

NJDEP – GOLDER SUBSURFACE VAPOR INTRUSION RESEARCH PROJECT

Report on:

**INVESTIGATION OF INDOOR AIR QUALITY IN
STRUCTURES LOCATED ABOVE
VOC-CONTAMINATED
GROUNDWATER, YEAR TWO
PART 1:
EVALUATION OF SOIL
VAPOR INTRUSION AT
MOUNT HOLLY SITE, NEW JERSEY**

**Submitted to
New Jersey Department of
Environmental Protection**

**By
Golder Associates
July 2006**



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SUMMARY

This report, prepared by Golder Associates Inc. (Golder Associates) for the New Jersey Department of Environmental Protection (NJDEP), describes the results of our research study of soil vapor intrusion at the Mount Holly site in New Jersey. The evaluation has been completed as part of a research study titled "*Investigation of Indoor Air Quality in Structures Located Above VOC-Contaminated Groundwater*", which is being conducted by Golder Associates Inc. (Golder) for the New Jersey Department of Environmental Protection (NJDEP). The purpose of this research program is to evaluate soil vapor intrusion into buildings through field measurements, comparisons to existing guidance for vapor intrusion, and site-specific mathematical modeling of vapor intrusion.

The subsurface contamination at the Mount Holly site consists of petroleum hydrocarbons (gasoline) that originate from releases at a former industrial site. Contamination has migrated off-site below a residential area with single family dwellings, which is the focus of this study. The field investigation scope in the off-site residential area consisted of a hydrogeological and groundwater contamination assessment, testing of soil vapor, slab vapor and indoor air, and evaluation and monitoring of building conditions relevant to soil vapor intrusion. The hydrogeological and groundwater contaminant assessment, and testing of slab vapor and indoor air was completed by JMC Environmental Consultants, Inc. (JMC). The testing of soil vapor and ancillary testing of building conditions was completed by Golder Associates.

The characterization program for evaluation of vapor intrusion focused on three houses of potential concern (91, 93 and 103 Hulme Street). These houses are over fifty years old, are three story buildings with basements, and have foundations of variable construction ranging from concrete to partial dirt floors.

The unsaturated soil deposits near 91/93 Hulme Street consist of sand (to 5 foot depth below ground surface) underlain by laterally variable soil deposits consisting of interlayered silt or clay and sand. The unsaturated soil deposits near 103 Hulme Street consist primarily of fine sand, that contains trace clay and silt below 7 feet depth. The depth to groundwater near 91/93 Hulme Street ranged from 7.8 to 9.2 feet below ground surface. The depth to groundwater near 103 Hulme Street ranged from 6.7 to 7.6 feet below ground surface. The soil testing results suggested the presence of residual NAPL in soil near to 103 Hulme Street; however, the NAPL was submerged below the water table during site monitoring completed in December 2004 and June 2005.

The laboratory testing of soil samples indicated relatively low BTEX concentrations in soil at boreholes near 91/93 Hulme Street. For 103 Hulme Street, there was a sharp increase in BTEX concentrations in soil below approximately 9 to 9.5 feet below ground surface. The results of analyses of groundwater samples from the temporary Geoprobe

well points and monitoring wells indicated the presence of two distinct off-site groundwater contaminant plumes located near to 91/93 Hulme and 103 Hulme. The total BTEX concentrations in shallow groundwater at sampling locations that were within 15 feet south of the houses exceeded 10 ppm. However, the groundwater characterization results indicated significant lateral concentration gradients in groundwater resulting in spatially variable and likely lower concentrations below the houses.

The soil vapor, subslab vapor and indoor air concentrations were relatively low for the BTEX chemicals and other potential chemicals of interest (*e.g.*, cyclohexane) and were within the typical range of background concentrations reported for these chemicals. For example, the maximum benzene, toluene, ethylbenzene, xylenes and cyclohexane concentrations measured in indoor air were $2.3 \mu\text{g}/\text{m}^3$, $74 \mu\text{g}/\text{m}^3$, $3.4 \mu\text{g}/\text{m}^3$, $11 \mu\text{g}/\text{m}^3$ and $48 \mu\text{g}/\text{m}^3$, respectively. There were small differences between the subslab vapor and indoor air concentrations; for the compounds evaluated, the ratio between subslab vapor and indoor air concentrations were between 1.1 and 55.

The soil vapor concentrations measured in probes within approximately two feet of the water table were typically only one to two orders-of-magnitude higher than the measured indoor air concentrations indicating a weak vapor contamination source. The reason for the low soil vapor concentrations is likely associated with low diffusive transport rates through the capillary transition zone combined with aerobic biodegradation in the vadose zone. While soil vapor concentrations were low near the water table, the vapor concentrations in well headspace air were much higher (about 28X) than those measured in a nearby vapor probe. These results contrast the potential difference in hydrocarbon concentrations off-gassing from a well screened across the water table compared to hydrocarbon concentrations in soil vapor above the capillary fringe.

Empirical groundwater-to-indoor air vapor attenuation factors were calculated for BTEX chemicals for data from 103 Hulme. Since the indoor air concentrations were within the typical range of background concentrations reported for these chemicals, the empirical attenuation factors are upper bound factors that include a background component. Since there was evidence for bioattenuation below the buildings, the true vapor attenuation factors are likely much less than those calculated since the vapor pathway is essentially incomplete. The upper bound groundwater-to-indoor air attenuation factors for BTEX chemicals range from 2.7×10^{-6} to 1.9×10^{-5} . For the BTEX chemicals, the New Jersey Ground Water Screening Levels (GWSLs) were derived by applying a 10X reduction to the generic alpha's calculated assuming no degradation, which for BTEX are 1.04×10^{-3} to 1.16×10^{-3} . When the 10X reduction is applied, the resulting alpha's (1.04×10^{-4} to 1.16×10^{-4}) are 5.5 to 43 times higher than the upper bound empirical vapor attenuation factors.

A modeling study was conducted to evaluate the predicted soil vapor profile below 103 Hulme as influenced by variable water-filled porosity within the capillary zone and first-order biodegradation within a dominant soil layer. The model used for this purpose is a new semi-analytical spreadsheet model (“J&E-BIO”) for one-dimensional transport developed by Golder Associates that incorporates first- and zero-order oxygen-limited biodegradation over a dominant soil layer (Johnson et al., 1998). The J&E-BIO model utilizes an identical mathematical formulation for diffusion and advection to that incorporated in the Johnson and Ettinger (1991) algorithm. Since site monitoring data indicates oxygen is present below the building foundation at 103 Hulme, first-order biodecay was assumed to be not constrained by oxygen limitations (i.e., the oxygen-limited function of the model was turned off).

The modeling simulated xylene transport through a variably saturated capillary fringe with the water-filled porosity based on water retention characteristics for a US Soil Conservation Service (SCS) Loamy Sand soil texture, and first-order decay within a thin (0.15 m) soil layer. For these inputs, it was found that a first-order decay rate of 0.036 hr^{-1} provided a reasonable match between the measured and model-predicted vertical vapor concentration profile. This first-order decay rate is reasonable based on published values for BTEX compounds.

This study highlights the importance of detailed assessment of conditions and processes near the water table when higher levels of contamination are located below the water table, including the appropriate use of monitoring well vapor phase data. A decline in the water table as a result of prolonged drought or pumping would increase the potential for elevated soil vapor concentrations above the water table. Whether this would translate to a significant potential for soil vapor intrusion into homes is uncertain since there are sharp lateral concentration gradients below houses. It is recommended that consideration be given to additional testing of soil vapor, and possibly indoor air, if there is a significant decline in the water table at the Mount Holly site.

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1.0 INTRODUCTION

This report, prepared by Golder Associates Inc. (Golder Associates) for the New Jersey Department of Environmental Protection (NJDEP), describes the results of a research study of soil vapor intrusion at the Mount Holly site located in Burlington County, New Jersey (Figure 1). The Mount Holly study represents one component of a multi-year study of soil vapor intrusion titled “*Investigation of Indoor Air Quality in Structures Located Above VOC-Contaminated Groundwater*”¹. The purpose of this research program is to evaluate soil vapor intrusion into buildings through field measurements, comparisons to existing guidance for vapor intrusion, and site-specific mathematical modeling of vapor intrusion. An important objective of this study was to obtain supporting information that would assist NJDEP in developing and refining guidance on soil vapor intrusion relevant to conditions in New Jersey.

The Mount Holly site represents the third site investigated by Golder Associates. The subsurface contamination at the Mount Holly site consists of petroleum hydrocarbons that originate from releases at a former industrial site (201-203 Pine Street), owned by Active Environment (formerly owned by Agway, L.T. (“Agway”)). Contamination has migrated off-site below a residential area, which is the focus of this study.

The field investigation scope in the off-site residential area consisted of a hydrogeological and groundwater contaminant assessment, testing of soil vapor, slab vapor and indoor air, and evaluation and monitoring of building conditions relevant to soil vapor intrusion. The hydrogeological and groundwater contaminant assessment, and testing of slab vapor and indoor air was completed by JMC Environmental Consultants, Inc. (JMC) on behalf of Agway. The testing of soil vapor and ancillary testing of building conditions was completed by Golder Associates on behalf of NJDEP. The scope and timing of the vapor intrusion assessment completed by Golder Associates was, in part, dictated by the investigation completed by JMC, since JMC took the lead in determining the scope and timing of the indoor air assessment.

This report begins with a description of background information on the site in Section 2. The scope and methods used for evaluation of soil vapor intrusion, followed by characterization results are provided in Sections 3 and 4. The investigation results together with modeling results that provide insight on soil vapor fate and transport at the Mount Holly site are provided in Section 5. Section 6 provides the report conclusions, and Section 7 provides references.

¹ The previous studies are summarized in the Golder report entitled “Year One Soil Vapor Intrusion Research Study at Stafford Township and Egg Harbour Sites, New Jersey”, dated March 2005.

2.0 BACKGROUND INFORMATION

2.1 Site Description

The residential area of potential concern is located along Hulme Street and is north of the former Agway facility (Figure 1). Photographs of three residences of potential concern (91, 93 and 103 Hulme Street) are provided in Appendix I. Residential areas are located further north and east and Pine Street is located to the west. A closed landfill site that is listed as a current Superfund facility (L&D landfill) is located south of the former Agway facility.

The ground surface in the residential area of potential concern slopes gently downward to the north and west. According to the United States Geological Survey (USGS) Mount Holly, NJ 7.5 Minute Series topographic map, the geodetic elevation is about 20 to 25 feet above mean sea level in the residential area.

2.2 Regional Geology and Hydrogeology

The site lies in the Inner Plain Geological Province within the Coastal Plain Province. There are complex sequences of Inner Plain deposits that overlie the Cretaceous Formations of the Coastal Plain. Of relevance to this assessment are shallow geologic units, which consist of the Wenonah-Mount Laurel Formation, which overlies the Marshalltown Formation. The Wenonah-Mount Laurel Formation consists of dark gray, silty sand and sand beds intercolated with dark-colored clay, which is up to 130 feet thick. The Marshalltown Formation is a thin deposit (10 to 40 feet thick) made up of silty, glauconitic sand.

In the Inner Coastal Plain Geologic Province there are three principal aquifers or aquifer systems: the Potomac-Raritan-Magothy (PRM) Aquifer System, the Englishtown Aquifer System and the Wenonah-Mount Laurel Aquifer. The PRM Aquifer System is the deepest system, extensive across most of the western portion of southern New Jersey and much of central New Jersey, consists of alternate layers of sand, gravel, silt and clay and is a highly productive and the most used confined aquifer in the Inner Coastal Plain. The Englishtown Aquifer System overlies the PRM, is confined and consists of sand with local clay beds. This aquifer is an important source of water for Ocean and Monmouth Counties to the east of the Site. Aquifer thickness generally ranges between 60 and 140 feet. The Wenonah-Mount Laurel Aquifer overlies the Englishtown Aquifer System, is a confined or partially confined aquifer in the northeast and southwest part of the Inner Coastal Plain, and the aquifer system local to the Site. The thickness of this aquifer generally ranges between 60 and 120 feet.

3.0 SOIL VAPOR INTRUSION CHARACTERIZATION PROGRAM SCOPE AND METHODS

3.1 Overview of Off-Site Investigation Program in Residential Area

The off-site investigations have consisted of several phases of soil, groundwater, soil vapor and indoor air testing. The initial off-site groundwater evaluation, conducted by JMC prior to September 2004, consisted of groundwater quality monitoring at two wells (MW-11 and MW-12), which are located along the north side of Hulme Street. The elevated BTEX concentrations in groundwater at these locations triggered additional hydrogeological and groundwater quality investigations and an indoor air monitoring program, as described below.

A second phase of off-site groundwater monitoring using temporary groundwater probes and two additional monitoring wells was completed by JMC in November 2004. Shortly thereafter (December 2004), JMC conducted an initial indoor air characterization program at three residences (91 Hulme Street, 93 Hulme Street and 103 Hulme Street). As part of the December 2004 indoor air program, Golder Associates conducted ancillary testing to provide additional information for evaluation of soil vapor intrusion into houses. In February and March 2005, JMC conducted additional investigations of soil and groundwater quality in the off-site area.

In May 2005, Golder Associates completed a focused evaluation of soil vapor concentrations at soil gas probes installed directly adjacent to the houses located at 91, 93 and 103 Hulme Street. The purpose of this investigation was to supplement the JMC indoor air study, and to provide data that could be used to evaluate volatilization and soil vapor intrusion potential. It is noted that the February and March 2005 monitoring results were not available to Golder Associates prior to the May 2005 soil vapor program. Finally, JMC completed a second, confirmatory round of indoor air quality monitoring in the above residences in September 2005.

The scope and methods for the off-site investigations are described in greater detail below. The focus of these sections is characterization used to evaluate soil vapor intrusion at the three residences of potential concern.

3.2 Soil Characterization Program (JMC; February to March 2005)

Twenty-two samples from 16 boreholes were analyzed for BTEX and TPH (selected samples). Soil samples were screened for possible hydrocarbon contamination using a photoionization detector (PID), and one to two samples per borehole were selected for chemical analysis from each borehole. Soil samples analyzed were from the 6-inch interval corresponding to the highest PID reading. However, if no PID readings were

recorded, samples were collected from the 6-inch interval above the groundwater table. Selected soil samples were also analyzed for total carbon, total organic carbon, total inorganic carbon, and chemical oxygen demand (COD). No grain size distribution data is provided in the report by JMC.

3.3 Groundwater Characterization

3.3.1 Using Temporary Well Points (JMC; July 2004 to March 2005)

Thirty-three temporary well points were installed at locations north of the Agway property, including locations along an abandoned storm sewer line identified in a ground penetrating radar (GPR) survey. The storm sewer runs in a north-south direction, east of 103 Hulme Street. These well points were installed between July 2004 and March 2005. Groundwater samples were collected from each temporary well point and submitted for laboratory analyses of BTEX compounds. Selected temporary well point samples were also analyzed for total dissolved solids (TDS) and COD. The temporary well points in the area of the residences had well screens installed between 4 feet and 14 feet below ground surface.

3.3.2 Using Monitoring Wells (JMC; prior to September 2004 to March 2005)

Monitoring wells were installed at six off-site locations in three phases: prior to September 2004 (MW-11 and MW-12); November 2004 (MW-13 and MW-14); and March 2005 (MW-15 and MW-16). Two-inch diameter, schedule 40 PVC monitoring wells were constructed to total depths of 20 feet, with 8-foot (MW-11), 10-foot (MW-12) or 15-foot (MW-13 to 16) well screens (0.020-inch slot).

3.4 Soil Vapor Intrusion Characterization Program

3.4.1 Ancillary Testing (Golder Associates; December 2004)

The following ancillary testing was conducted by Golder Associates:

Building Survey: The basement of each house was visually inspected for foundation conditions and storage of chemicals that could be sources of background VOCs.

Weather Conditions: The weather conditions at the South Jersey regional airport were obtained. This weather station is located about 4.5 miles southwest of the Agway site.

Differential Pressure: The differential pressure was measured between indoor and outdoor air using an Omniguard III, by Engineering Solutions, Inc., on December 14 and 15, 2004 (i.e., at the same time indoor air testing was conducted).

At 91 Hulme Street, the pressure lead (narrow diameter tubing) was routed up the stairs and out the front door of the house since the basement window could not be opened. During pressure monitoring, the front door was open, while the screen door (with glass insert) was closed. Tubing was inserted through weatherstripping (brush-type) at the top of the door.

At 93 Hulme Street, the window was open a crack to accommodate the pressure lead for most of the monitoring duration, although toward the end of monitoring (9:30 AM on December 15), the seal around the slightly opened window was improved using duct tape.

At 103 Hulme Street, the lead was routed out through a ½” crack that existed between the bottom of the window and the basement wall (i.e., window was not tightly sealed in the wall). The rest of the crack was filled with weatherstripping.

Indoor Air Quality Screening: A screening survey of total organic concentrations in indoor air was conducted on December 14, 2004 using a field photoionization detector (PID) capable of measuring ppbV levels of total hydrocarbon concentrations (ppbRAE by RAE Systems).

Subslab Soil Gas Quality Screening: The subslab soil gas concentrations were measured at two probes installed at 91 Hulme Street and one probe at 103 Hulme Street. The subslab soil gas monitoring was conducted using a PID (ppbRAE or MiniRAE) and multi-gas monitor for O₂, CO₂, O₂ and CH₄ (VRAE Model 7800). The subslab soil gas concentrations were measured shortly before and after the Summa canister sampling conducted by JMC. A ppbRAE was used on December 14; however, a MiniRAE was used on December 15 since dust had caused the ppbRAE to malfunction. To verify oxygen concentrations measured, two separate VRAE instruments were used. All instruments were calibrated prior to use.

Well Headspace Gas Screening: Well headspace vapor readings were taken from wells MW-11 and MW-12 after purging two well volumes.

3.4.2 Subslab Vapor and Indoor Air Testing (JMC; December 2004 and September 2005)

The indoor air and subslab vapor testing program consisted of collection of 24-hour Summa canister samples from the following locations on December 14 and 15, 2004, and on September 28 and 29, 2005:

- 91 Hulme Street: Subslab (two samples), Basement, First Floor;

- 93 Hulme Street: Basement, First Floor (no subslab samples were obtained since this house has a dirt floor); and,
- 103 Hulme Street: Subslab, Basement, First Floor.

In addition, ambient (outdoor) air samples were concurrently obtained from near to the three residences.

Summa canister samples were analyzed for volatile organic compounds (VOCs) (USEPA Method T0-15) by Accutest Laboratories located in Dayton, New Jersey.

3.4.3 Soil Vapor Testing (Golder Associates; June 2005)

The soil vapor testing consisted of field screening testing (oxygen, carbon dioxide, methane) and collection of Summa canister samples for VOC analyses from seven soil gas probes installed near 103 Hulme Street and 91/93 Hulme Street. The probes were installed within about 2 to 4 feet of the houses, and were installed in grass- or gravel-covered areas.

Soil gas probes were installed in holes created by driving a hollow steel probe into the ground using a percussion hammer. The diameter of the steel probe tip was $\frac{7}{8}$ inch, whereas the diameter of the rest of the probe was $\frac{3}{4}$ inch. Soil gas probes were constructed of an aluminum tip (“bubbler”) connected to $\frac{1}{8}$ inch OD tubing (Nylaflow). Tygon tubing ($\frac{1}{4}$ inch OD and $\frac{3}{8}$ inch OD) was used to connect nylon tubing. Only new tips and tubing were used. After lowering the tip and tubing in the hole, clean silica sand (FilPro Spec # MP-FilPro50-5) was placed surrounding the tip and up to 3 inches above the base of the tip. Granular bentonite was placed above the filter pack (BenSeal Cas# 1302-78-9 Grouting Bentonite Granules). The chips were carefully hydrated with distilled/deionized water. The sand filter pack and bentonite seal were carefully tamped down using a tamping rod. At ground surface the tubing was connected to a two-valve valve. The valve was buried slightly below ground beneath a protective casing (2-inch diameter PVC cap).

The collection of soil gas samples for field analyses of light gases and total hydrocarbons was performed on June 9 and 10, 2005. Three probe volumes were purged using either a syringe or battery-powered air sampling pump at a flow rate of 100 ml/min. After purging, a soil gas sample was collected using a 1-litre Tedlar bag. Oxygen, carbon dioxide and methane readings were obtained using a Landtec GEM-2000 gas monitor and total hydrocarbons were measured using a PID (ppbRAE or MiniRAE). At most probes, a second reading was taken by directly connecting the GEM-2000 or PID to the probe (“direct reading”). The GEM-2000 flow rate is approximately 500 mL/min while the PID flow rate is approximately 400 mL/min. During purging and sampling, the vacuum in the line was monitored using a digital manometer, and was found to be less than 5 inches of water. A tracer test at the first soil gas probe installed (103L-5) was conducted using

helium. Helium was released into air below a plastic shroud placed over the soil gas probe. The helium concentration in the soil gas sample exceeded 0.1 percent suggesting possible air ingress through connections in tubing or possible openings in the bentonite seal. All tubing connections were subsequently carefully checked.

One-litre Summa canister samples were obtained for laboratory analyses of VOCs on June 10, 2005. The Summa canisters were batch certified as clean prior to shipment from the laboratory. The Summa samples were obtained over a 20 minute period; therefore, the sampling rate was approximately 50 ml/min. No in-line moisture block was used during sampling. However, the translucent tubing was carefully observed for any signs of moisture during sampling; none was observed. Summa canister samples were analyzed for volatile organic compounds (VOCs) (USEPA Method T0-15) by STL Laboratories located in Burlington, Vermont.

At one location, a field duplicate was obtained by filling two Summa canisters in succession. The comparison of the field duplicate indicates that the relative percent differences (RPD) for the analyzed parameters ranged from 0 to 90 percent depending on the chemical (Appendix IV). Since the RPD includes both analytical and sampling variability (i.e., canisters were collected in succession), the range of RPDs are not unexpected. For some chemicals, the detected concentrations were only slightly above (within 5X) the laboratory reporting limit thus contributing to the variability. The vacuum in the canister pressure was measured before and after sampling using a pressure gauge supplied by the laboratory. The vacuum before sampling ranged from 30 to 31 inches mercury, whereas after sampling, the vacuum ranged from 3.3 to 7 inches mercury (Appendix IV). The residual vacuum in the canister was within an acceptable range.

4.0 SOIL VAPOR INTRUSION CHARACTERIZATION PROGRAM RESULTS

4.1 Soil Characterization Program (JMC; February to March 2005)

4.1.1 91/93 Hulme Street

The soil types encountered at monitoring well MW-12, located near 91/93 Hulme Street, are summarized as follows:

- 0-5.0 feet: Brown fine SAND, little clay;
- 5.0-10 feet: Light brown CLAY with some fine sand;
- 10-15 feet: Light brown CLAY with some fine sand; and,
- 15-20 feet: Light brown/Green fine SAND with some clay.

Different soil conditions were encountered at Geoprobe locations 91A and 91B with interlayered sand and sand with silt observed between 4 and 12 feet depth. Borehole logs for the above locations are provided in Appendix II.

The headspace vapor concentrations, measured using a PID, at two Geoprobe locations near 91/93 Hulme Street, are presented in Figure 2.

The laboratory testing of soil samples from two Geoprobe boreholes (91A and 91B) near 91/93 Hulme Street indicated relatively low BTEX concentrations at 9 to 9.5 feet depth (Figure 3). The maximum benzene and xylenes concentrations at these two boreholes were 1.2 mg/kg and 3.1 mg/kg, respectively.

4.1.2 103 Hulme Street

The soil types encountered at monitoring well MW-11, located near 103 Hulme Street, are summarized as follows:

- 0-2.5 feet: brown to dark brown fine SAND;
- 2.5-5.0 feet: Dark green gray fine SAND;
- 5.0-7.5 feet: Green grey fine SAND;
- 7.5-10.0 feet: Green green fine SAND (wet);
- 10.0-15.0 feet: Green tan SAND with some clay; and,
- 15.0-20.0 feet: Green tan SAND with some clay.

Similar soil conditions were encountered at Geoprobe locations 103E and 103F, except that trace silt and clay was present in the sand layer from 7 to 10 feet. Borehole logs for the above locations are provided in Appendix II.

The headspace vapor concentrations, measured using a PID, at two Geoprobe locations near 103 Hulme Street, are presented in Figure 4.

The laboratory testing of soil samples from three Geoprobe boreholes near 103 Hulme Street indicated elevated BTEX concentrations in samples obtained below 9 feet depth below ground surface (Figure 3). Typically, the benzene and xylenes concentrations were the minimum and maximum individual BTEX concentrations measured in soil, respectively; therefore, the discussion below presents data for these compounds to bracket the range in concentrations observed. At 103E (9 to 9.5 feet), the benzene and xylene concentrations were 1.1 mg/kg and 247 mg/kg, respectively. Slightly higher concentrations were measured in deep samples from 103A (11.5 to 12 feet), where the benzene and xylenes concentrations were 18 mg/kg and 897 mg/kg, respectively. The maximum total BTEX concentration was approximately 1,550 mg/kg. The individual BTEX concentrations in samples from 5.5 to 6.5 feet were less than 1 mg/kg. There was a significant decrease in BTEX concentrations at sampling locations west of 103 Hulme Street.

4.2 Groundwater Characterization

4.2.1 Hydrogeological Conditions

The groundwater flow direction is toward the north to northwest (Figures 5 and 6). The depths to the water table at two monitoring wells closest to 103 Hulme Street and 91/93 Hulme Street are provided in Table 1.

4.2.2 Groundwater Chemistry

The results of analyses of groundwater samples from the temporary well points documented the presence of two distinct off-site groundwater contaminant plumes associated with wells MW-11 to the east and MW-12 to the west (Figure 7).

91/93 Hulme Street

The BTEX concentrations in groundwater were elevated near the street in front of these residences at wells MW-12 and 91A (Figure 7). For MW-12, the maximum concentration was measured for benzene (7,470 ppb) followed by toluene (6,020 ppb). For 91A, the maximum concentration was measured for toluene (8,250 ppb) followed by xylenes (4,850 ppb).

At one Geoprobe well located west of 91 Hulme Street, the BTEX concentrations were much lower, with a measured benzene concentration of 5.9 ppb. The BTEX plume is not well delineated downgradient of 91/93 Hulme Street, but it appears that concentrations in groundwater may decrease significantly to the north.

103 Hulme Street

The BTEX concentrations in groundwater were elevated south and east of this residence at well MW-11, and temporary well points 103E and 103F (Figure 7). As for soil, the minimum and maximum individual BTEX concentrations were measured for benzene, which ranged from 11.5 ppb to 1,510 ppb at these wells, and xylenes, which ranged from 395 ppb to 8,590 ppb. There was a slight decrease in concentrations to the north, and a steep concentration gradient to the west (i.e., cross hydraulic gradient) with non-detect concentrations in groundwater (97A/B) beside the house west of 103 Hulme Street. The plume appears to be relatively narrow and just off-set from 103 Hulme Street; therefore strong lateral concentration gradients are expected below this house.

JMC report that the abandoned storm sewer line, located near 103 Hulme Street, does not appear to have had an effect on plume migration.

4.3 Soil Vapor Intrusion Characterization Program

4.3.1 Ancillary Testing (Golder Associates; December 2004)

The results of the ancillary testing conducted by Golder Associates during the December 2004 monitoring program are provided below.

Building Survey: The results of the building survey are summarized in Table 2 with details provided in Appendix I. Site photographs are also provided in Appendix I. Pertinent observations include the houses are relatively old, the basements have low ceilings and appear to be poorly ventilated, although compared to 91 and 93 Hulme Street, 103 Hulme Street had more leaks around windows, the air was fresher and basement was cooler. Two of the three homes (93 Hulme Street and 103 Hulme Street) have either partial or full dirt floor basements. The third home (91 Hulme Street) has a concrete floor slab. A very strong wood burning odor was noted at 103 Hulme Street.

Weather Conditions: The weather conditions just prior to and during the December 2004 indoor air sampling are shown in Figure 8. During the indoor air sampling period, the barometric pressure rose steadily (about 0.4 inches Hg) and the temperature decreased from about 39 °F at noon on December 14 to 22 °F at 7:00 AM on December 15. The temperature on December 15 increased to about 35 °F at 2:00 PM.

The weather conditions just prior to and during the June 2005 soil vapor sampling were warm temperatures (66 °F to 90 °F) and relatively stable barometric pressures.

The monthly precipitation in 2004 and 2005, and daily precipitation during the ten days prior to the December 2004 and June 2005 monitoring programs are provided in Table 3.

The average annual precipitation for the Mount Holly area of New Jersey is about 44 to 46 inches per year (Oregon State University Spatial Climate Analysis Service, 2000); therefore, the precipitation in 2004 and 2005 has been close to average levels. The November 2004 monthly precipitation (5.02 inches) was slightly above normal levels. While the May and June 2005 monthly precipitation was near normal levels, there was a heavy rainfall event (1.59 inches) on June 6, three days prior to soil vapor sampling.

Pressure Measurements: The differential pressure measurements are provided in Figures 9, 10 and 11, and are summarized as follows:

- **91 Hulme Street:** The basement was positively pressured (0 Pa to 2.5 Pa) relative to outside. However, pressure measurements were only taken over a relatively short period of time (25 minutes).
- **93 Hulme Street:** The basement was negatively pressurized (about -1 Pa to - 4 Pa) relative to outside. The basement depressurization increased over the monitoring interval.
- **103 Hulme Street:** The basement was negatively pressurized (about -2 Pa to -6 Pa) relative to outside. The basement depressurization decreased slightly from about -4.5 Pa to -3 Pa between about 1:00 PM on December 14 to 3:00 AM on December 15, and then increased over the remainder of the monitoring duration.

At 93 Hulme Street, the slightly opened window was not sealed tightly until just before the end of the monitoring duration (9:30 AM on December 15) when tape was used to improve the seal. No difference in pressure readings were observed when the seal was added.

The reasons for the pressure trends are not readily apparent. One possible reason for the increase in negative pressure at 93 Hulme Street may have been the decrease in outdoor temperature, which may have resulted in increased stack effect due to the greater difference in indoor and outdoor temperatures. It is noted that the two homes with negative pressures had either a partial or full dirt floor basements.

Indoor air quality screening: The results of screening of indoor air quality, conducted on December 14 prior to Summa canister deployment, are provided in Table 4 and summarized below. The PID measurements were made at mid-height in the room (about 3 ft) and directly above the floor at various locations.

- **91 Hulme Street:** No detectable PID concentrations were measured in ambient air either at mid-height or directly above the floor.
- **93 Hulme Street:** No detectable PID concentrations were measured in ambient air either at mid-height or directly above the floor.
- **103 Hulme Street:** While no detectable PID concentrations were measured in ambient air in the main floor of house, when going down the stairs into the basement, the PID concentrations began to increase. The PID concentrations at mid-height in the basement in areas with concrete floor ranged between about 500 ppbV and 1,200 ppbV. The peak PID concentration above the dirt floor area peaked at approximately 1,700 ppbV.

No detectable PID concentrations were detected in outdoor air beside the houses.

Subslab soil gas monitoring: The results of subslab soil gas monitoring are provided in Table 4. At 91 Hulme Street, the PID readings at the two subslab probes prior to Summa canister collection on December 14, 2004 were 8,100 ppbV (Eastern Hole) and 5,980 ppbV (Southwest Hole) (Figure 12). The oxygen concentrations at the Eastern and Southwest locations were 21.3 percent and 21.0 percent, respectively, prior to collection of the Summa canister sample. After Summa canister collection on December 15, the PID concentrations were 500 ppbV and 11,700 ppbV, respectively.

At 103 Hulme Street, the PID reading at the Northern subslab probe was 7,065 ppbV and the oxygen content was 20.9 percent. The Northern subslab probe was subsequently used for pressure monitoring, while the Southern probe was used for collection of subslab sample using Summa canister. After Summa canister collection on December 15, the PID reading at the Northern probe was 600 ppbV.

Accuracy of PID readings: The elevated PID readings in indoor air at 103 Hulme Street and relatively large variability in subslab PID readings may have been caused by dust and moisture entering the PID. Condensation on the PID sensor results in a slowly rising false positive response that may reach several hundred ppm (Western Australia Department of Environment, 2005). Microparticles of dust and wood soot absorb moisture more readily than clean surface exacerbating the effect of moisture. Since conditions in homes were dusty and in 103 Hulme Street there was a very strong wood burning odor, the PID readings may be biased high.

4.3.2 Subslab Vapor and Indoor Air Testing (JMC; December 2004)

The results of laboratory analyses of subslab vapor and indoor air for VOCs is presented in Table 5 (selected compounds), with analytical results presented in Appendix III. The subslab vapor and indoor air concentrations were relatively low, and were close to or below the analytical reporting limit for many compounds.

The December 2004 monitoring indicated that the maximum benzene, toluene, ethylbenzene and xylenes concentrations in indoor air were $2.3 \mu\text{g}/\text{m}^3$, $74 \mu\text{g}/\text{m}^3$, $1.7 \mu\text{g}/\text{m}^3$ and $11 \mu\text{g}/\text{m}^3$, respectively. There were minor differences between subslab vapor and indoor air concentrations. For example, as shown in Table 5, for the compounds evaluated, the ratio between the subslab vapor and indoor air concentrations ranged from 1.1 to 55. The cyclohexane concentrations in subslab vapor were low (less than $41 \mu\text{g}/\text{m}^3$) and the 2,2,4-trimethylpentane concentrations were below the analytical reporting limit.

The summation of individual compound concentrations on the standard analyte list (24 compounds) and tentatively identified compounds (TICs) reported by the analytical laboratory were much lower than the total concentrations measured using a PID. For example, for the subslab vapor sample at 103 Hulme Street, the sum of the standard list and TICs was $513 \mu\text{g}/\text{m}^3$, compared to subslab PID concentrations that were between 600 ppbV and 7,065 ppbV. For most VOCs, the factor used to convert $\mu\text{g}/\text{m}^3$ to ppbV is between 2 and 7. The reason for the large difference may be related to additional compounds detected by the PID or bias caused by moisture and dust. The TO-15 results are considered to be more accurate.

The September 2005 monitoring indicated lower BTEX concentrations than those measured in December 2004 (Appendix III). The maximum benzene, toluene, ethylbenzene and xylenes concentrations in indoor air for the September monitoring were $0.77 \mu\text{g}/\text{m}^3$, $14 \mu\text{g}/\text{m}^3$, $1 \mu\text{g}/\text{m}^3$ and $3.6 \mu\text{g}/\text{m}^3$, respectively. The subslab vapor concentrations were at similar concentrations to those measured in indoor air.

For analysis subsequently presented in this report only the December 2004 results are used since indoor air concentrations were slightly higher for this monitoring event, and therefore provide for a more conservative assessment of potential vapor intrusion.

4.3.3 Soil Vapor Testing (Golder Associates; June 2005)

Field Screening

The results of field testing of soil gas samples are presented in Table 6. The soil gas probe locations are shown on Figure 12. At soil gas probes, the hydrocarbon concentrations as measured by the PID were relatively low (generally ppbV range), the oxygen was near atmospheric levels (20.9 percent) or only slightly depleted, and the carbon dioxide concentrations were relatively low. The measured soil vapor concentrations are consistent with volatilization from a weak dissolved hydrocarbon source and aerobic biodegradation of hydrocarbons. For example, the oxygen and carbon dioxide levels measured at 103F-4.5 (6.1 percent and 8.2 percent, respectively), are consistent with those expected at sites where aerobic biodegradation is occurring.

Of significance are the higher PID concentrations measured in the well headspace at monitoring well MW-11 (199,000 ppbV) compared to the soil gas probe 103F-4.5 (7,100 ppbV) located 3 feet from MW-11. These results contrast the potential difference in hydrocarbon concentrations off-gassing from a well screened across the water table compared to hydrocarbon concentrations in soil vapor above the capillary fringe.

The field soil gas readings for deeper probes (i.e., those 6 feet or deeper) may have, to varying degrees, been biased by atmospheric intrusion caused by high soil vacuums generated during sampling, which were a result of the higher soil moisture near the water table. The depth to the water table during soil gas sampling was approximately 6.55 ft. below ground surface at nearby monitoring well MW-11. As discussed in Section 4.3.1, approximately 1.59 inches of rain fell three days before sampling, which may have contributed to higher soil moisture and difficulty in obtaining a representative soil gas sample.

Laboratory Analyses

The results of laboratory analysis of soil vapor for VOCs are presented in Table 5 (selected compounds), with analytical results presented in Appendix IV. The soil vapor concentrations were relatively low and for most chemicals were within one order-of-magnitude of the concentrations measured in indoor air or subslab vapor samples. The soil vapor concentrations measured near 103 Hulme Street were slightly higher than those measured near 91/93 Hulme Street.

The highest soil vapor concentrations were measured at the soil gas probe located in front (south) of 103 Hulme Street at 4.5 feet depth below ground surface (103F-4.5 feet). The lower soil vapor concentrations measured in the sample from 6 feet depth, at this same location, is likely due to atmospheric intrusion, which is hypothesized to have occurred as a result of high soil moisture near the water table, as described above.

The highest soil vapor concentrations, relative to subslab vapor and indoor air, were measured for 1,3,5-trimethylbenzene (TMB) and xylenes. At the soil gas probe in front of 103 Hulme Street (103F-4.5 feet), the 1,3,5-TMB concentrations in soil vapor and indoor air were $98 \mu\text{g}/\text{m}^3$ and $<0.98 \mu\text{g}/\text{m}^3$, respectively, while the xylenes concentrations in soil vapor and indoor air were $56 \mu\text{g}/\text{m}^3$ and $7.8 \mu\text{g}/\text{m}^3$, respectively.

5.0 DATA ANALYSIS, MODELING AND DISCUSSION

5.1 Overview

The results of the field investigation at the Mount Holly site indicate elevated dissolved hydrocarbon concentrations in shallow groundwater and in soil below approximately 9 feet depth below ground surface at sampling locations near residences located at 91, 93 and 103 Hulme Street. The total BTEX concentrations in groundwater from several wells exceeded 10 mg/L while in soil, the total BTEX concentrations below 9 feet depth exceeded 1,000 mg/kg. The results of headspace vapor testing indicated a relatively sharp vertical boundary between soil with and without elevated hydrocarbon concentrations. The measured groundwater and soil concentrations suggest residual non-aqueous phase liquid (NAPL) may be present in soil below the water table near to the residences. It is uncertain whether NAPL is present below residences.

The soil and groundwater concentrations near to 91, 93 and 103 Hulme Street are only partially delineated. At 103 Hulme Street, there were relatively high concentrations east of this house; however, there was a sharp decrease in concentrations to the west. Elevated hydrocarbon concentrations were below perhaps half of the house at 103 Hulme Street. The extent of contamination at 91 and 93 Hulme Street is less certain, but concentrations below these houses were likely lower than below 103 Hulme Street.

The measured deep soil vapor concentrations near to the water table were within one to two orders-of-magnitude of background levels; subslab vapor and indoor air concentrations were slightly lower than the deep soil vapor concentrations and were within typical background levels (NJDEP, 2005; NYDOH, 2005). The likely cause for the low soil vapor concentrations was the high water table in June 2005, which results in soil contamination being submerged. As a consequence, volatilization to soil vapor is limited to that occurring from only dissolved hydrocarbons in groundwater. Based on the headspace vapor profile, the top of the soil contamination zone was approximately 2 feet below the water table in June 2005.

5.2 Calculation of Upper Bound Empirical Groundwater-to-Indoor Air Vapor Attenuation Factors

The indoor air concentrations measured inside residences can be attributed to background indoor sources since soil vapor and subslab vapor concentrations were low and since indoor air concentrations measured using Summa canisters and laboratory analysis were within typical ranges of published background indoor air concentrations. When there is no evidence for soil vapor intrusion, the groundwater and indoor air data can be used to calculate an empirical vapor attenuation factor that is an upper bound value, meaning the true vapor attenuation factor is lower than this upper bound. When the source groundwater concentrations are relatively high, upper bound attenuation factors can be used to provide insight on the accuracy of attenuation factors used for guidance development purposes.

Upper bound empirical attenuation factors were calculated for 103 Hulme Street. The estimated groundwater concentration below the house was obtained by taking the average of the three sampling locations east of this residence (MW-11, 103E, 103F), and then dividing this concentration by two to reflect likely lateral east-west variation in concentration. The upper bound groundwater-to-indoor air attenuation factors for BTEX chemicals range from 2.7×10^{-6} to 1.9×10^{-5} (Table 5) for a depth to vapor contamination source of approximately 2.65 ft. below the building foundation. The conceptual site model and vapor attenuation factors are summarized in Figure 13.

5.3 Comparison to New Jersey VI Guidance BTEX Vapor Attenuation Factors

For the BTEX compounds, the New Jersey Ground Water Screening Levels (GWSLs) were derived by applying a 10X reduction to the generic alpha's calculated assuming no degradation, which for BTEX compounds are 1.04×10^{-3} to 1.16×10^{-3} . The NJ generic alpha's were derived for a US Soil Conservation Service Sand soil texture using the Johnson and Ettinger model and default NJ building parameters. When the 10X reduction is applied, the resulting guidance alpha's (1.04×10^{-4} to 1.16×10^{-4}) are 5.5 to 43 times higher than the upper bound empirical vapor attenuation factors (Table 5).

Semi-site specific² vapor attenuation factors were also calculated for a Loamy Sand. This is the inferred soil type based on the shallow soil descriptions on borehole logs, which indicates that unsaturated soil consist primarily of fine sand, with trace silt and clay. A US SCS Loamy Sand soil texture is the closest match based on this description. The semi-site specific calculations were performed using the Johnson and Ettinger model (USEPA Superfund Spreadsheet V3.0). As part of this modeling, only the soil type was adjusted since refinement of default building properties was not considered warranted based on the available information. The semi-site specific BTEX vapor attenuation factors for Loamy Sand, which range from 3.85×10^{-3} to 5.22×10^{-4} , are about 2.5X to 3X lower than the generic factors for Sand without the biodegradation factor. If a 10X factor were to be applied to the alpha's for Loamy Sand, the adjusted alpha's for Loamy Sand would be 2.7 to 17 times higher than the upper bound empirical attenuation factors.

5.4 Soil Vapor Profiles Predicted Using Johnson and Ettinger Model

A modeling study was conducted to evaluate the predicted soil vapor profile below 103 Hulme as influenced by variable water-filled porosity within the capillary zone and first-order biodegradation within a dominant soil layer. The model used for this purpose is a new semi-analytical spreadsheet model ("J&E-BIO") for one-dimensional transport developed by Golder Associates that incorporates first- and zero-order oxygen-limited biodegradation over a dominant soil layer (Johnson et al., 1998) and that provides the

² "Semi-site" is used to describe this modeling since only the soil type was modified

predicted soil vapor profile below the house (the USEPA Superfund spreadsheet does not have this capability). The J&E-BIO model utilizes an identical mathematical formulation for diffusion and advection to that incorporated in the Johnson and Ettinger (1991) algorithm. Since site monitoring data indicates oxygen is present below the building foundation at 103 Hulme, first-order biodecay was assumed to be not constrained by oxygen limitations (i.e., the oxygen-limited function of the model was turned off).

The model has the capability to simulate diffusive chemical transport through eight soil layers (although six layers were assumed for this work) with biodegradation limited to one soil layer. Within this layer, the mass flux equations for diffusive flux and mass loss through biodegradation were solved using an iterative approach (Excel SOLVER) over 30 sub-layers. As part of the model development process, the biodegradation-modified Johnson and Ettinger model was compared to the RISC model³ (which also includes first-order decay). For the first-order decay rate used for this study, the concentrations predicted by both models were within two percent.

The J&E-BIO model was used to calculate soil vapor concentration profiles for xylenes below 103 Hulme. Xylenes were chosen since soil vapor concentrations were slightly higher than for most other chemicals. Initially, the J&E-BIO model was used to evaluate diffusive transport with biodegradation turned off. The biodegradation scenario is described in Section 5.5.

The first three scenarios with biodegradation turned off were:

1. Generic analysis using NJDEP generic default parameters, which assumes a US SCS Sand texture (i.e., Tier 2 analysis using USEPA terminology).
2. Semi-site specific analysis for Loamy Sand using USEPA default soil moisture parameters moistures, and NJDEP generic defaults for other parameters (i.e., Tier 3 analysis).
3. Site specific analysis for Loamy Sand where the water-filled porosity was estimated using the Van Genuchten water retention model. The NJDEP generic defaults were used for other parameters (i.e., Tier 4 analysis).

The results of the soil vapor profile modeling are shown in Figure 14. The soil vapor profiles indicate attenuation within the vadose zone, but somewhat elevated concentrations below the foundation. The predicted indoor air concentrations for the above three scenarios ranged from 0.023 to 0.37 mg/m³. The water-filled porosity within

³ The RISC Version 4.0 model is a human health risk assessment model developed by Lyn Spence and BP.

the capillary fringe is lowest for the generic analysis using Sand (Tier 2), which results in the highest predicted soil vapor concentrations. When Loamy Sand defaults are used (Tier 3), slightly lower soil vapor concentrations are predicted. The soil vapor concentrations for both scenarios are much higher than the measured concentrations (Figure 14). For both the Tier 2 and Tier 3 analysis, a bi-linear soil moisture model is used for the capillary fringe and unsaturated zone. A similar assumption was made by USEPA in deriving the semi-site specific attenuation factor charts in the draft vapor intrusion guidance (USEPA, 2002). This underestimates the soil moisture; however, for the purpose for setting regulatory guidance, a lower soil moisture was desired to off-set possible water table fluctuations and contaminant migration within the capillary fringe.

To evaluate the influence of soil moisture within the capillary transition zone, the Golder multi-layer model was used to more accurately simulate soil vapor transport through a variably saturated Loamy Sand soil (Tier 4). The water-filled porosity was calculated using the Van Genuchten model and curve-fitting parameters recommended by Schaap and Leij (1998). It was assumed that the matric potential predicted by the water retention curve is equivalent to the height above the water table, which is a reasonable assumption when there is no surface water infiltration. The soil vapor concentration profile estimated using the modeled soil moisture profile was much lower than the Tier 2 or 3 profile, but was still higher than the measured soil vapor concentrations.

