

## **Preliminary Soil Vapor Investigation Summary Report**

### **Vapor Intrusion Evaluation of the Bedford Village Wells Shopping Arcade Remedial Site**

**NYSDEC Site ID # 03-60-006**

**Village of Bedford  
Westchester County**

**NYSDEC Project Manager: Hoffman**

**NYSDOH Project Manager: Obermeyer**

**November 2006**

NYSDEC field investigations conducted to determine if there is soil vapor contamination at the site and to determine the extent to which these contaminants pose a threat to human health and the environment.

Soil gas investigations performed in accordance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

## **Table of Contents**

- 1.0 Executive Summary
- 2.0 Site Background and Status
- 3.0 Summary of Soil Vapor Investigation
- 4.0 Summary of Findings
- 5.0 Recommendations and Conclusions

## **Tables**

- Table 1 Field Sampling Information
- Table 2 Summary of Detected Constituents - Groundwater Analytical Data
- Table 3 Summary of Detected Constituents - Soil Vapor Analytical Data

## **Figures**

- Figure 1 Groundwater Results - Shallow Wells
- Figure 2 Groundwater Results - Intermediate and Deep Wells
- Figure 3 Soil Vapor Results - Chlorinated Volatile and BTEX Compounds
- Figure 4 Soil Vapor Results - Additional Detected Compounds

## **Attachments**

- Attachment 1 Comprehensive Groundwater Analytical Results
- Attachment 2 Comprehensive Soil Vapor Analytical Results

## **1.0 Executive Summary**

A preliminary soil vapor investigation was conducted at the Bedford Village Wells - Shopping Arcade Remedial Site, New York State Department of Environmental Conservation (NYSDEC) Site ID # 03-60-006, located in the Town of Bedford, Westchester County, New York in November 2005. A total of twenty temporary and permanent groundwater monitoring wells and four soil vapor samples were collected from the vicinity of the site. Based on the information developed during this preliminary investigation, the NYSDEC, in consultation with the New York State Department of Health (NYSDOH), has determined that further investigation of the site and the surrounding area to address potential vapor intrusion exposures is not warranted.

## **2.0 Site Background and Status**

Although the soil vapor pathway has been historically evaluated at New York State sites, improvements in analytical techniques and knowledge gained from sites in New York and in other states has lead to a more complete understanding of soil vapor as an environmental media of concern. Based on this additional information, New York has re-evaluated previous assumptions and decisions regarding the potential for vapor intrusion at sites. To this effort, the State has conducted a limited soil vapor investigation at the Bedford Village Wells - Shopping Arcade Remedial Site # 03-60-006 (the Site) to evaluate the vapor intrusion pathway. The Site is currently listed as a Class 4, indicating that it is properly closed but requires continued monitoring. Residential and business drinking water wells located in the vicinity of the Site which were determined to be contaminated (concentrations above applicable New York State standards) have been connected to a public water supply.

### 2.1 Site Description

The Shopping Arcade Remedial Site #03-60-006 is located in an commercial and historic area of the Hamlet of Bedford Village, Westchester County, New York. The site is bordered by Old Post Road and commercial/retail buildings to the east and southeast, a gas station directly to the south, Old Post Road and a theater building to the northeast, Tarleton Road to the northwest, and a wooded area to the southwest. The main site features include a strip mall with single story buildings and a parking lot. The site is currently being utilized by multiple tenants for commercial/retail purposes. The surrounding parcels are currently used for a combination of residential, commercial and community purposes.

In 1979, because of suspected releases of chemical contamination from the dry cleaning establishments, a study was conducted in Bedford Village by the Westchester County Department of Health (WCDH). The study included the collection of drinking water samples from several private wells in the vicinity of Shopping Arcade dry cleaner. The analysis of the samples identified contaminated groundwater located in the Village Green area immediately downgradient of the Arcade. Parameters detected in the groundwater

included solvent compounds typically associated with dry cleaners including: tetrachloroethene (PCE) and associated breakdown compounds trichloroethene (TCE) and 1,2-dichloroethene (DCE). The Arcade dry cleaning establishment was identified as the source of waste at the Shopping Arcade Site.

In order to characterize and evaluate the appropriate cleanup method for the Site, several investigations including a Remedial Investigation and Feasibility Study (RI/FS) (1990), a Record of Decision (1990), and an amended Record of Decision (2002) were conducted for the Site.

## 2.2 Site Record of Decision (ROD)

The March 1990 ROD called for the following remedies: (1) On-Site treatment of contaminated groundwater by air stripping and reinjection of treated groundwater in the aquifer of withdrawal; (2) Long-term groundwater monitoring; (3) Implementation of site specific monitoring and evaluation plan of the Mianus River; (4) Installation of Point of Entry carbon filters for affected commercial/residence users until a new water supply is implemented; and (5) Development of new community water supply for affected properties.

The March 2002 Amended ROD summarized the completed actions for the Site and detailed the amended remedies. Since the March 1990 ROD, a public drinking water supply was constructed and impacted commercial and residential properties were connected to the drinking water supply. Properties in the vicinity of the affected area that continue to utilize private wells are tested periodically by the WCDH for site-related contamination. If any of these properties are found to be contaminated with site-related compounds above drinking water standards, they are connected to the public water supply. The Amended ROD discussed the following remedial approaches for the Site: (1) Due to the limited aerial extent and residual nature of the groundwater contamination, the in-situ groundwater remediation was omitted; (2) the Site was reclassified to Class 4; and (3) the long-term monitoring program was proposed to include four monitoring wells which are to be sampled on a semiannual basis for five years and subsequent annual monitoring of the four wells until they achieve groundwater standards for site-related contaminants.

The public health concern associated with the Site is the use of water from contaminated wells. Under the original ROD, properties impacted by the groundwater contamination (concentrations above New York State drinking water standards) were provided public water. Treatment to remove VOCs has been added to the public supply wells to ensure that site-related contaminants do not affect the community.

## 2.3 Site Geology and Groundwater Flow

The overburden geology is comprised of sorted, fine-coarse sands and silts typical of glacial outwash. The bedrock is identified as gneissic bedrock and depth to bedrock in the vicinity of the site ranges from approximately 5 feet to 80 feet below grade surface.

Local groundwater flow in the overburden in the vicinity of the Site is encountered less than 11 feet below grade surface, and according to historic documentation generally flows horizontally in a northeasterly direction towards the central Bedford Village area. Groundwater also migrates downward from the overburden and recharges the bedrock. Groundwater within the bedrock flows horizontally east-northeasterly direction. Surface water flow is also generally towards the northeast direction towards the Mianus River and travels overland through a series of small streams and ponds and/or the storm sewer system.

## **3.0 Summary of Soil Vapor Investigation**

A total of four (4) shallow soil vapor samples were collected from the vicinity of the Bedford Village Wells - Shopping Arcade Site # 360006 (the site). The shallow soil vapor samples were collected from a depth approximately one foot above the site groundwater table. Due to the shallow groundwater levels at the site, no deep soil vapor samples were collected as part of the investigation and no soil vapor sample was unable to be collected in the vicinity of MW-6M as proposed due to shallow groundwater which was encountered at 2 feet below grade surface. The soil vapor samples were collected from temporary soil vapor points installed via geoprobe push technology. The soil vapor points were constructed using 6-inch sampling screen attached to dedicated laboratory grade polyethylene tubing. The borehole was backfilled with filter sand to a minimum of 6 inches above the sampling screen and backfilled with bentonite to the ground surface. A minimum of 24 hours was provided to allow the bentonite to sufficiently hydrate prior to sampling. Helium Tracer gas was used at each soil vapor sample location to verify the integrity of the bentonite seal between the ground surface and the borehole sampling point. The soil vapor samples were collected over a 2 hour period into 1 liter summa canisters and were submitted to Centek Laboratories of Syracuse, New York, for analysis of Volatile Organic Compounds (VOCs) by EPA Method TO-15.

A total of 19 permanent and one (1) temporary monitoring wells were sampled as part of the investigation. Four (4) shallow overburden monitor wells were specifically sampled in the vicinity of the temporary soil vapor points in order to simultaneously evaluate the groundwater and soil vapor quality. The four monitor wells included three (3) permanent and one (1) temporary shallow overburden monitoring wells. The permanent overburden monitoring wells included monitoring wells MW-8M, MW-5S and MW-3M, sampled in the vicinity of temporary soil vapor points V-1S, V-2S, and V-4S, respectively. The temporary monitoring well 360006-GW-1 was sampled in the vicinity of V-3S.

