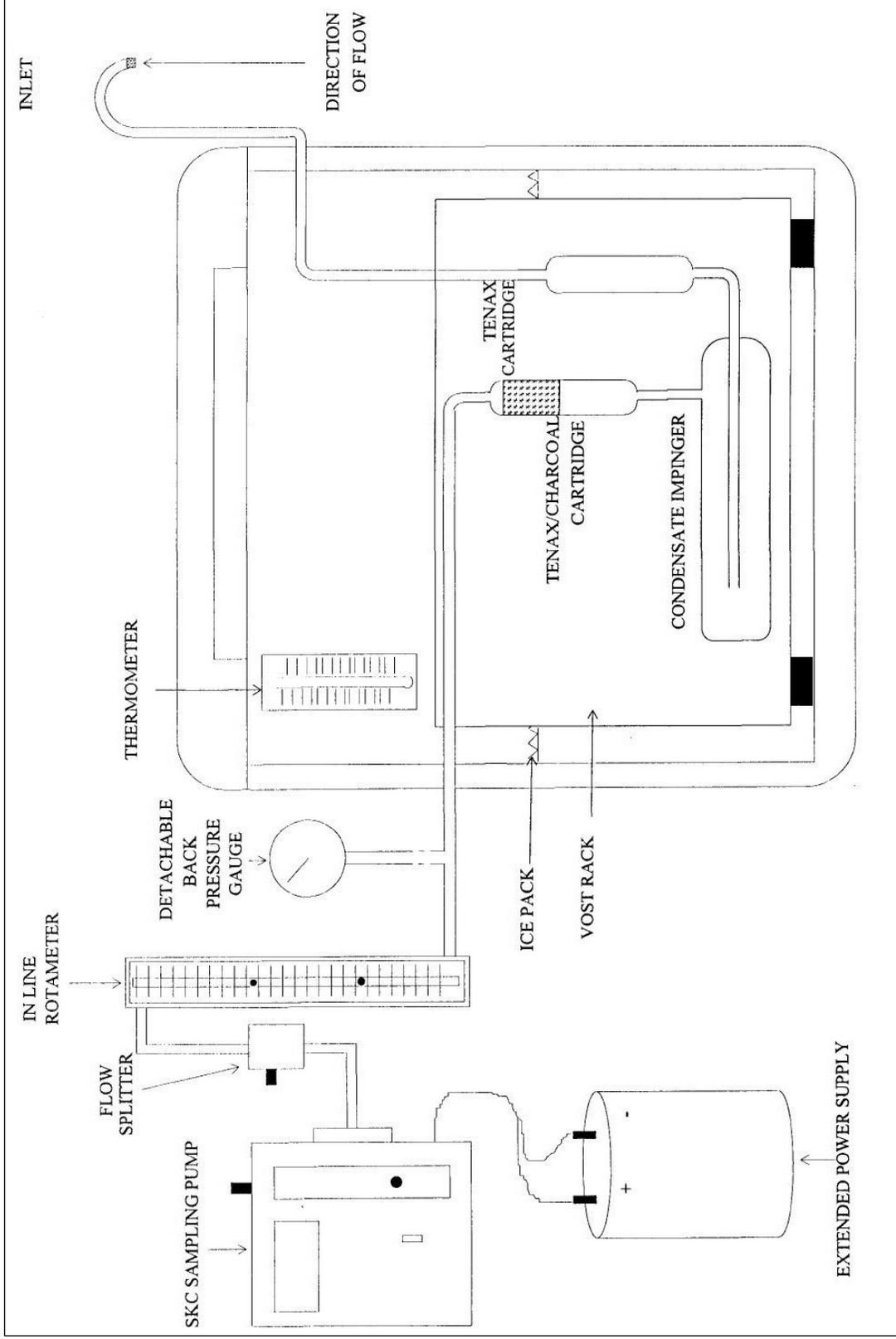
RTP Environmental Associates, Inc.

FIGURE 2.3

TOWN OF OYSTER BAY  
SOLID WASTE DISPOSAL FACILITY

MODIFIED PORTABLE VOST SAMPLER

FOURTH QUARTER 2008



Tenax and Tenax/Anasorb<sup>®</sup> sorbent cartridges used in the modified sampling train are similar to those used in the VOST EPA Reference Method 0030. In December 2003, RTP had elected to use a double Tenax/Anasorb<sup>®</sup> configuration to determine if compound breakthrough was occurring. Since this alteration and culminating in 2007, inconsistencies were noted in compound concentrations between collocated samples using the different sampling methods. Subsequently, RTP returned to the original Tenax and Tenax/Anasorb<sup>®</sup> design.

### 2.2.3 VOST Sample Volume Selection

The selection of sample volumes for the ambient air and soil gas samples for this study was investigated. In general, the sample volume or sample size is limited by the analytical instrumentation being applied at the host laboratory and the period of sampling required in the Consent Decree. Since sample quantitation is based on nanogram concentrations of constituents, appropriate sample volumes were necessary to provide the desired analytical sensitivity.

In general, analytical instruments can detect between a few nanograms to thousands of nanograms of individual constituents in a sample. The analytical instrument's lower quantitation limit was set at 5 nanograms for the majority of the TCL constituents in the ambient VOST samples and soil gas VOST samples. Five TCL constituents (acetone, bromoform, 2-butanone, 2-hexanone and 4-methyl-2-pentanone) in the ambient VOST samples and soil gas VOST samples were analyzed at an 8 nanogram lower quantitation limit due to the poor responses generally given by these constituents during laboratory analysis. Additional tentatively identified compounds (TICs); chlorotrifluoromethane (Freon 13), chloroethyl vinyl ether and decane were analyzed at levels equivalent to or greater than 25 nanograms, except for benzaldehyde, which has a minimum detection limit of 50 nanograms. The upper quantitation limit (calibration limit) for a splitless analysis was nominally set at 1,000 nanograms for both ambient and soil gas VOST samples for TCL and TIC constituents. Therefore, in order to provide the correct mass loading of constituents on the sample substrate, sample volumes were approximated based on the history of compound constituent identifications and corresponding concentrations detected at these locations and on Photoionization Detector (PID) values as presented in Table 2.2. Since the PID has a lower limit of detection of 0.1 parts per million (ppm), it was not always possible to specify the exact sample volume required to consistently achieve the proper mass loading on each sampling cartridge. Therefore, to minimize constituent non-detection because of insufficient sample volume for ambient air samples, a moderate sample volume (approximately 360 liters) was selected.

It has been estimated that a maximum 10 liter sample volume (based on the approximate volume contained within a 30-inch soil gas well) would be appropriate for sampling shallow soil gas wells. Removing more

**TABLE 2.2**

**TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX**

**GENERAL RELATIONSHIP BETWEEN PHOTOIONIZATION  
DETECTOR (PID) READINGS AND SAMPLE VOLUME**

**FOURTH QUARTER 2008**

<b>PID READINGS (ppm)</b>	<b>SAMPLE VOLUME (liters)</b>
<0.1 to 0.5	1,000 to 10
0.5 to 2	10 to 1
2 to 5	1
5 to 10	0.5
10 to 15	0.1
15 to 20	0.05
>20	0.01

**Notes:**

- ppm: parts per million
- Actual sample volumes collected may not correspond to their respective PID readings listed above when a history of constituent concentrations at the sampling site has been established.

than a 10 liter sample potentially would introduce ambient air from the surface into the well being sampled. Further, 10-liter sample volumes have been selected for the 10, 20, 30 and 40 foot deep subsurface wells at the M9 sampling location for comparison.

#### 2.2.4 Other Sampling Equipment

The SKC sampling pumps used in this study are Model 224-PCXR7/8 universal exhaust pumps. These automatically shut down for low battery voltage and excessive back pressure. The accuracy of the sampling pumps is about +/- 5% of the set nominal flow rate.

SKC sampling pumps can be programmed to operate continuously and intermittently. They can be used to collect different total sample volumes at different flow rates. The pumps can be programmed to continuously draw samples at a desired flow rate over a preassigned time period. This capability is particularly important in the ambient air sampling event. It is possible to collect ambient air samples over a 24-hour total elapsed time period to give an integrated 24-hour average VOC concentration as specified in the Consent Decree. The only factor that limits the overall sampling time is the pump battery capacity. This capacity has been expanded by attaching a 6-volt gel cell battery to the pump battery, thus providing a longer lasting power source.

A Bios DryCal<sup>®</sup> DC Lite digital flow calibrator (Model DCL-MH) was used before and after this sampling event to calibrate eight (8) Supelco rotameters in conjunction with the SKC sampling pumps to a desired nominal flow rate. This was performed to establish a relationship between actual pump volume flow rates and their corresponding rotameter readings. Inconsistencies between pre-test and post-test rotameter calibrations could reveal a leak in a rotameter. The calibration data together with the Supelco rotameter readings recorded during sampling are then used to establish the precise sample volumes collected during each test. The Bios flow calibrator is a digital air flow meter consisting of a piston and a precision encoder system (two finely collimated infrared light beams). The piston rises at the rate of evacuation (or pressurization) and once the piston travels past the two infrared light beams a flow reading is calculated. The Bios flow calibrator has been checked against a NIST traceable standard and was last calibrated on March 14, 2008. The flow calibration sheets and the calibration certificate for the Bios unit are located in Appendix E. The combined accuracy of this calibrator and the Supelco rotameters used for the 2008 fourth quarter event is +/- 1%.

A calibrated PID is generally used during the monitoring program before and after each sampling event to measure the total ambient and soil gas VOC concentration. It is a hand held instantaneously reading analyzer that measures the total concentration of all ionizable compounds in ppm. The PID can be used to

verify and adjust the appropriate sample volumes according to the general relationship between PID readings and sample volumes shown on Table 2.2, at sampling sites where the compound constituent identifications and corresponding concentrations are unknown. However, the actual ambient air and soil gas well sample volumes collected during this sampling event may not correspond to their respective PID readings listed on Table 2.2 because a history of compound constituent identifications and corresponding concentrations have already been established at the Town of Oyster Bay Old Bethpage Solid Waste Disposal Complex. During the fourth quarter sampling event, PID measurements were taken at 16 of the 17 soil gas wells sampled and at the three (3) ambient sampling locations. A battery failure prevented collection of ambient and soil gas well VOC concentrations at the remaining soil gas well sampled during the 2008 fourth quarter effort.

### 2.3 Meteorological Data

Meteorological data was set up to be collected at two (2) separate locations during the ambient air quality, soil gas and pressure well tests. Meteorological instruments provide localized information on ambient weather conditions occurring during a test. The meteorological parameters of interest in this program include: wind speed, wind direction, temperature, relative humidity, turbulence, barometric pressure and precipitation. The main meteorological station, located atop the landfill, consist of a Climatronics All-in-One (A10) compact weather unit, which includes a sonic anemometer and Sonimometer™ for wind speed and direction measurement, a multi-element temperature sensor, capacitive relative humidity sensor, barometric pressure sensor and an internal flux-gate compass. In addition to the A10, a tipping bucket rain gauge and vertical wind sensor (propeller) are also part of the weather station. All data is recorded using a Campbell Scientific CR850 datalogger. The CR850 data logger is enclosed inside a portable instrument case while the remainder of the equipment is mounted on a 12-foot tripod.

The same meteorological parameters were set to be collected at the upwind station. The upwind meteorological station now consists of the same data logging hardware as the other station. The data loggers from both stations calculate horizontal and vertical turbulence based on wind measurements. The stations were positioned atop and upwind of the landfill and operated for the entire 24-hour test. The data collected at both meteorological stations correlate well with other local observations, except as noted below.

Weather conditions for the December 3 and 4, 2008 fourth quarter sampling event were forecasted by the National Weather Service to include westerly to south southwesterly winds at light to moderate speeds with steady to falling barometric pressure. The actual meteorological conditions recorded onsite during the 24-hour test were similar to the forecast. Recorded onsite conditions included winds ranging mostly from the west southwesterly to southwesterly direction. Wind speeds were moderate during the sampling period.

The barometric pressure gradually fell a total of 0.17 inches of mercury over the course of the 24-hour testing effort.

One period of testing was reviewed to address inconsistencies in the collocated on-site data. From 5:00 PM (17:00) through 10:00 PM (22:00) on December 3, the upwind station recorded values that were not consistent with other onsite data. The remaining data correlates well with the meteorological station located atop the landfill and local weather observations recorded by the National Weather Service. RTP reviewed the data recorded during that period and believes that the area may have been experiencing a shallow thermal inversion. It is worth noting that the voltage drop of the unit during this period seemed to drop quicker during this period than the periods preceding and following the data in question. The equipment manufacturer, Climatronics, was contacted regarding this matter. They reviewed the data and concluded they could not identify any specific problems with the monitoring or datalogging equipment. RTP will continue to monitor meteorological data recorded at this location to determine if the data was indeed the result of a thermal inversion, equipment malfunction and/or tampering that may have influenced the recorded data.

Based on the wind direction observations recorded during the sampling period, the downwind samplers D1/D2 and D3 were under the influence of landfill sources for the entire 24 hour test period. In addition, it does not appear that the upwind samplers were under the influence of the landfill at any time. A summary of the meteorological monitoring data for the sampling period is provided in Appendix A.

### **3.0 SAMPLING AND ANALYSIS**

#### **3.1 Background**

The program's scope of work for sampling and analysis of ambient air quality levels in the vicinity of the Old Bethpage Landfill is principally guided by the Consent Decree. As mentioned in Section 2.0, the EPA reference sampling method was modified to account for site conditions and monitoring requirements. The sampling locations specified in the Consent Decree were adjusted slightly to account for expected meteorological conditions, as well as new abridged operating hours and hours of site access for the landfill, during the 24-hour sampling period.

Analytical laboratory services provided mass loading levels on specific substrates within the sampling cartridges from which concentrations were derived. Thus, it is important to determine the pollutant mass contained in each sample from both soil gas wells and ambient air locations. Traditionally, a portable

ambient air and soil gas VOC detection monitor (PID), having a detection range down to 0.1 ppm, is used in this case to assist in estimating sample loadings. Historical data was used to generally define what specific ambient levels were to be expected at the soil gas and ambient downwind sampling locations.

### 3.2 Ambient Air Sampling

The 2008 fourth quarter ambient air sampling event was conducted on December 3 and 4, 2008. Three (3) locations at the Old Bethpage Landfill were selected as illustrated on Figure 2.1, based on weather forecast data that indicated winds from the west to southwesterly direction and site accessibility. New abridged landfill business hours impeded RTP's ability to locate samplers within the fenced landfill property. Therefore, RTP selected sampling locations just outside the perimeter fence in order to allow access to sampling equipment for assessment and adjustment during non-business hours for this fourth quarter sampling event. All ambient air samples were collected using the modified VOST sampler at a calibrated flow rate of approximately 0.25 Lpm. The critical sampling parameters for the ambient VOST samplers and subsurface soil gas samplers are summarized in Table 3.1.

The sampling trains were partially assembled at the RTP Westbury office according to protocol prior to taking the five ambient air samplers to their respective field locations. The Supelco rotameters were calibrated; the SKC sampling pumps and gel cell battery packs were charged. Both the pumps and battery packs were positioned and connected, aluminum cartridge holders were positioned, sampling canes were mounted onto coolers and the sampling train inlets and exhausts were sealed. The VOST cartridges were removed from their protective cases and then the end caps and fittings were removed. The sample cartridges were installed and the samplers were then taken to their respective positions as shown in Figure 2.1. Leak checks were performed prior to sample initiation and these data were recorded on individual field data sheets located in Appendix D. The sampler design for the tests has been described in Section 2.2. The samplers for location U1/2 were collocated near the 15th hole fairway of the Bethpage State Black Golf Course approximately 150 feet west of Round Swamp Road. Samplers for location D1/2 were collocated near the entrance gate for the RAP building, approximately 125 feet west of Winding Road. Sampler D3 was located just north and east of the front gate of the OBSWDC facility on Bethpage Sweet Hollow Road. Sampler locations for sites U1, U2, D1, D2 and D3 are shown in Figure 2.1.

The ambient air samplers were set to continuously collect at a 0.25 Lpm nominal flow rate over a 24-hour period. The rotameter were set at 0.25 Lpm in order to allow the collection of a total air volume of approximately 360 liters over the 24-hour period. To achieve this low flow, an in-line sampling manifold was constructed and installed with two (2) SKC single stage universal constant-flow controllers in parallel.

TABLE 3.1

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF AMBIENT AIR AND SUBSURFACE SOIL GAS SAMPLING

FOURTH QUARTER 2008

SITE ID <sup>1</sup>	SAMPLE ID	TESTING DATE	DURATION (minutes)	SAMPLING HEIGHT (inches)	NOMINAL FLOWRATE (l/min)	DESIRED QUANTITY (liter)	SAMPLE VOLUME <sup>2</sup> (liter <sub>STD</sub> )
U1	OBL08-4:U1	12/3/08-12/4/08	1,440	40	0.25	360	400
U2	OBL08-4:U2	12/3/08-12/4/08	1,440	40	0.25	360	342
D1	OBL08-4:D1	12/3/08-12/4/08	1,440	40	0.25	360	405
D2	OBL08-4:D2	12/3/08-12/4/08	1,440	40	0.25	360	396
D3	OBL08-4:D3	12/3/08-12/4/08	1,361	40	0.25	360	345

SUMMARY OF SUBSURFACE SOIL GAS SAMPLING

SITE ID(1)	SAMPLE ID	TESTING DATE	DURATION (minutes)	WELL DEPTH (inches)	NOMINAL FLOWRATE (l/min)	DESIRED QUANTITY (liter)	SAMPLE VOLUME <sup>2</sup> (liter <sub>STD</sub> )
F1	OBL08-4:F1	12/3/2008	10	30	1.0	10	10.34
M2	OBL08-4:M2	12/3/2008	10	30	1.0	10	10.61
M4	OBL08-4:M4	12/3/2008	10	30	1.0	10	11.00
M5	OBL08-4:M5	12/3/2008	10	30	1.0	10	9.56
M6	OBL08-4:M6	12/3/2008	10	30	1.0	10	10.15
M9 (10')	OBL08-4:M9(10)	12/3/2008	10	120	1.0	10	10.19
M9 (20')	OBL08-4:M9(20)	12/3/2008	10	240	1.0	10	10.02
M9 (30')	OBL08-4:M9(30)	12/3/2008	10	360	1.0	10	10.05
M9 (40')	OBL08-4:M9(40)	12/3/2008	10	480	1.0	10	10.04
M13	OBL08-4:M13	12/3/2008	10	30	1.0	10	10.79
M16	OBL08-4:M16	12/3/2008	10	30	1.0	10	9.96
M21	OBL08-4:M21	<b>WELL NOT SAMPLED DUE TO INACCESSIBILITY CAUSED BY CONCRETE WALL</b>					
M22	OBL08-4:M22	12/3/2008	10	30	1.0	10	9.59
M28	OBL08-4:M28	12/3/2008	10	30	1.0	10	9.98
M31	OBL08-4:M31	12/3/2008	10	30	1.0	10	10.02
M34	OBL08-4:M34	12/3/2008	10	30	1.0	10	10.02
M37	OBL08-4:M37	12/3/2008	10	30	1.0	10	10.04
M39	OBL08-4:M39	12/3/2008	10	30	1.0	10	10.04

## NOTES:

<sup>1</sup> See Figure 2.1 for ambient air and soil gas sampling locations.

U1/U2: Ambient upwind samplers collocated near the 15th hole Fairway of the Bethpage State Black Golf Course approximately 150 feet west of Round Swamp Road.

D1/D2: Ambient downwind samplers collocated near the entrance gate for the RAP building, approximately 125 feet west of Winding Road.

D3: Ambient downwind sampler was located just north and east of the front gate of the facility on Bethpage Sweet Hollow Road.

<sup>2</sup> Corrected to standard conditions; 25° C and 29.92 in. Hg.

RTP has replaced each of the multi-port flow splitters used in earlier programs with two (2) connected single port flow splitters to allow for more stable sampling at lower flow rates. A Supelco low flow rotameter was also installed in-line, downstream of the sorbent cartridges, prior to the flow controller and SKC pump inlet. The constant flow controller was positioned in-line, upstream of the SKC pump and downstream of the Supelco rotameter, with the port open to the atmosphere. The adjustment pod to the constant-flow controller port was adjusted to register the desired 0.25 Lpm flow rate on the in-line rotameter. The remaining constant-flow controller port was adjusted to maintain the total flow to the SKC sampling pump within the pump operating range. This would allow for the continuous collection of an integrated nominal 360 liter sample over the 24-hour sampling period. Sample volumes are presented in Table 3.1.

Total ambient VOC concentrations were monitored at the start and finish of the sampling period at each ambient site using a PID. Total ambient VOC concentrations were measured at 0.0 ppm at the initiation of sampling for all locations; therefore, flow rates were initially set at 0.25 Lpm for all ambient samplers. These flow rates would achieve the desired range in sample volumes necessary for analytical sensitivity requirements over the 24-hour period. The sampling volumes recorded during the fourth quarter 2008 were all well within the acceptable range, despite a battery failure at pump D3 which caused the sampler to shut down just prior to completing the full 24-hours.

Periodic checks were made at all ambient air sampling locations. Pump operations were monitored and VOST train integrity and station flow rates at the samplers were also checked. In all, each sampler was checked approximately every 1 to 4 hours during the sampling period. Rotameter readings during these site checks were within established ranges or adjusted to be within the operating window for all ambient samplers. All samplers ran continuously for the total 24-hour sampling period except for sampler D3, which failed after running for 1,243 minutes, but was restarted at 7:14AM on December 4 and ran for an additional 118 minutes for a total of 1,361 minutes (95% of the 24-hour sampling period). Pump elapsed run time readings were recorded throughout the sampling period for all sites.

Upon completion of sampling, leak checks were performed and the VOST cartridges were removed, sealed and placed in their respective labeled shipping tubes. All sorbent cartridges were inventoried, packed and shipped to the analytical laboratory as per established protocol. No collectable condensate was present, and therefore, no condensate samples were collected or reported.

The analytical laboratory for this event was H2M Labs, Inc. The laboratory received all ambient sorbent cartridges in good condition. The analytical results along with the data observed during the sampling event will be discussed in Section 4.0. A chronology of the ambient air sampling event is presented in

Appendix B. The H2M analytical report is provided in Appendix C. Field data forms and equipment calibrations are provided in Appendix D and E, respectively.

### 3.3 Soil Gas Sampling

The soil gas sampling elements of the Consent Decree require soil gas samples to be extracted from several 30 inch deep subsurface gas wells and from 10, 20, 30 and 40 foot deep subsurface gas wells at one location (M9). The Decree does not specify the sample volume, constituents to be analyzed, time period for collection, conditions for collection, analytical instrumentation, minimum level of detection or other parameters necessary to specifically define the nature of the tests and the applicability of test results. Based on the elements of the work scope in the Consent Decree, RAP Attachment 2, RTP developed the protocols and procedures outlined in Section 2.2 of this report which were based on protocols approved by the NYSDEC.

The first step in the soil gas test was to assemble the sampling trains onsite. The sampler design used for the soil gas samples is similar to that used for the ambient air samples. However, the design differs slightly because flow splitters are not used in parallel with the rotameter and back pressure readings are not taken. This design is used to achieve a nominal flow rate of 1 Lpm. Furthermore, the sample probe was modified to include a 36 inch long, 1/4 inch diameter, stainless steel probe that was attached to a Teflon sampler inlet line in place of the sampling cane. Prior to use, the stainless steel sample probes were heated to +500°F to decontaminate the probes. They were then individually wrapped in aluminum foil and sealed to prevent inadvertent exposure to trace VOCs. The rotameters, in conjunction with the sampling pumps, were calibrated for specific flow rates at each soil gas sampling point based on data obtained from previous quarterly tests. Total well VOC concentrations were measured using a PID before and after the soil gas test at 16 of the 17 soil gas wells sampled during the fourth quarter testing period. As mentioned earlier, due to battery failure, VOCs were not measured at one (1) of the sampling wells.

Soil gas samples were collected at F1, M2, M4, M5, M6, M13, M16, M22, M28, M31, M34, M37, M39 and M9 (10, 20, 30 and 40 foot depths) as shown on Figure 2.1 and summarized in Table 3.1. As previously stated, soil gas well M21 was not sampled during this fourth quarter sampling period due to the construction of a wall along Claremont Road back in 2003 making the well location inaccessible. Future consultation between the Town and the NYSDEC may determine if soil gas well M21 will be relocated and sampling resumed. All 30 inch soil gas wells were temporarily sealed with Teflon tape and a Tygon tubing/metal plug at least 24 hours prior to the collection of the soil gas samples. M9 wells have individual shut-off valves which were all closed prior to the sampling event. A site specific description of the events which occurred at these respective wells is provided in the chronology (Appendix B).

RTP has developed a general procedure for collecting a soil gas sample. First, the soil gas well seal is removed from the well and the well is purged of stagnant gases. This is accomplished by using a pump, operated at 1 Lpm for 30 seconds to extract the stagnant well gases in the 30 inch well. A sampling pump is also used to extract stagnant gases from the M9 wells for longer intervals. The duration of pump operation at the M9 cluster well depends on the depth of each soil gas well. After extracting the stagnant well gas, a well concentration reading was taken with the PID just prior to sampling (ambient VOC concentrations are also typically measured using the PID at this time). The stainless steel sampling probe is attached to the inlet of the VOST train. A leak check is performed. The probe is then inserted into the well to a depth of approximately 24-inches and sealed from the atmosphere using a Teflon screw-on nut and ferrule. Sampling commences when the sampling pump attached to the outlet of the VOST sampling train is activated. Two (2) VOST sampling trains were used during this effort to sample a total of 17 soil gas wells.

The sampling pumps during soil gas sample collection were nominally set at a rate of 1.0 Lpm and run for 10 minutes at each well site. This procedure resulted in approximately 10 liters of soil gas being drawn through the VOST cartridges at each well. At the end of the sampling period at each well, a leak check was performed. As stated earlier, initial and final VOC measurements were recorded from 16 of the 17 wells, both in the ambient air and inside the well. Ambient VOCs were measured at 0.0 ppm at all locations in the ambient air and in most soil gas wells sampled, although there were a few wells that measured small levels of VOCs inside the well. Soil gas well M13 measured 1.6 ppm in the initial and 0.8 in the final well VOC reading. Soil gas well M16 measured 4.6 ppm in the well initially and 2.4 ppm in the soil gas well at the conclusion of the sampling period. Soil gas well M22 measured 5.8 ppm inside the well initially and jumped up to 33.4 ppm inside the well at the conclusion of the sampling period. Soil gas well M28 measured 7.0 ppm in the initial and 6.0 ppm in the final well VOC reading. Soil gas well M31 measured 7.7 ppm initially inside the well and 9.2 ppm in the final well VOC reading. M34 measured 28.2 ppm inside the well in the initial well reading and 9.6 ppm in the final well VOC reading. Finally, M39 measured 1.7 ppm in the initial well reading and 2.3 ppm at the conclusion of the sampling period. VOCs were not detected by the PID at any other soil gas wells.

Similar to the second quarter, it is unclear what caused these slightly more elevated levels of VOCs in soil gas wells M22, M28, M31, and M34 during the fourth quarter of 2008. In comparing the second quarter PID results with the recorded results from this fourth quarter effort, it appears that the previous quarter's results may not have been an aberration as originally believed. In previous tests, the PID monitor appeared to be reacting to the level of humidity present in the soil gas well, and this may again be the case during the fourth quarter. It is difficult to determine if the humidity was again interfering with the PID, or if these low-level VOCs were actually present. It may also be possible that some of the lower level PID readings were

the result of slight drift by the PID monitor. Despite a minor battery fault during testing of one PID unit hindering the ability to test all 17 locations, the PIDs appeared to be in good working order and the results seem fairly typical compared to previous efforts in 2008.

Following the sampling of a well, the VOST cartridges were removed from the train, labeled and packed for shipment to the analytical laboratory. The laboratory received all soil gas sorbent cartridges in good condition and samples were recovered normally.

A chronology of the soil gas sampling is presented in Appendix B. The H2M analytical summary report is provided in Appendix C. Field data forms and equipment calibrations are provided in Appendices D and E, respectively.

### 3.4 Analytical Laboratory Procedures

H2M provided the gas chromatograph-mass spectrographic (GC/MS) analytical services to identify and quantify all constituents listed on the TCL and plus additional TICs. H2M applied EPA SW846 Method 5041 in conjunction with EPA SW846 Method 8260 for analyzing the collected samples. Method 5041 provides the methodology for determining volatile organic compounds collected on Tenax and Tenax/Charcoal (Anasorb®) sorbent cartridges. Method 8260 is used to quantify volatile organic compounds with boiling points below 200 degrees Centigrade and is based on purge-and-trap GC/MS procedures. Further details of the analyses are provided in the analytical results in Appendix C.

New desorbed VOST cartridges were supplied by Air Toxics Ltd. for use in this study. As previously stated, RTP has been using Tenax/Anasorb® back half VOST cartridges in lieu of Tenax/Charcoal back half VOST cartridges over the past several years and for this fourth quarter sampling effort. This decision was based on recommendations from an USEPA publication, which studied different VOST trap charcoal specifications. Anasorb®, known for its organic vapor adsorbent properties and spherical shape was chosen over powdered charcoal, which has been used in the past. The use of Anasorb® began during the 2005 third quarter test. The cartridges are conditioned by Air Toxics Ltd. and were shipped with a verification certificate. Upon receipt at RTP, the sampling cartridges were examined for breakage and kept in cool storage until their use in the field program.

H2M was forwarded a target compound list of VOCs for this monitoring program. RTP's laboratory letter suggested sample splitting and breakthrough results for a limited set of VOST cartridge pairs be reported prior to analyzing the remaining samples. RTP recommended to H2M that splitless analyses be performed on field blank samples FB1, FB2 and FB3 prior to any other sample analyses for the presence of any

unforeseen contamination. In addition, RTP recommended a separate front and back cartridge analysis of ambient samples U2, D2 and D3 and soil gas wells M9(30) and M39 were performed to determine breakthrough and mass loading. It was recommended that H2M perform a non-dilution (splitless) combined front and back sample analysis for all remaining samples.

Based on the initial analysis, the remaining ambient air and soil gas samples were analyzed as pairs with no dilution. One trip blank sample was delivered to the laboratory along with the other samples. This trip blank was analyzed due to the field blanks showing atypical VOC concentrations. The trip blank results indicated 14 compounds, including acetone, bromoform, bromomethane, 2-butanone, carbon disulfide, chloroethane chloromethane, 1,1-dichloroethene, 2-hexanon, methylene chloride, 4-methyl-2-pentanone, 1,1,2,2-tetrachloroethane, trichlorofluoromethane and vinyl chloride were present. More compounds were detected in this sample than any of the field blanks submitted.

Due to the level of contamination in the field and trip blanks, RTP submitted two (2) VOST tube samples to Air Toxics Ltd. (Air Toxics) as an additional verification on January 2, 2009. The second lab analysis was performed in accordance with all applicable protocols. No compounds were detected in either sample. It is important to note that the detection limit for Air Toxics is 10 ng for most compounds (compared to 5 ng at H2M). It is possible compounds were present below the Air Toxics MDL, as many of the compounds detected in the blanks sent with the original samples to H2M were at or below 10 ng; however, there were still a significant number of compounds detected over 10 ng in the original field and trip blanks that were not present in the Air Toxics samples. It is possible that these compounds may be associated with the delivery, storage and/or analysis of the samples at H2M. RTP will share our findings with H2M and attempt to determine the cause for the discrepancies in the analytical results.

## **4.0 DISCUSSION OF RESULTS**

### **4.1 Ambient Air Concentrations**

For the 2008 fourth quarter sampling event at the Old Bethpage Landfill, the ambient air concentrations at selected sites were monitored for 24 hours on December 3 and 4, 2008. The sites have been identified and the monitoring and analytical methods were discussed in preceding sections of this report. Laboratory analytical results provided as mass are translated into ambient air concentrations in this section.

Table 4.1 contains a summary of the air sample analytical results. These values are in micrograms per standard cubic meter ( $\mu\text{g}/\text{std-m}^3$ ) and have been adjusted for flow volumes (as calibrated from the digital flow meter), temperature and barometric pressure. Table 4.1 also includes the lower quantitation limit (LQL) for each sample and the current AGCs and SGCs (current as of February 2009).

TABLE 4.1

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

AMBIENT AIR VOST SAMPLE RESULTS

FOURTH QUARTER 2008

SAMPLE IDENTIFICATION <sup>1</sup>	24-HR AMBIENT AIR SAMPLE					BLANK		CURRENT AGC	24-HOUR SGC <sup>4</sup>
	U1	U2	D1	D2	D3	FB3	TB1		
LOWER QUANTITATION LIMIT (LQL)	0.0125	0.0292	0.0123	0.0253	0.0290	5	5		
PRACTICAL QUANTITATION LIMIT (PQL)	0.0200	0.0468	0.0198	0.0404	0.0464	8	8		
TARGETED TIC LQL	0.0625	0.1462	0.0617	0.1263	0.145	25	25		
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )				
Acetone <sup>2</sup>	0.50	0.85	0.49	0.66	1.28	42	39	28,000	180,000
<b>Benzaldehyde<sup>3</sup></b>					< 0.46			0.10	---
<b>Benzene</b>	<b>0.93</b>	<b>1.04</b>	<b>0.91</b>	<b>0.97</b>	<b>1.34</b>			0.13	1,300
Bromodichloromethane								0.02	---
Bromoform <sup>2</sup>				< 0.06			9	0.91	---
Bromomethane							8	5.00	3,900
2-Butanone <sup>2</sup>	0.40	< 0.40	0.37	< 0.45	< 0.75	37	31	5,000	13,000
Carbon Disulfide							7	700	6,200
<b>Carbon Tetrachloride</b>	<b>0.63</b>	<b>0.68</b>	<b>0.67</b>	<b>0.63</b>	<b>0.66</b>			0.067	1,900
Chlorobenzene								110	---
Chloroethane							8	10,000	---
Chloroethyl Vinyl Ether <sup>3</sup>								0.10	---
<b>Chloroform</b>	<b>0.09</b>	<b>0.10</b>	<b>0.09</b>	<b>0.10</b>	<b>0.14</b>			0.043	150
Chloromethane							11	90	22,000
Dibromochloromethane								0.10	---
1,2-Dichlorobenzene (o)								360	30,000
1,3-Dichlorobenzene (m)								360	30,000
<b>1,4-Dichlorobenzene (p)</b>	<b>0.07</b>	< 0.08	0.08	< 0.09	< 0.16			0.09	---
1,1-Dichloroethane								0.63	---
1,2-Dichloroethane								0.038	---
1,1-Dichloroethene							6	70	---
cis-1,2-Dichloroethene								63	---
trans-1,2-Dichloroethene								63	---
1,2-Dichloropropane								4.0	---
1,3-Dichloropropene, cis & trans isomers								0.25	---
Ethylbenzene	0.28	< 0.30	0.27	< 0.29	< 0.59			1,000	54,000
<b>2/4-Ethyltoluene (total)</b>	<b>0.70</b>	< 0.77	<b>0.69</b>	< 0.72	< 1.26			0.10	---
Freon 13 <sup>3</sup>								1,000	68,000
2-Hexanone <sup>2</sup>					< 0.08	36	36	48	4,000
Methylene Chloride	0.25	0.41	0.30	0.41	0.57	11	17	2.10	14,000
4-Methyl-2-Pentanone <sup>2</sup>				< 0.15	< 0.06	26	33	3,000	31,000
Styrene								1,000	17,000
1,1,1,2-Tetrachloroethane				< 0.07		6	18	16	---
Tetrachloroethene	0.30	< 0.34	0.35	< 0.34	< 0.54			1.00	1,000
Toluene	1.43	< 1.68	1.51	< 1.60	< 3.49			5,000	37,000
1,1,1-Trichloroethane								1,000	68,000
1,1,2-Trichloroethane								1.40	---
Trichloroethene	0.04	< 0.06	0.05	< 0.06	< 0.06			0.50	14,000
Trichlorofluoromethane	1.10	1.30	1.60	1.59	1.52		6	1,000	68,000
Vinyl Chloride							9	0.11	180,000
Xylenes (Total)	1.15	< 1.33	1.16	< 1.25	< 2.59			100	4,300
Decane <sup>3</sup>	0.18	< 0.28	0.21	< 0.27	< 0.42			700	---

**TABLE 4.1**  
**Continued**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**AMBIENT AIR VOST SAMPLE RESULTS**

**FOURTH QUARTER 2008**

SAMPLE TYPE	24-HR AMBIENT AIR SAMPLE					BLANK		CURRENT AGC	24-HOUR SGC****
	U1	U2	D1	D2	D3	FB3	TB1		
SAMPLE IDENTIFICATION (1)	0.063	0.146	0.062	0.126	0.145	25	25		
ADDITIONAL TIC LQL	( $\mu\text{g}/\text{std-m}^3$ )	(ng)	(ng)	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )				
VOC COMPOUND NAME									
2-Methyl-pentane	4.75	4.15	3.95	3.23				4,200	350,000
3-Methyl-pentane				< 1.76				4,200	350,000
Straight-Chain Alkane					< 1.09			---	---
2-Methyl-butane	5.75	3.89	5.68	2.88	< 2.19			42,000	---
Hexane	4.00	< 3.87	3.95	< 3.60	< 1.00			700	---
Isobutane	3.50	< 1.94	3.95	< 1.63	< 1.72			57,000	---
Dichlorodifluoromethane	3.75	< 1.71	8.15	< 3.60	< 0.88			12,000	---
Unknown (RT: 1.33-14.55)					< 2.42			---	---
Ethane, 1,1,2-trichloro-1,2,2-triflu		< 0.77	2.72	< 0.74	< 0.68			180,000	960,000
branched alkane	3.00	3.86		1.59	4.38			---	---
2-Methyl-Hexane		< 2.06		< 1.83				---	---
Butane	5.50	< 2.76	5.43	< 2.13	< 2.16			57,000	---
Cyclohexane, methyl-					< 1.38			---	---
Octane		< 0.66		< 0.72	< 1.38			3,300	---

NOTES:

<sup>1</sup> See Figure 2.1 for ambient air sampling locations.

<sup>2</sup> An 8 (splitless) nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.

<sup>3</sup> Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.

<sup>4</sup> This 24-hour guideline concentration was calculated by multiplying the current SGC value (last revised September 2007 and still current as of February 2009) by 0.4 (EPA averaging time adjustment factor).

U1/U2: Ambient upwind samplers collocated near the 15th hole Fairway of the Bethpage State Black Golf Course approximately 150 feet west of Round Swamp Road.

D1/D2: Ambient downwind samplers collocated near the entrance gate for the RAP building, approximately 125 feet west of Winding Road.

D3: Ambient downwind sampler was located just north and east of the front gate of the facility on Bethpage Sweet Hollow Road.

- All values are reported in micrograms per standard cubic meter ( $\mu\text{g}/\text{std-m}^3$ ) except for the field blank and trip blank mass loading results which are reported in nanograms (ng).

- Blank values:

Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.

Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.

- Values in shaded areas are at or exceed the level of the current (last revised September 2007 and still current as of February 2009) and/or previous ambient air Annual Guideline Concentration (AGC) values.

- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.

- Freon 13 is listed as Chlorotrifluoromethane in the analytical results, Appendix C.

- ( $\mu\text{g}/\text{std-m}^3$ ): micrograms per standard cubic meter

- (ng): nanograms

A total of six (6) TCL constituents exceeded the level of their assigned AGC values as shown in Table 4.1. Compounds include: benzaldehyde, benzene, carbon tetrachloride, chloroform, 1,4-dichlorobenzene(p) and 2/4-ethyltoluene. Benzene, carbon tetrachloride, chloroform and 2/4-ethyltoluene exceeded their respective AGC guideline values in all five (5) ambient samples. Benzaldehyde exceeded its assigned AGC standard at downwind sample D3 and 1,4-dichlorobenzene exceeded its respective AGC guideline value in downwind samples D2 and D3. The Interim AGC value of  $0.1 \mu\text{g}/\text{m}^3$  for 2/4-ethyltoluene was assigned based on the Moderate Toxicity de minimis concentration, as per NYSDEC DAR-1 policy. No TICs were detected in excess of their respective AGC guideline value. The sample constituent concentrations appear reasonably representative of the areas tested based on preceding quarterly tests.

It is important to note that a single 24-hour average value greater than an AGC should not be interpreted as exceedance of the stated annual ambient air guideline. Further, concentrations of many compounds detected in the upwind samples were similar, if not greater, when compared to the downwind samples. Shaded values in Table 4.1 indicate an exceedance of the level of the assigned AGC. The analytical results are presented in Appendix C.

The short-term guideline concentrations (SGCs) are also provided in Table 4.1 for all TCL constituents and additional TICs (where available). In order to compare the observed 24-hour concentrations to the SGC values, the 24-hour values would need to be divided by a 0.4 adjustment factor. No calculated short-term values exceed the SGC guidelines when the observed values are adjusted to represent worst case 1-hour concentrations.

Six (6) target compounds, acetone, 2-butanone, 2-hexanone, methylene chloride, 4-methyl-2-pentanone and 1,1,2,2 tetrachloroethane, were detected in the field blank sample. Methylene chloride and acetone are known laboratory contaminants that are almost always detected in all ambient samples (as well as soil gas samples), including field and trip blank samples during quarterly monitoring events. The field blank concentrations are reported in Appendix C. It is unknown whether the compounds detected are associated with the ambient air or merely contamination from the laboratory. 1,1,2,2 tetrachloroethane is almost always detected in the ambient samples for each quarterly test, albeit small amounts; however, the other compounds are not necessarily commonly detected during quarterly testing. As previously stated, RTP has contacted H2M about the presence of these compounds and will continue to monitor field blanks for their presence in the future. These concentrations were not subtracted from the reported ambient air or soil gas concentrations so that conservative concentrations would be reported. It is difficult to quantify the difference between the concentrations detected on the blank samples that may be caused by laboratory contamination and the concentrations that may be associated with OBSWDC or other industrial activities.

No collectable condensate was present in the sample impingers. If small quantities were present, they were placed on the front trap to avoid influencing the sample minimum detection limit (MDL).

From the ambient data collected during the 2008 fourth quarter sampling event, background TCL constituent concentrations (upwind samples averaged TCL constituent concentrations) were subtracted from the average TCL constituent concentrations recorded at locations downwind of the landfill in order to provide an estimate of the net impacts that the landfill, and all other OBSWDC activities taken together, have on local air quality. This analysis is done only for the constituents that exceeded their respective guideline values. The net impact showed that only 2/4-ethyltoluene exceeded the assigned de minimis value after subtracting the upwind concentrations from the downwind concentrations. For compounds that were detected in some ambient samples but not all, the net impact analysis included the LQL to calculate the average value rather than using “non-detection” or zero (0).

In a more detailed comparison of the two different downwind locations (again only for TLCs that exceeded their respective AGC value or assigned Interim AGC value), the net concentrations of three (3) compounds demonstrated an exceedance when comparing the concentrations of downwind sample D3 to the average concentrations of upwind samples U1/2. Benzaldehyde, benzene and 2/4-ethyltoluene exceeded their respective AGC standard when comparing the downwind location D3 to the upwind samples. When comparing the average of the collocated downwind location D1/2 to the upwind samples, none of the compounds compared exceeded the assigned de minimis value. Once again, it is worth noting that many of the concentrations detected in the upwind samples are only slightly lower than the concentrations detected in the collocated downwind samples D1/2 and the downwind sample D3, and therefore, the bulk of these concentrations are not necessarily attributed to the landfill, but considered background concentrations.

The results indicated a few inconsistencies between concentrations of certain compounds when comparing the results between collocated samples (comparing U1 to U2 and comparing D1 to D2). Some of the inconsistencies are the result of compounds being detected only slightly over the MDL in one collocated sample over another, such as bromoform, 4-methyl-2-pentanone and 1,1,2,2-tetrachloroethane in D2. Also, the presence and concentration of various TICs were slightly varied from D1 to D2, as well as from U1 to U2. RTP continues to monitor the difference in compounds detected and their concentrations between collocated samples to determine if inconsistencies exist or not, and if so, what may be causing the inconsistencies.

In general, VOC concentrations in the ambient air for the fourth quarter test were similar to the 2008 first quarter test; however, concentrations detected were much lower when compared to the 2008 second quarter. The primary difference between concentrations detected in the first, third and fourth versus the second

quarter may be due to testing under different wind conditions. Even though the perimeter system and thermal oxidizer were not completely operational, there were no major differences in concentrations reported in the fourth quarter test that would appear to be the result of these issues.

## 4.2 Soil Gas Concentrations

Soil gas concentrations were monitored on December 3, 2008 at all soil gas well sites identified in the Consent Decree except for well M21, which was not tested due to the continued inaccessibility to the well location. Table 4.2 provides a summary of soil gas well VOC concentrations. These concentration values are reported in  $\mu\text{g}/\text{std-m}^3$  of soil gas. Table 4.2 also includes the lower quantification limit for each sample. All soil gas well cartridge sets were sent to H2M laboratories for analytical analysis. There are currently no State or Federal guidelines for permissible soil gas concentrations of VOCs; however, New York State is presently considering vadose zone limits. Nassau County does not have guidelines or standards at this time. For a relative comparison, Table 4.2 provides the AGCs and SGCs for ambient air quality. The shaded values indicate soil gas concentrations that exceed the respective level of the current NYSDEC AGC for ambient air. A value in excess of the level of the AGC or SGC should not be interpreted as an exceedance of the ambient air guideline since the measured values are soil gas concentrations, not ambient air concentrations.