5.5 Soil Vapor Profile Predicted Using First-Order Biodegradation Model

The J&E-BIO model was also used to evaluate the influence of biodegradation on the predicted soil vapor profile for xylenes below 103 Hulme Street (Figure 15). Since oxygen concentrations were elevated in soil gas below 103 Hulme Street, the use of a first-order decay model was considered appropriate. A relatively thin soil layer was simulated (0.15 m thick) consistent with observations at sites where bioattenuation over relatively thin layers has been observed (Fischer et al., 1996; Hers et al., 2000, Kjeldsen et al., 2003).

The first-order decay rate chosen was 0.036 hr^{-1} , which provided a reasonable match between the predicted and measured soil vapor concentrations. A first-order decay rate of 0.05 hr^{-1} is between the range of decay rates (0.018 to 1.8 hr^{-1}) used by Abreau (2005) to simulate the biodecay of BTEX vapors. The simulations for xylenes (Figure 15) predicted significant bioattenuation over the 0.15 m thick soil layer, with lower modeled than measured concentrations. The predicted vapor attenuation factor for the simulation that included bioattenuation was 2.8×10^{-7} , compared to 7.2×10^{-5} without bioattenuation.

6.0 CONCLUSIONS

Several phases of field investigations were completed at the Mount Holly site to enable evaluation of soil vapor intrusion into houses located near the former Agway industrial facility. The field investigations included analyses of soil, groundwater, soil vapor, subslab vapor and indoor air near and in three residences (91, 93 and 103 Hulme Street). The soil and groundwater analyses indicate hydrocarbon concentrations were elevated in soil below the water table and in groundwater near to residences. While the soil contamination zone and dissolved groundwater were only partially delineated near these houses, the dissolved concentrations were considered to be higher below 103 Hulme Street. However, there is an east-to-west decline in groundwater concentrations below 103 Hulme Street.

The soil vapor, subslab vapor and indoor air concentrations were relatively low for the BTEX chemicals and other potential chemicals of interest (*e.g.*, cyclohexane, 2,2,4-trimethylpentane). The soil vapor concentrations within one to two feet of the water table were typically only one to two orders-of-magnitude higher than the measured indoor air concentrations indicating a weak vapor contamination source. While soil vapor concentrations were low near the water table, the vapor concentrations in well headspace air were much higher (about 28X) than those measured in a nearby vapor probe. These results contrast the potential difference in hydrocarbon concentrations off-gassing from a well screened across the water table compared to hydrocarbon concentrations in soil vapor above the capillary fringe.

The reason for the low soil vapor concentrations is likely associated with low diffusive transport rates through the capillary transition zone combined with aerobic biodegradation in the vadose zone. The results of modeling confirm low diffusive flux and biodegradation as plausible mechanisms for the observed soil vapor and subslab vapor concentrations. Even without bioattenuation, the modeling study indicated a significant difference in the predicted vapor attenuation factor for loamy sand assuming a bi-linear soil moisture model (*i.e.*, adopted by USEPA and NJDEP for guidance development) compared to a model that incorporates multiple layers and a variably saturated capillary fringe. Particularly for finer-grained soil, the bi-linear model may be conservative.

This study highlights the importance of detailed assessment of conditions and processes near the water table when higher levels of contamination are located below the water table, including the appropriate use of monitoring well vapor phase data. A decline in the water table as a result of prolonged drought or pumping would increase the potential for elevated soil vapor concentrations above the water table. Whether this would translate to a significant potential for soil vapor intrusion into homes is uncertain since there are sharp lateral concentration gradients below houses. It is recommended that consideration be given to additional testing of soil vapor, and possibly indoor air, if there is a significant decline in the water table at the Mount Holly site.

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TABLE 1: Depth to Groundwater in Monitoring Wells

	MW-11 (Near 103 Hulme Street)	MW-12 (Near 91/93 Hulme Street)
December 14, 2004	6.67 ft.	7.84 ft.
March 12, 2005	7.61 ft.	9.21 ft.
June 10, 2005	6.55 ft.	7.95 ft.

Note: All measurements from top of casing, which approximately coincides with ground surface.

TABLE 2: House Characteristics - Mount Holly Site

Address	Type/Age	Levels Including Basement	General Construction	Building Footprint Area	Heating System	Foundation Base	Foundation Walls	Windows	Qualitative Assessment Ventilation	Comments
91 Hulme	Duplex Early 1900s	3	Basement, ~ 4.5ft. below grade, 6 ft. high	16ft. by 25ft.	Natural gas, non-vented gas fireplace	Concrete floor	Concrete block	1	Poor	Window could not be opened, smoker in home
93 Hulme	Duplex Early 1900s	3	Basement, ~ 4.5ft. below grade, 6ft. high	16ft. by 25ft.	Oil-fired furnace, tank inside	Dirt floor, covered with fabric in places	Concrete block & brick	1	Poor	Smoker in home
103 Hulme	Single family dwelling 1916	3	Basement, ~ 4ft. below grade, 5.5 ft. high	28ft. by 14ft.	Natural gas and wood fireplace	Concrete floor, with one dirt floor area (8 ft.x10 ft.)	Concrete block	2	Poor to Moderate	Windows drafty, small cracks, very strong wood burning odour in house, paints, stains, STP gas treatment stored in basement

2004 Data				2005 Data			
Month	Monthly Precipitation (in.)	Date	Daily Precipitation (in.)	Month	Monthly Precipitation (in.)	Date	Daily Precipitation (in.)
January	0.89	Dec. 4	0	January	2.87	May. 30	0
February	2.83	Dec. 5	0	February	1.74	May. 31	0.01
March	3.61	Dec. 6	0.04	March	1.84	Jun. 1	0
April	3.67	Dec. 7	0.6	April	4.21	Jun. 2	0
May	2.01	Dec. 8	0.11	May	1.82	Jun. 3	0.81
June	1.83	Dec. 9	0.5	June	4.44	Jun. 4	0.04
July	11.41	Dec. 10	0.17	July	4.13	Jun. 5	0
August	4.57	Dec. 11	0.09	August	5.54	Jun. 6	1.59
September	4.53	Dec. 12	0	September	0.61	Jun. 7	0
October	2.22	Dec. 13	0.05	October	11.96	Jun. 8	0
November	5.02	Dec. 14	0	November	3.19	Jun. 9	0
December	3	Dec. 15	0	December	2.73	Jun. 10	0.46
Total	45.59				45.08		

Note: Weather data from South New Jersey Regional Airport

Jan 2004 was dry

Feb.-March about normal

May and June somewhat dry

July much above normal

August and Sept. slightly above normal

November slightly above normal

Rainfall through Nov. approximately normal (normal for year is about 44-46")

**TABLE 4: Field Screening of Subslab Vapour, Indoor Air and Well Headspace Concentrations
December 2004**

Address	Sample Type	Sample Location	Date	Time	PID		VRAE Readings (%)			
					Reading	Units	CO	LEL	H ₂ S	O ₂
91 Hulme St.	Indoor Air	Basement (~ 3 ft height)	12/14/2004	1045	ND	ppbV	0	0	0	21.4
91 Hulme St.	Subslab Vapor	Eastern Subslab	12/14/2004	1115	8100	ppbV	0	0	0	21.3
91 Hulme St.	Subslab Vapor	Eastern Subslab	12/15/2004	1135	500	ppbV	0	0	0	20.9
91 Hulme St.	Indoor Air	Above floor & above crack between floor and walls (~ 1/4 in)	12/14/2004	1045	ND	ppbV	0	0	0	21.4
91 Hulme St.	Subslab Vapor	Southwest Subslab	12/14/2004	1100	5980	ppbV	0	0	0	21
91 Hulme St.	Subslab Vapor	Southwest Subslab	12/15/2004	1115	11700	ppbV	0	0	0	20.9
93 Hulme St.	Indoor Air	Basement (~ 3 ft height) (dirt floor home)	12/14/2004	945	ND	ppbV	0	0	0	21.4
93 Hulme St.	Indoor Air	Above floor & above crack between floor and walls (~ 1/4 in)	12/14/2004	945	ND	ppbV	0	0	0	21.4
103 Hulme St.	Outdoor Air	Beside house	12/14/2004	1330	ND	ppbV	0	0	0	20.9
103 Hulme St.	Indoor Air	Above Concrete Floor Area (~ 3 ft height)	12/14/2004	1334	1200	ppbV	0	0	0	20.9
103 Hulme St.	Indoor Air	Above Dirt Floor Area (~ 3 ft height)	12/14/2004	1250	1700	ppbV	NM	NM	NM	NM
103 Hulme St.	Subslab Vapor	Northern Subslab	12/14/2004	1300	7065	ppbV	0	0	0	21
103 Hulme St.	Subslab Vapor	Northern Subslab	12/15/2004	1331	600	ppbV	0	0	0	20.9
MW-11	Well Vapor	Reading 1 - at onset of purge	12/15/2004	1213	1,364,000	ppbV	0	8	1	20.2
MW-11	Well Vapor	Reading 2 - after purging 1 well volume	12/15/2004	1214	1,041,000	ppbV	6	4	1	20.1
MW-11	Well Vapor	Reading 3 - after purging 1.5 well volumes	12/15/2004	1216	877,000	ppbV	7	3	1	20.1
MW-11	Well Vapor	Reading 4 - after purging 2 well volumes	12/15/2004	1217	790,000	ppbV	9	4	1	20.1
MW-12	Well Vapor	Reading 1 - at onset of purge	12/15/2004	1230	303,000	ppbV	1	0	0	19.5
MW-12	Well Vapor	Reading 2 - after purging 1 well volume	12/15/2004	1232	255,000	ppbV	1	0	0	20.1
MW-12	Well Vapor	Reading 3 - after purging 2 well volumes	12/15/2004	1234	225,000	ppbV	1	0	0	20.2

Notes:

1. PID measurements on December 14 were obtained using ppbRAE model pgm7240 with 10.6 eV lamp.
2. PID measurements on December 15 were obtained using using miniRAE 2000 with 10.6 eV lamp.
3. Explosive gases measured using a VRAE Model 7800.
4. NM = not measured, ND = not detect

103 Hulme	Benzene		Cyclohexane	Ethylbenzene	Heptane	Hexane	MTBE	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	2,2,4-Trimethylpentane	Xylene (m&p)	Xylene (o)	Xylenes
	Measured Groundwater Concentration (ug/L)													
MW-11 (5/25/2004)	1510	NT	2030	NT	NT	NT	NT	3940	NT	NT	NT	NT	NT	6930
MW-11 (12/3/2004)	1220	NT	2260	NT	NT	NT	NT	4370	NT	NT	NT	NT	NT	8590
MW-11 (3/18/2005)	1510	NT	2410	NT	NT	NT	NT	6140	NT	NT	NT	NT	NT	8590
103E (July 2004 to Mar 2005)	617	NT	765	NT	NT	NT	NT	2420	NT	NT	NT	NT	NT	3340
103F (July 2004 to Mar 2005)	11.5	NT	103	NT	NT	NT	NT	109	NT	NT	NT	NT	NT	395
Measured Soil Vapor Concentration (ug/m³)														
103R-4.0: June 10, 2005; 4 ft depth 2 ft. from east side house	3.8	1.7	2.7	2	2.3	24		12	13	2.8	2.3	9.6	3.9	13.5
103F-4.5: June 10, 2005; 4.5 ft depth	11	1.7	6.5	2	2.3	21		2.1	20	98	22	30	26	56
103F-6.0: June 10, 2005; 6 ft depth	1.6	1.7	2.2	2	1.8	4.7		13	4.9	2.5	2.3	6.1	2.3	8.4
103L-5.0: June 10, 2005; 5 ft depth, 2 feet from west side house	3.8	1.7	2.2	2	1.8	19		4.9	34	7.9	2.3	6.1	3	9.1
Measured Subslab Vapor Concentration (ug/m³)														
Subslab #1 (Dec. 15, 2004)	0.73	37.5	0.91	25	<0.7	<0.72		4.9	1	<0.98	<0.93	3.7	1.1	4.8
Measured Indoor Air Concentration (ug/m³)														
Basement (Dec. 15, 2004)	0.38	<0.67	<0.87	<0.82	1.6	<0.72		3.5	<0.98	<0.98	NR	0.87	<0.87	<0.87
Basement (Dec. 15, 2004) dup	0.42	<0.67	<0.87	<0.82	0.53	<0.72		3	<0.98	<0.98	NR	<0.87	0.87	0.87
Basement (Dec. 15, 2004) avg	0.4	0.34	0.44	0.42	1.065	0.36		3.25	0.49	0.49	NR	0.87	0.87	0.87
First Floor (Dec. 15, 2004)	1.6	48.2	1.4	35	<0.7	<0.72		11	1.7	<0.98	NR	0.87	6.1	7.8
Ratio Subslab/Indoor Air	1.83	-	-	-	-	-		1.51	-	-	-	4.25	1.26	5.52
Measured Outdoor Air Concentration (ug/m³)														
#103	0.54	<0.69	<0.87	<0.83	0.82	0.47		1.5	<0.98	<0.98	NR	<0.87	<0.87	0.61
Measured Vapor Attenuation Factors														
Groundwater concentration (ug/L)	308	-	521	-	-	-		1150	-	-	-	-	-	2054
Henry's Law Constant (13°C)	0.13	-	0.164	-	-	-		0.148	-	-	-	-	-	0.158
Predicted soil vapor concentration (ug/m ³)	40051	-	85499	-	-	-		170175	-	-	-	-	-	324558
Measured groundwater-to-indoor air vapor alpha (upper bound due to background)	< 1.0E-05	-	< 5.1E-06	-	-	-		< 1.9E-05	-	-	-	-	-	< 2.7E-06
NJDEP VI Guidance Generic Sand groundwater-to-indoor air alpha with bio	1.16E-04	-	1.04E-04	-	-	-		1.15E-04	-	-	-	-	-	1.06E-04
Loamy Sand groundwater-to-indoor air alpha NJDEP defaults but no 10X bio	5.22E-04	-	4.52E-04	-	-	-		5.13E-04	-	-	-	-	-	4.63E-04

NR = Not reported

TABLE 5: Results of Groundwater, Soil Vapor, Subslab Vapor and Indoor Air Analyses

91 Hulme	Benzene	Cyclohexane	Ethylbenzene	Heptane	Hexane	MTBE	Toluene	1,2,4-	1,3,5-	2,2,4-	Xylene (m&p)	Xylene (o)	Xylenes
								Trimethylbenzene	Trimethylbenzene	Trimethylpentane			
Measured Groundwater Concentration (ug/L)													
MW-12 (5/25/2004)	6370	NT	470	NT	NT	NT	3490	NT	NT	NT	NT	NT	1850
MW-12 (12/3/2004)	7470	NT	803	NT	NT	NT	4290	NT	NT	NT	NT	NT	3000
MW-12 (3/18/2005)	6500	NT	769	NT	NT	NT	6020	NT	NT	NT	NT	NT	3550
91A (July 2004 to Mar 2005)	3720	NT	1170	NT	NT	NT	8250	NT	NT	NT	NT	NT	4850
91B (July 2004 to Mar 2005)	5.9	NT	ND	NT	NT	NT	ND	NT	NT	NT	NT	NT	ND
Measured Soil Vapor Concentration (ug/m³)													
91F-6.25: June 10, 2005; 6.25 ft depth	4.8	1.7	2.7	2	2.1	4.7	21	15	4	2.3	9.6	3.6	13.2
91L-7.3: June 10, 2005; 7.3 ft depth	3.1	1.7	2.8	2	2.8	21	6.4	2.5	2.3	9.6	3.6	13.2	16.8
93R-6.25: June 10, 2005; 6.25 ft depth	3.8	1.7	2.6	2	1.8	4.7	16	18	4.6	2.3	9.1	3.9	13
Measured Subslab Vapor Concentration (ug/m³)													
Subslab #1 (Dec. 15, 2004)	0.86	41.6	1.1	29	<0.7	0.43	6	1	<0.98	<0.93	4.3	1.3	5.6
Subslab #2 (Dec. 15, 2004)	0.86	34	0.83	20	<0.7	0.58	5.7	0.54	<0.98	<0.93	2.7	0.78	3.5
Average Subslab	0.86	37.8	0.965	24.5	N/A	0.505	5.85	0.77	N/A	N/A	3.5	1.04	4.55
Measured Indoor Air Concentration (ug/m³)													
Basement (Dec. 15, 2004)	0.73	<0.69	0.56	0.53	1.3	0.4	3.8	<0.98	<0.98	NR	1.9	0.52	2.4
First Floor (Dec. 15, 2004)	1.3	48.2	1.7	38	<0.7	0.65	12	1.6	0.49	NR	6.9	2	8.7
Ratio Subslab/Indoor Air	1.18	-	1.96	54.7	-	1.08	1.58	-	-	-	2.26	2.50	2.33

NR = Not reported

TABLE 5: Results of Groundwater, Soil Vapor, Subslab Vapor and Indoor Air Analyses

93 Hulme	Benzene	Cyclohexane	Ethylbenzene	Heptane	Hexane	MTBE	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	2,2,4-Trimethylpentane	Xylene (m&p)	Xylene (o)	Xylenes
	Measured Groundwater Concentration (ug/L)												
MW-12 (5/25/2004)	6370	NT	470	NT	NT	NT	3490	NT	NT	NT	NT	NT	1850
MW-12 (12/3/2004)	7470	NT	803	NT	NT	NT	4290	NT	NT	NT	NT	NT	3000
MW-12 (3/18/2005)	6500	NT	769	NT	NT	NT	6020	NT	NT	NT	NT	NT	3550
91A (July 2004 to Mar 2005)	3720	NT	1170	NT	NT	NT	8250	NT	NT	NT	NT	NT	4850
91B (July 2004 to Mar 2005)	5.9	NT	ND	NT	NT	NT	ND	NT	NT	NT	NT	NT	ND
Measured Soil Vapor Concentration (ug/m³)													
91F-6.25: June 10, 2005; 6.25 ft depth	4.8	1.7	2.7	2	2.1	4.7	21	15	4	2.3	9.6	3.6	13.2
91L-7.3: June 10, 2005; 7.3 ft depth	3.1	1.7	2.8	2	2.8	21	6.4	2.5	2.3	9.6	3.6	13.2	16.8
93R-6.25: June 10, 2005; 6.25 ft depth	3.8	1.7	2.6	2	1.8	4.7	16	18	4.6	2.3	9.1	3.9	13
Measured Indoor Air Concentration (ug/m³)													
Basement (Dec. 15, 2004)	1.6	33	1.7	26	3.1	1.3	28	1.3	<0.98	NR	5.6	1.7	6.9
First Floor (Dec. 15, 2004)	2.3	28	3.4	21	<0.7	0.97	73.9	2.8	0.79	NR	8.3	2.7	11
Measured Outdoor Air Concentration (ug/m³)													
#93	0.32	<0.69	<0.87	<0.82	0.39	<0.72	0.79	<0.98	<0.98	NR	<0.87	<0.87	0.52

NR = Not reported

Location ID	Date	Time	Method	PID	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Balance (%)	
103F-4.5	6/9/2005	1055	Tedlar	7100 ppbV	0	1.8	16	82.2	
103F-4.5	6/10/2005	1015	Direct	NM	0	8.2	6.1	85.8	
103F-6.0	6/10/2005	1235	Direct	530 ppbV	0	5	8.4	86.6	
103L-4.5	6/9/2005	1038	Tedlar	28,000 ppbV	0	0.3	20.2	79.5	
103L-6.0	6/9/2005	1155	Tedlar	13 ppbV	0	0	19.6	80.4	
103L-6.0	6/10/2005	950	Tedlar	240 ppbV	0	0.5	20.4	79.1	
103L-6.0	6/10/2005	1415	Tedlar (Syringe)	270 ppbV	0	0.4	20.2	79.4	
103R-4.0	6/10/2005	900	Direct	82,000 ppbV	0	0.7	19.7	79.6	
103R-4.5	6/9/2005	1100	No Readings - Screen under water						
91F-6.25	6/9/2005	1545	Direct	320 ppbV	NM	NM	NM	NM	
91F-6.25	6/10/2005	1053	Tedlar	700 ppbV	0	1.4	18.8	79.9	
91L-7.25	6/9/2005	1530	Direct	760 ppbV	NM	NM	NM	NM	
91L-7.25	6/10/2005	1105	Tedlar	310 ppbV	0	0	21.2	78.8	
93R-4.0	6/9/2005	1400	Tedlar	580 ppbV	NM	NM	NM	NM	
93R-6.25	6/9/2005	1535	Direct	330 ppbV	NM	NM	NM	NM	
93R-6.25	6/10/2005	1028	Tedlar	1,540 ppbV	0	0.5	20.5	79	
MW-11	6/9/2005	910	Tedlar	199,000 ppbV	16.2	1	17.6	65.2	
MW-12	6/9/2005	950	Tedlar	14,000 ppbV	0	0.5	19.2	80.3	

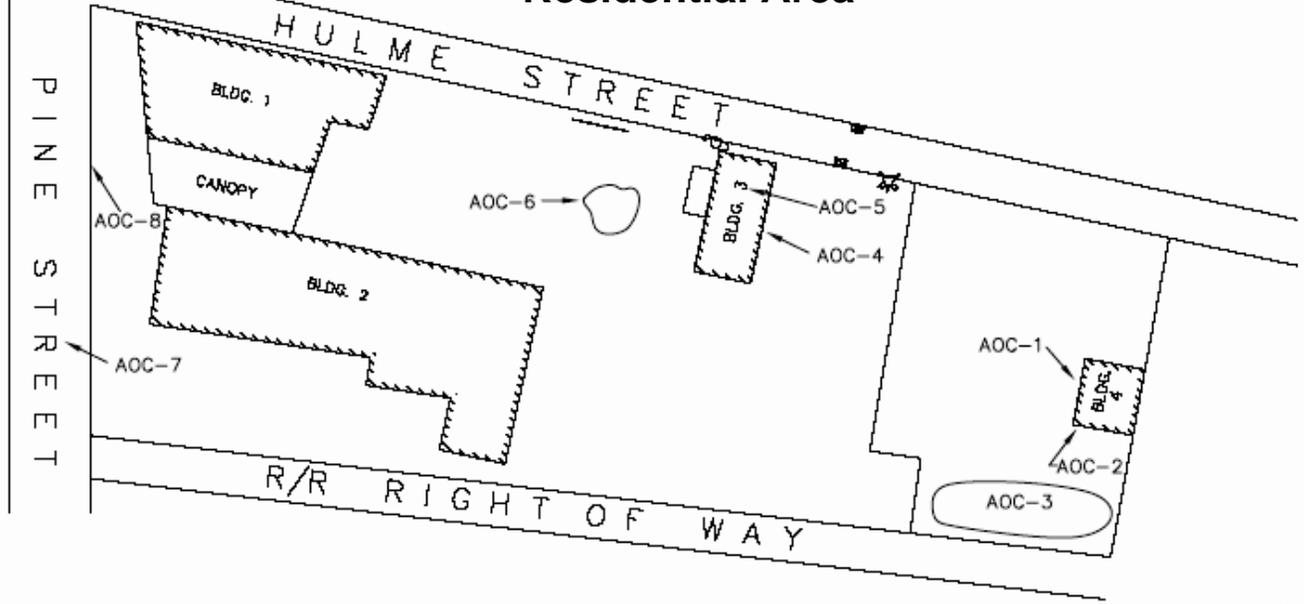
Notes:

1. NM = Not Measured
2. Oxygen, carbon dioxide and methane concentrations measured using Landtec GEM-2000, photoionization detector concentrations measured using MiniRAE or ppBRAE calibrated to 100 ppm isobutylene.
3. Lantec GEM2000 malfunctioned on 6/9/05 after 1400; and therefore readings were not obtained at 93R-4.0, 93R-6.25, 91F-6.25, and 91L-7.25.
4. Direct readings collected only where the SKC pump could not fill the tedlar bags.

- AOC-1 FORMER GASOLINE UST
- AOC-2 FORMER WASTE OIL DIESEL ADDITIVE UST'S
- AOC-3 FORMER AST FARM AREA
- AOC-4 FORMER HEATING OIL UST
- AOC-5 FORMER HYDRAULIC LIFT INSIDE BLDG. #3
- AOC-6 FORMER PUMP ISLAND STRUCTURE
- AOC-7 POTENTIAL GASOLINE UST
- AOC-8 ROUND CONCRETE SLAB IN SIDEWALK



Residential Area



LEGEND:
AOC-1 - AREA OF CONCERN LOCATION

AGWAY/MT. HOLLY	
AREA OF CONCERN LOCATION MAP	
FIGURE 1A	SCALE: 1"=50'
JMC ENVIRONMENTAL CONSULTANTS, INC.	
671 W. LAKE AVENUE, SUITE 2	
BAY HEAD, NEW JERSEY 08742	

JMC2004-0REV.DWG

Note: Base plan provided by JMC Environmental (2005 RIR, email, dated December 2005).

023-6124C
Golder Associates Inc.

Area of Concern Location Map
Figure 1

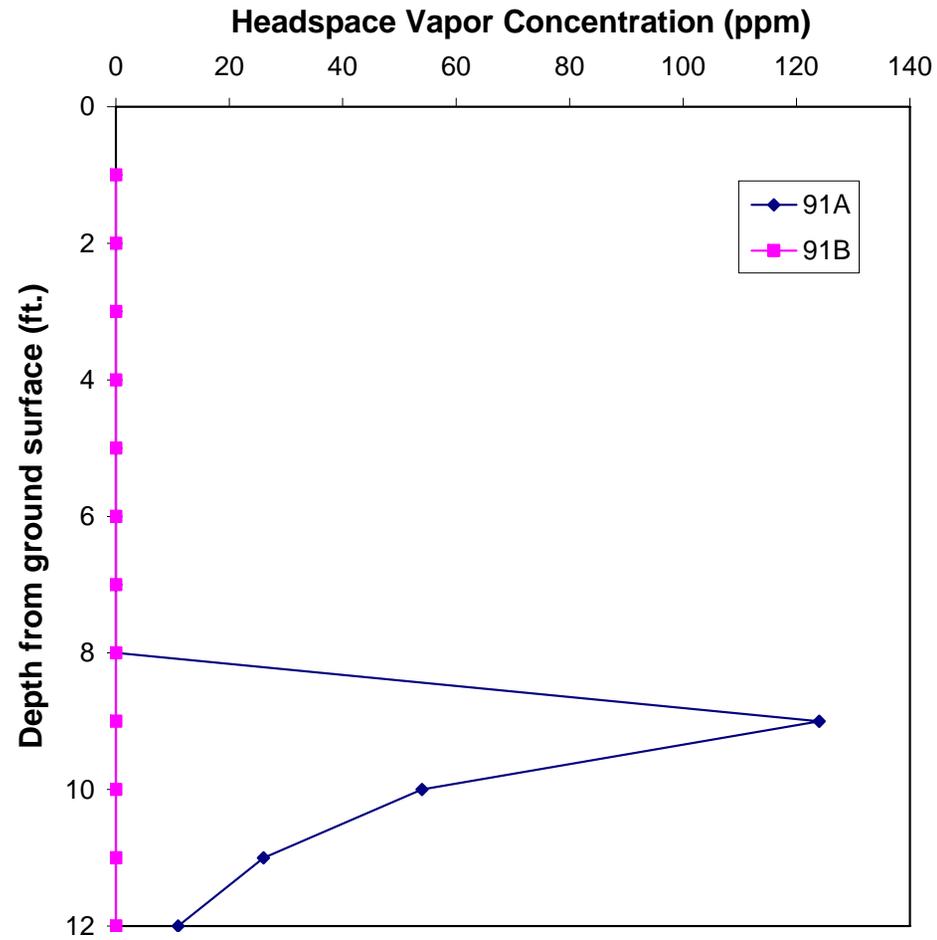
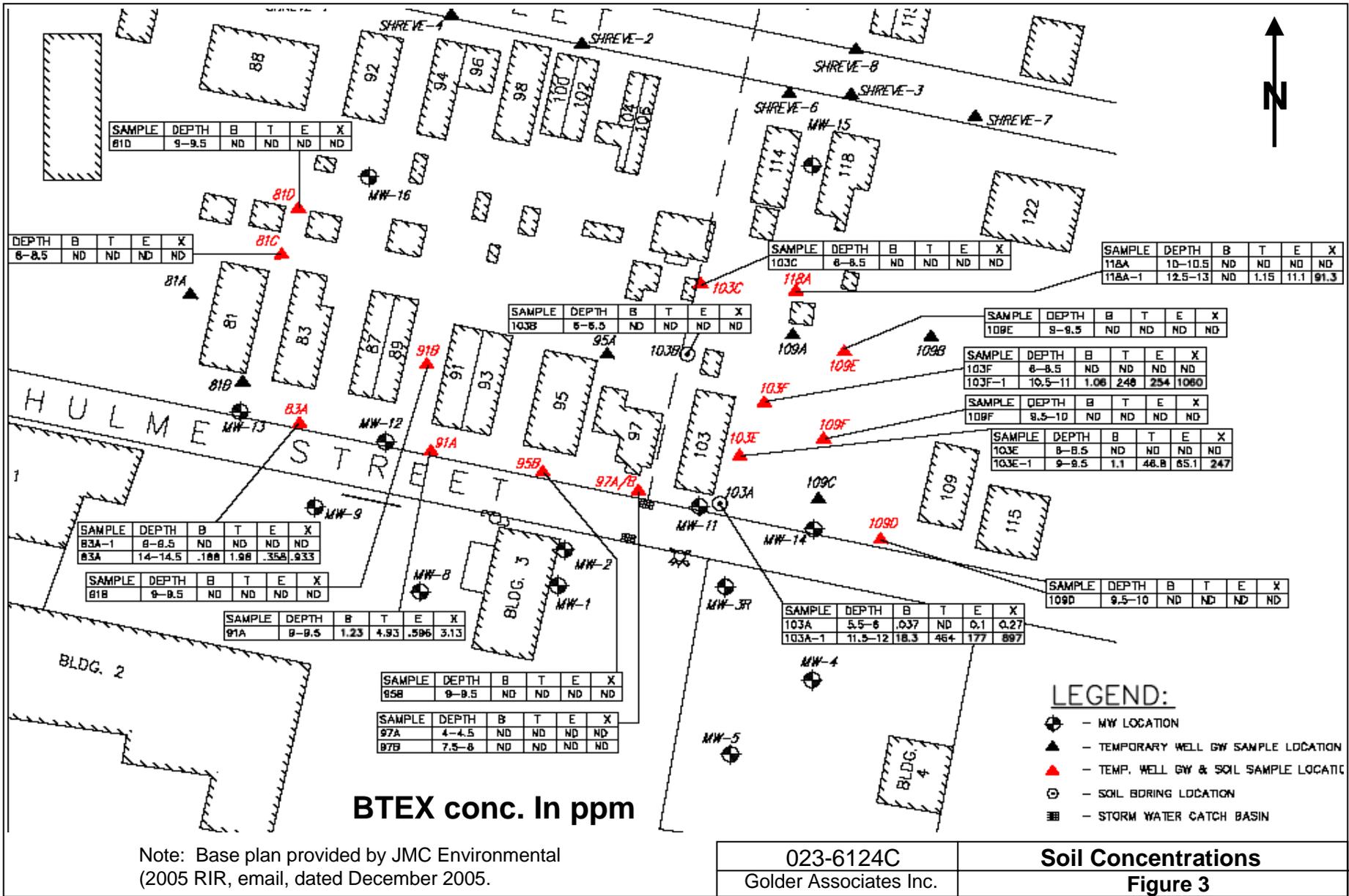


FIGURE 2. Headspace Vapor Concentrations in Soil Samples near 91/93 Hulme Street



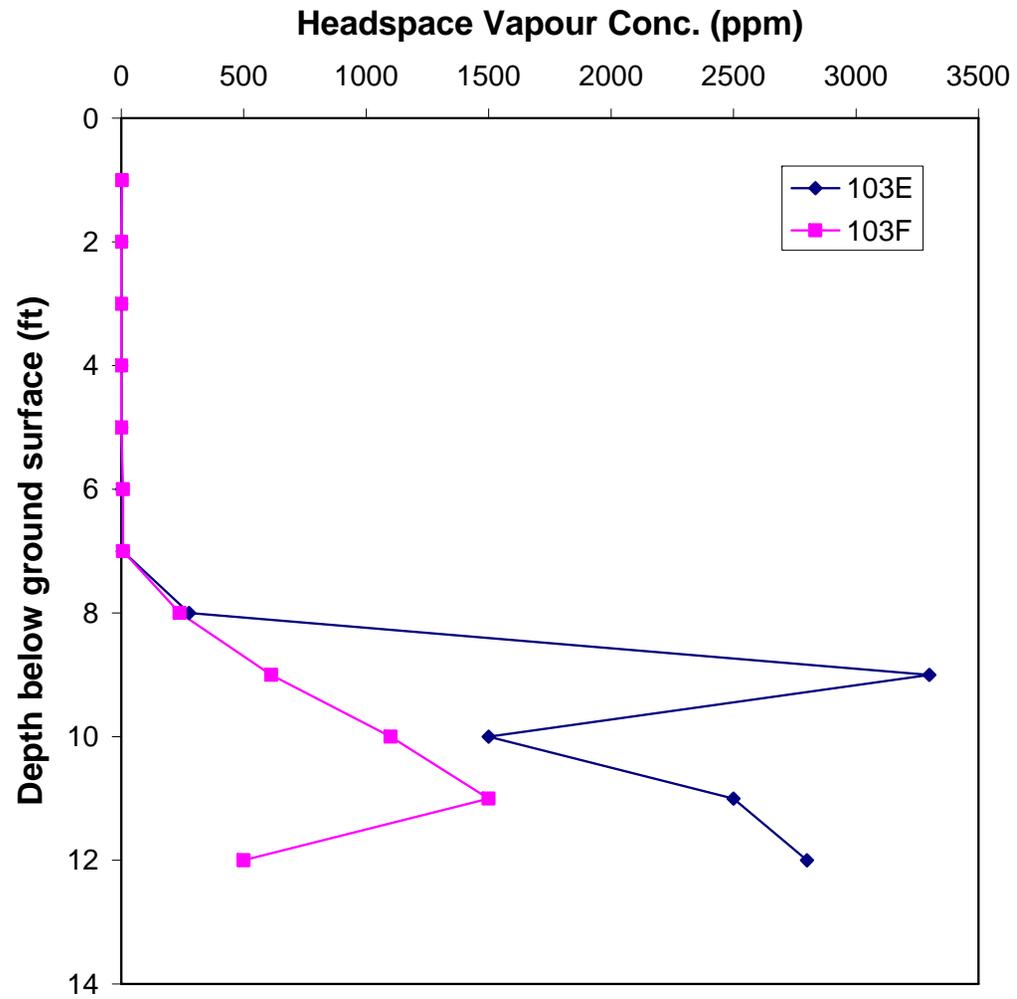
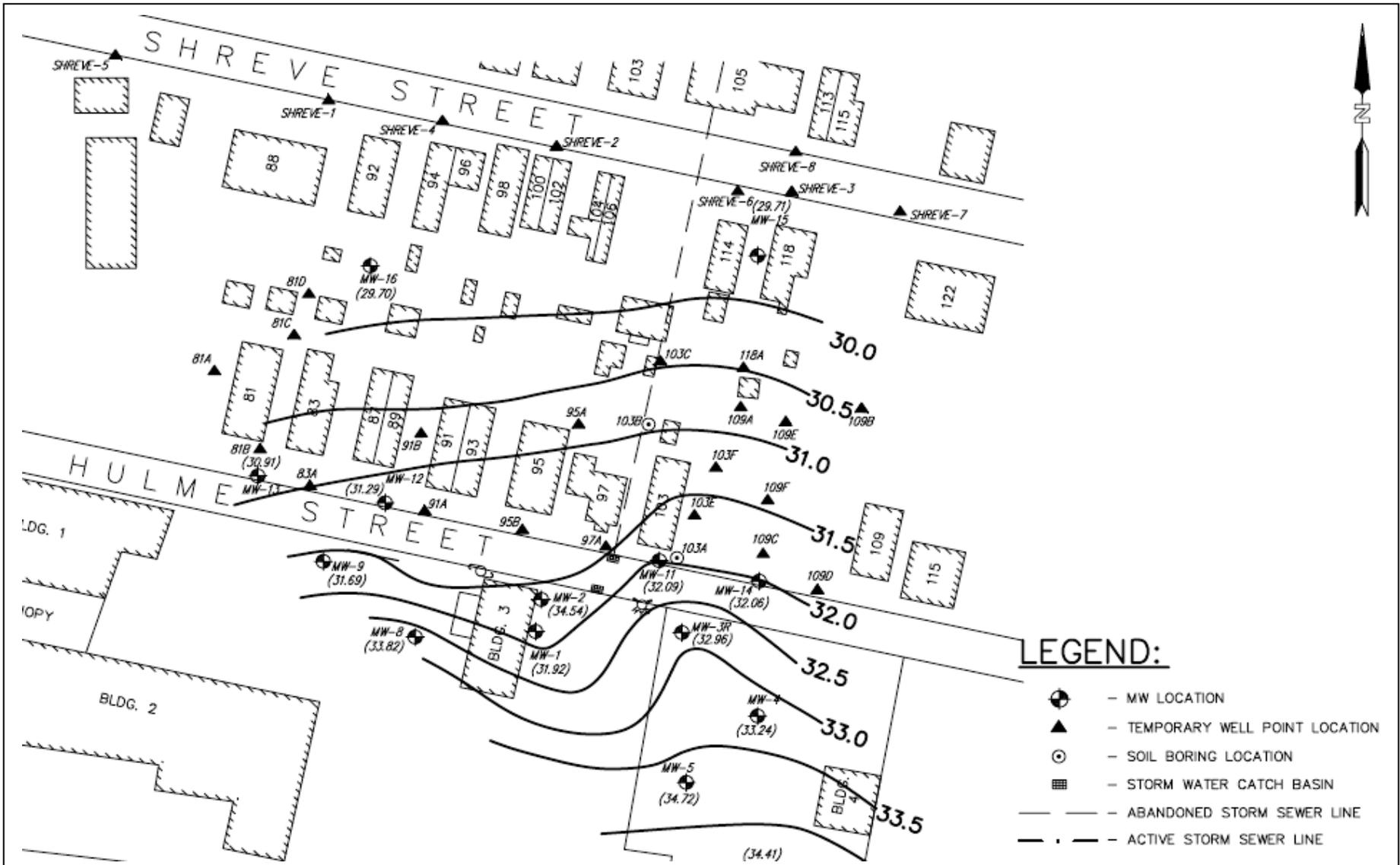
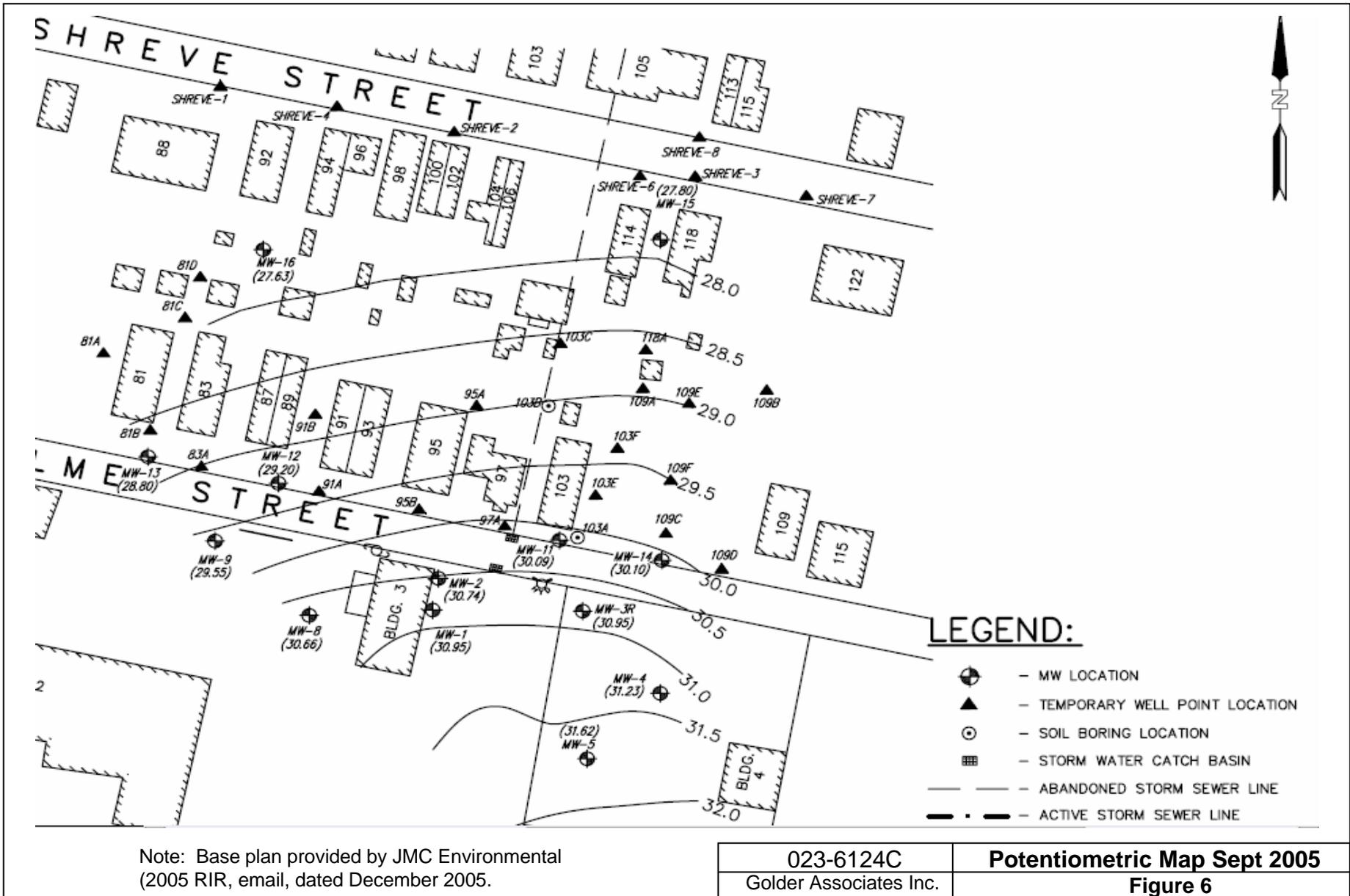


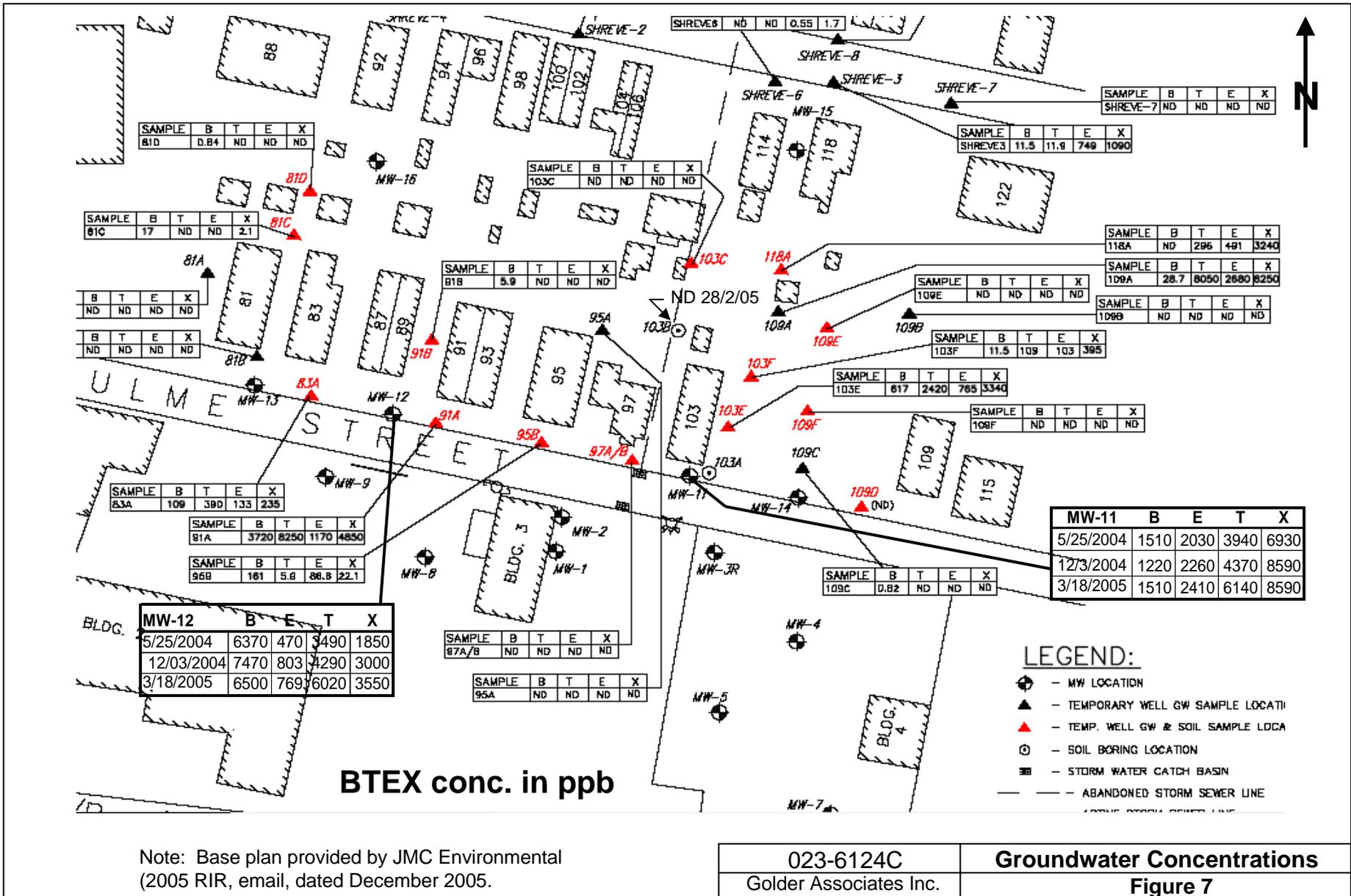
FIGURE 4. Headspace Vapor Concentrations in Soil Samples near 103 Hulme Street

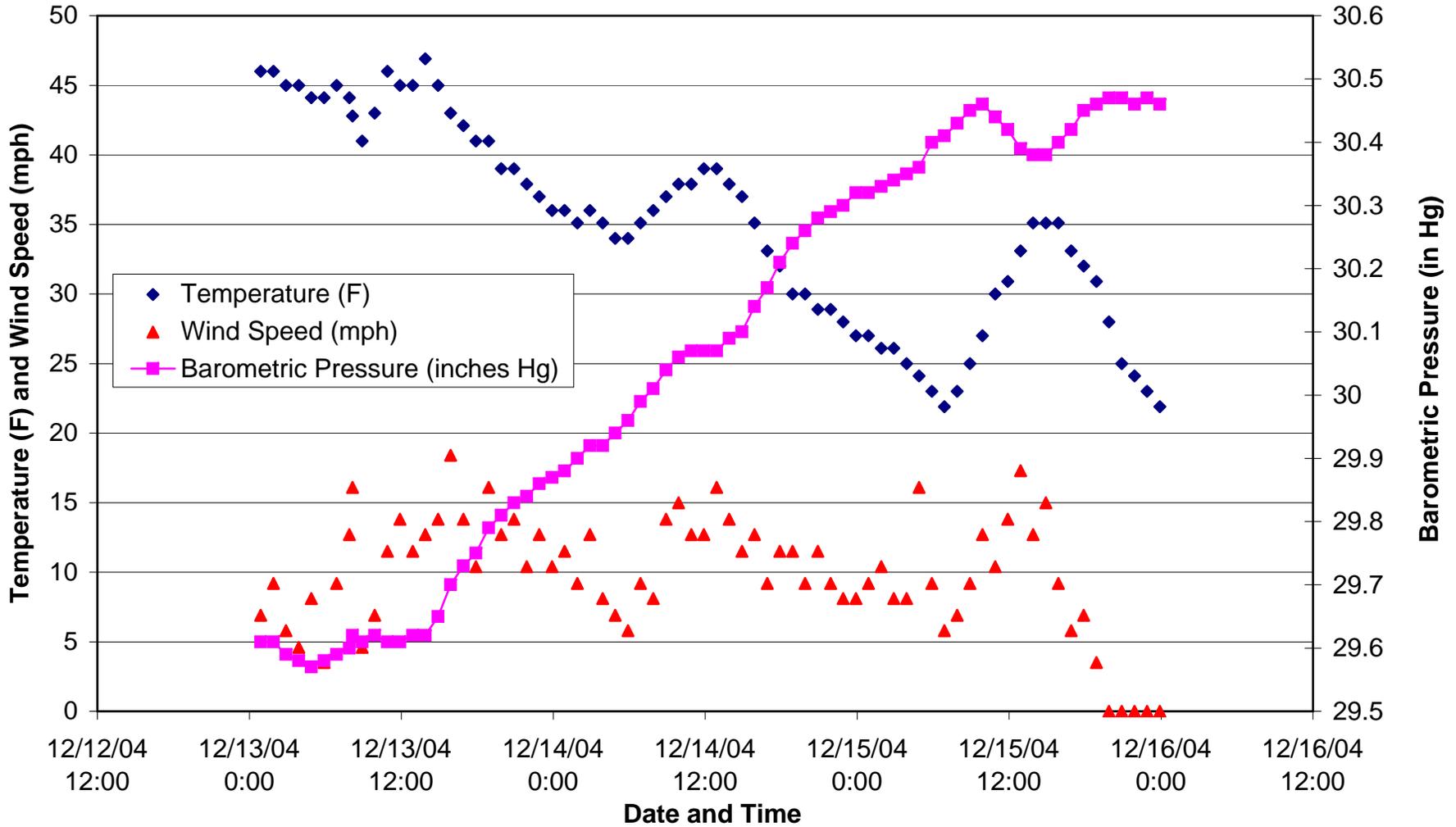


Note: Base plan provided by JMC Environmental (2005 RIR, email, dated December 2005).