The remaining 16 monitor wells, which included nine (9) shallow, one (1) intermediate, and six

(6) bedrock monitoring wells, were sampled as part of the bi-annual groundwater monitoring performed as part of the existing NYSDEC work assignment for the site. Consistent with the previous groundwater sampling and analysis under the existing NYSDEC work assignment, the groundwater samples were submitted to Chemtech Laboratories for analysis of Volatile Organic Compounds (VOCs) via EPA Method 624 and/or 525.2.

Refer to Table 1 for additional field sampling information regarding the soil vapor investigation.

## **4.0 Summary of Findings**

### *4.1 Groundwater Findings*

The groundwater sampling results are presented below according to the sampled groundwater interval: shallow overburden, intermediate overburden and bedrock. Refer to Table 2 and Figures 1 and 2 for a summary of the detected groundwater constituents.

#### *4.1.1 Shallow Monitoring Wells*

A total of 13 shallow overburden groundwater monitoring wells (total well depth less than 27 feet below grade surface) were sampled in the vicinity of the site. Of the four (4) shallow overburden wells (MW-8M, MW-5S, 360006-GW-1, and MW-3M) sampled in the vicinity of the temporary soil vapor points (V-1S, V-2S, V-3S, and V-4S, respectively), only 360006-GW-1 and MW-3M revealed detectable VOC concentrations. Specifically, acetone was detected in shallow monitoring well 360009-GW-1 at 31 micrograms per liter (ug/l) and chloroform and tetrachloroethene (PCE) were detected in MW-3M at 0.89 J ug/l and 16 ug/l, respectively. Trichloroethene (TCE) and toluene were not detected in any of the four (4) shallow overburden groundwater samples collected as part of the soil vapor investigation.

The additional nine (9) shallow overburden monitor wells sampled in the vicinity of the site included revealed detectable concentrations of various VOCs including MTBE, Benzene and PCE. A majority of the VOCs in shallow monitoring wells were detected in GS-11, which associated with a suspected gasoline spill. Monitoring well GS-11 had detectable concentrations of MTBE (160 ug/l), Cyclohexane (320 E ug/l), Methylcyclohexane (110 ug/l), Benzene (130 ug/l), Toluene (9.7 ug/l), m/p-xylanes (38 ug/l), and o-xylene (170 ug/l). MTBE, PCE and 1,4-dichlorobenzene were also detected in other shallow monitoring wells at 60 ug/l (GS-12), 7.7 ug/l (MW-4S), and 0.92 J (GS-10), respectively.

#### 4.1.2 Intermediate Monitoring Wells

One (1) intermediate overburden monitoring well, designated as MW-6M was sampled in the vicinity of the site and revealed a detectable concentrations of MTBE (1.6 J ug/l) and cis-1,2-dichloroethene (0.83 J ug/l). No other VOCs were detected within the intermediate overburden monitoring well.

#### 4.1.3 Bedrock Monitoring Well

A total of six (6) bedrock monitoring wells were sampled in the vicinity of the site. The bedrock monitor wells sampled in the vicinity of the site revealed detectable concentrations of Methylene Chloride (MC), cis-1,2-dichloroethene, TCE, toluene, and PCE. MC was detected in MW-5B at 0.7 JB ug/l ( Note: "B" indicates that MC was also detected in the Trip Blank sample). Cis-1,2-dichloroethene was detected in three (3) bedrock wells at concentrations ranging from 0.4 J ug/l (MW-5B) to 7.2 ug/l (MW-4B). TCE was detected in MW-4B and MW-5B at 13 ug/l and 0.4 J ug/l. Toluene was detected in MW-1B at 12 ug/l. PCE was detected in three (3) bedrock wells at concentrations ranging from 3.1 ug/l (MW-5B) to 16 ug/l (MW-4B).

### 4.2 Soil Vapor Findings

Four (4) shallow soil vapor samples were collected as part of the investigation in the vicinity of the Site. Tetrachloroethylene (PCE) was detected in two (2) of the four (4) shallow soil vapor sample locations at concentrations ranging from 3.1 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) (V-1S) (although V-1S DUPE was non-detect at  $1 \mu\text{g}/\text{m}^3$ ) to 3.9 J  $\mu\text{g}/\text{m}^3$  (V-2S). Trichloroethene (TCE) was detected in three (3) shallow soil vapor sample locations at concentrations ranging from 0.55 J  $\mu\text{g}/\text{m}^3$  (V-1S and V-1S DUPE) to 1 J  $\mu\text{g}/\text{m}^3$  (V-2S). Toluene was detected in all four (4) soil vapor sample locations at concentrations ranging from 4.7  $\mu\text{g}/\text{m}^3$  (V-4S) to 51 J  $\mu\text{g}/\text{m}^3$  (V-2S). Other constituents detected at concentrations greater than 5  $\mu\text{g}/\text{m}^3$  include chloroform, hexane, methylene chloride (MC) and m-xylene. Chloroform was detected at concentrations ranging from 1.6  $\mu\text{g}/\text{m}^3$  (V-3S) to 20  $\mu\text{g}/\text{m}^3$  (V-1S). Hexane was detected at concentrations ranging from 3.6  $\mu\text{g}/\text{m}^3$  (V-4S) and 42 J  $\mu\text{g}/\text{m}^3$  (V-2S). MC was detected at concentrations ranging from 2 J  $\mu\text{g}/\text{m}^3$  (V-2S) to 22 J  $\mu\text{g}/\text{m}^3$  (V-3S). M-xylene was detected at concentrations ranging from 2 J  $\mu\text{g}/\text{m}^3$  (V-4S) to 6.4 J  $\mu\text{g}/\text{m}^3$  (V-1S DUPE). Several other VOCs were detected in the soil vapor samples at low concentrations (less than 5  $\mu\text{g}/\text{m}^3$ ). MTBE was not detected in any of the soil vapor samples. Refer to Table 3 and Figures 3 and 4 for a summary of the detected soil vapor constituents.

## **5.0 Recommendations and Conclusions**

The Shopping Arcade Remedial Site #03-60-006 is located in an commercial and historic area of the Hamlet of Bedford Village, Westchester County, New York. The site is bordered by Old Post Road (Route 22) and commercial/retail buildings to the east and southeast, a gas station directly to the south, Old Post Road (Route 22) and a theater building to the northeast, Tarleton Road to the northwest, and a wooded area to the southwest. The main site features include a strip mall with single story buildings and a parking lot. The site is currently being utilized by multiple tenants for commercial/retail purposes. The surrounding parcels are currently used for a combination of residential, commercial and community purposes.

Based on the location of the original source area and the distribution of the soil vapor and groundwater concentrations, recommendations and conclusions for the Bedford Village Well - Shopping Arcade Remedial Site are discussed for areas east and west of Old Post Road (Route 22).

### 5.1 Bedford Village Wells - Shopping Arcade Area West of Old Post Road

The Bedford Village Wells Shopping Arcade area west of Old Post Road includes the Site strip mall and a gas station located directly south of the strip mall. This area is bordered to the east by Old Post Road and developed retail, commercial and community properties across Old Post Road, to the north by Tarleton Road, and to the west and south by undeveloped and sparsely developed areas. One (1) soil vapor sample (V-4S) and seven (7) groundwater samples (MW-3M, MW-1B, GS-10, GS-11, GS-12, GS-13 and MW-7) were collected to assess this area. Of the groundwater samples collected, five (5) were collected from the shallow overburden monitoring wells (MW-3M, GS-10, GS-11, GS-12 and GS-13) and two (2) were collected from bedrock monitoring wells (MW-1B and MW-7). Monitoring wells GS-10, GS-11, GS-12 and GS-13 are located in close proximity to the gas station. In general, no direct correlation was observed between the groundwater and soil vapor samples.

PCE was only detected at 16 ug/l in shallow monitoring well, MW-3M, which is located in the near vicinity of the former source (dry cleaner). PCE was not detected within the soil vapor sample, V-4S, collected in the vicinity of MW-3M. TCE was not detected in any of the monitoring wells or the soil vapor sample collected within the on-Site area. MTBE was only detected in two groundwater wells, GS-11 and GS-12 at 160 ug/l and 60 ug/l, respectively. Toluene was detected in shallow groundwater sample, GS-11 at 9.7 ug/l and in bedrock groundwater sample MW-1B at 12 ug/l. Toluene was also detected within soil vapor sample V-4S at 4.7 ug/m<sup>3</sup>. Other VOCs were detected in the soil vapor samples at low concentrations although they were not detected in the groundwater samples.