As shown on Table 4.2, eight (8) target VOCs (benzene, bromoform, carbon tetrachloride, chloroform, 1,4-dichlorobenzene (p), methylene chloride, tetrachloroethane and trichloroethene) were measured in excess of the level of their respective ambient air AGC value at one or more soil gas well locations. Benzene was detected in excess of its respective ambient air AGC value at M22 and M34. Bromoform was measured in excess of its respective ambient air AGC value at M9(30). Carbon tetrachloride was measured in excess of its respective ambient air AGC value at soil gas wells M22, M28, M34, M37 and M39 and chloroform was measured in excess of its respective ambient air AGC value at soil gas wells M9(10), M9(20), M9(30), M(40), M13 and M22. 1,4-dichlorobenzene was measured in excess of its respective ambient air AGC value at M2. Methylene chloride was in excess of its respective ambient air AGC value at soil gas wells F1, M2, M9(30) and M39. Tetrachloroethane was measured in excess of its respective ambient air AGC value at soil gas wells M6, M9(10), M9(20), M9(30), M(40), M13, M16 and M39; and finally, trichloroethene exceeded its respective ambient air AGC standard at M9(20), M9(30) and M9(40). One (1) TIC, C3 substituted benzene was detected in excess of its respective AGC guideline values at soil gas well M2; and no compounds (both TLCs and TICs) were found in excess of their SGC guideline values.

The exceedances in methylene chloride are likely, in part, associated with laboratory contamination and may not necessarily be associated with the soil gas. Further, RTP could not identify specific concentrations that

TABLE 4.2

TOWN OF OYSTER BAY  
 OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
 FOURTH QUARTER 2008

SOIL GAS WELL ID	F1	M2	M4	M5	M6	M9(10)	M9(20)	M9(30)	M9(40)	FBI	Current	Current
LOWER QUANTITATION LIMIT (LQL)	0.484	0.471	0.455	0.523	0.493	0.491	0.499	0.995	0.498	5	AGC	SGC
PRACTICAL QUANTITATION LIMIT (PQL)	0.774	0.754	0.727	0.837	0.788	0.785	0.798	1.592	0.80	8	---	---
TARGETED TIC LQL	2.42	2.36	2.27	2.62	2.46	2.45	2.50	4.98	2.49	25	---	---
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )								
Acetone*	29.98	2.45	0.73	1.88	1.48	2.06	1.60	1.59	1.59	20	28,000	180,000
Benzaldehyde**											0.10	---
Benzene											0.13	1300
Bromodichloromethane											0.02	---
<b>Bromoform*</b>								< 1.79			0.91	---
Bromomethane											5.00	3900
2-Butanone*								< 4.98		15	700	6200
Carbon Disulfide											0.067	1,900
Carbon Tetrachloride											110	---
Chlorobenzene											10,000	---
Chloroethane											0.10	---
Chloroethyl Vinyl Ether**											0.10	---
<b>Chloroform</b>						<b>0.69</b>	<b>1.10</b>	<b>&lt; 1.49</b>	<b>0.70</b>		0.043	150
Chloromethane											90.0	22,000
Dibromochloromethane											0.10	---
1,2-Dichlorobenzene (o)											360	30,000
1,3-Dichlorobenzene (m)											360	30,000
<b>1,4-Dichlorobenzene (p)</b>		<b>0.94</b>									0.09	---
1,1-Dichloroethane											0.63	---
1,2-Dichloroethane											0.038	---
1,1-Dichloroethene											70.00	---
cis-1,2-Dichloroethene											63	---
trans-1,2-Dichloroethene											63	---
1,2-Dichloropropane											4.00	---
1,3-Dichloropropene, cis & trans isomers											0.25	---
Ethylbenzene											1,000	54,000
2/4-Ethyltoluene (total)											0.10	---
Freon 13**											1,000	68,000
2-Hexanone*										14	48.0	4000
<b>Methylene Chloride</b>	<b>18.38</b>	<b>12.25</b>	1.82	1.78	0.69	1.18	1.90	<b>3.18</b>	0.90	9	2.10	14,000
4-Methyl-2-Pentanone*								< 3.38		18	3,000	31,000
Styrene											1,000	17,000
1,1,2,2-Tetrachloroethane										10	16	---
<b>Tetrachloroethene</b>		0.75			<b>1.67</b>	<b>8.73</b>	<b>17.96</b>	<b>&lt; 33.33</b>	<b>63.75</b>		1.00	1,000
Toluene		1.23									5,000	37,000
1,1,1-Trichloroethane											1,000	68,000
1,1,2-Trichloroethane							1.10	< 1.69	1.59		1,40	---
<b>Trichloroethene</b>							<b>1.00</b>	<b>&lt; 3.48</b>	<b>5.48</b>		0.50	14,000
Trichlorofluoromethane		1.41	1.36	1.46	1.48	4.12	4.19	4.78	5.78		1,000	68,000
Vinyl Chloride	21.28										0.11	180,000
Xylenes (Total)											100	4,300
Decane**											700	---

TABLE 4.2  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
FOURTH QUARTER 2008

SOIL GAS WELL ID	F1 (µg/std-m <sup>3</sup> )	M2 (µg/std-m <sup>3</sup> )	M4 (µg/std-m <sup>3</sup> )	M5 (µg/std-m <sup>3</sup> )	M6 (µg/std-m <sup>3</sup> )	M9(10) (µg/std-m <sup>3</sup> )	M9(20) (µg/std-m <sup>3</sup> )	M9(30) (µg/std-m <sup>3</sup> )	M9(40) (µg/std-m <sup>3</sup> )	FBI (ng)	Current AGC (µg/m <sup>3</sup> )	Current SCC (µg/m <sup>3</sup> )
ADDITIONAL TIC LOI	2.42	2.36	2.27	2.62	2.46	2.45	2.50	4.98	2.49	25	4,200	350,000
VOC COMPOUND NAME												
2-Methyl-pentane		3.68									0.13	1,300
C3 subst. Benzene											42,000	
2-Methyl-butane											40,000	
Ethane, 1,1-difluoro-		7.35									700	
Hexane												
Unknown siloxane (RT: 13.95-13.97)	4.93					5.40						
alpha-Pinene isomer (RT: 12.02)											270	
Isobutane											57,000	
Dichlorodifluoromethane	41.59	4.15	4.91	4.08	4.73	7.16	16.97	33.13	32.87		12,000	
1,1-Dichloro-1-fluoroethane	93.81							<	3.98			
Dodecane		9.43										
Unknown (RT: 1.33-14.55)		4.81					2.50					
Dichlorotetrafluoroethane					18.72	23.55	71.86	152.74	159.36		17,000	
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-									5.88		180,000	960,000
branched alkane	10.93	3.39										
Butane											57,000	
Bicyclo(2,2,1)heptane, dimethyl isomer												
Limonene isomer		3.49										
beta-Myrcene											3,400	
Santolina triene											3,000	
Ethene, 1-chloro-1-fluoro	25.15										25,000	

TABLE 4.2  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLER RESULTS  
FOURTH QUARTER 2008

SOIL GAS WELL ID	M13	M16	M21	M22	M28	M31	M34	M37	M39	FB2	Current AGC	Current SGC
LOWER QUANTITATION LIMIT (LQL)											(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )
PRACTICAL QUANTITATION LIMIT (PQL)											(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )
TARGETED TIC LQL											(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )								
Acetone*	0.74	2.51		2.19	2.00	4.89	3.39	1.79	5.78	9	28,000	180,000
Benzaldehyde**											0.10	----
<b>Benzene</b>				<b>0.63</b>			<b>1.10</b>				0.13	1300
Bromodichloromethane											0.02	----
Bromoform*											0.91	----
Bromomethane											5.00	3900
2-Butanone*											5000	13,000
Carbon Disulfide											700	6200
<b>Carbon Tetrachloride</b>				<b>0.73</b>	<b>0.60</b>		<b>0.60</b>	<b>0.60</b>	<b>&lt; 1.10</b>		0.067	1,900
Chlorobenzene											110	----
Chloroethane											10,000	----
Chloroethyl Vinyl Ether**											0.10	----
<b>Chloroform</b>	<b>0.93</b>			<b>0.63</b>							0.043	150
Chloromethane							0.80				90.0	22,000
Dibromochloromethane											0.10	----
1,2-Dichlorobenzene (o)											360	30,000
1,3-Dichlorobenzene (m)											360	30,000
1,4-Dichlorobenzene (p)											0.09	----
1,1-Dichloroethane											0.63	----
1,2-Dichloroethane											0.038	----
1,1-Dichloroethene											70.00	----
cis-1,2-Dichloroethene											63	----
trans-1,2-Dichloroethene											63	----
1,2-Dichloropropane											4.00	----
1,3-Dichloropropene, cis & trans isomers											0.25	----
Ethylbenzene											1,000	54,000
2/4-Ethyltoluene (total)											0.10	----
Freon 13**											1000	68,000
2-Hexanone*											48.0	4000
<b>Methylene Chloride</b>	1.02	1.00		1.56	1.30	0.90	1.60	1.79	<b>5.28</b>	8	2.10	14,000
4-Methyl-2-Pentanone*											3,000	31,000
Styrene											1,000	17,000
1,1,2,2-Tetrachloroethane											16	----
<b>Tetrachloroethene</b>	<b>4.54</b>	<b>3.11</b>							<b>&lt; 15.44</b>		1.00	1,000
Toluene				0.73			2.00				5000	37,000
1,1,1-Trichloroethane											1,000	68,000
1,1,2-Trichloroethane											1.40	----
Trichloroethene											0.50	14,000
Trichlorofluoromethane	1.85	2.91		1.77	1.60	1.40	1.50	1.59	< 1.99		1000	68,000
Vinyl Chloride											0.11	180,000
Xylenes (Total)											100	4,300
Decane**											700	----

**TABLE 4.2  
(Concluded)**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**SOIL GAS VOST SAMPLE RESULTS  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
FOURTH QUARTER 2008**

SOIL GAS WELL ID	M13 (µg/std-m <sup>3</sup> )	M16 (µg/std-m <sup>3</sup> )	M21 (µg/std-m <sup>3</sup> )	M22 (µg/std-m <sup>3</sup> )	M28 (µg/std-m <sup>3</sup> )	M31 (µg/std-m <sup>3</sup> )	M34 (µg/std-m <sup>3</sup> )	M37 (µg/std-m <sup>3</sup> )	M39 (µg/std-m <sup>3</sup> )	FB2 (ng)	Current AGC (µg/m <sup>3</sup> )	Current SGC (µg/m <sup>3</sup> )
ADDITIONAL TIC LQI	2.32	2.51	-	2.61	2.51	2.50	2.50	2.49	4.98	25	4,200	350,000
VOC COMPOUND NAME												
2-Methyl-pentane							2.59				0.13	1,300
C3 subst. Benzene											42,000	---
2-Methyl-butane				6.67	2.81		3.29	3.19			40,000	---
Ethane, 1,1-difluoro-								7.27			700	---
Hexane								5.88			---	---
Unknown siloxane (RT: 13.95-13.97)									< 9.66		270	---
alpha-Pinene isomer (RT: 12.02)											57,000	---
Isobutane				4.17		4.89	2.79				12,000	---
Dichlorodifluoromethane	4.36	13.05										---
1,1-Dichloro-1-fluoroethane				3.02				5.18			---	---
Dodecane											---	---
Unknown (RT: 1.33-14.55)				8.34			4.99				---	---
Dichlorotetrafluoroethane											17,000	---
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-											180,000	960,000
branched alkane											---	---
Butane				6.99	2.81		3.39	3.98			57,000	---
Bicyclo(2,2,1)heptane, dimethyl isomer									< 6.27		---	---
Limone Isomer											3,400	---
beta_Myrcene											3,000	---
Santolina triene											25,000	---
Ethene, 1-chloro-1-fluoro								5.68			---	---

Notes:

- \* An 8 nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.
- \*\* Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.
- All values are reported in micrograms per standard cubic meter (µg/std-m<sup>3</sup>).
- Blank values:
- Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.
- Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.
- Values in shaded areas are at or exceed the level of the current (last revised September 2007 and still current as of February 2009) and/or previous ambient air Annual Guideline Concentration (AGC) values.
- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.
- Freon 13 is listed as Chlorotrifluoromethane in the Analytical Results, Appendix C.
- (µg/std-m<sup>3</sup>): micrograms per standard cubic meter
- (ng): nanograms

should have been modified as a result of analytical issues regarding low internal standard responses from samples, calibration issues regarding specific compounds, or blank contamination; therefore, no changes were made.

The soil gas sample results for concentrations recorded at cluster well M9, including wells M9(10), M9(20), M9(30) and M9(40), historically show an increase in certain constituent concentrations as well depth increases, which may be attributed to groundwater conditions at this location. Tetrachloroethane and trichloroethene, as well as the TICs dichlorodifluoromethane and dichlorotetrafluoroethane, consistently increased in concentration with an increase in well depth. When comparing the results of various compounds at M9(40) from this fourth quarterly test of 2008 with the 2007 quarterly tests, concentrations are similar. However, some compound concentrations increased in this quarter when compared to last quarter.

Some LQLs exceeded the value of respective AGC levels; therefore, in addition to those noted above, other well concentrations may have exceeded the level of the ambient air AGC for compounds with an AGC value lower than the highest LQL ( $0.996 \mu\text{g}/\text{std}\text{-m}^3$ ) or PQL ( $1.594 \mu\text{g}/\text{std}\text{-m}^3$ ). The collection of a soil gas sample volume significantly greater than 10 liters would be required to reduce the LQL; however, a significantly larger sample volume greater than 10 liters is not recommended due to well volume restrictions.

The soil gas well TCLs that had exceeded the level of their respective ambient air AGCs during the 2008 fourth quarter were similar to those of previous quarterly tests; however, certain differences were noted for TIC concentrations. During the third quarter of 2008, a substantial amount of dichlorotetrafluoroethane was detected in soil gas well M5, with lesser amounts of this compound also detected in soil gas wells M6 and the entire M9 cluster. This compound is normally present in soil gas samples, but not at the levels detected in M5 during the third quarter test. This compound was not detected at M5 during this fourth quarter test, but was detected in relatively high, but fairly standard concentrations at other locations. Also, like the second quarter of 2008, and increase in the variety of TICs are being documented from the soil gas results. RTP will carefully monitor the results from the 2009 quarterly tests and see if similar results are noted. If so, the cause of these detections may warrant an investigation.

As shown in Table 4.2, no targeted compounds were measured in excess of their respective current SGC value. One should note that such comparisons are extremely conservative since soil gas concentrations are being compared to ambient air guideline values, and as such, no true exceedance in soil gas samples can truthfully be documented. Generally, soil gas concentrations from all wells sampled were slightly less as compared to the first quarter test and were similar as compared to concentrations reported during the second

and third quarter tests.

During the analysis of the samples by the laboratory, low internal standard responses from samples F1.f&b and M5.f&b may have compromised the results from the samples taken at these soil gas wells. Also, the initial calibrations for several runs show low benzaldehyde and chlorotrifluoromethane results. The laboratory could not provide a definitive explanation on how these problems may have affected the results for the identified samples. Furthermore, the thermal oxidizer was not operating and perimeter collection system was not completely functional during the test. The effect of these system problems will be discussed below.

## **5.0 SOIL GAS PRESSURE READINGS**

As required by the Consent Decree, pressure readings are to be taken on a quarterly basis at the following three locations around the perimeter of the gas collection system: (1) northwest of landfill between LGV16 and LGV17, (2) southeast of the landfill between TGV-1 and LGV-9 and (3) south of the landfill on the Nassau County Fire Service Academy at either F-6 or F-9. Figure 2.1 illustrates the locations of the three soil gas pressure wells PW1, PW2 and PW3.

A 10-inch inclined manometer, manufactured by Dwyer Instruments, Inc. was used to monitor soil gas pressures at each well. The 0-1 inch inclined portion is divided into 0.01 inch increments with the remaining portion (1 to 10 inches) marked in 0.1 inch increments. There are two soil gas pressure probes at different depths (10 foot and 20 foot) at each location.

Pressure readings were taken from each of the six (6) probes. Table 5.1 provides a summary of the soil gas pressure tests. All pressure wells were tested on December 4, 2008 from 7:43 AM to 8:06 AM. Zero pressure levels were recorded at all 10 foot depths. Positive pressures were recorded for all 20 foot well depths. PW1 and PW2 recorded 0.03 inches of water column for both 20 foot depth locations. PW3 recorded 0.06 and 0.08 inches of water column at 20 foot depths during the fourth quarter monitoring event. These results are consistent with the intrusion of air into the perimeter system which, in turn, has resulted in decreasing negative pressures at the landfill gas pressure wells.

Please note that based on a recent landfill gas collection and perimeter system assessment by LKB, substantial damage throughout the system was documented. As such, the perimeter system was not being operated as designed during the fourth quarter test. This has likely contributed to the positive pressure well readings. In addition, the thermal oxidizer was not operating during the fourth quarter test and has not operated since May 2008.

**TABLE 5.1**

TOWN OF OYSTER BAY  
 OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**SUMMARY OF SOIL GAS PRESSURE TESTS**

**FOURTH QUARTER 2008**

SAMPLE ID	DATE (mm/dd/yy)	TIME (EDT)	WELL ID	WELL LOCATION	WELL DEPTH (feet)	READINGS (INCHES H <sub>2</sub> O)
P1	12/04/08	7:52 AM	PW1	NW corner of the landfill on Haul Road	10	0.00
P2	12/04/08	7:52 AM	PW1	NW corner of the landfill on Haul Road	20	0.03
P3	12/04/08	7:53 AM	PW1	NW corner of the landfill on Haul Road	10	0.00
P4	12/04/08	7:53 AM	PW1	NW corner of the landfill on Haul Road	20	0.03
P5	12/04/08	7:43 AM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P6	12/04/08	7:43 AM	PW2	SE corner of the landfill NW of Well M2	20	0.03
P7	12/04/08	7:44 AM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P8	12/04/08	7:44 AM	PW2	SE corner of the landfill NW of Well M2	20	0.03
P9	12/04/08	8:05 AM	PW3	Nassau County Fire Service Academy	10	0.00
P10	12/04/08	8:05 AM	PW3	Nassau County Fire Service Academy	20	0.06
P11	12/04/08	8:06 AM	PW3	Nassau County Fire Service Academy	10	0.00
P12	12/04/08	8:06 AM	PW3	Nassau County Fire Service Academy	20	0.08

NOTES:

- Measurements taken using a ten inch Dwyer inclined manometer.
- Leak checks were performed on manometer before testing each well.

## 6.0 SUMMARY AND CONCLUSIONS

The 2008 fourth quarter ambient air, soil gas and soil gas pressure monitoring event was performed by RTP on December 3 and 4, 2008. Ambient air quality and meteorology were monitored during the 24-hour sampling period. In accordance with the Consent Decree, ambient air samples were collected at locations both upwind and downwind of the landfill. The ambient air quality test results indicate that six (6) constituents on the program TCL exceeded the level of their respective ambient air AGCs or assigned Interim AGC value at the upwind and downwind locations. These compounds included: benzaldehyde, benzene, carbon tetrachloride, chloroform, 1,4-dichlorobenzene (p) and 2/4-ethyltoluene (total). No TICs exceeded the level of their respective ambient air AGCs.

These results are based on 24-hour samples, and therefore, an exceedance of an AGC does not necessarily indicate an exceedance of a respective annual guideline value. No measured values exceeded their respective SGC values. Looking at the net impact values (averaged downwind concentrations minus averaged upwind concentrations) for the fourth quarter test, it appears the landfill had very little or no impact on the constituents that exceeded AGC values. In general, VOC concentrations in the ambient air for the fourth quarter test was similar to the first and third quarter test; however, concentrations detected were much lower than concentrations reported for the second quarter test.

On-site meteorological data from atop of the landfill were recorded for use in this analysis. The meteorological station upwind of the landfill collected some data that was inconsistent with other on-site data. The data collected from atop the landfill was considered representative of the overall site.

Comparing upwind versus downwind samples demonstrates that landfill emissions, including those associated with daily activities at the OBSWDC and the lack of landfill gas controls, may be contributors to some of the observed constituent levels. However, off-site sources are likely the primary sources of most of the compound concentrations detected at both the upwind and downwind locations. Again, the exceedances of target or tentatively identified compound concentrations relative to the state guidelines are based on comparisons of 24-hour sample results to annual guidelines. It should also be noted that no measured target or tentatively identified compound concentrations exceeded their short term guidance value.

Soil gas well concentrations were monitored at specific locations surrounding the landfill. All soil gas well samples were collected and analyzed successfully. Soil gas sample results show several target compounds were present in the soil gas surrounding the landfill. Although no applicable guidelines are currently available for soil gas concentration readings, New York State is currently considering introducing vadose

zone limits. The soil gas well target compound constituents that exceeded the level of their respective ambient air AGCs during the 2008 fourth quarter were similar when compared to previous quarterly tests in 2008. During the third quarter of 2008, there was a significant amount of the TIC dichlorotetrafluoroethane detected in soil gas well M5. Historically, we have seen rare occurrences of high values of dichlorotetrafluoroethane from this well. Although no concentrations were detected above the MDL for the fourth quarter at M5, there were slightly elevated amounts detected in M9 wells during this fourth quarter effort.

Additionally, the second quarter of 2008 documented a significant amount of 4-methyl-2-pentanone and 5-hepten-2-one, 6-methyl in soil gas well M28. Although 4-methyl-2-pentanone was present as a contaminant in the field and trip blanks, the fourth quarter did not detect either of these compounds in any soil gas well. TIC detections for this quarter also seem to have varied less from well to well than in the past several efforts. No target or tentatively identified compound in the soil gas exceeded the level of their respective ambient air SGC guideline values. RTP will continue to monitor the results from the quarterly efforts of 2009 to see if any trends are noted. Generally, soil gas concentrations from all wells sampled were slightly less as compared to the first and third quarter tests and were similar as compared to concentrations reported during the second quarter test.

The methylene chloride exceedances observed in soil gas samples are at least partially attributed to laboratory contamination. In addition, six (6) target compounds were detected in the ambient field blank samples and 14 target compounds were detected above the MDL in the trip blank. It is unknown what caused the presence of these compounds. Methylene chloride (as well as acetone) are known laboratory contaminants often found in all ambient and soil gas samples, including field and trip blanks during quarterly monitoring events. It is difficult to determine the quantity of methylene chloride and/or acetone associated with landfill activities since they are used in laboratories and may also be associated with OBSWDC activities. RTP has contacted H2M about the presence of the above referenced compounds and will continue to monitor field blanks for their presence in the future.

Finally, soil gas pressures were measured at three pressure well locations surrounding the landfill. Pressure readings were taken from each of the six (6) pressure probes. Reported pressure well readings were measured on December 4, 2008 from 7:43 AM to 8:06 AM. Zero pressure levels were recorded at all 10 foot depths. Positive pressures were recorded for all 20 foot well depths. PW1 and PW2 recorded 0.03 inches of water for both 20 foot depth locations. PW3 recorded 0.06 and 0.08 inches of water at 20 foot depths during the fourth quarter monitoring event. These results appear to be consistent with the fact that the perimeter landfill gas collection system vacuum is still disabled.

The gas collection parameter system for the landfill was damaged, and as such, is likely not operating according to design. This may have contributed to the positive pressure well readings, signifying that the perimeter system does not currently possess a sufficient vacuum. It does not appear that the perimeter system coupled with the shutdown of the TO affected either the ambient air or soil gas results from the fourth quarter test. Repairs to the system and TO are expected in the near future.

A summary of the 2008 fourth quarter ambient, soil gas and pressure well quarterly monitoring results will be provided in the annual report at the conclusion of the 2008 monitoring program.

**APPENDIX A**

**METEOROLOGICAL MONITORING DATA**

**Table A-1**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**SUMMARY OF ATOP METEOROLOGICAL DATA**

**FOURTH QUARTER 2008**  
**(December 3 and 4, 2008)**

EST (HH:MM)	MWS (MPH)	MWD (Degrees)	SDWD (Degrees)	TEMP (Deg F)	RH (%)	PRESS (in. Hg)	PRECIP (in.)
10:00	7.9	258.0	13.2	36.4	55.6	29.97	0.0
11:00	7.8	237.7	19.1	38.5	51.2	29.97	0.0
12:00	11.3	239.9	13.2	39.2	47.8	29.94	0.0
13:00	10.1	230.9	15.7	39.5	48.7	29.94	0.0
14:00	9.5	223.2	15.7	40.3	47.6	29.91	0.0
15:00	9.8	234.9	14.3	40.5	46.9	29.91	0.0
16:00	8.6	229.2	14.9	40.3	48.2	29.91	0.0
17:00	7.2	221.6	8.4	39.2	51.6	29.91	0.0
18:00	6.7	226.8	5.4	38.6	56.3	29.91	0.0
19:00	5.6	216.1	13.7	38.3	57.7	29.91	0.0
20:00	7.8	229.6	6.0	37.8	60.3	29.91	0.0
21:00	7.5	230.6	9.0	38.0	61.2	29.91	0.0
22:00	8.2	219.5	7.6	38.5	61.6	29.91	0.0
23:00	9.7	223.8	7.4	39.3	63.0	29.91	0.0
0:00	11.2	226.8	9.0	40.3	66.0	29.91	0.0
1:00	10.3	215.7	9.3	40.3	67.9	29.88	0.0
2:00	9.6	216.9	9.7	39.8	67.2	29.85	0.0
3:00	9.7	214.9	9.8	41.0	66.7	29.85	0.0
4:00	11.4	217.2	10.2	42.9	64.2	29.83	0.0
5:00	10.8	215.3	10.0	43.3	64.4	29.83	0.0
6:00	11.2	213.9	9.9	43.6	66.0	29.83	0.0
7:00	12.5	214.7	10.4	44.1	65.7	29.80	0.0
8:00	12.2	212.3	9.9	44.7	65.6	29.80	0.0
9:00	13.7	216.2	11.6	46.2	62.8	29.80	0.0

**Notes:**

- EST: Eastern Standard Time.
- MWS: Mean Wind Speed, miles per hour.
- MWD: Mean Wind Direction, corrected for wind direction reference.  
- 360 degrees is due North (Grid North).
- SDWD: Standard Deviation of Wind Direction.
- TEMP: Ambient Temperature, degrees Fahrenheit.
- RH: Relative Humidity, percent.
- PRESS: Atmospheric Pressure, inches of mercury.
- PRECIP: Precipitation, inches of water column.

**Table A-1**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**SUMMARY OF UPWIND METEOROLOGICAL DATA**

**FOURTH QUARTER 2008**  
**(December 3 and 4, 2008)**

EST (HH:MM)	MWS (MPH)	MWD (Degrees)	SDWD (Degrees)	TEMP (Deg F)	RH (%)	PRESS (in. Hg)	PRECIP (in.)
10:00	5.0	251.2	27.0	36.6	57.5	30.21	0.0
11:00	6.4	227.2	28.4	38.6	52.5	30.20	0.0
12:00	8.8	220.8	16.2	39.6	49.4	30.18	0.0
13:00	7.6	227.0	23.3	40.2	48.3	30.16	0.0
14:00	8.3	212.8	17.4	40.6	47.6	30.14	0.0
15:00	7.8	220.8	20.3	40.8	46.7	30.14	0.0
16:00	7.0	217.1	17.5	40.4	48.3	30.15	0.0
17:00	4.5	206.5	14.0	37.9	57.0	30.15	0.0
18:00	1.5	204.2	82.2	34.6	68.6	30.16	0.0
19:00	0.8	0.1	99.7	30.9	81.6	30.16	0.0
20:00	0.9	21.9	77.6	29.8	86.9	30.16	0.0
21:00	0.9	114.9	78.8	31.1	84.4	30.16	0.0
22:00	0.9	172.5	76.2	30.6	85.6	30.15	0.0
23:00	4.5	204.7	14.6	36.5	73.7	30.15	0.0
0:00	7.1	211.3	11.8	39.4	70.9	30.14	0.0
1:00	7.0	202.3	13.4	39.8	71.8	30.11	0.0
2:00	6.3	202.2	13.4	39.2	71.3	30.10	0.0
3:00	6.5	198.6	15.2	40.4	70.3	30.09	0.0
4:00	8.8	202.4	12.9	42.5	66.9	30.06	0.0
5:00	8.8	202.5	13.5	43.0	66.9	30.05	0.0
6:00	8.9	202.0	12.6	43.4	68.4	30.04	0.0
7:00	10.1	201.6	13.1	44.0	67.6	30.03	0.0
8:00	9.9	202.0	13.0	44.4	68.3	30.02	0.0
9:00	11.6	203.2	13.6	45.8	66.0	30.02	0.0

**Notes:**

- EST: Eastern Standard Time.
- MWS: Mean Wind Speed, miles per hour.
- MWD: Mean Wind Direction, corrected for wind direction reference.  
- 360 degrees is due North (Grid North).
- SDWD: Standard Deviation of Wind Direction.
- TEMP: Ambient Temperature, degrees Fahrenheit.
- RH: Relative Humidity, percent.
- PRESS: Atmospheric Pressure, inches of mercury.
- PRECIP: Precipitation, inches of water column.

**APPENDIX B**

**CHRONOLOGY**

**AMBIENT AIR, SOIL GAS AND WELL PRESSURE SAMPLING EVENTS**

## CHRONOLOGY FOR AMBIENT AIR, SOIL GAS AND WELL PRESSURE SAMPLING EVENTS

### **Ambient Air Monitoring**

A total of five ambient air monitoring stations were used to collect ambient air quality samples for VOCs during the 2008 fourth quarter test effort. The following discussion provides a chronology of events during this quarterly test event.

The samplers for location U1/2 were collocated near the 15th hole Fairway of the Bethpage State Black Golf Course approximately 150 feet west of Round Swamp Road. Both units were assembled at the RTP Westbury office, transported to the monitoring sites and U1/2 were started at 8:40 AM and 8:58 AM, respectively, on December 3, 2008. Sample U1 experienced a connection failure; the connector was switched and restarted at 9:38 AM. Upwind samplers U1/2 ran until 8:40 AM and 8:58 AM respectively, on December 4, 2008. Upwind samplers ran for a total of 1,440 minutes (100% of the 24-hour sampling period), respectively. Five (5) site inspections were performed for sampler U1 and sampler U2 over the sampling period where only one adjustment was made to the flow meters on upwind sampler U2 to maintain the optimum flow rate for the collection of samples. No adjustments were made to sampler U1. Samples U1/2 were recovered normally and the samples were forwarded to the laboratory as per protocol. Condensate in quantities available for collection was not present from either sampler.

Samplers for location D1/2 were collocated near the entrance gate for the RAP building, approximately 125 feet west of Winding Road. Both samplers were assembled as above and were both started at 8:29 AM on December 3, 2008 and both were shutdown at 8:29 AM on December 4, 2008. Samplers D1/2 ran for 1,440 minutes (100% of the 24-hour sampling period). Seven (7) site inspections took place for samplers D1/2 over the sampling period where no adjustments were necessary to the flow meters in order to maintain an optimum flow rate for the collection of samples throughout the duration of the sampling effort. Both samples were recovered normally and forwarded to the laboratory as per protocol. Again, condensate in quantities available for collection was not present from either sampler.

Sampler D3 was located just north and east of the front gate of the OBSWDC facility on Bethpage Sweet Hollow Road. This sampler was assembled as noted above and started at 8:14 AM on December 3, 2008. The sampler ran for 1,243 minutes until 4:57 AM on December 4, 2008 when a battery failure caused the pump to shut down. It was restarted again at 7:14 AM and ran for another 118 minutes for a total of 1,361 minutes. Seven (7) site inspections took place for sampler D3 over the sampling period where the only adjustment necessary was to restart the pump in order to salvage collection of the sample for the duration of the sampling effort. The sample was recovered normally and was forwarded to the laboratory as per protocol. Once again, condensate in quantities available for collection was not present.

Field blanks for the program were collected according to the protocol. Ambient field blank sample TOBOBL08-4:FB3.f&b was collected inside the RTP Westbury office where the ambient sampling trains were assembled prior to the commencement of the testing effort. All samples were forwarded to the laboratory as per protocol.

### **Soil Gas Monitoring**

Two field samplers were deployed for the soil gas monitoring portion of the program. Soil gas samples were collected according to the soil gas sampling protocol, except for soil gas well M21 due to well inaccessibility. All other soil gas wells for the fourth quarter 2008 test were collected and forwarded to the laboratory according to the protocol. Soil gas sampling was initiated at 9:56 AM on December 3, 2008 and the last sample was collected at 1:23 PM on that same day. The sampling procedures required 10 liter samples to be collected since no very high initial well readings were detected. Soil gas field blank TOBOBL08-4:FB1.f&b was collected at soil gas cluster well M9 and TOBOBL08-4: FB2.f&b was collected at soil gas well M39. All samples were recovered normally and forwarded to the laboratory as per protocol.

### **Soil Gas Pressure Readings**

Soil gas pressure readings were taken at the three (3) primary pressure wells surrounding the landfill. Sampling was performed on December 4, 2008 from 7:43 AM until 8:06 AM. Four readings were taken at each well (two per 10 foot depth and two per 20 foot depth) using a Dwyer 10 inch inclined manometer. The inclined manometer was zeroed and leak checked prior to collecting samples at a well. Sampling followed the established protocol.

**APPENDIX C**

**ANALYTICAL RESULTS**

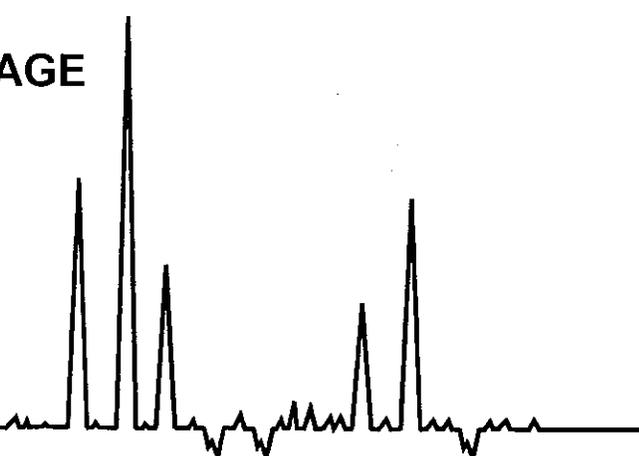
Analytical Data Package For

**RTP ENVIRONMENTAL ASSOCIATES, INC.  
4<sup>th</sup> QUARTER AMBIENT AIR  
SDG NO: TOY122**

Air Samples  
Received: 12/4/08

**SAMPLE DATA SUMMARY PACKAGE**

DECEMBER 2008



**H2M LABS, INC.**

Environmental Testing Laboratories  
575 Broad Hollow Road, Melville, N.Y. 11747

# **H2M LABS, INC.**

## **SAMPLE DATA SUMMARY PACKAGE**

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RTP ENVIRONMENTAL ASSOCIATES, INC  
4<sup>TH</sup> QUARTER AMBIENT AIR  
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SDG NO.: TOY122

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# **H2M LABS, INC.**

1. **NYS DEC SUMMARY FORMS**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND  
ANALYTICAL REQUIREMENT SUMMARY

SDG: TOY122

Analytical Requirements

Customer Sample Code	Laboratory Sample Code	MSVOA
D1.F+B	0814044-001	X
D2.B	0814044-002	X
D2.F	0814044-003	X
D3.B	0814044-004	X
D3.F	0814044-005	X
F1.F+B	0814044-006	X
FB1.F+B	0814044-007	X
FB2.F+B	0814044-008	X
FB3.F+B	0814044-009	X
M2.F+B	0814044-010	X
M4.F+B	0814044-011	X
M5.F+B	0814044-012	X
M6.F+B	0814044-013	X
M9(10).F+B	0814044-014	X
M9(20).F+B	0814044-015	X
M9(30).B	0814044-016	X
M9(30).F	0814044-017	X
M9(40).F+B	0814044-018	X
M13.F+B	0814044-019	X
M16.F+B	0814044-020	X
M22.F+B	0814044-021	X
M28.F+B	0814044-022	X
M31.F+B	0814044-023	X
M34.F+B	0814044-024	X
M37.F+B	0814044-025	X
M39.B	0814044-026	X
M39.F	0814044-027	X
U1.F+B	0814044-028	X
U2.B	0814044-029	X
U2.F	0814044-030	X
TB1.F+B	0814044-031	X

CLP, ~~Not CLP~~ (Please indicate year of protocol)

ASP B 1095  
mm 12/29/08

TOY122 S3

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY  
VOLATILE (VOA)  
ANALYSES

SDG: TOY122

Laboratory Samp ID	Client Sample ID	Matrix	Analytical Protocol	Date Collected	Date Recd at Lab	Date Extracted	Date Analyzed	Extraction Method	DF	Level	Aux Cleanup
0814044-001A	D1.F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-002A	D2.B	Air	5041	04-Dec-08	04-Dec-08		15-Dec-08		1	LOW	
0814044-003A	D2.F	Air	5041	04-Dec-08	04-Dec-08		15-Dec-08		1	LOW	
0814044-004A	D3.B	Air	5041	04-Dec-08	04-Dec-08		15-Dec-08		1	LOW	
0814044-005A	D3.F	Air	5041	04-Dec-08	04-Dec-08		15-Dec-08		1	LOW	
0814044-006A	F1.F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-007A	FBI.F+B	Air	5041	04-Dec-08	04-Dec-08		12-Dec-08		1	LOW	
0814044-008A	FB2.F+B	Air	5041	04-Dec-08	04-Dec-08		12-Dec-08		1	LOW	
0814044-009A	FB3.F+B	Air	5041	04-Dec-08	04-Dec-08		12-Dec-08		1	LOW	
0814044-010A	M2.F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-011A	M4.F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-012A	M5.F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-013A	M6.F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-014A	M9(10).F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-015A	M9(20).F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-016A	M9(30).B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-017A	M9(30).F	Air	5041	04-Dec-08	04-Dec-08		16-Dec-08		1	LOW	
0814044-018A	M9(40).F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-019A	M13.F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-020A	M16.F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-021A	M22.F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-022A	M28.F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-023A	M31.F+B	Air	5041	04-Dec-08	04-Dec-08		17-Dec-08		1	LOW	
0814044-024A	M34.F+B	Air	5041	04-Dec-08	04-Dec-08		18-Dec-08		1	LOW	
0814044-025A	M37.F+B	Air	5041	04-Dec-08	04-Dec-08		18-Dec-08		1	LOW	
0814044-026A	M39.B	Air	5041	04-Dec-08	04-Dec-08		16-Dec-08		1	LOW	
0814044-027A	M39.F	Air	5041	04-Dec-08	04-Dec-08		16-Dec-08		1	LOW	
0814044-028A	U1.F+B	Air	5041	04-Dec-08	04-Dec-08		18-Dec-08		1	LOW	

Laboratory Samp ID	Client Sample ID	Matrix	Analytical Protocol	Date Collected	Date Recd at Lab	Date Extracted	Date Analyzed	Extraction Method	DF	Level	Aux Cleanup
0814044-029A	U2.B	Air	5041	04-Dec-08	04-Dec-08		16-Dec-08		1	LOW	
0814044-030A	U2.F	Air	5041	04-Dec-08	04-Dec-08		16-Dec-08		1	LOW	
0814044-031A	TBI.F+B	Air	5041	04-Dec-08	04-Dec-08		15-Dec-08		1	LOW	

# **H2M LABS, INC.**

## **2. CHAIN OF CUSTODY DOCUMENTATION**

# CHAIN OF CUSTODY RECORD

TOY122

Page 1 of 4



400 Post Avenue, Suite 105  
 Westbury, NY 11590  
 Ph: (516) 333-4526  
 Fax: (516) 333-4571

Project name: TOBOBL08-4
Project ID: TOBOBL08-4
Project Location: TOB Landfill
Laboratory: H2M
Samplers: (Signature)

Test ID	Sample ID	Matrix (A, L, S)	Date	Time	Sample Method	Sample Duration	Number of Containers	Analysis Requested
TOBOBL08-4	D1.f	A	12/4/08	10:00	VOT	24-hr	1	081404H-001 ↓
	D1.b						1	-003 ↓
	D2.f						1	-002 ↓
	D2.b						1	-005 ↓
	D3.f						1	-004 ↓
	D3.b						1	-028 ↓
	U1.f						1	-030 ↓
	U1.b						1	-029 ↓
	U2.f						1	-006 ↓
	U2.b				10 min		1	-010 ↓
	F1.f						1	-010 ↓
	F1.b						1	-010 ↓
	M2.f						1	-010 ↓
	M2.b						1	-010 ↓
	M4.f						1	-010 ↓
	M4.b						1	-010 ↓
Relinquished by: (Signature)		Date/Time: 12/4/08 10:00		Received By: (Signature)		Date/Time: 12/4/08 10:00		
Relinquished by: (Signature)		Date/Time: 12/4/08 10:05		Received By: (Signature)		Date/Time: 12/4/08 10:05		
Remarks:								Delivery Method: Drop-off
Att: Jennifer Arzari								Custody Seats Intact: Yes No

# CHAIN OF CUSTODY RECORD

TOY12Z



400 Post Avenue, Suite 105  
 Westbury, NY 11590  
 Ph: (516) 333-4526  
 Fax: (516) 333-4571

Project name: TOB0BL08-4
Project ID: TOB0BL08-4
Project Location: TOB Landfill
Laboratory: H2M
Samplers: (Signature)

Page 2 of 4

Test ID	Sample ID	Matrix (A, L, S)	Date	Time	Sample Method	Sample Duration	Number of Containers	Analysis Requested
<del>0814044-4</del>	M9(10).f	A	12/4/08	10:00	VOST	10 min	1	0814044-014 ↓
	M9(10).b						1	-015 ↓
	M9(20).f						1	-017 ↓
	M9(20).b						1	-016 ↓
	M9(30).f						1	-018 ↓
	M9(40).f						1	↓
	M9(40).b						1	-019 ↓
	M13.f						1	↓
	M13.b						1	-020 ↓
	M16.f						1	↓
	M16.b						1	-021 ↓
	M22.f						1	↓
	M22.b						1	-022 ↓
	M28.f						1	↓
	M28.b						1	↓
Relinquished by: (Signature)		Date/Time:	12/4/08 10:00		Received By: (Signature)		Date/Time: 12/4/08 10:00	
Relinquished by: (Signature)		Date/Time:	12/4/08 10:05		Received By: (Signature)		Date/Time: 12/4/08 10:05	
Remarks:								Delivery Method: Drop-off
Custody Seals Intact:								Yes No

# CHAIN OF CUSTODY RECORD

TOY12Z



400 Post Avenue, Suite 105  
 Westbury, NY 11590  
 Ph: (516) 333-4526  
 Fax: (516) 333-4571

Project name: TOB0BL08-4
Project ID: TOB0BL08-4
Project Location: TOB Landfill
Laboratory: H2M
Samplers: (Signature)

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Test ID	Sample ID	Matrix (A, L, S)	Date	Time	Sample Method	Sample Duration	Number of Containers	Analysis Requested
TOB08-4	M21.f	A	12/4/08	10:00	VOST	10 min	1	0814044 -023
	M21.5						1	↓
	M34.f						1	-024
	M34.5						1	↓
	M37.f						1	-025
	M37.5						1	↓
	M38.f						1	-027
	M39.5						1	-026
	F41.f						1	-007
	F41.5						1	↓
	F42.f						1	-008
	F42.5						1	↓
	F43.f						1	-009
	F43.5						1	↓
	T21.f						1	-051
	T21.5						1	↓
Relinquished by: (Signature)			Date/Time: 12/4/08	10:00	Received By: (Signature)			Date/Time: 12/4/08 10:00
Relinquished by: (Signature)			Date/Time: 12/4/08	10:05	Received By: (Signature)			Date/Time: 12/4/08 10:05
Remarks:	Delivery Method: Drop-off							
Custody Seals Intact:								Yes <input type="radio"/> No <input checked="" type="radio"/>



H2M LABS, INC.