023-6124C	Potentiometric Map March 2005
Golder Associates Inc.	Figure 5







**Figure 8: South Jersey Regional Airport (4.5 miles SW Mount Holly)
Weather December 13 to 15, 2004**

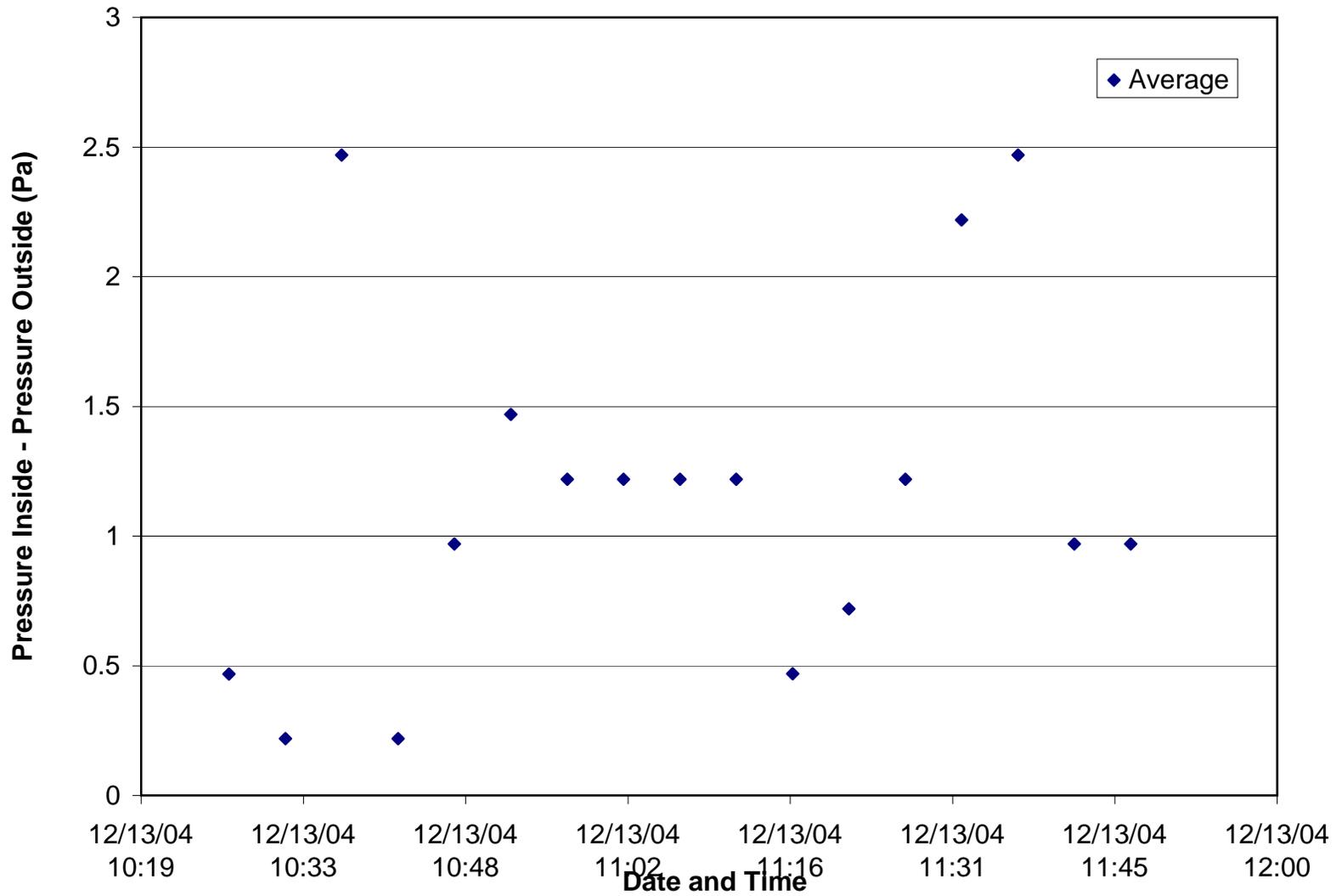


Figure 9: Pressure Readings 91 Hulme, Mount Holly, NJ

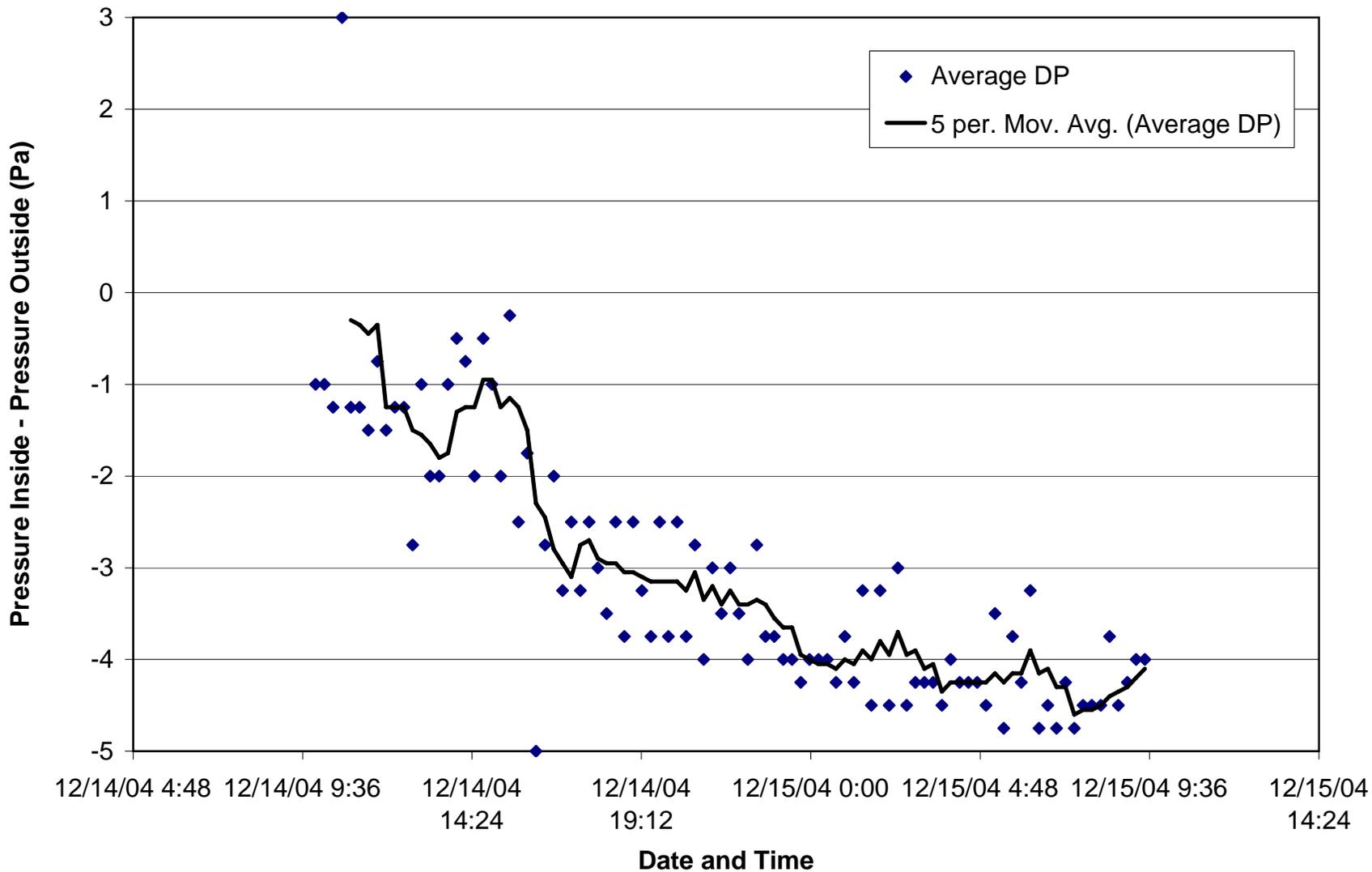


Figure 10: Pressure Readings 93 Hulme, Mount Holly, NJ

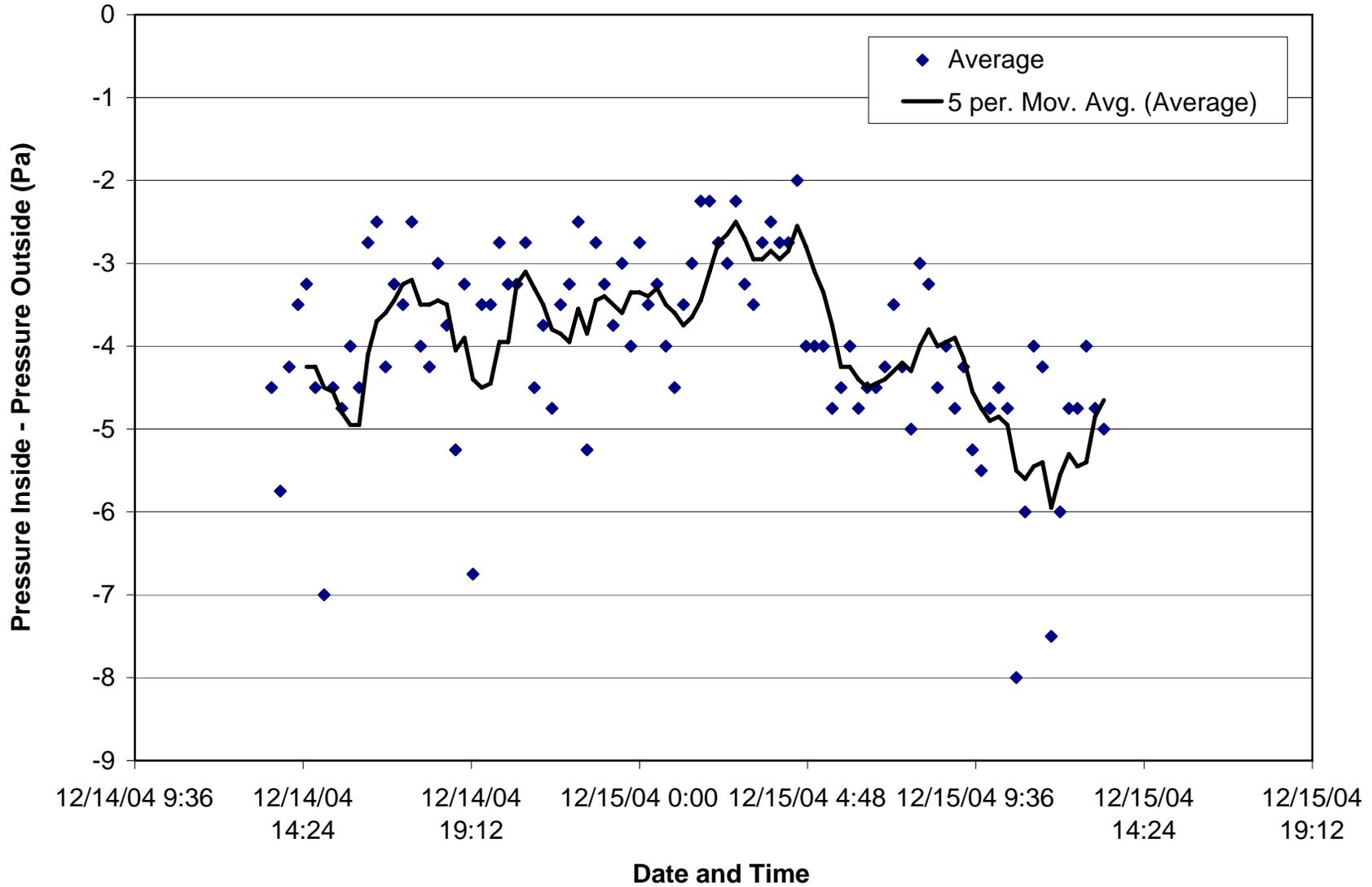


Figure 11: Pressure Readings 103 Hulme, Mount Holly, NJ

Legend

- ▲ Approximate soil gas probe location (Golder June 2005 program)
- Approximate subslab soil gas sampling location (June 2005 program)

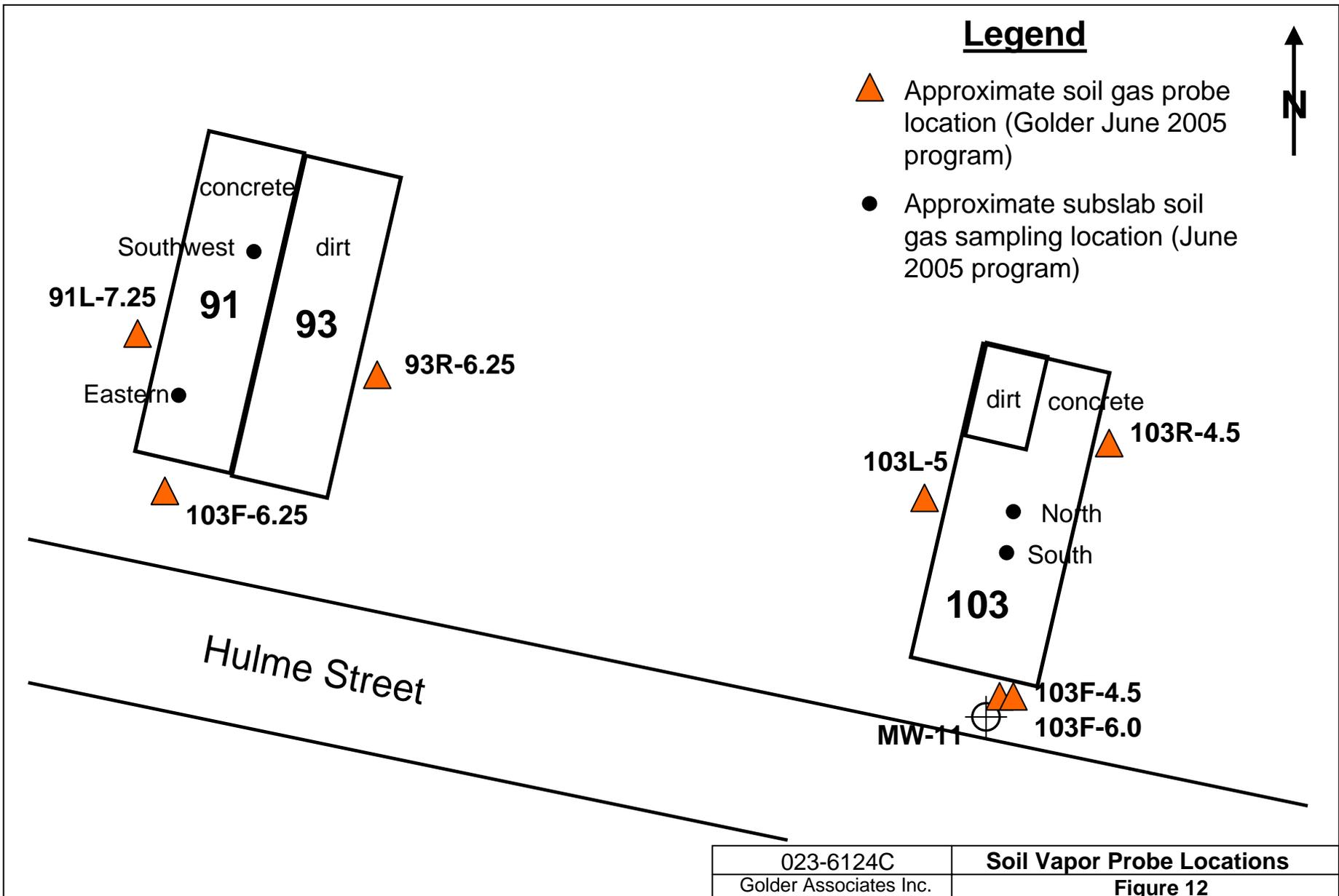
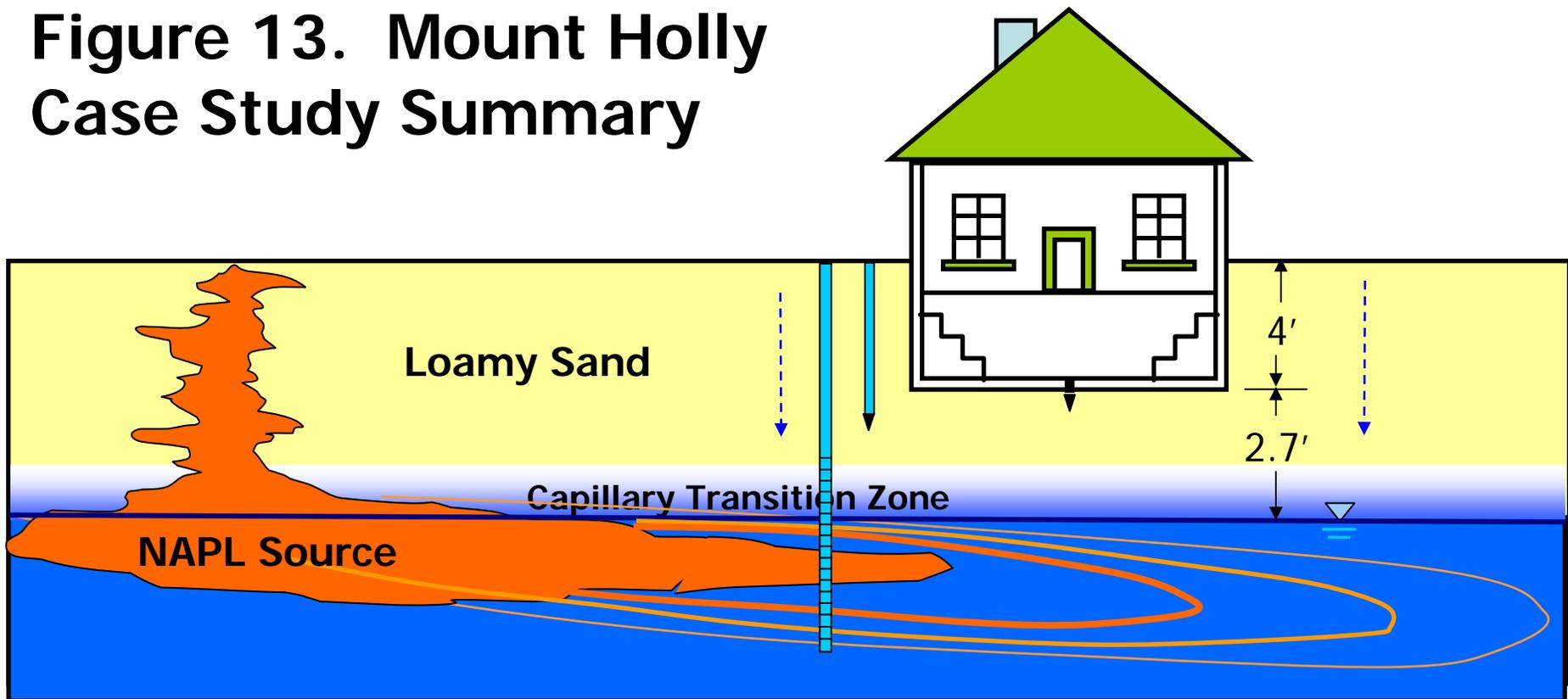


Figure 13. Mount Holly Case Study Summary



Data 103 Hulme	Benzene	Toluene	Xylenes	135-TMB	O ₂	CO ₂
Groundwater (ug/L)	308	1,150	2,054	-	-	-
Soil Vapor (ug/m ³)	11	2.1	56	98	6.1	8.2
Subslab Vapor (ug/m ³)	0.73	4.9	4.8	<0.98	20.9	-
Indoor Air (ug/m ³)	0.4	3.3	0.87	<0.98	20.9	-
Measured Gdw α	<1E-05	<1.9E-05	<2.7E-06	-	-	-

Notes: 1. Soil vapor probe depth = 4.5 ft. below ground, 2. Groundwater average nearby geoprobe and well data, 3. Different media data collected at different times over approximately ~ 1-year period.

Figure 14. Mount Holly J&E Model Predictions Xylenes

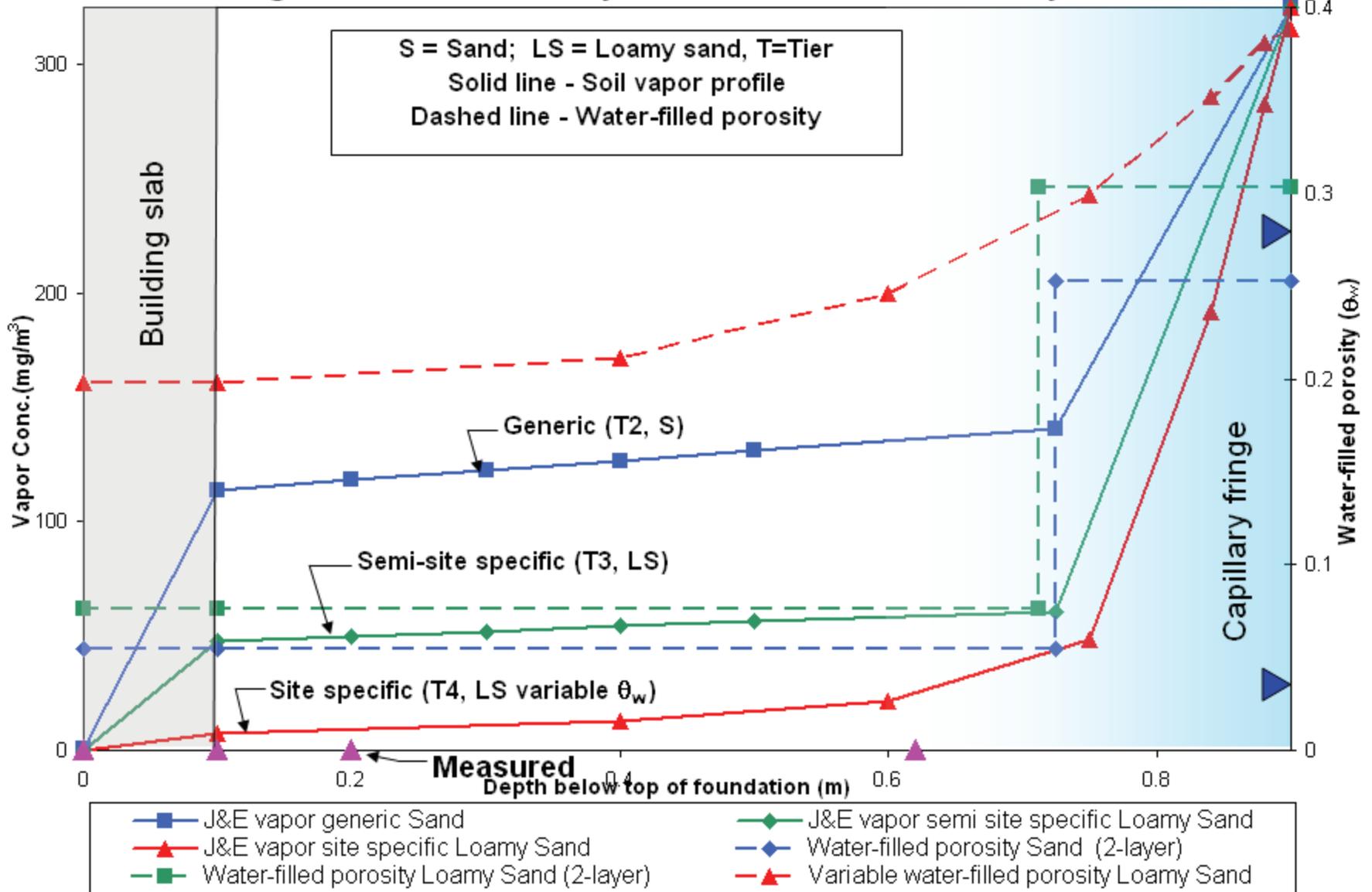
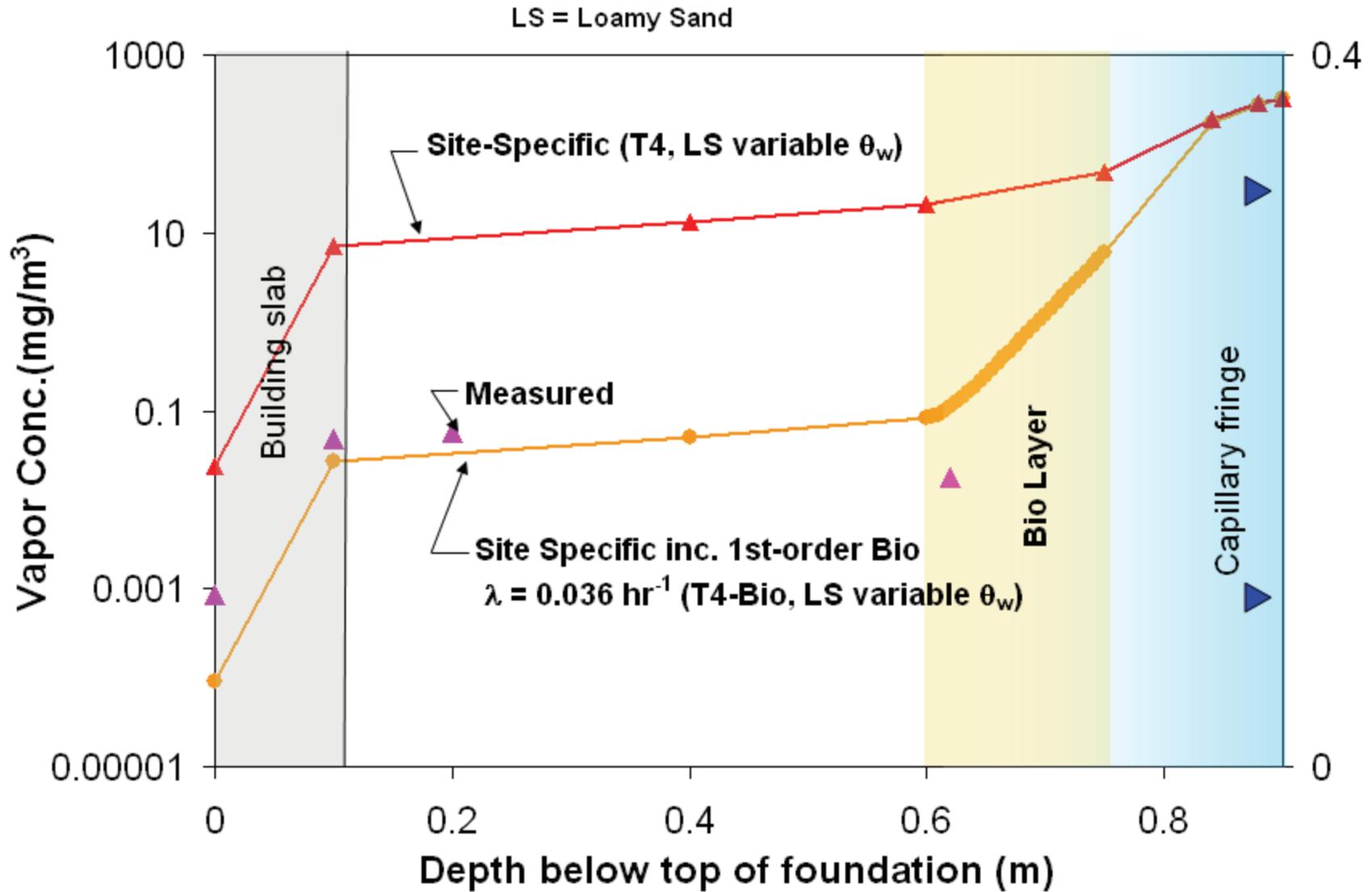


Fig 15. Mount Holly J&E+Bio Model Predictions Xylenes



APPENDIX I
BUILDING SURVEYS AND SITE PHOTOGRAPHS



New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY & SAMPLING FORM

Survey Completed by: JMC ENV. / NJDEP Date: 12/07/04

Site Name: Case #:

Part I - Occupants

Building Address: 103 Hulme Street

Property Contact: Viola Aramburu Owner Renter / other:

Contact's Phone: home (609) 265-2871 work () cell ()

Building occupants: Children under age 13 0 Children age 13-18 0 Adults 3

Part II - Building Characteristics

Building type: single-family residential / multi-family residential / office / strip mall / commercial / industrial

Describe building: Living area on 1st floor, Bedrooms up stairs, unfinished basement

Number of floors - below grade: 1 full basement / crawl space / slab at or above grade: 3

Basement size: 392 ft^2 Basement floor: concrete / dirt / floating / other (specify):

Foundation type: poured concrete / cinder blocks / stone / other (specify) parking cover (used & outside)

Type of ground cover around outside of building: grass / concrete / asphalt / other (specify)

Basement sump present? Yes / No Sump pump? Yes / No Filled & covered w/ steel plate

Type of heating system (circle all that apply): hot air circulation hot air radiation wood steam radiation kerosene heater electric baseboard heat pump other (specify): baseboard hot water radiation

Type of ventilation system (circle all that apply): central air conditioning mechanical fans bathroom ventilation fans individual air conditioning units kitchen range hood fan other (specify):

Type of fuel utilized (circle all that apply): Natural gas / electric / fuel oil / wood / coal / solar / kerosene / outside (fresh) air intake

Septic system? Yes / Yes (but not used) / No Irrigation/private well? Yes / Yes (but not used) / No

Existing subsurface depressurization (radon) system in place? Yes / No and running? Yes / No

Part III - Outside Contaminant Sources

NJDEP Comprehensive Site List (1000-ft. radius):

Other stationary sources nearby (gas stations, emission stacks, etc.): L&D Landfill / Businesses along Hulme St.

Heavy vehicular traffic nearby (or other mobile sources): TRUCK TRAFFIC on Hulme St.

Building address: 103 Hulme St.

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

Potential Sources	Location(s)	Removed Prior to Sampling? (Yes / No / NA)
Gasoline storage cans	1 Pt. STP Gas Treatment in Basement	NO
Gas-powered equipment	NONE	NA
Kerosene storage cans	NONE	NA
Paints / thinners / strippers	PAINTS, STAINS, Urethane Basement	NO
Cleaning solvents	NONE	NO NA
Oven cleaners	NONE	NO NA
Carpet / upholstery cleaners	NONE	NO NA
Other house cleaning products	UNDER Kitchen SINK	NO
Moth balls	NONE	NA
Polishes / waxes	NONE	NA
Insecticides	Treatment in crawl space 10/04 for Crickets +	NO
Furniture / floor polish	ROUNDUP on basement stairs	
Nail polish / polish remover	Upstairs bed/bath	NO
Hairspray	Upstairs bed/bath - not used often	NO
Cologne / perfume	Upstairs bed/bath	NO
Air fresheners	DUST - Upstairs bath	NO
Fuel tank (inside building)	NONE Present	NA
Wood stove or fireplace	YES - Living Room - (Strong wood burning ^{burning} odor in home)	NA
New furniture / upholstery	NO	NA
New carpeting / flooring	NONE	NA
Recent painting in building?	NONE	NA
Hobbies - glues, paints, etc.	NONE	NA

Part V – Miscellaneous Items

Do any occupants of the building smoke? Yes / No ↑ OUTSIDE ONLY How often? Daily

Has anyone smoked within the building within the last 48 hours? Yes / No

Does the building have an attached garage? Yes / No

If so, is a car usually parked in the garage? Yes / No

Do the occupants of the building have their clothes dry-cleaned? Yes / No

When were dry-cleaned clothes last brought into the building? _____

Have the occupants ever noticed any unusual odors in the building? Yes / No

Describe (with location): _____

Any known spills of a chemical immediately outside or inside the building? Yes / No

Describe (with location): _____

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens? Yes / No

If so, when and which chemicals? ROUNDUP FOR POSTAL POISON IVY CONTROL

Building address: 103 Halme St.

Part VI - Sampling Information

Sample Technician: AB / HS Phone number: (732) 295-2144

Sampler Type: Tedlar / Sorbent / Canister Analytical Method: TO-15 / TO-17 / other: _____

Laboratory: Accutest Laboratories NJ Certified Lab? Yes / No

→ #103 Basement

Sample #	Floor	Room	Canister / Tube #	Pump ID # (if applicable)	Sample Start Date / Time	Sample End Date / Time
#103 Subslab	Basement	- Subslab	A 345	N/A	132-5 12/14/04	132-5 12/15/04
#103 #11 Kitchen	Basement	Center Room	A170/A259	N/A	1306-103 1308-811 / 12/14/04	#103-1306 #11-1308 12/15/04
#103 1st Floor	1st Floor	DINING ROOM	A160	N/A	1252 12/14/04	1252 12/15/04
#103 Ambient FRONT Porch	N/A	N/A	A237	N/A	1247 12/14/04	1245 12/15/04

Sample location(s):

Provide Drawing of Sample Location(s) in Building

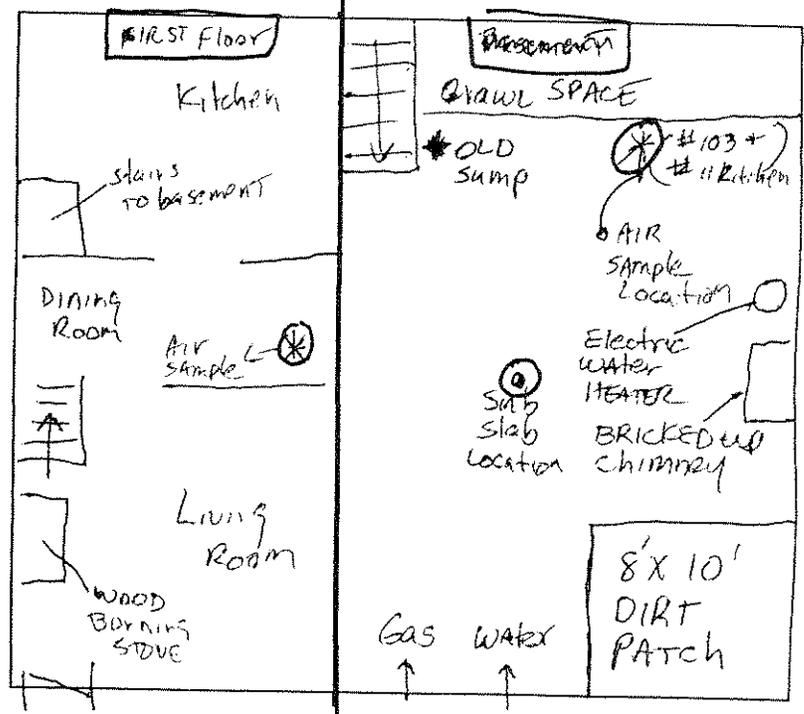
Sample # 103 1st Floor - Chair in Dining Room

Sample # 103 basement / Box along rear Center / #11 Kitchen basement

Sample # 103 - Collected from center / subslab of Basement Floor

Did the occupants not follow any of the "Instructions for Residents" directions? Yes No

If so, describe modifications: _____



Part VII - Weather Conditions

Outside temperature at time of sampling: AVERAGE 29 °F

Expected high temperature: 38 °F

Expected low temperature: 20 °F

Was there significant precipitation within 12 hours of (or during) the sampling event? Yes No

Describe the general weather conditions: Clear wind ~10mph out of ANW, Average Relative Humidity 55 w/ average barometric pressure of 30.8 inches

Part VIII - General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

Wood burning stove on 1st floor is used, although not at time of sampling. Very strong wood burning odor inside house.

*NOTE: #11 + #103 basement are Colocated samples.

OCCUPIED DWELLING QUESTIONNAIRE

Indoor Air Assessment Survey

Date: 12/7/04

1. Name: Aranbarru / Lepot

Address: 103 Hulme St.

Home Phone: 609 265-2871 Work Phone: _____

2. What is the best time to call to speak with you? Any At: Work or Home

3. Are you the Owner , Renter , Other (please specify) _____ of this Home/Structure?

4. Total number of occupants/persons at this location? 3
Number of children? -- Ages? ---

5. How long have you lived at this location? 8 years

General Home Description

6. Type of Home/Structure (check only one): Single Family Home , Duplex , Condominium , Townhouse , Other _____

7. Home/Structure Description: number of floors 3

Basement? Yes No

Crawl Space? Yes No

If Yes, under how much of the house's area? 100 %

8. Age of Home/Structure: ~1910 years, Not sure/Unknown

9. General Above-Ground Home/Structure construction (check all that apply):

Wood , Brick , Concrete , Cement block , Other _____

10. Foundation Construction (check all that apply):

Concrete slab

Fieldstone

Concrete block

- Elevated above ground/grade
- Other _____
11. What is the source of your drinking water (check all that apply)?
 Public water supply
 Private well
 Bottled water
 Other, please specify _____
12. Do you have a private well for purposes other than drinking?
 Yes No
 If yes, please describe what you use the well
 for: _____
13. Do you have a septic system? Yes No Not used Unknown
14. Do you have standing water outside your home (pond, ditch, swale)? Yes No

Basement Description, please check appropriate boxes.
If you do not have a basement go to question 23.

15. Is the basement finished or unfinished ?
16. If finished, how many rooms are in the basement? _____
 How many are used for more than 2 hours/day? None
17. Is the basement floor (check all that apply) concrete , tile , carpeted , dirt ,
 other (describe) 8' X 10' DIRT PATCH ?
18. Are the basement walls poured concrete , cement block , stone , wood , brick ,
 other ?
19. Does the basement have a moisture problem (check one only)?
 Yes, frequently (3 or more times/yr)
 Yes, occasionally (1-2 times/yr)
 Yes, rarely (less than 1 time/yr)
 No
20. Does the basement ever flood (check one only)?
 Yes, frequently (3 or more times/yr)
 Yes, occasionally (1-2 times/yr)
 Yes, rarely (less than 1 time/yr)
 No
21. Does the basement have any of the following? (check all that apply) Floor cracks ,
 Wall cracks , Sump , Floor drain , Other hole/opening in floor
 (describe) Abandoned Sump, Filled in &
 covered, 8' X 10' DIRT PATCH

22. Are any of the following used or stored in the basement (check all that apply)
 Paint Paint stripper/remover Paint thinner
 Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue
 Laundry spot removers Drain cleaners Pesticides
23. Have you recently (within the last six months) done any painting or remodeling in your home? Yes No
 If yes, please specify what was done, where in the home, and what month:

24. Have you installed new carpeting in your home within the last year? Yes No
 If yes, when and where? _____
25. Do you regularly use or work in a dry cleaning service (check only one box)?
 Yes, use dry-cleaning regularly (at least weekly)
 Yes, use dry-cleaning infrequently (monthly or less)
 Yes, work at a dry cleaning service
 No
26. Does anyone in your home use solvents at work?
 Yes If yes, how many persons _____
 No If no, go to question 28
27. If yes for question 26 above, are the work clothes washed at home? Yes No
28. Where is the washer/dryer located?
 Basement
 Upstairs utility room
 Kitchen
 Garage
 Use a Laundromat
 Other, please specify _____
29. If you have a dryer, is it vented to the outdoors? Yes No
30. What type(s) of home heating do you have (check all that apply)
 Fuel type: Gas , Oil , Electric , Wood , Coal , Other _____
 Heat conveyance system: Forced hot air
 Forced hot water
 Steam
 Radiant floor heat
 Wood stove
 Coal furnace
 Fireplace
 Other _____

31. Do you have air conditioning? Yes No . If yes, please check the appropriate type(s)
 Central air conditioning
 Window air conditioning unit(s)
 Other , please specify _____
32. Do you use any of the following? Room fans , Ceiling fans , Attic fan
 Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33. Has your home had termite or other pesticide treatment: Yes No Unknown
 If yes, please specify type of pest controlled, Crickets
 and approximate date of service Oct. 2004
34. Water Heater Type: Gas , Electric , By furnace , Other
 Water heater location: Basement , Upstairs utility room , Garage , Other (please describe) _____
35. What type of cooking appliance do you have? Electric , Gas , Other
36. Is there a stove exhaust hood present? Yes No
 Does it vent to the outdoors? Yes No
37. Smoking in Home:
 None , Rare (only guests) , Moderate (residents light smokers) ,
 Heavy (at least one heavy smoker in household)
38. If yes to above, what do they smoke?
 Cigarettes Cigars
 Pipe Other
39. Do you regularly use air fresheners? Yes No (in upstairs bathroom)
40. Does anyone in the home have indoor home hobbies of crafts involving: None
 Heating , soldering , welding , model glues , paint , spray paint,
 wood finishing , Other Please specify what type of hobby: _____
41. General family/home use of consumer products (please circle appropriate): Assume that
Never = never used, **Hardly ever** = less than once/month, **Occasionally** = about
 once/month, **Regularly** = about once/week, and **Often** = more than once/week.

<u>Product</u>	<u>Frequency of Use</u>
Spray-on deodorant	<input checked="" type="radio"/> Never <input type="radio"/> Hardly ever <input type="radio"/> Occasionally <input type="radio"/> Regularly <input type="radio"/> Often

Aerosol deodorizers	Never	Hardly ever	Occasionally	<u>Regularly</u>	Often
Insecticides/ <i>Herbicides</i>	Never	Hardly ever	<u>Occasionally</u>	Regularly	Often
Disinfectants	Never	Hardly ever	Occasionally	<u>Regularly</u>	Often

(Question 41, continued)

<u>Product</u>	<u>Frequency of Use</u>				
Window cleaners	Never	Hardly ever	<u>Occasionally</u>	Regularly	Often
Spray-on oven cleaners	<u>Never</u>	Hardly ever	Occasionally	Regularly	Often
Nail polish remover	Never	Hardly ever	Occasionally	<u>Regularly</u>	Often
Hair sprays	Never	<u>Hardly ever</u>	Occasionally	Regularly	Often

42. Please check weekly household cleaning practices:

- Dusting
- Dry sweeping
- Vacuuming
- Polishing (furniture, etc)
- Washing/waxing floors
- Other _____

43. Other comments:

PVC Cement
Cement Patch/Seal
STP Gas TREATMENT
Urethane
WOOD Stain
ANTI FREEZE
ROUNDUP

} *containers in basement*

**BUILDING SURVEY
& SAMPLING FORMS**

93 HULME STREET



New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY & SAMPLING FORM

Survey Completed by: JMC Environmental / NJDEP Date: 12/7/04
Site Name: Case #:

Part I - Occupants

Building Address: 93 Hulme Street
Property Contact: Robert Willse Owner (Renter) other:
Contact's Phone: home () work () cell ()
Building occupants: Children under age 13 0 Children age 13-18 0 Adults 2

Part II - Building Characteristics

Building type: single-family residential Duplex multi-family residential / office / strip mall / commercial / industrial
Describe building: East half of Duplex
Number of floors - below grade: 1 (full basement) / crawl space / slab at or above grade: 3
Basement size: 300 ft^2 Basement floor: concrete / dirt / floating / other (specify):
Foundation type: poured concrete / cinder blocks / stone / other (specify) BRICK
Type of ground cover around outside of building: grass / concrete / asphalt / other (specify)
Basement sump present? Yes (No) Sump pump? Yes (No)

Type of heating system (circle all that apply): hot air circulation hot air radiation wood steam radiation hot water radiation
kerosene heater electric baseboard heat pump other (specify):

Type of ventilation system (circle all that apply): 1 AC UNIT ON 3rd FLOOR
central air conditioning mechanical fans bathroom ventilation fans
individual air conditioning units kitchen range hood fan other (specify):

Type of fuel utilized (circle all that apply): AST IN basement (~250g)
Natural gas / electric / fuel oil / wood / coal / solar / kerosene / outside (fresh) air intake
Septic system? Yes / Yes (but not used) / (No) Irrigation/private well? Yes / Yes (but not used) / (No)
Existing subsurface depressurization (radon) system in place? Yes (No) and running? Yes / No

Part III - Outside Contaminant Sources

NJDEP Comprehensive Site List (1000-ft. radius):
Other stationary sources nearby (gas stations, emission stacks, etc.): LTD LAND FILL / BUSINESSES along Hk/n
Heavy vehicular traffic nearby (or other mobile sources): Truck Traffic along Hulme St.
FUEL OIL DELIVERED IMMEDIATELY PRIOR TO START OF SAMPLING

Building address: 93 Hulme St.