Due to the fact that no PCE or TCE soil vapor concentrations were detected within the Bedford Village Wells Shopping Arcade area west of Old Post Road, and that the property is currently occupied as a strip-mall, no further soil vapor investigations are

recommended.

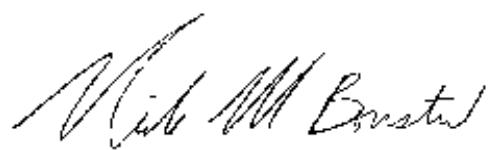
### 5.2 Bedford Village Wells - Shopping Arcade Area East of Old Post Road

The Bedford Village Wells Shopping Arcade area east of Old Post Road includes developed retail, commercial and community properties and undeveloped properties. This area is bordered to the west by Old Post Road and the Site strip mall and gas station across Old Post Road and sparsely developed residential and commercial areas to the northeast, west, and southeast. A total of three (3) soil vapor and 13 groundwater samples were collected to assess this area. Of the groundwater samples, samples from three monitoring wells, designated as MW-8M, MW-5S and 360006-GW-1, were collected in the vicinity of the soil vapor locations V-1S, V-2S, and V-3S, respectively. No VOC compounds were detected in groundwater samples collected from MW-8M, MW-5S, or 360006-GW-1 (with exception of Acetone detected in 360006 GW-1 at 31 ug/l) although several VOC compounds were detected in the soil vapor samples collected in close proximity to the monitoring wells. In general, no direct correlation was observed between the groundwater and soil vapor samples.

PCE was detected within two soil vapor samples collected east of Old Post Road, V-1S and V-2S, collected in the vicinity of MW-8M/MW-8B and MW-5S/MW-5B, respectively. The PCE soil vapor concentrations detected included 3.1 ug/m<sup>3</sup> (V-1S) (although the duplicate sample, V-1S DUPE was non-detect at 1 ug/m<sup>3</sup> for PCE) and 3.9 J ug/m<sup>3</sup> (V-2S). PCE was not detected within the shallow (MW-8M) or bedrock (MW-8B) monitoring wells collected in the vicinity of soil vapor sample V-1S and PCE was not detected within the shallow monitoring well (MW-5S) but was detected within the bedrock monitoring well (MW-5B) at 3.1 ug/l collected in the vicinity of soil vapor sample V-2S. PCE was detected in three (3) of the remaining nine monitoring wells collected east of Old Post Road including one (1) shallow and two (2) bedrock monitoring wells. PCE was detected in the remaining bedrock monitoring wells at 4.0 J ug/l (MW-6B) and 16 ug/l (MW-4B) and in shallow monitoring well MW-4S at 7.7 ug/l. TCE was detected in all three (3) soil vapor samples collected east of Old Post Road (V-1S, V-2S, and V-3S) at low concentrations (less than 1 ug/m<sup>3</sup>) and was only detected in two (2) bedrock monitoring wells MW-5B at 0.4 J ug/l (collected in the vicinity of V-2S) and MW-4B at 13 ug/l. MTBE was only detected in one intermediate monitoring well located east of Old Post Road, MW-6M at 1.6 J ug/l and was not detected in any soil vapor samples collected east of Old Post Road. Toluene was not detected within any of the groundwater samples collected east of Old Post Road but was detected in each soil vapor sample at concentrations ranging from 20 ug/m<sup>3</sup> (V-1S/V-1S DUPE) to 51 J ug/m<sup>3</sup> (V-2S). Other VOCs were detected in the soil vapor samples at low concentrations although they were not detected in the groundwater samples.

Due to the fact that the soil vapor concentrations within the Bedford Village Wells Shopping Arcade area east of Old Post Road were detected at low concentrations (PCE less than 3.9 J ug/m<sup>3</sup> and TCE less than 1 J ug/m<sup>3</sup>), and specifically that the soil vapor

sample collected in the close vicinity of the developed off-Site area (V-3S), was non-detect for PCE and 0.98 ug/m<sup>3</sup> for TCE, no further soil vapor investigations are recommended.

A handwritten signature in black ink, appearing to read "Nicole M. Bonsteel".

Nicole M. Bonsteel  
Division of Environmental Remediation

## **TABLES**

**Table 1**  
**Bedford Village Wells - Shopping Arcade Site No. 360006**  
**Field Sampling Information**

**Groundwater Sample Information**

Groundwater Sample I.D.	Sample Date	Sample Type	Depth to Water (feet)	Sample Depth (feet)	Monitoring Well Depth (feet)	Associated Vapor Point	GPS Coordinates
MW-8M	11/18/2005	Permanent Monitor Well	3.26	~ 21	26.7	360006-V-1S	41 12.324 N    073 38.632 W
MW-5S	11/18/2005	Permanent Monitor Well	6.52	~ 19	24.3	360006-V-2S	41 12.236 N    073 38.552 W
360006-GW-1	11/16/2005	Temporary Monitor Well	5.50	7.5	10.7	360006-V-3S	41 12.205 N    073 38.615 W
MW-3M	11/18/2005	Permanent Monitor Well	10.43	~ 17	22.2	360006-V-4S	41 12.254 N    073 38.674 W

**Soil Vapor Sample Information**

Vapor Point I.D.	Sample Date	Sample Type	Depth to Water (feet)	Sample Depth (feet)	Sample Screen Interval (feet)	Associated Monitoring Well	GPS Coordinates
360006-V-1S	11/17/2005	Temporary Shallow Vapor	4.45	3.5	2.4' - 3.7'	MW-8M	41 12.326 N    073 38.617 W
360006-V-2S	11/17/2005	Temporary Shallow Vapor	4.6	3.6	2.3' - 3.6'	MW-5S	41 12.234 N    073 38.551 W
360006-V-3S	11/17/2005	Temporary Shallow Vapor	4.0	3.0	1.7' - 3.0'	360006-GW-1	41 12.205 N    073 38.615 W
360006-V-4S	11/17/2005	Temporary Shallow Vapor	9.5	7.0	5.6' - 7.0'	MW-3M	41 12.259 N    073 38.673 W

**Notes:**

During construction of vapor point V-1S; depth to water was measured in the vapor point at 4.45'; therefore, sample depth was 3.5'.

MW-8M was formerly labeled as MW-2A within the Earth Tech May 2005 sampling report.

**Table 2**  
**Bedford Village Wells -Shopping Arcade Site No. 360006**  
**Summary of Detected Constituents -**  
**Groundwater Analytical Data**

Shallow Monitoring Wells Sampled in the Vicinity of Temporary Soil Vapor Points

Sample ID	MW-8M	MW-5S	360006-GW-1	MW-3M
Sampling Date	11/18/05	11/18/05	11/16/05	11/18/05
Depth to Water (ft.)	3.26	6.52	5.5	10.43
Depth of Well (ft.)	26.7	24.3	10.7	22.2
Sample Interval	Shallow Overburden	Shallow Overburden	Shallow Overburden	Shallow Overburden
Units	ug/L	ug/L	ug/L	ug/L
Acetone	6.8 U	1.1 U	<b>31</b>	6.8 U
Methyl tert-Butyl Ether	0.23 U	0.15 U	0.23 U	0.23 U
Methylene Chloride	0.98 U	0.27 U	0.98 U	0.98 U
Cyclohexane	5.0 U	NR	5.0 U	5.0 U
cis-1,2-Dichloroethene	0.28 U	0.12 U	0.28 U	0.28 U
Chloroform	0.18 U	0.16 U	0.18 U	<b>0.89 J</b>
Methylcyclohexane	5.0 U	NR	5.0 U	5.0 U
Benzene	0.35 U	0.14 U	0.35 U	0.35 U
Trichloroethene	0.59 U	0.15 U	0.59 U	0.59 U
Toluene	0.38 U	0.13 U	0.38 U	0.38 U
Tetrachloroethene	0.74 U	0.16 U	0.74 U	<b>16</b>
m/p-Xylenes	1.1 U	0.29 U	1.1 U	1.1 U
o-Xylene	0.47 U	0.15 U	0.47 U	0.47 U
1,4-Dichlorobenzene	0.79 U	0.17 U	0.79 U	0.79 U

**Notes:**

U - The compound was not detected at the indicated concentration.

J - Data indicates the estimated concentration of a compound that is less than the quantitation limit but greater than zero.

NR - Not analyzed

MW-8M was previously labeled as MW-2A within the EarthTech May 2005 Groundwater Sampling Report.