TOY 122

Sample Receipt Checklist

Client Name TOY

Date and Time Received:

12/4/2008 10:00:00 AM

Work Order Number 0814044

Received by dmc

Checklist completed by

*[Signature]*  
Signature

12/4/08  
Date

Reviewed by

JRA  
Initials

12/9/08  
Date

Matrix:

Carrier name Hand Delivered

- Shipping container/cooler in good condition? Yes  No  Not Applicable
- Custody seals intact on shipping container/cooler? Yes  No  Not Applicable
- Custody seals intact on sample bottles? Yes  No  Not Applicable
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No
- Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No
- Water - pH acceptable upon receipt? Yes  No

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

TOY122 S11

**INTERNAL CHAIN OF CUSTODY**

CLIENT: TOY DELIVERABLES: B5-70D TURN AROUND TIME: 21 DAYS

SDG #: TOY122 CASE #: \_\_\_\_\_ MATRIX: AIR pH CHECK Y or (N)

REMARKS: \_\_\_\_\_

RECEIVED BY: DMC SIGNATURE: [Signature] DATE: 12/4/08 TIME: 10:00

CLIENT ID	H2M LAB #	DATE COLLECTED	BOTTLE TYPE	# OF BOTTLES	TESTS REQUESTED
• D1.F#B	0814044-001A	12/4/08	VOST	1	TOY_AIR
• D2.B	-002A	↓	↓	↓	↓
• ↓ F	-003A	↓	↓	↓	↓
• D3B	-004A	↓	↓	↓	↓
• ↓ F	-005A	↓	↓	↓	↓
• F1.F#B	-006A	↓	↓	↓	↓
• FB1.F#B	-007A	↓	↓	↓	↓
• FB2.F#B	-008A	↓	↓	↓	↓
• FB3.F#B	-009A	↓	↓	↓	↓
• M2.F#B	-010A	↓	↓	↓	↓
• M4.F#B	-011A	↓	↓	↓	↓
• M5.F#B	-012A	↓	↓	↓	↓
• M6.F#B	-013A	↓	↓	↓	↓
• M9(10).F#B	-014A	↓	↓	↓	↓
• (20).F#B	-015A	↓	↓	↓	↓
• (30).B	-016A	↓	↓	↓	↓
• ↓ F	-017A	↓	↓	↓	↓
• ↓ (40)F#B	-018A	↓	↓	↓	↓
• M13.F#B	-019A	↓	↓	↓	↓
• M16.F#B	✓ -020A	✓	✓	✓	✓

DMC  
12/4

VOLATILE

P 0229

TOY122 S12

# H2M LABS, INC.

PG 2 of 2

## INTERNAL CHAIN OF CUSTODY

CLIENT: TOY DELIVERABLES: BS-70D TURN AROUND TIME: 21 DAYS

SDG #: TOY122 CASE #: \_\_\_\_\_ MATRIX: AIR pH CHECK Y or N

REMARKS: \_\_\_\_\_

RECEIVED BY: DMC SIGNATURE: [Signature] DATE: 12/4/08 TIME: 10:00

CLIENT ID	H2M LAB #	DATE COLLECTED	BOTTLE TYPE	# OF BOTTLES	TESTS REQUESTED
M22.F#B	0814044-021A	12/4/08	VOST	1	TOY-AIR
M28.F#B	-022A				
M31.F#B	-023A				
M34.F#B	-024A				
M37.F#B	-025A				
M39.B	-026A				
M39.F	-027A				
U1.F#B	-028A				
U2.B	-029A				
U2.F	-030A				
TB1.F#B	-031A				

DMC  
12/4/08

VOLATILE

P 0232

TOY122 S13



# **H2M LABS, INC.**

## **3. SDG NARRATIVES**

# H2M LABS, INC.

SDG NARRATIVE FOR VOST ANALYSIS  
PROJECT: 2008 AMBIENT AIR AND SOIL GAS  
SAMPLES RECEIVED: 12/4/08  
SDG #: TOY122

Page 1 of 2

For Samples:

D1.F+B	FB3.F+B	M9(30).F	M37.F+B
D2.B	M2.F+B	M9(40).F+B	M39.B
D2.F	M4.F+B	M13.F+B	M39.F
D3.B	M5.F+B	M16.F+B	U1.F+B
D3.F	M6.F+B	M22.F+B	U2.B
F1.F+B	M9(10).F+B	M28.F+B	U2.F
FB1.F+B	M9(20).F+B	M31.F+B	TB1.F+B
FB2.F+B	M9(30).B	M34.F+B	

The fourth quarter ambient air and soil gas VOST samples were analyzed according to EPA Method 5041. The reporting format follows the requirements of the NYSDEC Analytical Service Protocol (ASP), Rev. 10/95.

## QC DATA

Acetone and methylene chloride were present in the method blanks. Positives for these analytes in the associated samples were flagged with the qualifier "B".

## TUNING / CALIBRATION

Tuning and calibration were performed according to EPA method 5041.

Multi-point calibration at three concentration levels from 5 to 1000 ng was performed with internal standard calibration. The low level calibrations for methylene chloride and ketones were excluded from the average response computation due to interference by contamination.

Chlorotrifluoromethane, 2-chloroethylvinyl ether and decane are reported to a quantification limit (PQL) of 25 ng and benzaldehyde to 50 ng based on the low responses for these analytes.

For the samples comprising the front tubes of the downwind or upwind samples, benzaldehyde is reported with elevated PQLs of 250 ng. due to interference by trimethylbenzene. The QC criteria of method 5041 for SPCC compounds and CCC compounds were met for the initial and continuous calibrations (CCV).

# H2M LABS, INC.

SDG NARRATIVE FOR VOST ANALYSIS  
PROJECT: 2008 AMBIENT AIR AND SOIL GAS  
SAMPLES RECEIVED: 12/4/08  
SDG #: TOY122

Page 2 of 2

## SAMPLE ANALYSIS

TIC compounds, identified as siloxanes or silanes, that are suspected to be column bleed introduced by the analytical system, were flagged with the qualifier "X".

Sample M5.F+B had no recovery for the third internal standard and for two surrogates. Sample results may be biased low. Sample F1.F+B had a low internal standard area count.

**I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.**

Date Reported: December 29, 2008

\*\*\*\*\*  
\*  
\*  
\*\*\*\*\*  
Joann M. Slavin  
Senior Vice President

TOY122 S17

# H2M LABS, INC.

- 4. **SAMPLE REPORTS**
  - 4.1 VOLATILES

# H2M LABS, INC.

## QUALIFIERS FOR REPORTING ORGANICS DATA

Value - If the result is a value greater than or equal to the quantification limit, report the value.

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For example, 10U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(300 \text{ U})}{D} \times \text{df where } D = \frac{100\% \text{ moisture}}{100}$$

and df - dilution factor

$$\text{For example, at 24\% moisture, } D = \frac{100 - 24}{100} = 0.76$$

$$\frac{(300 \text{ U})}{.76} \times 10 = 4300 \text{ U rounded to the appropriate number of significant figures}$$

For semivolatle soil samples, the extract must be concentrated to 0.5 mL, and the sensitivity of the analysis is not compromised by the cleanup procedures. Similarly, pesticide samples subjected to GPC are concentrated to 5.0 mL. Therefore, the CRQL values in Exhibit C will apply to all samples, regardless of cleanup. However, if a sample extract cannot be concentrated to the protocol-specified volume (see Exhibit C), this fact must be accounted for in reporting the sample quantitation limit.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified quantification limit but greater than zero. (e.g.: If limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, report as 3J.) The sample quantitation limit must be adjusted for dilution as discussed for the U flag.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported of Form I with a "P".

C - This flag applies to pesticide results when the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag, instead use a Laboratory defined flag, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

# H2M LABS, INC.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. If one or more compounds have a response greater than full scale, except as noted in Exhibit D, the sample or extract must be diluted and re-analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration ranges in the second analysis, then the results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number. NOTE: For total xylenes, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately, e.g. a diluted analysis is not required for total xylenes unless the concentration of the peak representing the single isomer exceed 200 ug/L or the peak representing the two coeluting isomers on that GC column exceed 400 ug/L. Similarly, if the two 1,2-Dichloroethene isomers coelute, a diluted analysis is not required unless the concentration exceed 400 ug/L.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - This flag indicates suspected column bleed.

Y - This flag denotes concentration of tentatively identified compounds (TICs) to be biased low due to matrix interference with internal standard.

Z - Other specific flags may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the SDG narrative. Begin by using "X". If more than one flag is required use "Y" and "Z" as needed. If more than five qualifiers are required for a sample result, used the "X" flag to combine several flags as needed. For instance, the "X" flag might combine "A", "B", and "D" flags for some samples. The laboratory defined flags limited to the letters "X", "Y" and "Z".

The combination of flags "BU" or "UB" is expressly prohibited. Blank contaminants are flagged "B" only when they are detected in the sample.

# H2M LABS, INC.

## QUALIFIERS FOR REPORTING ORGANICS DATA

Value - If the result is a value greater than or equal to the quantification limit, report the value.

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For example, 10U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(300 \text{ U})}{D} \times \text{df where } D = \frac{100\% \text{ moisture}}{100}$$

and df - dilution factor

$$\text{For example, at 24\% moisture, } D = \frac{100 - 24}{100} = 0.76$$

$$\frac{(300 \text{ U})}{.76} \times 10 = 4300 \text{ U rounded to the appropriate number of significant figures}$$

For semivolatile soil samples, the extract must be concentrated to 0.5 mL, and the sensitivity of the analysis is not compromised by the cleanup procedures. Similarly, pesticide samples subjected to GPC are concentrated to 5.0 mL. Therefore, the CRQL values in Exhibit C will apply to all samples, regardless of cleanup. However, if a sample extract cannot be concentrated to the protocol-specified volume (see Exhibit C), this fact must be accounted for in reporting the sample quantitation limit.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified quantification limit but greater than zero. (e.g.: If limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, report as 3J.) The sample quantitation limit must be adjusted for dilution as discussed for the U flag.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported of Form I with a "P".

C - This flag applies to pesticide results when the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag, instead use a Laboratory defined flag, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

D1 F&B

MATRIX : AIR

Sample ID. : 0814044-001A

Lab File ID : W1915.D

Date/Time Analyzed: 17 Dec 20 8 15:29

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 u
Vinyl Chloride		5 u
Bromomethane		5 u
Chloroethane		5 u
1,1-Dichloroethene		5 u
Trichlorofluoromethane		650
Acetone		200 B
Carbon Disulfide		5 u
Methylene Chloride		120 B
2-Butanone		150
trans-1,2-Dichloroethene		5 u
cis-1,2-Dichloroethene		5 u
1,1-Dichloroethane		5 u
Chloroform		37
1,2-Dichloroethane		5 u
1,1,1-Trichloroethane		5 u
Carbon Tetrachloride		270
Trichloroethene		19
Benzene		370
1,2-Dichloropropane		5 u
Bromodichloromethane		5 u
cis-1,3-Dichloropropene		5 u
trans-1,3-Dichloropropene		5 u
1,1,2-Trichloroethane		5 u
4-Methyl-2-Pentanone		8 u
2-Hexanone		8 u
Toluene		610
Tetrachloroethene		140
Dibromochloromethane		5 u
Chlorobenzene		5 u
Ethylbenzene		110
Xylene (total)		470
Styrene		5 u
Bromoform		8 u
1,1,2,2-Tetrachloroethane		5 u
2/4-Ethyltoluene (total)		280
1,3-Dichlorobenzene		5 u
1,4-Dichlorobenzene		32
1,2-Dichlorobenzene		5 u
Chlorotrifluoromethane		25 u
Chloroethylvinylether		25 u
Benzaldehyde		250 u
Decane		87

TOY122 S22

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D1.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-001A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1915.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/17/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found:

*72 ppm  
12/26/08*

(µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.40	3300	JN
2. 000075-28-5	Isobutane	1.65	1600	JN
3. 000106-97-8	Butane	1.93	2200	JN
4. 000078-78-4	Butane, 2-methyl-	2.69	2300	JN
5. 000076-13-1	Ethane, 1,1,2-trichloro-1,2,2-trifl	3.43	1100	JN
6. 000107-83-5	Pentane, 2-methyl-	3.85	1600	JN
7. 000110-54-3	Hexane	4.31	1600	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

D2.F

MATRIX : AIR

Sample ID. : 0814044-003A

Lab File ID : W1897.D

Date/Time Analyzed: 15 Dec 20 8 21:38

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane	5	u
Vinyl Chloride	5	u
Bromomethane	5	u
Chloroethane	5	u
1,1-Dichloroethene	5	u
Trichlorofluoromethane	100	
Acetone	140	B
Carbon Disulfide	5	u
Methylene Chloride	52	B
2-Butanone	170	
trans-1,2-Dichloroethene	5	u
cis-1,2-Dichloroethene	5	u
1,1-Dichloroethane	5	u
Chloroform	29	
1,2-Dichloroethane	5	u
1,1,1-Trichloroethane	5	u
Carbon Tetrachloride	190	
Trichloroethene	17	
Benzene	350	
1,2-Dichloropropane	5	u
Bromodichloromethane	5	u
cis-1,3-Dichloropropene	5	u
trans-1,3-Dichloropropene	5	u
1,1,2-Trichloroethane	5	u
4-Methyl-2-Pentanone	52	
2-Hexanone	8	u
Toluene	630	
Tetrachloroethene	130	
Dibromochloromethane	5	u
Chlorobenzene	5	u
Ethylbenzene	110	
Xylene (total)	490	
Styrene	5	u
Bromoform	14	
1,1,2,2-Tetrachloroethane	22	
2/4-Ethyltoluene (total)	280	
1,3-Dichlorobenzene	5	u
1,4-Dichlorobenzene	32	
1,2-Dichlorobenzene	5	u
Chlorotrifluoromethane	25	u
Chloroethylvinylether	25	u
Benzaldehyde	250	u
Decane	80	

TOY122 S26

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

D2.F

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIRLab Sample ID: 0814044-003ASample wt/vol: 5(g/mL) GLab File ID: 08\W1897.DLevel: (low/med) LOWDate Received: 12/04/08

% Moisture: not dec.

Date Analyzed: 12/15/08GC Column: R-502.2ID: .53 (mm)Dilution Factor: 1.00

Soil Extract Volume:

(µl)

Soil Aliquot Volume: 0 (µL)

Number TICs found:

*76* *PT: 12/26/08*

CONCENTRATION UNITS:

(µg/L or µg/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000078-78-4	Butane, 2-methyl-	2.89	530	JN
2. 000107-83-5	Pentane, 2-methyl-	3.85	1100	JN
3. 000096-14-0	Pentane, 3-methyl-	4.07	670	JN
4. 000110-54-3	Hexane	4.30	1400	JN
5. 000591-76-4	Hexane, 2-methyl-	5.39	700	JN
6.	branched alkane	5.79	500	J
7. 000111-65-9	Octane	8.35	260	JN

1A  
VOLATILE ORGANIC ANALYSIS DATA SHEET  
VOST

H2M LABS INC.

Sample No.

D2.B

MATRIX : AIR

Sample ID : 0814044-002A

Lab File ID : W1898.D

Date/Time Analyzed: 15 Dec 20 8 22:14

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		530
Acetone		120 B
Carbon Disulfide		5 U
Methylene Chloride		110 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		9
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		61
Trichloroethene		5 U
Benzene		33
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S24

1F

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

D2.B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-002A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1898.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/15/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

Number TICs found: *T2 P<sup>m</sup> p<sup>h</sup>6/08* CONCENTRATION UNITS: (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.40	1400	JN
2. 000075-28-5	Isobutane	1.64	620	JN
3. 000106-97-8	Butane	1.92	820	JN
4. 000078-78-4	Butane, 2-methyl-	2.68	610	JN
5. 000076-13-1	Ethane, 1,1,2-trichloro-1,2,2-trifl	3.43	270	JN
6. 000107-83-5	Pentane, 2-methyl-	3.85	180	JN
7.	branched alkane	5.82	130	J

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

D3.F

MATRIX : AIR

Sample ID : 0814044-005A

Lab File ID : W1900.D

Date/Time Analyzed: 15 Dec 20 8 23:25

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		96
Acetone		140 B
Carbon Disulfide		5 U
Methylene Chloride		88 B
2-Butanone		250
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		41
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		180
Trichloroethene		15
Benzene		450
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		1,200 E
Tetrachloroethene		180
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		200
Xylene (total)		890
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		430
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		49
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		250 U
Decane		120

TOY122 S30

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D3.F

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIR

Lab Sample ID: 0814044-005A

Sample wt/vol: 5

(g/mL) G

Lab File ID: 08\W1900.D

Level: (low/med) LOW

Date Received: 12/04/08

% Moisture: not dec.

Date Analyzed: 12/15/08

GC Column: R-502.2

ID: .53 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_

( $\mu$ l)

Soil Aliquot Volume: 0 ( $\mu$ L)

Number TICs found:

*7 1* *pa 12/20/08*

CONCENTRATION UNITS:

( $\mu$ g/L or  $\mu$ g/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	4.30	320	JN
2.	straight-chain alkane	6.74	350	J
3. 000108-87-2	Cyclohexane, methyl-	7.04	450	JN
4.	branched alkane (7.3)	7.30	500	J
5.	unknown	7.51	810	J
6.	branched alkane (7.75)	7.75	440	J
7. 000111-65-9	Octane	8.34	450	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

D3.B

MATRIX : AIR

Sample ID : 0814044-004A

Lab File ID : W1899.D

Date/Time Analyzed: 15 Dec 20 8 22:50

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng	
Chloromethane		5	U
Vinyl Chloride		5	U
Bromomethane		5	U
Chloroethane		5	U
1,1-Dichloroethene		5	U
Trichlorofluoromethane		430	
Acetone		300	B
Carbon Disulfide		5	U
Methylene Chloride		110	B
2-Butanone		8	U
trans-1,2-Dichloroethene		5	U
cis-1,2-Dichloroethene		5	U
1,1-Dichloroethane		5	U
Chloroform		7	
1,2-Dichloroethane		5	U
1,1,1-Trichloroethane		5	U
Carbon Tetrachloride		49	
Trichloroethene		5	U
Benzene		13	
1,2-Dichloropropane		5	U
Bromodichloromethane		5	U
cis-1,3-Dichloropropene		5	U
trans-1,3-Dichloropropene		5	U
1,1,2-Trichloroethane		5	U
4-Methyl-2-Pentanone		15	
2-Hexanone		23	
Toluene		5	U
Tetrachloroethene		5	U
Dibromochloromethane		5	U
Chlorobenzene		5	U
Ethylbenzene		5	U
Xylene (total)		5	U
Styrene		5	U
Bromoform		8	U
1,1,2,2-Tetrachloroethane		5	U
2/4-Ethyltoluene (total)		5	U
1,3-Dichlorobenzene		5	U
1,4-Dichlorobenzene		5	U
1,2-Dichlorobenzene		5	U
Chlorotrifluoromethane		25	U
Chloroethylvinylether		25	U
Benzaldehyde		110	
Decane		25	U

TOY122 S28

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D3.B

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIR

Lab Sample ID: 0814044-004A

Sample wt/vol: 5

(g/mL) G

Lab File ID: 08\W1899.D

Level: (low/med) LOW

Date Received: 12/04/08

% Moisture: not dec.

Date Analyzed: 12/15/08

GC Column: R-502.2

ID: .53 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_

(µl)

Soil Aliquot Volume: 0 (µL)

Number TICs found: \_\_\_\_\_

*62 pm 12/26/08*

CONCENTRATION UNITS:

(µg/L or µg/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.51	280	JN
2. 000075-28-5	Isobutane	1.77	570	JN
3. 000106-97-8	Butane	2.05	720	JN
4. 000078-78-4	Butane, 2-methyl-	2.79	730	JN
5. 000076-13-1	Ethane, 1,1,2-trichloro-1,2,2-trifl	3.45	210	JN
6.	branched alkane	5.86	570	J

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

U2.F

MATRIX : AIR

Sample ID : 0814044-030A

Lab File ID : W1902.D

Date/Time Analyzed: 16 Dec 20 8 0:35

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane	5	U
Vinyl Chloride	5	U
Bromomethane	5	U
Chloroethane	5	U
1,1-Dichloroethene	95	
Trichlorofluoromethane	120	B
Acetone	5	U
Carbon Disulfide	52	B
Methylene Chloride	130	
2-Butanone	5	U
trans-1,2-Dichloroethene	5	U
cis-1,2-Dichloroethene	5	U
1,1-Dichloroethane	28	
Chloroform	5	U
1,2-Dichloroethane	5	U
1,1,1-Trichloroethane	180	
Carbon Tetrachloride	15	
Trichloroethene	340	
Benzene	5	U
1,2-Dichloropropane	5	U
Bromodichloromethane	5	U
cis-1,3-Dichloropropene	5	U
trans-1,3-Dichloropropene	5	U
1,1,2-Trichloroethane	8	U
4-Methyl-2-Pentanone	8	U
2-Hexanone	570	
Toluene	110	
Tetrachloroethene	5	U
Dibromochloromethane	5	U
Chlorobenzene	98	
Ethylbenzene	450	
Xylene (total)	5	U
Styrene	8	U
Bromoform	5	U
1,1,2,2-Tetrachloroethane	260	
2/4-Ethyltoluene (total)	5	U
1,3-Dichlorobenzene	24	
1,4-Dichlorobenzene	5	U
1,2-Dichlorobenzene	25	U
Chlorotrifluoromethane	25	U
Chloroethylvinylether	250	U
Benzaldehyde	70	
Decane		

TOY122 S80

IF  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

U2.F

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-030A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1902.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/16/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 10 *PVL 12/21/08* (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000078-78-4	Butane, 2-methyl-	2.67	610	JN
2. 000107-83-5	Pentane, 2-methyl-	3.83	1200	JN
3.	branched alkane (4.06)	4.06	710	J
4. 000110-54-3	Hexane	4.29	1300	JN
5. 000591-76-4	Hexane, 2-methyl-	5.40	680	JN
6.	branched alkane (5.8)	5.80	480	J
7. 000111-65-9	Octane	8.35	200	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

U2.B

MATRIX : AIR

Sample ID : 0814044-029A

Lab File ID : W1901.D

Date/Time Analyzed: 16 Dec 20 8 0:00

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		350
Acetone		170 B
Carbon Disulfide		5 U
Methylene Chloride		87 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		7
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		52
Trichloroethene		5 U
Benzene		15
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S78

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

U2.B

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIR

Lab Sample ID: 0814044-029A

Sample wt/vol: 5

(g/mL) G

Lab File ID: 08\W1901.D

Level: (low/med) LOW

Date Received: 12/04/08

% Moisture: not dec.

Date Analyzed: 12/16/08

GC Column: R-502.2

ID: .53 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_

( $\mu$ l)

Soil Aliquot Volume: 0 ( $\mu$ L)

CONCENTRATION UNITS:

( $\mu$ g/L or  $\mu$ g/Kg)

ng

Number TICs found: 12 *M 12/26/08*

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.40	560	JN
2. 000075-28-5	Isobutane	1.64	640	JN
3. 000106-97-8	Butane	1.92	920	JN
4. 000078-78-4	Butane, 2-methyl-	2.69	720	JN
5. 000076-13-1	Ethane, 1,1,2-trichloro-1,2,2-trifl	3.43	240	JN
6. 000107-83-5	Pentane, 2-methyl-	3.83	220	JN
7.	branched alkane	5.78	130	J

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

U1 F&B

MATRIX : AIR

Sample ID. : 0814044-028A

Lab File ID : W1934.D

Date/Time Analyzed: 18 Dec 20 8 15:15

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		440
Acetone		200 B
Carbon Disulfide		5 U
Methylene Chloride		100 B
2-Butanone		160
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		37
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		250
Trichloroethene		16
Benzene		370
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		570
Tetrachloroethene		120
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		110
Xylene (total)		460
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		280
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		28
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		250 U
Decane		73

TOY122 S76

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

U1.F+B

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIR

Lab Sample ID: 0814044-028A

Sample wt/vol: 5

(g/mL) G

Lab File ID: 08\W1934.D

Level: (low/med) LOW

Date Received: 12/04/08

% Moisture: not dec.

Date Analyzed: 12/18/08

GC Column: R-502.2

ID: .53 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_

( $\mu$ l)

Soil Aliquot Volume: 0 ( $\mu$ L)

CONCENTRATION UNITS:

Number TICs found: 7

*PA 12/18/08*

( $\mu$ g/L or  $\mu$ g/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.41	1500	JN
2. 000075-28-5	Isobutane	1.66	1400	JN
3. 000106-97-8	Butane	1.93	2200	JN
4. 000078-78-4	Butane, 2-methyl-	2.70	2300	JN
5. 000107-83-5	Pentane, 2-methyl-	3.85	1900	JN
6.	branched alkane	4.07	1200	J
7. 000110-54-3	Hexane	4.30	1600	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

F1 F&B

MATRIX : AIR

Sample ID. : 0814044-006A

Lab File ID : W1916.D

Date/Time Analyzed: 17 Dec 20 8 16:05

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		220
Acetone		310 B
Carbon Disulfide		5 U
Methylene Chloride		190 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S32

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

F1.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-006A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1916.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/17/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

Number TICs found: *83 pm 12/26/08* CONCENTRATION UNITS: (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.37	430	JN
2. 002317-91-1	Ethene, 1-chloro-1-fluoro-	1.61	260	JN
3.	branched alkane (1.89)	1.89	78	J
4. 001717-00-6	1,1-Dichloro-1-fluoroethane	3.28	970	JN
5.	branched alkane (4.31)	4.31	35	J
6.	unknown siloxane	13.97	51	JX

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

FB1 F&B

MATRIX : AIR

Sample ID. : 0814044-007A

Lab File ID : W1888.D

Date/Time Analyzed: 12 Dec 20 8 19:12

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		5 U
Acetone		20 B
Carbon Disulfide		5 U
Methylene Chloride		9 B
2-Butanone		15
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		18
2-Hexanone		14
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		10
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S34

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

FBI.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-007A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1888.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/12/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A  
VOLATILE ORGANIC ANALYSIS DATA SHEET  
VOST

H2M LABS INC.

Sample No.

FB2 F&B

MATRIX : AIR

Sample ID : 0814044-008A

Lab File ID : W1889.D

Date/Time Analyzed: 12 Dec 20 8 19:49

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		5 U
Acetone		9 B
Carbon Disulfide		5 U
Methylene Chloride		8 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S36

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FB2.F+B

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIR

Lab Sample ID: 0814044-008A

Sample wt/vol: 5

(g/mL) G

Lab File ID: 08\W1889.D

Level: (low/med) LOW

Date Received: 12/04/08

% Moisture: not dec.

Date Analyzed: 12/12/08

GC Column: R-502.2

ID: .53 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_

(µl)

Soil Aliquot Volume: 0 (µL)

Number TICs found:

*x 0* *12/26/08*

CONCENTRATION UNITS:

(µg/L or µg/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000109-66-0	Pentane	2.90	38	JN

1A  
VOLATILE ORGANIC ANALYSIS DATA SHEET  
VOST

H2M LABS INC.

Sample No.

FB3 F&B

MATRIX : AIR

Sample ID : 0814044-009A

Lab File ID : W1890.D

Date/Time Analyzed: 12 Dec 20 8 20:26

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng	
Chloromethane		5	U
Vinyl Chloride		5	U
Bromomethane		5	U
Chloroethane		5	U
1,1-Dichloroethene		5	U
Trichlorofluoromethane		5	U
Acetone		42	B
Carbon Disulfide		5	U
Methylene Chloride		11	B
2-Butanone		37	
trans-1,2-Dichloroethene		5	U
cis-1,2-Dichloroethene		5	U
1,1-Dichloroethane		5	U
Chloroform		5	U
1,2-Dichloroethane		5	U
1,1,1-Trichloroethane		5	U
Carbon Tetrachloride		5	U
Trichloroethene		5	U
Benzene		5	U
1,2-Dichloropropane		5	U
Bromodichloromethane		5	U
cis-1,3-Dichloropropene		5	U
trans-1,3-Dichloropropene		5	U
1,1,2-Trichloroethane		5	U
4-Methyl-2-Pentanone		26	
2-Hexanone		36	
Toluene		5	U
Tetrachloroethene		5	U
Dibromochloromethane		5	U
Chlorobenzene		5	U
Ethylbenzene		5	U
Xylene (total)		5	U
Styrene		5	U
Bromoform		8	U
1,1,2,2-Tetrachloroethane		6	
2/4-Ethyltoluene (total)		5	U
1,3-Dichlorobenzene		5	U
1,4-Dichlorobenzene		5	U
1,2-Dichlorobenzene		5	U
Chlorotrifluoromethane		25	U
Chloroethylvinylether		25	U
Benzaldehyde		50	U
Decane		25	U

TOY122 S38

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FB3.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-009A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1890.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/12/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

TB1 F&B

MATRIX : AIR

Sample ID : 0814044-031A

Lab File ID : W1896.D

Date/Time Analyzed: 15 Dec 20 8 21:00

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		11
Vinyl Chloride		9
Bromomethane		8
Chloroethane		8
1,1-Dichloroethene		6
Trichlorofluoromethane		6
Acetone		39
Carbon Disulfide		7
Methylene Chloride		17
2-Butanone		31
trans-1,2-Dichloroethene		5
cis-1,2-Dichloroethene		5
1,1-Dichloroethane		5
Chloroform		5
1,2-Dichloroethane		5
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Trichloroethene		5
Benzene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
cis-1,3-Dichloropropene		5
trans-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
4-Methyl-2-Pentanone		33
2-Hexanone		36
Toluene		5
Tetrachloroethene		5
Dibromochloromethane		5
Chlorobenzene		5
Ethylbenzene		5
Xylene (total)		5
Styrene		5
Bromoform		9
1,1,2,2-Tetrachloroethane		18
2/4-Ethyltoluene (total)		5
1,3-Dichlorobenzene		5
1,4-Dichlorobenzene		5
1,2-Dichlorobenzene		5
Chlorotrifluoromethane		25
Chloroethylvinylether		25
Benzaldehyde		50
Decane		25

TOY122 S82

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TB1.F+B

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIR

Lab Sample ID: 0814044-031A

Sample wt/vol: 5

(g/mL) G

Lab File ID: 08\W1896.D

Level: (low/med) LOW

Date Received: 12/04/08

% Moisture: not dec.

Date Analyzed: 12/15/08

GC Column: R-502.2

ID: .53 (mm)

Dilution Factor: 1.00

Soil Extract Volume:

( $\mu$ l)

Soil Aliquot Volume: 0 ( $\mu$ L)

CONCENTRATION UNITS:

Number TICs found:

0

( $\mu$ g/L or  $\mu$ g/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
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1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M2 F&B

MATRIX : AIR

Sample ID. : 0814044-010A

Lab File ID : W1917.D

Date/Time Analyzed: 17 Dec 20 8 16:42

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		15
Acetone		26 B
Carbon Disulfide		5 U
Methylene Chloride		130 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		13
Tetrachloroethene		8
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		10
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S40

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

M2.F+B

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIRLab Sample ID: 0814044-010ASample wt/vol: 5(g/mL) GLab File ID: 08W1917.DLevel: (low/med) LOWDate Received: 12/04/08

% Moisture: not dec.

Date Analyzed: 12/17/08GC Column: R-502.2ID: .53 (mm)Dilution Factor: 1.00

Soil Extract Volume:

(µl)

Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found:

7 <sup>PM</sup> 12/26/09

(µg/L or µg/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.37	44	JN
2. 000110-54-3	Hexane	4.29	78	JN
3.	c3-subs_benzene	13.36	39	J
4.	branched alkane	13.48	36	J
5.	Limonene isomer	13.62	37	J
6.	unknown	14.55	51	J
7. 000112-40-3	Dodecane	15.00	100	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M4 F&B

MATRIX : AIR

Sample ID. : 0814044-011A

Lab File ID : W1918.D

Date/Time Analyzed: 17 Dec 20 8 17:19

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		15
1 Acetone		8 U B
Carbon Disulfide		5 U
Methylene Chloride		20 B
2 2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
3 4-Methyl-2-Pentanone		8 U
4 2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
5 Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
6 Chlorotrifluoromethane		25 U
7 Chloroethylvinylether		25 U
8 Benzaldehyde		50 U
9 Decane		25 U

TOY122 S42

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M4.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-011A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1918.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/17/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 1 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.36	54	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M5 F&B

MATRIX : AIR

Sample ID. : 0814044-012A

Lab File ID : W1919.D

Date/Time Analyzed: 17 Dec 20 8 17:56

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		14
Acetone		18 B
Carbon Disulfide		5 U
Methylene Chloride		17 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S44

1F  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M5.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-012A

Sample wt/vol: 5 (g/mL) 5 Lab File ID: 08\W1919.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/17/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µl)

CONCENTRATION UNITS:

Number TICs found: 1 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.34	39	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
 VOST

H2M LABS INC.

Sample No.

M6 F&B

MATRIX : AIR

Sample ID. : 0814044-013A

Lab File ID : W1920.D

Date/Time Analyzed: 17 Dec 20 8 18:34

Instrument ID:

Split Factor : 1 : 1  
 Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		15
Acetone		15 B
Carbon Disulfide		5 U
Methylene Chloride		7 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		17
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S46

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

M6.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-013A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1920.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/17/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

## CONCENTRATION UNITS:

Number TICs found: 2 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.30	48	JN
2. 000076-14-2	Dichlorotetrafluoroethane	1.60	190	JN

1A  
VOLATILE ORGANIC ANALYSIS DATA SHEET  
VOST

H2M LABS INC.

Sample No.

M9(10) F&B

MATRIX : AIR

Sample ID. : 0814044-014A

Lab File ID : W1921.D

Date/Time Analyzed: 17 Dec 20 8 19:10

Instrument ID:

Split Factor : 1 : 1

Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng	
Chloromethane		5	U
Vinyl Chloride		5	U
Bromomethane		5	U
Chloroethane		5	U
1,1-Dichloroethene		5	U
Trichlorofluoromethane		42	
Acetone		21	B
Carbon Disulfide		5	U
Methylene Chloride		12	B
2-Butanone		8	U
trans-1,2-Dichloroethene		5	U
cis-1,2-Dichloroethene		5	U
1,1-Dichloroethane		5	U
Chloroform		7	
1,2-Dichloroethane		5	U
1,1,1-Trichloroethane		5	U
Carbon Tetrachloride		5	U
Trichloroethene		5	U
Benzene		5	U
1,2-Dichloropropane		5	U
Bromodichloromethane		5	U
cis-1,3-Dichloropropene		5	U
trans-1,3-Dichloropropene		5	U
1,1,2-Trichloroethane		5	U
4-Methyl-2-Pentanone		8	U
2-Hexanone		8	U
Toluene		5	U
Tetrachloroethene		89	
Dibromochloromethane		5	U
Chlorobenzene		5	U
Ethylbenzene		5	U
Xylene (total)		5	U
Styrene		5	U
Bromoform		8	U
1,1,2,2-Tetrachloroethane		5	U
2/4-Ethyltoluene (total)		5	U
1,3-Dichlorobenzene		5	U
1,4-Dichlorobenzene		5	U
1,2-Dichlorobenzene		5	U
Chlorotrifluoromethane		25	U
Chloroethylvinylether		25	U
Benzaldehyde		50	U
Decane		25	U

TOY122 S48

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M9(10).F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122  
 Matrix: (soil/water) AIR Lab Sample ID: 0814044-014A  
 Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1921.D  
 Level: (low/med) LOW Date Received: 12/04/08  
 % Moisture: not dec. Date Analyzed: 12/17/08  
 GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00  
 Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 3 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.40	73	JN
2. 000076-14-2	Dichlorotetrafluoroethane	1.64	240	JN
3.	unknown siloxane	13.96	55	JX

*pn*  
*12/26/08*

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M9(20) F&B

MATRIX : AIR

Sample ID. : 0814044-015A

Lab File ID : W1922.D

Date/Time Analyzed: 17 Dec 20 8 19:47

Instrument ID:

Split Factor : 1 : 1

Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		42
Acetone		16 B
Carbon Disulfide		5 U
Methylene Chloride		19 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		11
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		11
Carbon Tetrachloride		5 U
Trichloroethene		10
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		180
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S50

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M9(20).F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-015A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1922.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/17/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 3 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.34	170	JN
2. 000076-14-2	Dichlorotetrafluoroethane	1.53	720	JN
3.	unknown	3.40	25	J

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M9(30).B

MATRIX : AIR

Sample ID. : 0814044-016A

Lab File ID : W1914.D

Date/Time Analyzed: 17 Dec 20 8 14:53

Instument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng	
Chloromethane		5	u
Vinyl Chloride		5	u
Bromomethane		5	u
Chloroethane		5	u
1,1-Dichloroethene		5	u
Trichlorofluoromethane		8	
Acetone		8	B
Carbon Disulfide		5	u
Methylene Chloride		13	B
2-Butanone		42	
trans-1,2-Dichloroethene		5	u
cis-1,2-Dichloroethene		5	u
1,1-Dichloroethane		5	u
Chloroform		5	u
1,2-Dichloroethane		5	u
1,1,1-Trichloroethane		5	u
Carbon Tetrachloride		5	u
Trichloroethene		5	u
Benzene		5	u
1,2-Dichloropropane		5	u
Bromodichloromethane		5	u
cis-1,3-Dichloropropene		5	u
trans-1,3-Dichloropropene		5	u
1,1,2-Trichloroethane		5	u
4-Methyl-2-Pentanone		29	
2-Hexanone		8	u
Toluene		5	u
Tetrachloroethene		5	u
Dibromochloromethane		5	u
Chlorobenzene		5	u
Ethylbenzene		5	u
Xylene (total)		5	u
Styrene		5	u
Bromoform		10	
1,1,2,2-Tetrachloroethane		16	
2/4-Ethyltoluene (total)		5	u
1,3-Dichlorobenzene		5	u
1,4-Dichlorobenzene		5	u
1,2-Dichlorobenzene		5	u
Chlorotrifluoromethane		25	u
Chloroethylvinylether		25	u
Benzaldehyde		50	u
Decane		25	u

TOY122 S52

1F  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M9(30).B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-016A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1914.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/17/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 2 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.40	300	JN
2. 000076-14-2	Dichlorotetrafluoroethane	1.62	1500	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M9(30).F

MATRIX : AIR

Sample ID. : 0814044-017A

Lab File ID : W1905.D

Date/Time Analyzed: 16 Dec 20 8 2:24

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane	5	U
Vinyl Chloride	5	U
Bromomethane	5	U
Chloroethane	5	U
1,1-Dichloroethene	5	U
Trichlorofluoromethane	40	
Acetone	8	B
Carbon Disulfide	5	U
Methylene Chloride	19	B
2-Butanone	8	U
trans-1,2-Dichloroethene	5	U
cis-1,2-Dichloroethene	5	U
1,1-Dichloroethane	5	U
Chloroform	10	
1,2-Dichloroethane	5	U
1,1,1-Trichloroethane	12	
Carbon Tetrachloride	5	U
Trichloroethene	30	
Benzene	5	U
1,2-Dichloropropane	5	U
Bromodichloromethane	5	U
cis-1,3-Dichloropropene	5	U
trans-1,3-Dichloropropene	5	U
1,1,2-Trichloroethane	5	U
4-Methyl-2-Pentanone	8	U
2-Hexanone	8	U
Toluene	5	U
Tetrachloroethene	330	
Dibromochloromethane	5	U
Chlorobenzene	5	U
Ethylbenzene	5	U
Xylene (total)	5	U
Styrene	5	U
Bromoform	8	U
1,1,2,2-Tetrachloroethane	5	U
2/4-Ethyltoluene (total)	5	U
1,3-Dichlorobenzene	5	U
1,4-Dichlorobenzene	5	U
1,2-Dichlorobenzene	5	U
Chlorotrifluoromethane	25	U
Chloroethylvinylether	25	U
Benzaldehyde	50	U
Decane	25	U

TOY122 S54

IF  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M9(30).F

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122  
 Matrix: (soil/water) AIR Lab Sample ID: 0814044-017A  
 Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1905.D  
 Level: (low/med) LOW Date Received: 12/04/08  
 % Moisture: not dec. Date Analyzed: 12/16/08  
 GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00  
 Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 3 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.37	33	JN
2. 000076-14-2	Dichlorotetrafluoroethane	1.56	35	JN
3. 001717-00-6	1,1-Dichloro-1-fluoroethane	3.26	26	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M9(40) F&B

MATRIX : AIR

Sample ID : 0814044-018A

Lab File ID : W1923.D

Date/Time Analyzed: 17 Dec 20 8 20:24

Instrument ID:

Split Factor : 1 : 1

Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 u
Vinyl Chloride		5 u
Bromomethane		5 u
Chloroethane		5 u
1,1-Dichloroethene		5 u
Trichlorofluoromethane		58
Acetone		16 B
Carbon Disulfide		5 u
Methylene Chloride		9 B
2-Butanone		8 u
trans-1,2-Dichloroethene		5 u
cis-1,2-Dichloroethene		5 u
1,1-Dichloroethane		5 u
Chloroform		7
1,2-Dichloroethane		5 u
1,1,1-Trichloroethane		16
Carbon Tetrachloride		5 u
Trichloroethene		55
Benzene		5 u
1,2-Dichloropropane		5 u
Bromodichloromethane		5 u
cis-1,3-Dichloropropene		5 u
trans-1,3-Dichloropropene		5 u
1,1,2-Trichloroethane		5 u
4-Methyl-2-Pentanone		8 u
2-Hexanone		8 u
Toluene		5 u
Tetrachloroethene		640
Dibromochloromethane		5 u
Chlorobenzene		5 u
Ethylbenzene		5 u
Xylene (total)		5 u
Styrene		5 u
Bromoform		8 u
1,1,2,2-Tetrachloroethane		5 u
2/4-Ethyltoluene (total)		5 u
1,3-Dichlorobenzene		5 u
1,4-Dichlorobenzene		5 u
1,2-Dichlorobenzene		5 u
Chlorotrifluoromethane		25 u
Chloroethylvinylether		25 u
Benzaldehyde		50 u
Decane		25 u

TOY122 S56

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M9(40).F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122  
 Matrix: (soil/water): AIR Lab Sample ID: 0814044-018A  
 Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1923.D  
 Level: (low/med) LOW Date Received: 12/04/08  
 % Moisture: not dec. Date Analyzed: 12/17/08  
 GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00  
 Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 4 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.37	330	JN
2. 000076-14-2	Dichlorotetrafluoroethane	1.58	1600	JN
3. 001717-00-6	1,1-Dichloro-1-fluoroethane	3.27	40	JN
4. 000076-13-1	Ethane, 1,1,2-trichloro-1,2,2-trifl	3.44	59	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
 VOST

H2M LABS INC.

Sample No.

M13 F&B

MATRIX : AIR

Sample ID. : 0814044-019A

Lab File ID : W1924.D

Date/Time Analyzed: 17 Dec 20 8 21:01

Instrument ID:

Split Factor : 1 : 1  
 Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		20
Acetone		8 B
Carbon Disulfide		5 U
Methylene Chloride		11 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		10
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		49
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S58

1F  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M13.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-019A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1924.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/17/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 1 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.37	47	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M16 F&B

MATRIX : AIR

Sample ID : 0814044-020A

Lab File ID : W1925.D

Date/Time Analyzed: 17 Dec 20 8 21:38

Instrument ID:

Split Factor : 1 : 1

Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		29
Acetone		25 B
Carbon Disulfide		5 U
Methylene Chloride		10 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		31
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,1,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S60

IF  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M16.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-020A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1925.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/17/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 1 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.37	130	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M22 F&B

MATRIX : AIR

Sample ID. : 0814044-021A

Lab File ID : W1926.D

Date/Time Analyzed: 17 Dec 20 8 22:14

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		7
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		17
Acetone		21 B
Carbon Disulfide		5 U
Methylene Chloride		15 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		6
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		7
Trichloroethene		5 U
Benzene		6
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		7
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S62

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M22.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122  
 Matrix: (soil/water) AIR Lab Sample ID: 0814044-021A  
 Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1926.D  
 Level: (low/med) LOW Date Received: 12/04/08  
 % Moisture: not dec. Date Analyzed: 12/17/08  
 GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00  
 Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µl)

CONCENTRATION UNITS:

Number TICs found: 8 2 *PM 12/26/08* (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	1.33	80	J
2. 000075-28-5	Isobutane	1.60	40	JN
3. 000106-97-8	Butane	1.88	67	JN
4. 000078-78-4	Butane, 2-methyl-	2.66	64	JN
5. 001717-00-6	1,1-Dichloro-1-fluoroethane	3.27	29	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M28 F&B

MATRIX : AIR

Sample ID. : 0814044-022A

Lab File ID : W1927.D

Date/Time Analyzed: 17 Dec 20 8 22:50

Instument ID:

Split Factor : 1 : 1

Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		16
Acetone		20 B
Carbon Disulfide		5 U
Methylene Chloride		13 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		6
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S64

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M28.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122  
 Matrix: (soil/water) AIR Lab Sample ID: 0814044-022A  
 Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1927.D  
 Level: (low/med) LOW Date Received: 12/04/08  
 % Moisture: not dec. Date Analyzed: 12/17/08  
 GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00  
 Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 20 12/17/08 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000106-97-8	Butane	1.88	28	JN
2. 000078-78-4	Butane, 2-methyl-	2.65	28	JN

1A  
VOLATILE ORGANIC ANALYSIS DATA SHEET  
VOST

H2M LABS INC.

Sample No.

M31 F&B

MATRIX : AIR

Sample ID. : 0814044-023A

Lab File ID : W1928.D

Date/Time Analyzed: 17 Dec 20 8 23:26

Instrument ID:

Split Factor : 1 : 1

Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		14
Acetone		49 B
Carbon Disulfide		5 U
Methylene Chloride		9 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S66

1F  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M31.F+B

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIR

Lab Sample ID: 0814044-023A

Sample wt/vol: 5

(g/mL) G

Lab File ID: 08\W1928.D

Level: (low/med) LOW

Date Received: 12/04/08

% Moisture: not dec.

Date Analyzed: 12/17/08

GC Column: R-502.2

ID: .53 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_

( $\mu$ l)

Soil Aliquot Volume: 0 ( $\mu$ L)

CONCENTRATION UNITS:

Number TICs found:

1

( $\mu$ g/L or  $\mu$ g/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.38	49	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M34 F&B

MATRIX : AIR

Sample ID : 0814044-024A

Lab File ID : W1932.D

Date/Time Analyzed: 18 Dec 20 8 14:02

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		8
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		15
Acetone		34 B
Carbon Disulfide		5 U
Methylene Chloride		16 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		6
Trichloroethene		5 U
Benzene		11
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		20
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S68

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M34.F+B

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIR

Lab Sample ID: 0814044-024A

Sample wt/vol: 5

(g/mL) G

Lab File ID: 08\W1932.D

Level: (low/med) LOW

Date Received: 12/04/08

% Moisture: not dec.