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

Potential Sources	Location(s)	Removed Prior to Sampling? (Yes / No / NA)
Gasoline storage cans	None	NA
Gas-powered equipment	None	NA
Kerosene storage cans	None	NA
Paints / thinners / strippers	Basement	NO
Cleaning solvents	Basement	NO
Oven cleaners	None	NA
Carpet / upholstery cleaners	Kitchen	NO
Other house cleaning products	Kitchen	NO
Moth balls	None	NA
Polishes / waxes	NONE	NA
Insecticides	Basement (chlorpyrifos, captan, others), Kitchen Round up	NO
Furniture / floor polish	NONE	NA
Nail polish / polish remover	NONE	NA
Hairspray	NONE	NA
Cologne / perfume	NONE	NA
Air fresheners	Numerous FIRST FLOOR	NO
Fuel tank (inside building)	YES - 250 gal SE CORNER OF basement	NA
Wood stove or fireplace	YES - 1st floor, nonoperational	NA
New furniture / upholstery	None	NA
New carpeting / flooring	None	NA
Recent painting in building?	None	NA
Hobbies - glues, paints, etc.	None	NA

Part V – Miscellaneous Items

Do any occupants of the building smoke? Yes No How often? FREQUENTLY (big cigar + cigarette + pipe)

Has anyone smoked within the building within the last 48 hours? Yes No

Does the building have an attached garage? Yes / No

If so, is a car usually parked in the garage? Yes / No

Do the occupants of the building have their clothes dry-cleaned? Yes / No

When were dry-cleaned clothes last brought into the building? N/A

Have the occupants ever noticed any unusual odors in the building? Yes / No

Describe (with location): _____

Any known spills of a chemical immediately outside or inside the building? Yes / No

Describe (with location): _____

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens? Yes No

If so, when and which chemicals? ROUND UP (herbicide) along FENCE

Building address: 93 Hulme St.

Part VI - Sampling Information

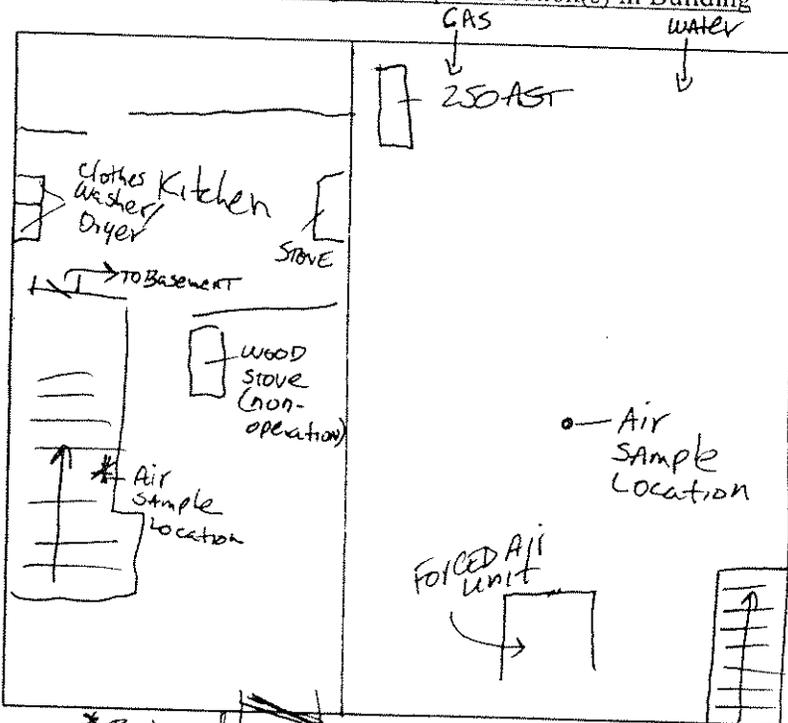
Sample Technician: AB/H5 Phone number: (732) 295 - 2144
 Sampler Type: Tedlar / Sorbent / Canister Analytical Method: TO-15 / TO-17 / other: _____
 Laboratory: Accutest Laboratories NJ Certified Lab? Yes No

Sample #	Floor	Room	Canister / Tube #	Pump ID # (if applicable)	Sample Start Date / Time	Sample End Date / Time
93 1 ST Floor	1 ST Floor	1 ST Floor	A 374	N/A	12/14/04 - 0935	12/15/04 - 0935
93 Basement	Basement	Center basement	A 285	↓	12/14/04 0930	12/15/04 0930
93 Background	1 ST Floor	Porch	A 272	↓	12/14/04 0940	12/15/04 0940

Sample location(s):

Sample # 93 1ST Floor - 3rd step up - 1ST Floor stairs
 Sample # 93 basement - Center post basement
 Sample # 93 back ground - Front Porch

Provide Drawing of Sample Location(s) in Building



Did the occupants not follow any of the "Instructions for Residents" directions? Yes / No

If so, describe modifications: One or more Cigarettes were smoked during sampling.

Part VII - Weather Conditions

Average Outside temperature at time of sampling: 29 °F
 Expected high temperature: 38 °F
 Expected low temperature: 20 °F

Was there significant precipitation within 12 hours of (or during) the sampling event? Yes No

Describe the general weather conditions: clear, wind ~10mph out of NNW, Average rH 59%, w average barometric pressure of 30.08 inches.

Part VIII - General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

- several CATS also reside in dwelling
- Gas stove not operational in kitchen, dryer also broken
- Evidence of mold/water damage in kitchen
- wood stove not operational in living room.

OCCUPIED DWELLING QUESTIONNAIRE

Indoor Air Assessment Survey

Date: 12/7/04

1. Name: R. Willse

Address: 93 Hulme St.

Home Phone: _____ Work Phone: _____

2. What is the best time to call to speak with you? _____ At: Work or Home ?

3. Are you the Owner , Renter , Other (please specify) _____ of this Home/Structure?

4. Total number of occupants/persons at this location? 2
Number of children? _____ Ages? _____

5. How long have you lived at this location? Renter ~ 7 months
Owner > 60 years

General Home Description

6. Type of Home/Structure (check only one): Single Family Home , Duplex , Condominium , Townhouse , Other _____

7. Home/Structure Description: number of floors 3
Basement? Yes No
Crawl Space? Yes No
If Yes, under how much of the house's area? 100%

8. Age of Home/Structure: Pre 1940 years, Not sure/Unknown

9. General Above-Ground Home/Structure construction (check all that apply):
Wood , Brick , Concrete , Cement block , Other _____

10. Foundation Construction (check all that apply):
Concrete slab
Fieldstone
Concrete block

- Elevated above ground/grade
- Other _____
11. What is the source of your drinking water (check all that apply)?
 Public water supply
 Private well
 Bottled water
 Other, please specify _____
12. Do you have a private well for purposes other than drinking?
 Yes No
 If yes, please describe what you use the well
 for: _____

13. Do you have a septic system? Yes No Not used Unknown
14. Do you have standing water outside your home (pond, ditch, swale)? Yes No
(IN FRONT YARD)

Basement Description, please check appropriate boxes.
 If you do not have a basement go to question 23.

15. Is the basement finished or unfinished ?
16. If finished, how many rooms are in the basement? _____
 How many are used for more than 2 hours/day? 0
17. Is the basement floor (check all that apply) concrete , tile , carpeted , dirt ,
 other (describe) _____?
18. Are the basement walls poured concrete , cement block , stone , wood , brick ,
 other _____?
19. Does the basement have a moisture problem (check one only)?
 Yes, frequently (3 or more times/yr)
 Yes, occasionally (1-2 times/yr)
 Yes, rarely (less than 1 time/yr)
 No
20. Does the basement ever flood (check one only)?
 Yes, frequently (3 or more times/yr)
 Yes, occasionally (1-2 times/yr)
 Yes, rarely (less than 1 time/yr)
 No
21. Does the basement have any of the following? (check all that apply) Floor cracks ,
 Wall cracks , Sump , Floor drain , Other hole/opening in floor
 (describe) FLOOR IS DIRT, COVERED w/ FABRIC IN PLACES

22. Are any of the following used or stored in the basement (check all that apply)
 Paint Paint stripper/remover Paint thinner
 Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue
 Laundry spot removers Drain cleaners Pesticides
23. Have you recently (within the last six months) done any painting or remodeling in your home? Yes No
 If yes, please specify what was done, where in the home, and what month:
6/04 - PAINTING OF UPSTAIRS BEDROOM
-
24. Have you installed new carpeting in your home within the last year? Yes No
 If yes, when and where? _____
25. Do you regularly use or work in a dry cleaning service (check only one box)?
 Yes, use dry-cleaning regularly (at least weekly)
 Yes, use dry-cleaning infrequently (monthly or less)
 Yes, work at a dry cleaning service
 No
26. Does anyone in your home use solvents at work?
 Yes If yes, how many persons _____
 No If no, go to question 28
27. If yes for question 26 above, are the work clothes washed at home? Yes No
28. Where is the washer/dryer located?
 Basement
 Upstairs utility room
 Kitchen
 Garage
 Use a Laundromat
 Other, please specify WASHER/DRYER IN KITCHEN NON-OPERATIONAL
29. If you have a dryer, is it vented to the outdoors? Yes No N/A
30. What type(s) of home heating do you have (check all that apply)
 Fuel type: Gas , Oil , Electric , Wood , Coal , Other _____
 Heat conveyance system: Forced hot air
 Forced hot water
 Steam
 Radiant floor heat
 Wood stove
 Coal furnace
 Fireplace
 Other _____
- Kitchen stove
hot water heater*

31. Do you have air conditioning? Yes No . If yes, please check the appropriate type(s)
 Central air conditioning
 Window air conditioning unit(s)
 Other , please specify _____
32. Do you use any of the following? Room fans , Ceiling fans , Attic fan
 Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33. Has your home had termite or other pesticide treatment: Yes No Unknown
 If yes, please specify type of pest controlled, _____
 and approximate date of service _____
34. Water Heater Type: Gas , Electric , By furnace , Other

 Water heater location: Basement , Upstairs utility room , Garage , Other (please describe) _____
35. What type of cooking appliance do you have? Electric , Gas , Other
 MICROWAVE - Gas stove broken
36. Is there a stove exhaust hood present? Yes No VENT FAN
 Does it vent to the outdoors? Yes No
37. Smoking in Home:
 None , Rare (only guests) , Moderate (residents light smokers) ,
 Heavy (at least one heavy smoker in household)
38. If yes to above, what do they smoke?
 Cigarettes Cigars
 Pipe Other
39. Do you regularly use air fresheners? Yes No
40. Does anyone in the home have indoor home hobbies of crafts involving: None
 Heating , soldering , welding , model glues , paint , spray paint,
 wood finishing , Other Please specify what type of hobby: _____

41. General family/home use of consumer products (please circle appropriate): Assume that
Never = never used, **Hardly ever** = less than once/month, **Occasionally** = about
 once/month, **Regularly** = about once/week, and **Often** = more than once/week.

Product	Frequency of Use
Spray-on deodorant	Never <input checked="" type="radio"/> Hardly ever <input type="radio"/> Occasionally <input type="radio"/> Regularly <input type="radio"/> Often <input type="radio"/>

Aerosol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insecticides/ <i>Herbicides</i>	Never	Hardly ever	Occasionally	Regularly	Often
Disinfectants	Never	Hardly ever	Occasionally	Regularly	Often

→ upstairs bathroom

(Question 41, continued)

Product	Frequency of Use				
Window cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail polish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair sprays	Never	Hardly ever	Occasionally	Regularly	Often

42. Please check weekly household cleaning practices:

- Dusting
- Dry sweeping
- Vacuuming
- Polishing (furniture, etc)
- Washing/waxing floors
- Other _____

43. Other comments:

- Cats occupy dwelling
- water/mold damage evident in kitchen
- Gas stove broken in kitchen; washer + dryer also broken.
- wood stove broken in living room
- Roundup applied for Poison Ivy control.

**BUILDING SURVEY
& SAMPLING FORMS**

91 HULME STREET



New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY & SAMPLING FORM

Survey Completed by: JMR ENV. / NJDEP Date: 12/7/04

Site Name: Case #:

Part I - Occupants

Building Address: 91 Hulme Street.

Property Contact: Faith & Charles Parrott Owner / Renter / other: 14 years

Contact's Phone: home (609) 261-3337 work () cell ()

Building occupants: Children under age 13 2 Children age 13-18 0 Adults 4

Part II - Building Characteristics

Building type: single-family residential / Duplex / multi-family residential / office / strip mall / commercial / industrial

Describe building: West half of duplex

Number of floors - below grade: 1 (full basement) / crawl space / slab at or above grade: 3

Basement size: 300 ft^2 Basement floor: concrete / dirt / floating / other (specify):

Foundation type: poured concrete / cinder blocks / stone / other (specify) BRICK

Type of ground cover around outside of building: grass / concrete / asphalt / other (specify)

Basement sump present? Yes No Sump pump? Yes No

Type of heating system (circle all that apply): see note hot air circulation hot air radiation wood steam radiation kerosene heater electric baseboard heat pump other (specify): baseboard hot water radiation

Type of ventilation system (circle all that apply): central air conditioning mechanical fans bathroom ventilation fans individual air conditioning units kitchen range hood fan other (specify):

Type of fuel utilized (circle all that apply): 14 yrs. Natural gas / electric / fuel oil / wood / coal / solar / kerosene / outside (fresh) air intake

Septic system? Yes / Yes (but not used) No Irrigation/private well? Yes / Yes (but not used) No

Existing subsurface depressurization (radon) system in place? Yes No and running? Yes / No

Part III - Outside Contaminant Sources

NJDEP Comprehensive Site List (1000-ft. radius):

Other stationary sources nearby (gas stations, emission stacks, etc.): LTP Landfill / Businesses along Hulme St.

Heavy vehicular traffic nearby (or other mobile sources): TRUCK TRAFFIC ON Hulme Street

*NOTE: A non-vented gas FIRE PLACE is located in living room.

Building address: 91 Hulme St.

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

Potential Sources	Location(s)	Removed Prior to Sampling? (Yes / No / NA)
Gasoline storage cans	None	NA
Gas-powered equipment	None	NA
Kerosene storage cans	None	NA
Paints / thinners / strippers	Basement - in Laundry Room	NO
Cleaning solvents	None	NA
Oven cleaners	None	NA
Carpet / upholstery cleaners	None	NA
Other house cleaning products	Laundry Room	NO
Moth balls	None	NA
Polishes / waxes	None	NA
Insecticides	None	NA
Furniture / floor polish	None	NA
Nail polish / polish remover	UPSTAIRS - USED DAILY	NO
Hairspray	UPSTAIRS	NA
Cologne / perfume	None	NA
Air fresheners	None	NA
Fuel tank (inside building)	None	NA
Wood stove or fireplace	YES - NATURAL GAS IN LIVING ROOM	NA
New furniture / upholstery	None	NA
New carpeting / flooring	Kitchen Floor ~7 months old	NA
Recent painting in building?	None	NA
Hobbies - glues, paints, etc.	None	NA

Part V – Miscellaneous Items

Do any occupants of the building smoke? Yes No ^{outside only} How often? DAILY

Has anyone smoked within the building within the last 48 hours? Yes No

Does the building have an attached garage? Yes No

If so, is a car usually parked in the garage? Yes / No

Do the occupants of the building have their clothes dry-cleaned? Yes No

When were dry-cleaned clothes last brought into the building? _____

Have the occupants ever noticed any unusual odors in the building? Yes / No

Describe (with location): SEWER VENT ODOR - OUTSIDE ONLY

Any known spills of a chemical immediately outside or inside the building? Yes No

Describe (with location): _____

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens? Yes No

If so, when and which chemicals? _____

Building address: 91 Hulme St.

Part VI - Sampling Information

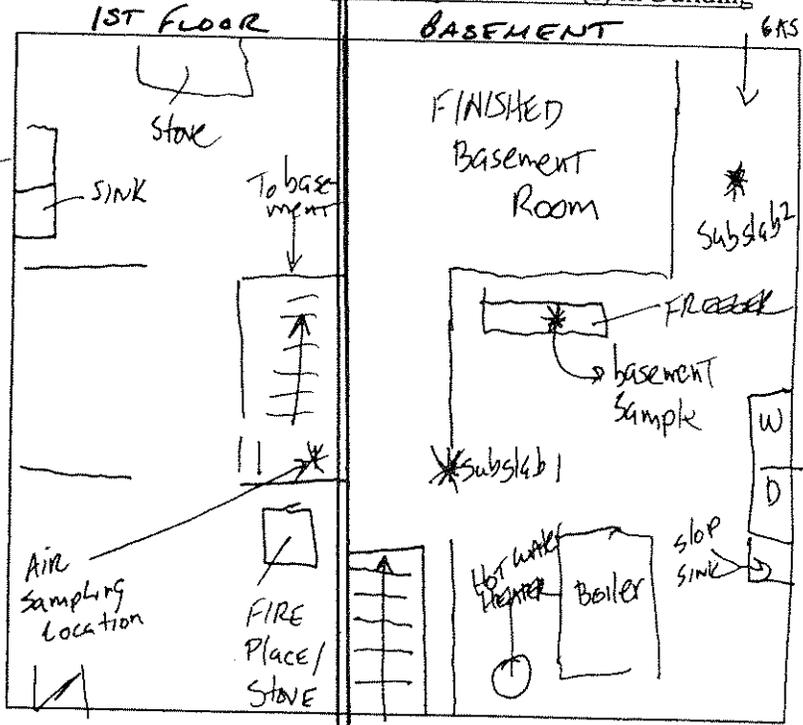
Sample Technician: AB/HS Phone number: (732) 295 - 2144
 Sampler Type: Tedlar / Sorbent / Canister Analytical Method: TO-15 / TO-17 / other: _____
 Laboratory: Accutest Laboratories NJ Certified Lab? Yes No

Sample #	Floor	Room	Canister / Tube #	Pump ID # (if applicable)	Sample Start Date / Time	Sample End Date / Time
91 FIRST FLOOR	1 ST FLOOR	LANDING	A 456	N/A	12/14/04 1015	12/15/04 1015
91 Basement	Basement	Laundry	A 316	N/A	12/14/04 1019	12/15/04 1019
91 subslab 1	Basement	Alcove	A 092	N/A	12/14/04 1100	12/15/04 1115
91 subslab 2	Basement	Between HALLWAY + Laundry	A 234	N/A	12/14/04 1133	12/15/04 1133

Sample location(s):

- 91 1ST FLOOR - STAIR LANDING IN DINING ROOM
- 91 Basement - ON TOP OF DEEP FREEZER UNIT
- subslab 1 - between edge of CARPET + LAUNDRY ROOM
- subslab 2 - IN ALCOVE near Gas meter

Provide Drawing of Sample Location(s) in Building



Did the occupants not follow any of the "Instructions for Residents" directions? Yes / No

If so, describe modifications: _____

Part VII - Weather Conditions

Average Outside temperature at time of sampling: 29 °F
 Expected high temperature: 38 °F
 Expected low temperature: 20 °F

Was there significant precipitation within 12 hours of (or during) the sampling event? Yes / No

Describe the general weather conditions: Clear, WINDS ~ 10mph FROM NNW, Average RH 59%, Average barometric pressure 30.08 inches.

Part VIII - General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

- Low basement ceilings
- Finished room is a children play room

OCCUPIED DWELLING QUESTIONNAIRE

Indoor Air Assessment Survey

Date: 12/7/04

1. Name: Father & Charles Parrott

Address: 91 Hulme Street

Home Phone: 609 261-3337 Work Phone: _____

2. What is the best time to call to speak with you? Any At: Work or Home ?

3. Are you the Owner , Renter , Other (please specify) _____ of this Home/Structure?

4. Total number of occupants/persons at this location? 6
Number of children? 2 Ages? < 13

5. How long have you lived at this location? 14 years

General Home Description

6. Type of Home/Structure (check only one): Single Family Home , Duplex , Condominium , Townhouse , Other _____

7. Home/Structure Description: number of floors 3

Basement? Yes No

Crawl Space? Yes No

If Yes, under how much of the house's area? 100 %

8. Age of Home/Structure: PRE 1940 years, Not sure/Unknown

9. General Above-Ground Home/Structure construction (check all that apply):
Wood , Brick , Concrete , Cement block , Other _____

10. Foundation Construction (check all that apply):

Concrete slab

Fieldstone

Concrete block

Elevated above ground/grade

Other BRICK

11. What is the source of your drinking water (check all that apply)?

Public water supply

Private well

Bottled water

Other, please specify _____

12. Do you have a private well for purposes other than drinking?

Yes No

If yes, please describe what you use the well
for: _____

13. Do you have a septic system? Yes No Not used Unknown

14. Do you have standing water outside your home (pond, ditch, swale)? Yes No

Basement Description, please check appropriate boxes.

If you do not have a basement go to question 23.

15. Is the basement finished or unfinished ?

16. If finished, how many rooms are in the basement? 2 (1 FINISHED / 1 UNFINISHED)
How many are used for more than 2 hours/day? 1

17. Is the basement floor (check all that apply) concrete , tile , carpeted , dirt ,
other (describe) _____?

18. Are the basement walls poured concrete , cement block , stone , wood , brick ,
other _____?

19. Does the basement have a moisture problem (check one only)?

Yes, frequently (3 or more times/yr)

Yes, occasionally (1-2 times/yr)

Yes, rarely (less than 1 time/yr)

No

20. Does the basement ever flood (check one only)?

Yes, frequently (3 or more times/yr)

Yes, occasionally (1-2 times/yr)

Yes, rarely (less than 1 time/yr)

No

21. Does the basement have any of the following? (check all that apply) Floor cracks ,

Wall cracks , Sump , Floor drain , Other hole/opening in floor

(describe) _____

22. Are any of the following used or stored in the basement (check all that apply)
 Paint Paint stripper/remover Paint thinner
 Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue
 Laundry spot removers Drain cleaners Pesticides
23. Have you recently (within the last six months) done any painting or remodeling in your home? Yes No
 If yes, please specify what was done, where in the home, and what month:
- Kitchen Floor REPLACED AS NEW 5/04
-
24. Have you installed new carpeting in your home within the last year? Yes No
 If yes, when and where? _____
25. Do you regularly use or work in a dry cleaning service (check only one box)?
 Yes, use dry-cleaning regularly (at least weekly)
 Yes, use dry-cleaning infrequently (monthly or less)
 Yes, work at a dry cleaning service
 No
26. Does anyone in your home use solvents at work?
 Yes If yes, how many persons _____
 No If no, go to question 28
27. If yes for question 26 above, are the work clothes washed at home? Yes No
28. Where is the washer/dryer located?
 Basement
 Upstairs utility room
 Kitchen
 Garage
 Use a Laundromat
 Other, please specify _____
29. If you have a dryer, is it vented to the outdoors? Yes No
30. What type(s) of home heating do you have (check all that apply)
 Fuel type: Gas , Oil , Electric , Wood , Coal , Other _____
 Heat conveyance system: Forced hot air
 Forced hot water
 Steam
 Radiant floor heat
 Wood stove
 Coal furnace
 Fireplace
 Other _____

31. Do you have air conditioning? Yes No . If yes, please check the appropriate type(s)
 Central air conditioning
 Window air conditioning unit(s)
 Other , please specify _____
32. Do you use any of the following? Room fans , Ceiling fans , Attic fan
 Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33. Has your home had termite or other pesticide treatment: Yes No Unknown
 If yes, please specify type of pest controlled, _____
 and approximate date of service _____
34. Water Heater Type: Gas , Electric , By furnace , Other

 Water heater location: Basement , Upstairs utility room , Garage , Other (please describe) _____
35. What type of cooking appliance do you have? Electric , Gas , Other

36. Is there a stove exhaust hood present? Yes No
 Does it vent to the outdoors? Yes No
37. Smoking in Home:
 None , Rare (only guests) , Moderate (residents light smokers) ,
 Heavy (at least one heavy smoker in household)
38. If yes to above, what do they smoke?
 Cigarettes Cigars
 Pipe Other
39. Do you regularly use air fresheners? Yes No
40. Does anyone in the home have indoor home hobbies of crafts involving: None
 Heating , soldering , welding , model glues , paint , spray paint,
 wood finishing , Other Please specify what type of hobby: _____

41. General family/home use of consumer products (please circle appropriate): Assume that
Never = never used, **Hardly ever** = less than once/month, **Occasionally** = about
 once/month, **Regularly** = about once/week, and **Often** = more than once/week.

Product

Frequency of Use

Spray-on deodorant

Never

Hardly ever

Occasionally

Regularly

Often

Aerosol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insecticides	Never	Hardly ever	Occasionally	Regularly	Often
Disinfectants	Never	Hardly ever	Occasionally	Regularly	Often

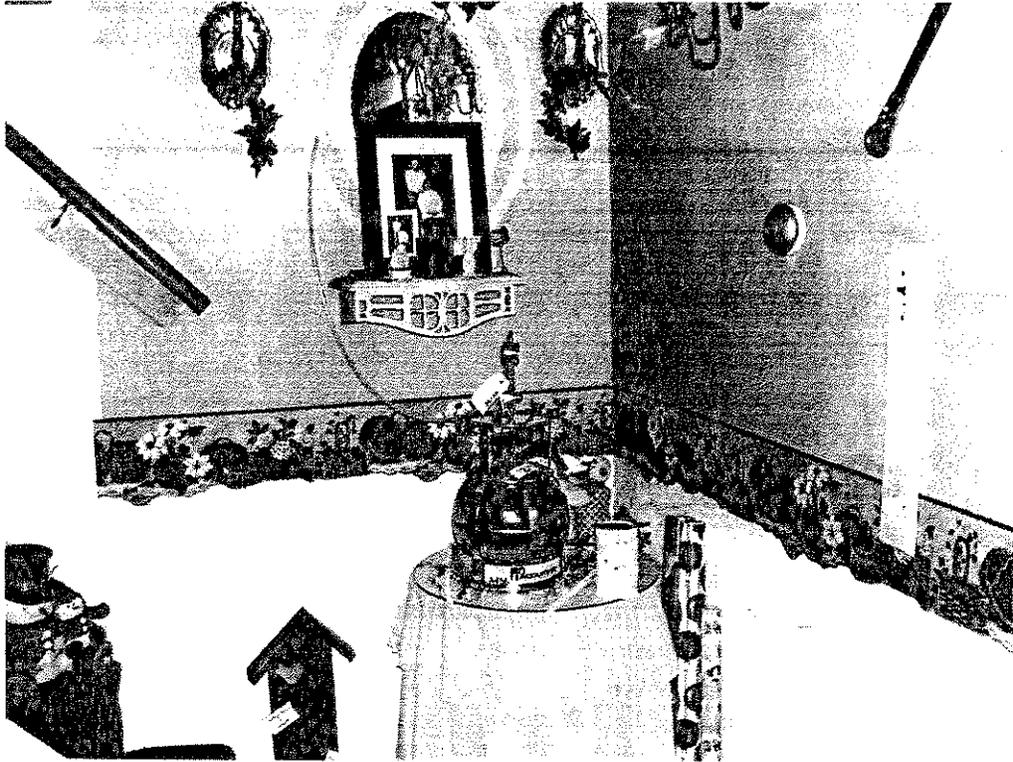
(Question 41, continued)

<u>Product</u>	<u>Frequency of Use</u>				
Window cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail polish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair sprays	Never	Hardly ever	Occasionally	Regularly	Often

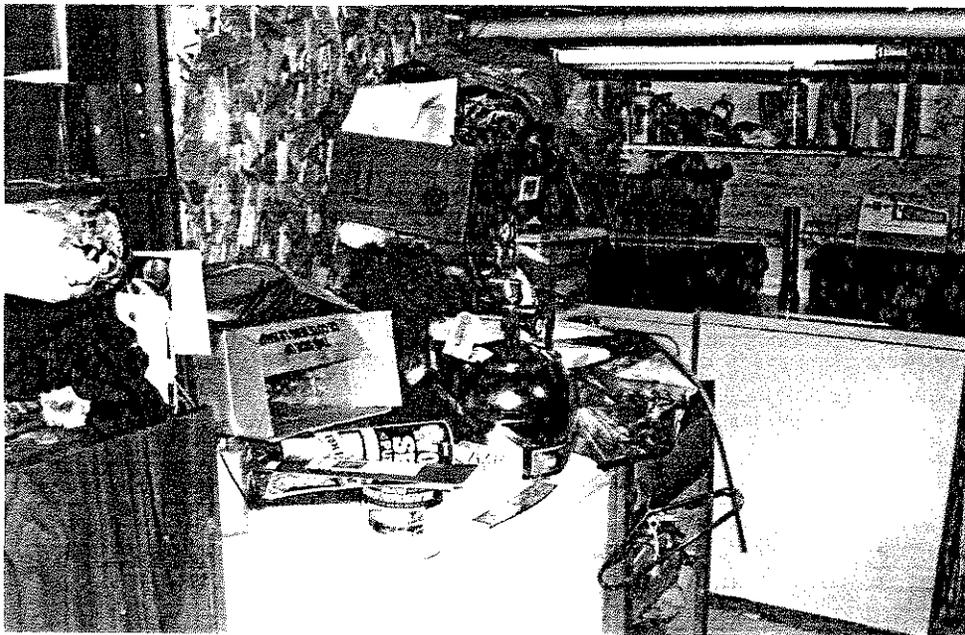
42. Please check weekly household cleaning practices:

- Dusting
- Dry sweeping
- Vacuuming
- Polishing (furniture, etc)
- Washing/waxing floors
- Other _____

43. Other comments: *Finished room in basement used as
a children's play room.
Low ceiling in basement.*



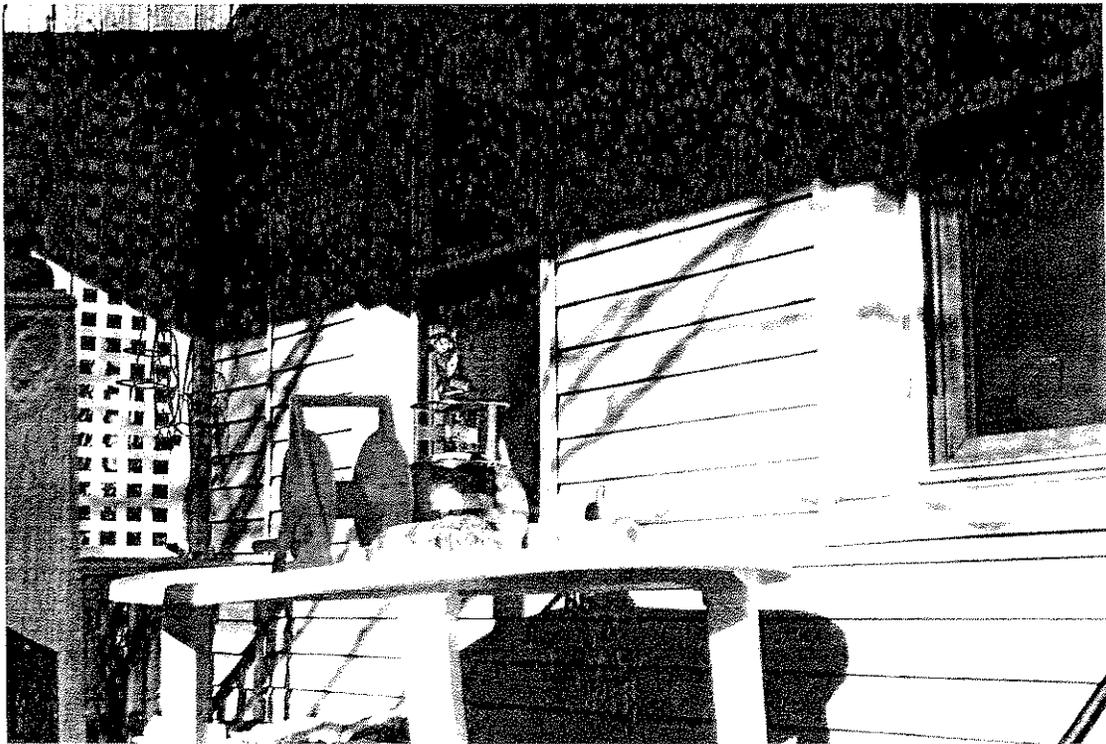
First floor #91 Hulme Street



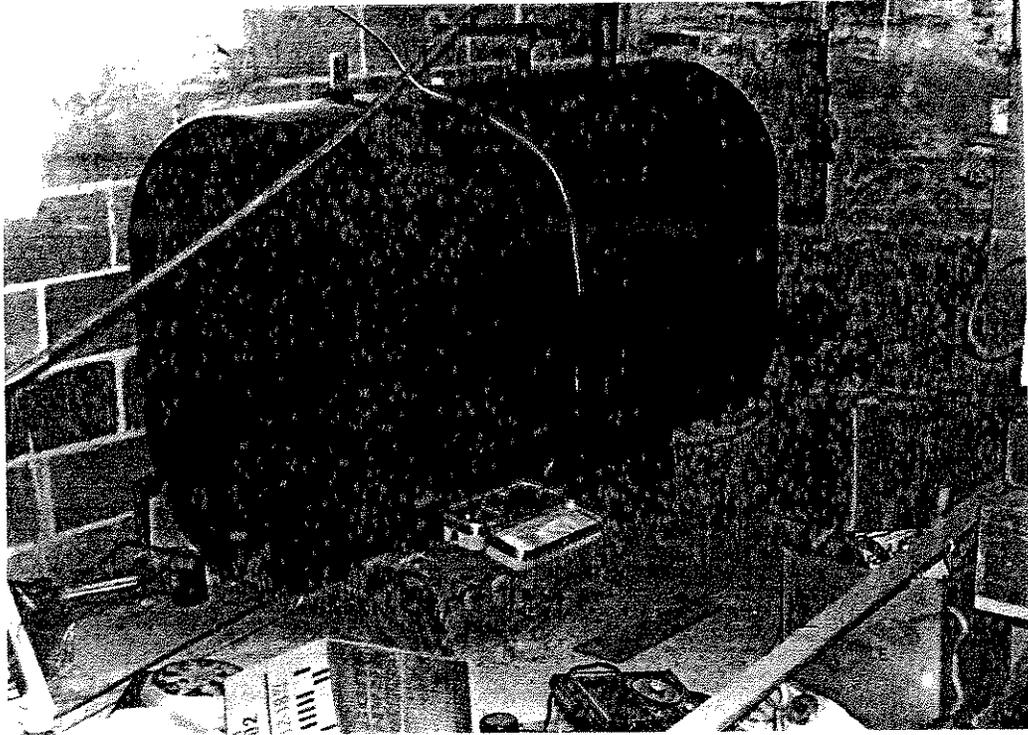
Basement sample #91 Hulme Street



First floor sample #93 Hulme Street



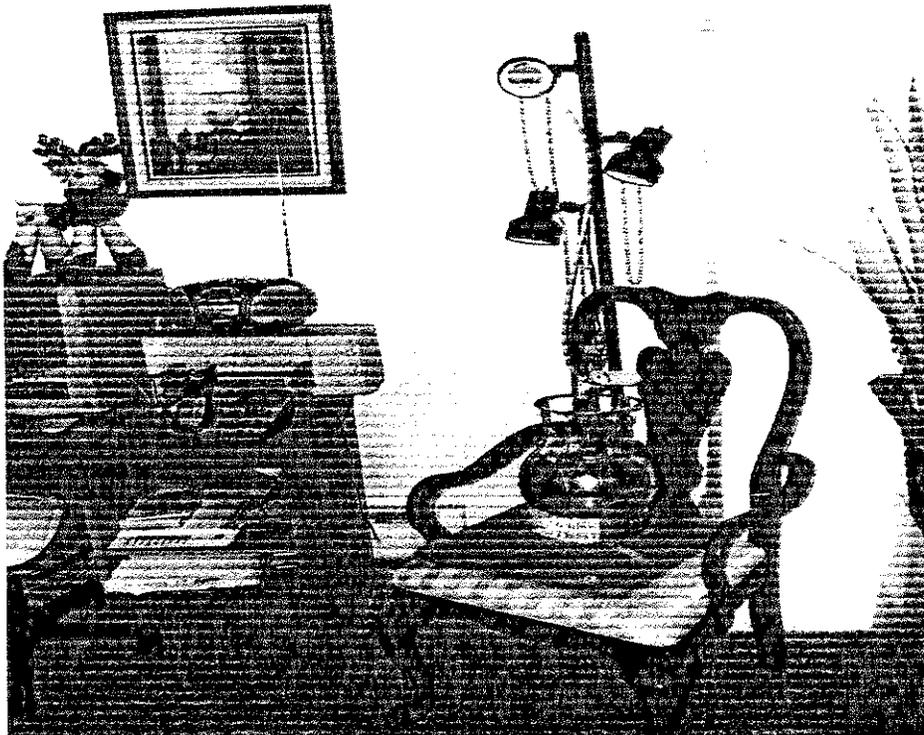
Background Sample #93 Hulme Street



AST in basement of #93 Hulme Street



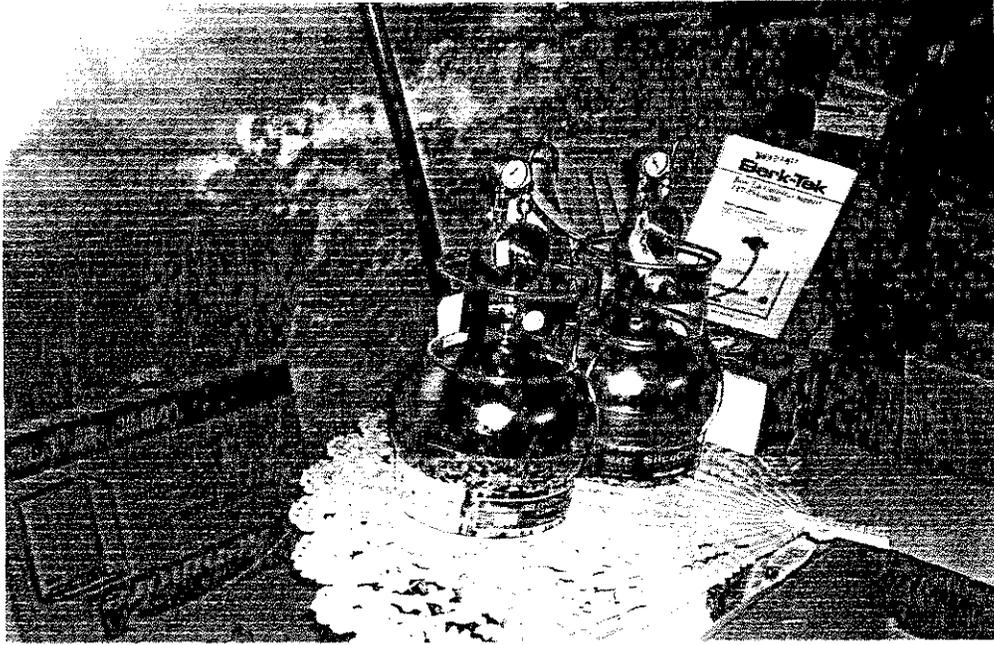
Basement sample #93 Hulme Street



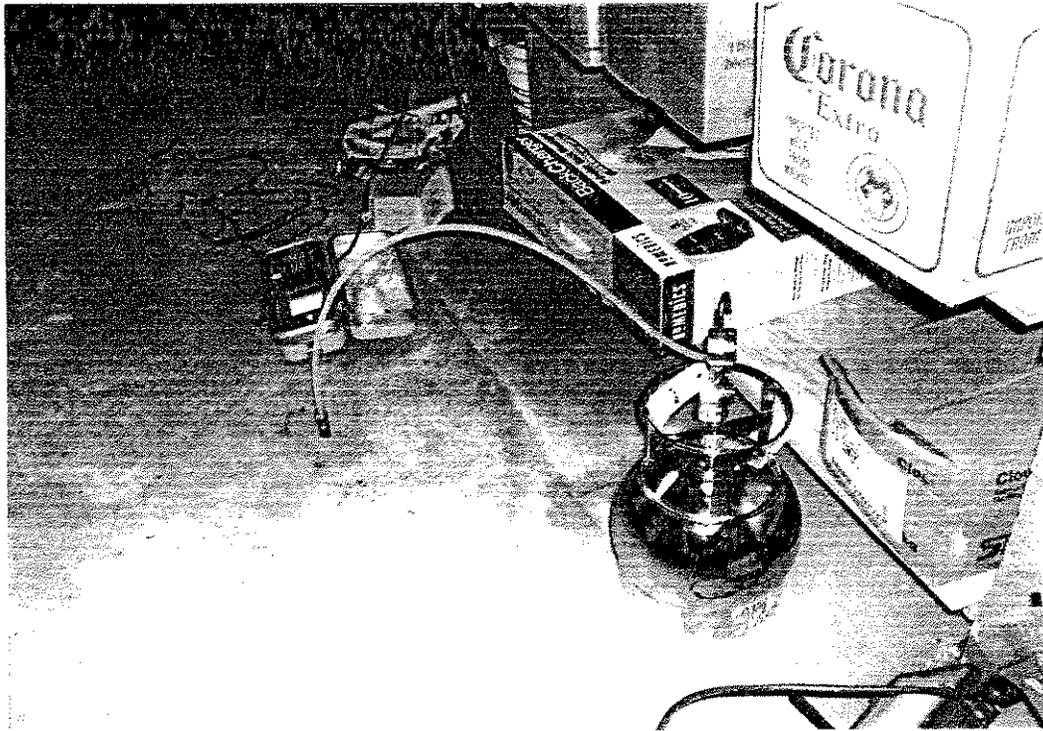
#103 Hulme Street First Floor



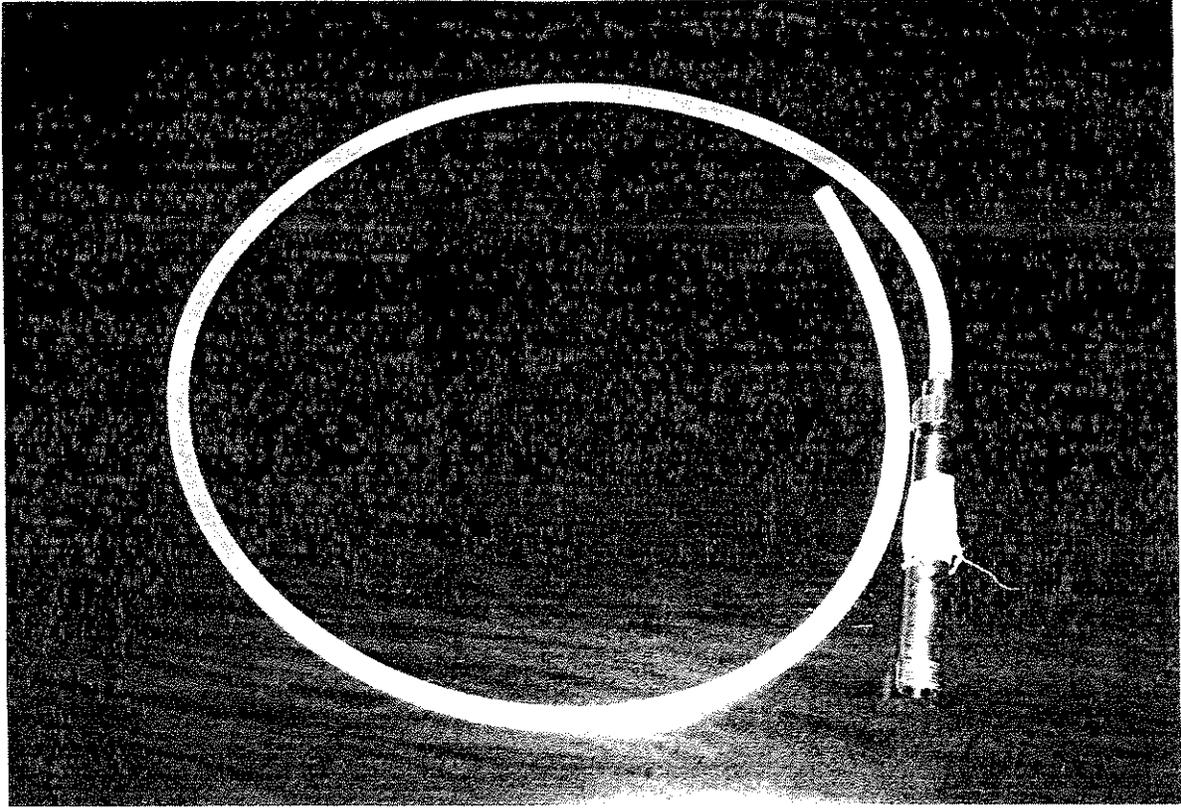
Background Sample #103 Hulme Street



Basement and duplicate sample in #103



Sub-slab sample #103 Hulme Street





PHOTOGRAPH 1

91 Hulme Street



PHOTOGRAPH 2

93 Hulme Street

Golder Associates



PHOTOGRAPH 3

103 Hulme Street

APPENDIX II
BOREHOLE LOGS

JMC Environmental Consultants, Inc.