Samples were analyzed by Chemtech Laboratories for VOCs via EPA Method 624/524.2 (in accordance with the existing Work Assignment).

**Table 2**  
**Bedford Village Wells -Shopping Arcade Site No. 360006**  
**Summary of Detected Constituents -**  
**Groundwater Analytical Data**

Remainder of Site Area Monitoring Wells

Sample ID	MW-1B	MW-4S	MW-4B	MW-5B	MW-6M	MW-6B	MW-7	MW-8B	MW-U7
Sampling Date	11/18/2005	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05
Depth to Water (ft.)	8.48	4.48	3.02	6.15	2.72	1.2 AGS	35.62	3.25	7.32
Depth of Well (ft.)	42.5	21.5	77	97	37	92	>100	62.6	21.0
Sample Interval	Bedrock	Shallow Overburden	Bedrock	Bedrock	Intermediate Overburden	Bedrock	Bedrock	Bedrock	Shallow Overburden
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Acetone	6.8 U	6.8 U	6.8 U	1.1 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U
Methyl tert-Butyl Ether	0.23 U	0.23 U	0.23 U	0.15 U	1.6 J	0.23 U	0.23 U	0.23 U	0.23 U
Methylene Chloride	0.98 U	0.98 U	0.98 U	0.7 JB	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
Cyclohexane	5.0 U	5.0 U	5.0 U	NT	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	0.28 U	0.28 U	7.2	0.4 J	0.83 J	1.2 J	0.28 U	0.28 U	0.28 U
Chloroform	0.18 U	0.18 U	0.18 U	0.16 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Methylcyclohexane	5.0 U	5.0 U	5.0 U	NR	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	0.35 U	0.35 U	0.35 U	0.14 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Trichloroethene	0.59 U	0.59 U	13	0.4 J	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
Toluene	12	0.38 U	0.38 U	0.13 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Tetrachloroethene	0.74 U	7.7	16	3.1	0.74 U	4.0 J	0.74 U	0.74 U	0.74 U
m/p-Xylenes	1.1 U	1.1 U	1.1 U	0.29 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
o-Xylene	0.47 U	0.47 U	0.47 U	0.15 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
1,4-Dichlorobenzene	0.79 U	0.79 U	0.79 U	0.17 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U

**Notes:**

U - The compound was not detected at the indicated concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the

NR - Not analyzed

B - The analyze was found in the laboratory blank as well as the sample.

MW-6B is an artesian bedrock monitoring well, therefore the water level is measured above ground surface (AGS) within the monitoring well casing.

MW-8B and MW-U7 were previously labeled as MW-2 and MW-7, respectively, within the EarthTech May 2005 Groundwater Sampling Report.

Samples were analyzed by Chemtech Laboratories for VOCs via EPA Method 624/524.2 (in accordance with the existing Work Assignment).

**Table 2**  
**Bedford Village Wells -Shopping Arcade Site No. 360006**  
**Summary of Detected Constituents -**  
**Groundwater Analytical Data**

**Remainder of Site Area Monitoring Wells**

Sample ID	MW-U8	MW-U9	MW-10	GS-10	GS-11	GS-12	GS-13	TRIPBLANK
Sampling Date	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05
Depth to Water (ft.)	7.55	7.66	3.02	3.93	3.93	3.23	2.89	N/A
Depth of Well (ft.)	16.0	16.8	25.6	13.2	13.2	11.5	19.5	N/A
Sample Interval	Shallow Overburden	N/A						
Units	ug/L	ug/L						
Acetone	6.8 U	<b>9.9 J</b>						
Methyl tert-Butyl Ether	0.23 U	0.23 U	0.23 U	0.23 U	<b>160</b>	<b>60</b>	0.23 U	0.23 U
Methylene Chloride	0.98 U	0.98 U						
Cyclohexane	5.0 U	5.0 U	5.0 U	5.0 U	<b>320 E</b>	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	0.28 U	0.28 U						
Chloroform	0.18 U	0.18 U						
Methylcyclohexane	5.0 U	5.0 U	5.0 U	5.0 U	<b>110</b>	5.0 U	5.0 U	5.0 U
Benzene	0.35 U	0.35 U	0.35 U	0.35 U	<b>130</b>	0.35 U	0.35 U	0.35 U
Trichloroethene	0.59 U	0.59 U						
Toluene	0.38 U	0.38 U	0.38 U	0.38 U	<b>9.7</b>	0.38 U	0.38 U	0.38 U
Tetrachloroethene	0.74 U	0.74 U						
m/p-Xylenes	1.1 U	1.1 U	1.1 U	1.1 U	<b>38</b>	1.1 U	1.1 U	1.1 U
o-Xylene	0.47 U	0.47 U	0.47 U	0.47 U	<b>170</b>	0.47 U	0.47 U	0.47 U
1,4-Dichlorobenzene	0.79 U	0.79 U	0.79 U	<b>0.92 J</b>	0.79 U	0.79 U	0.79 U	0.79 U

**Notes:**

U - The compound was not detected at the indicated concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the

NR - Not analyzed

E - The analyze concentration is estimated. Cyclohexane was non-detect in the dilution run of GS-11.

MW-U8 and MW-U9 were previously labeled as MW-8 and MW-9, respectively, and GS-10, GS-11, GS-12 and GS-13 were previously labeled as MW-10, MW-11, MW-12 and MW-13, respectively, within the Earth Tech May 2005 Groundwater Sampling Report.

GS-10 through GS-13 are believed to be associated with an gas station investigation and have been renamed accordingly.

Samples were analyzed by Chemtech Laboratories for VOCs via EPA Method 624/524.2 (in accordance with the existing Work Assignment).

**Table 3**  
**Bedford Village Wells - Shopping Arcade Site No. 360006**  
**Summary of Detected Constituents -**  
**Soil Vapor Analytical Data**

**Temporary Shallow Soil Vapor Sampling Points**

Sample ID	360006-V-1S	360006-V-1S DUPE	360006-V-2S	360006-V-3S	360006-V-4S
Sampling Date	11/17/05	11/17/05	11/17/05	11/17/05	11/17/05
Sample Depth (feet)	3.5	3.5	3.6	3.0	7.0
Depth to Water (feet)	4.45	4.45	4.6	4.0	9.5
Units	ug/m <sup>3</sup>				
1,2,4-Trimethylbenzene	2.7	1.9	2 J	2	1.8
1,3,5-Trimethylbenzene	1	0.85	1.2 J	1.3	0.9
1,4-Dichlorobenzene	0.92 U	0.92 U	1.3 J	1.4	0.49 J
2,2,4-trimethylpentane	0.71 U	0.71 U	0.71 J	0.71 U	0.38 J
4-ethyltoluene	1	0.85	0.8 J	1	0.5 J
Benzene	0.88	0.91	0.68 J	0.52	1.2
Carbon disulfide	3.9	3.6	1.8 J	1.5	0.47 U
Carbon tetrachloride	0.96 U	0.32 J	0.96 U	0.96 U	0.64 J
Chloroform	20	19	1.8 J	1.6	0.74 U
Cyclohexane	1.1	1.0	3.8 NJ	3 NJ	0.52 U
Ethylbenzene	3.1	3.2	2.9 J	3.1	0.88
Freon 11	1.7	1.7	1.7 J	1.9	1.9
Freon 113	1.2 U	0.62 J	1.2 U	0.78 J	0.7 J
Freon 12	3.1	3.0	4.3 J	3.3	3.4
Heptane	1.1	1.2	2.2 J	2	0.42 J
Hexane	9.1	9.1	42 J	30	3.6
Methylene chloride	3 J	0.53 UJ	2 J	22	2.6
m-Xylene	6.3 J	6.4 J	4.7 J	5.5 J	2 J
o-Xylene	2.2	2.2	1.8 J	1.9	0.88
p-Xylene	2.7 J	2.6 J	3.2 J	3 J	0.79 J
Styrene	3.7	3.8	2.3 J	2.8	0.52 J
Tetrachloroethylene	3.1	1 U	3.9 J	1 U	1 U
Toluene	20	20	51 J	38	4.7
Trichloroethene	0.55 J	0.55 J	1 J	0.98	0.82 U

**Qualifiers**

U - The compound was not detected at the indicated concentration.