Date Analyzed: 12/18/08

GC Column: R-502.2

ID: .53 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl)

Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 81

(µg/L or µg/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	1.35	50	J
2. 000075-28-5	Isobutane	1.63	28	JN
3. 000106-97-8	Butane	1.90	34	JN
4. 000078-78-4	Butane, 2-methyl-	2.67	33	JN
5. 000107-83-5	Pentane, 2-methyl-	3.84	26	JN

1A  
VOLATILE ORGANIC ANALYSIS DATA SHEET  
VOST

H2M LABS INC.

Sample No.

M37 F&B

MATRIX : AIR

Sample ID. : 0814044-025A

Lab File ID : W1933.D

Date/Time Analyzed: 18 Dec 20 8 14:38

Instument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		16
Acetone		18 B
Carbon Disulfide		5 U
Methylene Chloride		18 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		6
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S70

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M37.F+B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-025A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1933.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/18/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 84 *PM 12/16/08* (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-37-6	Ethane, 1,1-difluoro-	1.32	73	JN
2. 002317-91-1	Ethene, 1-chloro-1-fluoro-	1.60	57	JN
3. 000106-97-8	Butane	1.87	40	JN
4. 000078-78-4	Butane, 2-methyl-	2.66	32	JN
5. 001717-00-6	1,1-Dichloro-1-fluoroethane	3.26	52	JN
6.	unknown siloxane	13.95	59	JX

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M39.F

MATRIX : AIR

Sample ID : 0814044-027A

Lab File ID : W1903.D

Date/Time Analyzed: 16 Dec 20 8 1:12

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		15
Acetone		28 B
Carbon Disulfide		5 U
Methylene Chloride		40 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		6
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		150
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S74

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

M39.F

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-027A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1903.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/16/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 5 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 001717-00-6	1,1-Dichloro-1-fluoroethane	3.28	28	JN
2. 002153-66-4	Santolina triene	11.18	64	JN
3.	alpha -Pinene isomer	12.02	72	J
4. 000471-84-1	Bicyclo(2_2_1)heptane, dimethyl isomer	12.40	38	JN
5. 000123-35-3	beta -Myrcene	12.87	29	JN

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.

M39.B

MATRIX : AIR

Sample ID. : 0814044-026A

Lab File ID : W1904.D

Date/Time Analyzed: 16 Dec 20 8 1:48

Instrument ID:

Split Factor : 1 : 1

Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		5 U
Acetone		30 B
Carbon Disulfide		5 U
Methylene Chloride		13 B
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S72

1F  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
M39.B

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122

Matrix: (soil/water) AIR Lab Sample ID: 0814044-026A

Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1904.D

Level: (low/med) LOW Date Received: 12/04/08

% Moisture: not dec. Date Analyzed: 12/16/08

GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 1

(µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 000075-71-8	Dichlorodifluoromethane	1.37	39	JN

# H2M LABS, INC.

## 5. SURROGATE SPIKE ANALYSIS RESULTS

### 5.1 VOLATILES

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Level: (low/med) LOW

EPA SAMPLE NO.	1 DCA #	2 BFB #	3 TOL #	OTHER	TOT OUT
01 VBLK121208	102	99	97		0
02 FB1.F+B	104	99	98		0
03 FB2.F+B	106	99	99		0
04 FB3.F+B	111	103	98		0
05 VBLK121508	116	106	99		0
06 TB1.F+B	122	107	100		0
07 D2.F	119	113	100		0
08 D2.B	123	105	102		0
09 D3.B	125	106	100		0
10 D3.F	111	110	98		0
11 U2.B	122	107	98		0
12 U2.F	119	108	98		0
13 M39.F	121	108	100		0
14 M39.B	137	109	100		0
15 M9(30).F	121	89	100		0
16 VBLK121708	125	114	101		0
17 M9(30).B	174	110	98		0
18 D1.F+B	125	117	99		0
19 F1.F+B	138	108	108		0
20 M2.F+B	129	117	100		0
21 M4.F+B	130	114	100		0
22 M5.F+B	130	0 *	0 *		2
23 M6.F+B	131	112	97		0
24 M9(10).F+B	130	113	99		0
25 M9(20).F+B	135	111	101		0
26 M9(40).F+B	134	114	102		0
27 M13.F+B	132	116	102		0
28 M16.F+B	135	117	99		0
29 M22.F+B	134	113	101		0

QC Limit

- 1 DCA = 1,2-Dichloroethane-d4 (80-190)
- 2 BFB = 4-Bromofluorobenzene (69-145)
- 3 TOL = Toluene-d8 (81-125)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Level: (low/med) LOW

EPA SAMPLE NO.	1 DCA #	2 BFB #	3 TOL #	OTHER	TOT OUT
31 M28.F+B	135	113	100		0
32 M31.F+B	137	110	99		0
33 VBLK121808	131	109	100		0
34 M34.F+B	138	115	101		0
35 M37.F+B	138	112	103		0
36 U1.F+B	133	116	98		0

QC Limit  
1 DCA = 1,2-Dichloroethane-d4 (80-190)  
2 BFB = 4-Bromofluorobenzene (69-145)  
3 TOL = Toluene-d8 (81-125)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

# H2M LABS, INC.

6. BLANK SUMMARY DATA AND RESULTS
  - 6.1 VOLATILES

4A

EPA SAMPLE NO.

VOLATILE METHOD BLANK SUMMARY

VBLK121208

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Lab File ID: 08\W1887.D

Lab Sample ID: VBLK121208

Date Analyzed: 12/12/08

Time Analyzed: 18:29

GC Column: R-502.2 ID: .53 (mm)

Heated Purge: (Y/N) Y

Instrument ID: HP5996

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	FB1.F+B	0814044-007A	08W1888.D	19:12
02	FB2.F+B	0814044-008A	08W1889.D	19:49
03	FB3.F+B	0814044-009A	08W1890.D	20:26

COMMENTS: \_\_\_\_\_

1A  
VOLATILE ORGANIC ANALYSIS DATA SHEET  
VOST

H2M LABS INC.

Sample No.

VBLK121208

MATRIX : AIR

Sample ID : VBLK121208

Lab File ID : W1887.D

Date/Time Analyzed: 12 Dec 20 8 18:29

Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		5 U
Acetone		8
Carbon Disulfide		5 U
Methylene Chloride		9
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S89

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK121208

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIR

Lab Sample ID: VBLK121208

Sample wt/vol: 5

(g/mL) G

Lab File ID: 08\W1887.D

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 12/12/08

GC Column: R-502.2

ID: .53 (mm)

Dilution Factor: 1.00

Soil Extract Volume:

( $\mu$ l)

Soil Aliquot Volume: 0 ( $\mu$ L)

CONCENTRATION UNITS:

Number TICs found:

0

( $\mu$ g/L or  $\mu$ g/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
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## VOLATILE METHOD BLANK SUMMARY

VBLK121508

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122Lab File ID: 08\W1895.DLab Sample ID: VBLK121508Date Analyzed: 12/15/08Time Analyzed: 20:24GC Column: R-502.2 ID: .53 (mm)Heated Purge: (Y/N) YInstrument ID: HP5996

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	TB1.F+B	0814044-031A	08W1896.D	21:00
02	D2.F	0814044-003A	08W1897.D	21:38
03	D2.B	0814044-002A	08W1898.D	22:14
04	D3.B	0814044-004A	08W1899.D	22:50
05	D3.F	0814044-005A	08W1900.D	23:25
06	U2.B	0814044-029A	08W1901.D	0:00
07	U2.F	0814044-030A	08W1902.D	0:35
08	M39.F	0814044-027A	08W1903.D	1:12
09	M39.B	0814044-026A	08W1904.D	1:48
10	M9(30).F	0814044-017A	08W1905.D	2:24

COMMENTS: \_\_\_\_\_

page 1 of 1

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
 VOST

H2M LABS INC.

Sample No.

VBLK121508

MATRIX : AIR

Sample ID : VBLK121508

Lab File ID : W1895.D

Date/Time Analyzed: 15 Dec 20 8 20:24

Instrument ID:

Split Factor : 1 : 1  
 Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 u
Vinyl Chloride		5 u
Bromomethane		5 u
Chloroethane		5 u
1,1-Dichloroethene		5 u
Trichlorofluoromethane		5 u
Acetone		17
Carbon Disulfide		5 u
Methylene Chloride		6
2-Butanone		8 u
trans-1,2-Dichloroethene		5 u
cis-1,2-Dichloroethene		5 u
1,1-Dichloroethane		5 u
Chloroform		5 u
1,2-Dichloroethane		5 u
1,1,1-Trichloroethane		5 u
Carbon Tetrachloride		5 u
Trichloroethene		5 u
Benzene		5 u
1,2-Dichloropropane		5 u
Bromodichloromethane		5 u
cis-1,3-Dichloropropene		5 u
trans-1,3-Dichloropropene		5 u
1,1,2-Trichloroethane		5 u
4-Methyl-2-Pentanone		8 u
2-Hexanone		8 u
Toluene		5 u
Tetrachloroethene		5 u
Dibromochloromethane		5 u
Chlorobenzene		5 u
Ethylbenzene		5 u
Xylene (total)		5 u
Styrene		5 u
Bromoform		8 u
1,1,2,2-Tetrachloroethane		5 u
2/4-Ethyltoluene (total)		5 u
1,3-Dichlorobenzene		5 u
1,4-Dichlorobenzene		5 u
1,2-Dichlorobenzene		5 u
Chlorotrifluoromethane		25 u
Chloroethylvinylether		25 u
Benzaldehyde		50 u
Decane		25 u

TOY122 S92

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

VBLK121508

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIR

Lab Sample ID: VBLK121508

Sample wt/vol: 5

(g/mL) G

Lab File ID: 08\W1895.D

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 12/15/08

GC Column: R-502.2

ID: .53 (mm)

Dilution Factor: 1.00

Soil Extract Volume:

( $\mu$ l)

Soil Aliquot Volume: 0 ( $\mu$ L)

CONCENTRATION UNITS:

Number TICs found:

0

( $\mu$ g/L or  $\mu$ g/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

## VOLATILE METHOD BLANK SUMMARY

VBLK121708

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: TOYSAS No.: \_\_\_\_\_ SDG No.: TOY122Lab File ID: 08\W1913.DLab Sample ID: VBLK121708Date Analyzed: 12/17/08Time Analyzed: 13:27GC Column: R-502.2 ID: .53 (mm)Heated Purge: (Y/N) YInstrument ID: HP5996

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	M9(30).B	0814044-016A	08W1914.D	14:53
02	D1.F+B	0814044-001A	08W1915.D	15:29
03	F1.F+B	0814044-006A	08W1916.D	16:05
04	M2.F+B	0814044-010A	08W1917.D	16:42
05	M4.F+B	0814044-011A	08W1918.D	17:19
06	M5.F+B	0814044-012A	08W1919.D	17:56
07	M6.F+B	0814044-013A	08W1920.D	18:34
08	M9(10).F+B	0814044-014A	08W1921.D	19:10
09	M9(20).F+B	0814044-015A	08W1922.D	19:47
10	M9(40).F+B	0814044-018A	08W1923.D	20:24
11	M13.F+B	0814044-019A	08W1924.D	21:01
12	M16.F+B	0814044-020A	08W1925.D	21:38
13	M22.F+B	0814044-021A	08W1926.D	22:14
14	M28.F+B	0814044-022A	08W1927.D	22:50
15	M31.F+B	0814044-023A	08W1928.D	23:26

COMMENTS: \_\_\_\_\_

page 1 of 1

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
VOST

H2M LABS INC.

Sample No.  
VBLK121708

MATRIX : AIR

Sample ID : VBLK121708  
Lab File ID : W1913.D  
Date/Time Analyzed: 17 Dec 20 8 13:27  
Instrument ID:

Split Factor : 1 : 1  
Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 u
Vinyl Chloride		5 u
Bromomethane		5 u
Chloroethane		5 u
1,1-Dichloroethene		5 u
Trichlorofluoromethane		5 u
Acetone		21
Carbon Disulfide		5 u
Methylene Chloride		34
2-Butanone		8 u
trans-1,2-Dichloroethene		5 u
cis-1,2-Dichloroethene		5 u
1,1-Dichloroethane		5 u
Chloroform		5 u
1,2-Dichloroethane		5 u
1,1,1-Trichloroethane		5 u
Carbon Tetrachloride		5 u
Trichloroethene		5 u
Benzene		5 u
1,2-Dichloropropane		5 u
Bromodichloromethane		5 u
cis-1,3-Dichloropropene		5 u
trans-1,3-Dichloropropene		5 u
1,1,2-Trichloroethane		5 u
4-Methyl-2-Pentanone		8 u
2-Hexanone		8 u
Toluene		5 u
Tetrachloroethene		5 u
Dibromochloromethane		5 u
Chlorobenzene		5 u
Ethylbenzene		5 u
Xylene (total)		5 u
Styrene		5 u
Bromoform		8 u
1,1,2,2-Tetrachloroethane		5 u
2/4-Ethyltoluene (total)		5 u
1,3-Dichlorobenzene		5 u
1,4-Dichlorobenzene		5 u
1,2-Dichlorobenzene		5 u
Chlorotrifluoromethane		25 u
Chloroethylvinylether		25 u
Benzaldehyde		50 u
Decane		25 u

TOY122 S95

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
**VBLK121708**

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_  
Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122  
Matrix: (soil/water) AIR Lab Sample ID: VBLK121708  
Sample wt/vol: 5 (g/mL) G Lab File ID: 08\W1913.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. Date Analyzed: 12/17/08  
GC Column: R-502.2 ID: .53 (mm) Dilution Factor: 1.00  
Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE METHOD BLANK SUMMARY

VBLK121808

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Lab File ID: 08\W1931.D

Lab Sample ID: VBLK121808

Date Analyzed: 12/18/08

Time Analyzed: 13:23

GC Column: R-502.2 ID: .53 (mm)

Heated Purge: (Y/N) Y

Instrument ID: HP5996

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	M34.F+B	0814044-024A	08W1932.D	14:02
02	M37.F+B	0814044-025A	08W1933.D	14:38
03	U1.F+B	0814044-028A	08W1934.D	15:15

COMMENTS:

\_\_\_\_\_

1A  
**VOLATILE ORGANIC ANALYSIS DATA SHEET**  
 VOST

H2M LABS INC.

Sample No.  
VBLK121808

MATRIX : AIR

Sample ID. : VBLK121808  
 Lab File ID : W1931.D  
 Date/Time Analyzed: 18 Dec 20 8 13:23  
 Instrument ID:

Split Factor : 1 : 1  
 Quant Range : 5 to 1000

COMPOUND NAME:	Result :	ng
Chloromethane		5 U
Vinyl Chloride		5 U
Bromomethane		5 U
Chloroethane		5 U
1,1-Dichloroethene		5 U
Trichlorofluoromethane		5 U
Acetone		17
Carbon Disulfide		5 U
Methylene Chloride		7
2-Butanone		8 U
trans-1,2-Dichloroethene		5 U
cis-1,2-Dichloroethene		5 U
1,1-Dichloroethane		5 U
Chloroform		5 U
1,2-Dichloroethane		5 U
1,1,1-Trichloroethane		5 U
Carbon Tetrachloride		5 U
Trichloroethene		5 U
Benzene		5 U
1,2-Dichloropropane		5 U
Bromodichloromethane		5 U
cis-1,3-Dichloropropene		5 U
trans-1,3-Dichloropropene		5 U
1,1,2-Trichloroethane		5 U
4-Methyl-2-Pentanone		8 U
2-Hexanone		8 U
Toluene		5 U
Tetrachloroethene		5 U
Dibromochloromethane		5 U
Chlorobenzene		5 U
Ethylbenzene		5 U
Xylene (total)		5 U
Styrene		5 U
Bromoform		8 U
1,1,2,2-Tetrachloroethane		5 U
2/4-Ethyltoluene (total)		5 U
1,3-Dichlorobenzene		5 U
1,4-Dichlorobenzene		5 U
1,2-Dichlorobenzene		5 U
Chlorotrifluoromethane		25 U
Chloroethylvinylether		25 U
Benzaldehyde		50 U
Decane		25 U

TOY122 S98

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK121808

Lab Name: H2M LABS, INC.

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: TOY

SAS No.: \_\_\_\_\_

SDG No.: TOY122

Matrix: (soil/water)

AIR

Lab Sample ID: VBLK121808

Sample wt/vol: 5

(g/mL) G

Lab File ID: 08\W1931.D

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 12/18/08

GC Column: R-502.2

ID: .53 (mm)

Dilution Factor: 1.00

Soil Extract Volume:

( $\mu$ l)

Soil Aliquot Volume: 0 ( $\mu$ L)

CONCENTRATION UNITS:

Number TICs found:

0

( $\mu$ g/L or  $\mu$ g/Kg)

ng

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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# H2M LABS, INC.

## 7. INTERNAL STANDARD AREA DATA 7.1 VOLATILES

## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122  
 Lab File ID (Standard): 08\W1886.D Date Analyzed: 12/12/08  
 EPA Sample No. (VSTD050##): VSTD250NG Time Analyzed: 17:43  
 Instrument ID: HP5996 Heated Purge: (Y/N) Y  
 GC Column: R-502.2 ID: .53 (mm)

	IS1 BCM AREA #	RT #	IS2 DFB AREA #	RT #	IS3 CBZ AREA #	RT #
12 HOUR STD	322432	5.5	1831481	6.56	1327130	10.77
UPPER LIMIT	644864	6	3662962	7.06	2634260	11.27
LOWER LIMIT	161216	5	915741	6.06	663565	10.27
EPA SAMPLE						
01 VBLK121208	342702	5.51	1835124	6.56	1334330	10.74
02 FB1.F+B	307383	5.51	1647347	6.57	1187689	10.75
03 FB2.F+B	283649	5.44	1580109	6.51	1114448	10.71
04 FB3.F+B	282919	5.49	1526931	6.56	1082809	10.73

IS1 BCM = Bromochloromethane  
 IS2 DFB = 1,4-Difluorobenzene  
 IS3 CBZ = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area  
 AREA LOWER LIMIT = -50% of internal standard area  
 RT UPPER LIMIT = +0.50 minutes of internal standard RT  
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.  
 \* Values outside of QC limits.

## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122  
 Lab File ID (Standard): 08\W1893.D Date Analyzed: 12/15/08  
 EPA Sample No. (VSTD050##): VSTD250NG Time Analyzed: 19:02  
 Instrument ID: HP5996 Heated Purge: (Y/N) Y  
 GC Column: R-502.2 ID: .53 (mm)

	IS1 BCM AREA #	RT #	IS2 DFB AREA #	RT #	IS3 CBZ AREA #	RT #
12 HOUR STD	274777	5.48	1502854	6.55	1083261	10.72
UPPER LIMIT	549554	5.98	3005708	7.05	2166522	11.22
LOWER LIMIT	137389	4.98	751427	6.05	541631	10.22
EPA SAMPLE						
01 VBLK121508	278870	5.49	1518773	6.56	1128253	10.74
02 TB1.F+B	259688	5.54	1423935	6.59	1051235	10.74
03 D2.F	237671	5.49	1305809	6.55	955275	10.74
04 D2.B	231270	5.50	1336326	6.57	1008751	10.76
05 D3.B	238303	5.55	1328937	6.60	987509	10.79
06 D3.F	224539	5.49	1291370	6.54	920686	10.74
07 U2.B	245954	5.48	1357706	6.54	989174	10.70
08 U2.F	246001	5.49	1347768	6.56	968550	10.72
09 M39.F	245411	5.48	1332734	6.54	983783	10.72
10 M39.B	212693	5.49	1302798	6.55	954184	10.72
11 M9(30).F	219956	5.47	1270202	6.52	877466	10.71

IS1 BCM = Bromochloromethane  
 IS2 DFB = 1,4-Difluorobenzene  
 IS3 CBZ = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area  
 AREA LOWER LIMIT = -50% of internal standard area  
 RT UPPER LIMIT = +0.50 minutes of internal standard RT  
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.  
 \* Values outside of QC limits.

page 1 of 1

## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122  
 Lab File ID (Standard): 08\W1912.D Date Analyzed: 12/17/08  
 EPA Sample No. (VSTD050##): VSTD250NG Time Analyzed: 12:47  
 Instrument ID: HP5996 Heated Purge: (Y/N) Y  
 GC Column: R-502.2 ID: .53 (mm)

	IS1 BCM AREA #	RT #	IS2 DFB AREA #	RT #	IS3 CBZ AREA #	RT #
12 HOUR STD	182524	5.53	975606	6.59	708090	10.79
UPPER LIMIT	365048	6.03	1951212	7.09	1416180	11.29
LOWER LIMIT	91262	5.03	487803	6.09	354045	10.29
EPA SAMPLE						
01 VBLK121708	179886	5.51	982040	6.59	742792	10.76
02 M9(30).B	113753	5.50	962271	6.56	708003	10.74
03 D1.F+B	177770	5.51	943193	6.58	680372	10.78
04 F1.F+B	14477*	5.50	76444*	6.57	55249*	10.78
05 M2.F+B	179983	5.48	919478	6.55	656342	10.73
06 M4.F+B	172377	5.51	903670	6.56	677662	10.74
07 M5.F+B	171179	5.50	894763	6.56	0*	0.00
08 M6.F+B	169439	5.51	894313	6.56	645914	10.73
09 M9(10).F+B	168070	5.49	900862	6.54	673086	10.74
10 M9(20).F+B	162192	5.46	886748	6.52	709314	10.71
11 M9(40).F+B	174424	5.49	908045	6.55	690913	10.72
12 M13.F+B	164568	5.49	905196	6.55	674068	10.74
13 M16.F+B	169381	5.49	905167	6.56	656556	10.74
14 M22.F+B	159515	5.49	867147	6.55	638840	10.73
15 M28.F+B	163888	5.49	884664	6.55	661885	10.74
16 M31.F+B	160677	5.51	888079	6.57	659249	10.74

IS1 BCM = Bromochloromethane  
 IS2 DFB = 1,4-Difluorobenzene  
 IS3 CBZ = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area  
 AREA LOWER LIMIT = -50% of internal standard area  
 RT UPPER LIMIT = +0.50 minutes of internal standard RT  
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.  
 \* Values outside of QC limits.

## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: H2M LABS, INC. Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: TOY SAS No.: \_\_\_\_\_ SDG No.: TOY122  
 Lab File ID (Standard): 08\W1930.D Date Analyzed: 12/18/08  
 EPA Sample No. (VSTD050##): VSTD250NG Time Analyzed: 0:37  
 Instrument ID: HP5996 Heated Purge: (Y/N) Y  
 GC Column: R-502.2 ID: .53 (mm)

	IS1 BCM AREA #	RT #	IS2 DFB AREA #	RT #	IS3 CBZ AREA #	RT #
12 HOUR STD	150142	5.5	851459	6.56	599186	10.74
UPPER LIMIT	300284	6	1702918	7.06	1198372	11.24
LOWER LIMIT	75071	5	425730	6.06	299593	10.24
EPA SAMPLE						
01 50 NG BFB						
02 VBLK121808	158201	5.47	891719	6.53	648243	10.72
03 M34.F+B	160825	5.49	860966	6.55	621331	10.73
04 M37.F+B	160161	5.48	850918	6.56	656855	10.74
05 U1.F+B	162026	5.50	882246	6.55	633441	10.73

IS1 BCM = Bromochloromethane  
 IS2 DFB = 1,4-Difluorobenzene  
 IS3 CBZ = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area  
 AREA LOWER LIMIT = -50% of internal standard area  
 RT UPPER LIMIT = +0.50 minutes of internal standard RT  
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.  
 \* Values outside of QC limits.

**APPENDIX D**

**FIELD DATA FORMS**

# AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL08-4 Date: 12/2/08  
 Project Site: TOBOBSWDC Operators: KJS, BA, JKB, JLV, VV  
 General Weather Conditions: fair

Sample ID: TOBOBL08-4: U1 Sample Location: UPWIND 15' AIRWAY  
 Pump ID: R9 Nominal Flow Rate: 0.25 LPM  
 Sampler ID: {R-9} Nominal Sample Volume: 360 liters

Initial Ambient VOC Conc. (ppm): 0.1  
 Leak Check: OK  
 Sampling Start Time: 9:38  
 Initial Rotameter Reading (Bottom of the S.S. Ball): 58  
 Initial Pressure Drop Across Traps: 10  
 Initial Max/Min Temperature Inside Cooler:

Rotameter Reading	Total Elapse Time	Local Time
58	0	9:38
62	210	12:09
58	575	18:12
58	837	20:35
58	1017	139
59	1348	0706

Rotameter Reading	Total Elapse Time	Local Time

Final Leak Check: OK  
 Sample Stop Time: 8:40  
 Final Rotameter Reading: 60  
 Total Elapse Time: 1440  
 Final Ambient VOC Conc. (ppm): 0  
 Final Pressure Drop Across Traps: 10  
 Final Max/Min Temperature Inside Cooler: 28° / 46°

Comments: .f = 1623-19-11A  
 .b = 1623-19-11B

# AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL08-4 Date: 11/2/08  
 Project Site: TOBOBSWDC Operators: KJS, BA, JKB, JLV, JV  
 General Weather Conditions: FAIR

Sample ID: TOBOBL08-4 Sample Location: JAWINDS 15th Fwy  
 Pump ID: R-10 Nominal Flow Rate: 0.25 LPM  
 Sampler ID: {R-10}-5 Nominal Sample Volume: 360 liters

Initial Ambient VOC Conc. (ppm): 0.2 0.1  
 Leak Check: OK  
 Sampling Start Time: 8:53  
 Initial Rotameter Reading (Bottom of the S.S. Ball): 42  
 Initial Pressure Drop Across Traps: 8  
 Initial Max/Min Temperature Inside Cooler: 40/40

Rotameter Reading	Total Elapse Time	Local Time
42	0	853
61	4	857
66	193	1208
66	558	1812
60	829	2235
59	1000	140
60	1331	0706

Rotameter Reading	Total Elapse Time	Local Time

Final Leak Check: OK  
 Sample Stop Time: 8:59  
 Final Rotameter Reading: 62  
 Total Elapse Time: 1446  
 Final Ambient VOC Conc. (ppm): 6  
 Final Pressure Drop Across Traps: 11  
 Final Max/Min Temperature Inside Cooler: 27°/44°

Comments: .f = 6A  
 .b = 6B

# AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL08-4 Date: 12/2/08  
 Project Site: TOBOBSWDC Operators: KJS, BA, JKB, JLV, VV  
 General Weather Conditions: Cold, Sunny, Lt Winds

Sample ID: TOBOBL08-4: D1 Sample Location: Outside of the Rap Bldg gate  
 Pump ID: 121 Nominal Flow Rate: 0.25 LPM  
 Sampler ID: {R- 1 } Nominal Sample Volume: 360 liters

Initial Ambient VOC Conc. (ppm): 0.0  
 Leak Check: *AP*  
 Sampling Start Time: 8:29  
 Initial Rotameter Reading (Bottom of the S.S. Ball): 59  
 Initial Pressure Drop Across Traps: 8  
 Initial Max/Min Temperature Inside Cooler:

Rotameter Reading	Total Elapse Time	Local Time
60	5	8:34
60	38	9:06
61	210	12:00
60	575	18:05
58		
60	836	20:24
60	1022	132

Rotameter Reading	Total Elapse Time	Local Time
60	1352	0700
61	1432	823

Final Leak Check:  
 Sample Stop Time: 8:29  
 Final Rotameter Reading: 61  
 Total Elapse Time: 1448  
 Final Ambient VOC Conc. (ppm):  
 Final Pressure Drop Across Traps: 10  
 Final Max/Min Temperature Inside Cooler: 30°/44°

Comments: .f = 10A  
 .b = 10B

# AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL08-4 Date: 12/2/08  
 Project Site: TOBOBSWDC Operators: KUS, BA, JKB, JLV, VV  
 General Weather Conditions: Cold, Sunny, Lt Winds

Sample ID: TOBOBL08-4: D2 Sample Location: Outside of the RAAP Bldg gate  
 Pump ID: R2 Nominal Flow Rate: 0.25 LPM  
 Sampler ID: (R-2) Nominal Sample Volume: 360 liters

Initial Ambient VOC Conc. (ppm): 0.0  
 Leak Check:   
 Sampling Start Time: 8:29  
 Initial Rotameter Reading (Bottom of the S.S. Ball): 59  
 Initial Pressure Drop Across Traps: 7  
 Initial Max/Min Temperature Inside Cooler:

Rotameter Reading	Total Elapse Time	Local Time
61	5	8:34
60	38	9:06
61	212	12:01
59	576	18:05
59	836	22:04
59	1021	1:51

Rotameter Reading	Total Elapse Time	Local Time
60	1:37	2:700
60	14:34	8:23

Final Leak Check:   
 Sample Stop Time: 8:29  
 Final Rotameter Reading: 60  
 Total Elapse Time: 1948  
 Final Ambient VOC Conc. (ppm):  
 Final Pressure Drop Across Traps: 8  
 Final Max/Min Temperature Inside Cooler: 32° / 44°

Comments: f = 5A  
 b = 5B

# AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL08-4 Date: 12/2/08  
 Project Site: TOBOBSWDC Operators: KJS, BA, JKB, JLV, VV  
 General Weather Conditions: Cold, Sunny, lt winds

Sample ID: TOBOBL08-4: D3 Sample Location: Front gate on Bethpage SW/Hollowick  
 Pump ID: 25 Nominal Flow Rate: 0.25 LPM  
 Sampler ID: {R-8} Nominal Sample Volume: 360 liters

Initial Ambient VOC Conc. (ppm): 0.0  
 Leak Check: OK  
 Sampling Start Time: 8:14  
 Initial Rotameter Reading (Bottom of the S.S. Ball): 58  
 Initial Pressure Drop Across Traps: 7  
 Initial Max/Min Temperature Inside Cooler: 50/50

Rotameter Reading	Total Elapse Time	Local Time
58	5	8:19
58	56	9:10
59	224	12:04
57	594	18:08
57	855	22:28
58	1047	144
0	1243	0713

Rotameter Reading	Total Elapse Time	Local Time
60	0	0714

Final Leak Check: OK  
 Sample Stop Time: 4:13  
 Final Rotameter Reading: 61  
 Total Elapse Time: 118  
 Final Ambient VOC Conc. (ppm): 0  
 Final Pressure Drop Across Traps: 12  
 Final Max/Min Temperature Inside Cooler: 33°/47°

Comments: f = 8A  
 b = 8B - stem cracked PUMP FAILED BACKUP BATTERY WAS FAULTY.  
 Odor! - composting

# AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL08-4      Date: 12/2/08  
 Project Site: TOBOBSWDC      Operators: KJS/BA, JKB, JLV, VV  
 General Weather Conditions:

Sample ID: TOBOBL08-4: FB3      Sample Location: RTP office  
 Pump ID:      Nominal Flow Rate: 0.25 LPM  
 Sampler ID: {R- }      Nominal Sample Volume: 360 liters

Initial Ambient VOC Conc. (ppm): \_\_\_\_\_  
 Leak Check: \_\_\_\_\_  
 Sampling Start Time: 6:56  
 Initial Rotameter Reading (Bottom of the S.S. Ball): \_\_\_\_\_  
 Initial Pressure Drop Across Traps: \_\_\_\_\_  
 Initial Max/Min Temperature Inside Cooler: \_\_\_\_\_

Rotameter Reading	Total Elapse Time	Local Time

Rotameter Reading	Total Elapse Time	Local Time

Final Leak Check: \_\_\_\_\_  
 Sample Stop Time: \_\_\_\_\_  
 Final Rotameter Reading: \_\_\_\_\_  
 Total Elapse Time: \_\_\_\_\_  
 Final Ambient VOC Conc. (ppm): \_\_\_\_\_  
 Final Pressure Drop Across Traps: \_\_\_\_\_  
 Final Max/Min Temperature Inside Cooler: \_\_\_\_\_

Comments: .f = 4A  
 .b = 4B

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/3/08  
Investigator: TJKJS, BA, JKB, JLV, VV  
General Well TOBOBL07-5 FAR.

SAMPLE ID TOBOBL08-4: SAMPLER ID (R-4)  
PUMP ID R4 SAMPLE LOCATION F-1  
WELL ID F-1 WELL DEPTH 30 or 10', 20', 30', or 40'  
NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters  
INITIAL LEAK CHECK AOK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0.0 INITIAL WELL VOC READING -  
INITIAL INLET LINE VOC READING - SAMPLE START TIME 9:57

INITIAL ROTAMETER READING 122 BOTTOM OF THE S.S. BALL  
5 MIN ROTAMETER READING 121

FINAL AMBIENT VOC READING ~~122~~ 0.0 FINAL WELL VOC READING 0.0  
SAMPLE STOP TIME 10:07 DURATION 10

FINAL ROTAMETER READING 122 BOTTOM OF THE S.S. BALL  
FINAL LEAK CHECK OK

Comments: FRONT TRAP ID: 22A  
BACK TRAP ID: 22B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/03/08  
Investigator: T. KJS, BA, JKB, JLV, VV  
General Well TOBOBL07-5 FAIR

SAMPLE ID TOBOBL08-4: SAMPLER ID (R-4)  
PUMP ID R4 SAMPLE LOCATION M-2  
WELL ID M-2 WELL DEPTH 30" or 10', 20', 30', or 40'  
NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters  
INITIAL LEAK CHECK OK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0.0 INITIAL WELL VOC READING 0.0

INITIAL INLET LINE VOC READING ~~1.2~~ SAMPLE START TIME 1024

INITIAL ROTAMETER READING 122 BOTTOM OF THE S.S. BALL  
5 MIN ROTAMETER READING 124

FINAL AMBIENT VOC READING 0.0 FINAL WELL VOC READING 0.0

SAMPLE STOP TIME 1034 DURATION 10

FINAL ROTAMETER READING 126 BOTTOM OF THE S.S. BALL  
FINAL LEAK CHECK \_\_\_\_\_

Comments: FRONT TRAP ID: 19A  
BACK TRAP ID: 19B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/03/08  
Investigator: T(KJS), BA, JKB, JLV, VV  
General Well TOBOBL07-5 FAIR

SAMPLE ID TOBOBL08-4: SAMPLER ID (R-4)  
PUMP ID R4 SAMPLE LOCATION M-4  
WELL ID M-4 WELL DEPTH 30' or 10', 20', 30', or 40'  
NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters  
INITIAL LEAK CHECK OK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0.0 INITIAL WELL VOC READING 0.0  
INITIAL INLET LINE VOC READING - SAMPLE START TIME 10:46

INITIAL ROTAMETER READING 120 BOTTOM OF THE S.S. BALL  
5 MIN ROTAMETER READING 120

FINAL AMBIENT VOC READING 0.0 FINAL WELL VOC READING 0.0  
SAMPLE STOP TIME 10:56 DURATION 10

FINAL ROTAMETER READING 119 BOTTOM OF THE S.S. BALL  
FINAL LEAK CHECK ADK

Comments: FRONT TRAP ID: 17A  
BACK TRAP ID: 17B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC

Date 12/03/08

Investigator: TJKJS, BA, JKB, JLV, VV

General Well TOBOBL07-5 FAIR

SAMPLE ID TOBOBL08-4:

SAMPLER ID (R-45)

PUMP ID R4

SAMPLE LOCATION M5

WELL ID M-5

WELL DEPTH (30) or 10', 20', 30', or 40'

NOMINAL FLOW RATE 1 LPM

NOMINAL SAMPLE VOLUME 10 Liters

INITIAL LEAK CHECK 10K

MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING -

INITIAL WELL VOC READING -

INITIAL INLET LINE VOC READING -

SAMPLE START TIME 1126

INITIAL ROTAMETER READING 120

BOTTOM OF THE S.S. BALL

5 MIN ROTAMETER READING 120

FINAL AMBIENT VOC READING -

FINAL WELL VOC READING -

SAMPLE STOP TIME 1136

DURATION 10

FINAL ROTAMETER READING 120

BOTTOM OF THE S.S. BALL

FINAL LEAK CHECK ADK

Comments: FRONT TRAP ID: 16A

BACK TRAP ID: 16B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/3/08  
Investigator: TJKJS, BA, JKB, JLV, VV  
General We TOBOBL07-5 FMT

SAMPLE ID TOBOBL08-4: SAMPLER ID (R-4)  
PUMP ID R4 SAMPLE LOCATION M6  
WELL ID M-6 WELL DEPTH 30' or 10', 20', 30', or 40'  
NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters  
INITIAL LEAK CHECK ADK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0 INITIAL WELL VOC READING 0.0

INITIAL INLET LINE VOC READING - SAMPLE START TIME 11:07

INITIAL ROTAMETER READING 120 BOTTOM OF THE S.S. BALL  
5 MIN ROTAMETER READING 120

FINAL AMBIENT VOC READING 0.0 FINAL WELL VOC READING 0.0

SAMPLE STOP TIME 11:17 DURATION 10

FINAL ROTAMETER READING 120 BOTTOM OF THE S.S. BALL  
FINAL LEAK CHECK ADK

Comments: FRONT TRAP ID: 24A  
BACK TRAP ID: 24B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/03/08  
Investigator: T(KJB), BA, JKB, JLV, VV  
General Well TOBOBL07-5 FAIR

SAMPLE ID TOBOBL08-4: SAMPLER ID (R-4)  
PUMP ID R-4 SAMPLE LOCATION M-9  
WELL ID M-9-10' WELL DEPTH 30" or 10', 20', 30', or 40'  
NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters  
INITIAL LEAK CHECK ACK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0.0 INITIAL WELL VOC READING 0.0

INITIAL INLET LINE VOC READING \_\_\_\_\_ SAMPLE START TIME 12:38

INITIAL ROTAMETER READING 121 BOTTOM OF THE S.S. BALL  
5 MIN ROTAMETER READING 123

FINAL AMBIENT VOC READING 0.0 FINAL WELL VOC READING 0.0

SAMPLE STOP TIME 12:48 DURATION 10 min

FINAL ROTAMETER READING 121 BOTTOM OF THE S.S. BALL  
FINAL LEAK CHECK ACK

Comments: FRONT TRAP ID: 18A  
BACK TRAP ID: 18B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/03/08  
Investigator: (KJS) BA, JKB, JLV, VV  
General Well TOBOBL07-5 FAIR

SAMPLE ID TOBOBL08-4: SAMPLER ID (R-4)  
PUMP ID R-4 SAMPLE LOCATION M9  
WELL ID M9-20 WELL DEPTH 30" or 10', 20', 30', or 40'  
NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters  
INITIAL LEAK CHECK OK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0.0 INITIAL WELL VOC READING 0.0  
INITIAL INLET LINE VOC READING - SAMPLE START TIME 1252

INITIAL ROTAMETER READING 120 BOTTOM OF THE S.S. BALL  
5 MIN ROTAMETER READING 120

FINAL AMBIENT VOC READING 0.0 FINAL WELL VOC READING 0.0  
SAMPLE STOP TIME 1302 DURATION 10 min

FINAL ROTAMETER READING 120 BOTTOM OF THE S.S. BALL  
FINAL LEAK CHECK OK

Comments: FRONT TRAP ID: 12A  
BACK TRAP ID: 12B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/03/08

Investigator: T (KJS, BA, JKB, JLV, VV)

General Well TOBOBL07-5

SAMPLE ID TOBOBL08-4: SAMPLER ID (R-4)

PUMP ID R4 SAMPLE LOCATION M9-30

WELL ID M-9 30' WELL DEPTH 30" or 10', 20' (30'), or 40'

NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters

INITIAL LEAK CHECK AOK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0.0 INITIAL WELL VOC READING 0.0

INITIAL INLET LINE VOC READING - SAMPLE START TIME 13<sup>08</sup>

INITIAL ROTAMETER READING 120 BOTTOM OF THE S.S. BALL

5 MIN ROTAMETER READING 120

FINAL AMBIENT VOC READING 0.0 FINAL WELL VOC READING 0.0

SAMPLE STOP TIME 13<sup>18</sup> DURATION 10 min

FINAL ROTAMETER READING 121 BOTTOM OF THE S.S. BALL

FINAL LEAK CHECK AOK

Comments: FRONT TRAP ID:

BACK TRAP ID:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/3/08  
 Investigator: T(KJS) BA, JKB, JLV, VV  
 General Well TOBOBL07-5 FMR

SAMPLE ID TOBOBL08-4: SAMPLER ID (R-4)  
 PUMP ID R4 SAMPLE LOCATION M9  
 WELL ID M9 40' WELL DEPTH 30" or 10', 20', 30', or 40'  
 NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters  
 INITIAL LEAK CHECK AOL MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0.0 INITIAL WELL VOC READING 0.0  
 INITIAL INLET LINE VOC READING - SAMPLE START TIME 13<sup>23</sup>

INITIAL ROTAMETER READING 120 BOTTOM OF THE S.S. BALL  
 5 MIN ROTAMETER READING 120

FINAL AMBIENT VOC READING \_\_\_\_\_ FINAL WELL VOC READING \_\_\_\_\_

SAMPLE STOP TIME 13<sup>33</sup> DURATION 10 MIN.