571 West Lake Avenue, Suite 6, Bay Head, New Jersey 08742
 Phone: (732) 295-2144 Fax: (732) 295-2150

Boring for Location: HL-3

Permit #: NA	Location: Agway Property/Milford Fertilizer - Mt. Holly, NJ	G.W. Encountered: 7.0	Static Water:
Site Name: Pine St. - Mt. Holly	Project: M.O.A.	JMC Job #: 20045	Well - Depth:
Owner:	Use: Soil sampling	Casing - Length:	Diameter:
Boring Drill Date: 07/08/2004	Type: Grab	Screen - Length:	Diameter:
Boring Driller: EFS, Inc.	Purge Method:	Screen Type:	
Boring Rig: Geoprobe	Sample Method:	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VOCs	Sand Pack: N/A	
Sampling Method: 2" Macro sampler	Sampler: A. Biskupski	Depth to PVC Rim:	

Depth (ft.)	Sample ID and Depth	OWM (Meter Units)	Blows/12.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1						0-.5' 3" of concrete floor above 3" layer of dark brown sand	1	
2						0.5'- 4.0' Dark brown and tan sand (fine)	2	
3							3	
4							4	
5	HL-3A	1671				4.0-8.0 Orange/tan/greenish silty clay with trace tan fine sand	5	
6		1039					6	
7	HL-3B	1033				Moist to wet at 7.0'	7	
8		1023					8	
9		408				8.0-8.5' Greenish black clay	9	
10		120				8.5-9.0' Green silt w/clay	10	
11		943				9.5-10.0' Tan/brown silt w/ clay	11	
12		70				10.0 12.0-Green/gray silt w/ clay	12	
13		196					13	
14		45				12.0-16.0' Green/gray silty sand	14	
15	HL-3C	26					15	
16		6					16	
17						Groundwater encountered at 7feet bgs	17	
18						End of boring at 16.0'	18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

*Drawing vertically to scale

JMC Environmental Consultants, Inc.

571 W. Lake Avenue, Suite 6, Bay Head NJ
 Phone: (732) 295-2144 Fax: (732) 295-2150

Boring for Location: B-35

Permit #: NA	Location: Agway Property/Milford Fertilizer - Mt. Holly, NJ	G.W. Encountered: 7.5	Static Water:
Site Name: Pine St. - Mt. Holly	Project: M.O.A.	JMC Job #: 20045	Well - Depth:
Owner:	Use: Soil sampling	Casing - Length:	Diameter:
Boring Drill Date: 07/08/04	Type: Grab	Screen - Length:	Diameter:
Boring Driller: EFS, Inc.	Purge Method:	Screen Type:	
Boring Rig: Geoprobe	Sample Method:	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters:	Sand Pack: N/A	
Sampling Method: 2" Macro sampler	Sampler: H. Syvarth	Depth to PVC Rim:	

Depth (ft.)	Sample ID and Depth and Depth (Meter Units)	OVM (Meter Units)	Blows/12.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0				0.0- 1.5' fill material consisting primarily of a mixture of fine to coarse sands with a little silt present mixture of medium to coarse poorly drained sands	1	<p>The diagram shows a vertical shaft representing the boring. The shaft is shaded grey. A horizontal line with a downward-pointing triangle and two short horizontal bars below it is drawn at the 8.5-foot depth, indicating the groundwater level. The shaft ends at 15.0 feet.</p>
2		0				1.5-3.0 rust brown-grey medium to coarse sandy clay	2	
3		0				3.0- 4.0 rust brown-grey medium to coarse sandy clay to mottled dark grey silty clay, with trace of very fine sand	3	
4		0				4.0- 6.0 see 3.0-4.0	4	
5		0					5	
6		71				6.0-8.0 olive brown silty sand (fine) with trace amounts of clay - moist to wet	6	
7		1300					7	
8		1500				8.0-12.0 very fine to fine sand with varying percentages of silt and clay color varied (wet) groundwater encountered at 8.5'	8	
9	B35-B	1500					9	
10		1030					10	
11		200				see 8-12' interval grey green fine sand with some silt and clay	11	
12							12	
13		200					13	
14	B-35C	10					14	
15		10				End of boring at 15.0'	15	
16							16	
17							17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

*Drawing vertically to scale

JMC Environmental Consultants, Inc.						Boring for Location: B-36		
571 W. Lake Avenue, Suite 6 Bay Head NJ Phone: (732) 295-2144 Fax: (732) 295-2150								
Permit #: NA		Location: Agway Property/Milford Fertilizer - Mt. Holly, NJ		G.W. Encountered 7.0'		Static Water:		
Site Name: Pine St. - Mt. Holly		Project: M.O.A.		JMC Job #: 20045		Well - Depth:		
Owner:		Use: Soil sampling		Casing - Length:		Diameter:		
Boring Drill Date: 07/08/04		Type: Grab		Screen - Length:		Diameter:		
Boring Driller: EFS, Inc.		Purge Method:		Screen Type:				
Boring Rig: Geoprobe		Sample Method:		Bentonite: N/A				
Driller/Helper: John Wysocki		Sample Parameters:		Sand Pack: N/A				
Sampling Method: 2" Macro sampler		Sampler: H. Syvarth		Depth to PVC Rim:				
Depth (ft.)	Sample ID and Depth	OWM (Meter Units)	Blows/12.0'	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0				0.0-0.5' fill material light brown fine to coarse sand with little silt and trace 0.5-2.5 light brown fine to coarse sand with little silt and trace gravel	1	
2		0				2.5-3.0 brown to gray medium to coarse sand with little silt 3.0-4.0 grey silty clay with fine sands	2	
3		0					3	
4		0					4	
5		46				4.0-5.0 see 2.5-3' interval 5.0-8.0 olive to reddish brown fine sandy silt with trace amounts of clay	5	
6		30					6	
7		1500					7	
8							8	
9	B-36B	1600				8.0-12.0 olive brown rusted brown with dark grey streaks throughout the interval with increasing percentages of clay, fine to medium silty sand (wet) groundwater encountered at 8.5'	9	
10		1500					10	
11		1300					11	
12							12	
13		132				12-13.0 same as 8-12' interval	13	
14		63				13-16.0 grey moderate to well sorted fine to medium sands with some silt and clay	14	
15		20					15	
16	B-35C	7					16	
17		7					17	
18		4				End of boring at 16.0'	18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

*Drawing vertically to scale

JMC Environmental Consultants, Inc.
 571 W. Lake Avenue, Suite 6 Bay Head, NJ
 Phone: (732) 295-2144 Fax: (732) 295-2150

Boring for Location: B-37

Permit #: NA	Location: Agway Property/Milford Fertilizer - Mt. Holly, NJ	G.W. Encountered: 7.5'	Static Water:
Site Name: Pine St. - Mt. Holly	Project: M.O.A.	JMC Job #: 20045	Well - Depth:
Owner:	Use: Soil sampling	Casing - Length:	Diameter:
Boring Drill Date: 07/08/04	Type: Grab	Screen - Length:	Diameter:
Boring Driller: EFS, Inc.	Purge Method:	Screen Type:	
Boring Rig: Geoprobe	Sample Method:	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters:	Sand Pack: N/A	
Sampling Method: 2" Macro sampler	Sampler: H. Syvarth	Depth to PVC Rim:	

Depth (ft.)	Sample ID and Depth	OMV (Meter Units)	Blows/12.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0				0.0-0-1.5 fill material consisting primarily of a mixture of fine to coarse sands with a little silt present	1	
2		0				1.5-4.0 light brown medium sand with trace amounts of silt and coarse sand	2	
3		0					3	
4		0					4	
5		0				4.0 4.5 grey silty clay with little very fine to fine sand	5	
6		30				4.5-5.5 reddish brown to olive brown silt with clay trace of fine sands	6	
7		60				5.5 -8.0 brown silty sand with varying percentage of clay (moist to wet)	7	
8		132					8	
9	B37-B	1980				8.0-12.0 olive brown/green fine to medium sand with trace clay (wet)	9	
10		1500					10	
11		1200					11	
12							12	
13		1300				12.0-16.0 varied olive green/brown sands	13	
14		1100					14	
15		400					15	
16		490					16	
17		206				16.0-20.0 saturated moderate to well sorted sand with some silt and clay	17	
18		13					18	
19		7					19	
20	B37-C	7					20	
21						End of boring at 20.0'	21	
22							22	
23							23	
24							24	

*Drawing vertically to scale

JMC Environmental Consultants, Inc.

571 W. Lake Avenue, Suite 6 Bay Head NJ
 Phone: (732) 295-2144 Fax: (732) 295-2150

Boring for Location: B-38

Permit #: NA	Location: Agway Property/Milford Fertilizer - Mt. Holly, NJ	G.W. Encountered: 10'	Static Water:
Site Name: Pine St. - Mt. Holly	Project: M.O.A.	JMC Job #: 20045	Well - Depth:
Owner:	Use: Soil sampling	Casing - Length:	Diameter:
Boring Drill Date: 07/08/04	Type: Grab	Screen - Length:	Diameter:
Boring Driller: EFS, Inc.	Purge Method:	Screen Type:	
Boring Rig: Geoprobe	Sample Method:	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters:	Sand Pack: N/A	
Sampling Method: 2" Macro sampler	Sampler: H. Syvarth	Depth to PVC Rim:	

Depth (ft.)	Sample ID and Depth (ft.)	OVM (Meter Units)	Blows/12.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
0						0-1' Black grit/ash fill material	0	
1		0				1-3' light brown fine to medium sand with some silt	1	
2		4				3.0- 4.0 medium to coarse gravel damp at bottom of interval brown poorly sorted medium to coarse sand	2	
3		2				4.0- 6.5 brown fill with sandy silt mixed in reddish brown clayey silt with little fine sand	3	
4		6				6.8- 8.0 olive brown moderately sorted medium to fine sand with little silt - moist	4	
5		240				8.0 12.0 same as previous interval - moist to wet groundwater @ 10.0'	5	
6		540					6	
7		700					7	
8		1260					8	
9		1400					9	
10		1300					10	
11		1400					11	
12	38B	1900				12.0-16.0 same as previous interval	12	
13							13	
14		1800					14	
15		1800					15	
16	38C	0				16-20.0 well sorted fine to medium sand with some silt and some clay	16	
17		0					17	
18		0					18	
19		0					19	
20						no recovery	20	
21						End of boring at 20.0'	21	
22							22	
23							23	
24							24	

*Drawing vertically to scale

JMC Environmental Consultants, Inc.

571 W. Lake Avenue, Suite 6, Bay Head NJ 08742
 Phone: (732) 295-2144 Fax: (732) 295-2150

Boring for Location: B-39

Permit #: NA	Location: Agway Property/Milford Fertilizer - Mt. Holly, NJ	G.W. Encountered: 10'	Static Water:
Site Name: Pine St. - Mt. Holly	Project: M.O.A.	JMC Job #: 20045	Well - Depth:
Owner:	Use: Soil sampling	Casing - Length:	Diameter:
Boring Drill Date: 07/08/04	Type: Grab	Screen - Length:	Diameter:
Boring Driller: EFS, Inc.	Purge Method:	Screen Type:	
Boring Rig: Geoprobe	Sample Method:	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters:	Sand Pack: N/A	
Sampling Method: 2" Macro sampler	Sampler: H. Syvarth	Depth to PVC Rim:	

Depth (ft.)	Sample ID and Depth and Depth (Meter Units)	Blows/12.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	0		3.5'		Fill Material	1	
2					Brown/yellow medium to coarse SAND	2	
3	0					3	
4	0		3.5		no recovery	4	
5	0				brown red coarse to medium sand	5	
6	0					6	
7	0				brown silty sand	7	
8	0				same as above	8	
9			3.5'		silty clay with sand water encountered @ 10'	9	
10	375					10	
11	570					11	
12	390					12	
13	200		2.5'		tan fine grained sand	13	
14	1600					14	
15	1900				tan fine grained silty sands	15	
16	1100					16	
17	300		4'		olive green/tan mottled sandy soil	17	
18	150					18	
19	2					19	
20	2					20	
21	0				no sample collected	21	
22	0				End of boring at 20.0'	22	
23						23	
24						24	

*Drawing vertically to scale

JMC Environmental Consultants, Inc.

571 W. Lake Avenue, Suite 6, Bay Head NJ 08742
 Phone: (732) 295-2144 Fax: (732) 295-2150

Boring for Location: B-40

Permit #: NA	Location: Agway Property/Milford Fertilizer - Mt. Holly, NJ	G.W. Encountered: 8.5'	Static Water:
Site Name: Pine St. - Mt. Holly	Project: M.O.A.	JMC Job #: 20045	Well - Depth:
Owner:	Use: Soil sampling	Casing - Length:	Diameter:
Boring Drill Date: 07/08/04	Type: Grab	Screen - Length:	Diameter:
Boring Driller: EFS, Inc.	Purge Method:	Screen Type:	
Boring Rig: Geoprobe	Sample Method:	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters:	Sand Pack: N/A	
Sampling Method: 2" Macro sampler	Sampler: H. Syvarth	Depth to PVC Rim:	

Depth (ft.)	Sample ID and Depth	OMV (Meter Units)	Blows/12.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0		2.5'		0.0-2.5 fill material w/mixed coarse sands and gravel	1	
2							2	
3		0				2.5-4.0 brown/black medium to coarse sand	3	
4		0		3.5		4.0- 5.0 tightly packed medium to fine sands	4	
5		0				5.0 - 8.0 brown fine sand with some silt and clay	5	
6		0				groundwater encountered at 8.5'	6	
7		0					7	
8		0		4'		8.0-12.0 same as above	8	
9	40B	0					9	
10	40C	0					10	
11		0					11	
12		0					12	
13						End of boring at 12.0'	13	
14							14	
15							15	
16							16	
17							17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

*Drawing vertically to scale

JMC Environmental Consultants, Inc.

571 West Lake Avenue, Suite 6, Bay Head, New Jersey 08742
 Phone: (732) 295-2144 Fax: (732) 295-2150

Boring for Location: B-41

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.5' BSG	Static Water: N/A
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: N/A
Owner: Growmark F.S.	Use: Soil sampling	Casing - Length: N/A	Diameter: N/A
Boring Drill Date: 11/08/04	Type: Grab	Screen - Length: N/A	Diameter: N/A
Boring Driller: Environmental Field Service, Inc.	Purge Method: N/A	Screen Type: N/A	
Boring Rig: Geoprobe 5400	Sample Method: N/A	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: N/A	

Depth (ft.)	Sample ID and Depth	OV/1 (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	0.75'	SP	0 - 2.0' Black fine SAND w/ organics (damp)	1	
2		0			SM	2.0 - 4.0' Tan green fine SAND w/Silt (damp)	2	
3		0					3	
4		0					4	
5		0		4	SC	4 - 4.5' Brown orange mottled CLAY w/ Sand	5	
6		0				4.5 - 5.0' Green brown fine SAND w/ Clay	6	
7		21			SM	5.0 - 5.5' Brown orange mottled SAND w/ Clay	7	
8		8			SC	5.5 - 6.0' Green gray fine SAND w/ Silt	8	
9	A	285		2.75	SM	6.0 - 8.0' Brown mottled SAND w/ Clay	9	
10		366				8.0 - 11.75' Green mottled fine SAND w/ Silt (wet)	10	
11		440				10.0 - 11.5' Tan mottled fine SAND (wet)	11	
12	B	398				11.75 - 12.0' Gray fine SAND	12	
13		405		3.5		12.0 - 16.0' Green glauconitic SAND, some Silt (wet)	13	
14		399					14	
15		360					15	
16		493					16	
17		101		3.75		16.0 - 20.0' Green glauconitic SAND, some Silt (wet)	17	
18		31					18	
19		34					19	
20		30					20	
21		15					21	
22		13					22	
23		23					23	
24		5					24	
		5						
		4						
		1.5						
		1						
21	Boring advanced to 20 feet below grade						21	
22	Groundwater encountered at 8.5 feet below grade						22	
23							23	
24							24	

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Boring for Location: B-42

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.0' BSG	Static Water: N/A
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: N/A
Owner: Growmark F.S.	Use: Soil sampling	Casing - Length: N/A	Diameter: N/A
Boring Drill Date: 11/08/04	Type: Grab	Screen - Length: N/A	Diameter: N/A
Boring Driller: Environmental Field Service, Inc.	Purge Method: N/A	Screen Type: N/A	
Boring Rig: Geoprobe 5400	Sample Method: N/A	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: N/A	

Depth (ft.)	Sample ID and Depth	OV/M (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	3	SM	0 - 0.25' Gray SAND 0.25 - 1.0' Black coal debris 1.0 - 3.25' Tan white brown fine SAND	1	
2		0					2	
3		0					3	
4		6				3.25 - 3.5' Coarse SAND 3.5 - 4.0' Green brown med-coarse SAND 4 - 4.25' Coarse SAND 4.25 - 8.0' Tan brown mottled fine SAND w/ Silt	4	
5		100		3			5	
6		242					6	
7		364					7	
8		350					8	
9	A	396				8.0 - 12.0' Tan gray green mottled fine SAND w/ Silt (wet)	9	
10	B	382					10	
11		197		3			11	
12		455					12	
13		476					13	
14		456					14	
15		473					15	
16		428					16	
17		426					17	
18		434					18	
19		508		3.5		12.0 - 16.0' Tan gray green mottled fine SAND w/ Silt (wet)	19	
20	C	322					20	
21		126					21	
22		77					22	
23		109					23	
24		89					24	
25		37					25	
26		47		3		16.0 - 20.0' Green glauconitic SAND, some Silt (wet)	26	
27		83					27	
28		17					28	
29		59					29	
30		100					30	
31		28					31	
32		26					32	
33	D						33	
34							34	
35							35	
36							36	
37							37	
38							38	
39							39	
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Boring for Location: B-44

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.0'	Static Water: N/A
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: N/A
Owner: Growmark F.S.	Use: Soil sampling	Casing - Length: N/A	Diameter: N/A
Boring Drill Date: 11/08/04	Type: Grab	Screen - Length: N/A	Diameter: N/A
Boring Driller: Environmental Field Service, Inc.	Purge Method: N/A	Screen Type: N/A	
Boring Rig: Geoprobe 5400	Sample Method: N/A	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: N/A	

Depth (ft.)	Sample ID and Depth	OV/M (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	3.75		0 - 2.25' Coal debris w/ soil	1	
2		3			SM	2.25 - 3.5' Tan mottled fine - med SAND	2	
3		16				3.5 - 4.0' Green gray med-coarse SAND	3	
4		0				4.0 - 4.5' Coarse SAND	4	
5		0		3		4.5 - 7.5' Tan green mottled fine SAND w/ Silt	5	
6		0.3					6	
7		2					7	
8	A	36				7.5 - 8.0' Tan mottled fine SAND w/ Silt	8	
9		119				8.0 - 12.0' Tan orange mottled fine SAND w/ Silt (wet)	9	
10		236					10	
11		421					11	
12		92		3			12	
13		257				12.0 - 16.0' Tan orange mottled fine SAND w/ Silt (wet)	13	
14	B	289					14	
15		336					15	
16	C	404					16	
17		392					17	
18		421					18	
19		441					19	
20		454					20	
21		80					21	
22		76					22	
23		16					23	
24		1					24	
17						Boring advanced to 16 feet below grade	17	
18						Groundwater encountered at 8.0 feet below grade	18	

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Boring for Location: B-45

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.0'	Static Water: N/A
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: N/A
Owner: Growmark F.S.	Use: Soil sampling	Casing - Length: N/A	Diameter: N/A
Boring Drill Date: 11/08/04	Type: Grab	Screen - Length: N/A	Diameter: N/A
Boring Driller: Environmental Field Service, Inc.	Purge Method: N/A	Screen Type: N/A	
Boring Rig: Geoprobe 5400	Sample Method: N/A	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: N/A	

Depth (ft.)	Sample ID and Depth (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A		0 - 2.25' Coal debris w/ soil	1	
2		0		SM	2.25 - 3.5' Green gray fine SAND	2	
3		0			3.5 - 4.0' Green Gray med - coarse SAND	3	
4		0			4.0 - 4.25' Coarse SAND	4	
5		0	2.75		4.25 - 8.0' Tan green mottled fine SAND w/ Silt	5	
6		0				6	
7		6				7	
8	A	18			8.0 - 12.0' Tan brown orange mottled fine SAND w/ Silt (wet)	8	
9		31	3.25			9	
10	B	37				10	
11		68				11	
12		126				12	
13		68			12.0 - 16.0' Tan brown mottled fine SAND w/ Silt (wet)	13	
14		114				14	
15		102				15	
16	C	104				16	
17		76				17	
18		87			Boring advanced to 16 feet below grade	18	
19		111			Groundwater encountered at 8.0 feet below grade	19	
20		60				20	
21		45				21	
22		1				22	
23		0				23	
24						24	

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Boring for Location: B-46

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.0'	Static Water: N/A
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: N/A
Owner: Growmark F.S.	Use: Soil sampling	Casing - Length: N/A	Diameter: N/A
Boring Drill Date: 11/08/04	Type: Grab	Screen - Length: N/A	Diameter: N/A
Boring Driller: Environmental Field Service, Inc.	Purge Method: N/A	Screen Type: N/A	
Boring Rig: Geoprobe 5400	Sample Method: N/A	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: N/A	

Depth (ft.)	Sample ID and Depth	OV/M (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	3.5	SW	0 - 0.25' Tan SAND	1	
2		0			SM	0.25 - 2.75' Black coal SAND/Debris	2	
3		0				2.75 - 3.25' Gray fine SAND	3	
4		0				3.25 - 4.0' Tan fine-coarse SAND w/ trace fine Gravel	4	
5		0		3		4.0 - 4.25' Med - coarse SAND	5	
6		0				4.25 - 8.0' Tan green mottled fine SAND w/ Silt	6	
7		0					7	
8	A	20					8	
9	B	2		3		8.0 - 12.0' Green brown mottled fine SAND w/ Silt (wet)	9	
10		94					10	
11		81					11	
12		87					12	
13		19					13	
14		47		2.5		12.0 - 16.0' Tan brown mottled fine SAND w/ Silt (wet)	14	
15		32					15	
16	C	9					16	
17		40					17	
18		26					18	
19		20					19	
20		0					20	
21		0					21	
22		0					22	
23		0					23	
24		0					24	

Boring advanced to 16 feet below grade
 Groundwater encountered at 8.0 feet below grade

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Boring for Location: B-47

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.0'	Static Water: N/A
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: N/A
Owner: Growmark F.S.	Use: Soil sampling	Casing - Length: N/A	Diameter: N/A
Boring Drill Date: 11/08/04	Type: Grab	Screen - Length: N/A	Diameter: N/A
Boring Driller: Environmental Field Service, Inc.	Purge Method: N/A	Screen Type: N/A	
Boring Rig: Geoprobe 5400	Sample Method: N/A	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: N/A	

Depth (ft.)	Sample ID and Depth (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	GM	0 - 2.0' Coal and Gravel	1	
2		0		SP	2.0 - 3.0' Green tan fine SAND	2	
3		0			3.0 - 4.0' Green gray med - coarse SAND	3	
4		1			4.0 - 4.25' Med - coarse SAND	4	
5		13	2.75	SM	4.25 - 8.0' Tan green brown mottled fine SAND w/ Silt	5	
6		62				6	
7		142				7	
8	A	62				8	
9		298				9	
10	B	390				10	
11		300				11	
12		427	3			12	
13		406				13	
14		524				14	
15		307				15	
16	C	476				16	
17		470				17	
18		424				18	
19						19	
20						20	
21						21	
22						22	
23						23	
24						24	

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Boring for Location: B-48

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.0'	Static Water: N/A
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: N/A
Owner: Growmark F.S.	Use: Soil sampling	Casing - Length: N/A	Diameter: N/A
Boring Drill Date: 11/08/04	Type: Grab	Screen - Length: N/A	Diameter: N/A
Boring Driller: Environmental Field Service, Inc.	Purge Method: N/A	Screen Type: N/A	
Boring Rig: Geoprobe 5400	Sample Method: N/A	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: N/A	

Depth (ft.)	Sample ID and Depth	OV/M (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		8	N/A	3	SP	0 - 3.25' Brown / dark brown fine-medium SAND	1	
2		20					2	
3		53					3	
4		57				3.25 - 4.0' Brick debris and medium SAND	4	
5		152		3.25	SM	4.0 - 4.5' Medium SAND	5	
6		250				4.5 - 8.0' Green brown mottled fine SAND w/ Silt	6	
7		356					7	
8	A	402					8	
9		399				8.0 - 12.0' Tan orange gray mottled fine SAND w/ Silt (wet)	9	
10		392					10	
11	B	402					11	
12		337		3			12	
13		337					13	
14		343					14	
15		443					15	
16	C	373				12.0 - 16.0' Tan orange gray mottled fine SAND w/ Silt (wet)	16	
17		404					17	
18		332					18	
19						Boring advanced to 16 feet below grade Groundwater encountered at 8.0 feet below grade	19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: B-49

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.0'	Static Water: N/A
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: N/A
Owner: Growmark F.S.	Use: Soil sampling	Casing - Length: N/A	Diameter: N/A
Boring Drill Date: 11/08/04	Type: Grab	Screen - Length: N/A	Diameter: N/A
Boring Driller: Environmental Field Service, Inc.	Purge Method: N/A	Screen Type: N/A	
Boring Rig: Geoprobe 5400	Sample Method: N/A	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: N/A	

Depth (ft.)	Sample ID and Depth (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		N/A	3.5	SP	0 - 0.5' Brown fine-medium SAND w/ organics	1	
2					0.5 - 1.5' Tan gray SAND	2	
3				ML	1.5 - 1.75' Coal debris layer	3	
4					1.75 - 2.75' Brown fine-coarse SAND	4	
5				SM	2.75 - 4.0' Gray brown mottled SILT w/ Clay	5	
6					4.0 - 8.0' Gray green tan orange mottled fine SAND w/ Silt	6	
7					8.0 - 12.0' Gray green tan mottled fine SAND w/ Silt (wet)	7	
8	A		3.25		12.0 - 13.0' Dark gray green fine SAND w/ Silt (wet)	8	
9					13.0 - 14.5' Tan brown green fine SAND w/ Silt (wet)	9	
10					14.5 - 16.0' Dark gray black fine SAND w/ Silt	10	
11						11	
12	B					12	
13						13	
14						14	
15						15	
16	C					16	
17					Boring advanced to 16 feet below grade	17	
18					Groundwater encountered at 8.0 feet below grade	18	
19						19	
20						20	
21						21	
22						22	
23						23	
24						24	

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Boring for Location: 81-A

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10' BSG	Static Water: 11.46' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 13.92' BSG
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 07/29/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 1.08'	

Depth (ft.)	Sample ID and Depth (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	3.25	PT	0 - 0.5'	1	
2		0		SP	0.5 - 1.0'	2	
3		0		SM	1.0 - 4.0'	3	
4		0				4	
5		0	4	SW	4.0 - 8.0'	5	
6		0				6	
7		0				7	
8		0				8	
9		0	4		8.0 - 12.0'	9	
10		0				10	
11		0				11	
12		0				12	
13		0	4		12.0 - 15.0'	13	
14		0				14	
15		0				15	
16					Boring advanced to 15 feet below grade.	16	
17					Groundwater encountered at 10 feet below grade.	17	
18					Monitoring well set at 13.92 feet below grade.	18	
19						19	
20						20	
21						21	
22						22	
23						23	
24						24	

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Boring for Location: 81-B

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10' BSG	Static Water: 11.02' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 14.44' BSG
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 07/29/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.5625'	

Depth (ft.)	Sample ID and Depth (Meter Units)	OVM	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	3.25	PT SM	0 - 0.75' 0.75 - 4.0' Dark brown humic layer Tan brown fine SAND, w/ some Silt, trace Clay, some mottling (dry)	1	
2		0					2	
3		0					3	
4		0					4	
5		0		3.5		4.0 - 8.0' Brown w/ tan fine SAND/SILT w/ trace Clay Mottled at 6 - 8' (dry)	5	
6		0					6	
7		0					7	
8		0					8	
9		0		4		8.0 - 12.0' Brown mottled fine SAND w/ Silt (wet at 10')	9	
10		0					10	
11		0					11	
12		0					12	
13		0		4		12.0 - 13.0' Green fine SAND w/ Silt (very soft, wet)	13	
14		0			SW	13.0 - 15.0' Green mottled fine SAND (wet)	14	
15		0					15	
16						Boring advanced to 15 feet below grade.	16	
17						Groundwater encountered at 10 feet below grade.	17	
18						Monitoring well set at 14.44 feet below grade.	18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 81C

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 9.5' BSG	Static Water: 12.38'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 15'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5'	Diameter: 1"
Boring Drill Date: 02/28/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method:	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.83'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	2		0 - 0.5' Top soil	1	
2		0				0.5 - 4.0' Tan gray fine to medium Sand w/ silt	2	
3		0					3	
4		0					4	
5		0		4		4.0 - 8.0' Tan mottled green fine to medium sand with silt	5	
6		0					6	
7		0					7	
8		0					8	
9	81C	0		4		8.0 - 12.0' Tan green fine Sand w/ silt, mottled	9	
10		0					10	
11		0					11	
12		0					12	
13		0		4		12.0 - 15.5' Tan green fine to medium mottled SAND	13	
14		0					14	
15		0					15	
16		0					16	
17						Boring advanced to 16 feet below grade	17	
18						Groundwater encountered at 9.5 feet below grade	18	
19						Monitoring well set at 14.17 feet	19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 81 D

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 9.5' BSG	Static Water: 8.74'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 15'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5'	Diameter: 1"
Boring Drill Date: 03/16/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peri. Pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 54T	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 2.17'	

Depth (ft.)	Sample ID and Depth (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		N/A	3.25	PT	0 - 1.0' Top soil	1	
2				SP	1.0 - 4.0' Tan brown SILT w/ some fine SAND	2	
3						3	
4						4	
5			4		4.0 - 5.0' Tan brown orange SILT w/ some fine Sand (dry)	5	
6					5.0 - 8.0' Tan orange gray fine SAND w/ some Silt	6	
7						7	
8						8	
9			3.5		8.0 - 16.0' Green tan fine SAND w/ mottling, trace Silt (wet at 9.5')	9	
10	81D					10	
11						11	
12						12	
13			2.5			13	
14						14	
15						15	
16						16	
17					Boring advanced to 16 feet below grade	17	
18					Groundwater encountered at 9.5 feet below grade	18	
19					Temporary well set at 13 feet	19	
20						20	
21						21	
22						22	
23						23	
24						24	

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Boring for Location: 83 A

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 9.5' BSG	Static Water: 12.01'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: '
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: '	Diameter: 1"
Boring Drill Date: 02/28/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method:	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: 0.71'	

Depth (ft.)	Sample ID and Depth	OWM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	3.5		0 - 0.5' Topsoil 0.5 - 4.0 Tan green sand with silt to 4.0	1	
2		0				2.25 - 4.0' Tan fine mottled SAND	2	
3		0					3	
4		0					4	
5		0		4		4.0 - 8.0' Dark green mottled fine sand w/ silt	5	
6		0					6	
7		0					7	
8		0					8	
9		0		4		8.0 - 12.0' Tan green mottled fine sand w/ silt	9	
10	83A1	0					10	
11		0					11	
12		0					12	
13		26		2.5		12.0 - 16.0 Tan green mottled fine sand with silt	13	
14	83 A	33					14	
15		6					15	
16		2					16	
17						Boring advanced to 16 feet below grade	17	
18						Groundwater encountered at 9.5 feet below grade	18	
19						Monitoring well set at 14.29 feet	19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 91 A

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 9.0' BSG	Static Water: 10.0'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: ' Diameter: 1"
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 02/28/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method:	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: +1.0'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	3.6		0.0 - 2.0 2.0 - 4.0 Tan fine to medium sand to 2.0' Tan clay	1	
2		0					2	
3		0					3	
4		0					4	
5		0		4		4.0 - 8.0' Tan fine to medium sand with silt	5	
6		0					6	
7		0					7	
8		0					8	
9	91A	126		4		8.0 - 12.0' Tan green fine to medium sand w/odor @ 9.0'	9	
10		54					10	
11		26					11	
12		11					12	
13		63		4		12.0 - 14' Tan green fine to medium sand with silt to 14.0'	13	
14		56				14.0 - 14.5 14.5 - 15.0' Brown rust fine to medium sand Dark green fine to medium sand	14	
15							15	
16						Boring advanced to 15 feet below grade Groundwater encountered at 9.0 feet below grade Monitoring well set at 14.0 feet	16	
17							17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 91B

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 9.5' BSG	Static Water: 11.13'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 16.73'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 6.73'	Diameter: 1"
Boring Drill Date: 02/28/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method:	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: +19"	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	3		0.0 - 4.0 Brown fine- medium sand w/some silt, mottled	1	
2		0					2	
3		0					3	
4		0					4	
5		0		4		4.0 - 8.0' Tan fine to medium sand w/ some silt, mottled at 6-8'	5	
6		0					6	
7		0					7	
8		0					8	
9		0		4		8.0 - 12.0' Tan green fine to medium sand w/ silt some motting (wet at 9.5')	9	
10	91B	0					10	
11		0					11	
12		0					12	
13		0		4		12.0 - 15.0' Tan green fine to medium sand w/ silt	13	
14		0					14	
15		3					15	
16		0					16	
17						Boring advanced to 15 feet below grade	17	
18						Groundwater encountered at 9.5 feet below grade	18	
19						Monitoring well set at 13.42 feet	19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 95 A

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 9' BSG	Static Water: 9.65' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 14.0' BSG
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 07/29/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 1.0'	

Depth (ft.)	Sample ID and Depth and Depth (Meter Units)	OVM	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	3	PT GM	0 - 0.5' 0.5 - 4.0' Dark brown humic material Tan orange fine SAND w/ Silt, some fine-medium Gravel trace Clay	1	
2		0					2	
3		0					3	
4		0					4	
5		0		4	SM	4.0 - 6.5' Brown fine SAND w/ Silt	5	
6		0					6	
7		0				6.5 - 8.0' Tan green mottled SAND, trace Silt	7	
8		0					8	
9		0		4	SW	8.0 - 12.0' Green mottled fine SAND, trace Silt (damp at 9')	9	
10		0					10	
11		0					11	
12		0					12	
13		0		4	SM	12.0 - 13.0' Tan brown mottled SAND w/ Silt (wet)	13	
14		0				13.0 - 14.0' Orange tan fine SAND (wet)	14	
15		0				14.0 - 15.0' Gray fine SAND (wet)	15	
16							16	
17						Boring advanced to 15 feet below grade. Groundwater encountered at 9 feet below grade. Monitoring well set at 14.0 feet below grade.	17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 95B

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 9.5' BSG	Static Water: 7.65'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 15'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5'	Diameter: 1"
Boring Drill Date: 03/16/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peri. Pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 54T	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 1.0'	

Depth (ft.)	Sample ID and Depth (feet)	OV/M (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	3.5	PT SP	0 - 0.75' Gray coarse SAND w/ Gravel 0.75 - 2.0' Green fine SAND	1	
2		0				2.0 - 2.50' Green brown fine-coarse SAND 2.5 - 4.0' Green gray mottled fine SAND	2	
3		0					3	
4		0					4	
5		0		3		4.0 - 5.25' Tan green fine SAND w/ some Silt (dry) 5.25 - 6.25' Medium-coarse GRAVEL	5	
6		0				6.25 - 8.0' Tan green fine SAND	6	
7		0					7	
8		0					8	
9		0		3.5		8.0 - 12.0' Tan green fine SAND w/ Silt, trace fine Gravel (wet at 9.5')	9	
10	95B	0					10	
11		0					11	
12		0					12	
13		0		2.5		12.0 - 16.0' Dark green fine SAND w/ trace Silt	13	
14		0					14	
15		0					15	
16		0					16	
17						Boring advanced to 16 feet below grade Groundwater encountered at 9.5 feet below grade Temporary well set at 13.5 feet	17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 97A

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.1' BSG	Static Water: 7.73'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 15'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5'	Diameter: 1"
Boring Drill Date: 03/16/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peri. Pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 54T	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 1.5'	

Depth (ft.)	Sample ID and Depth (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	PT	0 - 0.5'	1	
2		0		SP	0.5 - 3.0'	2	
3		0				3	
4		0			3.0 - 6.0'	4	
5	97A	0	2.75			5	
6		0				6	
7		0			6.0 - 8.0'	7	
8	97B	0				8	
9		0	3	ML	8.0 - 11.25'	9	
10		0				10	
11		0				11	
12		0		SM	11.25 - 16.0'	12	
13		0	2.5			13	
14		0				14	
15		0				15	
16		0				16	
17					Boring advanced to 16 feet below grade	17	
18					Groundwater encountered at 8.0 feet below grade	18	
19					Temporary well set at 13.5 feet	19	
20						20	
21						21	
22						22	
23						23	
24						24	

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Boring for Location: 103A

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 6.0' BSG	Static Water: N/A
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: N/A
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: N/A	Diameter:
Boring Drill Date: 03/16/05	Type: Grab	Screen - Length: N/A	Diameter:
Boring Driller: Environmental Field Service, Inc.	Purge Method: N/A	Screen Type: N/A	
Boring Rig: Geoprobe 54T	Sample Method: N/A	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: N/A	

Depth (ft.)	Sample ID and Depth	OV/M (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	3	PT	0 - 0.5' Top soil	1	
2		0			SP	0.5 - 1.0' Brown fine SAND	2	
3		0				1.0 - 3.0' Tan fine SAND	3	
4		49				3.0 - 3.75' Tan mottled fine SAND w/ fine Gravel	4	
5		64		3.3		3.75 - 4.0' Green fine SAND	5	
6	103A	113				4.0 - 6.0' White tan fine SAND (odor at 4 - 6')	6	
7		8				6.0 - 8.0' Green fine SAND w/ some Silt	7	
8		6					8	
9		40		2.8	SM	8.0 - 11.0' Green SILT w/ trace Clay (wet)	9	
10		17					10	
11		364					11	
12	103B	427			SP	11.0 - 15.0' Green fine SAND, trace Silt	12	
13		87		2.5			13	
14		68					14	
15		35					15	
16		18				15.0 - 16.0' Tan brown fine SAND w/ some Silt	16	
17						Boring advanced to 16 feet below grade	17	
18						Groundwater encountered at 6.0 feet below grade	18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 103 B

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 6.5' BSG	Static Water: N/A
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: N/A
Owner: Growmark F.S.	Use: Soil sampling	Casing - Length: N/A	Diameter: N/A
Boring Drill Date: 02/28/05	Type: Grab	Screen - Length: N/A	Diameter: N/A
Boring Driller: Environmental Field Service, Inc.	Purge Method: N/A	Screen Type: N/A	
Boring Rig: Geoprobe 5400	Sample Method: N/A	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: N/A	

Depth (ft.)	Sample ID and Depth	OV/M (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	3		0 0.5' Top soil	1	
2		0				0.5 - 4.0' Tan fine to medium sand	2	
3		0				Tan green fine SAND w/Silt (damp)	3	
4		0					4	
5		0		3.5		4.0 - 8.0' Tan fine to medium sand w/ silt	5	
6	103B	0					6	
7		0					7	
8		0					8	
9		0		2.75		8.0 - 12.0' Green fine to medium sand	9	
10		0					10	
11		0					11	
12		0					12	
13						Boring advanced to 12 feet below grade	13	
14						Groundwater encountered a 6.5 feet below grade	14	
15							15	
16							16	
17							17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 103-C

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 2.75' BSD	Static Water: 3.39'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth:
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 02/28/05	Type: Grab	Screen - Length: 10.0'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method:	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: +1.66'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	2.75		0 -0.1' Topsoil	1	
2		0				2.0 - 4.0' Tan fine to medium SAND w/ some Silt	2	
3		0					3	
4		0					4	
5		0		4		4.0 -7.0' Tan fine to medium sand w/ Silt to 7'	5	
6		0					6	
7	103C	0				7.0 - 8.0' Orange rust fine to medium sand to 8'	7	
8		0					8	
9		0		2.75		8.0 - 11.0' Tan green fine to medium sand w/ slit to 11.0'	9	
10		0					10	
11		0				11.0 - 12.0' Orange fine to medium sand to 12.0'	11	
12		0					12	
13		0		2.75		12.0 - 14.0' Tan green fine to medium sand to 13.0'	13	
14		0				14.0 - 15.0' Brown green fine to medium sand to 15.0'	14	
15		0				15.0 - 16.0' Green fine to medium sand to 16.0'	15	
16		0					16	
17							17	
18						Boring advanced to 16 feet below grade Groundwater encountered at 6.5 feet below grade Monitoring well set at 13.34 feet	18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

JMC Environmental Consultants, Inc.	Boring for Location: 103-E
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Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 6.5' BSG	Static Water: 6.8'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 15'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5'	Diameter: 1"
Boring Drill Date: 03/24/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method:	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 54T	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: H. Syvarth	Depth to PVC Rim: + 0.5'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	3		0 - 0.66' 0.66 - 3.0' Top soil Dark brown medium to fine SAND	1	
2		0					2	
3		0				3.0-5.0 Mottled tan fine-medium SAND	3	
4		0					4	
5		0		4		5.0-7.0' Tan Fine - Medium sand (water encounter @ 6.5')	5	
6	103E	2					6	
7		6				7.0-11.0' Green fine SAND, trace Silt and clay (wet)	7	
8		277					8	
9		3300		3			9	
10	103E1	1500					10	
11		2500				11.0 - 13.0' Tan Medium to fine sand with some slit	11	
12		2800					12	
13		10		2.5		13.0 -14.0 Green fine to medium sand	13	
14		25				14.0-16' Green fine to medium sands with tan mottling	14	
15		35					15	
16		34					16	
17						Boring advanced to 16 feet below grade Groundwater encountered at 6.5 feet below grade Temporary well set at 14.5 feet	17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 103-F

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 6.5' BSG	Static Water: 3.5'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 15'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5'	Diameter: 1"
Boring Drill Date: 03/24/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method:	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 54T	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: H. Syvarth	Depth to PVC Rim: + 0.75'	

Depth (ft.)	Sample ID and Depth	QVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		2.3	N/A	2	0 - 1'	Top soil	1	
2		0			1.0-4.0'	Tan medium to fine sand w/ some debris	2	
3		0					3	
4		0			4.0-7.0	Tan Fine - Medium sand (water encounter @ 6.5')	4	
5		0		3			5	
6		7					6	
7	103F	7			7.0-9.0'	Tan/Green fine SAND, trace Silt and clay (wet)	7	
8		238					8	
9		612		3	9.0 -16'	Green medium to fine sand with some silt and clay	9	
10		1100					10	
11	103F1	1500					11	
12		500					12	
13		22		3			13	
14		25					14	
15		18					15	
16		21					16	
17						Boring advanced to 16 feet below grade	17	
18						Groundwater encountered at 6.5 feet below grade	18	
19						Temporary well set at 14.25 feet	19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 109-A

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 9.0' BSG	Static Water: 10.23' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 14.25' BSG
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 07/29/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.75'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	2.75	PT	0 - 1.0' Dark brown humic material	1	
2		0			SP	1.0 - 4.0' Brown fine-medium SAND (dry)	2	
3		0					3	
4		0					4	
5		0		3.5	SW	4.0 - 8.0' Brown fine mottled SAND (dry)	5	
6		0					6	
7		0					7	
8		0					8	
9	103			4	SP	8.0 - 8.5' Tan brown fine SAND 8.5 - 12.0' Green mottled fine SAND w/ some medium Sand (wet at 9.0')	9	
10	952						10	
11	981						11	
12	81						12	
13	499			4	SM	12.0 - 15.0' Green mottled SAND w/ trace Silt (wet)	13	
14	370						14	
15	180						15	
16	81						16	
17						Boring advanced to 15 feet below grade. Groundwater encountered at 9 feet below grade. Monitoring well set at 14.25 feet below grade.	17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 109-B

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.4' BSG	Static Water: 10.32' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 20.15' BTOC
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 07/29/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 1.21'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	2.75	PT	0 - 0.5'	1	
2		0			SW	0.5 - 1.0'	2	
3		0			SP	1.0 - 1.5'	3	
4		0			SM	1.5 - 4.0'	4	
5		0		4		4.0 - 8.0'	5	
6		0					6	
7		0					7	
8		0					8	
9		0		4		8.0 - 12.0'	9	
10		0					10	
11		0					11	
12		0					12	
13		0		3.5		12.0 - 15.0'	13	
14		0					14	
15		0					15	
16						Boring advanced to 15 feet below grade.	16	
17						Groundwater encountered at 10.33 feet below grade.	17	
18						Monitoring well set at 13.79 feet below grade.	18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 109-C

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 12' BSG	Static Water: 10.23' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 14.25' BSG
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 07/29/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.75'	

Depth (ft.)	Sample ID and Depth (Meter Units)	OVM	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	2.25	PT GM	0 - 0.75' 0.75 - 4.0' Dark brown humic material Brown fine SAND, trace medium Gravel (damp at 3.5')	1	
2		0					2	
3		0					3	
4		0					4	
5		0		1	SM	4.0 - 6.0' Brown fine SAND w/ trace Silt (dry)	5	
6		0				6.0 - 8.0' Brown mottled fine SAND, trace Silt (moist)	6	
7		0					7	
8		0					8	
9		0		3.5	SW	8.0 - 12.0' Green tan orange mottled SAND (damp)	9	
10		0					10	
11		0					11	
12		0					12	
13		0		4	SM	12.0 - 15.0' Brown green mottled SAND, trace Silt (wet)	13	
14		0					14	
15		0					15	
16						Boring advanced to 15 feet below grade.	16	
17						Groundwater encountered at 10 feet below grade.	17	
18						Monitoring well set at 14.25 feet below grade.	18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 109 D

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.1' BSG	Static Water: 11'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 15'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5'	Diameter: 1"
Boring Drill Date: 03/16/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peri. Pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 54T	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 1.17'	

Depth (ft.)	Sample ID and Depth (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		4	N/A	PT	0 - 0.5'	1	
2		9		SP	0.5 - 3.25'	2	
3		11				3	
4		5			3.25 - 4.0'	4	
5		1	4		4.0 - 8.0'	5	
6		1				6	
7		1				7	
8		1				8	
9		1	3.5		8.0 - 10.0'	9	
10	109D	1			10.0 - 16.0'	10	
11		1				11	
12		0				12	
13		0	2.5			13	
14		0				14	
15		1				15	
16		0				16	
17					Boring advanced to 16 feet below grade	17	
18					Groundwater encountered at 10.0 feet below grade	18	
19					Temporary well set at 13.83 feet	19	
20						20	
21						21	
22						22	
23						23	
24						24	

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Boring for Location: 109 E

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 9.5' BSG	Static Water: 8.98'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 15'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5'	Diameter: 1"
Boring Drill Date: 03/16/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peri. Pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 54T	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 1.5'	