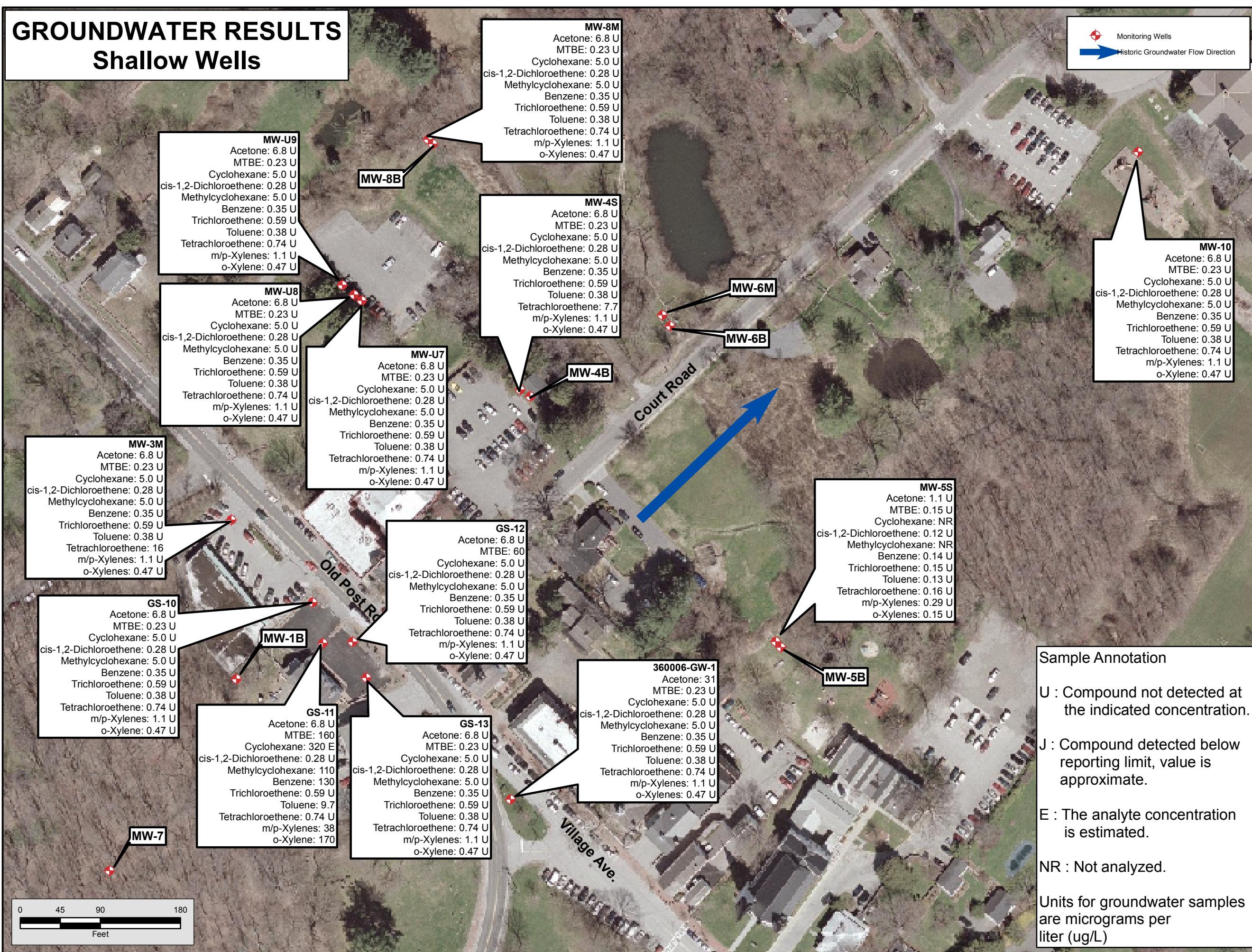
J - The result is an approximate value which is less than the quantitation limit but greater than zero.

Samples analyzed by Centex Laboratories via EPA Method TO-15 with a minimum reporting limit of 1 ug/m<sup>3</sup>.

## **FIGURES**

# GROUNDWATER RESULTS

## Shallow Wells



New York State  
Department of Environmental Conservation  
Division of Environmental Remediation

**Map Details**

Created in ArcGIS 9.1

Created by B. Rung

Date of Last Revision: 11/29/2006

UNAUTHORIZED DUPLICATION  
IS A VIOLATION OF APPLICABLE LAWS

**Figure 1**

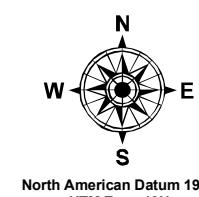
Bedford Village Wells Shopping Arcade Site No. 3-60-006

Weschester County Town of Bedford

DEC Contact:  
Hoffman

DOH Contact:  
Obermeyer

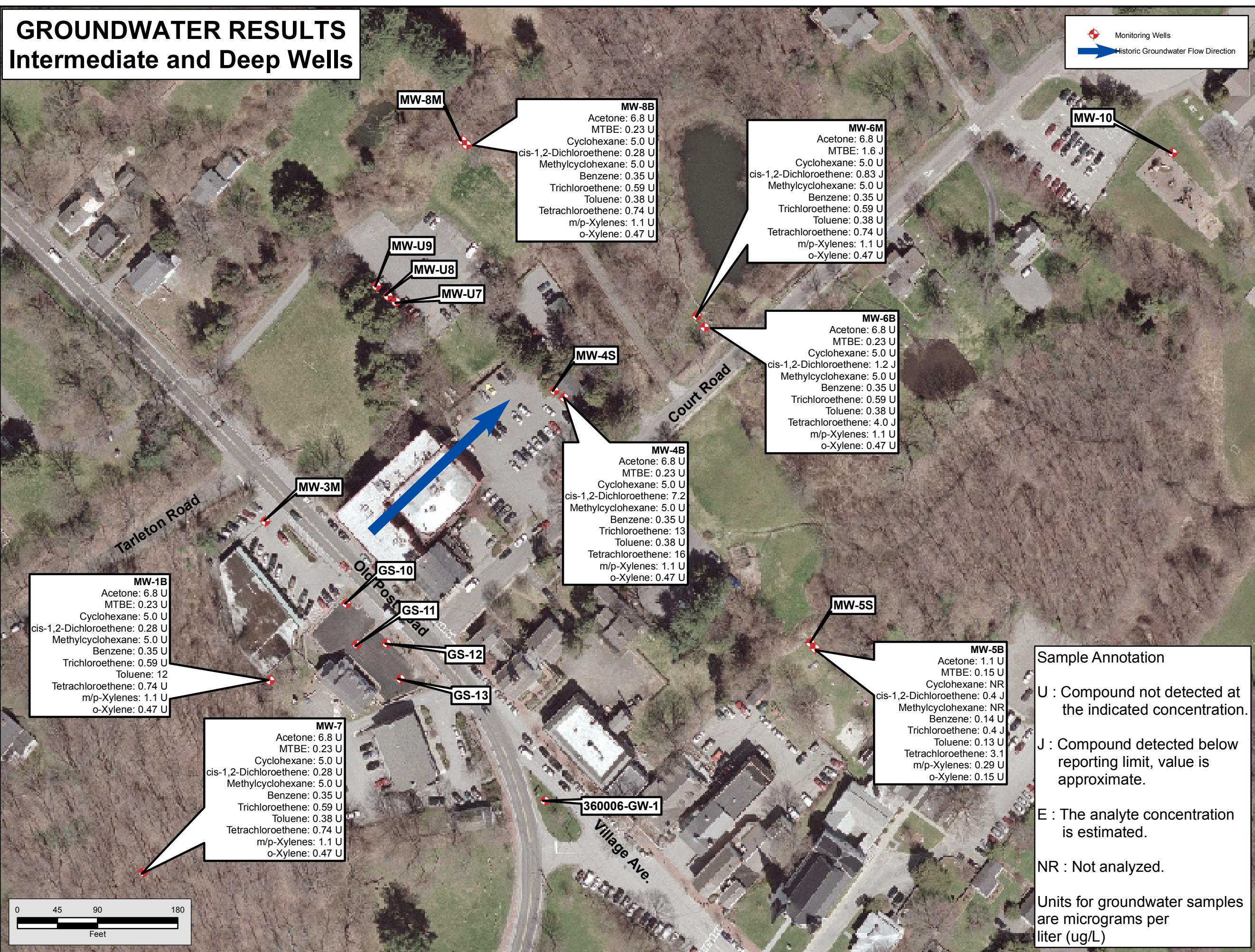
Spring 2004  
Aerial Photography



North American Datum 1983  
UTM Zone 18N

# GROUNDWATER RESULTS

## Intermediate and Deep Wells



New York State  
Department of Environmental Conservation  
Division of Environmental Remediation