FINAL ROTAMETER READING 121 BOTTOM OF THE S.S. BALL  
 FINAL LEAK CHECK AOL

Comments: FRONT TRAP ID: 25A  
 BACK TRAP ID: 25B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/3/08

Investigator: T(KJS, BA, JKB, JLV, YV)

General We TOBOBL07-5 Summary: clear, temp ~45°F

SAMPLE ID TOBOBL08-4: M13 SAMPLER ID (R-3)

PUMP ID 3 SAMPLE LOCATION M13

WELL ID M13 WELL DEPTH (30" or 10', 20', 30', or 40')

NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters

INITIAL LEAK CHECK \_\_\_\_\_ MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0.0 INITIAL WELL VOC READING 1.6

INITIAL INLET LINE VOC READING - SAMPLE START TIME 12:50

INITIAL ROTAMETER READING 129 BOTTOM OF THE S.S. BALL

5 MIN ROTAMETER READING 130

FINAL AMBIENT VOC READING 0.0 FINAL WELL VOC READING 0.8

SAMPLE STOP TIME 13:00 DURATION 10 min

FINAL ROTAMETER READING 127 BOTTOM OF THE S.S. BALL

FINAL LEAK CHECK OK

Comments: FRONT TRAP ID: 01A  
BACK TRAP ID: 01B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/3/08

Investigator: T(KJS, BA) JKB, JLV, VV

General Well TOBOBL07-5 Sample: clear, Temp = 45°F

SAMPLE ID	<u>TOBOBL08-4: M16</u>	SAMPLER ID	<u>(R-3)</u>
PUMP ID	<u>3</u>	SAMPLE LOCATION	<u>M16</u>
WELL ID	<u>M16</u>	WELL DEPTH	<u>30" of 10', 20', 30', or 40'</u>
NOMINAL FLOW RATE	<u>1 LPM</u>	NOMINAL SAMPLE VOLUME	<u>10 Liters</u>
INITIAL LEAK CHECK	<u>OK</u>	MICROTIP	<u>PA900161 PA900166</u>

INITIAL AMBIENT VOC READING	<u>0.0</u>	INITIAL WELL VOC READING	<u>4.6</u>
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INITIAL INLET LINE VOC READING	<u>—</u>	SAMPLE START TIME	<u>12:28</u>
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INITIAL ROTAMETER READING	<u>129</u>	BOTTOM OF THE	<u>S.S.</u> BALL
5 MIN ROTAMETER READING	<u>127</u>		

FINAL AMBIENT VOC READING	<u>0.0</u>	FINAL WELL VOC READING	<u>2.4</u>
SAMPLE STOP TIME	<u>12:38</u>	DURATION	<u>10 min</u>

FINAL ROTAMETER READING	<u>127</u>	BOTTOM OF THE	<u>S.S.</u> BALL
FINAL LEAK CHECK	<u>OK</u>		

Comments: FRONT TRAP ID: 29A  
BACK TRAP ID: 29B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/3/08  
Investigator: T(KJS, BA)JKB, JLV, (V)  
General We TOBOBL07-5 440 Sun, clear

SAMPLE ID TOBOBL08-4: M22 SAMPLER ID (R-3)  
PUMP ID 3 SAMPLE LOCATION M22  
WELL ID M22 WELL DEPTH 30' or 10', 20', 30', or 40'  
NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters  
INITIAL LEAK CHECK OK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0.0 INITIAL WELL VOC READING 5.8  
INITIAL INLET LINE VOC READING \_\_\_\_\_ SAMPLE START TIME 11:44

INITIAL ROTAMETER READING 130 BOTTOM OF THE S.S. BALL  
5 MIN ROTAMETER READING 131

FINAL AMBIENT VOC READING 0.0 FINAL WELL VOC READING 33.4  
SAMPLE STOP TIME 11:54 DURATION 10 min  
FINAL ROTAMETER READING 131 BOTTOM OF THE S.S. BALL  
FINAL LEAK CHECK OK

Comments: FRONT TRAP ID: 2A  
BACK TRAP ID: 2B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/3/08  
Investigator: T(KJS, BA), JKB, JLV, VV  
General We TOBOBL07-5 44° Sun, clear

SAMPLE ID TOBOBL08-4: M28 SAMPLER ID (R-?)  
PUMP ID 3 SAMPLE LOCATION M28  
WELL ID M28 WELL DEPTH 30" or 10', 20', 30', or 40'  
NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters  
INITIAL LEAK CHECK OK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0 INITIAL WELL VOC READING 7  
INITIAL INLET LINE VOC READING \_\_\_\_\_ SAMPLE START TIME 11:17

INITIAL ROTAMETER READING 130 BOTTOM OF THE S.S. BALL  
5 MIN ROTAMETER READING 140

FINAL AMBIENT VOC READING \_\_\_\_\_ FINAL WELL VOC READING 6  
SAMPLE STOP TIME 11:27 DURATION 10 min

FINAL ROTAMETER READING 126 BOTTOM OF THE S.S. BALL  
FINAL LEAK CHECK OK

Comments: FRONT TRAP ID: 20A  
BACK TRAP ID: 20D

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL08-4 Location TOBOBSWDC Date 12/3/08  
Investigator: T(KJS, BA, JKB, JLV, VV)  
General We TOBOBL07-5 44° Sun, clear

SAMPLE ID TOBOBL08-4: M31 SAMPLER ID (R-3)  
PUMP ID 3 SAMPLE LOCATION M31  
WELL ID M31 WELL DEPTH 30" or 10', 20', 30', or 40'  
NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters  
INITIAL LEAK CHECK OK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0 INITIAL WELL VOC READING 7.7

INITIAL INLET LINE VOC READING \_\_\_\_\_ SAMPLE START TIME 10:44

INITIAL ROTAMETER READING 127 BOTTOM OF THE S.S. BALL  
5 MIN ROTAMETER READING 126

FINAL AMBIENT VOC READING 0 FINAL WELL VOC READING 9.2

SAMPLE STOP TIME 10:54 DURATION 10 min

FINAL ROTAMETER READING 126 BOTTOM OF THE S.S. BALL  
FINAL LEAK CHECK OK

Comments: FRONT TRAP ID: 26A  
BACK TRAP ID: 26B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/3/08  
Investigator: T(KJS, SA) JKB, JLV, VV  
General Well TOBOBL07-5 42" Sample

SAMPLE ID TOBOBL08-4: M34 SAMPLER ID (R-3)  
PUMP ID 3 SAMPLE LOCATION \_\_\_\_\_  
WELL ID M34 WELL DEPTH 30" or 10', 20', 30', or 40'  
NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters  
INITIAL LEAK CHECK OK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0 INITIAL WELL VOC READING 28.2

INITIAL INLET LINE VOC READING \_\_\_\_\_ SAMPLE START TIME 10:23

INITIAL ROTAMETER READING 129 BOTTOM OF THE S.S. BALL  
5 MIN ROTAMETER READING 132

FINAL AMBIENT VOC READING 0 FINAL WELL VOC READING 9.6

SAMPLE STOP TIME 10:24 DURATION 10 min

FINAL ROTAMETER READING 132 BOTTOM OF THE S.S. BALL  
FINAL LEAK CHECK OK

Comments: FRONT TRAP ID: 23A  
BACK TRAP ID: 23B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC

Date 12/3/08

Investigator: T(KJS, BA, JKB, JLV, VV)

General We TOBOBL07-5 42° Sun, clear

SAMPLE ID TOBOBL08-4: M-37

SAMPLER ID (R-3)

PUMP ID 3

SAMPLE LOCATION M37

WELL ID M37

WELL DEPTH 30" or 10', 20', 30', or 40'

NOMINAL FLOW RATE 1 LPM

NOMINAL SAMPLE VOLUME 10 Liters

INITIAL LEAK CHECK OK

MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0

INITIAL WELL VOC READING 0

INITIAL INLET LINE VOC READING \_\_\_\_\_

SAMPLE START TIME 9:56

INITIAL ROTAMETER READING 128

BOTTOM OF THE S.S. BALL

5 MIN ROTAMETER READING ~~128~~ 130

FINAL AMBIENT VOC READING 0

FINAL WELL VOC READING 0

SAMPLE STOP TIME 10:06

DURATION 10 min

FINAL ROTAMETER READING ~~128~~ 133

BOTTOM OF THE S.S. BALL

FINAL LEAK CHECK OK

Comments: FRONT TRAP ID: 21A slight sponge odor from storm pond  
BACK TRAP ID: 21B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC Date 12/3/08

Investigator: T(KJS, BA, JKB, JLV, V)

General We TOBOBL07-5 Sunny & clear, temp = 45°F

SAMPLE ID TOBOBL08-4: M39 SAMPLER ID (R-3)

PUMP ID 3 SAMPLE LOCATION \_\_\_\_\_

WELL ID \_\_\_\_\_ WELL DEPTH 30' or 10', 20', 30', or 40'

NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters

INITIAL LEAK CHECK OK MICROTIP PA900161 PA900166

INITIAL AMBIENT VOC READING 0.0 INITIAL WELL VOC READING 1.7

INITIAL INLET LINE VOC READING — SAMPLE START TIME 12:06

INITIAL ROTAMETER READING 129 BOTTOM OF THE S.S. BALL

5 MIN ROTAMETER READING 128

FINAL AMBIENT VOC READING 0.0 FINAL WELL VOC READING 2.3

SAMPLE STOP TIME 12:16 DURATION 10 min

FINAL ROTAMETER READING 128 BOTTOM OF THE S.S. BALL

FINAL LEAK CHECK OK

Comments: FRONT TRAP ID: 7A  
BACK TRAP ID: 7B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

SOIL GAS WELL SAMPLING DATA SHEET

Project ID TOBOBL08-4 Location TOBOBSWDC

Date 12/3/08

Investigator: T(KJS/BA), JKB, JLV, XV

General Well TOBOBL07-5

SAMPLE ID TOBOBL08-4: M39 SAMPLER ID (R - )

PUMP ID \_\_\_\_\_ SAMPLE LOCATION \_\_\_\_\_

WELL ID \_\_\_\_\_ WELL DEPTH 30" or 10', 20', 30', or 40'

NOMINAL FLOW RATE 1 LPM NOMINAL SAMPLE VOLUME 10 Liters

INITIAL LEAK CHECK \_\_\_\_\_ MICRO TIP PA900161 PA900166

INITIAL AMBIENT VOC READING \_\_\_\_\_ INITIAL WELL VOC READING \_\_\_\_\_

INITIAL INLET LINE VOC READING \_\_\_\_\_ SAMPLE START TIME 12:18

INITIAL ROTAMETER READING \_\_\_\_\_ BOTTOM OF THE S.S. BALL

5 MIN ROTAMETER READING \_\_\_\_\_

FINAL AMBIENT VOC READING \_\_\_\_\_ FINAL WELL VOC READING \_\_\_\_\_

SAMPLE STOP TIME \_\_\_\_\_ DURATION \_\_\_\_\_

FINAL ROTAMETER READING \_\_\_\_\_ BOTTOM OF THE S.S. BALL

FINAL LEAK CHECK \_\_\_\_\_

Comments: FRONT TRAP ID: 9A

BACK TRAP ID: 9B

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

## PRESSURE WELL READING DATA SHEET

Project ID: TOBOBL08-4  
 Project Site: TOBOBSWDC  
 Date: 12/04/08  
 General Weather Condition: FAIR 35W @ 10  
 Equipment ID: Dwyer 10" inclined manometer  
 Operators: KJS, JLV, BA, JKB, VV

Well ID	Pressure Well Location	Color Code	Time	Reading
PW1	NW corner of landfill	blue	0752	0
		green	0752	+0.03
		blue	0753	0
		green	0753	+0.03
Well ID	Pressure Well Location	Color Code	Time	Reading
PW2	SE corner of landfill	blue	0743	0
		green	0743	+0.03
		blue	0744	0
		green	0744	+0.03
Well ID	Pressure Well Location	Color Code	Time	Reading
PW3	FTC	blue	0805	0
		green	0805	+0.06
		blue	0806	0
		green	0806	+0.08
Well ID	Pressure Well Location	Color Code	Time	Reading

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

BLUE (Short) = 10'    GREEN (Long) = 20'

**APPENDIX E**

**EQUIPMENT CALIBRATIONS**

ROTAMETER ONE : R1

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 11/20/2008  
 Pump I.D.: 625226 Time (EDT): 12:10  
 Rotameter R-?: 1 Barometric Pressure (in. Hg): 29.81  
 PRE- or POST-?: PRE Temperature (deg. F): 71.7  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	40	50	60	70			
Sampling Medium							
T-T/C FOR LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.136	0.194	0.266	0.331			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	0.1360	0.1940	0.2660	0.3310	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1333	0.1901	0.2607	0.3244	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 22  
 Pv a= 0.78  
 std Press in. Hg 29.92  
 Tstd °C = 25

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 12/16/2008  
 Pump I.D.: 625226 Time (EDT): 15:15  
 Rotameter R-?: 1 Barometric Pressure (in. Hg): 30.50  
 PRE- or POST-?: POST Temperature (deg. F): 76.4  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	40	50	60	70			
Sampling Medium							
T-T/C WITH FLOW SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.136	0.192	0.263	0.327			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	0.1360	0.1922	0.2630	0.3273	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1344	0.1899	0.2598	0.3234	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 25  
 Pv a= 0.94  
 std Press in. Hg 29.92  
 Tstd °C = 25

ACCURACY CHECK BETWEEN CALIBRATIONS ACCORDING TO STANDARD FLOWS USING PRE- AS REFERENCE							
POINT #:	POINT 1	POINT 2	POINT 3	POINT 4	POINT 5	POINT 6	POINT 7
RR Reading:	40	50	60	70	0	0	0
ACCURACY:	0.825	-0.105	-0.345	-0.308	#DIV/0!	#DIV/0!	#DIV/0!
PRE Precision:	#DIV/0!						
POST Precision:	#DIV/0!						

ROTAMETER TWO : R2

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 11/20/2008  
 Pump I.D.: 625232 Time (EDT): 12:23  
 Rotameter R-?: 2 Barometric Pressure (in. Hg): 29.81  
 PRE- or POST-?: PRE Temperature (deg. F): 72.8  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	40	50	60	70			
Sampling Medium							
T-T/C WITH FLOW SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.138	0.196	0.264	0.336			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	0.1380	0.1960	0.2640	0.3360	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1346	0.1911	0.2574	0.3276	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 23  
 Pv a= 0.83  
 std Press in. Hg 29.92  
 Tstd °C = 25

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 12/16/2008  
 Pump I.D.: 625232 Time (EDT): 15:31  
 Rotameter R-?: 2 Barometric Pressure (in. Hg): 30.50  
 PRE- or POST-?: POST Temperature (deg. F): 76.4  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	40	50	60	70			
Sampling Medium							
T-T/C WITH FLOW SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.139	0.201	0.265	0.328			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	0.1387	0.2013	0.2645	0.3275	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1370	0.1989	0.2613	0.3236	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 25  
 Pv a= 0.94  
 std Press in. Hg 29.92  
 Tstd °C = 25

ACCURACY CHECK BETWEEN CALIBRATIONS ACCORDING TO STANDARD FLOWS USING PRE- AS REFERENCE								
POINT #:	POINT 1	POINT 2	POINT 3	POINT 4	POINT 5	POINT 6	POINT 7	
RR Reading:	40	50	60	70	0	0	0	
ACCURACY:	1.783	4.082	1.515	-1.221	#DIV/0!	#DIV/0!	#DIV/0!	
PRE Precision:	#DIV/0!							
POST Precision:	#DIV/0!							

ROTAMETER THREE : R3

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 11/20/2008  
 Pump I.D.: 522574 Time (EDT): 13:46  
 Rotameter R- ? : 3 Barometric Pressure (in. Hg): 29.81  
 PRE- or POST- ? : PRE Temperature (deg. F): 71.7  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
			110	120	130	140	
Sampling Medium							
T-T/C FOR AMBIENT AIR BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1			0.880	0.965	1.028	1.113	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.8800	0.9650	1.0280	1.1130
Average Standard Liters Per Minute, Avg. (SLPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.8625	0.9458	1.0076	1.0909

REMARKS: Ta °C= 22  
 Pv a= 0.78  
 std Press in. Hg 29.92  
 Tstd °C = 25

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 12/16/2008  
 Pump I.D.: 522574 Time (EDT): 15:44  
 Rotameter R- ? : 3 Barometric Pressure (in. Hg): 30.50  
 PRE- or POST- ? : POST Temperature (deg. F): 75.8  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
			110	120	130	140	
Sampling Medium							
T-T/C FOR AMBIENT AIR BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1			0.869	0.950	1.026	1.099	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.8690	0.9499	1.0260	1.0990
Average Standard Liters Per Minute, Avg. (SLPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.8632	0.9435	1.0191	1.0916

REMARKS: Ta °C= 24  
 Pv a= 0.88  
 std Press in. Hg 29.92  
 Tstd °C = 25

ACCURACY CHECK BETWEEN CALIBRATIONS ACCORDING TO STANDARD FLOWS USING PRE- AS REFERENCE								
POINT #:	POINT 1	POINT 2	POINT 3	POINT 4	POINT 5	POINT 6	POINT 7	
RR Reading:	0	0	0	110	120	130	140	
ACCURACY:	#DIV/0!	#DIV/0!	#DIV/0!	0.081	-0.243	1.141	0.064	
PRE Precision:	#DIV/0!							
POST Precision:	#DIV/0!							

ROTAMETER FOUR : R4

**PERSONAL PUMP CALIBRATION SHEET**

Project: **OBL08-3** Date: **11/20/2008**  
 Pump I.D.: **545761** Time (EDT): **13:03**  
 Rotameter R- ? : **4** Barometric Pressure (in. Hg): **29.80**  
 PRE- or POST- ? : **PRE** Temperature (deg. F): **71.9**  
 Calibrator Model: **DryCal** Calibrator I.D.: **101996**

Rotameter Reading (Bottom of the SS, R, B Ball)							
			110	120	130	140	
Sampling Medium							
T-T/C FOR AMBIENT AIR BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1			0.937	1.026	1.109	1.171	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.9370	1.0260	1.1090	1.1710
Average Standard Liters Per Minute, Avg. (SLPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.9181	1.0053	1.0866	1.1473

REMARKS: Ta °C= 22  
 Pv a= 0.78  
 std Press in. Hg 29.92  
 Tstd °C = 25

**PERSONAL PUMP CALIBRATION SHEET**

Project: **OBL08-3** Date: **12/16/2008**  
 Pump I.D.: **545761** Time (EDT): **15:55**  
 Rotameter R- ? : **4** Barometric Pressure (in. Hg): **30.50**  
 PRE- or POST- ? : **POST** Temperature (deg. F): **76.2**  
 Calibrator Model: **DryCal** Calibrator I.D.: **101996**

Rotameter Reading (Bottom of the SS, R, B Ball)							
			110	120	130	140	
Sampling Medium							
T-T/C FOR AMBIENT AIR BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1			0.940	1.009	1.102	1.174	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average Actual Liters Per Minute (ALPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.9395	1.0090	1.1020	1.1740
Average Standard Liters Per Minute, Avg. (SLPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.9282	0.9969	1.0887	1.1599

REMARKS: Ta °C= 25  
 Pv a= 0.94  
 std Press in. Hg 29.92  
 Tstd °C = 25

ACCURACY CHECK BETWEEN CALIBRATIONS ACCORDING TO STANDARD FLOWS USING PRE- AS REFERENCE								
POINT #:	POINT 1	POINT 2	POINT 3	POINT 4	POINT 5	POINT 6	POINT 7	
RR Reading:	0	0	0	110	120	130	140	
ACCURACY:	#DIV/0!	#DIV/0!	#DIV/0!	1.1	-0.836	0.193	1.098	
PRE Precision:	#DIV/0!							
POST Precision:	#DIV/0!							

ROTAMETER FIVE : R5

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 11/20/2008  
 Pump I.D.: 625239 Time (EDT): 14:02  
 Rotameter R-?: 5 Barometric Pressure (in. Hg): 29.80  
 PRE- or POST-?: PRE Temperature (deg. F): 70.8  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	40	50	60	70	80		
Sampling Medium							
T-T/C FOR LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.127	0.187	0.253	0.326			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	0.1270	0.1870	0.2530	0.3260	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1244	0.1832	0.2479	0.3194	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 22  
 Pv a= 0.78  
 std Press in. Hg 29.92  
 Tstd °C = 25

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 12/16/2008  
 Pump I.D.: 625239 Time (EDT): 16:03  
 Rotameter R-?: 5 Barometric Pressure (in. Hg): 30.50  
 PRE- or POST-?: POST Temperature (deg. F): 76.8  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	40	50	60	70	80		
Sampling Medium							
T-T/C FOR AMBIENT AIR BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.128	0.189	0.254	0.318			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average Actual Liters Per Minute (ALPM)							
	0.1280	0.1893	0.2535	0.3182	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1265	0.1870	0.2504	0.3144	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 25  
 Pv a= 0.94  
 std Press in. Hg 29.92  
 Tstd °C = 25

ACCURACY CHECK BETWEEN CALIBRATIONS ACCORDING TO STANDARD FLOWS USING PRE- AS REFERENCE								
POINT #:	POINT 1	POINT 2	POINT 3	POINT 4	POINT 5	POINT 6	POINT 7	
RR Reading:	40	50	60	70	80	0	0	
ACCURACY:	1.688	2.074	1.008	-1.565	#DIV/0!	#DIV/0!	#DIV/0!	
PRE Precision:	#DIV/0!							
POST Precision:	#DIV/0!							

ROTAMETER SIX : R6

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 11/20/2008  
 Pump I.D.: 538146 Time (EDT): 14:15  
 Rotameter R- ? : 6 Barometric Pressure (in. Hg): 29.80  
 PRE- or POST- ? : PRE Temperature (deg. F): 71.1  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
			110	120	130	140	
Sampling Medium							
T-T/C FOR LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1			0.908	0.982	1.074	1.157	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.9080	0.9820	1.0740	1.1570
Average Standard Liters Per Minute, Avg. (SLPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.8896	0.9621	1.0523	1.1336

REMARKS: Ta °C= 22  
 Pv a= 0.78  
 std Press in. Hg 29.92  
 Tstd °C = 25

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 12/16/2008  
 Pump I.D.: 538146 Time (EDT): 16:30  
 Rotameter R- ? : 6 Barometric Pressure (in. Hg): 30.49  
 PRE- or POST- ? : POST Temperature (deg. F): 77.2  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
			100	110	120	130	140
Sampling Medium							
T-T/C FOR LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1				0.910	0.981	1.075	1.149
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average Actual Liters Per Minute (ALPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.9097	0.9814	1.0750	1.1490
Average Standard Liters Per Minute, Avg. (SLPM)							
	#DIV/0!	#DIV/0!	#DIV/0!	0.8985	0.9693	1.0617	1.1348

REMARKS: Ta °C= 25  
 Pv a= 0.94  
 std Press in. Hg 29.92  
 Tstd °C = 25

ACCURACY CHECK BETWEEN CALIBRATIONS ACCORDING TO STANDARD FLOWS USING PRE- AS REFERENCE								
POINT #:	POINT 1	POINT 2	POINT 3	POINT 4	POINT 5	POINT 6	POINT 7	
RR Reading:	0	0	0	110	120	130	140	
ACCURACY:	#DIV/0!	#DIV/0!	#DIV/0!	1	0.748	0.893	0.106	
PRE Precision:	#DIV/0!							
POST Precision:	#DIV/0!							

ROTAMETER SEVEN : R7

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 11/20/2008  
 Pump I.D.: 538819 Time (EDT): 15:11  
 Rotameter R- 2: 7 Barometric Pressure (in. Hg): 20.79  
 PRE- or POST- ? PRE Temperature (deg. F): 71.8  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	30	40	50	60			
Sampling Medium							
T-T/C FOR LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.148	0.230	0.328	0.414			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	0.1480	0.2300	0.3280	0.4140	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1000	0.1554	0.2216	0.2797	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 22  
 Pv a= 0.78  
 std Press in. Hg 29.92  
 Tstd °C = 25

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 12/16/2008  
 Pump I.D.: 538819 Time (EDT): 16:41  
 Rotameter R- 2: 7 Barometric Pressure (in. Hg): 30.49  
 PRE- or POST- ? POST Temperature (deg. F): 77.2  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	30	40	50	60			
Sampling Medium							
T-T/C FOR LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.150	0.226	0.326	0.411			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average Actual Liters Per Minute (ALPM)							
	0.1497	0.2261	0.3262	0.4111	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1478	0.2233	0.3222	0.4060	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 25  
 Pv a= 0.94  
 std Press in. Hg 29.92  
 Tstd °C = 25

ACCURACY CHECK BETWEEN CALIBRATIONS ACCORDING TO STANDARD FLOWS USING PRE- AS REFERENCE							
POINT #:	POINT 1	POINT 2	POINT 3	POINT 4	POINT 5	POINT 6	POINT 7
RR Reading:	30	40	50	60			
ACCURACY:	47.8	43.694	45.397	45.156	#DIV/0!	#DIV/0!	#DIV/0!
PRE Precision:	#DIV/0!						
POST Precision:	#DIV/0!						

ROTAMETER EIGHT : R8

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 11/20/2008  
 Pump I.D.: 625276 Time (EDT): 14:26  
 Rotameter R-?: 8 Barometric Pressure (in. Hg): 29.79  
 PRE- or POST-?: PRE Temperature (deg. F): 72.4  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	40	50	60	70			
Sampling Medium							
T/T-C FOR LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.146	0.202	0.270	0.339			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	0.1460	0.2020	0.2700	0.3390	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1430	0.1978	0.2645	0.3320	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 22  
 P, a= 0.78  
 std Press in. Hg 29.92  
 Tstd °C = 25

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 12/16/2008  
 Pump I.D.: 625276 Time (EDT): 17:05  
 Rotameter R-?: 8 Barometric Pressure (in. Hg): 30.49  
 PRE- or POST-?: POST Temperature (deg. F): 76.5  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	40	50	60	70			
Sampling Medium							
T/T-C FOR LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.149	0.206	0.272	0.337			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average Actual Liters Per Minute (ALPM)							
	0.1490	0.2059	0.2720	0.3371	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1472	0.2034	0.2686	0.3329	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 25  
 P, a= 0.94  
 std Press in. Hg 29.92  
 Tstd °C = 25

ACCURACY CHECK BETWEEN CALIBRATIONS ACCORDING TO STANDARD FLOWS USING PRE- AS REFERENCE								
	POINT #:	POINT 1	POINT 2	POINT 3	POINT 4	POINT 5	POINT 6	POINT 7
RR Reading:	40	50	60	70	0	0		
ACCURACY:	2.937	2.831	1.55	0.271	#DIV/0!	#DIV/0!	#DIV/0!	
PRE Precision:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
POST Precision:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

ROTAMETER NINE : R9

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 11/20/2008  
 Pump I.D.: 625277 Time (EDT): 14:51  
 Rotameter R-?: 9 Barometric Pressure (in. Hg): 20.79  
 PRE- or POST-?: PRE Temperature (deg. F): 72.8  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	40	50	60	70	80		
Sampling Medium							
T/T-C LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.136	0.195	0.262	0.328			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	0.1360	0.1950	0.2620	0.3280	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.0913	0.1310	0.1760	0.2203	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 23  
 Pv a= 0.83  
 std Press in. Hg 29.92  
 Tstd °C = 25

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 12/16/2008  
 Pump I.D.: 625277 Time (EDT): 17:24  
 Rotameter R-?: 9 Barometric Pressure (in. Hg): 30.49  
 PRE- or POST-?: POST Temperature (deg. F): 74.2  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	40	50	60	70	80		
Sampling Medium							
T/T-C FOR LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.140	0.198	0.265	0.328			
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average Actual Liters Per Minute (ALPM)							
	0.1397	0.1979	0.2649	0.3276	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1394	0.1975	0.2644	0.3269	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta °C= 23  
 Pv a= 0.83  
 std Press in. Hg 29.92  
 Tstd °C = 25

ACCURACY CHECK BETWEEN CALIBRATIONS ACCORDING TO STANDARD FLOWS USING PRE- AS REFERENCE								
	POINT #:	POINT 1	POINT 2	POINT 3	POINT 4	POINT 5	POINT 6	POINT 7
RR Reading:	40	50	60	70	80	0		
ACCURACY:	52.683	50.763	50.227	48.389	50.227	0	#DIV/0!	#DIV/0!
PRE Precision:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
POST Precision:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

ROTAMETER TEN : R10

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 11/20/2008  
 Pump I.D.: 545767 Time (EDT): 15:38  
 Rotameter R- ? : 10 Barometric Pressure (in. Hg): 20.79  
 PRE- or POST- ? : PRE Temperature (deg. F): 70.8  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	30	35	40	45	50		
Sampling Medium							
T/T-C LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.160	0.194	0.237	0.286	0.344		
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average (ALPM)							
	0.1600	0.1940	0.2370	0.2860	0.3440	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1081	0.1311	0.1601	0.1932	0.2324	#DIV/0!	#DIV/0!

REMARKS: Ta oC= 22  
 Pv a= 0.78  
 std Press in. Hg 29.92  
 Tstd oC = 25

**PERSONAL PUMP CALIBRATION SHEET**

Project: OBL08-3 Date: 12/16/2008  
 Pump I.D.: 545767 Time (EDT): 17:38  
 Rotameter R- ? : 10 Barometric Pressure (in. Hg): 30.49  
 PRE- or POST- ? : POST Temperature (deg. F): 75.6  
 Calibrator Model: DryCal Calibrator I.D.: 101996

Rotameter Reading (Bottom of the SS, R, B Ball)							
	30	35	40	45	50		
Sampling Medium							
T/T-C FOR LOW FLOW WITH SPLITTER BOTTOM OF SS BALL							
Actual Liters Per Minute, ALPM							
1	0.170	0.206					
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Average Actual Liters Per Minute (ALPM)							
	0.1695	0.2058	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Average Standard Liters Per Minute, Avg. (SLPM)							
	0.1683	0.2044	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

REMARKS: Ta oC= 24  
 Pv a= 0.88  
 std Press in. Hg 29.92  
 Tstd oC = 25

ACCURACY CHECK BETWEEN CALIBRATIONS ACCORDING TO STANDARD FLOWS USING PRE- AS REFERENCE							
POINT #:	POINT 1	POINT 2	POINT 3	POINT 4	POINT 5	POINT 6	POINT 7
RR Reading:	40	50	60	70	0	0	
ACCURACY:	#DIV/0!						
PRE Precision:	#DIV/0!						
POST Precision:	#DIV/0!						

## **APPENDIX G**

**“Town of Oyster Bay, Old Bethpage Solid Waste Disposal Complex  
Evaluation of Volatile Organic Compounds  
in Ambient Air, Soil Gas and Soil Gas Pressure Readings  
2008 Annual Summary Report”**

**RTP Environmental Associates, Inc.  
February 2009**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**EVALUATION OF VOLATILE ORGANIC COMPOUNDS  
IN AMBIENT AIR, SOIL GAS AND SOIL GAS  
PRESSURE READINGS**

**2008 Annual Summary Report**

Prepared for:

Town of Oyster Bay  
Department of Public Works  
Syosset, New York

Prepared by:



RTP Environmental Associates, Inc.  
400 Post Avenue  
Westbury, New York

**February 2009**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**EVALUATION OF VOLATILE ORGANIC COMPOUNDS  
IN AMBIENT AIR, SOIL GAS AND SOIL GAS  
PRESSURE READINGS**

**2008 Annual Summary**

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C - 2008 Quarterly Soil Gas Pressure Well Data

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**EVALUATION OF VOLATILE ORGANIC COMPOUNDS  
IN AMBIENT AIR, SOIL GAS AND SOIL GAS  
PRESSURE READINGS**

**2008 Annual Summary**

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TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**EVALUATION OF VOLATILE ORGANIC COMPOUNDS  
IN AMBIENT AIR, SOIL GAS AND SOIL GAS  
PRESSURE READINGS**

**1.0 INTRODUCTION**

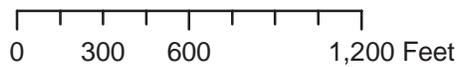
The Town of Oyster Bay (the Town) has contracted RTP Environmental Associates, Inc. to conduct a supplemental gas monitoring program of volatile organic compounds (VOCs) and soil gas pressures during 2008 on a quarterly basis at the Old Bethpage Landfill. The landfill is located within the Old Bethpage Solid Waste Disposal Complex (OBSWDC). The ambient air, soil gas and soil gas pressure monitoring program was designed to comply with several requirements stipulated in the New York State Consent Decree (83CIV5357) RAP Attachment 2. The details of the specific monitoring methods used, laboratory analyses performed and the results for all program phases, including VOC monitoring, have been presented in the 2008 quarterly reports. The quarterly reports have been forwarded to the Town as they were completed. The other monitoring efforts being conducted to complete the Consent Decree requirements were reported separately. This evaluation has been prepared to review and summarize the ambient air and soil gas VOC concentration and soil gas pressure data that were collected during the 2008 monitoring efforts.

The OBSWDC is located in the Town of Oyster Bay, New York. The OBSWDC is comprised of a landfill, inactive power generating facility, thermal oxidizer, leachate and groundwater treatment systems, clean fill disposal site, solid waste recycling center, solid waste transfer station, vehicle maintenance garage and scale house (Figure 1.1). The OBSWDC is bordered on the north by Bethpage Sweethollow Road, on the west by Round Swamp Road and on the east by Winding Road. A concrete plant and the Nassau County Fire Service Academy (NCFSA) are located along the southern border of the OBSWDC; a campground is located along the northwest border. An industrial park adjoins the northeastern border of the OBSWDC and other industrial areas exist nearby to the north and west. These other industrial areas do not have common boundaries with the OBSWDC; however, these locations are sources of air pollutants that impact the area. Other sources of air pollutants are vehicular traffic on the roads that border the OBSWDC as well as regional sources. Therefore, several other sources emitting VOCs influence the ambient concentrations being monitored.



IMAGERY SOURCE: NYSGIS CLEARINGHOUSE

FIGURE 1.1  
 OBSWDC AND SURROUNDING AREA MAP  
 TOWN OF OYSTER BAY LANDFILL  
 BETHPAGE, NEW YORK



RTP Environmental Associates, Inc.  
 400 Post Avenue  
 Westbury, NY 11590  
 P:(516) 333-4526 F:(516) 333-4571

To control landfill emissions, the landfill has undergone significant changes as part of the closure process. A gas collection system was installed along the perimeter of the landfill with portions beginning operation in 1981. A capping program was initiated in 1983. The capping program involved placing an impervious clay cap over the landfill. The capping program was completed in January 1993. The perimeter gas collection system was expanded in 1995. Six landfill gas extraction wells (LGV23, LGV24, LGV25, LGV26, LGV27 and LGV28) were installed and became operational August 16, 1995. These wells are located along the western and southern perimeters of the capped landfill. They are designed to contain gas migration and to maintain acceptable methane levels at the thermal oxidizer. Four (4) additional perimeter gas collection wells (LGV29, LGV30, LGV31 and LGV32) were installed and became operational during 1996 along the west side of the Haul Road, near Briden Construction. The perimeter gas collection well loop around the landfill was also completed during 1996.

The thermal oxidizer was installed in 1987 to combust the landfill gas collected by the perimeter collection system. In early 2001, the contractor who was mining gas from the landfill for energy production suspended operations due to low recovery rates of landfill gas. These activities have restricted or mitigated the release of gas from the landfill and thereby reduced landfill gas and associated air pollutant emissions from this site.

As of May 2008, the thermal oxidizer (TO), as well as the perimeter gas collection system, were not completely operational. A perimeter system and landfill gas collection system assessment performed by Lockwood, Kessler & Bartlett, Inc. (LKB) found that the system had been damaged. As such, the perimeter system and TO are not being operated as designed. This may have contributed to the positive pressure well readings recorded during the 2008 quarterly efforts, particularly the third and fourth quarter efforts, signifying that the system did not provide a sufficient vacuum. The results recorded during the 2008 quarterly efforts were consistent with the intrusion of air into the perimeter system.

As stipulated in the Consent Decree, ambient air and soil gas concentrations and soil gas pressure levels are currently measured on a quarterly basis at selected points around the landfill. The results are reported quarterly and are summarized in this report. It is worth mentioning that in 2008, the Town changed the business hours of the OBSWDC, allowing general access to the facility only between the hours of 6:00 AM to 4:00 PM. As such, monitoring locations were adjusted during the third and fourth quarterly efforts to allow for 24-hour access to sampling equipment for operational assessments and adjustments to flow. The air emissions from the thermal oxidizer were tested on a quarterly basis initially and are now tested on an annual basis. The test results for the thermal oxidizer have been reported separately. As

stated above, the TO was not operating as of May and as a result, a stack test was not performed in 2008. Repairs to the TO and perimeter system are expected in the near future. RTP continues to contact the Town in order to schedule a testing date when the system resumes normal operations.

## **2.0 ANALYSIS OF DATA**

### **2.1 Analysis of the 2008 Data Base**

The established target compound list (TCL) for this study was based on the Volatile Organic Sampling Train (VOST) method developed by the United States Environmental Protection Agency (USEPA) to quantify various VOC emissions. The standard VOST sampling train was modified slightly to make a portable unit for in-field use. A schematic of the sampling train, the sampling and analysis protocols, along with all the details on data collection, analysis and other documentation, are provided in the quarterly reports.

The sampling events were scheduled to observe concentrations during various seasons of the year. As a conservative step, the sampling events typically take place during periods of steady or falling atmospheric pressure. These periods would coincide with the greatest potential for releases of VOCs from the landfill; however, a test will occasionally be performed during steady to rising atmospheric pressure conditions to test ambient concentrations during rising pressure when landfill emissions are expected to be lower. For 2008, all of the four (4) quarterly tests were conducted during periods of falling atmospheric pressure. The pressure for the first quarter event overall fell 0.26 inches of mercury throughout the duration of the test. The pressure for the second quarter event fell by 0.03 inches of mercury throughout the duration of the test. The pressure for the third quarter event fell by 0.20 inches of mercury throughout the duration of the test, and finally, the pressure for the fourth quarter event fell overall roughly 0.17 inches of mercury. Sampling for each quarterly test occurred over a consecutive 24-hour period.

Table 2.1 provides the months during which the quarterly test efforts for each year of the sampling program were conducted. Monitoring for the 2008 sampling program, which is evaluated herein, occurred in March, May, October and December 2008.

**TABLE 2.1**

**TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX**

**PROGRAM EFFORTS ACCORDING TO CALENDAR QUARTER**

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
1990-1991	July	October	February	May
1992-1993	October	March	May	August
1994	April	July	September	December
1995	March	May	July	October
1996	March	June	August	November
1997	February	April	August	November
1998	March	May	August	November
1999	March-April	May	July	November
2000	March	June	August	October
2001	March	May	August	September
2002	February	May	September	November
2003	March	May	August	December
2004	March	June	August	November
2005	March	June	August	November
2006	March	June	September	November
2007	April	July	September	November
2008	March	May	October	December

Note:

The first two years of the program did not follow the calendar year schedule.

The program TCL is provided in Table 2.2 along with toxicity and guideline concentration values. The TCL has been modified during the course of the monitoring effort because of changing State requirements, analytical capabilities and continuing data review as related to the tentatively identified compounds (TICs) being detected. It was based on the most recently modified DAR-1 Annual and Short-term Guideline Concentrations (AGCs and SGCs) dated September 10, 2007 and was used for comparison in 2008 quarterly sampling efforts, as well as the annual average totals.

Several changes to the TCL and analytical procedures had been made for the 1997 program and these changes apply to the 2008 program as well. The designation for cis-1,2-dichloroethene was changed from a tentatively identified compound to a target compound as the result of preceding tests. The combined 1-ethyl-2-methylbenzene and 1-ethyl-4-methylbenzene isomers are reported as 2/4-ethyltoluene (total) as a means of simplifying the data reduction and reporting process. The combined isomer concentration is required for direct comparison to the New York State Department of Environmental Conservation (NYSDEC) de minimus guideline value. Furthermore, a practical quantitation limit (PQL) was introduced by the analytical laboratory, Holzmacher, McLendon & Murrell, P.C. (H2M), for several compounds as a result of lowering the minimum detection limit from 20 nanograms (ng) to five ng. The PQL represents the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. The analytical laboratory used for sample analysis, H2M, introduced a TIC minimum detection limit of 25 ng, (50 ng for benzaldehyde) which also can be applied to additional TICs when less than six (6) are detected. Otherwise, the lowest mass loading of the top six (6) additional TICs is considered to be the additional TIC minimum detection limit of a particular sample.

The NYSDEC provides both short-term (1-hour) guideline concentrations (SGC) and long-term annual average guideline concentration (AGC) values for most of the compounds being monitored. SGC values are significantly higher than AGCs values, and therefore, the program concentrates on longer term averages based on 24-hour samples as stipulated in the Consent Decree. The October 16, 1995 Air Guide-1 AGC and SGC values had been used in previous quarterly and annual reports until 2000. Revisions of the Air Guide-1 AGC/SGC values were released by the NYSDEC on July 12, 2000. These updated values were used in the quarterly and annual reports from 2001 through 2003. During the 2003 monitoring program, the designation of decane was changed from an additional TIC to a targeted TIC on the TCL. This change was completed in December 2003 and first became effective in the 2003 fourth



TABLE 2.2  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX  
PROGRAM TARGET COMPOUND LIST  
AND NYSDEC AMBIENT AIR GUIDELINE CONCENTRATIONS

NOTES:

TOXICITY (T):

- (H) HIGH Toxicity Contaminant.
- (M) MODERATE Toxicity Contaminant.
- (L) LOW Toxicity Contaminant.

WHO (W), Source of AGC/SGC Assignment:

- (A) AGC/SGC based upon NYSDEC "Analogy".
- (D) NYSDEC derived AGC/SGC.
- (E) AGC based upon EPA IRIS data (RFC or Unit Risk).
- (H) NYSDOH derived AGC/SGC.
- (S) AGC/SGC listed is FEDERAL or NYS Standard.
- (T) AGC based upon ACGIH TLV.
- (Y) SGC is based on ACGIH TLV Ceiling limit.
- (Z) SGC is based on ACGIH STEL.
- (d) AGC assigned Moderate Toxicity "de minimis" limit.
- (\*) AGC assigned High Toxicity "de minimis" limit.
- (----) There is no SGC for this compound.

WHO (W), Source of special AGC/SGC Interim Assignment:

- (s) AGC/SGC based upon Equivalent FEDERAL or NYS Standard.
- (X) There is no AGC/SGC value for this contaminant.

----codes----

11111

123456789012345:

codes, (Position 1):

- (U) AGC equivalent to "one in a million risk".

codes, (Position 3):

- (H) FEDERAL HAP identified by 1990 CAAA.

codes, (Positions 4 & 5):

- (A) ACGIH Human Carcinogen.
- (B) ACGIH Suspected Human Carcinogen.
- (C) ACGIH Ceiling Limit.
- (G) ACGIH Simple Asphyxiant.
- (I) Refer to ACGIH Handbook.
- (K) Multiple TLVs assigned in ACGIH Handbook.

codes, (Position 8):

- (Q) REFERENCED AGC adjusted for elemental assignment.

codes, (Position 9):

- (Q) REFERENCED SGC adjusted for elemental assignment.

codes, (Position 10):

- (R) AGC ASSIGNED TO REFERENCED COMPOUND.

codes, (Position 11):

- (R) SGC ASSIGNED TO REFERENCED COMPOUND.

codes, (Position 12):

- (Q) AGC ASSIGNED AS DIFFERENT ELEMENT(s) & ADJUSTED

codes, (Position 13):

- (Q) SGC ASSIGNED AS DIFFERENT ELEMENT(s) & ADJUSTED

codes, (Position 14):

- (M) REFERENCED AGC adjusted for MOLECULAR WEIGHTS.

codes, (Position 15):

- (M) REFERENCED SGC adjusted for MOLECULAR WEIGHTS.

- AGC/SGC recently revised September 2007 and are still current as of February 2009.

quarter testing effort with an amendment in June 2004. From that revision, the AGC value for decane changed from 0.1 to 200  $\mu\text{g}/\text{m}^3$ , and is currently 700  $\mu\text{g}/\text{m}^3$  as per the most recent revision in September 2007. The NYSDEC revised many of the SGC/AGC ambient air guideline values in September 2007, some of which are compounds that are being tested for during the quarterly monitoring program. Most noticeably, the AGC value for 1,1,2,2-tetrachloroethane was modified from 0.017 to 16  $\mu\text{g}/\text{m}^3$ . As previously stated, any changes in guidelines were incorporated in all quarterly reports for this year, as well as this 2008 annual summary report. The quoted values represent NYSDEC guidelines as of February 2009.

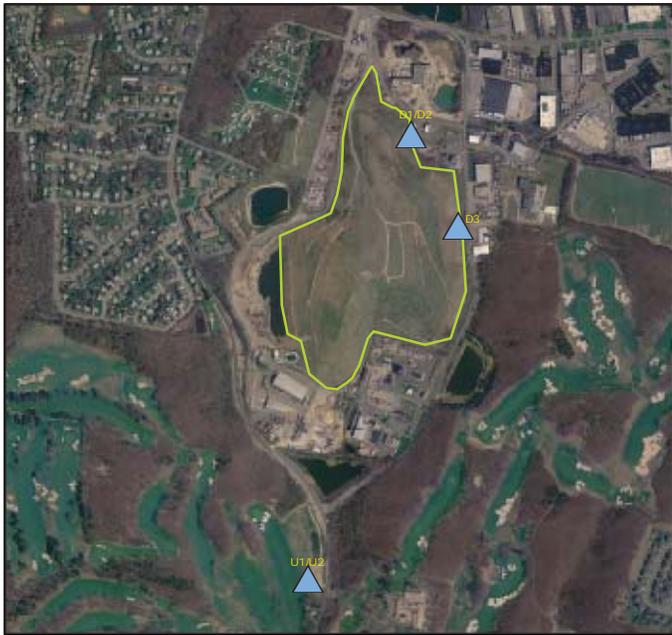
The NYSDEC strongly emphasizes that the AGC's are guideline values only, developed for screening and toxicity ranking, and are not standards or absolute limits of acceptable risk. With these limitations in mind, the AGC's are used to relate the data recorded from the OBSWDC to a scale of toxicity. This is necessary because compounds are known to vary widely in toxicity and reporting only the concentrations of chemicals without any information as to their relative toxicity would be less informative.

The ambient air monitoring program incorporates repositioning of sampling equipment to best define the overall contributions associated with the OBSWDC during each quarterly 24-hour test effort. Normally, two (2) collocated samples are taken at an upwind location and three (3) samples are taken at two (2) locations downwind of the OBSWDC. Therefore, upwind concentrations can be compared directly to downwind concentrations to conservatively determine the impact of the OBSWDC on the ambient air.

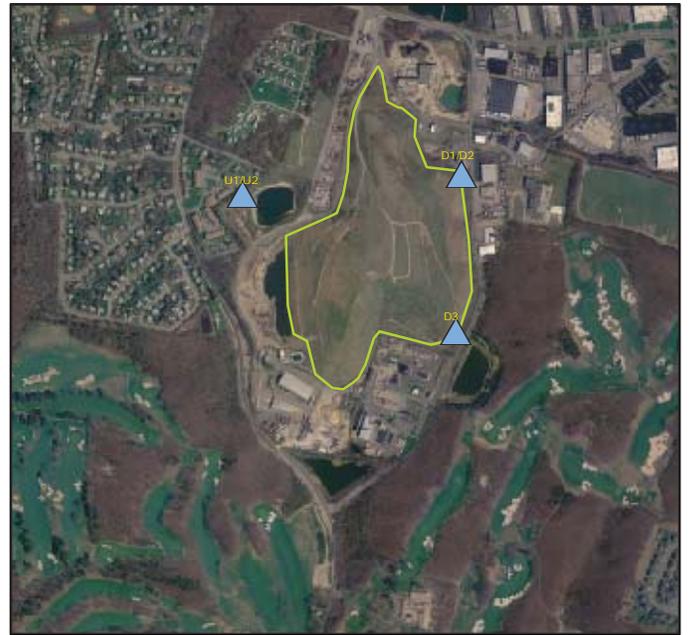
## 2.2 Analysis of 2008 Ambient Air Quality Data

Ambient air quality levels were monitored for each 24-hour sampling period at three (3) sampling locations during the 2008 sampling events. Figure 2.1 provides the locations of the ambient air sampling sites during each quarterly test. Samplers were positioned at two (2) locations generally downwind of the OBSWDC as prescribed by the Consent Decree. Two (2) collocated low volume samples and an individually located low volume sample were collected in the areas downwind of the landfill during the test efforts. The EPA reference sampling method was modified to account for site conditions and monitoring requirements. The sampling locations specified in the Consent Decree were adjusted slightly to account for expected meteorological conditions during the 24-hour sampling period. Collocated samples were used for quality assurance and control precision checks. In this case, at the upwind location and

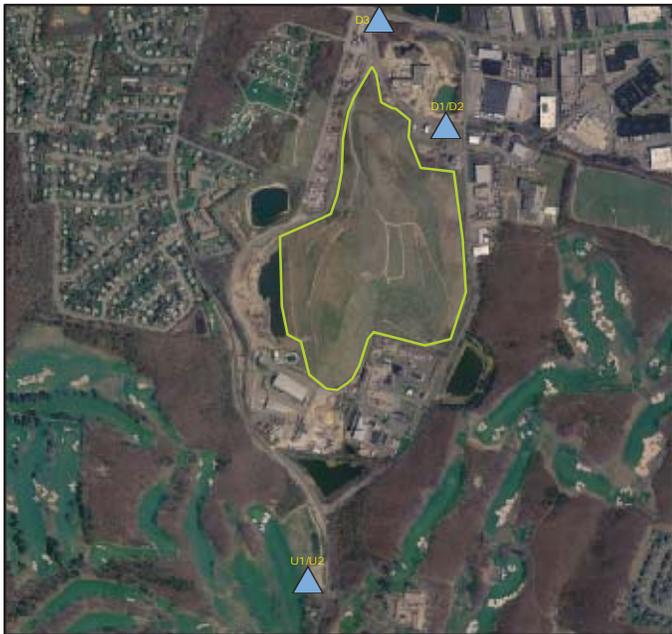
1st Quarter



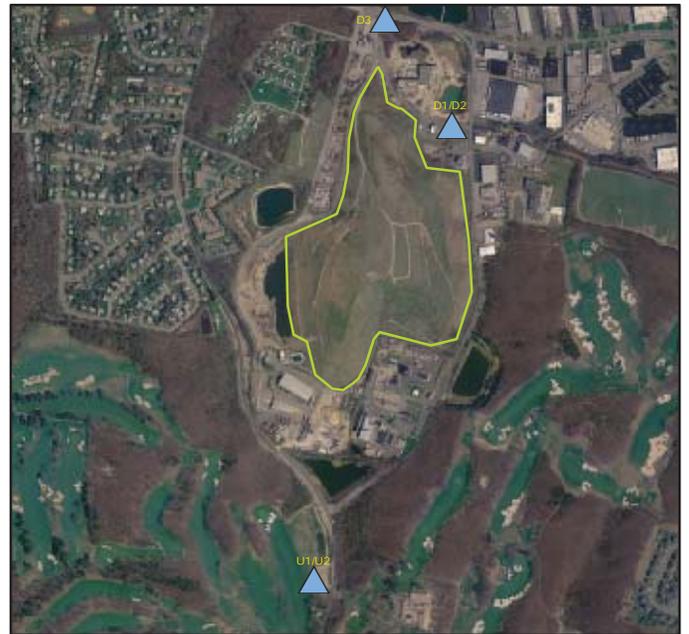
2nd Quarter



3rd Quarter



4th Quarter



IMAGERY SOURCE: NYSGIS CLEARINGHOUSE

**Legend**

Ambient Sample
  Landfill Boundary

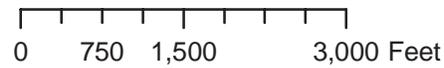


FIGURE 2.1  
 AMBIENT AIR SAMPLING LOCATIONS  
 FOR 2008 EFFORTS  
 TOWN OF OYSTER BAY LANDFILL  
 BETHPAGE, NEW YORK

  
 RTP Environmental Associates, Inc.  
 400 Post Avenue  
 Westbury, NY 11590  
 P:(516) 333-4526 F:(516) 333-4571

one (1) downwind location, collocated samplers were positioned to provide duplicate samples.