Depth (ft.)	Sample ID and Depth (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	PT	0 - 0.5'	1	
2		0		SP	0.5 - 4.0'	2	
3		0				3	
4		0				4	
5		0	3		4.0 - 16.0'	5	
6		0				6	
7		0				7	
8		0				8	
9		0	3.5			9	
10	109E	0			(wet at 9.5')	10	
11		0				11	
12		0				12	
13		0	2.5			13	
14		0				14	
15		0				15	
16		0				16	
17					Boring advanced to 16 feet below grade Groundwater encountered at 9.5 feet below grade Temporary well set at 13.5 feet	17	
18						18	
19						19	
20						20	
21						21	
22						22	
23						23	
24						24	

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Boring for Location: 109 F

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10' BSG	Static Water: 8.41'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 15'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5'	Diameter: 1"
Boring Drill Date: 03/16/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peri. Pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 54T	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 1.4'	

Depth (ft.)	Sample ID and Depth (feet)	OV/M (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	2.75	PT SP	0 - 0.5' 0.5 - 1.0' 1.0 - 2.5'	1	
2		0					2	
3		0				2.5 - 4.0'	3	
4		0					4	
5		1		3.25		4.0 - 16.0'	5	
6		0					6	
7		0					7	
8		0					8	
9		0		3.75			9	
10	103F	0				(wet at 10')	10	
11		0					11	
12		0					12	
13		0		2.75			13	
14		0					14	
15		0					15	
16		0					16	
17						Boring advanced to 16 feet below grade Groundwater encountered at 10 feet below grade Temporary well set at 13.6 feet	17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: 118 A

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.5' BSC	Static Water: 10.31'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 15'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5'	Diameter: 1"
Boring Drill Date: 03/16/05	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peri. Pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 54T	Sample Method: bailer	Bentonite: N/A	
Driller/Helper: Tom Hartwell	Sample Parameters: BTEX	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 1.1'	

Depth (ft.)	Sample ID and Depth (feet)	OV/M (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	N/A	3	PT	0 - 0.5'	1	
					SP	0.5 - 1.0'	2	
2		0				1.0 - 2.5'	3	
3		0				2.5 - 4.0'	4	
4		0					5	
5		0		3		4.0 - 8.0'	6	
6		0					7	
7		0					8	
8		0					9	
9		0		4		8.0 - 12.0'	10	
10		0					11	
11	118A	0					12	
12		189					13	
13	118a1	520		2.25		12.0 - 16.0'	14	
14		101					15	
15		92					16	
16		88					17	
17						Boring advanced to 16 feet below grade	18	
18						Groundwater encountered at 10.5 feet below grade	19	
19						Temporary well set at 13.9 feet	20	
20							21	
21							22	
22							23	
23							24	
24								

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Boring for Location: Shreve-1

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.0' BSG	Static Water: 10.62' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 14.92'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0"	Diameter: 1"
Boring Drill Date: 07/08/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.42'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	4	PT	0 - 0.75'	1	
2		0.9			CL	0.75 - 1.0'	2	
3		2.1			N/N	1.0 - 1.1'	3	
4		2			ML	1.1 - 4.0'	4	
5		0		4	SM	4.0 - 8.0'	5	
6		0					6	
7		0					7	
8		0					8	
9		0		3.75		8.0 - 12.0'	9	
10		0				Tan brown SILT/SAND Mottled at 12.0' (wet at 10.0')	10	
11		0					11	
12		0					12	
13		0		3.75		12.0 - 16.0'	13	
14		0				Tan brown mottled SAND w/ some Silt, trace Clay (wet)	14	
15		0					15	
16		0					16	
17						Boring advanced to 15 feet below grade	17	
18						Groundwater encountered at 10 feet below grade	18	
19						Monitoring well set at 14.91 feet	19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: Shreve-2

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.0' BSG	Static Water: 11.58' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 14.91'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0"	Diameter: 1"
Boring Drill Date: 07/08/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.25'	

Depth (ft.)	Sample ID and Depth	OVN (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	3.75	PT SM	0 - 0.75' 0.75 - 4.0' Top soil; coal layer at 0.75 feet Brown SILT w/ some fine Sand, trace Clay (dry)	1	
2		0					2	
3		0					3	
4		0					4	
5		0		4		4.0 - 8.0' Tan brown fine mottled SAND w/ Silt, some Clay (dry)	5	
6		0					6	
7		0					7	
8		0					8	
9		0		3.75		8.0 - 12.0' Tan brown mottled SAND w/ Silt, some Clay (wet at 10.5')	9	
10		0					10	
11		0					11	
12		0					12	
13		0		3.5		12.0 - 13.5' Tan brown mottled SAND w/ some Silt, trace Clay (wet)	13	
14		0			SW	13.5 - 16.0' Orange tan brown mottled SAND (wet)	14	
15		0					15	
16		0					16	
17						Boring advanced to 15 feet below grade Groundwater encountered at 10.5 feet below grade Monitoring well set at 14.91 feet	17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: Shreve-3

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 11.0' BSC	Static Water: 12.43' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 14.91'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0"	Diameter: 1"
Boring Drill Date: 07/08/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.25'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A			0 - 4.0' No recovery	1	
2		0					2	
3		0					3	
4		0					4	
5		0		4	SM	4.0 - 8.0' Tan brown mottled SAND w/ Silt, trace Clay (dry)	5	
6		0					6	
7		0					7	
8		0					8	
9		0		4		8.0 - 12.0' Tan brown mottled SAND w/ Silt, trace clay (wet at 11')	9	
10		0					10	
11		0					11	
12		0					12	
13		0		3		12.0 - 16.0' Brown green mottled SAND, some Silt (wet)	13	
14		0					14	
15		0					15	
16		0					16	
17						Boring advanced to 15 feet below grade	17	
18						Groundwater encountered at 11 feet below grade	18	
19						Monitoring well set at 14.91 feet	19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: Shreve-4

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.1' BSG	Static Water: 10.89' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 14.91'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0"	Diameter: 1"
Boring Drill Date: 07/08/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.25'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	3.75	PT SM	0 - 0.75' 0.75 - 4.0'	1	
2		0				Tan brown fine SAND w/ Silt, trace Clay	2	
3		0					3	
4		0					4	
5		0	4			4.0 - 8.0' Tan brown mottled SAND w/ some Silt, trace Clay (damp)	5	
6		0					6	
7		0					7	
8		0					8	
9		0	4			8.0 - 12.0' Brown green fine mottled SAND, some Silt, trace Clay (wet at 10.1')	9	
10		0					10	
11		0					11	
12		0					12	
13		0	3.5			12.0 - 16.0' Brown green mottled fine SAND w/ some Silt, trace Clay (wet)	13	
14		0					14	
15		0					15	
16		0					16	
17						Boring advanced to 15 feet below grade	17	
18						Groundwater encountered at 10.1 feet below grade	18	
19						Monitoring well set at 14.91 feet	19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: Shreve-5

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.5' BSG	Static Water: 9.91' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 14.91'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0"	Diameter: 1"
Boring Drill Date: 07/08/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.25'	

Depth (ft.)	Sample ID and Depth	OCM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	4	PT SM	0 - 0.75' 0.75 - 4.0' Top soil Brown fine SAND w/ trace Silt (dry)	1	
2		0					2	
3		0					3	
4		0					4	
5		0		4		4.0 - 8.0' Tan brown mottled SAND w/ trace Silt & clay (dry)	5	
6		0					6	
7		0					7	
8		0					8	
9		0		4		8.0 - 12.0' Brown green fine SAND w/ Silt, trace Clay (wet at 10.5')	9	
10		0					10	
11		0					11	
12		0					12	
13		0		3		12.0 - 16.0' Brown green fine SAND w/ Silt, trace Clay (wet)	13	
14		0					14	
15		0					15	
16		0					16	
17						Boring advanced to 15 feet below grade Groundwater encountered at 10.5 feet below grade Monitoring well set at 14.91 feet	17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: Shreve-6

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.0' BSC	Static Water: 12.51'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 15'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5'	Diameter: 1"
Boring Drill Date: 08/23/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.42'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	3.33	PT SP	0 - 0.25' 0.25 - 4.0'	1	
2		0				Light brown fine SAND (dry)	2	
3		0					3	
4		0					4	
5		0	3.33		SW	4.0 - 8.0'	5	
6		0				Light brown fine SAND, trace coarse Gravel, little mottling (dry)	6	
7		0					7	
8		0					8	
9		0	3.75		SP	8.0 - 10.0'	9	
10		0				Tan fine Sand (dry)	10	
11		0				10.0 - 11.5'	11	
12		0				Tan mottled fine SAND (wet)	12	
13		0	3.75			11.5 - 12.0'	13	
14		0				Tan green fine SAND	14	
15		0				12.0 - 13.0'	15	
16		0				Tan orange fine SAND	16	
17						13.0 - 14.5'	17	
18						14.5 - 16.0'	18	
19						Orange brown fine SAND	19	
20							20	
21							21	
22							22	
23							23	
24							24	
Boring advanced to 16 feet below grade Groundwater encountered at 12.5 feet below grade Monitoring well set at 14.91 feet								

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Boring for Location: Shreve-7

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.0' BSC	Static Water: 12.51'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 16.73'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 6.73'	Diameter: 1"
Boring Drill Date: 08/23/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 1.19'	

Depth (ft.)	Sample ID and Depth	OWM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	3.5	PT SP	0 - 0.5' 0.5 - 4.0'	1	
2		0					2	
3		0					3	
4		0					4	
5		0	4		SW	4.0 - 8.0' Light brown fine SAND, trace mottling (damp at 4 - 5.25' & 7.75 - 8')	5	
6		0					6	
7		0					7	
8		0					8	
9		0	4		SP	8.0 - 12.0' Light brown mottled fine SAND (wet at 12.0')	9	
10		0					10	
11		0					11	
12		0					12	
13		0	4			12.0 - 15.0' Light brown, trace mottled, fine SAND	13	
14		0					14	
15		0					15	
16		0				15.0 - 16.0' Green fine SAND (dry)	16	
17						Boring advanced to 16 feet below grade	17	
18						Groundwater encountered at 12.5 feet below grade	18	
19						Monitoring well set at 16.73 feet	19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: Shreve-8

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.5' BSC	Static Water: 12.78'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 14.92'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 08/23/04	Type: Grab	Screen - Length: 10'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.33'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	3.5	N/N SP	0 - 0.75' 0.75 - 4.0' Red shale driveway gravel, asphalt Light brown fine SAND	1	
2		0					2	
3		0					3	
4		0					4	
5		0	4		ML	4.0 - 7.0' Light brown SILT w/ Clay (dry)	5	
6		0					6	
7		0					7	
8		0			SP	7.0 - 8.0' Light brown fine SAND (dry)	8	
9		0	4			8.0 - 12.0' Light brown mottled fine SAND (damp at 10.5')	9	
10		0					10	
11		0					11	
12		0					12	
13		0	4			12.0 - 14.25' Light brown / brown, light mottled fine-medium SAND (wet)	13	
14		0					14	
15		0				14.25 - 16.0' Green fine SAND	15	
16		0					16	
17						Boring advanced to 16 feet below grade	17	
18						Groundwater encountered at 10.5 feet below grade	18	
19						Monitoring well set at 14.92 feet	19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: BOE-2

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 2.75' BSG	Static Water: 3.39'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 9.90'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 08/23/04	Type: Grab	Screen - Length: 5.0'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.46'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	3.75	PT/SP	0 - 2.0' Topsoil w/ brown fine SAND	1	
2		0			SM	2.0 - 4.0' Tan fine mottled SAND w/ some Silt (wet at 2.25')	2	
3		0					3	
4		0					4	
5		0	4			4.0 - 8.0' Tan gray mottled fine SAND, trace Silt (wet)	5	
6		0					6	
7		0					7	
8		0					8	
9		0	4			8.0 - 12.0' Gray brown mottled fine SAND, trace Silt (wet)	9	
10		0					10	
11		0					11	
12		0					12	
13						Boring advanced to 12 feet below grade Groundwater encountered at 2.75 feet below grade Monitoring well set at 9.9 feet	13	
14							14	
15							15	
16							16	
17							17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: BOE-3

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 2.75' BSC	Static Water: 4.1'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 9.90'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 08/23/04	Type: Grab	Screen - Length: 5.0'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.625'	

Depth (ft.)	Sample ID and Depth and Depth (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	PT	0 - 0.5'	1	
2		0	3.5	SP	0.5 - 2.75'	2	
3		0			2.75 - 4.0'	3	
4		0				4	
5		0	4	SM	4.0 - 8.0'	5	
6		0				6	
7		0				7	
8		0				8	
9		0	4		8.0 - 12.0'	9	
10		0				10	
11		0				11	
12		0				12	
13					Boring advanced to 12 feet below grade	13	
14					Groundwater encountered at 2.75 feet below grade	14	
15					Monitoring well set at 9.9 feet	15	
16						16	
17						17	
18						18	
19						19	
20						20	
21						21	
22						22	
23						23	
24						24	

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Boring for Location: BOE-4

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 2.75' BSL	Static Water: 4.55'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 9.90'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 08/23/04	Type: Grab	Screen - Length: 5.0'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 0.8125'	

Depth (ft.)	Sample ID and Depth (feet)	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0	N/A	3.5	PT	0 - 1.5' Top soil w/ dark brown fill SAND	1	
2		0			SW	1.5 - 2.75' Dark brown fine SAND w/ fine-medium Gravel	2	
3		0				2.75 - 3.0' Gray fine SAND w/ fine Gravel	3	
4		0			SP	3.0 - 4.0' Tan gray mottled SAND (wet at 2.75')	4	
5		0	4		SM	4.0 - 5.25' Gray green fine SAND w/ Silt (wet)	5	
6		0			SW	5.25 - 6.25' Gray fine-coarse SAND w/ fine-medium Gravel	6	
7		0				6.25 - 6.75' Green fine-medium SAND, trace medium Gravel	7	
8		0				6.75 - 8.0' Orange medium-coarse SAND w/ fine-medium Gravel (wet)	8	
9		0	4			8.0 - 9.5' Tan green fine SAND w/ fine-coarse Gravel (wet)	9	
10		0				9.5 - 10.66' Orange fine-coarse SAND w/ fine Gravel	10	
11		0			SP	10.66 - 11.75' Green fine-medium SAND w/ trace coarse Sand	11	
12		0			SW	11.75 - 12.0' Dark green gray fine SAND w/ Silt	12	
13						Boring advanced to 12 feet below grade	13	
14						Groundwater encountered at 2.75 feet below grade	14	
15						Monitoring well set at 9.9 feet	15	
16							16	
17							17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: BOE-5

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 2.5' BSG	Static Water: 4.17'
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 9.90'
Owner: Growmark F.S.	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 1"
Boring Drill Date: 08/23/04	Type: Grab	Screen - Length: 5.0'	Diameter: 1"
Boring Driller: Environmental Field Service, Inc.	Purge Method: Peristaltic pump	Screen Type: Sch 40 .010 in.	
Boring Rig: Geoprobe 5400	Sample Method: pump	Bentonite: N/A	
Driller/Helper: John Wysocki	Sample Parameters: VO+10	Sand Pack: N/A	
Sampling Method: 2" dia Macro-core sampler	Sampler: A. Biskupski	Depth to PVC Rim: + 2.5'	

Depth (ft.)	Sample ID and Depth	OWM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0.0	N/A	3.5	PT	0 - 2.0' Top soil w/ black fine fill SAND	1	
2		15.0			SW	2.0 - 2.5' Black gray SAND w/ fine-medium Gravel	2	
3		13.2			SP	2.5 - 4.0' Gray green tan mottled SAND (wet at 2.5')	3	
4		10.4				4.0 - 5.25' Tan gray fine SAND (wet)	4	
5		10.7		4		5.25 - 5.5' Tan fine-medium SAND	5	
6		12.2			SM	5.5 - 7.0' Tan fine SAND w/ Silt	6	
7		7.7				7.0 - 8.0' Green tan fine SAND	7	
8		7.7			SP		8	
9		8.6					9	
10						Boring advanced to 8 feet below grade	10	
11						Groundwater encountered at 2.5 feet below grade	11	
12						Monitoring well set at 9.9 feet	12	
13							13	
14							14	
15							15	
16							16	
17							17	
18							18	
19							19	
20							20	
21							21	
22							22	
23							23	
24							24	

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Boring for Location: MW-13

Permit #: 32 000 28231	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.0' BSG	Static Water: 9.73' TOC
Site Name: Agway	Project:	JMC Job #: 20045	Well - Depth: 18.83' BTOC
Owner:	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 2"
Boring Drill Date: 11/15/04	Type: Grab	Screen - Length: 15'	Diameter: 2"
Boring Driller: Tabasco Drilling Corp.	Purge Method: Submersible DC pump	Screen Type: Sch 40 .020 in.	
Boring Rig: Cent. Mine Equip. CME 45 Auger Rig	Sample Method: N/A	Bentonite: 1 - 2' below grade	
Driller/Helper: Bill Anderson / Jim Maier	Sample Parameters: N/A	Sand Pack: 3.0' above screen	
Sampling Method: N/A	Sampler: A. Biskupski	Depth to PVC Rim: - 0.5'	

Depth (ft.)	Sample ID and Depth	OVN (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	1	1.75	SW	0 - 1.0' Black Humus and fine Sand	1	
2		0	2			1.0 - 2.0' Tan fine SAND (wet to 2')	2	
3		0	3	0.33	SM	2.0 - 3.0' Tan fine SAND w/ little Silt	3	
4		0	4			3.0 - 4.0' Brown orange mottled fine SAND w/ trace Silt	4	
5		0	5	1.75		4.0 - 5.75' Gray fine SAND w/ Silt	5	
6		0	6			5.75 - 6.0' Tan yellow brown mottled SAND w/ Silt	6	
7		0	7	1.25		6.0 - 10.0' Tan orange mottled SAND w/ trace Silt	7	
8		0	8				8	
9		0	9	1.5			9	
10		0	10			10.0 - 12.0' Tan brown orange fine SAND w/ little silt	10	
11		0	11	2			11	
12		0	12				12	
13		0	13	1.25	SP	12.0 - 17.75' Tan fine mottled SAND	13	
14		0	14				14	
15		0	15	1.75			15	
16		0	16				16	
17		0	17	2			17	
18		0	18			17.75 - 18.0' Gray fine SAND	18	
19		0	19	2		18.0 - 20.0' Tan green mottled SAND	19	
20		0	20				20	
21						Boring advanced to 20 feet below grade.	21	
22						Groundwater encountered at 8 feet below grade.	22	
23						Monitoring well set at 18.83 feet below grade.	23	
24							24	

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Boring for Location: MW-14

Permit #: 32 000 28232	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.0' BSG	Static Water: 9.21' TOC
Site Name: Agway	Project:	JMC Job #: 20045	Well - Depth: xx.xx' BTOC
Owner:	Use: Groundwater sampling	Casing - Length: 5.0"	Diameter: 2"
Boring Drill Date: 11/15/04	Type: Grab	Screen - Length: 15'	Diameter: 2"
Boring Driller: Tabasco Drilling Corp.	Purge Method: Submersible DC pump	Screen Type: Sch 40 .020 in.	
Boring Rig: Cent. Mine Equip. CME 45 Auger Rig	Sample Method: N/A	Bentonite: 1 - 2' below grade	
Driller/Helper: Bill Anderson / Jim Maier	Sample Parameters: N/A	Sand Pack: 3.0' above screen	
Sampling Method: N/A	Sampler: A. Biskupski	Depth to PVC Rim: - 0.33'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0'	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	4	1.1	SW	0 - 0.5' Black HUMUS	1	
			6			0.5 - 1.5' Black fine SAND		
2		0	4			1.5 - 2.0' Tan fine SAND	2	
			4			2.0 - 3.0' Tan fine SAND		
3		0	3	1.33		3.0 - 3.5' Brown rusty fine SAND	3	
			3			3.5 - 4.0' Brown orange mottled fine SAND w/ Silt		
4		0	5		SM		4	
						5.0 - 7.0' Tan fine SAND w/ Silt		
5							5	
			2					
6		0	5	1.5			6	
			6					
7		0	8				7	
						7.0 - 15.0' Tan fine mottled SAND w/ some Silt		
8		0	11	1.25			8	
			13					
9		0	24				9	
			25					
10			8				10	
11		0	12	1.1			11	
			13					
12		0	14				12	
13		0	15	2			13	
			16					
14		0	22				14	
15							15	
			12		SP	15.0 - 17.0' Tan gray fine SAND		
16		0	18	2			16	
			17					
17		0	23				17	
18		0	20	2		17.0 - 18.0' Tan fine SAND	18	
			22					
19		0	33		SM	18.0 - 19.0' Tan fine mottled SAND w/ little Silt	19	
			38					
20		0	8	2	SP	19.0 - 20.0' Tan fine SAND	20	
			18					
21		0	19			20.0 - 21.0' Gray fine SAND	21	
			18					
22						Boring advanced to 21 feet below grade.	22	
23						Groundwater encountered at 8 feet below grade.	23	
24						Monitoring well set at xx.xx feet below grade.	24	

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Boring for Location: MW-15

Permit #:	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.5' BSG	Static Water: 10.44' TOC
Site Name: Agway	Project:	JMC Job #: 20045	Well - Depth: 19.17' TOC
Owner:	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 2"
Boring Drill Date: 03/02/05	Type: Grab	Screen - Length: 15'	Diameter: 2"
Boring Driller: Tabasco Drilling Corp.	Purge Method: Submersible DC pump	Screen Type: Sch 40 .020 in.	
Boring Rig: Diedrich D-120 Auger Rig	Sample Method: Split Spoon	Bentonite: 1' below grade	
Driller/Helper: Bill Anderson / Steve Anderson	Sample Parameters: TPH,	Sand Pack: 1.0' above screen	
Sampling Method: 2" Stainless Steel Split Spoon	Sampler: A. Biskupski	Depth to PVC Rim: - 0.375'	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	1		SW	0 - 0.5' Top soil & red fine Sand	1	
		0	2	1.75		0.5 - 1.0' Tan fine SAND	2	
2		0	3			1.0 - 3.0' Orange brown fine-medium SAND, some coarse Sand, trace rounded fine-medium Gravel (wet, loose)	3	
		0	4		SM		4	
3		0	5	1.75			5	
		0	6			3.0 - 4.0' Brown green mottled fine SAND	6	
4		0	9				7	
		0	5			4.0 - 12.0' Tan fine SAND, trace Silt, some mottling (dry, wet at 10.5', very stiff)	8	
5		0	8	1.6			9	
		0	9				10	
6		0	10				11	
		0	11	1.8			12	
7		0	13				13	
		0	15				14	
8		0	7				15	
		0	8	1.6			16	
9		0	8				17	
		0	8				18	
10		0	12				19	
	A	0	4				20	
11		0	8	1.75			21	
		0	10				22	
12		0	13				23	
		0	5		SP	12.0 - 14.0' Green mottled fine SAND, w/ some Silt (wet, med dense)	24	
13		0	10	1.65				
		0	14			14.0 - 16.0' Dark green fine SAND, trace Silt (wet, med dense)		
14		0	18					
		0	3			16.0 - 17.0' Green mottled fine SAND (wet, med dense)		
15		7	11	1.7				
		17	15			17.0 - 18.0' Orange tan fine SAND (wet, dense)		
16		24	17					
	B	19	6			18.0 - 20.0' Green brown mottled fine SAND, trace Silt (wet, dense)		
17		12	12	1.7				
		11	20					
18		11	19					
		17	9	2				
19		8	17					
		23	16					
20		9	15					
21						Boring advanced to 20 feet below grade.		
22						Groundwater encountered at 10.5 feet below grade.		
23						Monitoring well set at 19.17 feet below grade.		
24								

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Boring for Location: MW-16

Permit #: 31 000 695 18	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.0' BSG	Static Water: 8.83 TOC
Site Name: Agway	Project:	JMC Job #: 20045	Well - Depth: 19.92' TOC
Owner:	Use: Groundwater sampling	Casing - Length: 5.0'	Diameter: 2"
Boring Drill Date: 03/04/05	Type: Grab	Screen - Length: 15'	Diameter: 2"
Boring Driller: Tabasco Drilling Corp.	Purge Method: Submersible DC pump	Screen Type: Sch 40 .020 in.	
Boring Rig: Diedrich D-120 Auger Rig (D11)	Sample Method: Split Spoon	Bentonite: 1' below grade	
Driller/Helper: Bill Anderson / Steve Anderson	Sample Parameters: TPH,	Sand Pack: 1.0' above screen	
Sampling Method: 2" Stainless Steel Split Spoon	Sampler: A. Biskupski	Depth to PVC Rim: - 0.5'	

Depth (ft.)	Sample ID and Depth	OWM (Meter Units)	Blows/6.0"	Recovery (feet)	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1		0	1	1.1		0 - 1.5' Top soil & dark brown Sand	1	
2		0	2		SP	1.5 - 2.0' Brown fine SAND w/ trace coarse Sand	2	
3		0	3			2.0 - 13.0' Tan brown fine SAND, trace Silt, trace to some mottling (dry, medium dense, wet at 10.0')	3	
4		0	4	2			4	
5		0	5				5	
6		0	6	2			6	
7		0	7				7	
8		0	8	2			8	
9		0	8				9	
10	A	0	10	1.9			10	
11		0	11	2			11	
12		0	11				12	
13		0	3	2		13.0 - 14.0' Orange tan fine SAND	13	
14		0	5				14	
15		0	6	1.75		14.0 - 16.0' Tan gray mottled fine SAND (wet, med dense) Orange sand lens at 15 - 15.25'	15	
16		0	7				16	
17		0	9	2		16.0 - 20.0' Tan green mottled fine SAND, trace Silt (wet, med dense)	17	
18		6	12				18	
19	B	3	3	2			19	
20		32	8				20	
		20	10					
		3.5	12					
21						Boring advanced to 20 feet below grade.	21	
22						Groundwater encountered at 10.0 feet below grade.	22	
23						Monitoring well set at 19.92 feet below grade.	23	
24							24	

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Boring for Location: MW-11

Permit #: 3100065666	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 8.0' BSG	Static Water: 6.77' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 19.43' BTOC
Owner: Agway	Use: Groundwater sampling	Casing - Length: 4.43'	Diameter: 2"
Boring Drill Date: 04/23/03	Type: Grab	Screen - Length: 15'	Diameter: 2"
Boring Driller: Tabasco Drilling Corp.	Purge Method: Submersible Whale pump	Screen Type: Sch 40 .020 in.	
Boring Rig: Diedrich D-120 Auger Rig	Sample Method: N/A	Bentonite: 1 - 2' below grade	
Driller/Helper: Rick Davis / Rick Ervin	Sample Parameters: VO+10	Sand Pack: 3.0' above screen	
Sampling Method: N/A	Sampler: A. Biskupski	Depth to PVC Rim: - 0.71'	

Depth (ft.)	Sample ID and Depth	OMV (Meter Units)	Blows/6.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0.0	N/A	N/A	SM	0 - 2.5' Brown to Dark Brown fine SAND	1	
2		0.0				2.5 - 5.0' Dark green gray fine SAND	2	
3		251.0				5.0 - 7.5' Green gray fine SAND	3	
4		287.0				7.5 - 10.0' Green gray fine SAND (wet)	4	
5		283.0				10.0 - 15.0' Green tan SAND w/ some CLAY	5	
6						15.0 - 20.0' Green tan SAND w/ some CLAY	6	
7							7	
8							8	
9							9	
10							10	
11							11	
12							12	
13							13	
14		334.0					14	
15							15	
16		266.0					16	
17							17	
18							18	
19							19	
20		1.2					20	
21						Boring advanced to 20 feet below grade.	21	
22						Groundwater encountered at 8 feet below grade.	22	
23						Monitoring well set at 20 feet below grade.	23	
24							24	

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Boring for Location: MW-12

Permit #: 3100065667	Location: 201 - 203 Pine Street, Mount Holly, New Jersey	G.W. Encountered: 10.0' BSG	Static Water: 7.94' TOC
Site Name: Agway	Project: M.O.A.	JMC Job #: 20045	Well - Depth: 19.76' BTOC
Owner: Agway	Use: Groundwater sampling	Casing - Length: 4.76'	Diameter: 2"
Boring Drill Date: 04/22/03	Type: Grab	Screen - Length: 15'	Diameter: 2"
Boring Driller: Tabasco Drilling Corp.	Purge Method: Submersible Whale pump	Screen Type: Sch 40 .020 in.	
Boring Rig: Diedrich D-120 Auger Rig	Sample Method: N/A	Bentonite: 1 - 2' below grade	
Driller/Helper: Rick Davis / Mike Tabasco	Sample Parameters: VO+10	Sand Pack: 3.0' above screen	
Sampling Method: N/A	Sampler: A. Biskupski	Depth to PVC Rim: - 0.42	

Depth (ft.)	Sample ID and Depth	OVM (Meter Units)	Blows/6.0"	Recovery	Soil Type	Soil/Geologic Description	Depth (ft.)	Boring Diagram
1	N/A	0.0	N/A	N/A	SM	0 - 5.0' Brown fine SAND, little Clay	1	
2							2	
3							3	
4							4	
5							5	
6		0.0				5.0 - 10.0' Light brown CLAY w/ some fine Sand (wet at 10 feet)	6	
7							7	
8							8	
9							9	
10							10	
11		0.0				10.0 - 15.0' Light brown CLAY w/ some fine Sand	11	
12							12	
13							13	
14							14	
15							15	
16		0.0				15.0 - 20.0' Light brown / Green fine SAND w/ some Clay	16	
17							17	
18							18	
19							19	
20							20	
21						Boring advanced to 20 feet below grade. Groundwater encountered at 10 feet below grade. Monitoring well set at 20 feet below grade.	21	
22							22	
23							23	
24							24	

APPENDIX III

**SUBSLAB VAPOR AND INDOOR AIR ANALYTICAL TESTING
RESULTS - DECEMBER 2004 AND SEPTEMBER 2005**



INDOOR AIR BUILDING SURVEY & SAMPLING FORM

Survey Completed by: Howard M. Spivack, Inc. Env. Consult., Inc. Date: 9/26/05
Site Name: Aquat - Mt. Holly Case #:

Part I - Occupants

Building Address: 103 Hulme Street
Property Contact: Viola Crumbaru Owner Renter / other:
Contact's Phone: home (609) 265-2871 work () cell (609) 731-2668
Building occupants: Children under age 13 Children age 13-18 Adults 2

Part II - Building Characteristics

Building type: single-family residential / multi-family residential / office / strip mall / commercial / industrial
Describe building: Single Family Dwelling w/ living area on 1st floor, bedrooms upstairs UNFINISHED basement
Number of floors - below grade: 1 full basement / crawl space / slab at or above grade:
Basement size: 392 ft^2 Basement floor: concrete dirt floating / other (specify):
Foundation type: poured concrete / cinder blocks / stone / other (specify) parking cover (inside & outside)
Type of ground cover around outside of building: grass concrete / asphalt / other (specify)
Basement sump present? Yes / No Sump pump? Yes No Covered w/ steel plate
Type of heating system (circle all that apply): hot air circulation hot air radiation wood steam radiation hot water radiation
kerosene heater electric baseboard heat pump other (specify): baseboard
Type of ventilation system (circle all that apply): central air conditioning mechanical fans bathroom ventilation fans
individual air conditioning units kitchen range hood fan other (specify):
Type of fuel utilized (circle all that apply): Natural gas / electric / fuel oil wood coal / solar / kerosene / outside (fresh) air intake
Septic system? Yes / Yes (but not used) No Irrigation/private well? Yes / Yes (but not used) No
Existing subsurface depressurization (radon) system in place? Yes No and running? Yes No

Part III - Outside Contaminant Sources

NIDEP Comprehensive Site List (1000-ft. radius):
Other stationary sources nearby (gas stations, emission stacks, etc.): LTO Landfill / Businesses along Hulme St
Heavy vehicular traffic nearby (or other mobile sources): TRUCK TRAFFIC on Hulme Street.

Building address: 103 Hulme St.

Part VI - Sampling Information

Sample Technician: HOWARD SYVAN TH Phone number: (732) 295-2144

Sampler Type: Tedlar / Sorbent Canister Analytical Method: TO-15 TO-17 / other: _____

Laboratory: ACCUTEST Laboratory NJ Certified Lab? Yes / No

Sample #	Floor	Room	Canister / Tube #	Pump ID # (if applicable)	Sample Start Date / Time	Sample End Date / Time
103A 1st	1st Floor	DINING	A 445	N/A	1306 - 9/28	1300 9/29
103A Base	Basement	N/A	A 131	N/A	1315 9/28	1310 9/29
11A Kitch	Basement	N/A	A 351	N/A	1315 9/28	1311 9/29
103 Sub	Sub-slab	N/A	A 350	N/A	1320 9/28	1318 9/29

Sample location(s): _____

Provide Drawing of Sample Location(s) in Building

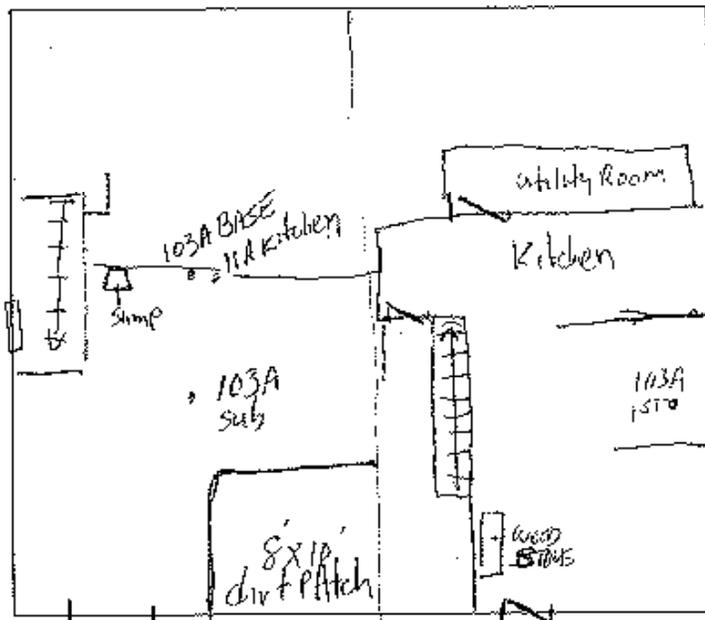
Sample # _____

Sample # _____

Sample # _____

Did the occupants **not** follow any of the "Instructions for Residents" directions? Yes / No

If so, describe modifications: _____



Part VII - Weather Conditions

Outside temperature at time of sampling: 62 °F

Expected high temperature: 78 °F

Expected low temperature: 46 °F

Was there significant precipitation within 12 hours of (or during) the sampling event? Yes / No

Describe the general weather conditions: WED: Sunny Av. Humidity 71% 0.007 precip, wind 5 mph DEW PT 45°F
Thurs: Sunny Av. Humidity 74% 0.007 precip - WIND 4 mph (W) DEW PT - 52°F
(See Attached)

Part VIII - General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

Basement wet for 1st time in 10 yrs, w/ snow melt + early spring rains. Basement damp at time of pre-sample survey.

Building address: 103 Hulme St.

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

Potential Sources	Location(s)	Removed Prior to Sampling? (Yes / No / NA)
Gasoline storage cans	<u>1 Pt. (unopened) STP Gasoline treatment</u>	<u>NO</u>
Gas-powered equipment		<u>N/A</u>
Kerosene storage cans		<u>N/A</u>
<u>Paints</u> / thinners / strippers	<u>PAINTS / STAIN / WAX / etc. - Basement</u>	
Cleaning solvents	<u>NONE</u>	
Oven cleaners	<u>NONE</u>	
Carpet / upholstery cleaners	<u>NONE</u>	
Other house cleaning products	<u>UNDER Kitchen sink</u>	
Moth balls	<u>NONE</u>	
Polishes / waxes	<u>NONE</u>	
Insecticides	<u>2 CANS OF "OFF" INSECT REPELLANT - basement</u>	
Furniture / floor polish	<u>UNDER Kitchen sink</u>	
Nail polish / polish remover	<u>Upstairs bed/bath</u>	
Hairspray	<u>Upstairs bed/bath</u>	
Cologne / perfume	<u>Upstairs bed/bath</u>	
Air fresheners	<u>Upstairs</u>	
Fuel tank (inside building)	<u>NONE PRESENT</u>	<u>NA</u>
Wood stove or fireplace	<u>1ST FLOOR Living RM, not yet operational</u>	<u>NA</u>
New furniture / upholstery	<u>NONE</u>	
New carpeting / flooring	<u>none</u>	<u>NA</u>
Recent painting in building?	<u>none</u>	<u>NA</u>
Hobbies - glues, paints, etc.	<u>none</u>	

Part V – Miscellaneous Items

Do any occupants of the building smoke? Yes / No How often? Outside only daily

Has anyone smoked within the building within the last 48 hours? Yes No

Does the building have an attached garage? Yes No

If so, is a car usually parked in the garage? Yes No

Do the occupants of the building have their clothes dry-cleaned? Yes No

When were dry-cleaned clothes last brought into the building? _____

Have the occupants ever noticed any unusual odors in the building? Yes No

Describe (with location): _____

Any known spills of a chemical immediately outside or inside the building? Yes No

Describe (with location): _____

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens? Yes / No

If so, when and which chemicals? Pesticide application for Crickets in Sept. 2005.

OCCUPIED DWELLING QUESTIONNAIRE

Indoor Air Assessment Survey

Date: 9/26/05

1. Name: Vola Aramburu (Lillian Lipat)

Address: 103 Walme Street

Mt. Kaley NJ

Home Phone: (609) 265 2871 Work Phone:

2. What is the best time to call to speak with you? ~1000- At: Work [] or Home [x]?

3. Are you the Owner [x], Renter [], Other [] (please specify) of this Home/Structure?

4. Total number of occupants/persons at this location? 2 Number of children? 0 Ages? N/A

5. How long have you lived at this location? ~10 years

General Home Description

6. Type of Home/Structure (check only one): Single Family Home [x], Duplex [], Condominium [], Townhouse [], Other []

7. Home/Structure Description: number of floors 3 Basement? Yes [x] No [] Crawl Space? Yes [x] No [] If Yes, under how much of the house's area? 100 %

8. Age of Home/Structure: >60 years, Not sure/Unknown []

9. General Above-Ground Home/Structure construction (check all that apply): Wood [x], Brick [x], Concrete [], Cement block [], Other []

10. Foundation Construction (check all that apply): Concrete slab [] Fieldstone [] Concrete block [x] w/brick

Elevated above ground/grade

Other _____

11. What is the source of your drinking water (check all that apply)?

Public water supply

Private well

Bottled water

Other, please specify _____

12. Do you have a private well for purposes other than drinking?

Yes No

If yes, please describe what you use the well
for: _____

13. Do you have a septic system? Yes No Not used Unknown

14. Do you have standing water outside your home (pond, ditch, swale)? Yes No

Basement Description, please check appropriate boxes.

If you do not have a basement go to question 23.

15. Is the basement finished or unfinished ?

16. If finished, how many rooms are in the basement? _____

How many are used for more than 2 hours/day? -0-

17. Is the basement floor (check all that apply) concrete , tile , carpeted , dirt ,
other (describe) _____?

18. Are the basement walls poured concrete , cement block , stone , wood , brick ,
other _____?

19. Does the basement have a moisture problem (check one only)?

Yes, frequently (3 or more times/yr)

Yes, occasionally (1-2 times/yr)

Yes, rarely (less than 1 time/yr)

No

20. Does the basement ever flood (check one only)?

Yes, frequently (3 or more times/yr)

Yes, occasionally (1-2 times/yr)

Yes, rarely (less than 1 time/yr)

No

21. Does the basement have any of the following? (check all that apply) Floor cracks ,

Wall cracks , Sump , Floor drain , Other hole/opening in floor

(describe) _____

22. Are any of the following used or stored in the basement (check all that apply)
 Paint Paint stripper/remover Paint thinner
 Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue
 Laundry spot removers Drain cleaners Pesticides
23. Have you recently (within the last six months) done any painting or remodeling in your home? Yes No
 If yes, please specify what was done, where in the home, and what month:

24. Have you installed new carpeting in your home within the last year? Yes No
 If yes, when and where? _____
25. Do you regularly use or work in a dry cleaning service (check only one box)?
 Yes, use dry-cleaning regularly (at least weekly)
 Yes, use dry-cleaning infrequently (monthly or less)
 Yes, work at a dry cleaning service
 No
26. Does anyone in your home use solvents at work?
 Yes If yes, how many persons _____
 No If no, go to question 28
27. If yes for question 26 above, are the work clothes washed at home? Yes No
28. Where is the washer/dryer located?
 Basement
 Upstairs utility room
 Kitchen
 Garage
 Use a Laundromat
 Other, please specify _____
29. If you have a dryer, is it vented to the outdoors? Yes No
30. What type(s) of home heating do you have (check all that apply)
 Fuel type: Gas , Oil , Electric , Wood , Coal , Other _____
 Heat conveyance system: Forced hot air
 Forced hot water
 Steam
 Radiant floor heat
 Wood stove
 Coal furnace
 Fireplace
 Other _____

31. Do you have air conditioning? Yes No . If yes, please check the appropriate type(s)
 Central air conditioning
 Window air conditioning unit(s)
 Other , please specify _____
32. Do you use any of the following? Room fans , Ceiling fans , Attic fan
 Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33. Has your home had termite or other pesticide treatment: Yes No Unknown
 If yes, please specify type of pest controlled, crickets
 and approximate date of service SEPT 20, 2005
34. Water Heater Type: Gas , Electric , By furnace , Other

 Water heater location: Basement , Upstairs utility room , Garage , Other (please describe) _____
35. What type of cooking appliance do you have? Electric , Gas , Other

36. Is there a stove exhaust hood present? Yes No
 Does it vent to the outdoors? Yes No
37. Smoking in Home: smoking on patio/porch only
 None , Rare (only guests) , Moderate (residents light smokers) ,
 Heavy (at least one heavy smoker in household)
38. If yes to above, what do they smoke?
 Cigarettes Cigars
 Pipe Other
39. Do you regularly use air fresheners? Yes No
40. Does anyone in the home have indoor home hobbies of crafts involving: None
 Heating , soldering , welding , model glues , paint , spray paint,
 wood finishing , Other Please specify what type of hobby: _____
41. General family/home use of consumer products (please circle appropriate): Assume that
 Never = never used, Hardly ever = less than once/month, Occasionally = about
 once/month, Regularly = about once/week, and Often = more than once/week.

Product	Frequency of Use				
Spray-on deodorant	<input checked="" type="radio"/> Never	<input type="radio"/> Hardly ever	<input type="radio"/> Occasionally	<input type="radio"/> Regularly	<input type="radio"/> Often

Aerosol deodorizers	Never	Hardly ever	<u>Occasionally</u>	Regularly	Often
Insecticides	Never	<u>Hardly ever</u>	Occasionally	Regularly	Often
Disinfectants	Never	Hardly ever	<u>Occasionally</u>	Regularly	Often

(Question 41, continued)

Product	Frequency of Use				
Window cleaners	Never	<u>Hardly ever</u>	Occasionally	Regularly	Often
Spray-on oven cleaners	Never	<u>Hardly ever</u>	Occasionally	Regularly	Often
Nail polish remover	<u>Never</u>	Hardly ever	Occasionally	Regularly	Often
Hair sprays	Never	Hardly ever	<u>Occasionally</u>	Regularly	Often

42. Please check weekly household cleaning practices:

- Dusting
- Dry sweeping
- Vacuuming
- Polishing (furniture, etc)
- Washing/waxing floors
- Other _____

43. Other comments: ⇒ Damp basement (FIRST TIME EVER AS PER RESIDENT/OWNER)
⇒ WOOD STOVE NOT YET OPERATING (Locate LR 1st FLOOR)
⇒ Pesticide Application for Crickets in Sept 2005.