**Figure 2**

Bedford Village Wells  
Shopping Arcade  
Site No. 3-60-006

Weschester County  
Town of Bedford

DEC Contact:  
Hoffman

DOH Contact:  
Obermeyer

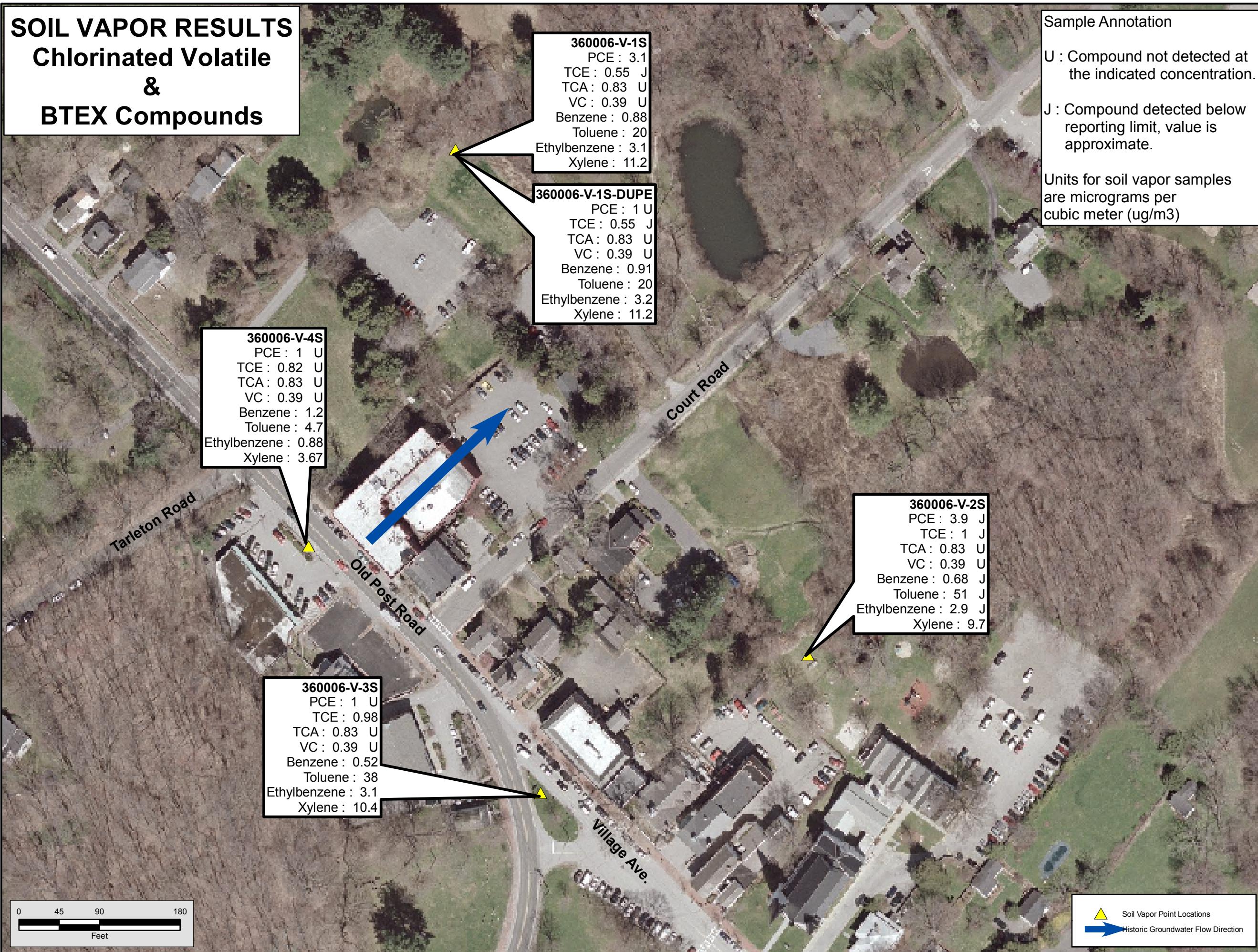
Spring 2004  
Aerial Photography



North American Datum 1983  
UTM Zone 18N

# SOIL VAPOR RESULTS

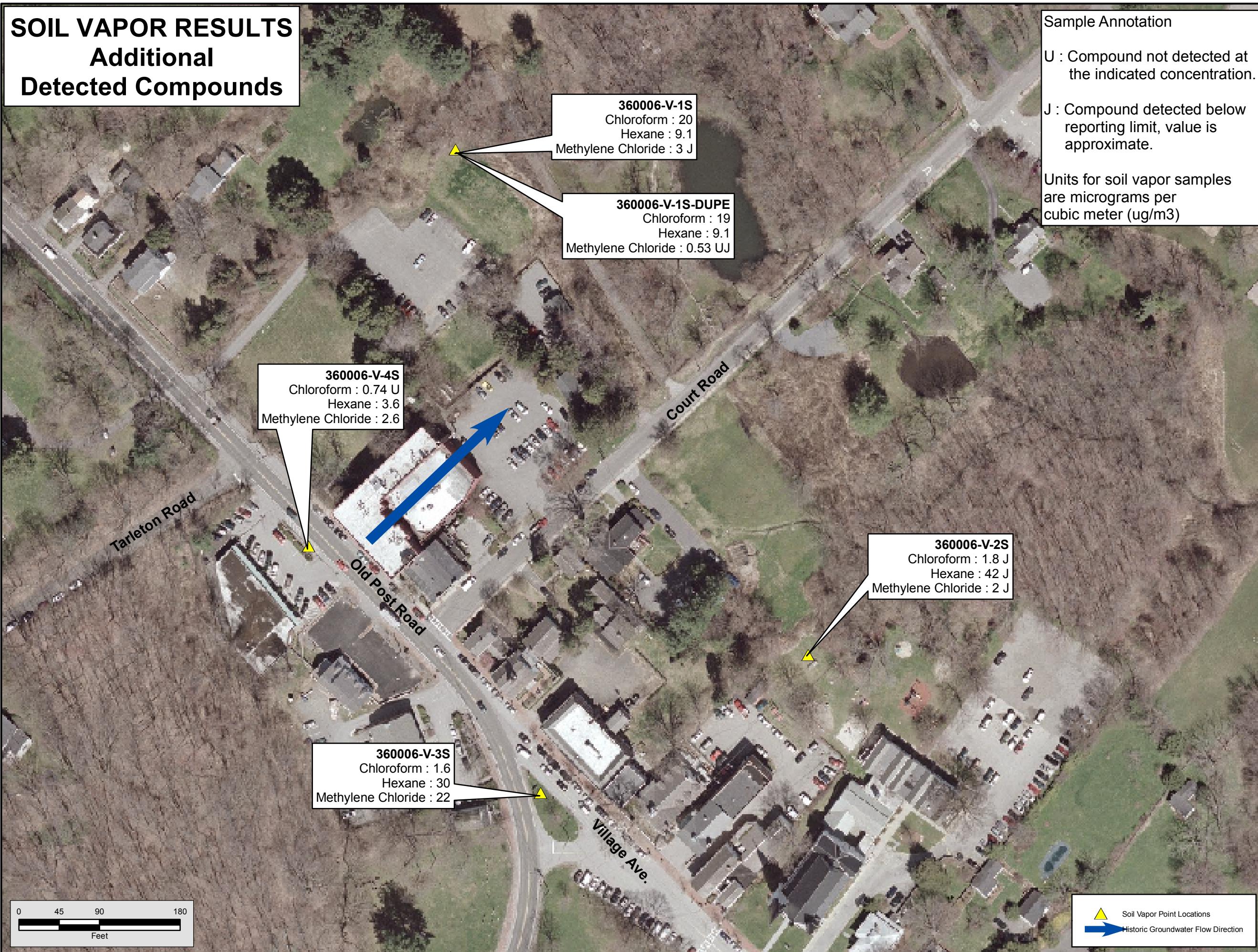
## Chlorinated Volatile & BTEX Compounds



New York State  
Department of Environmental Conservation  
Division of Environmental Remediation

# SOIL VAPOR RESULTS

## Additional Detected Compounds



New York State  
Department of Environmental Conservation  
Division of Environmental Remediation