One (1) double Tenax cartridge and one (1) Tenax/Anasorb<sup>®</sup> cartridge combination were used for all samples (EPA Reference Method 0030) for all four (4) quarterly tests of 2008. This approach was used in order to compare analytical results equally from all samples taken and to determine if compound breakthrough was occurring. Based on the results of the split samples, it does appear that some minor contaminant breakthrough may have occurred through the front (all Tenax) cartridges.

The results from ambient air samples during the 2008 quarterly monitoring efforts were mostly consistent; however, some minor inconsistencies were noted. The ambient results during the quarterly tests appeared to have some differences in collocated samplers, where compounds varied slightly. During the 2007 efforts, some of the split samples were suspect for compound breakthrough and therefore, the sampling method was changed from U2, D2 and D3 being a double Tenax/Anasorb<sup>®</sup> configuration and were reverted to the primary configuration (Tenax/Tenax to Tenax/Anasorb<sup>®</sup>) in 2008. Samplers D1, D2, U1 and U2 ran for the intended 1,440 minutes throughout all four sampling events. D3 ran for the full 1,440 minutes during the first three tests of 2008. In the fourth quarter of 2008, D3 shut down due to a battery failure after running for 1,243 minutes. It was restarted and ran for an additional 118 minutes until the completion of the sampling period.

Table 2.3 contains data for the 2008 monitoring program at the downwind sampling locations. The downwind location presented for each quarter was chosen based on the highest total speciated target VOCs for the downwind samples per quarterly test effort. This data represents conservative annual average ambient air concentrations downwind of the OBSWDC. The samples were collected over a 24-hour period using a 0.25 liter per minute nominal sampling rate. The individual quarterly 24-hour samples were averaged to provide an estimated annual average concentration for locations downwind of the OBSWDC. As shown in Table 2.3, the annual average downwind value of six (6) TCL constituents consistently exceeded or potentially exceeded the level of their respective current AGCs specified by the NYSDEC during the quarterly tests. However, an annual average exceedance does not necessarily suggest that guideline values were exceeded by each quarterly test effort. In addition, one (1) TIC constituent, C3 substituted benzene, exceeded the level of its AGC. No target or tentatively Identified compounds exceeded their respective SGC values.

Table 2.4 presents the 2008, 24-hour monitoring data for ambient air concentrations at the selected upwind sample locations. Two (2) collocated samplers were positioned upwind of the OBSWDC during

TABLE 2.3

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEXSUMMARY OF MAXIMUM QUARTERLY 24-HOUR DOWNWIND AMBIENT AIR VOST SAMPLE RESULTS  
2008 Annual Summary

Quarterly I.D. Sample Identification	1st D2	2nd D1	3rd D1	4th D3	ANNUAL AVERAGE MAX DOWNWIND VALUE	CURRENT AGC	24 HOUR SGC
Lower Quantitation Limit ( $\mu\text{g}/\text{m}^3$ )	0.0248	0.0262	0.0169	0.0290	0.0242	---	---
Practical Quantitation Limit ( $\mu\text{g}/\text{m}^3$ )	0.0396	0.0420	0.0270	0.0464	0.0388	---	---
Target TIC Lower Quantitation Limit ( $\mu\text{g}/\text{m}^3$ )	0.1238	0.1312	0.0845	0.145	0.1211	---	---
Constituent/Units	( $\mu\text{g}/\text{std}\text{-m}^3$ )	( $\mu\text{g}/\text{std}\text{-m}^3$ )	( $\mu\text{g}/\text{std}\text{-m}^3$ )	( $\mu\text{g}/\text{std}\text{-m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )
Acetone*	0.67	1.39	0.68	1.28	1.003	28,000	180,000
<b>Benzaldehyde**</b>		0.03		< 0.46	<b>0.177</b>	0.10	----
<b>Benzene</b>	< <b>0.71</b>	<b>1.46</b>	<b>0.57</b>	<b>1.34</b>	<b>1.022</b>	0.13	1,300
Bromodichloromethane						0.02	---
Bromoform*						0.91	---
Bromomethane						5.0	3,900
2-Butanone*	< 0.39	0.73	0.41	< 0.75	0.568	5,000	13,000
Carbon Disulfide						700	6,200
<b>Carbon Tetrachloride</b>	<b>0.78</b>	<b>0.75</b>	<b>0.91</b>	<b>0.66</b>	<b>0.775</b>	0.067	1,900
Chlorobenzene						110	---
Chloroethane						10,000	---
Chloroethyl Vinyl Ether**		0.03			0.097	0.10	----
<b>Chloroform</b>	<b>0.09</b>	<b>0.19</b>	<b>0.11</b>	<b>0.14</b>	<b>0.133</b>	0.043	150
Chloromethane	0.07	< 0.06	0.10		< 0.065	90	22,000
Dibromochloromethane						0.10	---
1,2-Dichlorobenzene (o)						360	30,000
1,3-Dichlorobenzene (m)						360	30,000
<b>1,4-Dichlorobenzene (p)</b>	< 0.05	< <b>0.16</b>	<b>0.10</b>	< <b>0.16</b>	<b>0.118</b>	0.09	---
1,1-Dichloroethane						0.63	---
1,2-Dichloroethane						0.038	---
1,1-Dichloroethene						70	---
cis-1,2-Dichloroethene						63	---
trans-1,2-Dichloroethene						63	----
1,2-Dichloropropane						4.0	----
1,3-Dichloropropene, cis & trans isomers						0.25	---
Ethylbenzene	< 0.12	< 0.98	0.19	< 0.59	0.471	1,000	54,000
<b>2/4-Ethyltoluene (total)</b>	< <b>0.18</b>	< <b>1.33</b>	<b>0.51</b>	< <b>1.26</b>	<b>0.819</b>	0.10	
Freon 13**						1000	68,000
2-Hexanone*				< 0.08	0.047	48	4,000
Methylene Chloride	0.41	0.84	0.28	0.57	0.526	2.10	14,000
4-Methyl-2-Pentanone*				< 0.06	0.042	3,000	31,000
Styrene						1,000	17,000
1,1,2,2-Tetrachloroethane		< 0.03			0.026	16	---
Tetrachloroethene	< 0.18	< 0.59	0.30	< 0.54	0.403	1.0	1,000
Toluene	< 0.58	2.46	0.81	< 3.49	1.837	5,000	37,000
1,1,1-Trichloroethane	0.10		0.10		0.065	1,000	68,000
1,1,2-Trichloroethane						1.40	---
<b>Trichloroethene</b>	< 0.04	< <b>0.59</b>	0.02	< 0.06	0.177	0.50	14,000
Trichlorofluoromethane	2.28	1.79	1.69	1.52	1.822	1,000	68,000
Vinyl Chloride						0.11	180,000
Xylenes (Total)	< 0.43	< 2.90	0.84	< 2.59	1.693	100	4,300
Decane**	< 0.14	< 0.59		< 0.42	0.293	700	---

TABLE 2.3  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF MAXIMUM QUARTERLY 24-HOUR DOWNWIND AMBIENT AIR VOST SAMPLE RESULTS FOR  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
2008 Annual Summary

Quarterly I.D.	1st	2nd	3rd	4th	ANNUAL AVERAGE	CURRENT	24 HOUR
Sample Identification	D2	D1	D1	D3	MAX DOWNWIND VALUE	AGC	SGC
TIC Lower Quantitation Limit (LQL)	0.124	0.140	0.084	0.145	0.123	---	---
Constituent/Units	(µg/m <sup>3</sup> )						
2-Methyl-1 propene			1.99		0.601	---	---
2-Methyl-pentane	< 0.41	< 3.22			< 0.963	4,200	350,000
(DEL) Branched Alkane (Total)	2.70	2.99	1.22	4.38	< 2.821	---	---
<b>C3 subst. Benzene</b>		< 1.04			< 0.347	0.13	1,300
2-Methyl-butane	0.92	3.46	2.64	< 2.19	< 2.301	42,000	---
2-Methyl-hexane	< 0.33	< 2.69			< 0.813	---	---
Hexane	< 0.58	< 3.48		< 1.00	< 1.286	700	---
Isobutane	< 0.75	< 0.83		< 1.72	< 0.848	57,000	---
Dichlorodifluoromethane	< 0.73	< 0.62		< 0.88	< 0.579	12,000	---
Butane	< 0.98	< 1.17	1.59	< 2.16	< 1.473	57,000	---
Unknown (RT: 1.33-15.45)		< 0.41	1.52	< 2.42	< 1.118	---	---
Ethane, 1,1,2-trichloro-1,2,2-triflu (Freon 113)				< 0.68	< 0.257	180,000	960,000
Octane			1.01	< 1.38	0.664	3,300	---
Unknown alkene (RT: 3.33-3.42)		< 0.51			0.216	---	---
(DEL) Straight-chain Alkane	< 0.63			< 1.09	0.486	---	---
Chlorodifluoromethane + dichlorodifluoromethane			2.80		0.803	50,000	---
Cyclohexane, methyl-				< 1.38	0.431	5,000	37,000

Notes:

\* An 8 (splitless) nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.

\*\* Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.

- All values are reported in micrograms per standard cubic meter (µg/std-m<sup>3</sup>).

- Blank values:

Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.

Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.

- Values in shaded areas are at or exceed the level of the current (recently revised September 2007 and still current as of February 2009) and/or previous ambient air Annual Guideline Concentration (AGC) values.

- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.

TABLE 2.4

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEXSUMMARY OF MINIMUM QUARTERLY 24-HOUR UPWIND AMBIENT AIR VOST SAMPLE RESULTS  
2008 Annual Summary

Quarterly I.D. Sample Identification*	1st U2	2nd U2	3rd U2	4th U1	ANNUAL AVERAGE MIN UPWIND VALUE	CURRENT AGC	24 HOUR SGC
Lower Quantitation Limit (ug/m3)	0.0234	0.0269	0.0298	0.0125	0.023	---	---
Practical Quantitation Limit (ug/m3)	0.0375	0.0430	0.0476	0.0200	0.037	---	---
Target TIC Lower Quantitation Limit (ug/m3)	0.1171	0.1344	0.1488	0.0625	0.115	---	---
Constituent/Units	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )				
Acetone*	0.73	1.96	0.80	0.50	< 0.998	28,000	180,000
Benzaldehyde**						0.10	----
<b>Benzene</b>	< <b>0.71</b>	<b>1.16</b>	< <b>0.29</b>	<b>0.93</b>	< <b>0.772</b>	0.13	1,300
Bromodichloromethane						0.02	---
Bromoform*						0.9	---
Bromomethane						5.0	3,900
2-Butanone*	< 0.28			0.40	< 0.192	5,000	13,000
Carbon Disulfide		< 0.03			< 0.025	700	6,200
<b>Carbon Tetrachloride</b>	<b>0.89</b>	<b>0.74</b>	<b>0.82</b>	<b>0.63</b>	< <b>0.770</b>	0.07	1,900
Chlorobenzene						110	---
Chloroethane						10,000	---
Chloroethyl Vinyl Ether**						0.10	----
<b>Chloroform</b>	<b>0.09</b>	<b>0.30</b>	<b>0.10</b>	<b>0.09</b>	< <b>0.145</b>	0.043	150
Chloromethane	0.12	< 0.07			< 0.058	90	22,000
Dibromochloromethane						0.10	---
1,2-Dichlorobenzene (o)						360	30,000
1,3-Dichlorobenzene (m)						360	30,000
<b>1,4-Dichlorobenzene (p)</b>	< <b>0.07</b>	< <b>0.19</b>	< 0.08	0.07	< <b>0.102</b>	0.09	---
1,1-Dichloroethane						0.63	---
1,2-Dichloroethane						0.04	---
1,1-Dichloroethene						70	---
cis-1,2-Dichloroethene						63	---
trans-1,2-Dichloroethene						63	----
1,2-Dichloropropane						4.0	----
1,3-Dichloropropene, cis & trans isomers						0.25	---
Ethylbenzene	< 0.12	< 0.58	< 0.13	0.28	< 0.276	1,000	54,000
<b>2/4-Ethyltoluene (total)</b>	< <b>0.18</b>	< <b>0.93</b>	< <b>0.31</b>	<b>0.70</b>	< <b>0.529</b>	0.10	
Freon 13**						1,000	68,000
2-Hexanone*						48	4,000
Methylene Chloride	0.49	0.68	0.21	0.25	0.407	2.10	14,000
4-Methyl-2-Pentanone*						3,000	31,000
Styrene						1,000	17,000
1,1,2,2-Tetrachloroethane						16	---
Tetrachloroethene	< 0.18	< 0.52	< 0.21	0.30	< 0.303	1.0	1,000
Toluene	< 0.53	< 2.46	< 0.58	1.43	< 1.248	5,000	37,000
1,1,1-Trichloroethane	0.11	< 0.10	< 0.08		< 0.078	1,000	68,000
1,1,2-Trichloroethane						1.4	---
Trichloroethene	< 0.04	< 0.26		0.04	< 0.094	0.5	14,000
Trichlorofluoromethane	1.64	1.77	1.49	1.10	1.498	1,000	68,000
Vinyl Chloride						0.11	180,000
Xylenes (Total)	< 0.46	< 2.41	< 0.55	1.15	< 1.141	100	4,300
Decane**	< 0.13	< 0.39		0.18	< 0.183	700	---

TABLE 2.4  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF MINIMUM QUARTERLY 24-HOUR DOWNWIND AMBIENT AIR VOST SAMPLE RESULTS FOR  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
2008 Annual Summary

Quarterly I.D.	1st	2nd	3rd	4th	ANNUAL AVERAGE MIN UPWIND VALUE	CURRENT AGC	24 HOUR SGC
Sample Identification*	U2	U2	U2	U1			
TIC Lower Quantitation Limit (LQL)	0.117	0.134	0.149	0.063	0.116	---	---
Constituent/Units	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )				
2-Methyl-pentane	< 0.32	1.13		4.75	< 1.586	4,200	350,000
Benzene, dimethyl-isomer		< 0.58			0.227	100	4,300
(DEL) Branched Alkane (Total)	1.79	1.24	< 1.71	3.00	< 1.934	---	---
2-methyl heptane		< 0.58			0.227	---	---
<b>C3 subst. Benzene</b>	<b>&lt; 0.32</b>	<b>&lt; 0.71</b>			<b>0.310</b>	0.13	1,300
2-Methyl-butane	0.91	< 1.68	< 1.06	5.75	< 2.350	42,000	---
2-Methyl-hexane		< 0.74	< 0.52		0.360	---	---
Hexane	< 0.39	< 0.79	< 1.09	4.00	1.566	700	---
Isobutane	< 0.74	< 0.93		3.50	< 1.328	57,000	---
Dichlorodifluoromethane	< 1.28		< 1.44	3.75	< 1.651	12,000	---
Butane	< 0.88	< 1.17	< 0.79	5.50	< 2.084	57,000	---
Unknown (RT: 1.36-15.45)		< 0.36	2.24		0.696	---	---
Ethane, 1,1,2-trichloro-1,2,2-triflu (Freon 113)	< 0.43		< 0.21		< 0.210	180,000	960,000
Unknown alkene (RT: 3.33-3.42)		< 0.58			0.227	---	---

Notes:

- \* An 8 (splitless) nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.
- \*\* Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.
- All values are reported in micrograms per standard cubic meter ( $\mu\text{g}/\text{std-m}^3$ ).
- Blank values:
  - Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.
  - Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.
- Values in shaded areas are at or exceed the level of the current (recently revised September 2007 and still current as of February 2009) and/or previous ambient air Annual Guideline Concentration (AGC) values.
- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.

all four (4) quarters of testing. The quarterly upwind samples presented in Table 2.4 were chosen based on lowest total speciated target VOCs in order to provide conservative 24-hour ambient air background concentrations for determining a conservative landfill impact. The samples were collected using a 0.25 liter per minute nominal sampling rate. The individual quarterly 24-hour samples were averaged to provide an estimated annual average background ambient air quality concentration. Of the annual average background (upwind) concentrations presented in Table 2.4, five (5) TCL constituents exceeded the level of the current NYSDEC AGCs during all quarterly tests. In addition, one (1) of the TICs identified at the upwind site, C3 substituted benzene exceeded the level of its respective AGC. Further, no target compounds or TICs exceeded their respective SGC values. No collectable condensate samples were retrieved during any of the four quarterly sampling events, and therefore, the condensate samples were not reported.

Trip and field blank air samples were submitted to assure that there was no media contamination prior to or during the quarterly monitoring efforts. However, several compounds were detected in the trip and field blanks throughout the quarterly sampling efforts with varying concentrations and retention times. Acetone and methylene chloride are known lab contaminants and are assumed to be at least a partial cause for their presence in these samples. In addition, the third quarter showed a possibility of slight 1,1,2,2-tetrachloroethane contamination; however, it is believed that the media itself may have been compromised for this compound since laboratory contamination has been ruled out. Both field blanks and the trip blank for the fourth quarter effort showed a significant amount of contamination when analyzed. Six (6) target compounds were detected in the ambient and soil gas field blank samples, and fourteen (14) target compounds were detected above the MDL in the trip blank, including methylene chloride and acetone. It is unknown what caused the presence of these compounds. As an additional verification, RTP submitted two (2) VOST tube samples from the same sample lot to Air Toxics Ltd. (Air Toxics) and no compounds were detected in either sample. It is possible that the compounds were present below the Air Toxics' MDL of 10 ng (H2M MDL is 5 ng) as many of the blanks sent with the original samples to H2M were at or below 10 ng. However, there were a significant number of compounds detected over 10 ng in the original field and trip blanks that were also not present in the Air Toxics samples. RTP is presently working with H2M to resolve this conundrum. These compound concentrations and confirmation testing methods will be monitored for the 2009 sampling efforts in an effort to find and mitigate the cause of the contaminants.

As a means of providing a conservative estimate of the potential impacts from OBSWDC emissions, the difference between the minimum annual average upwind values and maximum downwind values are calculated and compared to the level of the current NYSDEC AGCs. These values are provided in Table 2.5. To be conservative, the upwind annual average included quarterly upwind samples with comparatively the lowest concentration of speciated target VOCs while the downwind annual average

included quarterly samples with comparatively the highest concentrations of speciated target VOCs. In addition, the MDL of the upwind sample was not subtracted from the result to maximize potential impacts. As shown in Table 2.5, the results indicate that three (3) TCL constituents, benzaldehyde, benzene and 2/4-ethyltoluene (total), potentially impacted the ambient air quality at a concentration that exceeds the level of their currently assigned AGC guideline/ de minimus values. If an estimate is calculated using all upwind and downwind data, the net impacts downwind of the landfill will be below values documented in Table 2.5. Again, Table 2.5 data provides a conservative, worst-case scenario. Three (3) other compounds, carbon tetrachloride, chloroform and 1,4-dichlorobenzene (p), exceeded AGC guideline values for downwind and upwind impact values respectively; however once upwind was subtracted from the downwind to determine net impact, the resulting values no longer exceeded their respective ambient guideline value. All other TCL constituents identified in the annual averages have differential downwind impact values that are below their respective AGCs.

According to the NYSDEC, benzene is the one compound that shows significant annual average concentrations above its AGC at several of the various sites monitored across the state, indicating a ubiquitous source of this compound throughout the state. The principle sources of benzene are mobile sources both from direct emissions and related gasoline storage and handling. The concentrations of benzene observed may actually reflect the relative amounts of automobile traffic at the various sites, and may only partially related to the emissions from the landfill.

In a further analysis of the ambient data collected during all four quarters of the 2008 sampling events, background TCL constituent concentrations (total averaged upwind sample concentrations) were subtracted from the total average downwind sample concentrations recorded at both locations downwind of the landfill in order to provide an estimate of the net impacts that the landfill, and all other OBSWDC activities taken together, have on local air quality. This analysis is done only for the constituents that exceeded their respective guideline values for the year. The net impact from this analysis showed that only 2/4- ethyltoluene continued to exceed its assigned de minimus guideline value when comparing the upwind concentrations detected and/or the LQL for undetectable compounds to the downwind concentrations detected, suggesting the landfill or other OBSWDC onsite activities may have had a slight influence on the air quality in the vicinity of the landfill during the time of this quarterly test.

TABLE 2.5

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

## CONSERVATIVE ESTIMATION OF POTENTIAL IMPACTS

Quarterly I.D.	ANNUAL AVERAGE	ANNUAL AVERAGE	MAX DOWNWIND -	CURRENT
Sample Identification	MAX DOWNWIND VALUE	MIN UPWIND VALUE	MIN UPWIND VALUE	AGC
Lower Quantitation Limit (ug/m3)	0.0242	0.0231	---	---
Target TIC Lower Quantitation Limit (ug/m3)	0.0388	0.0369	---	---
Practical Quantitation Limit (ug/m3)	0.1211	0.1152	---	---
Constituent/Units	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )
Acetone*	1.003	< 0.998	0.005	28,000
<b>Benzaldehyde**</b>	<b>0.177</b>		<b>0.177</b>	0.10
<b>Benzene</b>	<b>1.022</b>	< <b>0.772</b>	<b>0.250</b>	0.13
Bromodichloromethane				0.02
Bromoform*				0.91
Bromomethane				5.0
2-Butanone*	0.568	< 0.192	0.376	5,000
Carbon Disulfide		< 0.025		700
<b>Carbon Tetrachloride</b>	<b>0.775</b>	< <b>0.770</b>	0.005	0.067
Chlorobenzene				110
Chloroethane				10,000
Chloroethyl Vinyl Ether**	0.097		0.097	0.10
<b>Chloroform</b>	<b>0.133</b>	< <b>0.145</b>		0.043
Chloromethane	< 0.065	< 0.058	0.007	90
Dibromochloromethane				0.10
1,2-Dichlorobenzene (o)				360
1,3-Dichlorobenzene (m)				360
<b>1,4-Dichlorobenzene (p)</b>	<b>0.118</b>	< <b>0.102</b>	0.015	0.09
1,1-Dichloroethane				0.63
1,2-Dichloroethane				0.038
1,1-Dichloroethene				70
cis-1,2-Dichloroethene				63
trans-1,2-Dichloroethene				63
1,2-Dichloropropane				4.0
1,3-Dichloropropene, cis & trans isomers				0.25
Ethylbenzene	0.471	< 0.276	0.195	1,000
<b>2/4-Ethyltoluene (total)</b>	<b>0.819</b>	< <b>0.529</b>	<b>0.290</b>	0.10
Freon 13**				1,000
2-Hexanone*	0.047		0.047	48
Methylene Chloride	0.526	0.407	0.119	2.10
4-Methyl-2-Pentanone*	0.042		0.042	3,000
Styrene				1,000
1,1,2,2-Tetrachloroethane	0.026		0.026	16
Tetrachloroethene	0.403	< 0.303	0.100	1.0
Toluene	1.837	< 1.248	0.589	5,000
1,1,1-Trichloroethane	0.065	< 0.078		1,000
1,1,2-Trichloroethane				1.40
Trichloroethene	0.177	< 0.094	0.083	0.50
Trichlorofluoromethane	1.822	1.498	0.325	1,000
Vinyl Chloride				0.11
Xylenes (Total)	1.693	< 1.141	0.552	100
Decane**	< 0.065	< 0.058	0.007	700

## NOTES:

\* An 8 (splitless) nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis

\*\* Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that five (5) times the targeted compound Lower Quantitation Limit

- All values are reported in micrograms per standard cubic meter  $\mu\text{g}/\text{std}\text{-m}^3$ .

- Blank values:

Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether; Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL

Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.

- Values in shaded areas are at or exceed the level of the current (recently revised September 2007 and still current as of February 2009) and/or previous ambient air Annual Guideline Concentration (AGC) values

- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is average with the reported values.

Additionally, the average annual results were analyzed to determine impacts based on two separate downwind locations. The net concentrations for the exceeding compounds were slightly varied. 2/4-ethyltoluene continued to exceed its AGC standard, but only for the collocated downwind location D1/2 when compared to the averaged upwind locations. As previously stated, the interim AGC value of 0.1 µg/m<sup>3</sup> was assigned to 2/4-ethyltoluene based on its moderately toxic classification and the Moderate Toxicity de minimus concentration, as per NYSDEC DAR-1 policy. According to this policy, when no exposure limits derived by NYSDEC, USEPA, New York State Department of Health (NYSDOH) or the American Conference of Governmental Industrial Hygienists (ACGIH) values are available and no analogies can be made, NYSDEC will assign a conservative de minimus limit as the AGC.

No other compounds exceeded their standard. As with the previous analysis, all averages were taken for exceeding compounds from all four quarters for the 2008 sampling efforts.

In terms of the relative impact of the landfill, it deserves repeating that because minimum 2008 upwind sample concentrations were subtracted from maximum 2008 downwind sample concentrations, the ambient air impact analysis presented within this report takes a conservative approach rather than simply comparing 2008 average upwind concentrations with 2008 average downwind concentrations.

The short-term guideline values for the target compounds were estimated from the 24-hour recorded values. The individual quarterly concentrations shown in Tables 2.3 and 2.4 were compared to the 24-hour SGC values, (which are calculated by multiplying the current SGC by 0.4, an EPA averaging time adjustment factor). This comparison of the observed values with the resulting guidelines show that concentrations fall within their respective SGC values. The remaining upwind and downwind ambient air quality sample data that were collected during the four test efforts during the 2008 monitoring program are presented in Appendix A. In all cases, no measured concentrations exceeded this respective short-term guideline value.

### 2.3 New York State VOC Monitoring Summary

Beginning in the 2007 annual report, RTP developed a comparison of the OBSWDC VOC results to the state-wide VOC ambient air quality levels. This section summarizes VOC monitoring data collected by the NYSDEC. A comparison between State collected data and the OSBSWDC 2008 annual average results are also provided for all compounds that were detected in the VOST samples.

The NYSDEC first established the ambient air toxics monitoring program in 1985 as part of the Governor's Air Monitoring Modernization Capital Budget Program. This monitoring network measures VOCs throughout NY. The initial development of the network and analytical capabilities was part of a joint Staten Island/New Jersey Urban Air Toxics Assessment Project (SI/NJ Study) coordinated with USEPA Region II from 1987 through 1989. The network expanded in 1990 to a statewide network. Currently, there are 14 monitoring locations throughout the State measuring over 40 VOCs. The goal of the NYSDEC monitoring program is to monitor air quality related to toxics in urban, industrial, residential and rural areas.

There are several land use characteristics immediately surrounding the landfill including industrial, urban and suburban; and therefore, it is difficult to classify the results collected in the vicinity of the landfill as any one land use. As such, it is important to compare the results with State monitoring data representing several different site characteristics. As shown in Figure 2.2, five locations based on several site characteristics represented at the landfill and a control (rural site) have been chosen for comparison to average concentration levels. A location at the Troy Atrium in Troy, NY was chosen to represent an urban area. Lackawanna in Erie County, NY was chosen to represent an industrial site. Whiteface Base Lodge located in Adirondack Park, Essex, NY was selected as a rural site for control comparison. LaTourette Golf Course in Richmond, NY was chosen to represent a suburban neighborhood, and finally, the two sites located at Fresh Kills landfill (East and West) in Staten Island, NY were selected to represent releases from another landfill. The nearest monitoring site to the landfill is located at the La Tourette Golf Course in Staten Island, NY, located approximately 49 miles west southwest of the OBSWDC.

Table 2.6 provides annual average air toxic VOC concentrations for 2002 and 2003 at the urban, industrial, suburban/residential, landfill and a rural State monitoring site along with the VOC concentrations from the OBSWDC 2008 air tests, as these are the latest sample years available. Upwind and downwind sample results for the OBSWDC tests represent the average concentrations for all four (4) 2008 quarterly sampling events. OBSWDC data for both upwind and downwind samplers were used to more closely compare with the NYSDEC data since the NYSDEC does not differentiate samplers as upwind or downwind. OBSWDC samples have been presented as the total annual average of combined upwind and downwind results in order to provide a more accurate value for comparison. It is important to note, however, that 2008 OBSWDC values being presented as representative of the annual average



TABLE 2.6

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

NYSDEC AIR TOXIC CONCENTRATIONS AT VARIOUS STATE MONITORING SITES (µg/m<sup>3</sup>)

Exceeding Compounds for 2008 Quarterly Efforts	TROY <i>Urban</i>		LACKAWANNA <i>Industrial</i>		Whiteface Mt. Base <i>Rural</i>		Fresh Kills Landfill West <i>Landfill</i>		Fresh Kills Landfill East <i>Landfill</i>		La Tourette Golf Course (Richmond) <i>Neighborhood</i>		TOB- OBSWDC <i>Landfill</i> 2008 Avg.	NYSDEC AGCs
	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003		
Benzene	1.469	1.781	3.336	1.299	0.450	0.428	1.408	1.433	1.338	1.743	1.261	1.360	0.788	0.13
Bromodichloromethane	0.067	0.020	0.107	0.080	0.027	0.020	0.121	0.020	0.027	0.027	0.027	0.027	0.023	0.02
Bromomethane	0.074	0.054	0.085	0.074	0.066	0.058	0.097	0.074	0.081	0.070	0.074	0.078	0.023	5.0
Carbon Tetrachloride	0.748	0.729	1.018	0.704	0.767	0.692	0.773	0.717	0.792	0.692	0.754	0.723	0.685	0.07
Chlorobenzene	0.064	0.037	0.083	0.078	0.055	0.037	0.069	0.051	0.064	0.069	0.046	0.046	0.023	110
Chloroethane	0.018	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.023	10,000
Chloroform	0.166	0.176	0.161	0.166	0.098	0.102	0.181	0.171	0.181	0.283	0.166	0.185	0.115	0.04
Chloromethane	1.176	1.649	1.050	1.211	1.071	1.232	1.174	1.319	1.187	1.308	1.069	1.306	0.057	90
1,2-Dichlorobenzene (o)	0.090	0.010	0.017	0.016	0.013	0.009	0.015	0.012	0.012	0.013	0.011	0.011	0.023	360
1,3-Dichlorobenzene (m)	0.084	0.054	0.102	0.096	0.078	0.048	0.084	0.060	0.072	0.060	0.066	0.060	0.023	360
1,4-Dichlorobenzene (p)	0.673	0.517	0.180	0.168	0.204	0.066	0.252	0.204	0.330	0.282	0.264	0.234	0.116	0.09
1,2-Dichloroethane	0.069	0.057	0.085	0.089	0.057	0.061	0.028	0.065	0.061	0.065	0.057	0.065	0.023	0.04
1,1-Dichloroethene	0.020	0.004	0.036	0.038	0.012	0.008	0.020	0.008	0.008	0.012	0.008	0.012	0.023	70
1,2-Dichloropropane	0.023	0.009	0.037	0.111	0.014	0.018	0.023	0.014	0.009	0.018	0.009	0.023	0.023	4.0
Ethylbenzene	0.620	0.655	0.443	0.412	0.113	0.204	0.720	0.529	0.759	0.594	0.607	0.490	0.334	1,000
Styrene	0.247	0.187	0.226	0.183	0.123	0.089	0.238	0.175	0.566	0.311	0.213	0.166	0.023	1,000
1,1,2,2-Tetrachloroethane	0.096	0.089	0.117	0.117	0.034	0.069	0.041	0.089	0.021	0.096	0.021	0.089	0.026	16.0
Tetrachloroethene	0.237	0.237	0.264	0.298	0.108	0.102	0.447	0.474	0.535	0.556	0.420	0.522	0.375	1.0
Toluene	3.295	4.798	2.259	3.197	0.459	1.032	4.188	3.958	3.577	3.762	3.144	3.363	1.397	5,000
1,1,1-Trichloroethane	0.278	0.224	0.311	0.305	0.256	0.218	0.747	1.538	0.278	0.251	0.262	0.240	0.087	1,000
1,1,2-Trichloroethane	0.033	0.016	0.093	0.104	0.022	0.022	0.033	0.016	0.016	0.093	0.016	0.022	0.023	1.40
Trichloroethene	0.097	0.145	0.118	0.107	0.032	0.086	0.145	0.145	0.188	0.172	0.166	0.145	1.954	0.50
Trichlorofluoromethane	1.830	2.044	1.651	1.696	1.696	1.780	1.712	1.886	1.881	1.909	1.740	1.914	1.623	1,000
Vinyl Chloride	0.010	0.000	0.010	0.001	0.005	0.000	0.010	0.003	0.018	0.008	0.003	0.003	0.023	0.11
Xylenes (Total)	2.499	2.855	1.775	1.783	0.330	0.894	0.926	2.234	2.694	2.382	2.434	2.087	1.302	100

Notes:

- TOB-OBSWDC site is presented for comparison with the NYSDEC monitoring data. The TOB sites are not an official part of the NYSDEC Air Toxic Program.
- The NYSDEC data is only available up to 2003. As such, the two most current annual data averages were presented for comparison with the current 2008 average data from OBSWDC.
- Values in red represent the highest individual average annual compound concentration for the monitoring sites presented in this comparison.
- Values in shaded areas are equal to or exceed the level of the current (recently revised September 2007 and still current as of February 2009) and/or previous ambient air Annual Guideline Concentration (AGC) values.

have been taken under similar meteorological conditions in four (4) seasonal quarters for a total of 20 tests per compound throughout the year. The NYSDEC VOC values have been taken once every six days regardless of meteorological conditions for the entire year amounting to roughly 60 samples. Although the amount of samples taken are lower and the sampling method is not known, it is believed that the results are comparable.

Aside from the TOB-OBSWDC 2008 annual average data, the values presented in Table 2.6 include only compounds measured by the NYSDEC. This analysis was completed during the 2007 annual report as well. No new data has been presented for the five (5) selected NYSDEC sites, so the OBSWDC 2008 data are compared to the existing 2002 and 2003 data for these locations. After reviewing the 2008 annual averages in comparison to the 2007 annual averages, the results are quite similar. The same five (5) compounds, benzene, carbon tetrachloride, chloroform, 1,4-dichlorobenzene (p) and trichloroethene, continued to exceed the standard with the addition of one exceeding compound, bromodichloromethane, in 2008. The TOB-OBSWDC continued to report the highest average annual concentration of trichloroethene. Although the concentration for trichloroethene was highest for the OBSWDC compared to the other five locations, the source of this compound is most likely attributed to off-site industrial sources as opposed to actual landfill activities.

Lackawanna, the industrial site, detected the highest concentrations for five compounds in both 2002 and 2003, which was still the most as compared to the other sites provided in this comparison. For the majority of compounds, the OBSWDC results were generally below the average ambient air quality levels monitored at the other five (5) selected NYSDEC monitoring sites, including the rural site at Whiteface Mountain located in Adirondack Park. It is worth noting that five (5) compounds, benzene, bromodichloromethane, carbon tetrachloride, chloroform, 1,4-dichlorobenzene (p) and 1,2-dichloroethane were detected in excess of the annual average data collected at the Whiteface Mountain site; however, the benzene concentration was below the data collected at all the other compared locations.

This demonstrates the air quality at many locales throughout New York State exceed certain State AGC guidelines. It is important to remember the NYSDEC monitoring data provided in Table 2.6 represents the most recent annual average concentrations available. As such, it is not appropriate to directly compare the OBSWDC 2008 annual average ambient air results to State AGC values from 2002 and 2003, and they are only provided as a general reference. However, the data in Table 2.6 clearly shows the TOB-OBSWDC annual results are below ambient VOC concentrations collected in other parts of State, representing various land uses.

## 2.4 Analysis of the Ambient Air Quality Program Data Base Since 1990

The ambient air quality at and surrounding the Old Bethpage Landfill has been monitored by RTP Environmental Associates, Inc. for the Town since 1990. Over the course of the past eighteen years, several changes have been made to the program to improve the quality of the data. These changes occurred throughout the program, principally before 1997. A comparison between upwind and downwind sample ambient data collected during 2008 and in 2007 (as well as results from previous years) confirm that benzene, carbon tetrachloride and 2/4-ethyltoluene (previously reported as ethyl-methyl benzene) concentrations consistently exceed the level of the NYSDEC ambient annual guideline values at both upwind and downwind locations. The Interim AGC value of  $0.1 \mu\text{g}/\text{m}^3$  for 2/4-ethyltoluene was assigned based on the Moderate Toxicity de minimis concentration, as per NYSDEC DAR-1 policy. Since the decane AGC guideline value was revised upward in December 2003 and again in September 2007, measured ambient concentrations have not exceeded the new AGC value. Further, the compound 1,1,2,2-tetrachloroethane typically exceeded its AGC standard; however, with the revision of the guideline value from  $0.017$  to  $16 \mu\text{g}/\text{m}^3$  in September 2007, measured concentrations have not exceeded this guideline value. Nevertheless, RTP will continue to monitor these target compounds as part of the Consent Decree. In addition, trichloroethene was in excess of its respective AGC guideline values in both upwind and downwind samples during 2007. Although this compound is normally detected during quarterly sampling, it was detected in lower concentrations for 2008 and did not demonstrate a consistent exceedance of its respective guideline value. In 2006 and other monitoring years, benzaldehyde was measured in excess of its assigned AGC/de minimus value at both upwind and downwind sample locations, but in 2008, detections are inconsistent and exceedances are only noted in downwind samples.

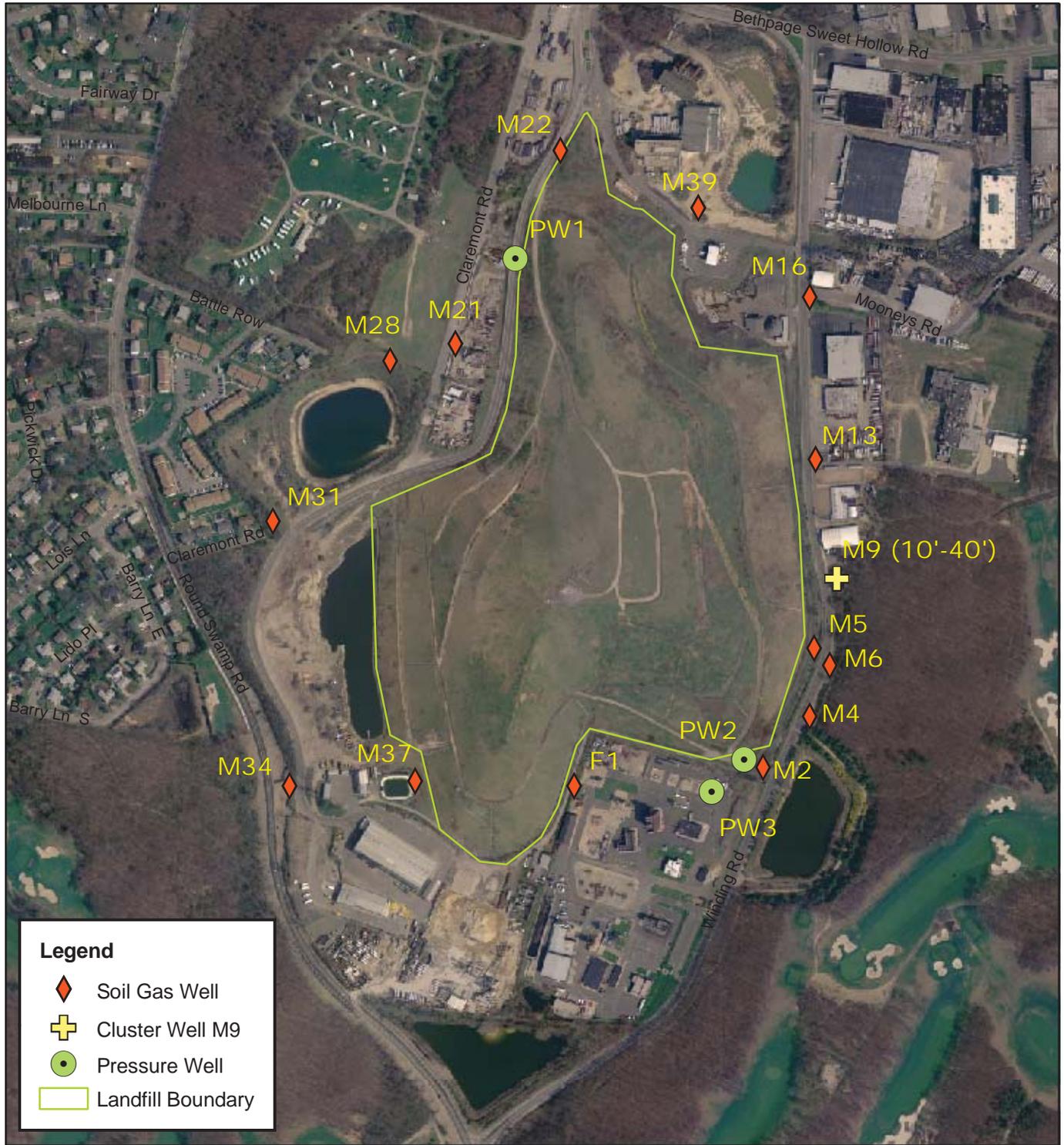
Several compounds observed in upwind and downwind samples during the first two years of monitoring appear at slightly higher concentration values when compared to 2008 values. The decrease for some compounds may, in part, be attributed to landfill capping which was completed in January 1993 and the decrease in landfill gas generation which is expected to occur with time as the landfill ages. Furthermore, the 2008 study data show that upwind and downwind concentrations for most compounds, in general, are similar and thus, tending to discount the OBSWDC as a significant source of any detected compounds. The comparison with similar air toxics data collected by NYSDEC at other sites in the State indicates that the levels at the OBSWDC are typically lower than in other industrial areas as shown in Section 2.3.

## 2.5 Analysis of 2008 Soil Gas VOC Concentration Data

The 2008 soil gas VOC samples provide data on the concentrations of TCL and TIC constituents in the soil gas in the vicinity of the landfill. Figure 2.3 provides the 2008 sampling locations. Soil gas concentrations of the identified constituents observed during the 2008 year of testing have been presented in the quarterly reports and summary tables are reproduced in Appendix B of this report. Table 2.7 provides an annual summary of maximum soil gas VOC concentrations for each quarter. Since the third quarterly test of 2003 (August), no tests were conducted at soil gas well M21 due to the construction of a retaining wall along Claremont Road making the well inaccessible. To be conservative, these samples were chosen based on the highest total speciated target VOCs for the soil gas samples per test effort for the shallow 30-inch wells only. As shown in Table 2.7, a total of five (5) compounds averaged higher than their respective ambient air AGC value. No TIC compounds exceeded their respective AGC value(s).

Individually, M28 provides the maximum total VOC concentration out of all the soil gas wells analyzed during the 2008 quarterly monitoring efforts. M39 demonstrated the highest VOC concentrations for all the other quarterly sampling efforts for 2008. The number of soil gas wells containing target compound constituents that had exceeded the level of their respective AGCs varied throughout the four 2008 quarterly tests. No additional TIC compounds exceeded their respective AGC value from the selected soil gas wells. Since the soil gas values are not ambient air values, they cannot be directly compared to NYSDEC AGC/SGC ambient air guidelines; although, the measured 10-minute concentrations for several compounds are in excess of the levels of annual ambient air guideline values specified. No soil gas concentrations were measured in excess of NYSDEC SGC air guidelines during 2008. Neither the NYSDEC nor Nassau County have developed vadose zone VOC concentration guidelines, and therefore, a direct comparison to applicable State regulations cannot be made; however New York State is currently considering vadose zone limits for soil gas concentrations. When these guideline values are promulgated, future quarterly and annual reports for soil gas collection at the Old Bethpage Landfill will be modified to address any applicable guidance.