New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY & SAMPLING FORM

Survey Completed by: Howard Synnott, JPE Environmental Consultants, Inc. Date: 9/26/05
Site Name: Aquat - Mt. Holly Case #:

Part I - Occupants

Building Address: 93 Hulme Street
Property Contact: Rick Moorehouse Owner Renter / other:
Contact's Phone: home (609) 456-8167 work () cell ()
Building occupants: Children under age 13 Children age 13-18 Adults 3

Part II - Building Characteristics

Building type: Single-family residential / multi-family residential / office / strip mall / commercial / industrial
Describe building: East half of duplex w/ 91 Hulme Street.
Number of floors - below grade: full basement / crawl space / slab at or above grade: 3
Basement size: 300 ft^2 Basement floor: concrete dirt floating / other (specify):
Foundation type: poured concrete / cinder blocks / stone / other (specify):
Type of ground cover around outside of building: grass / concrete asphalt / other (specify):
Basement sump present? Yes No Sump pump? Yes No
Type of heating system (circle all that apply): hot air circulation hot air radiation wood steam radiation hot water radiation
kerosene heater electric baseboard heat pump other (specify):
Type of ventilation system (circle all that apply): central air conditioning mechanical fans bathroom ventilation fans
individual air conditioning units kitchen range hood fan other (specify):
Type of fuel utilized (circle all that apply): Natural gas / electric fuel oil wood / coal / solar / kerosene / outside (fresh) air intake
Septic system? Yes / Yes (but not used) No Irrigation/private well? Yes / Yes (but not used) No
Existing subsurface depressurization (radon) system in place? Yes No and running? Yes / No

Part III - Outside Contaminant Sources

NJDEP Comprehensive Site List (1000-ft. radius):
Other stationary sources nearby (gas stations, emission stacks, etc.): L+D Landfill/Businesses Along Hulme St.
Heavy vehicular traffic nearby (or other mobile sources): Vehicular traffic along Hulme (particularly trucks)

Building address: 93 Halme

Part IV - Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

Potential Sources	Location(s)	Removed Prior to Sampling? (Yes / No / NA)
Gasoline storage cans	REAR OF PROPERTY	
Gas-powered equipment	N/A	
Kerosene storage cans	N/A	
Paints / thinners / strippers	Basement	
Cleaning solvents	Basement / Kitchen	
Oven cleaners	N/A	
Carpet / upholstery cleaners	N/A	
Other house cleaning products	Kitchen	
Moth balls	N/A	
Polishes / waxes	1st Floor	
Insecticides	1st Floor	
Furniture / floor polish	1st Floor	
Nail polish / polish remover	N/A	
Hairspray	N/A	
Cologne / perfume	Bedrooms upstairs	
Air fresheners	1st Floor / Kitchen	
Fuel tank (inside building)	Basement	NA
Wood stove or fireplace	1st Floor (broken / unused)	NA
New furniture / upholstery	N/A	
New carpeting / flooring	N/A	NA
Recent painting in building?	N/A	NA
Hobbies - glues, paints, etc.	N/A	

Part V - Miscellaneous Items

Do any occupants of the building smoke? Yes / No How often? Frequently (CIGARETTES pipe)

Has anyone smoked within the building within the last 48 hours? Yes / No

Does the building have an attached garage? Yes No

If so, is a car usually parked in the garage? Yes No / IN DRIVEWAY

Do the occupants of the building have their clothes dry-cleaned? Yes / No

When were dry-cleaned clothes last brought into the building? _____

Have the occupants ever noticed any unusual odors in the building? Yes No

Describe (with location): _____

Any known spills of a chemical immediately outside or inside the building? Yes No

Describe (with location): _____

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens? Yes No

If so, when and which chemicals? _____

Building address: 93 Hulme

Part VI - Sampling Information

Sample Technician: Howard Syvarth Phone number: (732) 295-2144

Sampler Type: Tedlar / Sorbent (Canister) Analytical Method: (TO-15) TO-17 / other: _____

Laboratory: Accutest Laboratory NJ Certified Lab? (Yes) No

Sample #	Floor	Room	Canister Tube #	Pump ID # (if applicable)	Sample Start Date / Time	Sample End Date / Time
93A 1 st	1 st Floor		A310	N/A	092805 0900	9/29 0856
93A Base	Basement		A354	N/A	092805 0908	9/29 0858
93A Back			A487	N/A	092805 0858	9/29 0855

Sample location(s): _____ Provide Drawing of Sample Location(s) in Building

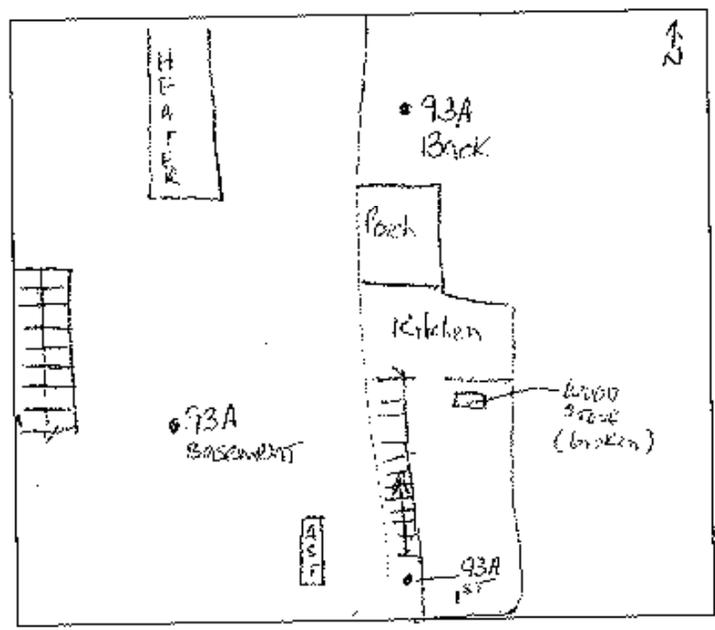
Sample # 93A - 1st Floor

Sample # 93A - Center basement
Base.

Sample # 93 - Backyard near
Back. of 93 Hulme.

Did the occupants not follow any of the "Instructions for Residents" directions? (Yes) No

If so, describe modifications: RESIDENTS
SMOKED IN HOUSE



Part VII - Weather Conditions

Outside temperature at time of sampling: 62 °F

Expected high temperature: 78 °F

Expected low temperature: 46 °F

Was there significant precipitation within 12 hours of (or during) the sampling event? Yes / (No)

Describe the general weather conditions: WED: Sunny Av. Hum. 71% 0.00 precip. wind 0 mph Dew Pt 48°F
Thurs: Sunny Av. Hum. 74% 0.09 precip. wind 4 mph (w) Dew Pt 52°F
(see attached)

Part VIII - General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

- NO activity in basement for some time, Ast w/ 1/4 fuel oil.
- House keeping poor, mesby w/ smell of cat/mildew.

OCCUPIED DWELLING QUESTIONNAIRE

Indoor Air Assessment Survey

Date: 9/26/05

1. Name: Rick Morehouse

Address: 93 Hulme Street

Mt. Holly NJ

Home Phone: 609 456-8167 Work Phone: _____

2. What is the best time to call to speak with you? AM 11-5 At: Work or Home ?

3. Are you the Owner , Renter , Other (please specify) _____ of this Home/Structure?

4. Total number of occupants/persons at this location? 3
Number of children? 0 Ages? _____

5. How long have you lived at this location? >60 years

General Home Description

6. Type of Home/Structure (check only one): Single Family Home , Duplex , Condominium , Townhouse , Other _____

7. Home/Structure Description: number of floors 3

Basement? Yes No

Crawl Space? Yes No

If Yes, under how much of the house's area? 100%

8. Age of Home/Structure: >60 years years, Not sure/Unknown

9. General Above-Ground Home/Structure construction (check all that apply):
Wood , Brick , Concrete , Cement block , Other _____

10. Foundation Construction (check all that apply):

Concrete slab

Fieldstone

Concrete block

BRICK

- Elevated above ground/grade
- Other _____
11. What is the source of your drinking water (check all that apply)?
 Public water supply
 Private well
 Bottled water
 Other, please specify _____
12. Do you have a private well for purposes other than drinking?
 Yes No
 If yes, please describe what you use the well
 for: _____
13. Do you have a septic system? Yes No Not used Unknown
14. Do you have standing water outside your home (pond, ditch, swale)? Yes No

Basement Description, please check appropriate boxes.
 If you do not have a basement go to question 23.

15. Is the basement finished or unfinished ?
16. If finished, how many rooms are in the basement? 8
 How many are used for more than 2 hours/day? 8
17. Is the basement floor (check all that apply) concrete , tile , carpeted , dirt ,
 other (describe) _____?
18. Are the basement walls poured concrete , cement block , stone , wood , brick ,
 other _____?
19. Does the basement have a moisture problem (check one only)?
 Yes, frequently (3 or more times/yr)
 Yes, occasionally (1-2 times/yr)
 Yes, rarely (less than 1 time/yr)
 No
20. Does the basement ever flood (check one only)?
 Yes, frequently (3 or more times/yr)
 Yes, occasionally (1-2 times/yr)
 Yes, rarely (less than 1 time/yr)
 No
21. Does the basement have any of the following? (check all that apply) Floor cracks ,
 Wall cracks , Sump , Floor drain , Other hole/opening in floor
 (describe) _____

22. Are any of the following used or stored in the basement (check all that apply)
 Paint Paint stripper/remover Paint thinner
 Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue
 Laundry spot removers Drain cleaners Pesticides
23. Have you recently (within the last six months) done any painting or remodeling in your home? Yes No
 If yes, please specify what was done, where in the home, and what month:

24. Have you installed new carpeting in your home within the last year? Yes No
 If yes, when and where? _____
25. Do you regularly use or work in a dry cleaning service (check only one box)?
 Yes, use dry-cleaning regularly (at least weekly)
 Yes, use dry-cleaning infrequently (monthly or less)
 Yes, work at a dry cleaning service
 No
26. Does anyone in your home use solvents at work?
 Yes If yes, how many persons _____
 No If no, go to question 28
27. If yes for question 26 above, are the work clothes washed at home? Yes No
28. Where is the washer/dryer located?
 Basement
 Upstairs utility room
 Kitchen
 Garage
 Use a Laundromat
 Other, please specify _____
29. If you have a dryer, is it vented to the outdoors? Yes No N/A
30. What type(s) of home heating do you have (check all that apply)
 Fuel type: Gas , Oil , Electric , Wood , Coal , Other _____
 Heat conveyance system: Forced hot air
 Forced hot water
 Steam
 Radiant floor heat
 Wood stove (NOT USED)
 Coal furnace
 Fireplace
 Other _____

31. Do you have air conditioning? Yes No . If yes, please check the appropriate type(s)
 Central air conditioning
 Window air conditioning unit(s)
 Other , please specify _____
32. Do you use any of the following? Room fans , Ceiling fans , Attic fan
 Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33. Has your home had termite or other pesticide treatment: Yes No Unknown
 If yes, please specify type of pest controlled, _____
 and approximate date of service _____
34. Water Heater Type: Gas , Electric , By furnace , Other

 Water heater location: Basement , Upstairs utility room , Garage , Other (please describe) _____
35. What type of cooking appliance do you have? Electric , Gas , Other

36. Is there a stove exhaust hood present? Yes No
 Does it vent to the outdoors? Yes No
37. Smoking in Home:
 None , Rare (only guests) , Moderate (residents light smokers) ,
 Heavy (at least one heavy smoker in household)
38. If yes to above, what do they smoke?
 Cigarettes Cigars
 Pipe Other
39. Do you regularly use air fresheners? Yes No
40. Does anyone in the home have indoor home hobbies of crafts involving: None
 Heating , soldering , welding , model glues , paint , spray paint,
 wood finishing , Other Please specify what type of hobby: _____

41. General family/home use of consumer products (please circle appropriate): Assume that
Never = never used, **Hardly ever** = less than once/month, **Occasionally** = about
 once/month, **Regularly** = about once/week, and **Often** = more than once/week.

Product	Frequency of Use				
	Never	Hardly ever	Occasionally	Regularly	Often
Spray-on deodorant	Never				

Aerosol deodorizers	Never	Hardly ever	Occasionally	Regularly	Often
Insecticides	Never	Hardly ever	Occasionally	Regularly	Often
Disinfectants	Never	Hardly ever	Occasionally	Regularly	Often

(Question 41, continued)

Product	Frequency of Use				
Window cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Spray-on oven cleaners	Never	Hardly ever	Occasionally	Regularly	Often
Nail polish remover	Never	Hardly ever	Occasionally	Regularly	Often
Hair sprays	Never	Hardly ever	Occasionally	Regularly	Often

42. Please check weekly household cleaning practices:

- Dusting
- Dry sweeping
- Vacuuming
- Polishing (furniture, etc)
- Washing/waxing floors
- Other _____

43. Other comments: _____



New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY & SAMPLING FORM

Survey Completed by: Howard Spack, JME Env. Consultants, Inc. Date: 9/26/05
Site Name: Aquat Mt. Holly Case #:

Part I - Occupants

Building Address: 91 Hulme Street
Property Contact: Charles Faith Parratt Owner/Renter/other:
Contact's Phone: home (609) 261-3337 work () cell ()
Building occupants: Children under age 13 2 Children age 13-18 0 Adults 4

Part II - Building Characteristics

Building type: single-family residential / multi-family residential / office / strip mall / commercial / industrial
Describe building: WEST HALF OF DUPLEX w/ 93 Hulme St.
Number of floors - below grade: 1 full basement / crawl space / slab at or above grade: 3
Basement size: 300 sq ft Basement floor: concrete dirt / floating / other (specify):
Foundation type: poured concrete / cinder blocks / stone / other (specify) BRICK
Type of ground cover around outside of building: grass concrete / asphalt / other (specify)
Basement sump present? Yes No Sump pump? Yes No
Type of heating system (circle all that apply): hot air circulation hot air radiation wood steam radiation hot water radiation
kerosene heater electric baseboard heat pump other (specify):
Type of ventilation system (circle all that apply): central air conditioning mechanical fans bathroom ventilation fans
individual air conditioning units kitchen range hood fan other (specify):
Type of fuel utilized (circle all that apply): Natural gas / electric / fuel oil / wood / coal / solar / kerosene / outside (fresh) air intake
Septic system? Yes / Yes (but not used) No Irrigation/private well? Yes / Yes (but not used) No
Existing subsurface depressurization (radon) system in place? Yes No and running? Yes No

Part III - Outside Contaminant Sources

NJDEP Comprehensive Site List (1000-ft. radius):
Other stationary sources nearby (gas stations, emission stacks, etc.): LAD Landfill / Commer Businesses along Hulme
Heavy vehicular traffic nearby (or other mobile sources): Commercial Traffic Along Hulme St.

Building address: 91 Hulme St.

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

Potential Sources	Location(s)	Removed Prior to Sampling? (Yes / No / NA)
Gasoline storage cans	N/A	N/A
Gas-powered equipment	N/A	N/A
Kerosene storage cans	N/A	N/A
Paints / thinners / strippers	Basement Laundry Room	
Cleaning solvents	UPSTAIRS UNDER KITCHEN SINK	
Oven cleaners	N/A	
Carpet / upholstery cleaners	UNDER Kitchen Sink	
Other house cleaning products	UNDER KITCHEN SINK	
Moth balls	None	
Polishes / waxes	Kitchen	
Insecticides	Basement - Laundry Room - CAUSE OF "DEE"	
Furniture / floor polish	UPSTAIRS - Kitchen (1st Floor)	
Nail polish / polish remover	UPSTAIRS - 2ND + 3RD FLOOR	
Hairspray	UPSTAIRS - 2ND + 3RD FLOOR	
Cologne / perfume	UPSTAIRS - 2ND + 3RD FLOOR	
Air fresheners	UPSTAIRS bathroom	
Fuel tank (inside building)	N/A	NA
Wood stove or fireplace	GAS FIREPLACE 1st Floor Living Room	NA
New furniture / upholstery	N/A	NA
New carpeting / flooring	N/A	NA
Recent painting in building?	N/A	NA
Hobbies - glues, paints, etc.	N/A	

Part V – Miscellaneous Items

Do any occupants of the building smoke? Yes / No

How often? DAILY - OUTSIDE OF HOME

Has anyone smoked within the building within the last 48 hours? Yes No

Does the building have an attached garage? Yes No

If so, is a car usually parked in the garage? Yes No

Do the occupants of the building have their clothes dry-cleaned? Yes No

When were dry-cleaned clothes last brought into the building? _____

Have the occupants ever noticed any unusual odors in the building? Yes No

Describe (with location): _____

Any known spills of a chemical immediately outside or inside the building? Yes No

Describe (with location): _____

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens? Yes / No

If so, when and which chemicals? HERBICIDE (UNKNOWN) TO DRIVEWAY, (~4 WEEK PRIOR)

Building address: 91 Halme St.

Part VI - Sampling Information

Sample Technician: Howard Swarth Phone number: (932) 895-2144

Sampler Type: Tedlar / Sorbent / Canister Analytical Method: TO-15 / TO-17 / other: _____

Laboratory: Accutest Laboratory NJ Certified Lab? Yes / No

Sample #	Floor	Room	Canister / Tube #	Pump ID # (if applicable)	Sample Start Date / Time	Sample End Date / Time
91A 1 st	1 st Floor		A357	N/A	9/28 0928	9/28 0915
91A Base	Basement	Lobby	A139	✓	9/28 0930	9/28 0916
91A Sub 1	Basement		A376	✓	9/28 0941	9/28 0917
91A Sub 2			A442		9/29 0945	9/29 0919

Sample location(s): _____ Provide Drawing of Sample Location(s) in Building

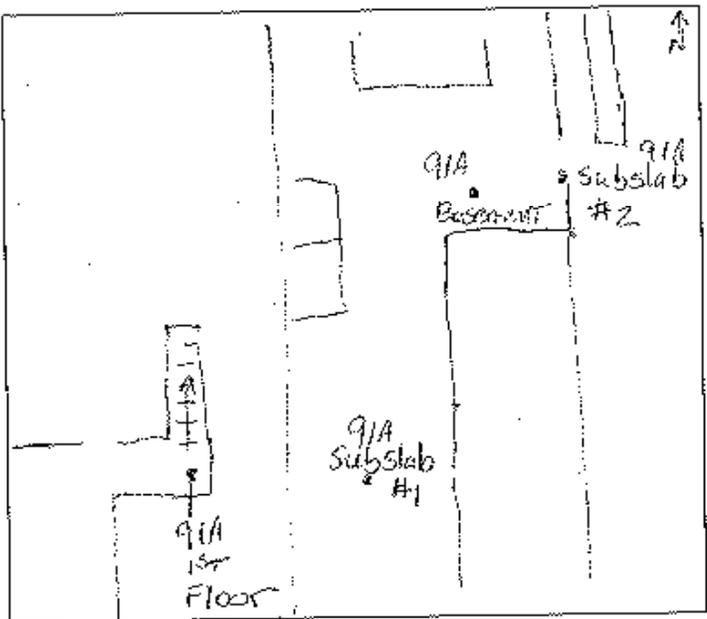
Sample # 91A 1st - 1st Floor

Sample # 91A - Basement
Base

Sample # 91A - Subslab
Sub 1
91A Sub 2 - Subslab

Did the occupants not follow any of the "Instructions for Residents" directions? Yes No

If so, describe modifications: _____



Part VII - Weather Conditions

Outside temperature at time of sampling: 62 °F

Expected high temperature: 78 °F

Expected low temperature: 46 °F

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Describe the general weather conditions: WED - Sunny - Avg Hum. 71% 0.00 precip. Wind 0 mph Dew Pt 46
THURS Avg Hum 74% 0.09 precip. Wind 4 mph (W)
Sunny -> cloudy

Part VIII - General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

- RESIDENT SMOKES ONLY ON FRONT PORCH.
- FRONT DOOR OPENS FREQUENTLY (CHILDREN ENTERING/LEAVING HOUSE)

OCCUPIED DWELLING QUESTIONNAIRE

Indoor Air Assessment Survey

Date: 9/26/05

1. Name: Charles + FAITH Parrott

Address: 91 Hulme Street, Mt. Holly NJ

Home Phone: 609 261-3337 Work Phone: _____

2. What is the best time to call to speak with you? 12 AM At: Work or Home ?

3. Are you the Owner , Renter , Other (please specify) _____
of this Home/Structure?

4. Total number of occupants/persons at this location? 6
Number of children? 2 Ages? 4, 7

5. How long have you lived at this location? 14 years

General Home Description

6. Type of Home/Structure (check only one): Single Family Home , Duplex ,
Condominium , Townhouse , Other _____

7. Home/Structure Description: number of floors 3
Basement? Yes No
Crawl Space? Yes No
If Yes, under how much of the house's area? 100%

8. Age of Home/Structure: >60y years, Not sure/Unknown

9. General Above-Ground Home/Structure construction (check all that apply):
Wood , Brick , Concrete , Cement block , Other _____

10. Foundation Construction (check all that apply):
Concrete slab
Fieldstone
Concrete block
BRICK

- Elevated above ground/grade
- Other _____
11. What is the source of your drinking water (check all that apply)?
 Public water supply
 Private well
 Bottled water
 Other, please specify _____
12. Do you have a private well for purposes other than drinking?
 Yes No
 If yes, please describe what you use the well for: _____
13. Do you have a septic system? Yes No Not used Unknown
14. Do you have standing water outside your home (pond, ditch, swale)? Yes No

Basement Description, please check appropriate boxes.
 If you do not have a basement go to question 23.

15. Is the basement finished or unfinished ? *1 Finished Room*
16. If finished, how many rooms are in the basement? *2 - 1 UNFINISHED ROOM*
 How many are used for more than 2 hours/day? *1 (Finished Room)*
17. Is the basement floor (check all that apply) concrete , tile , carpeted , dirt , other (describe) _____?
18. Are the basement walls poured concrete , cement block , stone , wood , brick , other _____?
19. Does the basement have a moisture problem (check one only)?
 Yes, frequently (3 or more times/yr)
 Yes, occasionally (1-2 times/yr)
 Yes, rarely (less than 1 time/yr)
 No
20. Does the basement ever flood (check one only)?
 Yes, frequently (3 or more times/yr)
 Yes, occasionally (1-2 times/yr)
 Yes, rarely (less than 1 time/yr)
 No
21. Does the basement have any of the following? (check all that apply) Floor cracks ,
 Wall cracks , Sump , Floor drain , Other hole/opening in floor
 (describe) *none visible*

22. Are any of the following used or stored in the basement (check all that apply)
 Paint Paint stripper/remover Paint thinner
 Metal degreaser/cleaner Gasoline Diesel fuel Solvents Glue
 Laundry spot removers Drain cleaners Pesticides
23. Have you recently (within the last six months) done any painting or remodeling in your home? Yes No
 If yes, please specify what was done, where in the home, and what month:

24. Have you installed new carpeting in your home within the last year? Yes No
 If yes, when and where? _____
25. Do you regularly use or work in a dry cleaning service (check only one box)?
 Yes, use dry-cleaning regularly (at least weekly)
 Yes, use dry-cleaning infrequently (monthly or less)
 Yes, work at a dry cleaning service
 No
26. Does anyone in your home use solvents at work?
 Yes If yes, how many persons _____
 No If no, go to question 28
27. If yes for question 26 above, are the work clothes washed at home? Yes No
28. Where is the washer/dryer located?
 Basement
 Upstairs utility room
 Kitchen
 Garage
 Use a Laundromat
 Other, please specify _____
29. If you have a dryer, is it vented to the outdoors? Yes No
30. What type(s) of home heating do you have (check all that apply)
 Fuel type: Gas , Oil , Electric , Wood , Coal , Other _____
 Heat conveyance system: Forced hot air
 Forced hot water
 Steam
 Radiant floor heat
 Wood stove
 Coal furnace
 Fireplace
 Other _____

31. Do you have air conditioning? Yes No . If yes, please check the appropriate type(s)
 Central air conditioning
 Window air conditioning unit(s)
 Other , please specify _____
32. Do you use any of the following? Room fans , Ceiling fans , Attic fan
 Do you ventilate using the fan-only mode of your central air conditioning or forced air heating system? Yes No
33. Has your home had termite or other pesticide treatment: Yes No Unknown
 If yes, please specify type of pest controlled, _____
 and approximate date of service _____
34. Water Heater Type: Gas , Electric , By furnace , Other

 Water heater location: Basement , Upstairs utility room , Garage , Other (please describe) _____
35. What type of cooking appliance do you have? Electric , Gas , Other

36. Is there a stove exhaust hood present? Yes No
 Does it vent to the outdoors? Yes No
37. Smoking in Home: *→ Done on porch only*
 None , Rare (only guests) , Moderate (residents light smokers) ,
 Heavy (at least one heavy smoker in household)
38. If yes to above, what do they smoke?
 Cigarettes Cigars
 Pipe Other
39. Do you regularly use air fresheners? Yes No
40. Does anyone in the home have indoor home hobbies of crafts involving: None
 Heating , soldering , welding , model glues , paint , spray paint,
 wood finishing , Other Please specify what type of hobby: _____

41. General family/home use of consumer products (please circle appropriate): Assume that
Never = never used, **Hardly ever** = less than once/month, **Occasionally** = about
 once/month, **Regularly** = about once/week, and **Often** = more than once/week.

Product	Frequency of Use				
Spray-on deodorant	Never	Hardly ever	Occasionally	Regularly	Often

Aerosol deodorizers	Never	Hardly ever	<u>Occasionally</u>	Regularly	Often
Insecticides	Never	<u>Hardly ever</u>	Occasionally	Regularly	Often
Disinfectants	Never	Hardly ever	Occasionally	Regularly	Often

(Question 41, continued)

Product	Frequency of Use				
Window cleaners	Never	Hardly ever	<u>Occasionally</u>	Regularly	Often
Spray-on oven cleaners	<u>Never</u>	Hardly ever	Occasionally	Regularly	Often
Nail polish remover	Never	Hardly ever	Occasionally	<u>Regularly</u>	Often
Hair sprays	Never	Hardly ever	Occasionally	<u>Regularly</u>	Often

42. Please check weekly household cleaning practices:

- Dusting
- Dry sweeping
- Vacuuming
- Polishing (furniture, etc)
- Washing/waxing floors
- Other _____

43. Other comments: - Finished Room in basement, childrens play room
UNFINISHED ROOM - laundry/general storage.
- RESIDENT SMOKES ON FRONT PORCH.
- NO MATERIAL IDENTIFIED IN SURVEY REMOVED PRIOR TO
SAMPLING

Table 1
Air Sample Results -- September 2005
93A & 103A Hulme Street Background Samples

Agway-Mount Holly, NJ

Sample Number Laboratory Sample Number Date Collected	EPA Region III RBC Values*	EPA TO-15 Method RL*	93A BACKGROUND J11160-1 09/28/2005	103A BACKGROUND J11160-8 09/28/2005	TRIP BLANK J11160-13 09/28/2005
GC/MS Volatiles (Method TO-15)	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>
Acetone	3300	1.19	2.6	ND	ND
Benzene	0.23	1.6	ND	ND	ND
Carbon disulfide	730	1.56	ND	ND	ND
Chloromethane	95	1.03	0.72	0.7	ND
Dichlorodifluoromethane	180	2.47	2.3	2.1	ND
p-Dichlorobenzene	0.28	3.01	ND	ND	ND
Ethanol	NS	0.94	5.6	ND	ND
Ethylbenzene	1100	2.17	ND	ND	ND
Ethyl Acetate	3300	1.8	ND	ND	ND
Freon 113	31000	3.83	1.1 J	1.3 J	ND
Heptane	NS	2.05	ND	ND	ND
Hexane	210	1.76	ND	ND	ND
Methylene chloride	3.8	1.74	0.45 J	0.34 J	ND
Methyl ethyl ketone	5100	1.47	ND	ND	ND
Methyl Isobutyl Ketone	3100	2.05	ND	ND	ND
Methyl Tert Butyl Ether	1.6	1.8	0.61 J	ND	ND
Styrene	1000	2.13	ND	ND	ND
1,1,1-Trichloroethane	1000	2.73	ND	ND	ND
1,2,4-Trimethylbenzene	6.2	2.46	ND	ND	ND
Tetrachloroethylene	0.31	3.39	ND	ND	ND
Toluene	5100	1.88	0.64 J	0.57	ND
Trichloroethylene	0.016	2.69	ND	ND	ND
Trichlorofluoromethane	730	2.81	1.1 J	0.96	ND
m,p-Xylene	110	2.17	ND	ND	ND
o-Xylene	110	2.17	ND	ND	ND
Xylenes (total)	110	2.17	ND	0.39 J	0.32

Notes:

* - NJDEP employs the higher of either the EPA Region III Risk-Based Concentration (RBC) or the Method Reporting Limit (RL) for indoor air quality evaluations. These values are shown in BOLD print.

Per USEPA, the Region 3 RBC Table values are screening levels only and do not constitute regulation or guidance.

ug/m3 - Micrograms Per Cubic Meter of Air

NS - No RBC Screening Level Provided

J = Estimated value, less than the reporting limit, but greater than zero

E = Compound concentration exceeds the highest calibration standard

Table 2
Sub-Slab Soil Gas Sample Results -- September 2005
91A & 103A Hulme Street Background Samples

Agway-Mount Holly, NJ

Sample Number	91A SUB-SLAB 1	91A SUB-SLAB 2	103 A SUB SLAB	
Laboratory Sample Number	J11160-4	J11160-5	J11160-12	
Date Collected	09/28/2005	09/28/2005	09/28/2005	
GC/MS Volatiles (Method TO-15)	(ug/m3)	(ug/m3)	(ug/m3)	
Acetone	66,000	22	19	7.8
Benzene	16	9.6	0.89	0.38
Carbon disulfide	800	4.7	ND	1.2
Carbon tetrachloride	31	0.52 J	ND	0.69
Chloromethane	1,900	ND	0.81	0.66
Dichlorodifluoromethane	3,600	2.5	2.4	3.3
p-Dichlorobenzene	30	43	ND	16
Ethanol	NS	7.9	35.9	3.4
Ethylbenzene	21,000	0.83 J	0.83 J	ND
Ethyl Acetate	NS	1.4	4	ND
Freon 113	NS	0.77 J	ND	0.92
Heptane	NS	1.8	0.98	0.86
Hexane	4200	1.8	1.7	0.53
Isopropyl Alcohol	NS	ND	5.4	ND
Methylene chloride	76	1.9 J	1.8	0.38
Methyl ethyl ketone	NS	ND	1.3	1.2
Methyl Isobutyl Ketone	63,000	ND	ND	ND
Methyl Tert Butyl Ether	31	ND	2.3	0.4
Styrene	21,000	0.55 J	ND	ND
1,1,1-Trichloroethane	46,000	1.3	0.6 J	ND
1,2,4-Trimethylbenzene	120	0.74 J	0.69 J	0.54
2,2,4 - Trimethylpentane	NS	ND J	0.61 J	ND
Tetrachloroethylene	34	1.3 J	1.9	ND
Toluene	8,300	7.5	7.5	2.2
Trichloroethylene	27	ND	ND	ND
Trichlorofluoromethane	15,000	4.6	6.7	1.5
m,p-Xylene	NS	2.4	2.3	1.1
o-Xylene	NS	0.83 J	0.83 J	ND
Xylenes (total)	2200	3.2	3.1	1.4

Notes:

NS - No Soil Gas Screening Level provided

J - Estimated value, less than the reporting limit, but greater than zero

ug/m3 - Micrograms Per Cubic Meter of Air

Table 3
Air Sample Results -- September 2005

103 Hulme Street Samples
Agway-Mount Holly, NJ

Sample Number Laboratory Sample Number Date Collected	EPA Region III RBC Values*	EPA TO-15 Method RL*	103A BACKGROUND J11160-8 09/28/2005	103A 1ST FLOOR J11160-9 09/28/2005	11A KITCHEN (DUP) J11160-10 09/28/2005	103A BASEMENT J11160-11 9/28/05
GC/MS Volatiles (Method TO-15)	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>
Acetone	3300	1.19	ND	ND	ND	3.1
Benzene	0.23	1.6	ND	0.27 J	ND	ND
Carbon disulfide	730	1.56	ND	ND	ND	ND
Chloromethane	95	1.03	0.7	0.58	0.52	0.54
Carbon Tetrachloride	0.12	3.15	ND	ND	ND	0.53 J
Dichlorodifluoromethane	180	2.47	2.1	2.4	2	2.6
p-Dichlorobenzene	0.28	3.01	ND	ND	ND	ND
Ethanol	NS	0.94	ND	ND	ND	ND
Ethylbenzene	1100	2.17	ND	ND	ND	ND
Ethyl Acetate	3300	1.8	ND	ND	ND	ND
Freon 113	31000	3.83	1.3 J	1.1 J	0.84	1.4 J
Heptane	NS	2.05	ND	ND	ND	ND
Hexane	210	1.76	ND	0.39 J	0.42 J	0.34 J
Methylene chloride	3.8	1.74	0.34 J	0.38 J	ND	0.49 J
Methyl ethyl ketone	5100	1.47	ND	ND	ND	ND
Methyl Isobutyl Ketone	3100	2.05	ND	ND	ND	ND
Methyl Tert Butyl Ether	1.6	1.8	ND	ND	ND	0.5 J
Styrene	1000	2.13	ND	ND	ND	ND
1,1,1-Trichloroethane	1000	2.73	ND	ND	ND	ND
1,2,4-Trimethylbenzene	6.2	2.46	ND	ND	ND	ND
Tetrachloroethylene	0.31	3.39	ND	ND	ND	ND
Toluene	5100	1.88	0.57	1.4	1.2	1.1
Trichloroethylene	0.016	2.69	ND	ND	ND	ND
Trichlorofluoromethane	730	2.81	0.96	1.1 J	0.9 J	1.3
m,p-Xylene	110	2.17	ND	ND	ND	ND
o-Xylene	110	2.17	ND	ND	ND	ND
Xylenes (total)	110	2.17	0.39 J	0.65 J	0.48 J	0.4 J

Notes:

* - NJDEP employs the higher of either the EPA Region III Risk-Based Concentration (RBC) or the TO-15 Method Reporting Limit (RL) for indoor air quality evaluations. These values are shown in BOLD print.

ug/m3 - Micrograms Per Cubic Meter of Air

NS - No RBC Screening Level Provided

J = Estimated value, less than the reporting limit, but greater than zero

Table 4
Air Sample Results -- September 2005
93 Hulme Street Samples

Agway-Mount Holly, NJ

Sample Number Laboratory Sample Number Date Collected	EPA Region III RBC Values*	EPA TO-15 Method RL*	93A BACKGROUND J11160-1 09/28/2005	93A 1ST FLOOR J11160-2 09/28/2005	93A BASEMENT J11160-3 09/28/2005
GC/MS Volatiles (Method TO-15)	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>
Acetone	3300	1.19	2.6	21	9
Benzene	0.23	1.6	ND	0.7	0.73
Carbon disulfide	730	1.56	ND	ND	ND
Chloromethane	95	1.03	0.72	1.3	ND
Dichlorodifluoromethane	180	2.47	2.3	2.9	2.4
p-Dichlorobenzene	0.28	3.01	ND	1.2	4.4
Ethanol	NS	0.94	5.6	45.3	31.6
Ethylbenzene	1100	2.17	ND	0.39	0.41
Ethyl Acetate	3300	1.8	ND	ND	ND
Freon 113	31000	3.83	1.1	0.75	1
Heptane	NS	2.05	ND	1.6	1.5
Hexane	210	1.76	ND	ND	1.2
Methylene chloride	3.8	1.74	0.45	2.5	2.2
Methyl ethyl ketone	5100	1.47	ND	ND	0.74
Methyl Isobutyl Ketone	3100	2.05	ND	ND	ND
Methyl Tert Butyl Ether	1.6	1.8	0.61	0.83	0.65
Styrene	1000	2.13	ND	ND	ND
1,1,1-Trichloroethane	1000	2.73	ND	7.1	3.3
1,2,4-Trimethylbenzene	6.2	2.46	ND	ND	0.54
Tetrachloroethylene	0.31	3.39	ND	5.6	3.2
Toluene	5100	1.88	0.64	3.1	2.5
Trichloroethylene	0.016	2.69	ND	ND	ND
Trichlorofluoromethane	730	2.81	1.1	2.4	3.3
m,p-Xylene	110	2.17	ND	1.1	1.3
o-Xylene	110	2.17	ND	ND	0.43
Xylenes (total)	110	2.17	ND	1.5	1.8

Notes:

* - NJDEP employs the higher of either the EPA Region III Risk-Based Concentration (RBC) or the TO-15 Method Reporting Limit (RL) for indoor air quality evaluations.

These values are shown in BOLD print.

ug/m3 - Micrograms Per Cubic Meter of Air

NS - No RBC Screening Level Provided

J = Estimated value, less than the reporting limit, but greater than zero

E = Compound concentration exceeds the highest calibration standard

Table 5
Air Sample Results -- September 2005
91 Hulme Street Samples
Agway-Mount Holly, NJ

Sample Number Laboratory Sample Number Date Collected	EPA Region III RBC Values*	EPA TO-15 Method RL*	91 A 1st FLOOR J11160-6 09/28/2005	91A BASEMENT J11160-7 12/15/2004
GC/MS Volatiles (Method TO-15)	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>	<i>(ug/m3)</i>
Acetone	3300	1.19	28	18
Benzene	0.23	1.6	0.77	0.67
Carbon disulfide	730	1.56	ND	ND
Carbon tetrachloride	0.12	3.15	0.47	0.6
Chloromethane	95	1.03	0.99	1.1
Dichlorodifluoromethane	180	2.47	2.1	2.7
p-Dichlorobenzene	0.28	3.01	ND	0.72
Ethanol	NS	0.94	144	144
Ethylbenzene	1100	2.17	1	0.83
Ethyl Acetate	3300	1.8	8.6	4.7
Freon 113	31000	3.83	0.76	4.9
Heptane	NS	2.05	0.9	0.9
Hexane	210	1.76	1	1.3
Isopropyl Alcohol	NS	1.23	ND	7.9
Methylene chloride	3.8	1.74	2	3
Methyl ethyl ketone	5100	1.47	2.6	1.7
Methyl Isobutyl Ketone	3100	2.05	ND	ND
Methyl Tert Butyl Ether	1.6	1.8	0.79	0.72
Styrene	1000	2.13	0.51	0.47
1,1,1-Trichloroethane	1000	2.73	1.4	1.1
1,2,4-Trimethylbenzene	6.2	2.46	0.64	0.54
2,2,4 - Trimethylpentane	NS	2.34	ND	ND
Tetrachloroethylene	0.31	3.39	3.8	2.2
Toluene	5100	1.88	14	6.8
Trichloroethylene	0.016	2.69	1.5	ND
Trichlorofluoromethane	730	2.81	2.5	7.3
m,p-Xylene	110	2.17	2.7	2
o-Xylene	110	2.17	0.96	0.69
Xylenes (total)	110	2.17	3.6	2.7

Notes:

* - NJDEP employs the higher of either the EPA Region III Risk-Based Concentration (RBC) or the TO-15 Method Reporting Limit (RL) for indoor air quality evaluations.

These values are shown in BOLD print.

ug/m3 - Micrograms Per Cubic Meter of Air

E = Compound concentration exceeds the highest calibration standard

ENCLOSURE TRANSMITTAL SHEET



TO: Ian Hers FROM: Paul Sanders
 COMPANY: Golder Associates DATE: 4/13/05
 FAX NUMBER: (604) 298-5253 NO. OF PAGES W/COVER 5
 PHONE NUMBER: SENDER'S PHONE NUMBER (609) 292-4498
 SUBJECT: Mount Holly results - 1st of 2 faxes
 2, 3, 4 - THP results not shown on these pages

New Jersey Department of Environmental Protection
 Division of Science, Research & Technology
 P.O. Box 409
 401 E. State Street
 Trenton, NJ 08625
 (609) 984-6071
 Fax - (609) 777-2852
 Eileen Murphy, Director

COMMENTS:

URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY PLEASE RECYCLE

Table I
Air Sample Results -- Dec, 2004
Background (Ambient) Air Samples

Agway-Mount Holly, NJ

Sample Number Laboratory Sample Number Date Collected	Region III RBC Values*	Laboratory RL*	#103 BACKGROUND N86354-8 12/15/2004	#93 BACKGROUND N86354-1 12/15/2004	TRIP BLANK N86354-13 12/15/2004
GC/MS Volatiles (Method TD-15)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)
Acetone	3300	0.48	2.2	1.7	1.1
Benzene	0.23	0.64	0.54	0.32	ND
Carbon disulfide	730	0.62	ND	ND	ND
Chloroform	0.077	0.98	ND	ND	ND
Chloromethane	95	0.41	0.85	0.52	ND
Cyclohexane	6200	0.69	ND	ND	ND
Dichlorodifluoromethane	180	0.99	2	1.1	ND
m-Dichlorobenzene	11	1.2	ND	ND	ND
p-Dichlorobenzene	0.28	1.2	ND	ND	ND
Ethanol	NS	0.94	1.8	1.8	ND
Ethylbenzene	1100	0.87	ND	ND	ND
Ethyl Acetate	3300	0.72	ND	ND	ND
Freon 113	31000	1.5	1.4	0.71	1
Heptane	NS	0.82	ND	ND	ND
Hexane	210	0.7	0.81	0.39	ND
Isopropyl Alcohol	NS	0.49	ND	ND	ND
Methylene chloride	3.8	0.69	ND	0.35	ND
Methyl ethyl ketone	5100	0.59	0.29	ND	ND
Methyl Isobutyl Ketone	3100	0.82	ND	ND	ND
Methyl Tert Butyl Ether	1.6	0.72	0.47	ND	ND
Propylene	NS	0.86	0.94	ND	ND
Styrene	1000	0.85	ND	ND	ND
1,1,1-Trichloromethane	2300	1.1	ND	ND	ND
1,2,4-Trimethylbenzene	6.2	0.98	ND	ND	ND
1,3,5-Trimethylbenzene	6.2	0.98	ND	ND	ND
Tertiary Butyl Alcohol	NS	0.61	ND	ND	ND
Tetrachloroethylene	0.31	1.4	ND	ND	ND
Tetrahydrofuran	0.92	0.59	ND	ND	ND
Toluene	420	0.75	1.5	0.79	ND
Trichloroethylene	0.036	1.1	1.6	ND	ND
Trichlorofluoromethane	730	1.1	1	0.62	ND
Vinyl Acetate	210	0.7	ND	ND	ND
m,p-Xylene	110	0.87	ND	ND	ND
o-Xylene	110	0.87	ND	ND	ND
Xylenes (total)	110	0.87	0.61	0.52	ND

Notes:

* - NJDEP employs the higher of either the EPA Region III Risk-Based Concentration (RBC) or the laboratory Reporting Limit (RL) for indoor air quality evaluations. These values are shown in BOLD print. Per USEPA, the Region 3 RBC Table values are screening levels only and do not constitute regulation or guidance.

ug/m3 - Micrograms Per Cubic Meter of Air

NS - No RBC Screening Level Provided

J = Estimated value, less than the reporting limit, but greater than zero

E = Compound concentration exceeds the highest calibration standard

Table 2
Air Sample Results -- Dec. 2004
103 Hulme Street Samples

Agway-Mount Holly, NJ

Sample Number Laboratory Sample Number Date Collected	Region III RBC Values*	Laboratory RL*	#103 SUB-SLAB N86354-12 12/15/2004	#103 BASEMENT N86354-11 12/15/2004	#11 KITCHEN** (DUP) N86354-10 12/15/2004	#103 FIRST FLOOR N86354-9 12/15/2004	#103 BACKGROUND N86354-8 12/15/2004
GC/MS Volatiles (Method TO-15)	(ug/m ³)	(ug/m ³)	(ug/m ³)	(ug/m ³)	(ug/m ³)	(ug/m ³)	(ug/m ³)
Acetone	3300	0.48	ND	8.3	3.1	ND	2.2
Benzene	0.23	0.64	0.73	0.38	0.42	1.6	0.54
Carbon disulfide	730	0.62	1	ND	ND	0.59	ND
Chloroform	0.077	0.98	ND	ND	ND	ND	ND
Chloromethane	95	0.41	0.29	0.89	0.85	1	0.85
Cyclohexane	6200	0.69	37.5	ND	ND	48.2	ND
Dichlorodifluoromethane	180	0.99	2.1	2.1	2.4	2.4	2
m-Dichlorobenzene	11	1.2	7.2	ND	ND	ND	ND
p-Dichlorobenzene	0.28	1.2	7.2	ND	ND	13	ND
Ethanol	NS	0.94	5.6	24.5	21.1	218	1.8
Ethylbenzene	1100	0.87	0.91	ND	ND	1.4	ND
Ethyl Acetate	3300	0.72	82.8	ND	ND	167	ND
Freon 113	31000	1.5	1.5	1.6	1.2	1.8	1.4
Heptane	NS	0.82	25	ND	ND	35	ND
Hexane	210	0.7	ND	1.6	0.53	ND	0.81
Isopropyl Alcohol	NS	0.49	ND	0.71	ND	2.7	ND
Methylene chloride	3.8	0.69	0.42	0.35	ND	0.52 low	ND
Methyl ethyl ketone	5100	0.59	2.3	0.8	0.53	2.4	0.29
Methyl Isobutyl Ketone	3100	0.82	1.1	ND	ND	1.6	ND
Methyl Tert Butyl Ether	1.6	0.72	ND	ND	ND	ND	0.47
Propylene	NS	0.86	ND	ND	ND	ND	0.94
Styrene	1000	0.85	ND	ND	ND	0.55	ND
1,1,1-Trichloroethane	2300	1.1	ND	ND	ND	ND low	ND
1,2,4-Trimethylbenzene	6.2	0.98	1	ND	ND	1.7	ND
1,3,5-Trimethylbenzene	6.2	0.98	ND	ND	ND	ND	ND
Tertiary Butyl Alcohol	NS	0.61	ND	ND	ND	2.8	ND
Tetrachloroethylene	0.31	1.4	3.3	ND	ND	4.8	ND
Tetrahydrofuran	0.92	0.59	ND	0.53	0.66	0.62	ND
Toluene	420	0.75	4.9	3.5	3	11	1.5
Trichloroethylene	0.016	1.1	ND	ND	ND	ND	1.6
Trichlorofluoromethane	730	1.1	1	1.1	1.1	1.1	1
Vinyl Acetate	210	0.7	1.6	ND	ND	2.9	ND
m,p-Xylene	110	0.87	3.7	ND	0.87	6.1	ND
o-Xylene	110	0.87	1.1	ND	ND	1.8	ND
Xylenes (total)	110	0.87	4.8	ND	0.87	7.8	0.61

Notes:

* - NJDEP employs the higher of either the EPA Region III Risk-Based Concentration (RBC) or the laboratory Reporting Limit (RL) for indoor air quality evaluations. These values are shown in BOLD print.