## **ATTACHMENTS**



Sample ID	MW-5B	MW-5S	GS-10	GS-11	GS-11DL	GS-12	GS-13	MW-1B	MW-3M	MW-4B	MW-4S	MW-6B
Lab Sample Number	T5860-09	T5860-10	T5860-01	T5860-02	T5860-02DL	T5860-03	T5860-04	T5860-05	T5860-06	T5860-07	T5860-08	T5860-11
Sampling Date	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05
Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor	1.0	1.0	1.0	1.0	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Compound	CAS #	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Isopropylbenzene	98-82-8	0.14 U	0.14 U	5.0 U	5.0 U	25 UD	5.0 U					
1,1,2,2-Tetrachloroethane	79-34-5	0.18 U	0.18 U	0.35 U	0.35 U	1.8 UD	0.35 U					
1,3-Dichlorobenzene	541-73-1	0.15 U	0.15 U	0.65 U	0.65 U	3.3 UD	0.65 U					
1,4-Dichlorobenzene	106-46-7	0.17 U	0.17 U	0.92 J	0.79 U	4.0 UD	0.79 U					
1,2-Dichlorobenzene	95-50-1	0.16 U	0.16 U	0.67 U	0.67 U	3.4 UD	0.67 U					
1,2-Dibromo-3-Chloropropane	96-12-8	0.19 U	0.19 U	5.0 U	5.0 U	25 UD	5.0 U					
1,2,4-Trichlorobenzene	120-82-1	0.11 U	0.11 U	5.0 U	5.0 U	25 UD	5.0 U					
tert-Butyl Alcohol	75-65-0	2.9 U	2.9 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Diethyl Ether	60-29-7	0.16 U	0.16 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Iodomethane	74-88-4	0.08 U	0.08 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Allyl Chloride	107-5-1	0.15 U	0.15 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Acrylonitrile	107-13-1	0.46 U	0.46 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl acrylate	79-20-9	0.16 U	0.16 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
2,2-Dichloropropane	594-20-7	0.19 U	0.19 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
t-1,4-Dichloro-2-butene	110-57-6	0.45 U	0.45 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1-Dichloropropene	563-58-6	0.16 U	0.16 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Isopropyl Ether	108-20-3	0.18 U	0.18 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Propionitrile	107-12-0	1.7 U	1.7 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methacrylonitrile	126-98-7	0.62 U	0.62 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrahydrofuran	109-99-9	0.45 U	0.45 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
1-Chlorobutane	109-69-3	0.17 U	0.17 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dibromomethane	74-95-3	0.19 U	0.19 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl methacrylate	80-62-6	0.32 U	0.32 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethyl methacrylate	97-63-2	0.16 U	0.16 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3-Dichloropropane	142-28-9	0.14 U	0.14 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2-Tetrachloroethane	630-20-6	0.17 U	0.17 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Hexachloroethane	67-72-1	0.17 U	0.17 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Bromobenzene	108-86-1	0.14 U	0.14 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,3-Trichloropropane	96-18-4	0.20 U	0.20 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
n-propylbenzene	103-65-1	0.14 U	0.14 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Chlorotoluene	95-49-8	0.11 U	0.11 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3,5-Trimethylbenzene	108-67-8	0.15 U	0.15 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
4-Chlorotoluene	106-43-4	0.15 U	0.15 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
tert-Butylbenzene	98-06-6	0.15 U	0.15 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trimethylbenzene	95-63-6	0.15 U	0.15 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
sec-Butylbenzene	135-98-8	0.14 U	0.14 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
p-Isopropyltoluene	99-87-6	0.14 U	0.14 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
n-Butylbenzene	104-51-8	0.12 U	0.12 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Hexachlorobutadiene	87-68-3	0.13 U	0.13 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
Naphthalene	91-20-3	0.14 U	0.14 U	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,3-Trichlorobenzene	87-61-6	0.16 U	0.16 U	NR	NR	NR	NR	NR	NR	NR	NR	NR

#### Qualifiers

U - The compound was not detected at the indicated concentration.  
 J - The result is an approximate value which is less than the quantitation limit but greater than zero.

NR - Not analyzed

E - The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

GS-11DL is the diluted sample of GS-11

Samples analyzed by Chemtech Laboratories for VOCs via EPA Method 624/ 524.2 (in accordance with the existing Site work assignment).

Note: MW-8M and MW-8B were previously referred to MW-2A and MW-2, respectively, within the Earth Tech May 2005 Groundwater Sampling Report.

MW-U7, MW-U8, and MW-U9 were previously labeled MW-8 and MW-9, respectively, and GS-10, GS-11, GS-12, and GS-13 were previously labeled as MW-10, MW-11, MW-12 and MW-13, respectively, within the EarthTech May 2005 Groundwater Sampling Report.

Sample ID		MW-6M	MW-7	MW-8B	MW-8M	MW-10	MW-17	MW-18	MW-19	360006-GW-1	TRIPBLANK
Lab Sample Number		T5860-12	T5860-13	T5860-14	T5860-15	T5860-16	T5860-17	T5860-18	T5860-19	T5860-20	T5860-23
Sampling Date		11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/16/05	11/18/05
Matrix		WATER	WATER								
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Compound	CAS #	ug/L	ug/L								
Dichlorodifluoromethane	75-71-8	0.70 U	0.70 U								
Chloromethane	74-87-3	0.45 U	0.45 U								
Vinyl Chloride	75-01-4	0.62 U	0.62 U								
Bromomethane	74-83-9	1.3 U	1.3 U								
Chloroethane	75-00-3	1.1 U	1.1 U								
Trichlorofluoromethane	75-69-4	0.58 U	0.58 U								
1,1,2-Trichlorotrifluoroethane	76-13-1	2.1 U	2.1 U								
1,1-Dichloroethene	75-35-4	0.33 U	0.33 U								
Acetone	67-64-1	6.8 U	6.8 U								
Carbon Disulfide	75-15-0	0.36 U	0.36 U								
Methyl tert-Butyl Ether	1634-04-4	1.6 J	0.23 U	0.23 U							
Methyl Acetate	79-20-9	5.0 U	5.0 U								
Methylene Chloride	75-09-2	0.98 U	0.98 U								
trans-1,2-Dichloroethene	156-60-5	0.40 U	0.40 U								
1,1-Dichloroethane	75-34-3	0.28 U	0.28 U								
Cyclohexane	110-82-7	5.0 U	5.0 U								
2-Butanone	78-93-3	1.6 U	1.6 U								
Carbon Tetrachloride	56-23-5	0.34 U	0.34 U								
cis-1,2-Dichloroethene	156-59-2	0.83 J	0.28 U	0.28 U							
Chloroform	67-66-3	0.18 U	0.18 U								
1,1,1-Trichloroethane	71-55-6	0.17 U	0.17 U								
Methylcyclohexane	108-87-2	5.0 U	5.0 U								
Benzene	71-43-2	0.35 U	0.35 U								
1,2-Dichloroethane	107-06-2	0.28 U	0.28 U								
Trichloroethene	79-01-6	0.59 U	0.59 U								
1,2-Dichloropropane	78-87-5	0.27 U	0.27 U								
Bromodichloromethane	75-27-4	0.30 U	0.30 U								
4-Methyl-2-Pentanone	108-10-1	1.7 U	1.7 U								
Toluene	108-88-3	0.38 U	0.38 U								
t-1,3-Dichloropropene	10061-02-6	0.29 U	0.29 U								
cis-1,3-Dichloropropene	10061-01-5	0.26 U	0.26 U								
1,1,2-Trichloroethane	79-00-5	0.36 U	0.36 U								
2-Hexanone	591-78-6	1.3 U	1.3 U								
Dibromoethane	124-48-1	0.22 U	0.22 U								
1,2-Dibromoethane	106-93-4	0.25 U	0.25 U								
Tetrachloroethene	127-18-4	0.74 U	0.74 U								
Chlorobenzene	108-90-7	0.47 U	0.47 U								
Ethyl Benzene	100-41-4	0.50 U	0.50 U								
m/p-Xylenes	126777-61-2	1.1 U	1.1 U								
o-Xylene	95-47-6	0.47 U	0.47 U								
Styrene	100-42-5	0.45 U	0.45 U								
Bromoform	75-25-2	0.22 U	0.22 U								