The 2008 soil gas VOST sample results for cluster well M9, including wells M9(10'), M9(20'), M9(30') and M9(40') varied in certain constituent concentrations at the different well depth for all four quarterly tests. In past years, constituent concentrations have increased with well depths which may be attributed to groundwater conditions at this location. Although this trend was not quite as pronounced during 2008

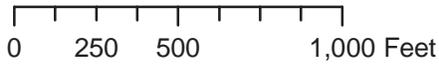


**Legend**

- ◆ Soil Gas Well
- ⊕ Cluster Well M9
- Pressure Well
- ▭ Landfill Boundary

IMAGERY SOURCE: NYSGIS CLEARINGHOUSE

FIGURE 2.3  
 SOIL GAS AND PRESSURE WELLS FOR  
 2008 EFFORTS  
 TOWN OF OYSTER BAY LANDFILL  
 BETHPAGE, NEW YORK




RTP Environmental Associates, Inc.  
 400 Post Avenue  
 Westbury, NY 11590  
 P:(516) 333-4526 F:(516) 333-4571

TABLE 2.7

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

## SUMMARY OF MAXIMUM SOIL GAS VOC SAMPLE RESULTS FROM 2008

Quarterly I.D.	1st	2nd	3rd	4th	ANNUAL AVERAGE	CURRENT
Soil Gas Well Identification*	M39	M28	M39	M39	---	AGC
Lower Quantitation Limit (LQL)	0.460	0.469	0.976	0.45	0.461	---
Practical Quantitation Limit (PQL)	0.735	0.750	1.561	0.73	0.74	---
Targeted TIC LQL	2.30	2.35	4.88	2.27	2.95	---
Constituent/Units	(µg/std-m3)	(µg/std-m3)	(µg/std-m3)	(µg/std-m <sup>3</sup> )	(µg/std-m <sup>3</sup> )	(µg/m <sup>3</sup> )
Acetone**	3.13	10.32		2.63	4.41	28,000
Benzaldehyde***						0.10
<b>Benzene</b>	<b>2.57</b>				<b>1.12</b>	0.13
Bromodichloromethane						0.02
Bromoform**						0.91
Bromomethane						5.0
2-Butanone**			< 1.85		1.02	5,000
Carbon Disulfide						700
<b>Carbon Tetrachloride</b>		<b>0.75</b>			<b>0.66</b>	0.067
Chlorobenzene						110
Chloroethane						10,000
Chloroethyl Vinyl Ether***						0.10
<b>Chloroform</b>			< 1.85	<b>1.18</b>	<b>0.99</b>	0.043
Chloromethane						90
Dibromochloromethane						0.10
1,2-Dichlorobenzene (o)						360
1,3-Dichlorobenzene (m)						360
1,4-Dichlorobenzene (p)						0.09
1,1-Dichloroethane						0.63
1,2-Dichloroethane						0.038
1,1-Dichloroethene						70
cis-1,2-Dichloroethene						63
trans-1,2-Dichloroethene						63
1,2-Dichloropropane						4.0
1,3-Dichloropropene, cis & trans isomers						0.25
Ethylbenzene	0.74	4.13			1.57	1,000
2/4-Ethyltoluene (total)						0.10
Freon 13***						1,000
2-Hexanone**						48
<b>Methylene Chloride</b>	<b>2.11</b>	<b>2.81</b>			<b>1.59</b>	2.10
4-Methyl-2-Pentanone**		469.04			118.02	3,000
Styrene						1,000
1,1,2,2-Tetrachloroethane						16
<b>Tetrachloroethene</b>	<b>35.85</b>	0.66	< 39.51	27.22	<b>25.81</b>	1.0
Toluene	404.41				101.58	5,000
1,1,1-Trichloroethane				0.54	0.61	1,000
1,1,2-Trichloroethane						1.40
Trichloroethene						0.50
Trichlorofluoromethane	3.03	1.50	< 2.73	2.18	2.36	1,000
Vinyl Chloride						0.11
Xylenes (Total)						100
Decane***						700

**TABLE 2.7**  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**SUMMARY OF MAXIMUM SOIL GAS VOC SAMPLE RESULTS FROM 2008**  
**ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS**

Quarterly	1st	2nd	3rd	4th	ANNUAL AVERAGE	CURRENT
Soil Gas Well Identification*	M39	M28	M39	M39	---	AGC
Additional TIC LQL	2.30	2.35	4.88	2.27	2.95	---

Constituent/Units	(µg/m <sup>3</sup> )					
2-Methyl-pentane	14.71				6.05	4,200
3-Methyl-pentane	15.63				6.28	4,200
Cyclopentane, methyl-	9.10				4.65	700
.alpha-pinene isomer			< 27.80		8.68	270
2-Methyl-hexane	5.51				3.75	---
Hexane	248.16				64.41	700
Dichlorodifluoromethane	3.31			3.09	3.40	12,000
1,1-Dichloro-1-fluoroethane	14.71				6.05	---
Chlorodifluoromethane		36.59			11.51	50,000
Unknown (RT: 1.64-15.45)			< 10.83		4.44	---
2-Pentanone		21.58			7.76	---
5-Hepten-2-one, 6-methyl		131.33			35.19	---
Cyclotrisiloxane, hexamethyl-			< 20.98		6.97	---
2-Propenal, 2-methyl		4.50			3.49	720
2-Heptanone		4.88			3.58	550
2-Nonanone		5.44			3.72	50,000
Chlorodifluoromethane + dichlorodifluoromethane			< 6.54		3.36	50,000
Unknown silane (RT: 13.95)			< 6.05		3.24	1,400
Furan, 2-methyl		5.44			3.72	95.0

**NOTES:**

- \* The samples identified were chosen based on the highest total speciated target VOCs for the soil gas samples per test effort.
- \*\* An 8 (splitless) nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.
- \*\*\* Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.
- All values are reported in micrograms per standard cubic meter (µg/std-m<sup>3</sup>).
- Blank values:
  - Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL
  - Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.
- Values in shaded areas are at or exceed the level of the current (recently revised September 2007 and still current as of February 2009) and/or previous ambient air Annual Guideline Concentration (AGC) values.
- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.

or 2007 efforts as in previous years, levels of the principal contaminant, tetrachloroethene, continued to show a significant increase with depth in 2008. Additionally, trichloroethene and the TIC dichlorotetrafluoroethane showed a consistent increase with depth during all four of the 2008 quarterly efforts.

## 2.6 Analysis of the Soil Gas Program Data Base Since 1990

VOC concentrations in soil gas samples have been measured at the OBSWDC since 1990. Throughout the past sixteen years, modifications have been made to the soil gas sampling program in order to provide quality data. However, since 1992, the soil gas wells that have been sampled and the target sample volume has remained the same. Therefore, these data are directly comparable. In general, these soil gas VOC concentration exceedances increased in number from 1992 through 1997. Since 1997, the number and magnitudes of the exceedances has remained similar for each test year, specifically the compounds benzene, carbon tetrachloride, chloroform, tetrachloroethene and trichloroethene have consistently exceeded the level of their respective NYSDEC ambient air annual guideline values. In 2008, methylene chloride was also in excess of its respective AGC air standard; however, trichloroethene was not. Again, it is worth noting that methylene chloride exceedances may be associated in part with laboratory contamination and not necessarily reflective of OBSWDC activities. It is critical to note that the subsurface soil gas data were only 10 minute samples which are not directly comparable to NYSDEC annual or short-term guideline concentration values for ambient air. As stated before, the NYSDEC and Nassau County do not have soil gas standards at this point, and therefore, a direct comparison to applicable regulations cannot be made; however, New York State is currently considering vadose zone limits. Should these guideline values be adopted, RTP shall provide analysis in future quarterly and annual reports for all effected efforts.

## 2.7 Analysis of 2008 Soil Gas Pressure Measurements

Soil gas pressure measurements were made during the 2008 testing program as prescribed in the Consent Order. The locations of the pressure wells are provided in Figure 2.3. PW1 and PW2 are on the OBSWDC property while PW3 is off-site at the NCFSA. PW1 and PW3 are located outside the perimeter collection system while PW2 is located within the perimeter collection system.

Soil gas pressure readings during 2008 were zero or negative for PW1 and PW2 during the first quarter and all pressure wells measured during the second quarter effort only. PW3 during the first quarter effort

and all wells sampled during the third and fourth quarterly efforts in 2008 measured slightly positive soil gas pressures. Further, the results are consistent with the observed damage to the system that has caused intrusion of air into the perimeter system which, in turn, has resulted in decreasing negative pressures at the landfill soil gas pressure wells. These results indicate that the landfill gas control system was not operating normally according to its design for the majority of 2008. The summaries of soil gas pressure readings for the quarterly tests are provided in Appendix C.

### 3.0 SUMMARY AND CONCLUSIONS

In summary, the 2008 test program involved collecting data on ambient air and soil gas volatile organic compounds and soil gas pressure readings. The program was completed according to the NYSDEC approved monitoring plan which is in conformance with the Consent Decree. The data indicates that several compounds, most notably benzene, carbon tetrachloride, chloroform, 1,4-dichlorobenzene and 2/4-ethyltoluene had ambient air concentrations in excess of the level of their respective NYSDEC annual guideline concentrations. These compounds were measured in excess of the level of the guideline values at locations both upwind and downwind of the OBSWDC.

Once the average minimum upwind VOC concentrations (background levels) are subtracted from the peak downwind VOC concentration levels, only 2/4-ethyltoluene, when adjusted for background levels, exceeded the level of the guideline value downwind of the landfill.

The upwind and downwind values that have been used in estimating air quality impacts associated with releases from the landfill are intentionally conservative. Moreover, it should be noted that quarterly monitoring, in most cases, is intended to occur during generally falling barometric pressure conditions which tend to maximize the observed impacts from any landfill source. All four (4) quarterly sampling events for 2008 occurred during falling atmospheric pressure. The downwind sampling locations were also positioned in order to maximize the recorded impact. As previously stated, new abridged landfill business hours impeded RTP's ability to locate samplers and perform periodic flow and operational inspections within the landfill complex. Therefore, RTP selected sampling locations for the third and fourth quarter sampling events that were just outside the perimeter fence in order to access sampling equipment for assessment and adjustment during non-business hours. A comparison of the data collected by the NYSDEC at other sites across the State indicated that the air quality in the area surrounding the OBSWDC is typical of other areas of the State.

A database is being developed for both an uncapped and a capped landfill. Since capping was completed, the data collected continues to show, for a limited set of compounds, exceedances of the NYSDEC ambient guideline values both upwind and downwind of the OBSWDC. Additionally, the TCL has been occasionally updated based on continuing reviews of TICs being detected by enhanced analytical procedures. These compounds can be significant as illustrated by hexachloroethane and decane, which were not on the initial list of target compounds but were measured in excess of State annual guideline concentrations both upwind and downwind of the OBSWDC in the past. Decane, which was added to the TCL in 2003, is almost always detected in the ambient samples, but since the AGC was increased in 2003 from 0.1  $\mu\text{g}/\text{m}^3$  to 200  $\mu\text{g}/\text{m}^3$  and then again in 2007 to 700  $\mu\text{g}/\text{m}^3$ , it is unlikely it will exceed its currently assigned standard. Hexachloroethane, an additional TIC, was found during the 2006 quarterly sampling efforts in one upwind sample during the second quarter monitoring event. Hexachloroethane was also detected during the 2003, 2004 and 2005 quarterly tests. Prior to this, hexachloroethane was last detected during the 2001 third quarter effort before being detected during the fourth quarter of 2002. This compound was detected during the 2008 first quarter monitoring event in soil gas well M13. It is detected from time to time in the vicinity of the OBSWDC, but the source(s) continues to be unknown. No additional precautions are recommended at this point since this compound was below the AGC limit in 2008 and all previous concentrations were below the State SGC limit.

In conclusion, the ambient VOC concentrations measured during the 2008 study upwind and downwind of the facility for most compounds appear to be similar to VOC concentrations detected during previous years. However, the ambient results during the 2008 quarterly tests appeared to have a few unmatched constituents in collocated samplers. Several potential causes for this finding have been postulated but none have been proven conclusively. RTP will continue the current sample media configuration in future quarterly efforts for 2009.

Where the conservative net differences between the upwind and downwind sample exceed the NYSDEC AGC, the level of exceedances is fairly limited. Based on this test data, the OBSWDC appears to have had a limited impact on air quality for measured VOC compounds in 2008. No VOC compound concentrations measured downwind of the landfill exceeded NYSDEC short-term air guidelines.

**APPENDIX A**

**TOWN OF OYSTER BAY**

**OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX  
EVALUATION OF VOLATILE ORGANIC COMPOUNDS IN  
AMBIENT AIR, SOILS AND SOIL GAS PRESSURE READINGS**

**2008 ANNUAL SUMMARY REPORT**

**2008 QUARTERLY AMBIENT AIR VOC CONCENTRATION DATA**

TABLE 4.1

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

AMBIENT AIR VOST SAMPLE RESULTS

FIRST QUARTER 2008

SAMPLE IDENTIFICATION <sup>1</sup>	24-HR AMBIENT AIR SAMPLE					BLANK		CURRENT AGC	24-HOUR SGC <sup>4</sup>
	U1	U2	D1	D2	D3	FB3	TB1		
LOWER QUANTITATION LIMIT (LQL)	0.0120	0.0234	0.0123	0.0248	0.0259	5	5		
PRACTICAL QUANTITATION LIMIT (PQL)	0.0193	0.0375	0.0196	0.0396	0.0415	8	8		
TARGETED TIC LQL	0.0602	0.1171	0.0613	0.1238	0.130	25	25		
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )				
Acetone <sup>2</sup>	0.530	0.726	0.711	0.668	0.751	15		28,000	180,000
Benzaldehyde <sup>3</sup>								0.10	----
<b>Benzene</b>	<b>1.277</b>	< <b>0.714</b>	<b>0.735</b>	< <b>0.705</b>	< <b>0.661</b>			0.13	1,300
Bromodichloromethane								0.02	---
Bromoform <sup>2</sup>			0.029					0.91	---
Bromomethane								5.00	3,900
2-Butanone <sup>2</sup>	0.241	< 0.276	0.392	< 0.391	< 0.280			5,000	13,000
Carbon Disulfide								700	6,200
<b>Carbon Tetrachloride</b>	<b>1.783</b>	<b>0.892</b>	<b>0.809</b>	<b>0.780</b>	<b>0.788</b>			0.067	1,900
Chlorobenzene								110	---
Chloroethane								10,000	---
Chloroethyl Vinyl Ether <sup>3</sup>								0.10	----
<b>Chloroform</b>	<b>0.082</b>	<b>0.091</b>	<b>0.088</b>	<b>0.089</b>	<b>0.085</b>			0.043	150
Chloromethane	0.084	0.117	0.069	0.072	< 0.119			90	22,000
Dibromochloromethane								0.10	---
1,2-Dichlorobenzene (o)								360	30,000
1,3-Dichlorobenzene (m)								360	30,000
1,4-Dichlorobenzene (p)	0.041	< 0.066	0.061	< 0.054	< 0.057			0.09	---
1,1-Dichloroethane								0.63	---
1,2-Dichloroethane								0.038	---
1,1-Dichloroethene								70	---
cis-1,2-Dichloroethene								63	---
trans-1,2-Dichloroethene								63	----
1,2-Dichloropropane								4.0	----
1,3-Dichloropropene, cis & trans isomers								0.25	---
Ethylbenzene	0.113	< 0.122	0.120	< 0.119	< 0.130			1,000	54,000
<b>2/4-Ethyltoluene (total)</b>	<b>0.188</b>	< <b>0.178</b>	<b>0.186</b>	< <b>0.183</b>	< <b>0.223</b>			0.10	----
Freon 13 <sup>3</sup>								1,000	68,000
2-Hexanone <sup>2</sup>								48	4,000
Methylene Chloride	0.313	0.492	0.392	0.408	0.495	45		2.10	14,000
4-Methyl-2-Pentanone <sup>2</sup>								3,000	31,000
Styrene								1,000	17,000
1,1,2,2-Tetrachloroethane			0.025					16	---
Tetrachloroethene	0.183	< 0.183	0.179	< 0.183	< 0.181			1.00	1,000
Toluene	0.578	< 0.527	0.637	< 0.582	< 0.557			5,000	37,000
1,1,1-Trichloroethane	0.222	0.115	0.100	0.101	0.106			1,000	68,000
1,1,2-Trichloroethane								1.40	---
Trichloroethene	0.058	< 0.042	0.027	< 0.037	< 0.041			0.50	14,000
Trichlorofluoromethane	1.325	1.639	1.936	2.282	1.974			1,000	68,000
Vinyl Chloride								0.11	180,000
Xylenes (Total)	0.434	< 0.457	0.515	< 0.433	< 0.479			100	4,300
Decane <sup>3</sup>	0.092	< 0.129	0.081	< 0.144	< 0.158			700	---

**TABLE 4.1**  
**Continued**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**AMBIENT AIR VOST SAMPLE RESULTS**

**FIRST QUARTER 2008**

SAMPLE TYPE SAMPLE IDENTIFICATION (1)	24-HR AMBIENT AIR SAMPLE					BLANK		CURRENT AGC	24-HOUR SGC <sup>4</sup>
	U1	U2	D1	D2	D3	FB3	TB1		
ADDITIONAL TIC LQL	0.060	0.117	0.061	0.124	0.130	25	25		
VOC COMPOUND NAME	( $\mu\text{g}/\text{std-m}^3$ )	(ng)	(ng)	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )				
2-Methyl-pentane		< 0.32	0.56	< 0.41	< 0.45			4,200	350,000
Straight-Chain Alkane (DEL)				< 0.63				---	---
Branched Alkane (DEL)	1.64	1.79	0.83	2.70	2.10			---	---
<b>C3 subst. Benzene</b>		< <b>0.316</b>			< <b>0.376</b>			0.13	1,300
2-Methyl-butane	0.82	0.91	0.91	0.92	1.11			42,000	---
Hexane		< 0.39	0.59	< 0.58	< 0.53			700	---
Isobutane	0.53	< 0.74	0.66	< 0.75	< 1.00			57,000	---
Dichlorodifluoromethane	0.89	< 1.28	0.61	< 0.73	< 1.23			12,000	---
Ethane, 1,1,2-trichloro-1,2,2-triflu		< 0.43			< 0.53			180,000	960,000
2-Methyl-Hexane				< 0.33				---	---
Butane	0.92	< 0.88	0.91	< 0.98	< 1.18			57,000	---

NOTES:

<sup>1</sup> See Figure 2.1 for ambient air sampling locations.

<sup>2</sup> An 8 (splitless) nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.

<sup>3</sup> Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.

<sup>4</sup> This 24-hour guideline concentration was calculated by multiplying the current SGC value (last revised September 2007 and still current as of May 2008) by 0.4 (EPA averaging time adjustment factor).

U1/U2: Ambient upwind samplers collocated near the 15th hole Fairway of the Bethpage State Black Golf Course approximately 150 feet west of Round Swamp Road.

D1/D2: Ambient downwind samplers collocated approximately 75 feet southwest of the southwestern corner of the RAP building.

D3: Ambient downwind sampler located on a foot bridge adjacent to the east side landfill haul road, approximately 40 feet west of Winding Road.

- All values are reported in micrograms per standard cubic meter ( $\mu\text{g}/\text{std-m}^3$ ) except for the field blank and trip blank mass loading results which are reported in nanograms (ng).

- Blank values:

Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.

Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.

- Values in shaded areas are at or exceed the level of the current (last revised September 2007 and still current as of May 2008) and/or previous ambient air Annual Guideline Concentration (AGC) values.

- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.

- Freon 13 is listed as Chlorotrifluoromethane in the analytical results, Appendix C.

- ( $\mu\text{g}/\text{std-m}^3$ ): micrograms per standard cubic meter

- (ng): nanograms

TABLE 4.1

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

AMBIENT AIR VOST SAMPLE RESULTS

SECOND QUARTER 2008

SAMPLE IDENTIFICATION <sup>1</sup>	24-HR AMBIENT AIR SAMPLE					BLANK		CURRENT AGC	24-HOUR SGC <sup>4</sup>
	U1	U2	D1	D2	D3	FB3	TB1		
LOWER QUANTITATION LIMIT (LQL)	0.0251	0.0269	0.0262	0.0257	0.0277	5	5		
PRACTICAL QUANTITATION LIMIT (PQL)	0.0401	0.0430	0.0420	0.0411	0.0443	8	8		
TARGETED TIC LQL	0.1253	0.1344	0.1312	0.1285	0.139	25	25		
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )				
Acetone <sup>2</sup>	1.805	1.962	1.391	1.157	1.080	35		28,000	180,000
Benzaldehyde <sup>3</sup>			0.034					0.10	---
<b>Benzene</b>	<b>1.078</b>	<b>1.161</b>	<b>1.465</b>	<b>1.483</b>	<b>1.219</b>			0.13	1,300
<b>Bromodichloromethane</b>				< 0.028				0.02	---
Bromoform <sup>2</sup>								0.91	---
Bromomethane								5.00	3,900
2-Butanone <sup>2</sup>	< 0.521		0.727	0.684	< 0.493			5,000	13,000
Carbon Disulfide		< 0.035						700	6,200
<b>Carbon Tetrachloride</b>	<b>0.722</b>	<b>0.745</b>	<b>0.745</b>	<b>0.797</b>	<b>0.720</b>			0.067	1,900
Chlorobenzene								110	---
Chloroethane								10,000	---
Chloroethyl Vinyl Ether <sup>3</sup>			0.034					0.10	---
<b>Chloroform</b>	<b>0.273</b>	<b>0.296</b>	<b>0.192</b>	<b>0.203</b>	<b>0.177</b>			0.043	150
Chloromethane	< 0.043	< 0.073	< 0.060	< 0.049	< 0.055			90	22,000
Dibromochloromethane								0.10	---
1,2-Dichlorobenzene (o)								360	30,000
1,3-Dichlorobenzene (m)								360	30,000
<b>1,4-Dichlorobenzene (p)</b>	<b>&lt; 0.231</b>	<b>&lt; 0.191</b>	<b>&lt; 0.163</b>	<b>&lt; 0.141</b>	<b>&lt; 0.186</b>			0.09	---
1,1-Dichloroethane								0.63	---
1,2-Dichloroethane								0.038	---
1,1-Dichloroethene								70	---
cis-1,2-Dichloroethene								63	---
trans-1,2-Dichloroethene								63	---
1,2-Dichloropropane								4.0	---
1,3-Dichloropropene, cis & trans isomers								0.25	---
Ethylbenzene	< 0.614	< 0.578	< 0.984	< 0.835	< 0.512			1,000	54,000
<b>2/4-Ethyltoluene (total)</b>	<b>&lt; 0.915</b>	<b>&lt; 0.927</b>	<b>&lt; 1.325</b>	<b>&lt; 1.324</b>	<b>&lt; 0.762</b>			0.10	---
Freon 13 <sup>3</sup>								1,000	68,000
2-Hexanone <sup>2</sup>								48	4,000
Methylene Chloride	0.727	0.680	0.840	0.679	0.668			2.10	14,000
4-Methyl-2-Pentanone <sup>2</sup>								3,000	31,000
Styrene								1,000	17,000
1,1,1,2-Tetrachloroethane			< 0.031					16	---
Tetrachloroethene	< 0.514	< 0.524	< 0.591	< 0.578	< 0.568			1.00	1,000
Toluene	2.531	< 2.460	2.462	< 2.275	2.072			5,000	37,000
1,1,1-Trichloroethane		< 0.099		< 0.113	< 0.094			1,000	68,000
1,1,2-Trichloroethane								1.40	---
<b>Trichloroethene</b>	<b>0.243</b>	<b>&lt; 0.263</b>	<b>&lt; 0.591</b>	<b>&lt; 0.681</b>	<b>0.909</b>			0.50	14,000
Trichlorofluoromethane	1.521	1.766	1.793	1.805	1.612			1,000	68,000
Vinyl Chloride								0.11	180,000
Xylenes (Total)	< 2.469	< 2.406	< 2.900	< 2.841	< 2.064			100	4,300
Decane <sup>5</sup>	< 0.363	< 0.390	< 0.591	< 0.578	< 0.346			700	---

**TABLE 4.1**  
**Continued**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**AMBIENT AIR VOST SAMPLE RESULTS**

**SECOND QUARTER 2008**

SAMPLE TYPE	24-HR AMBIENT AIR SAMPLE					BLANK		CURRENT AGC	24-HOUR SGC****
	U1	U2	D1	D2	D3	FB3	TB1		
SAMPLE IDENTIFICATION (1)	0.125	0.134	0.131	0.129	0.139	25	25		
ADDITIONAL TIC LQL									
VOC COMPOUND NAME	( $\mu\text{g}/\text{std-m}^3$ )	(ng)	(ng)	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )				
2-Methyl-Heptane		< 0.58						---	---
2-Methyl-pentane	< 0.61	1.13	< 3.22	2.85	2.08			4,200	350,000
Benzene, dimethyl-isomer		< 0.58						100	4,300
Branched Alkane (DEL)	1.68	1.24	2.99	3.88	1.94			---	---
<b>C3 subst. Benzene</b>	< <b>0.739</b>	< <b>0.712</b>	< <b>1.037</b>	< <b>1.144</b>				0.13	1,300
2-Methyl-butane	< 1.47	< 1.68	3.46	3.16	2.85			42,000	---
Hexane	< 0.76	< 0.79	< 3.48	< 3.15	< 2.59			700	---
Decane	< 0.36	< 0.39	< 0.59	< 0.58	< 0.35			700	---
Isobutane	< 0.76	< 0.93	< 0.83	< 0.86	< 0.79			57,000	---
Dichlorodifluoromethane	< 0.59		< 0.62	< 0.78	< 0.76			12,000	---
Unknown (RT: 1.36-1.45)		< 0.36	< 0.41					---	---
2-Methyl-Hexane	< 0.69	< 0.74	< 2.69	< 2.61	< 1.98			---	---
Butane	< 1.14	< 1.17	< 1.17	< 1.22	< 1.15			57,000	---
Unknown alkene (3.33-3.42)	< 0.41	< 0.58	< 0.51	< 0.60	< 0.46			---	---
Octane	< 0.61				< 1.90			3,300	---
Nonane					< 1.12			25,000	---

NOTES:

<sup>1</sup> See Figure 2.1 for ambient air sampling locations.

<sup>2</sup> An 8 (splitless) nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.

<sup>3</sup> Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.

<sup>4</sup> This 24-hour guideline concentration was calculated by multiplying the current SGC value (last revised September 2007 and still current as of August 2008) by 0.4 (EPA averaging time adjustment factor).

U1/U2: Ambient upwind samplers collocated near the western OBSWDC property boundary, approximately 150 feet west of Discharge Basin No. 1.

D1/D2: Ambient downwind samplers collocated near a footbridge on the eastern side of the landfill, approximately 25 feet west of Winding Road.

D3: Ambient downwind sampler was located in the southeast corner of the landfill boundary on the landfill access road, just northeast of the Nassau County Fire Service Academy.

- All values are reported in micrograms per standard cubic meter ( $\mu\text{g}/\text{std-m}^3$ ) except for the field blank and trip blank mass loading results which are reported in nanograms (ng).

- Blank values:

Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.

Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.

- Values in shaded areas are at or exceed the level of the current (last revised September 2007 and still current as of August 2008) and/or previous ambient air Annual Guideline Concentration (AGC) values.

- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.

- Freon 13 is listed as Chlorotrifluoromethane in the analytical results, Appendix C.

- ( $\mu\text{g}/\text{std-m}^3$ ): micrograms per standard cubic meter

- (ng): nanograms

TABLE 4.1

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

## AMBIENT AIR VOST SAMPLE RESULTS

## THIRD QUARTER 2008

SAMPLE IDENTIFICATION <sup>1</sup>	24-HR AMBIENT AIR SAMPLE					BLANK		CURRENT AGC	24-HOUR SGC <sup>4</sup>
	U1	U2	D1	D2	D3	FB3	TB1		
LOWER QUANTITATION LIMIT (LQL)	0.0152	0.0298	0.0169	0.0330	0.0319	5	5		
PRACTICAL QUANTITATION LIMIT (PQL)	0.0243	0.0476	0.0270	0.0528	0.0511	8	8		
TARGETED TIC LQL	0.0760	0.1488	0.0845	0.1650	0.160	25	25		
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )				
Acetone <sup>2</sup>	0.578	0.804	0.676	0.693	0.767			28,000	180,000
Benzaldehyde <sup>3</sup>								0.10	----
<b>Benzene</b>	<b>0.334</b>	<b>&lt; 0.286</b>	<b>0.574</b>	<b>0.554</b>	<b>&lt; 0.335</b>			0.13	1,300
Bromodichloromethane								0.02	---
Bromoform <sup>2</sup>								0.91	---
Bromomethane								5.00	3,900
2-Butanone <sup>2</sup>	0.365		0.405	< 0.277				5,000	13,000
Carbon Disulfide								700	6,200
<b>Carbon Tetrachloride</b>	<b>0.881</b>	<b>0.818</b>	<b>0.912</b>	<b>0.878</b>	<b>0.834</b>			0.067	1,900
Chlorobenzene								110	---
Chloroethane								10,000	---
Chloroethyl Vinyl Ether <sup>3</sup>								0.10	----
<b>Chloroform</b>	<b>0.097</b>	<b>0.101</b>	<b>0.111</b>	<b>0.106</b>	<b>&lt; 0.096</b>			0.043	150
Chloromethane	0.046		0.098		< 0.093			90	22,000
Dibromochloromethane								0.10	---
1,2-Dichlorobenzene (o)								360	30,000
1,3-Dichlorobenzene (m)								360	30,000
<b>1,4-Dichlorobenzene (p)</b>	<b>0.070</b>	<b>&lt; 0.083</b>	<b>0.098</b>	<b>0.109</b>	<b>&lt; 0.112</b>			0.09	---
1,1-Dichloroethane								0.63	---
1,2-Dichloroethane								0.038	---
1,1-Dichloroethene								70	---
cis-1,2-Dichloroethene								63	---
trans-1,2-Dichloroethene								63	----
1,2-Dichloropropane								4.0	----
1,3-Dichloropropene, cis & trans isomers								0.25	---
Ethylbenzene	0.134	< 0.128	0.186	< 0.178	< 0.195			1,000	54,000
<b>2/4-Ethyltoluene (total)</b>	<b>0.304</b>	<b>&lt; 0.313</b>	<b>0.507</b>	<b>&lt; 0.512</b>	<b>&lt; 0.431</b>			0.10	----
Freon 13 <sup>3</sup>								1,000	68,000
2-Hexanone <sup>2</sup>								48	4,000
Methylene Chloride	0.161	0.205	0.280	0.142	0.412	9		2.10	14,000
4-Methyl-2-Pentanone <sup>2</sup>								3,000	31,000
Styrene								1,000	17,000
1,1,1,2-Tetrachloroethane								16	---
Tetrachloroethene	0.222	< 0.205	0.301	< 0.310	< 0.278			1.00	1,000
Toluene	0.638	< 0.580	0.811	< 0.743	< 0.783			5,000	37,000
1,1,1-Trichloroethane	0.088	< 0.083	0.105	< 0.099	0.252			1,000	68,000
1,1,2-Trichloroethane								1.40	---
Trichloroethene			0.024					0.50	14,000
Trichlorofluoromethane	1.277	1.485	1.689	1.383	1.847	41		1,000	68,000
Vinyl Chloride								0.11	180,000
Xylenes (Total)	0.578	< 0.551	0.845	< 0.776	< 0.815			100	4,300
Decane <sup>3</sup>								700	---

**TABLE 4.1**  
**Continued**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**AMBIENT AIR VOST SAMPLE RESULTS**

**THIRD QUARTER 2008**

SAMPLE TYPE	24-HR AMBIENT AIR SAMPLE					BLANK		CURRENT AGC	24-HOUR SGC****
	U1	U2	D1	D2	D3	FB3	TB1		
SAMPLE IDENTIFICATION (1)	U1	U2	D1	D2	D3	FB3	TB1		
ADDITIONAL TIC LQL	0.076	0.149	0.084	0.165	0.160	25	25		
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )				
2-Methyl-pentane	0.76			< 0.78	< 0.75			4,200	350,000
Branched Alkane (DEL)		< 1.71			< 1.07			---	---
2-Methyl-butane	1.52	< 1.06	2.64	< 1.07	1.63			42,000	---
Hexane	1.03	< 1.09		< 1.34				700	---
Isobutane				< 0.58				57,000	---
Dichlorodifluoromethane	0.82	< 1.44			< 2.38			12,000	---
1,1-Dichloro-1-fluoroethane				< 0.22				---	---
Unknown (RT: 1.64-15.45)		2.24	1.52	1.12	3.42			---	---
Ethane, 1,1,2-trichloro-1,2,2-triflu		< 0.21						180,000	960,000
1-Propene, 2-methyl- branched alkane			1.99					---	---
2-Methyl-Hexane		< 0.52		< 0.71	< 0.72			---	---
Butane	0.73	< 0.79	1.59	< 0.78				57,000	---
Octane	0.85		1.01	< 1.01				3,300	---
Ethyl Acetate					< 0.59			3,400	---
Nonane	0.76			< 0.61	< 1.10			25,000	---
Chlorodifluoromethane + dichlorodifluoromethane			2.80	< 1.17				12,000	---

NOTES:

<sup>1</sup> See Figure 2.1 for ambient air sampling locations.

<sup>2</sup> An 8 (splitless) nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.

<sup>3</sup> Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.

<sup>4</sup> This 24-hour guideline concentration was calculated by multiplying the current SGC value (last revised September 2007 and still current as of December 2008) by 0.4 (EPA averaging time adjustment factor).

U1/U2: Ambient upwind samplers collocated near the 15th hole Fairway of the Bethpage State Black Golf Course approximately 150 feet west of Round Swamp Road.

D1/D2: Ambient downwind samplers collocated near the entrance gate for the RAP building, approximately 125 feet west of Winding Road.

D3: Ambient downwind sampler was located just north and east of the front gate of the OBSWDC facility on Bethpage Sweet Hollow Road.

- All values are reported in micrograms per standard cubic meter (µg/std-m<sup>3</sup>) except for the field blank and trip blank mass loading results which are reported in nanograms (ng).

- Blank values:

Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.

Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.

- Values in shaded areas are at or exceed the level of the current (last revised September 2007 and still current as of December 2008) and/or previous ambient air Annual Guideline Concentration (AGC) values.

- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.

- Freon 13 is listed as Chlorotrifluoromethane in the analytical results, Appendix C.

- (µg/std-m<sup>3</sup>): micrograms per standard cubic meter

- (ng): nanograms

TABLE 4.1

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

AMBIENT AIR VOST SAMPLE RESULTS

FOURTH QUARTER 2008

SAMPLE IDENTIFICATION <sup>1</sup>	24-HR AMBIENT AIR SAMPLE					BLANK		CURRENT AGC	24-HOUR SGC <sup>4</sup>
	U1	U2	D1	D2	D3	FB3	TB1		
LOWER QUANTITATION LIMIT (LQL)	0.0125	0.0292	0.0123	0.0253	0.0290	5	5		
PRACTICAL QUANTITATION LIMIT (PQL)	0.0200	0.0468	0.0198	0.0404	0.0464	8	8		
TARGETED TIC LQL	0.0625	0.1462	0.0617	0.1263	0.145	25	25		
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )				
Acetone <sup>2</sup>	0.500	0.848	0.494	0.657	1.275	42	39	28,000	180,000
Benzaldehyde <sup>3</sup>					< 0.464			0.10	----
<b>Benzene</b>	<b>0.925</b>	<b>1.038</b>	<b>0.914</b>	<b>0.967</b>	<b>1.342</b>			0.13	1,300
Bromodichloromethane								0.02	---
Bromoform <sup>2</sup>				< 0.056			9	0.91	---
Bromomethane							8	5.00	3,900
2-Butanone <sup>2</sup>	0.400	< 0.404	0.370	< 0.449	< 0.748	37	31	5,000	13,000
Carbon Disulfide							7	700	6,200
<b>Carbon Tetrachloride</b>	<b>0.625</b>	<b>0.678</b>	<b>0.667</b>	<b>0.634</b>	<b>0.664</b>			0.067	1,900
Chlorobenzene								110	---
Chloroethane							8	10,000	---
Chloroethyl Vinyl Ether <sup>3</sup>								0.10	----
<b>Chloroform</b>	<b>0.093</b>	<b>0.102</b>	<b>0.091</b>	<b>0.096</b>	<b>0.139</b>			0.043	150
Chloromethane							11	90	22,000
Dibromochloromethane								0.10	---
1,2-Dichlorobenzene (o)								360	30,000
1,3-Dichlorobenzene (m)								360	30,000
<b>1,4-Dichlorobenzene (p)</b>	0.070	< 0.085	0.079	< 0.093	< 0.157			0.09	---
1,1-Dichloroethane								0.63	---
1,2-Dichloroethane								0.038	---
1,1,1-Dichloroethene							6	70	---
cis-1,2-Dichloroethene								63	---
trans-1,2-Dichloroethene								63	----
1,2-Dichloropropane								4.0	----
1,3-Dichloropropene, cis & trans isomers								0.25	---
Ethylbenzene	0.275	< 0.301	0.272	< 0.290	< 0.594			1,000	54,000
<b>2/4-Ethyltoluene (total)</b>	<b>0.700</b>	<b>&lt; 0.775</b>	<b>0.691</b>	<b>&lt; 0.720</b>	<b>&lt; 1.261</b>			0.10	----
Freon 13 <sup>3</sup>								1,000	68,000
2-Hexanone <sup>2</sup>					< 0.081	36	36	48	4,000
Methylene Chloride	0.250	0.406	0.296	0.409	0.574	11	17	2.10	14,000
4-Methyl-2-Pentanone <sup>2</sup>				< 0.152	< 0.058	26	33	3,000	31,000
Styrene								1,000	17,000
1,1,1,2-Tetrachloroethane				< 0.068		6	18	16	---
Tetrachloroethene	0.300	< 0.336	0.346	< 0.341	< 0.536			1.00	1,000
Toluene	1.425	< 1.681	1.506	< 1.604	< 3.493			5,000	37,000
1,1,1-Trichloroethane								1,000	68,000
1,1,2-Trichloroethane								1.40	---
Trichloroethene	0.040	< 0.058	0.047	< 0.056	< 0.058			0.50	14,000
Trichlorofluoromethane	1.100	1.301	1.605	1.591	1.525		6	1,000	68,000
Vinyl Chloride							9	0.11	180,000
Xylenes (Total)	1.150	< 1.330	1.160	< 1.250	< 2.594			100	4,300
Decane <sup>3</sup>	0.183	< 0.278	0.215	< 0.265	< 0.420			700	---

**TABLE 4.1**  
**Continued**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**AMBIENT AIR VOST SAMPLE RESULTS**

**FOURTH QUARTER 2008**

SAMPLE TYPE SAMPLE IDENTIFICATION (1)	24-HR AMBIENT AIR SAMPLE					BLANK		CURRENT AGC	24-HOUR SGC****
	U1	U2	D1	D2	D3	FB3	TB1		
ADDITIONAL TIC LQL	0.063	0.146	0.062	0.126	0.145	25	25		
VOC COMPOUND NAME	( $\mu\text{g}/\text{std-m}^3$ )	(ng)	(ng)	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )				
2-Methyl-pentane	4.75	4.15	3.95	3.23				4,200	350,000
3-Methyl-pentane				< 1.76				4,200	350,000
Straight-Chain Alkane					< 1.09			---	---
2-Methyl-butane	5.75	3.89	5.68	2.88	< 2.19			42,000	---
Hexane	4.00	< 3.87	3.95	< 3.60	< 1.00			700	---
Isobutane	3.50	< 1.94	3.95	< 1.63	< 1.72			57,000	---
Dichlorodifluoromethane	3.75	< 1.71	8.15	< 3.60	< 0.88			12,000	---
Unknown (RT: 1.33-14.55)					< 2.42			---	---
Ethane, 1,1,2-trichloro-1,2,2-triflu		< 0.77	2.72	< 0.74	< 0.68			180,000	960,000
branched alkane	3.00	3.86		1.59	4.38			---	---
2-Methyl-Hexane		< 2.06		< 1.83				---	---
Butane	5.50	< 2.76	5.43	< 2.13	< 2.16			57,000	---
Cyclohexane, methyl-					< 1.38			---	---
Octane		< 0.66		< 0.72	< 1.38			3,300	---

NOTES:

<sup>1</sup> See Figure 2.1 for ambient air sampling locations.

<sup>2</sup> An 8 (splitless) nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.

<sup>3</sup> Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.

<sup>4</sup> This 24-hour guideline concentration was calculated by multiplying the current SGC value (last revised September 2007 and still current as of February 2009) by 0.4 (EPA averaging time adjustment factor).

U1/U2: Ambient upwind samplers collocated near the 15th hole Fairway of the Bethpage State Black Golf Course approximately 150 feet west of Round Swamp Road.

D1/D2: Ambient downwind samplers collocated near the entrance gate for the RAP building, approximately 125 feet west of Winding Road.

D3: Ambient downwind sampler was located just north and east of the front gate of the facility on Bethpage Sweet Hollow Road.

- All values are reported in micrograms per standard cubic meter ( $\mu\text{g}/\text{std-m}^3$ ) except for the field blank and trip blank mass loading results which are reported in nanograms (ng).

- Blank values:

Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.

Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.

- Values in shaded areas are at or exceed the level of the current (last revised September 2007 and still current as of February 2009) and/or previous ambient air Annual Guideline Concentration (AGC) values.

- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.

- Freon 13 is listed as Chlorotrifluoromethane in the analytical results, Appendix C.

- ( $\mu\text{g}/\text{std-m}^3$ ): micrograms per standard cubic meter

- (ng): nanograms

**APPENDIX B**

**TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX  
EVALUATION OF VOLATILE ORGANIC COMPOUNDS IN  
AMBIENT AIR, SOILS AND SOIL GAS PRESSURE READINGS**

**2008 ANNUAL SUMMARY REPORT**

**2008 QUARTERLY SOIL GAS VOC CONCENTRATION DATA**

TABLE 4.2

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
FIRST QUARTER 2008

SOIL GAS WELL ID	F1	M2	M4	M5	M6	M9(10)	M9(20)	M9(30)	M9(40)	FBI	Current	Current
	(µg/std-m <sup>3</sup> )	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )								
Acetone*	4.73	2.50	2.00	10.11	12.05	4.20	2.58	5.86	1.61	17	28,000	180,000
<b>Benzaldehyde**</b>				< 10.30	23.09						0.10	---
<b>Benzene</b>					0.90						0.13	1300
Bromodichloromethane											0.02	---
Bromoform*											0.91	---
Bromomethane											5.00	3900
2-Butanone*					3.82						5000	13,000
Carbon Disulfide											700	6200
Carbon Tetrachloride											0.067	1,900
Chlorobenzene											110	---
Chloroethane											10,000	---
Chloroethyl Vinyl Ether**											0.10	---
<b>Chloroform</b>	0.69			0.50	0.50		0.79	< 1.31	0.70		0.043	150
Chloromethane				1.71							90.0	22,000
Dibromochloromethane											0.10	---
1,2-Dichlorobenzene (o)											360	30,000
1,3-Dichlorobenzene (m)											360	30,000
<b>1,4-Dichlorobenzene (p)</b>					2.91						0.09	---
1,1-Dichloroethane											0.63	---
1,2-Dichloroethane											0.038	---
cis-1,2-Dichloroethene											70.00	---
trans-1,2-Dichloroethene											63	---
1,2-Dichloropropane											63	---
1,3-Dichloropropene, cis & trans isomers											4.00	---
Ethylbenzene											0.25	---
2/4-Ethyltoluene (total)											1,000	54,000
Freon 13**											0.10	---
2-Hexanone*											1000	68,000
<b>Methylene Chloride</b>	1.97	4.00	2.61	8.05	4.72	6.29	2.98	11.63	5.82	76	2.10	14,000
4-Methyl-2-Pentanone*											3,000	31,000
Styrene											1,000	17,000
1,1,2,2-Tetrachloroethane											16	---
<b>Tetrachloroethene</b>	2.56				0.50	6.69	19.86	< 40.95	74.30		1.00	1,000
Toluene											5000	37,000
1,1,1-Trichloroethane								< 1.01	1.00		1,000	68,000
1,1,2-Trichloroethane											1.40	---
<b>Trichloroethene</b>								< 1.31	1.81		0.50	14,000
Trichlorofluoromethane	2.36	1.90	2.10	2.06	3.11	4.50	6.55	7.08	9.34		1000	68,000
Vinyl Chloride											0.11	180,000
Xylenes (Total)											100	4,300
Decane**											700	---

TABLE 4.2  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
FIRST QUARTER 2008

SOIL GAS WELL ID	F1 (µg/std-m <sup>3</sup> )	M2 (µg/std-m <sup>3</sup> )	M4 (µg/std-m <sup>3</sup> )	M5 (µg/std-m <sup>3</sup> )	M6 (µg/std-m <sup>3</sup> )	M9(10) (µg/std-m <sup>3</sup> )	M9(20) (µg/std-m <sup>3</sup> )	M9(30) (µg/std-m <sup>3</sup> )	M9(40) (µg/std-m <sup>3</sup> )	FBI (ng)	Current AGC (µg/m <sup>3</sup> )	Current SGC (µg/m <sup>3</sup> )
ADDITIONAL TIC LOI	2.46	2.50	2.51	4.91	2.51	2.50	2.48	5.06	2.51	25	---	---
VOC COMPOUND NAME												
2-Methyl-1 propene				< 8.05	4.22		2.88				---	---
2-Methyl-pentane											4,200	350,000
3-Methyl-pentane											4,200	350,000
Straight-Chain Alkane (DEL)						2.70					---	---
Branched Alkane (DEL)	23.94	3.60			4.12	4.80	2.58				---	---
2-Methyl-butane											42,000	---
Cyclopentane, methyl-											700	---
Hexane											700	---
alpha-Pinene isomer (RT - 12.01)											270	---
Isobutane											57,000	---
Dichlorodifluoromethane		4.30	3.81	< 6.18	6.53		11.92	< 17.69	19.08		12,000	---
1,1-Dichloro-1-fluoroethane	7.29								3.01		---	---
Unknown silane (RT: 13.94)	6.01										---	---
Dichlorotetrafluoroethane				< 10.01	3.71	21.98	65.54	91.41	130.52		17,000	---
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-									6.12		180,000	960,000
Chlorodifluoromethane											50,000	---
2-Methyl-Hexane											---	---
Bicyclo(3,1,0)hexane, 4-methylene-1											---	---
Propane	22.66										---	---
Nonanal											43,000	---
Hexachloroethane											---	---
											23	---

TABLE 4.2  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLER RESULTS  
FIRST QUARTER 2008

SOIL GAS WELL ID	M13 (µg/std-m <sup>3</sup> )	M16 (µg/std-m <sup>3</sup> )	M21 (µg/std-m <sup>3</sup> )	M22 (µg/std-m <sup>3</sup> )	M28 (µg/std-m <sup>3</sup> )	M31 (µg/std-m <sup>3</sup> )	M34 (µg/std-m <sup>3</sup> )	M37 (µg/std-m <sup>3</sup> )	M39 (µg/std-m <sup>3</sup> )	FB2 (ng)	Current AGC (µg/m <sup>3</sup> )	Current SGC (µg/m <sup>3</sup> )
Acetone*	3.51	1.74		4.90	3.11	3.72	8.64	4.58	3.13		28,000	180,000
Benzaldehyde**											0.10	-----
<b>Benzene</b>	<b>1.01</b>			<b>1.00</b>			<b>0.73</b>		<b>2.57</b>		0.13	1300
Bromodichloromethane											0.02	-----
Bromoform*											0.91	-----
Bromomethane											5.00	3900
2-Butanone*											5000	13,000
Carbon Disulfide											700	6200
<b>Carbon Tetrachloride</b>							<b>0.64</b>	<b>0.63</b>			0.067	1,900
Chlorobenzene											110	-----
Chloroethane											10,000	-----
Chloroethyl Vinyl Ether**											0.10	-----
<b>Chloroform</b>	<b>1.29</b>					<b>0.54</b>					0.043	150
Chloromethane				1.45			1.18				90.0	22,000
Dibromochloromethane											0.10	-----
1,2-Dichlorobenzene (o)											360	30,000
1,3-Dichlorobenzene (m)											360	30,000
1,4-Dichlorobenzene (p)											0.09	-----
1,1-Dichloroethane											0.63	-----
1,2-Dichloroethane											0.038	-----
1,1-Dichloroethene											70.00	-----
cis-1,2-Dichloroethene											63	-----
trans-1,2-Dichloroethene											63	-----
1,2-Dichloropropane											4.00	-----
1,3-Dichloropropene, cis & trans isomers											0.25	-----
Ethylbenzene	0.55								0.74		1,000	54,000
2/4-Ethyltoluene (total)											0.10	-----
Freon 13**											1000	68,000
2-Hexanone*											48.0	4000
<b>Methylene Chloride</b>	10.15	1.28		<b>2.82</b>	<b>2.56</b>	2.00	<b>2.18</b>	<b>19.77</b>	<b>2.11</b>		2.10	14,000
4-Methyl-2-Pentanone*											3,000	31,000
Styrene											1,000	17,000
1,1,2,2-Tetrachloroethane	1.01										16	-----
<b>Tetrachloroethene</b>	<b>10.15</b>	<b>3.20</b>		0.45	0.46	0.45		0.72	<b>35.85</b>		1.00	1,000
Toluene	92.25	12.79		15.44	12.79		1.00	0.45	404.41		5000	37,000
1,1,1-Trichloroethane	1.29										1,000	68,000
1,1,2-Trichloroethane											1.40	-----
<b>Trichloroethene</b>	<b>0.83</b>										0.50	14,000
Trichlorofluoromethane	2.86	3.29		2.09	2.10	1.82	1.91	2.07	3.03		1000	68,000
Vinyl Chloride											0.11	180,000
Xylenes (Total)	1.20										100	4,300
Decane**											700	-----

**TABLE 4.2  
(Concluded)**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**SOIL GAS VOST SAMPLE RESULTS  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
FIRST QUARTER 2008**

SOIL GAS WELL ID	M13	M16	M21	M22	M28	M31	M34	M37	M39	FB2	Current AGC (µg/m <sup>3</sup> )	Current SGC (µg/m <sup>3</sup> )
ADDITIONAL TIC LQI	2.31	2.28	-	2.27	2.28	2.27	2.27	2.25	2.30	25	4,200	---
VOC COMPOUND NAME	(µg/std-m)	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )								
2-Methyl-1 propene				3.72	3.93	2.27	2.45	3.14			---	---
2-Methyl-pentane	4.15								14.71		4,200	---
3-Methyl-pentane									15.63		4,200	---
Straight-Chain Alkane (DEL)						2.45					---	---
Branched Alkane (DEL)	11.44	9.04		3.81		11.26		15.36			---	---
2-Methyl-butane				3.18							42,000	---
Cyclopentane, methyl-									9.10		700	---
Hexane	64.58	26.48		12.72	12.79				248.16		700	---
alpha-Pinene isomer (RT - 12.01)		8.86									270	---
Isobutane								3.14			57,000	---
Dichlorodifluoromethane		5.48				3.91			3.31		12,000	---
1,1-Dichloro-1-Fluoroethane	5.35	3.84		4.00				7.55	14.71		---	---
Unknown silane (RT: 13.94)											---	---
Dichlorotetrafluoroethane											17,000	---
Ethane, 1,1,2-trichloro-1,2,2-trifluoro											180,000	960,000
Chlorodifluoromethane	3.69			5.36	4.20		10.00	10.78	5.51		50,000	---
2-Methyl-Hexane											---	---
Bicyclo(3_1_0)hexane, 4-methylene -1		17.35									---	---
Propane											---	---
Nonanal						2.45					43,000	---
Hexachloroethane	5.26										23	---

Notes:

- \* An 8 nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.
- \*\* Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.
- All values are reported in micrograms per standard cubic meter (µg/std-m<sup>3</sup>).
- Blank values:
- Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.
- Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.
- Values in shaded areas are at or exceed the level of the current (last revised September 2007 and still current as of May 2008) and/or previous ambient air Annual Guideline Concentration (AGC) values.
- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.
- Freon 13 is listed as Chlorotrifluoromethane in the Analytical Results, Appendix C.
- (µg/std-m<sup>3</sup>): micrograms per standard cubic meter
- (ng): nanograms

TABLE 4.2

TOWN OF OYSTER BAY  
 OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
 SECOND QUARTER 2008

SOIL GAS WELL ID	F1	M2	M4	M5	M6	M9(10)	M9(20)	M9(30)	M9(40)	FBI	Current AGC	Current SGC
LOWER QUANTITATION LIMIT (LQL)	0.476	0.485	0.486	0.991	0.500	0.498	0.495	0.987	0.496	5	---	---
PRACTICAL QUANTITATION LIMIT (PQL)	0.761	0.776	0.778	0.793	0.800	0.797	0.792	1.579	0.79	8	---	---
TARGETED TIC LQL	2.38	2.42	2.43	4.96	2.50	2.49	2.48	4.94	2.48	25	---	---
VOC COMPOUND NAME	( $\mu\text{g}/\text{std}\cdot\text{m}^3$ )	(ng)	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )								
Acetone*	9.51	15.52	6.91	< 4.46	2.40	1.69	0.89	9.67	1.79	18	28,000	180,000
Benzaldehyde**											0.10	---
Benzene											0.13	1300
Bromodichloromethane											0.02	---
Bromoform*											0.91	---
Bromomethane											5.00	3900
2-Butanone*			2.33								5000	13,000
Carbon Disulfide											700	6200
Carbon Tetrachloride											0.067	1,900
Chlorobenzene											110	---
Chloroethane											10,000	---
Chloroethyl Vinyl Ether**											0.10	---
<b>Chloroform</b>	<b>1.14</b>		<b>0.58</b>	< <b>1.68</b>		<b>0.70</b>	<b>0.89</b>	< <b>1.18</b>	<b>0.60</b>		<b>0.043</b>	<b>150</b>
Chloromethane											90.0	22,000
Dibromochloromethane											0.10	---
1,2-Dichlorobenzene (o)											360	30,000
1,3-Dichlorobenzene (m)											360	30,000
1,4-Dichlorobenzene (p)											0.09	---
1,1-Dichloroethane											0.63	---
1,2-Dichloroethane											0.038	---
1,1-Dichloroethene											70,000	---
cis-1,2-Dichloroethene											63	---
trans-1,2-Dichloroethene											63	---
1,2-Dichloropropane											4.00	---
1,3-Dichloropropene, cis & trans isomers											0.25	---
Ethylbenzene											1,000	54,000
2/4-Ethyltoluene (total)											0.10	---
2-Hexanone*											1000	68,000
<b>Methylene Chloride</b>	<b>1.33</b>	<b>1.16</b>	<b>1.26</b>	< <b>1.49</b>	<b>3.00</b>	<b>1.39</b>	<b>2.77</b>	<b>4.15</b>	<b>2.48</b>	<b>20</b>	<b>2.10</b>	<b>14,000</b>
4-Methyl-2-Pentanone*											3,000	31,000
Styrene											1,000	17,000
1,1,2,2-Tetrachloroethane											16	---
<b>Tetrachloroethene</b>	<b>8.09</b>	<b>1.16</b>	<b>0.97</b>	< <b>9.81</b>	<b>1.70</b>	<b>8.76</b>	<b>17.82</b>	< <b>34.06</b>	<b>69.44</b>		<b>1.00</b>	<b>1,000</b>
Toluene											5,000	37,000
1,1,1-Trichloroethane							0.69	< 1.28	1.09		1,000	68,000
1,1,2-Trichloroethane											1.40	---
<b>Trichloroethene</b>							<b>0.59</b>	< <b>2.27</b>	<b>2.38</b>		<b>0.50</b>	<b>14,000</b>
Trichlorofluoromethane	2.00	1.45	1.56	< 2.97	1.40	4.18	5.35	5.53	7.84		1,000	68,000
Vinyl Chloride											0.11	180,000
Xylenes (Total)											100	4,300
Decane**											700	---

TABLE 4.2  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
SECOND QUARTER 2008

SOIL GAS WELL ID	F1 (µg/std-m <sup>3</sup> )	M2 (µg/std-m <sup>3</sup> )	M4 (µg/std-m <sup>3</sup> )	M5 (µg/std-m <sup>3</sup> )	M6 (µg/std-m <sup>3</sup> )	M9(10) (µg/std-m <sup>3</sup> )	M9(20) (µg/std-m <sup>3</sup> )	M9(30) (µg/std-m <sup>3</sup> )	M9(40) (µg/std-m <sup>3</sup> )	FBI (ng)	Current AGC (µg/m <sup>3</sup> )	Current SGC (µg/m <sup>3</sup> )
ADDITIONAL TIC LQI	2.38	2.42	2.43	4.96	2.50	2.49	2.48	4.94	2.48	25		
VOC COMPOUND NAME												
Straight-Chain Alkane (DEL)	3.14											
Branched Alkane (DEL)												
Dimethylcyclohexadiene isomer (10.49-11.38)												
2-Pentanone		2.72										53,000
Cyclotrisiloxane, hexamethyl- + Octane												
Undecane												
alpha-Pinene isomer (RT - 12.03)	6.18											
Dichlorodifluoromethane							4.26	< 18.26			12,000	
1,1-Dichloro-1-fluoroethane	6.76								2.78			
2-Nonanone												
Furan, 2-methyl												
Undecane + Unknown				< 3.07							95.0	6,000
Unknown silane (RT: 13.93)	2.85											
Dichlorotetrafluoroethane												
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-						13.94	57.43	86.08	119.05		17,000	
2-Propenal, 2-methyl												
2-Heptanone												
Chlorodifluoromethane		3.88	3.11		4.70	6.97		< 5.13			550	
Cyclotrisiloxane, hexamethyl-											50,000	
Octanal				< 2.87								
5-Hepten-2-one, 6-methyl												
Nonanal												
Octane + Unknown siloxane	4.00											
1-Hepten-2-one, 2-methyl												

TABLE 4.2  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
SECOND QUARTER 2008

SOIL GAS WELL ID	M13	M16	M21	M22	M28	M31	M34	M37	M39	FB2	Current AGC	Current SGC
LOWER QUANTITATION LIMIT (LQL)	0.491	0.497	-	0.488	0.469	0.486	0.491	0.476	0.996	5		
PRACTICAL QUANTITATION LIMIT (PQL)	0.785	0.795	-	0.781	0.750	0.78	0.785	0.761	1.594	8		
TARGETED TIC LQL	2.45	2.49	-	2.44	2.35	2.43	2.45	2.38	4.98	25		
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )								
Acetone*	5.40	3.08		4.88	10.32	5.83	5.00	5.42	11.55		28,000	180,000
Benzaldehyde**											0.10	---
Benzene											0.13	1300
Bromodichloromethane											0.02	---
Bromoform*											0.91	---
Bromomethane											5.00	3900
2-Butanone*				0.59							5000	13,000
Carbon Disulfide				0.88	0.75		0.69	0.67			700	6200
<b>Carbon Tetrachloride</b>											0.067	1,900
Chlorobenzene											110	---
Chloroethane											10,000	---
Chloroethyl Vinyl Ether**											0.10	---
<b>Chloroform</b>	3.34	3.68		1.46		0.97	1.57		< 1.79		0.043	150
Chloromethane											90.0	22,000
Dibromochloromethane											0.10	---
1,2-Dichlorobenzene (o)											360	30,000
1,3-Dichlorobenzene (m)											360	30,000
1,4-Dichlorobenzene (p)											0.09	---
<b>1,1-Dichloroethane</b>	1.28										0.63	---
1,2-Dichloroethane											0.038	---
1,1-Dichloroethene											70.00	---
cis-1,2-Dichloroethene											63	---
trans-1,2-Dichloroethene											63	---
1,2-Dichloropropane											4.00	---
1,3-Dichloropropene, cis & trans isomers											0.25	---
Ethylbenzene					4.13	30.13					1,000	54,000
2/4-Ethyltoluene (total)											0.10	---
Freon 13**											1000	68,000
2-Hexanone*											48.0	4000
<b>Methylene Chloride</b>	1.77	1.49		2.15	2.81	2.33	1.96	11.42	1.69	12	2.10	14,000
4-Methyl-2-Pentanone*	3.04			5.18	469.04	19.44					3,000	31,000
Styrene											1,000	17,000
1,1,2,2-Tetrachloroethane											16	---
<b>Tetrachloroethene</b>	19.63	11.93		0.78	0.66	0.78	0.88	0.57	< 29.38		1.00	1,000
Toluene				1.56				0.57			5000	37,000
1,1,1-Trichloroethane	2.45	0.60									1,000	68,000
1,1,2-Trichloroethane											1.40	---
<b>Trichloroethene</b>	1.77										0.50	14,000
Trichlorofluoromethane	3.43	4.37		1.95	1.50	1.85	1.96	1.90	< 1.69		1000	68,000
Vinyl Chloride											0.11	180,000
Xylenes (Total)											100	4,300
Decane**											700	---

**TABLE 4.2  
(Concluded)**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**SOIL GAS VOST SAMPLE RESULTS  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
SECOND QUARTER 2008**

SOIL GAS WELL ID	M13 (µg/std-m <sup>3</sup> )	M16 (µg/std-m <sup>3</sup> )	M21 (µg/std-m <sup>3</sup> )	M22 (µg/std-m <sup>3</sup> )	M28 (µg/std-m <sup>3</sup> )	M31 (µg/std-m <sup>3</sup> )	M34 (µg/std-m <sup>3</sup> )	M37 (µg/std-m <sup>3</sup> )	M39 (µg/std-m <sup>3</sup> )	FB2 25 (ng)	Current AGC (µg/m <sup>3</sup> )	Current SGC (µg/m <sup>3</sup> )
ADDITIONAL TIC LQI VOC COMPOUND NAME	2.45	2.49	-	2.44	2.35	2.43	2.45	2.38	4.98			
Straight-Chain Alkane (DEL)	2.78											
Branched Alkane (DEL)	14.52	7.95		2.64		3.69	3.43	15.89	< 13.75			
Dimethylcyclohexadiene isomer (10.49-11.38)						5.93						
2-Pentanone					21.58							53,000
Cyclotrisiloxane, hexamethyl- + Octane	3.83	2.78		3.42		3.79	6.58	91.34	< 7.57			
Undecane				2.83					6.77			
alpha-Pinene isomer (RT = 12.03)	4.12										12,000	
Dichlorodifluoromethane												
1,1-Dichloro-1-fluoroethane							6.08	7.90				
2-Nonanone					5.44							
Furan, 2-methyl					5.44							6,000
Undecane + Unknown												
Unknown silane (RT: 13.93)												
Dichlorotetrafluoroethane												
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-												17,000
2-Propenal, 2-methyl					4.50							180,000
2-Heptanone					4.88							
Chlorodifluoromethane		3.68		7.81	36.59	10.69		24.74			550	
Cyclotrisiloxane, hexamethyl-											50,000	
Octanal				3.61								
5-Hepten-2-one, 6-methyl	15.70			30.27	131.33	81.63	11.78					
Nonanal	5.59	3.28		7.71				3.90				
Octane + Unknown siloxane												
1-Hepten-2-one, 2-methyl						12.63						

Notes:

- \* An 8 nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.
- \*\* Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.
- All values are reported in micrograms per standard cubic meter (µg/std-m<sup>3</sup>).
- Blank values:
- Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloromethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.
- Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.
- Values in shaded areas are at or exceed the level of the current (last revised September 2007 and still current as of August 2008) and/or previous ambient air Annual Guideline Concentration (AGC) values.
- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.
- Freon 13 is listed as Chlorotrifluoromethane in the Analytical Results, Appendix C.
- (µg/std-m<sup>3</sup>): micrograms per standard cubic meter
- (ng): nanograms

TABLE 4.2

TOWN OF OYSTER BAY  
 OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
 THIRD QUARTER 2008

SOIL GAS WELL ID	F1	M2	M4	M5	M6	M9(10)	M9(20)	M9(30)	M9(40)	FBI	Current AGC	Current SGC
LOWER QUANTITATION LIMIT (LQL)	0.483	0.478	0.482	0.481	0.481	0.493	0.488	0.979	0.490	5	---	---
PRACTICAL QUANTITATION LIMIT (PQL)	0.772	0.764	0.771	0.769	0.770	0.789	0.780	1.567	0.78	8	---	---
TARGETED TIC LQL	2.41	2.39	2.41	2.40	2.41	2.47	2.44	4.90	2.45	25	---	---
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )								
Acetone*	2.12					9.07		< 24.29			28,000	180,000
Benzaldehyde**											0.10	---
Benzene											0.13	1300
Bromodichloromethane											0.02	---
<b>Bromoform*</b>			0.77			<b>1.38</b>					0.91	---
Bromomethane											5.00	3900
2-Butanone*											5000	13,000
Carbon Disulfide											700	6200
Carbon Tetrachloride											0.067	1,900
Chlorobenzene											110	---
Chloroethane											10,000	---
Chloroethyl Vinyl Ether**											0.10	---
<b>Chloroform</b>	<b>2.90</b>	<b>0.76</b>		<b>1.06</b>		<b>1.18</b>	<b>1.56</b>	<b>&lt; 1.37</b>	<b>0.78</b>		0.043	150
Chloromethane											90.0	22,000
Dibromochloromethane											0.10	---
1,2-Dichlorobenzene (o)											360	30,000
1,3-Dichlorobenzene (m)											360	30,000
1,4-Dichlorobenzene (p)											0.09	---
1,1-Dichloroethane											0.63	---
1,2-Dichloroethane											0.038	---
1,1-Dichloroethene											70,000	---
cis-1,2-Dichloroethene											63	---
trans-1,2-Dichloroethene											63	---
1,2-Dichloropropane											4.00	---
1,3-Dichloropropene, cis & trans isomers											0.25	---
Ethylbenzene											1,000	54,000
2/4-Ethyltoluene (total)											0.10	---
2-Hexanone*											1000	68,000
<b>Methylene Chloride</b>	<b>0.87</b>			<b>1.92</b>		1.97		< 1.76	1.96	15	2.10	14,000
4-Methyl-2-Pentanone*											3,000	31,000
Styrene											1,000	17,000
1,1,2,2-Tetrachloroethane			0.87			1.87					16	---
<b>Tetrachloroethene</b>	<b>6.37</b>	<b>1.34</b>	<b>2.03</b>	<b>10.58</b>	<b>3.85</b>	<b>15.78</b>	<b>27.32</b>	<b>&lt; 44.56</b>	<b>58.82</b>		1.00	1,000
Toluene									0.69		5,000	37,000
1,1,1-Trichloroethane									1.76		1,000	68,000
1,1,2-Trichloroethane						0.89	1.95	< 2.25			1.40	---
<b>Trichloroethene</b>									<b>4.90</b>		0.50	14,000
Trichlorofluoromethane	3.09	3.06	2.89	4.04	3.18	7.79	6.54	6.86	7.84		1,000	68,000
Vinyl Chloride											0.11	180,000
Xylenes (Total)											100	4,300
Decane**											700	---

TABLE 4.2  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
THIRD QUARTER 2008

SOIL GAS WELL ID	F1	M2	M4	M5	M6	M9(10)	M9(20)	M9(30)	M9(40)	FBI	Current AGC (µg/m <sup>3</sup> )	Current SGC (µg/m <sup>3</sup> )
ADDITIONAL TIC LQI	2.41	2.39	2.41	2.40	2.41	2.47	2.44	4.90	2.45	25		
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)										
Straight-Chain Alkane (DEL)												
Branched Alkane (DEL)												
2-Methyl-butane											42,000	
Ethane, 1,1-difluoro-											40,000	
Ethane, 1,1-dichloro-1,2,2,2-tetrafluoro								< 5.48				
Hexane											700	
alpha-Pinene isomer (RT - 12.04)											270	
Dichlorodifluoromethane			3.95	13.46	12.51	9.86	21.46	27.23	24.51		12,000	
1,1-Dichloro-1-fluoroethane	32.82					2.66	3.32					
Undecane												
Unknown silane (RT: 13.95)	4.05					3.25						
Unknown (RT: 1.64-15.45)	3.09	2.48	2.51			6.02	5.85					
Dichlorotetrafluoroethane				259.62	48.12	24.65	82.93	< 110.19	127.45		17,000	
2-Methyl-Hexane	2.41					4.14						
Cyclotrisiloxane, hexamethyl-							3.32					
Octanal				2.88								
Propene												
Chlorodifluoromethane + dichlorodifluoromethane	8.30	5.64									3,000	
Ethene, 1-chloro-1-fluoro	6.95										12,000	

TABLE 4.2  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
THIRD QUARTER 2008

SOIL GAS WELL ID	M13	M16	M21	M22	M28	M31	M34	M37	M39	FB2	Current AGC	Current SGC
LOWER QUANTITATION LIMIT (LQL)	0.482	0.496	-	0.493	0.486	0.482	0.481	0.479	0.976	5		
PRACTICAL QUANTITATION LIMIT (PQL)	0.771	0.793	-	0.788	0.778	0.77	0.770	0.767	1.561	8		
TARGETED TIC LQL	2.41	2.48	-	2.46	2.43	2.41	2.41	2.40	4.88	25		
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )								
Acetone*	2.41	3.07		1.87							28,000	180,000
Benzaldehyde**											0.10	---
Benzene											0.13	1300
Bromodichloromethane											0.02	---
Bromoform*											0.91	---
Bromomethane											5.00	3900
2-Butanone*									< 1.85		5000	13,000
Carbon Disulfide											700	6200
Carbon Tetrachloride											0.067	1,900
Chlorobenzene											110	---
Chloroethane											10,000	---
Chloroethyl Vinyl Ether**											0.10	---
<b>Chloroform</b>	<b>3.47</b>	<b>3.27</b>				<b>1.06</b>		<b>0.77</b>	<b>&lt; 1.85</b>		0.043	150
Chloromethane											90.0	22,000
Dibromochloromethane											0.10	---
1,2-Dichlorobenzene (o)											360	30,000
1,3-Dichlorobenzene (m)											360	30,000
1,4-Dichlorobenzene (p)											0.09	---
<b>1,1-Dichloroethane</b>	<b>0.96</b>										0.63	---
1,2-Dichloroethane											0.038	---
1,1-Dichloroethene											70.00	---
cis-1,2-Dichloroethene											63	---
trans-1,2-Dichloroethene											63	---
1,2-Dichloropropane											4.00	---
1,3-Dichloropropene, cis & trans isomers											0.25	---
Ethylbenzene											1,000	54,000
2/4-Ethyltoluene (total)											0.10	---
2-Hexanone*											1000	68,000
<b>Methylene Chloride</b>	<b>3.95</b>			<b>2.66</b>	1.56		<b>4.14</b>	<b>3.26</b>		17	2.10	14,000
4-Methyl-2-Pentanone*											3,000	31,000
Styrene											1,000	17,000
1,1,1,2,2-Tetrachloroethane											16	---
<b>Tetrachloroethene</b>	<b>19.29</b>	<b>15.86</b>		0.59			0.96	0.77	<b>&lt; 39.51</b>		1.00	1,000
Toluene							1.25	1.05			5000	37,000
1,1,1-Trichloroethane											1,000	68,000
1,1,2-Trichloroethane	3.47							0.86			1.40	---
<b>Trichloroethene</b>	<b>0.68</b>										0.50	14,000
Trichlorofluoromethane	4.05	4.36		2.27	1.36	1.06	1.73	13.42	< 2.73		1000	68,000
Vinyl Chloride											0.11	180,000
Xylenes (Total)											100	4,300
Decane**											700	---

**TABLE 4.2  
(Concluded)**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**SOIL GAS VOST SAMPLE RESULTS  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
THIRD QUARTER 2008**

SOIL GAS WELL ID	M13	M16	M21	M22	M28	M31	M34	M37	M39	FB2	Current AGC (µg/m <sup>3</sup> )	Current SGC (µg/m <sup>3</sup> )
ADDITIONAL TIC LQI	2.41	2.48	-	2.46	2.43	2.41	2.41	2.40	4.88	25		
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )								
Straight-Chain Alkane (DEL)				3.35			5.49					
Branched Alkane (DEL)						2.89	5.39	8.15				
2-Methyl-butane							10.55				42,000	
Ethane, 1,1-difluoro-								15.34			40,000	
Ethane, 1,1-dichloro-1,2,2,2-tetrafluoro												
Hexane							3.85				700	
alpha-Pinene isomer (RT - 12.04)									< 27.80		270	
Dichlorodifluoromethane	4.63	4.66									12,000	
1,1-Dichloro-1-fluoroethane	5.59					76.11		21.09				
Undecane												
Unknown silane (RT: 13.95)							3.56	2.59	< 6.05			
Unknown (RT: 1.64-15.45)	7.71				3.31	5.01			< 10.83			
Dichlorotetrafluoroethane											17,000	
2-Methyl-Hexane												
Cyclotrisiloxane, hexamethyl-					9.66				< 20.98			
Octanal												
Propene												
Chlorodifluoromethane + dichlorodifluoromethane								19.18			3,000	
Ethene, 1-chloro-1-fluoro						4.82			< 6.54		12,000	

Notes:

- \* An 8 nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.
- \*\* Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.
- All values are reported in micrograms per standard cubic meter (µg/std-m<sup>3</sup>).
- Blank values:
- Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.
- Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.
- Values in shaded areas are at or exceed the level of the current (last revised September 2007 and still current as of December 2008) and/or previous ambient air Annual Guideline Concentration (AGC) values.
- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.
- Freon 13 is listed as Chlorotrifluoromethane in the Analytical Results, Appendix C.
- (µg/std-m<sup>3</sup>): micrograms per standard cubic meter
- (ng): nanograms

TABLE 4.2

TOWN OF OYSTER BAY  
 OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
 FOURTH QUARTER 2008

SOIL GAS WELL ID	F1	M2	M4	M5	M6	M9(10)	M9(20)	M9(30)	M9(40)	FBI	Current AGC	Current SGC
LOWER QUANTITATION LIMIT (LQL)	0.484	0.471	0.455	0.523	0.493	0.491	0.499	0.995	0.498	5	---	---
PRACTICAL QUANTITATION LIMIT (PQL)	0.774	0.754	0.727	0.837	0.788	0.785	0.798	1.592	0.80	8	---	---
TARGETED TIC LQL	2.42	2.36	2.27	2.62	2.46	2.45	2.50	4.98	2.49	25	---	---
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )								
Acetone*	29.98	2.45	0.73	1.88	1.48	2.06	1.60	1.59	1.59	20	28,000	180,000
Benzaldehyde**											0.10	---
Benzene											0.13	1300
Bromodichloromethane											0.02	---
<b>Bromoform*</b>								< 1.79			0.91	---
Bromomethane											5.00	3900
2-Butanone*								< 4.98		15	5000	13,000
Carbon Disulfide											700	6200
Carbon Tetrachloride											0.067	1,900
Chlorobenzene											110	---
Chloroethane											10,000	---
Chloroethyl Vinyl Ether**											0.10	---
<b>Chloroform</b>						0.69	1.10	< 1.49	0.70		0.043	150
Chloromethane											90.0	22,000
Dibromochloromethane											0.10	---
1,2-Dichlorobenzene (o)											360	30,000
1,3-Dichlorobenzene (m)											360	30,000
<b>1,4-Dichlorobenzene (p)</b>											0.09	---
1,1-Dichloroethane		0.94									0.63	---
1,2-Dichloroethane											0.038	---
1,1-Dichloroethene											70,000	---
cis-1,2-Dichloroethene											63	---
trans-1,2-Dichloroethene											63	---
1,2-Dichloropropane											4.00	---
1,3-Dichloropropene, cis & trans isomers											0.25	---
Ethylbenzene											1,000	54,000
2/4-Ethyltoluene (total)											0.10	---
Freon 13**											1000	68,000
2-Hexanone*										14	48.0	4000
<b>Methylene Chloride</b>	18.38	12.25	1.82	1.78	0.69	1.18	1.90	3.18	0.90	9	2.10	14,000
4-Methyl-2-Pentanone*								< 3.38		18	3,000	31,000
Styrene											1,000	17,000
1,1,2,2-Tetrachloroethane								< 2.09		10	16	---
<b>Tetrachloroethene</b>						8.73	17.96	< 33.33	63.75		1.00	1,000
Toluene		0.75									5,000	37,000
1,1,1-Trichloroethane		1.23					1.10	< 1.69	1.59		1,000	68,000
1,1,2-Trichloroethane											1.40	---
<b>Trichloroethene</b>							1.00	< 3.48	5.48		0.50	14,000
Trichlorofluoromethane	21.28	1.41	1.36	1.46	1.48	4.12	4.19	4.78	5.78		1,000	68,000
Vinyl Chloride											0.11	180,000
Xylenes (Total)											100	4,300
Decane**											700	---

TABLE 4.2  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
FOURTH QUARTER 2008

SOIL GAS WELL ID	F1	M2	M4	M5	M6	M9(10)	M9(20)	M9(30)	M9(40)	FBI	Current AGC (µg/m <sup>3</sup> )	Current SGC (µg/m <sup>3</sup> )
ADDITIONAL TIC LQI	2.42	2.36	2.27	2.62	2.46	2.45	2.50	4.98	2.49	25	42,000	350,000
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )								
2-Methyl-pentane		3.68									4,200	1,300
C3 subst. Benzene											0.13	1,300
2-Methyl-butane											42,000	---
Ethane, 1,1-difluoro-											40,000	---
Hexane		7.35									700	---
Unknown siloxane (RT: 13.95-13.97)	4.93					5.40					---	---
alpha-Pinene isomer (RT: 12.02)											270	---
Isobutane											57,000	---
Dichlorodifluoromethane	41.59	4.15	4.91	4.08	4.73	7.16	16.97	33.13	32.87		12,000	---
1,1-Dichloro-1-fluoroethane	93.81							<	3.98		---	---
Dodecane		9.43									---	---
Unknown (RT: 1.33-14.55)		4.81					2.50				---	---
Dichlorotetrafluoroethane					18.72	23.55	71.86	152.74	159.36		17,000	---
Ethane, 1,1,2-trichloro-1,2-trifluoro-									5.88		180,000	960,000
branched alkane	10.93	3.39									---	---
Butane											57,000	---
Bicyclo(2,2,1)heptane, dimethyl isomer											---	---
Limonene Isomer		3.49									---	---
_beta_-Myrcene											3,400	---
Santolima triene											3,000	---
Ethene, 1-chloro-1-fluoro	25.15										25,000	---

TABLE 4.2  
(Continued)

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS  
FOURTH QUARTER 2008

SOIL GAS WELL ID	M13	M16	M21	M22	M28	M31	M34	M37	M39	FB2	Current AGC	Current SGC
LOWER QUANTITATION LIMIT (LQL)	0.463	0.502	-	0.521	0.501	0.499	0.499	0.498	0.996	5		
PRACTICAL QUANTITATION LIMIT (PQL)	0.741	0.803	-	0.834	0.802	0.80	0.798	0.797	1.594	8		
TARGETED TIC LQL	2.32	2.51	-	2.61	2.51	2.50	2.50	2.49	4.98	25		
VOC COMPOUND NAME	(µg/std-m <sup>3</sup> )	(ng)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )								
Acetone*	0.74	2.51		2.19	2.00	4.89	3.39	1.79	5.78	9	28,000	180,000
Benzaldehyde**											0.10	---
<b>Benzene</b>				<b>0.63</b>			<b>1.10</b>				0.13	1300
Bromodichloromethane											0.02	---
Bromoform*											0.91	---
Bromomethane											5,000	39,000
2-Butanone*											5,000	13,000
Carbon Disulfide											700	6,200
<b>Carbon Tetrachloride</b>				<b>0.73</b>	<b>0.60</b>		<b>0.60</b>	<b>0.60</b>	<b>&lt; 1.10</b>		0.067	1,900
Chlorobenzene											110	---
Chloroethane											10,000	---
Chloroethyl Vinyl Ether**											0.10	---
<b>Chloroform</b>	<b>0.93</b>			<b>0.63</b>							0.043	150
Chloromethane							0.80				90.0	22,000
Dibromochloromethane											0.10	---
1,2-Dichlorobenzene (o)											360	30,000
1,3-Dichlorobenzene (m)											360	30,000
1,4-Dichlorobenzene (p)											0.09	---
1,1-Dichloroethane											0.63	---
1,2-Dichloroethane											0.038	---
1,1-Dichloroethene											70.00	---
cis-1,2-Dichloroethene											63	---
trans-1,2-Dichloroethene											63	---
1,2-Dichloropropane											4.00	---
1,3-Dichloropropene, cis & trans isomers											0.25	---
Ethylbenzene											1,000	54,000
2/4-Ethyltoluene (total)											0.10	---
Freon 13**											1,000	68,000
2-Hexanone*											48.0	4,000
<b>Methylene Chloride</b>	1.02	1.00		1.56	1.30	0.90	1.60	1.79	<b>5.28</b>	8	2.10	14,000
4-Methyl-2-Pentanone*											3,000	31,000
Styrene											1,000	17,000
1,1,2,2-Tetrachloroethane											16	---
<b>Tetrachloroethene</b>	<b>4.54</b>	<b>3.11</b>							<b>&lt; 15.44</b>		1.00	1,000
Toluene				0.73			2.00				5,000	37,000
1,1,1-Trichloroethane											1,000	68,000
1,1,2-Trichloroethane											1.40	---
Trichloroethene											0.50	14,000
Trichlorofluoromethane	1.85	2.91		1.77	1.60	1.40	1.50	1.59	<b>&lt; 1.99</b>		1,000	68,000
Vinyl Chloride											0.11	180,000
Xylenes (Total)											100	4,300
Decane**											700	---

**TABLE 4.2  
(Concluded)**

TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**SOIL GAS VOST SAMPLE RESULTS  
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS  
FOURTH QUARTER 2008**

SOIL GAS WELL ID	M13	M16	M21	M22	M28	M31	M34	M37	M39	PB2	Current AGC (µg/m <sup>3</sup> )	Current SGC (µg/m <sup>3</sup> )
ADDITIONAL TIC LQL VOC COMPOUND NAME	2.32 (µg/std-m <sup>3</sup> )	2.51 (µg/std-m <sup>3</sup> )	- (µg/std-m <sup>3</sup> )	2.61 (µg/std-m <sup>3</sup> )	2.51 (µg/std-m <sup>3</sup> )	2.50 (µg/std-m <sup>3</sup> )	2.50 (µg/std-m <sup>3</sup> )	2.49 (µg/std-m <sup>3</sup> )	4.98 (µg/std-m <sup>3</sup> )	25 (ng)	4,200	350,000
2-Methyl-pentane							2.59				0.13	1,300
C3 subst. Benzene											42,000	---
2-Methyl-butane				6.67	2.81		3.29	3.19			40,000	---
Ethane, 1,1-difluoro-								7.27			700	---
Hexane								5.88			---	---
Unknown siloxane (RT: 13.95-13.97)									< 9.66		270	---
alpha-Pinene isomer (RT: 12.02)				4.17			2.79				57,000	---
Isobutane	4.36	13.05									12,000	---
Dichlorodifluoromethane						4.89					---	---
1,1-Dichloro-1-fluoroethane				3.02				5.18			---	---
Dodecane											---	---
Unknown (RT: 1.33-14.55)				8.34			4.99				---	---
Dichlorotetrafluoroethane											---	---
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-											17,000	---
branched alkane											180,000	960,000
Butane				6.99	2.81		3.39	3.98			---	---
Bicyclo(2,2,1)heptane, dimethyl isomer									< 6.27		---	---
Limonene Isomer											3,400	---
beta_-Myrcene											3,000	---
Santolina triene											25,000	---
Ethene, 1-chloro-1-fluoro								5.68			---	---

Notes:

- \* An 8 nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.
- \*\* Targeted Tentatively Identified Compound (TIC). As reported by the laboratory. Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.
- All values are reported in micrograms per standard cubic meter (µg/std-m<sup>3</sup>).
- Blank values:
- Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.
- Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where less than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.
- Values in shaded areas are at or exceed the level of the current (last revised September 2007 and still current as of February 2009) and/or previous ambient air Annual Guideline Concentration (AGC) values.
- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.
- Freon 13 is listed as Chlorotrifluoromethane in the Analytical Results, Appendix C.
- (µg/std-m<sup>3</sup>): micrograms per standard cubic meter
- (ng): nanograms

**APPENDIX C**

**TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX  
EVALUATION OF VOLATILE ORGANIC COMPOUNDS IN  
AMBIENT AIR, SOILS AND SOIL GAS PRESSURE READINGS**

**2008 ANNUAL SUMMARY REPORT**

**2008 QUARTERLY SOIL GAS PRESSURE WELL DATA**

**TABLE 5.1****TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX****SUMMARY OF SOIL GAS PRESSURE TESTS****FIRST QUARTER 2008**

SAMPLE ID	DATE (mm/dd/yy)	TIME (EDT)	WELL ID	WELL LOCATION	WELL DEPTH (feet)	READINGS (INCHES H2O)
P1	03/26/08	4:04 PM	PW1	NW corner of the landfill on Haul Road	10	0.00
P2	03/26/08	4:04 PM	PW1	NW corner of the landfill on Haul Road	20	0.00
P3	03/26/08	4:06 PM	PW1	NW corner of the landfill on Haul Road	10	0.00
P4	03/26/08	4:06 PM	PW1	NW corner of the landfill on Haul Road	20	0.00
P5	03/26/08	3:54 PM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P6	03/26/08	3:54 PM	PW2	SE corner of the landfill NW of Well M2	20	-0.01
P7	03/26/08	3:55 PM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P8	03/26/08	3:55 PM	PW2	SE corner of the landfill NW of Well M2	20	-0.01
P9	03/26/08	4:16 PM	PW3	Fireman's Training Center	10	0.00
P10	03/26/08	4:16 PM	PW3	Fireman's Training Center	20	0.025
P11	03/26/08	4:18 PM	PW3	Fireman's Training Center	10	0.00
P12	03/26/08	4:18 PM	PW3	Fireman's Training Center	20	0.01

## NOTES:

- Measurements taken using a ten inch Dwyer inclined manometer.
- Leak checks were performed on manometer before testing each well.

**TABLE 5.1****TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX****SUMMARY OF SOIL GAS PRESSURE TESTS****SECOND QUARTER 2008**

SAMPLE ID	DATE (mm/dd/yy)	TIME (EDT)	WELL ID	WELL LOCATION	WELL DEPTH (feet)	READINGS (INCHES H2O)
P1	05/30/08	8:47 AM	PW1	NW corner of the landfill on Haul Road	10	0.00
P2	05/30/08	8:47 AM	PW1	NW corner of the landfill on Haul Road	20	0.00
P3	05/30/08	8:48 AM	PW1	NW corner of the landfill on Haul Road	10	0.00
P4	05/30/08	8:48 AM	PW1	NW corner of the landfill on Haul Road	20	0.00
P5	05/30/08	8:34 AM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P6	05/30/08	8:34 AM	PW2	SE corner of the landfill NW of Well M2	20	-0.11
P7	05/30/08	8:35 AM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P8	05/30/08	8:35 AM	PW2	SE corner of the landfill NW of Well M2	20	-0.11
P9	05/30/08	8:22 AM	PW3	Nassau County Fire Service Academy	10	0.00
P10	05/30/08	8:22 AM	PW3	Nassau County Fire Service Academy	20	-0.14
P11	05/30/08	8:23 AM	PW3	Nassau County Fire Service Academy	10	0.00
P12	05/30/08	8:23 AM	PW3	Nassau County Fire Service Academy	20	-0.14

## NOTES:

- Measurements taken using a ten inch Dwyer inclined manometer.
- Leak checks were performed on manometer before testing each well.

**TABLE 5.1**

TOWN OF OYSTER BAY  
 OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

**SUMMARY OF SOIL GAS PRESSURE TESTS**

**THIRD QUARTER 2008**

SAMPLE ID	DATE (mm/dd/yy)	TIME (EDT)	WELL ID	WELL LOCATION	WELL DEPTH (feet)	READINGS (INCHES H2O)
P1	10/09/08	12:10 PM	PW1	NW corner of the landfill on Haul Road	10	0.00
P2	10/09/08	12:10 PM	PW1	NW corner of the landfill on Haul Road	20	0.00
P3	10/09/08	12:11 PM	PW1	NW corner of the landfill on Haul Road	10	0.00
P4	10/09/08	12:11 PM	PW1	NW corner of the landfill on Haul Road	20	0.00
P5	10/09/08	12:00 PM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P6	10/09/08	12:00 PM	PW2	SE corner of the landfill NW of Well M2	20	0.05
P7	10/09/08	12:01 PM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P8	10/09/08	12:01 PM	PW2	SE corner of the landfill NW of Well M2	20	0.05
P9	10/09/08	11:50 AM	PW3	Nassau County Fire Service Academy	10	0.02
P10	10/09/08	11:50 AM	PW3	Nassau County Fire Service Academy	20	0.06
P11	10/09/08	11:52 AM	PW3	Nassau County Fire Service Academy	10	0.03
P12	10/09/08	11:52 AM	PW3	Nassau County Fire Service Academy	20	0.07

NOTES:

- Measurements taken using a ten inch Dwyer inclined manometer.
- Leak checks were performed on manometer before testing each well.

**TABLE 5.1****TOWN OF OYSTER BAY  
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX****SUMMARY OF SOIL GAS PRESSURE TESTS****FOURTH QUARTER 2008**

SAMPLE ID	DATE (mm/dd/yy)	TIME (EDT)	WELL ID	WELL LOCATION	WELL DEPTH (feet)	READINGS (INCHES H2O)
P1	12/04/08	7:52 AM	PW1	NW corner of the landfill on Haul Road	10	0.00
P2	12/04/08	7:52 AM	PW1	NW corner of the landfill on Haul Road	20	0.03
P3	12/04/08	7:53 AM	PW1	NW corner of the landfill on Haul Road	10	0.00
P4	12/04/08	7:53 AM	PW1	NW corner of the landfill on Haul Road	20	0.03
P5	12/04/08	7:43 AM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P6	12/04/08	7:43 AM	PW2	SE corner of the landfill NW of Well M2	20	0.03
P7	12/04/08	7:44 AM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P8	12/04/08	7:44 AM	PW2	SE corner of the landfill NW of Well M2	20	0.03
P9	12/04/08	8:05 AM	PW3	Nassau County Fire Service Academy	10	0.00
P10	12/04/08	8:05 AM	PW3	Nassau County Fire Service Academy	20	0.06
P11	12/04/08	8:06 AM	PW3	Nassau County Fire Service Academy	10	0.00
P12	12/04/08	8:06 AM	PW3	Nassau County Fire Service Academy	20	0.08

## NOTES:

- Measurements taken using a ten inch Dwyer inclined manometer.
- Leak checks were performed on manometer before testing each well.