Sample ID		MW-6M	MW-7	MW-8B	MW-8M	MW-10	MW-17	MW-18	MW-U9	360006-GW-1	TRIPBLANK
Lab Sample Number		T5860-12	T5860-13	T5860-14	T5860-15	T5860-16	T5860-17	T5860-18	T5860-19	T5860-20	T5860-23
Sampling Date		11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05	11/18/05
Matrix		WATER	WATER								
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Compound	CAS #	ug/L	ug/L								
Isopropylbenzene	98-82-8	5.0 U	5.0 U								
1,1,2,2-Tetrachloroethane	79-34-5	0.35 U	0.35 U								
1,3-Dichlorobenzene	541-73-1	0.65 U	0.65 U								
1,4-Dichlorobenzene	106-46-7	0.79 U	0.79 U								
1,2-Dichlorobenzene	95-50-1	0.67 U	0.67 U								
1,2-Dibromo-3-Chloropropane	96-12-8	5.0 U	5.0 U								
1,2,4-Trichlorobenzene	120-82-1	5.0 U	5.0 U								
tert-Butyl Alcohol	75-65-0	NR	NR								
Diethyl Ether	60-29-7	NR	NR								
Iodomethane	74-88-4	NR	NR								
Allyl Chloride	107-5-1	NR	NR								
Acrylonitrile	107-13-1	NR	NR								
Methyl acrylate	79-20-9	NR	NR								
2,2-Dichloropropane	594-20-7	NR	NR								
1-t,4-Dichloro-2-butene	110-57-6	NR	NR								
1,1-Dichloropropene	563-58-6	NR	NR								
Isopropyl Ether	108-20-3	NR	NR								
Propionitrile	107-12-0	NR	NR								
Methacrylonitrile	126-98-7	NR	NR								
Tetrahydrofuran	109-99-9	NR	NR								
1-Chlorobutane	109-69-3	NR	NR								
Dibromomethane	74-95-3	NR	NR								
Methyl methacrylate	80-62-6	NR	NR								
Ethyl methacrylate	97-63-2	NR	NR								
1,3-Dichloropropane	142-28-9	NR	NR								
1,1,2-Tetrachloroethane	630-20-6	NR	NR								
Hexachloroethane	67-72-1	NR	NR								
Bromobenzene	108-86-1	NR	NR								
1,2,3-Trichloropropane	96-18-4	NR	NR								
n-propylbenzene	103-65-1	NR	NR								
2-Chlorotoluene	95-49-8	NR	NR								
1,3,5-Trimethylbenzene	108-67-8	NR	NR								
4-Chlorotoluene	106-43-4	NR	NR								
tert-Butylbenzene	98-06-6	NR	NR								
1,2,4-Trimethylbenzene	95-63-6	NR	NR								
sec-Butylbenzene	135-98-8	NR	NR								
p-Isopropyltoluene	99-87-6	NR	NR								
n-Butylbenzene	104-51-8	NR	NR								
Hexachlorobutadiene	87-68-3	NR	NR								
Naphthalene	91-20-3	NR	NR								
1,2,3-Trichlorobenzene	87-61-6	NR	NR								

#### Definitions

- The compound was not detected at the indicated concentration.
- The result is an approximate value which is less than the detection limit.
- Not analyzed

The concentration given is an approximate value.

The analyte was found in the laboratory blank as well as the dilution sample of GS-11.

11DL is the detection limit for VOCs via ECD.

All samples analyzed by Chemtech Laboratories for VOCs via ECD.

MW-8M and MW-8B were previously referred to as MW-2.

MW-U7, MW-U8, and MW-U9 were previously labeled MW-8.

## Soil Vapor Intrusion Evaluation

**Bedford Village Wells- Shopping Arcade**

**NYSDEC Site No. 360006**

**Sample Type: Air**

CONSTITUENT	STATION	360006-V-1S	360006-V-1S-DUPE	360006-V-2S	360006-V-3S	360006-V-4S
	SAMPLE ID	360006-V-1	360006-V-1	360006-V-2	360006-V-3	360006-V-4
	DATE	01/00/00	01/00/00	01/00/00	01/00/00	01/00/00
	TYPE	N	FD	N	N	N
1,1,1-Trichloroethane	ug/m3	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
1,1,2,2-Tetrachloroethane	ug/m3	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/m3	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
1,1-Dichloroethane	ug/m3	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
1,1-Dichloroethene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
1,2,4-Trichlorobenzene	ug/m3	1.1 U	1.1 U	1.1 U J	1.1 U	1.1 U
1,2,4-Trimethylbenzene	ug/m3	2.7	1.9	2 J	2	1.8
1,2-Dibromoethane	ug/m3	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,2-Dichlorobenzene	ug/m3	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
1,2-Dichloroethane	ug/m3	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
1,2-Dichloropropane	ug/m3	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
1,3,5-Trimethylbenzene	ug/m3	1	0.85	1.2 J	1.3	0.9
1,3-butadiene	ug/m3	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,3-Dichlorobenzene	ug/m3	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
1,4-Dichlorobenzene	ug/m3	0.92 U	0.92 U	1.3 J	1.4	0.49 J
1,4-Dioxane	ug/m3	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
2,2,4-trimethylpentane	ug/m3	0.71 U	0.71 U	0.71 J	0.71 U	0.38 J
4-ethyltoluene	ug/m3	1	0.85	0.8 J	1	0.5 J
Acetone	ug/m3	0.72 U J	0.72 U J	0.72 U	0.72 U	0.72 U
Allyl chloride	ug/m3	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
Benzene	ug/m3	0.88	0.91	0.68 J	0.52	1.2
Benzyl chloride	ug/m3	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
Bromodichloromethane	ug/m3	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/m3	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Bromomethane	ug/m3	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
Carbon disulfide	ug/m3	3.9	3.6	1.8 J	1.5	0.47 U
Carbon tetrachloride	ug/m3	0.96 U	0.32 J	0.96 U	0.96 U	0.64 J
Chlorobenzene	ug/m3	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Chloroethane	ug/m3	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Chloroform	ug/m3	20	19	1.8 J	1.6	0.74 U
Chloromethane	ug/m3	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
cis-1,2-Dichloroethene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
cis-1,3-Dichloropropene	ug/m3	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Cyclohexane	ug/m3	1.1	1	3.8 NJ	3 NJ	0.52 U
Dibromochloromethane	ug/m3	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Ethyl acetate	ug/m3	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
Ethylbenzene	ug/m3	3.1	3.2	2.9 J	3.1	0.88
Freon 11	ug/m3	1.7	1.7	1.7 J	1.9	1.9
Freon 113	ug/m3	1.2 U	0.62 J	1.2 U	0.78 J	0.7 J
Freon 114	ug/m3	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Freon 12	ug/m3	3.1	3	4.3 J	3.3	3.4

## Soil Vapor Intrusion Evaluation

Bedford Village Wells- Shopping Arcade

NYSDEC Site No. 360006

Sample Type: Air

CONSTITUENT	STATION	360006-V-1S	360006-V-1S-DUPE	360006-V-2S	360006-V-3S	360006-V-4S
	SAMPLE ID	360006-V-1	360006-V-1	360006-V-2	360006-V-3	360006-V-4
	DATE	01/00/00	01/00/00	01/00/00	01/00/00	01/00/00
	TYPE	N	FD	N	N	N
Heptane	ug/m3	1.1	1.2	2.2 J	2	0.42 J
Hexachloro-1,3-butadiene	ug/m3	1.6 U	1.6 U	1.6 U J	1.6 U	1.6 U
Hexane	ug/m3	9.1	9.1	42 J	30	3.6
Isopropyl alcohol	ug/m3	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Methyl Butyl Ketone	ug/m3	1.2 U	1.2 U	1.2 U J	1.2 U	1.2 U
Methyl Ethyl Ketone	ug/m3	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U
Methyl Isobutyl Ketone	ug/m3	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Methyl tert-butyl ether	ug/m3	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
Methylene chloride	ug/m3	3 J	0.53 U J	2 J	22	2.6
m-Xylene	ug/m3	6.3 J	6.4 J	4.7 J	5.5 J	2 J
o-Xylene	ug/m3	2.2	2.2	1.8 J	1.9	0.88
Propylene	ug/m3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
p-Xylene	ug/m3	2.7 J	2.6 J	3.2 J	3 J	0.79 J
Styrene	ug/m3	3.7	3.8	2.3 J	2.8	0.52 J
Tetrachloroethylene	ug/m3	3.1	1 U	3.9 J	1 U	1 U
Tetrahydrofuran	ug/m3	0.45 U	0.45 U	0.45 U J	0.45 U	0.45 U
Toluene	ug/m3	20	20	51 J	38	4.7
trans-1,2-Dichloroethene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
trans-1,3-Dichloropropene	ug/m3	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Trichloroethene	ug/m3	0.55 J	0.55 J	1 J	0.98	0.82 U
Vinyl acetate	ug/m3	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
Vinyl bromide	ug/m3	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Vinyl chloride	ug/m3	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U