For USEPA, the Region I RBC Table values are screening levels only and do not constitute regulation or guidance.

ug/m³ - Micrograms Per Cubic Meter of Air

NS - No RBC Screening Level Provided

J - Estimated value, less than the reporting limit, but greater than zero

E - Compound concentration exceeds the highest calibration standard

** Duplicate of 103 Basement Sample

Table 3
Air Sample Results -- Dec. 2004
93 Dulme Street Samples

Agway-Mount Holly, NJ

Sample Number Laboratory Sample Number Date Collected	Region III RBC Values*	Laboratory RL*	#93 BASEMENT N86354-J 11/15/2004	#93 1ST FLOOR N86354-2 12/15/2004	#93 BACKGROUND N86354-1 12/15/2004
GC/MS Volatiles (Method TO-15)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)
Acetone	3300	0.48	ND	ND	1.7
Benzene	0.23	0.64	1.6	2.3	0.32
Carbon disulfide	730	0.62	0.69	0.5	ND
Chloroform	0.077	0.98	ND	ND	ND
Chloromethane	95	0.41	0.95	ND	0.52
Cyclohexane	6200	0.69	33	28	ND
Dichlorodifluoromethane	180	0.99	2.1	2.2	1.1
m-Dichlorobenzene	11	1.2	ND	ND	ND
p-Dichlorobenzene	0.28	1.2	7.8	13	ND
Ethanol	NS	0.94	62.5	80.5	1.8
Ethylbenzene	1100	0.87	1.7	3.4	ND
Ethyl Acetate	3300	0.72	79.9	120	ND
Freon 113	31000	1.5	1.4	1.5	0.71
Heptane	NS	0.82	26	21	ND
Hexane	210	0.7	3.1	ND	0.39
Isopropyl Alcohol	NS	0.49	3.7	2.1	ND
Methylene chloride	3.8	0.69	1	1.2	0.35
Methyl ethyl ketone	5100	0.59	2.4	3.5	ND
Methyl Isobutyl Ketone	3100	0.82	1.2	1.2	ND
Methyl Tert Butyl Ether	1.6	0.72	1.3	0.97	ND
Propylene	NS	0.86	ND	ND	ND
Styrene	1000	0.85	0.43	1.9	ND
1,1,1-Trichloroethane	2300	1.1	0.98	2.6	ND
1,2,4-Trimethylbenzene	6.2	0.98	1.3	2.8	ND
1,3,5-Trimethylbenzene	6.2	0.98	ND	0.79	ND
Tertiary Butyl Alcohol	NS	0.61	2.3	1.9	ND
Tetrachloroethylene	0.31	1.4	6	8.8	ND
Tetrahydrofuran	0.92	0.59	ND	0.53	ND
Toluene	420	0.75	28	73.9	0.79
Trichloroethylene	0.016	1.1	ND	ND	ND
Trichlorofluoromethane	730	1.1	1.6	1.6	0.62
Vinyl Acetate	210	0.7	2	2.3	ND
m,p-Xylene	110	0.87	5.6	8.3	ND
o-Xylene	110	0.87	1.7	2.7	ND
Xylenes (total)	110	0.87	6.9	11	0.52

Notes:

* - NJDEP employs the higher of either the EPA Region III Risk-Based Concentration (RBC) or the Laboratory Reporting Limit (RL) for indoor air quality evaluations. These values are shown in BOLD print. Per USEPA, the Region J RBC Table values are screening levels only and do not constitute regulation or guidance.

ug/m3 - Micrograms Per Cubic Meter of Air

NS - No RBC Screening Level Provided

J = Estimated value, less than the reporting limit, but greater than zero

E = Compound concentration exceeds the highest calibration standard

Table 4
Air Sample Results -- Dec. 2004
91 Hulme Street Samples

Agway-Mount Holly, NJ

Sample Number Laboratory Sample Number Date Collected	Region III RBC Values*	Laboratory RL*	#91 SUB-SLAB 1 N86354-4 12/15/2004	#91 SUB-SLAB 2 N86354-5 12/15/2004	#91 BASEMENT N86354-7 12/15/2004	#91 1ST FLOOR N86354-6 12/15/2004
GC/MS Volatiles (Method TO-15)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)	(ug/m3)
Acetone	3300	0.48	5.9	16	9	14
Benzene	0.23	0.64	0.86	0.86	0.73	1.3
Carbon disulfide	730	0.62	0.62	0.44	ND	0.59
Chloroform	0.077	0.98	ND	0.93	ND	ND
Chloromethane	95	0.41	0.41	0.97	0.93	0.93
Cyclohexane	6200	0.69	41.6	34	ND	48.2
Dichlorodifluoromethane	180	0.99	1.9	2.1	ND	2.1
m-Dichlorobenzene	11	1.2	8.4	ND	ND	ND
p-Dichlorobenzene	0.28	1.2	8.4	3.1	ND	14
Ethanol	NS	0.94	14	22.4	11.7	177
Ethylbenzene	1100	0.87	1.1	0.83	0.56	1.7
Ethyl Acetate	3300	0.72	38.2	27	ND	41
Freon 113	31000	1.5	1	1.1	1.7	1.8
Heptane	NS	0.82	29	20	0.53	38
Hexane	210	0.7	ND	ND	1.3	ND
Isopropyl Alcohol	NS	0.49	1.9	ND	1.5	4.4
Methylene chloride	3.8	0.69	0.45	1.5	1.6	2
Methyl ethyl ketone	5100	0.59	1.4	3.8	0.68	1.2
Methyl Isobutyl Ketone	3100	0.82	1.3	ND	ND	1.6
Methyl Tert Butyl Ether	1.6	0.72	0.43	0.58	0.4	0.65
Propylene	NS	0.86	2.9	ND	ND	ND
Styrene	1000	0.85	ND	ND	ND	0.6
1,1,1-Trichloroethane	2300	1.1	ND	ND	ND	0.6
1,2,4-Trimethylbenzene	6.2	0.98	1	0.54	ND	1.6
1,3,5-Trimethylbenzene	6.2	0.98	ND	ND	ND	0.49
Tertiary Butyl Alcohol	NS	0.61	1.1	ND	ND	ND
Tetrachloroethylene	0.31	1.4	16	2.5	0.75	5.7
Tetrahydrofuran	0.92	0.59	ND	ND	ND	ND
Toluene	420	0.75	6	5.7	3.8	12
Trichloroethylene	0.016	1.1	ND	ND	ND	ND
Trichlorofluoromethane	730	1.1	1.3	2.2	3.2	2.1
Vinyl Acetate	210	0.7	1.3	ND	ND	2.1
m,p-Xylene	110	0.87	4.3	2.7	1.9	6.9
o-Xylene	110	0.87	1.3	0.78	0.52	2
Xylenes (total)	110	0.87	5.6	3.5	2.4	8.7

Notes:

* - NJDEP employs the higher of either the EPA Region III Risk-Based Concentration (RBC) or the laboratory Reporting Limit (RL) for indoor air quality evaluations. These values are shown in RBC.

Per USEPA, the Region J RBC Table values are screening levels only and do not constitute regulation or guidance.

ug/m3 - Micrograms Per Cubic Meter of Air

NS - No RBC Screening Level Provided

J = Estimated value, less than the reporting limit, but greater than zero

E = Compound concentration exceeds the highest calibration standard

NY/DOTI

50th

210 ug/m³
0.75 ug/m³

ethanol
CH

ethanol correction factors.

duplicating copy machines.

air conditioning

perfumes

cleaners

perfumes

Addressives
Sesquiterpene
human breath -

$$F = 1.5 (75 - 25^{th})$$

ethyl acetate.

beauty pro

whiteboard pens

fungi VOCs

deodorants.

hair w

Chl wood glues
varnishes.

ENVIRONMENTAL SCIENCE



TO: Ian Hers FROM: Paul Sanders
 COMPANY: Golder Associates DATE: 4/13/05
 FAX NUMBER: (609) 298-5253 NO. OF PAGES W/COVER 10
 PHONE NUMBER: SENDER'S PHONE NUMBER
(609) 292-9998

SUBJECT: Mount Holly results - 2nd of two faxes
shows absence of 2,3,4-THP in sub slab samples

New Jersey Department of Environmental Protection
 Division of Science, Research & Technology
 P.O. Box 409
 401 E. State Street
 Trenton, NJ 08625
 (609) 984-6071
 Fax - (609) 777-2852
 Eileen Murphy, Director

COMMENTS:

URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY PLEASE RECYCLE

Report of Analysis

Client Sample ID: #91 SUB-SLAB 1	Date Sampled: 12/15/04
Lab Sample ID: N86354-4	Date Received: 12/16/04
Matrix: AIR - Air Summa ID: A092	Percent Solids: n/a
Method: TO-15	
Project: Agway, Hulme Street, Mount Holly, NJ	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2W1259.D	1	01/04/05	MC	n/a	n/a	V2W53
Run #2							

Run #	Initial Volume
Run #1	400 ml
Run #2	

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	2.5	0.20	ppbv		5.9	0.48	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	0.27	0.20	ppbv		0.86	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	0.20	0.20	ppbv		0.62	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.20	0.20	ppbv		0.41	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	84.16	Cyclohexane	12.1	0.20	ppbv		41.6	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.39	0.20	ppbv		1.9	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	1.4	0.20	ppbv		8.4	1.2	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	147	p-Dichlorobenzene	1.4	0.20	ppbv		8.4	1.2	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: #91 SUB-SLAB 1	
Lab Sample ID: N86354-4	Date Sampled: 12/15/04
Matrix: AIR - Air	Summa ID: A092
Method: TO-15	Date Received: 12/16/04
Project: Agway, Hulme Street, Mount Holly, NJ	Percent Solids: n/a

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46	Ethanol	7.2	0.50	ppbv		14	0.94	ug/m3
100-41-4	106.2	Ethylbenzene	0.25	0.20	ppbv		1.1	0.87	ug/m3
141-78-6	88	Ethyl Acetate	10.6	0.20	ppbv		38.2	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	0.13	0.20	ppbv	J	1.0	1.5	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	100.2	Heptane	7.0	0.20	ppbv		29	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	86.17	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60	Isopropyl Alcohol	0.77	0.20	ppbv		1.9	0.49	ug/m3
75-09-2	84.94	Methylene chloride	0.13	0.20	ppbv	J	0.45	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.48	0.20	ppbv		1.4	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	0.31	0.20	ppbv		1.3	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	0.12	0.20	ppbv	J	0.43	0.72	ug/m3
115-07-1	42	Propylene	1.7	0.50	ppbv		2.9	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.21	0.20	ppbv		1.0	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.35	0.20	ppbv		1.1	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	2.4	0.20	ppbv		16	1.4	ug/m3
109-99-9	72	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	92.14	Toluene	1.6	0.20	ppbv		6.0	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.23	0.20	ppbv		1.3	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	86	Vinyl Acetate	0.36	0.20	ppbv		1.3	0.70	ug/m3
	106.2	m,p-Xylene	1.0	0.20	ppbv		4.3	0.87	ug/m3
95-47-6	106.2	o-Xylene	0.30	0.20	ppbv		1.3	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	1.3	0.20	ppbv		5.6	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%		78-124%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: #91 SUB-SLAB 1	Date Sampled: 12/15/04
Lab Sample ID: N86354-4	Date Received: 12/16/04
Matrix: AIR - Air Summa ID: A092	Percent Solids: n/a
Method: TO-15	
Project: Agway, Hulme Street, Mount Holly, NJ	

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
108-87-2	Cyclohexane, methyl-	13.71	27	ppbv	JN
	cycloalkane/alkene	18.24	7.4	ppbv	J
	cycloalkane/alkene	18.30	20	ppbv	J
	cycloalkane/alkene	18.87	12	ppbv	J
	alkane	19.54	38	ppbv	J
	alkane	19.68	7.5	ppbv	J
	alkane	19.81	30	ppbv	J
	alkane	19.99	9.6	ppbv	J
	alkane	20.08	35	ppbv	J
74630-25-4	2-Decene, 8-methyl-, (Z)-	20.23	7	ppbv	JN
	alkane	20.29	15	ppbv	J
	cycloalkane/alkene	20.67	19	ppbv	J
	alkane	20.78	12	ppbv	J
	alkane	21.16	6.6	ppbv	J
	alkane	21.29	10	ppbv	J
Total TIC, Volatile			256.1	ppbv	J

(a) Matrix spikes are not analyzed by this procedure.

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	#91 SUB-SLAB 2	Date Sampled:	12/15/04
Lab Sample ID:	N86354-5	Date Received:	12/16/04
Matrix:	AIR - Air Summa ID: A234	Percent Solids:	n/a
Method:	TO-15		
Project:	Agway, Hulme Street, Mount Holly, NJ		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	2W1260.D	1	01/05/05	MC	n/a	n/a	V2W53
Run #2							

Run #	Initial Volume
Run #1	400 ml
Run #2	

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	6.9	0.20	ppbv		16	0.48	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	0.27	0.20	ppbv		0.86	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	0.14	0.20	ppbv	J	0.44	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.19	0.20	ppbv	J	0.93	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.47	0.20	ppbv		0.97	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	84.16	Cyclohexane	9.8	0.20	ppbv		34	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.42	0.20	ppbv		2.1	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	147	p-Dichlorobenzene	0.52	0.20	ppbv		3.1	1.2	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	#91 SUB-SLAB 2	Date Sampled:	12/15/04
Lab Sample ID:	N86354-5	Date Received:	12/16/04
Matrix:	AIR - Air	Summa ID:	A234
Method:	TO-15	Percent Solids:	n/a
Project:	Agway, Hulme Street, Mount Holly, NJ		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46	Ethanol	11.9	0.50	ppbv		22.4	0.94	ug/m3
100-41-4	106.2	Ethylbenzene	0.19	0.20	ppbv	J	0.83	0.87	ug/m3
141-78-6	88	Ethyl Acetate	7.4	0.20	ppbv		27	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	0.15	0.20	ppbv	J	1.1	1.5	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	100.2	Heptane	4.8	0.20	ppbv		20	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	86.17	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	84.94	Methylene chloride	0.42	0.20	ppbv		1.5	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	1.3	0.20	ppbv		3.8	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	0.16	0.20	ppbv	J	0.58	0.72	ug/m3
115-07-1	42	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.11	0.20	ppbv	J	0.54	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.37	0.20	ppbv		2.5	1.4	ug/m3
109-99-9	72	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	92.14	Toluene	1.5	0.20	ppbv		5.7	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.39	0.20	ppbv		2.2	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	106.2	m,p-Xylene	0.63	0.20	ppbv		2.7	0.87	ug/m3
95-47-6	106.2	o-Xylene	0.18	0.20	ppbv	J	0.73	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	0.81	0.20	ppbv		3.5	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		78-124%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: #91 SUB-SLAB 2	Date Sampled: 12/15/04
Lab Sample ID: N86354-5	Date Received: 12/16/04
Matrix: AIR - Air Summa ID: A234	Percent Solids: n/a
Method: TO-15	
Project: Agway, Hulme Street, Mount Holly, NJ	

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	C4H10 alkane	6.02	4.4	ppbv	J
589-34-4	Hexane, 3-methyl-	12.40	5.6	ppbv	JN
108-87-2	Cyclohexane, methyl-	13.70	24	ppbv	JN
	cycloalkane/alkene	15.11	2.9	ppbv	J
	cycloalkane/alkene	18.29	5.7	ppbv	J
	cycloalkane/alkene	18.87	2.9	ppbv	J
	alkane	19.53	10	ppbv	J
	alkane	19.80	12	ppbv	J
	alkane	19.98	3.7	ppbv	J
	alkane	20.07	15	ppbv	J
	alkane	20.29	5.8	ppbv	J
	unknown	20.67	4.4	ppbv	J
	alkane	20.77	5.1	ppbv	J
	Branched alkane	21.16	3	ppbv	J
	Branched alkane	21.29	4.7	ppbv	J
	Total TIC, Volatile		109.2	ppbv	J

(a) Matrix spikes are not analyzed by this procedure.

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: #103 SUB SLAB	Date Sampled: 12/15/04
Lab Sample ID: N86354-12	Date Received: 12/16/04
Matrix: AIR - Air Summa ID: A345	Percent Solids: n/a
Method: TO-15	
Project: Agway, Hulme Street, Mount Holly, NJ	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2W1282.D	1	01/05/05	MC	n/a	n/a	V2W54
Run #2							

Run #	Initial Volume
Run #1	400 ml
Run #2	

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	0.23	0.20	ppbv		0.73	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	0.33	0.20	ppbv		1.0	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.14	0.20	ppbv	J	0.29	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	84.16	Cyclohexane	10.9	0.20	ppbv		37.5	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.42	0.20	ppbv		2.1	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	1.2	0.20	ppbv		7.2	1.2	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	147	p-Dichlorobenzene	1.2	0.20	ppbv		7.2	1.2	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: #103 SUB SLAB	Date Sampled: 12/15/04
Lab Sample ID: N86354-12	Date Received: 12/16/04
Matrix: AIR - Air Summa ID: A345	Percent Solids: n/a
Method: TO-15	
Project: Agway, Hulme Street, Mount Holly, NJ	

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46	Ethanol	3.0	0.50	ppbv		5.6	0.94	ug/m3
100-41-4	106.2	Ethylbenzene	0.21	0.20	ppbv		0.91	0.87	ug/m3
141-78-6	88	Ethyl Acetate	23.0	0.20	ppbv		82.8	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	0.20	0.20	ppbv		1.5	1.5	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	100.2	Heptane	6.0	0.20	ppbv		25	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	86.17	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	84.94	Methylene chloride	0.12	0.20	ppbv	J	0.42	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.79	0.20	ppbv		2.3	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	0.26	0.20	ppbv		1.1	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
115-07-1	42	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	0.21	0.20	ppbv		1.0	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.49	0.20	ppbv		3.3	1.4	ug/m3
109-99-9	72	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	92.14	Toluene	1.3	0.20	ppbv		4.9	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.18	0.20	ppbv	J	1.0	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	86	Vinyl Acetate	0.45	0.20	ppbv		1.6	0.70	ug/m3
	106.2	m,p-Xylene	0.85	0.20	ppbv		3.7	0.87	ug/m3
95-47-6	106.2	o-Xylene	0.26	0.20	ppbv		1.1	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	1.1	0.20	ppbv		4.8	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%		78-124%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Photo #1- 91A 1st Floor



Photo #2 - 91A Basement



Photo #3 – 91A Sub-slab 1



Photo #4 – 91A Sub-slab 2



Photo #5 – 93A 1st Floor



Photo #6 - Basement sample 93A



Photo #9 – 103A Sub slab



Photo #10- Background at 103 Hulme Street



Photo #11- Background location at 93 Hulme Street

APPENDIX IV

**SOIL VAPOR ANALYTICAL TESTING
RESULTS – JUNE 2005**

TARGET ANALYTES -
 AIR RESULTS

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Acetone (2-propanone)	67-64-1	58.078	13	U	31		
Benzene	71-43-2	78.108	1.2		3.8		
Bromodichloromethane	75-27-4	163.83	0.5	U	3.4		
Bromoethene	593-60-2	106.96	0.5	U	2.2		
Bromoform	75-25-2	252.75	0.5	U	5.2		
Bromomethane (Methyl bromide)	74-83-9	94.94	0.5	U	1.9		
1,3-Butadiene	106-99-0	54.09	0.5	U	1.1		
2-Butanone (Methyl ethyl ketone)	78-93-3	72.11	1.3	U	3.8		
Carbon disulfide	75-15-0	76.14	1.3	U	4		
Carbon tetrachloride	56-23-5	153.81	0.5	U	3.1		
Chlorobenzene	108-90-7	112.55	0.5	U	2.3		
Chloroethane	75-00-3	64.52	0.5	U	1.3		
Chloroform	67-66-3	119.38	0.5	U	2.4		
Chloromethane (Methyl chloride)	74-87-3	50.49	1.3	U	2.7		
3-Chloropropene (allyl chloride)	107-05-1	76.53	0.5	U	1.6		
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	126.59	0.5	U	2.6		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Dibromochloromethane	124-48-1	208.29	0.5	U	4.3		
1,2-Dibromoethane	106-93-4	187.87	0.5	U	3.8		
1,2-Dichlorobenzene	95-50-1	147	0.5	U	3		
1,3-Dichlorobenzene	541-73-1	147	0.5	U	3		
1,4-Dichlorobenzene	106-46-7	147	0.5	U	3		
Dichlorodifluoromethane	75-71-8	120.91	1.3	U	6.4		
1,1-Dichloroethane	75-34-3	98.96	0.5	U	2		
1,2-Dichloroethane	107-06-2	98.96	0.5	U	2		
1,1-Dichloroethene	75-35-4	96.94	0.5	U	2		
1,2-Dichloroethene (cis)	156-59-2	96.94	0.5	U	2		
1,2-Dichloroethene (trans)	156-60-5	96.94	0.5	U	2		
1,2-Dichloropropane	78-87-5	112.99	0.5	U	2.3		
1,3-Dichloropropene (cis)	10061-01-5	110.97	0.5	U	2.3		
1,3-Dichloropropene (trans)	10061-02-6	110.97	0.5	U	2.3		
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	170.92	0.5	U	3.5		
Ethylbenzene	100-41-4	106.17	0.63		2.7		
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	120.2	1.2		5.9		
n-Heptane	142-82-5	100.21	0.5	U	2		
Hexachlorobutadiene	87-68-3	260.76	0.5	U	5.3		
n-Hexane	110-54-3	86.172	0.64		2.3		
Methylene Chloride	75-09-2	84.93	1.3	U	4.5		
4-Methyl-2-pentanone (MIBK)	108-10-1	100.16	1.3	U	5.3		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	6.6		24		
Styrene	100-42-5	104.15	0.5	U	2.1		
Tertiary butyl alcohol (TBA)	75-65-0	74.12	13	U	39		

Project: 25000
 Field ID Number: 103R-4.0
 Laboratory ID Number: 625042

TARGET ANALYTES -
 AIR RESULTS

Sampling Date: 6/10/05
 Analysis Date: 6/24/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
1,1,2,2-Tetrachloroethane	79-34-5	167.85	0.5	U	3.4		
Tetrachloroethene (PCE)	127-18-4	165.83	0.98		6.6		
Toluene	108-88-3	92.14	3.3		12		
1,2,4-Trichlorobenzene	120-82-1	181.45	1.3	U	9.6		
1,1,1-Trichloroethane	71-55-6	133.41	0.5	U	2.7		
1,1,2-Trichloroethane	79-00-5	133.41	0.5	U	2.7		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	187.38	0.5	U	3.8		
Trichloroethene (TCE)	79-01-6	131.39	0.5	U	2.7		
Trichlorofluoromethane (Freon 11)	75-69-4	137.37	0.5	U	2.8		
1,2,4-Trimethylbenzene	95-63-6	120.2	2.6		13		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.57		2.8		
2,2,4-Trimethylpentane	540-84-1	114.23	0.5	U	2.3		
Vinyl Chloride	75-01-4	62.5	0.5	U	1.3		
Xylene (m&p)	1330-20-7	106.17	2.2		9.6		
Xylene (o)	95-47-6	106.17	0.89		3.9		

Project: 25000
 Field ID Number: 103L-5.0
 Laboratory ID Number: 625043

TARGET ANALYTES -
 AIR RESULTS - 103L-5.0

Sampling Date: 6/10/05
 Analysis Date: 6/22/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Acetone (2-propanone)	67-64-1	58.078	13	U	31		
Benzene	71-43-2	78.108	1.2		3.8		
Bromodichloromethane	75-27-4	163.83	0.5	U	3.4		
Bromoethene	593-60-2	106.96	0.5	U	2.2		
Bromoform	75-25-2	252.75	0.5	U	5.2		
Bromomethane (Methyl bromide)	74-83-9	94.94	0.5	U	1.9		
1,3-Butadiene	106-99-0	54.09	0.5	U	1.1		
2-Butanone (Methyl ethyl ketone)	78-93-3	72.11	1.3	U	3.8		
Carbon disulfide	75-15-0	76.14	1.3	U	4		
Carbon tetrachloride	56-23-5	153.81	0.5	U	3.1		
Chlorobenzene	108-90-7	112.55	0.5	U	2.3		
Chloroethane	75-00-3	64.52	0.5	U	1.3		
Chloroform	67-66-3	119.38	0.5	U	2.4		
Chloromethane (Methyl chloride)	74-87-3	50.49	1.3	U	2.7		
3-Chloropropene (allyl chloride)	107-05-1	76.53	0.5	U	1.6		
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	126.59	0.5	U	2.6		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Dibromochloromethane	124-48-1	208.29	0.5	U	4.3		
1,2-Dibromoethane	106-93-4	187.87	0.5	U	3.8		
1,2-Dichlorobenzene	95-50-1	147	0.5	U	3		
1,3-Dichlorobenzene	541-73-1	147	0.5	U	3		
1,4-Dichlorobenzene	106-46-7	147	0.5	U	3		
Dichlorodifluoromethane	75-71-8	120.91	1.3	U	6.4		
1,1-Dichloroethane	75-34-3	98.96	0.5	U	2		
1,2-Dichloroethane	107-06-2	98.96	0.5	U	2		
1,1-Dichloroethene	75-35-4	96.94	0.5	U	2		
1,2-Dichloroethene (cis)	156-59-2	96.94	0.5	U	2		
1,2-Dichloroethene (trans)	156-60-5	96.94	0.5	U	2		
1,2-Dichloropropane	78-87-5	112.99	0.5	U	2.3		
1,3-Dichloropropene (cis)	10061-01-5	110.97	0.5	U	2.3		
1,3-Dichloropropene (trans)	10061-02-6	110.97	0.5	U	2.3		
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	170.92	0.5	U	3.5		
Ethylbenzene	100-41-4	106.17	0.5	U	2.2		
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	120.2	2.1		10		
n-Heptane	142-82-5	100.21	0.5	U	2		
Hexachlorobutadiene	87-68-3	260.76	0.5	U	5.3		
n-Hexane	110-54-3	86.172	0.5	U	1.8		
Methylene Chloride	75-09-2	84.93	1.3	U	4.5		
4-Methyl-2-pentanone (MIBK)	108-10-1	100.16	1.3	U	5.3		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	5.2		19		
Styrene	100-42-5	104.15	0.5	U	2.1		
Tertiary butyl alcohol (TBA)	75-65-0	74.12	13	U	39		
1,1,2,2-Tetrachloroethane	79-34-5	167.85	0.5	U	3.4		

Project: 25000
 Field ID Number: 103L-5.0
 Laboratory ID Number: 625043

TARGET ANALYTES -
 AIR RESULTS - 103L-5.0

Sampling Date: 6/10/05
 Analysis Date: 6/22/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Tetrachloroethene (PCE)	127-18-4	165.83	0.62		4.2		
Toluene	108-88-3	92.14	1.3		4.9		
1,2,4-Trichlorobenzene	120-82-1	181.45	1.3	U	9.6		
1,1,1-Trichloroethane	71-55-6	133.41	0.5	U	2.7		
1,1,2-Trichloroethane	79-00-5	133.41	0.5	U	2.7		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	187.38	0.5	U	3.8		
Trichloroethene (TCE)	79-01-6	131.39	0.5	U	2.7		
Trichlorofluoromethane (Freon 11)	75-69-4	137.37	0.5	U	2.8		
1,2,4-Trimethylbenzene	95-63-6	120.2	6.9		34		
1,3,5-Trimethylbenzene	108-67-8	120.2	1.6		7.9		
2,2,4-Trimethylpentane	540-84-1	114.23	0.5	U	2.3		
Vinyl Chloride	75-01-4	62.5	0.5	U	1.3		
Xylene (m&p)	1330-20-7	106.17	1.4		6.1		
Xylene (o)	95-47-6	106.17	0.7		3		

Project: 25000
 Field ID Number: 103L-5.0
 Laboratory ID Number: 625043

TARGET ANALYTES -
 AIR RESULTS - 103L-5.0

Sampling Date: 6/10/05
 Analysis Date: 6/22/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Benzene	71-43-2	78.108	1.2		3.8		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Ethylbenzene	100-41-4	106.17	0.5	U	2.2		
n-Heptane	142-82-5	100.21	0.5	U	2		
n-Hexane	110-54-3	86.172	0.5	U	1.8		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	5.2		19		
Toluene	108-88-3	92.14	1.3		4.9		
1,2,4-Trimethylbenzene	95-63-6	120.2	6.9		34		
1,3,5-Trimethylbenzene	108-67-8	120.2	1.6		7.9		
2,2,4-Trimethylpentane	540-84-1	114.23	0.5	U	2.3		
Xylene (m&p)	1330-20-7	106.17	1.4		6.1		
Xylene (o)	95-47-6	106.17	0.7		3		
Xylenes					9.1		

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
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Chemical	Generates Results in ug/m3
Benzene	3.8
Cyclohexane	1.7
Ethylbenzene	2.2
n-Heptane	2
n-Hexane	1.8
MTBE (Methyl tert-butyl ether)	19
Toluene	4.9
1,2,4-Trimethylbenzene	34
1,3,5-Trimethylbenzene	7.9
2,2,4-Trimethylpentane	2.3
Xylene (m&p)	6.1
Xylene (o)	3
Xylenes	9.1

Project: 25000
 Field ID Number: 103F-4.5
 Laboratory ID Number: 625044

TARGET ANALYTES -
 AIR RESULTS - 103F-4.5

Sampling Date: 6/10/05
 Analysis Date: 6/22/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Acetone (2-propanone)	67-64-1	58.078	13	U	31		
Benzene	71-43-2	78.108	3.5		11		
Bromodichloromethane	75-27-4	163.83	0.5	U	3.4		
Bromoethene	593-60-2	106.96	0.5	U	2.2		
Bromoform	75-25-2	252.75	0.5	U	5.2		
Bromomethane (Methyl bromide)	74-83-9	94.94	0.5	U	1.9		
1,3-Butadiene	106-99-0	54.09	0.5	U	1.1		
2-Butanone (Methyl ethyl ketone)	78-93-3	72.11	1.5		4.4		
Carbon disulfide	75-15-0	76.14	1.3	U	4		
Carbon tetrachloride	56-23-5	153.81	0.5	U	3.1		
Chlorobenzene	108-90-7	112.55	0.5	U	2.3		
Chloroethane	75-00-3	64.52	0.5	U	1.3		
Chloroform	67-66-3	119.38	0.5	U	2.4		
Chloromethane (Methyl chloride)	74-87-3	50.49	1.3	U	2.7		
3-Chloropropene (allyl chloride)	107-05-1	76.53	0.5	U	1.6		
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	126.59	0.5	U	2.6		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Dibromochloromethane	124-48-1	208.29	0.5	U	4.3		
1,2-Dibromoethane	106-93-4	187.87	0.5	U	3.8		
1,2-Dichlorobenzene	95-50-1	147	0.5	U	3		
1,3-Dichlorobenzene	541-73-1	147	0.5	U	3		
1,4-Dichlorobenzene	106-46-7	147	0.5	U	3		
Dichlorodifluoromethane	75-71-8	120.91	1.3	U	6.4		
1,1-Dichloroethane	75-34-3	98.96	0.5	U	2		
1,2-Dichloroethane	107-06-2	98.96	0.5	U	2		
1,1-Dichloroethene	75-35-4	96.94	0.5	U	2		
1,2-Dichloroethene (cis)	156-59-2	96.94	0.5	U	2		
1,2-Dichloroethene (trans)	156-60-5	96.94	0.5	U	2		
1,2-Dichloropropane	78-87-5	112.99	0.5	U	2.3		
1,3-Dichloropropene (cis)	10061-01-5	110.97	0.5	U	2.3		
1,3-Dichloropropene (trans)	10061-02-6	110.97	0.5	U	2.3		
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	170.92	0.5	U	3.5		
Ethylbenzene	100-41-4	106.17	1.5		6.5		
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	120.2	7.2		35		
n-Heptane	142-82-5	100.21	0.5	U	2		
Hexachlorobutadiene	87-68-3	260.76	0.5	U	5.3		
n-Hexane	110-54-3	86.172	0.65		2.3		
Methylene Chloride	75-09-2	84.93	1.3	U	4.5		
4-Methyl-2-pentanone (MIBK)	108-10-1	100.16	1.3	U	5.3		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	5.8		21		
Styrene	100-42-5	104.15	0.5	U	2.1		
Tertiary butyl alcohol (TBA)	75-65-0	74.12	13	U	39		
1,1,2,2-Tetrachloroethane	79-34-5	167.85	0.5	U	3.4		

Project: 25000
 Field ID Number: 103F-4.5
 Laboratory ID Number: 625044

TARGET ANALYTES -
 AIR RESULTS - 103F-4.5

Sampling Date: 6/10/05
 Analysis Date: 6/22/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Tetrachloroethene (PCE)	127-18-4	165.83	1.1		7.5		
Toluene	108-88-3	92.14	5.4		20		
1,2,4-Trichlorobenzene	120-82-1	181.45	1.3	U	9.6		
1,1,1-Trichloroethane	71-55-6	133.41	0.5	U	2.7		
1,1,2-Trichloroethane	79-00-5	133.41	0.5	U	2.7		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	187.38	0.5	U	3.8		
Trichloroethene (TCE)	79-01-6	131.39	0.5	U	2.7		
Trichlorofluoromethane (Freon 11)	75-69-4	137.37	0.5	U	2.8		
1,2,4-Trimethylbenzene	95-63-6	120.2	20		98		
1,3,5-Trimethylbenzene	108-67-8	120.2	4.5		22		
2,2,4-Trimethylpentane	540-84-1	114.23	6.5		30		
Vinyl Chloride	75-01-4	62.5	0.5	U	1.3		
Xylene (m&p)	1330-20-7	106.17	6		26		
Xylene (o)	95-47-6	106.17	2.8		12		

Project: 25000
 Field ID Number: 103F-4.5
 Laboratory ID Number: 625044

TARGET ANALYTES -
 AIR RESULTS - 103F-4.5

Sampling Date: 6/10/05
 Analysis Date: 6/22/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
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Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Benzene	71-43-2	78.108	3.5		11		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Ethylbenzene	100-41-4	106.17	1.5		6.5		
n-Heptane	142-82-5	100.21	0.5	U	2		
n-Hexane	110-54-3	86.172	0.65		2.3		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	5.8		21		
Styrene	100-42-5	104.15	0.5	U	2.1		
Toluene	108-88-3	92.14	5.4		20		
1,2,4-Trimethylbenzene	95-63-6	120.2	20		98		
1,3,5-Trimethylbenzene	108-67-8	120.2	4.5		22		
2,2,4-Trimethylpentane	540-84-1	114.23	6.5		30		
Xylene (m&p)	1330-20-7	106.17	6		26		
Xylene (o)	95-47-6	106.17	2.8		12		
Xylenes					38		

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
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Chemical	Generates Results in ug/m3
Benzene	11
Cyclohexane	1.7
Ethylbenzene	6.5
n-Heptane	2
n-Hexane	2.3
MTBE (Methyl tert-butyl ether)	21
Styrene	2.1
Toluene	20
1,2,4-Trimethylbenzene	98
1,3,5-Trimethylbenzene	22
2,2,4-Trimethylpentane	30
Xylene (m&p)	26
Xylene (o)	12
Xylenes	38

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Acetone (2-propanone)	67-64-1	58.078	13		31		
Benzene	71-43-2	78.108	1.2		3.8		
Bromodichloromethane	75-27-4	163.83	0.5	U	3.4		
Bromoethene	593-60-2	106.96	0.5	U	2.2		
Bromoform	75-25-2	252.75	0.5	U	5.2		
Bromomethane (Methyl bromide)	74-83-9	94.94	0.5	U	1.9		
1,3-Butadiene	106-99-0	54.09	0.5	U	1.1		
2-Butanone (Methyl ethyl ketone)	78-93-3	72.11	2.1		6.2		
Carbon disulfide	75-15-0	76.14	1.3	U	4		
Carbon tetrachloride	56-23-5	153.81	0.5	U	3.1		
Chlorobenzene	108-90-7	112.55	0.5	U	2.3		
Chloroethane	75-00-3	64.52	0.5	U	1.3		
Chloroform	67-66-3	119.38	0.5	U	2.4		
Chloromethane (Methyl chloride)	74-87-3	50.49	1.3	U	2.7		
3-Chloropropene (allyl chloride)	107-05-1	76.53	0.5	U	1.6		
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	126.59	0.5	U	2.6		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Dibromochloromethane	124-48-1	208.29	0.5	U	4.3		
1,2-Dibromoethane	106-93-4	187.87	0.5	U	3.8		
1,2-Dichlorobenzene	95-50-1	147	0.5	U	3		
1,3-Dichlorobenzene	541-73-1	147	0.5	U	3		
1,4-Dichlorobenzene	106-46-7	147	0.5	U	3		
Dichlorodifluoromethane	75-71-8	120.91	1.3	U	6.4		
1,1-Dichloroethane	75-34-3	98.96	0.5	U	2		
1,2-Dichloroethane	107-06-2	98.96	0.5	U	2		
1,1-Dichloroethene	75-35-4	96.94	0.5	U	2		
1,2-Dichloroethene (cis)	156-59-2	96.94	0.5	U	2		
1,2-Dichloroethene (trans)	156-60-5	96.94	0.5	U	2		
1,2-Dichloropropane	78-87-5	112.99	0.5	U	2.3		
1,3-Dichloropropene (cis)	10061-01-5	110.97	0.5	U	2.3		
1,3-Dichloropropene (trans)	10061-02-6	110.97	0.5	U	2.3		
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	170.92	0.5	U	3.5		
Ethylbenzene	100-41-4	106.17	0.59		2.6		
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	120.2	1.5		7.4		
n-Heptane	142-82-5	100.21	0.5	U	2		
Hexachlorobutadiene	87-68-3	260.76	0.5	U	5.3		
n-Hexane	110-54-3	86.172	0.5	U	1.8		
Methylene Chloride	75-09-2	84.93	1.3	U	4.5		
4-Methyl-2-pentanone (MIBK)	108-10-1	100.16	1.3	U	5.3		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	1.3	U	4.7		
Styrene	100-42-5	104.15	0.5	U	2.1		
Tertiary butyl alcohol (TBA)	75-65-0	74.12	13	U	39		
1,1,2,2-Tetrachloroethane	79-34-5	167.85	0.5	U	3.4		

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Tetrachloroethene (PCE)	127-18-4	165.83	3.9		26		
Toluene	108-88-3	92.14	4.3		16		
1,2,4-Trichlorobenzene	120-82-1	181.45	1.3	U	9.6		
1,1,1-Trichloroethane	71-55-6	133.41	0.5	U	2.7		
1,1,2-Trichloroethane	79-00-5	133.41	0.5	U	2.7		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	187.38	0.5	U	3.8		
Trichloroethene (TCE)	79-01-6	131.39	0.5	U	2.7		
Trichlorofluoromethane (Freon 11)	75-69-4	137.37	0.5	U	2.8		
1,2,4-Trimethylbenzene	95-63-6	120.2	3.7		18		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.93		4.6		
2,2,4-Trimethylpentane	540-84-1	114.23	0.5	U	2.3		
Vinyl Chloride	75-01-4	62.5	0.5	U	1.3		
Xylene (m&p)	1330-20-7	106.17	2.1		9.1		
Xylene (o)	95-47-6	106.17	0.9		3.9		

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
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Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Benzene	71-43-2	78.108	1.2		3.8		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Ethylbenzene	100-41-4	106.17	0.59		2.6		
n-Heptane	142-82-5	100.21	0.5	U	2		
n-Hexane	110-54-3	86.172	0.5	U	1.8		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	1.3	U	4.7		
Toluene	108-88-3	92.14	4.3		16		
1,2,4-Trimethylbenzene	95-63-6	120.2	3.7		18		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.93		4.6		
2,2,4-Trimethylpentane	540-84-1	114.23	0.5	U	2.3		
Xylene (m&p)	1330-20-7	106.17	2.1		9.1		
Xylene (o)	95-47-6	106.17	0.9		3.9		
Xylenes					13		

Project: 25000
 Field ID Number: 93R-6.25
 Laboratory ID Number: 625045

TARGET ANALYTES -
 AIR RESULTS - 93R-6.25

Sampling Date: 6/10/05
 Analysis Date: 6/22/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
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Chemical	Generates Results in ug/m3
Benzene	3.8
Cyclohexane	1.7
Ethylbenzene	2.6
n-Heptane	2
n-Hexane	1.8
MTBE (Methyl tert-butyl ether)	4.7
Toluene	16
1,2,4-Trimethylbenzene	18
1,3,5-Trimethylbenzene	4.6
2,2,4-Trimethylpentane	2.3
Xylene (m&p)	9.1
Xylene (o)	3.9
Xylenes	13

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Acetone (2-propanone)	67-64-1	58.078	18		43		
Benzene	71-43-2	78.108	1.5		4.8		
Bromodichloromethane	75-27-4	163.83	0.5	U	3.4		
Bromoethene	593-60-2	106.96	0.5	U	2.2		
Bromoform	75-25-2	252.75	0.5	U	5.2		
Bromomethane (Methyl bromide)	74-83-9	94.94	0.5	U	1.9		
1,3-Butadiene	106-99-0	54.09	0.5	U	1.1		
2-Butanone (Methyl ethyl ketone)	78-93-3	72.11	3.6		11		
Carbon disulfide	75-15-0	76.14	1.3	U	4		
Carbon tetrachloride	56-23-5	153.81	0.5	U	3.1		
Chlorobenzene	108-90-7	112.55	0.5	U	2.3		
Chloroethane	75-00-3	64.52	0.5	U	1.3		
Chloroform	67-66-3	119.38	0.5	U	2.4		
Chloromethane (Methyl chloride)	74-87-3	50.49	1.3	U	2.7		
3-Chloropropene (allyl chloride)	107-05-1	76.53	0.5	U	1.6		
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	126.59	0.5	U	2.6		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Dibromochloromethane	124-48-1	208.29	0.5	U	4.3		
1,2-Dibromoethane	106-93-4	187.87	0.5	U	3.8		
1,2-Dichlorobenzene	95-50-1	147	0.5	U	3		
1,3-Dichlorobenzene	541-73-1	147	0.5	U	3		
1,4-Dichlorobenzene	106-46-7	147	0.5	U	3		
Dichlorodifluoromethane	75-71-8	120.91	1.3	U	6.4		
1,1-Dichloroethane	75-34-3	98.96	0.5	U	2		
1,2-Dichloroethane	107-06-2	98.96	0.5	U	2		
1,1-Dichloroethene	75-35-4	96.94	0.5	U	2		
1,2-Dichloroethene (cis)	156-59-2	96.94	0.5	U	2		
1,2-Dichloroethene (trans)	156-60-5	96.94	0.5	U	2		
1,2-Dichloropropane	78-87-5	112.99	0.5	U	2.3		
1,3-Dichloropropene (cis)	10061-01-5	110.97	0.5	U	2.3		
1,3-Dichloropropene (trans)	10061-02-6	110.97	0.5	U	2.3		
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	170.92	0.5	U	3.5		
Ethylbenzene	100-41-4	106.17	0.63		2.7		
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	120.2	1.4		6.9		
n-Heptane	142-82-5	100.21	0.5	U	2		
Hexachlorobutadiene	87-68-3	260.76	0.5	U	5.3		
n-Hexane	110-54-3	86.172	0.61		2.1		
Methylene Chloride	75-09-2	84.93	1.3	U	4.5		
4-Methyl-2-pentanone (MIBK)	108-10-1	100.16	1.3	U	5.3		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	1.3	U	4.7		
Styrene	100-42-5	104.15	0.5	U	2.1		
Tertiary butyl alcohol (TBA)	75-65-0	74.12	13	U	39		
1,1,2,2-Tetrachloroethane	79-34-5	167.85	0.5	U	3.4		

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Tetrachloroethene (PCE)	127-18-4	165.83	4		27		
Toluene	108-88-3	92.14	5.5		21		
1,2,4-Trichlorobenzene	120-82-1	181.45	1.3	U	9.6		
1,1,1-Trichloroethane	71-55-6	133.41	0.5	U	2.7		
1,1,2-Trichloroethane	79-00-5	133.41	0.5	U	2.7		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	187.38	0.5	U	3.8		
Trichloroethene (TCE)	79-01-6	131.39	0.5	U	2.7		
Trichlorofluoromethane (Freon 11)	75-69-4	137.37	0.5	U	2.8		
1,2,4-Trimethylbenzene	95-63-6	120.2	3.1		15		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.81		4		
2,2,4-Trimethylpentane	540-84-1	114.23	0.5	U	2.3		
Vinyl Chloride	75-01-4	62.5	0.5	U	1.3		
Xylene (m&p)	1330-20-7	106.17	2.2		9.6		
Xylene (o)	95-47-6	106.17	0.82		3.6		

Project: 25000
 Field ID Number: 91F-6.25
 Laboratory ID Number: 625046

TARGET ANALYTES -
 AIR RESULTS - 91F-6.25

Sampling Date: 6/10/05
 Analysis Date: 6/24/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
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Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Benzene	71-43-2	78.108	1.5		4.8		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Ethylbenzene	100-41-4	106.17	0.63		2.7		
n-Heptane	142-82-5	100.21	0.5	U	2		
n-Hexane	110-54-3	86.172	0.61		2.1		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	1.3	U	4.7		
Toluene	108-88-3	92.14	5.5		21		
1,2,4-Trimethylbenzene	95-63-6	120.2	3.1		15		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.81		4		
2,2,4-Trimethylpentane	540-84-1	114.23	0.5	U	2.3		
Xylene (m&p)	1330-20-7	106.17	2.2		9.6		
Xylene (o)	95-47-6	106.17	0.82		3.6		
Xylenes					13.2		

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
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Chemical	Generates Results in ug/m3
Benzene	4.8
Cyclohexane	1.7
Ethylbenzene	2.7
n-Heptane	2
n-Hexane	2.1
MTBE (Methyl tert-butyl ether)	4.7
Toluene	21
1,2,4-Trimethylbenzene	15
1,3,5-Trimethylbenzene	4
2,2,4-Trimethylpentane	2.3
Xylene (m&p)	9.6
Xylene (o)	3.6
Xylenes	13.2

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Acetone (2-propanone)	67-64-1	58.078	18		43		
Benzene	71-43-2	78.108	0.96		3.1		
Bromodichloromethane	75-27-4	163.83	0.5	U	3.4		
Bromoethene	593-60-2	106.96	0.5	U	2.2		
Bromoform	75-25-2	252.75	0.5	U	5.2		
Bromomethane (Methyl bromide)	74-83-9	94.94	0.5	U	1.9		
1,3-Butadiene	106-99-0	54.09	0.5	U	1.1		
2-Butanone (Methyl ethyl ketone)	78-93-3	72.11	2.6		7.7		
Carbon disulfide	75-15-0	76.14	1.3	U	4		
Carbon tetrachloride	56-23-5	153.81	0.5	U	3.1		
Chlorobenzene	108-90-7	112.55	0.5	U	2.3		
Chloroethane	75-00-3	64.52	0.5	U	1.3		
Chloroform	67-66-3	119.38	0.5	U	2.4		
Chloromethane (Methyl chloride)	74-87-3	50.49	1.3	U	2.7		
3-Chloropropene (allyl chloride)	107-05-1	76.53	0.5	U	1.6		
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	126.59	0.5	U	2.6		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Dibromochloromethane	124-48-1	208.29	0.5	U	4.3		
1,2-Dibromoethane	106-93-4	187.87	0.5	U	3.8		
1,2-Dichlorobenzene	95-50-1	147	0.5	U	3		
1,3-Dichlorobenzene	541-73-1	147	0.5	U	3		
1,4-Dichlorobenzene	106-46-7	147	0.5	U	3		
Dichlorodifluoromethane	75-71-8	120.91	1.3	U	6.4		
1,1-Dichloroethane	75-34-3	98.96	0.5	U	2		
1,2-Dichloroethane	107-06-2	98.96	0.5	U	2		
1,1-Dichloroethene	75-35-4	96.94	0.5	U	2		
1,2-Dichloroethene (cis)	156-59-2	96.94	0.5	U	2		
1,2-Dichloroethene (trans)	156-60-5	96.94	0.5	U	2		
1,2-Dichloropropane	78-87-5	112.99	0.5	U	2.3		
1,3-Dichloropropene (cis)	10061-01-5	110.97	0.5	U	2.3		
1,3-Dichloropropene (trans)	10061-02-6	110.97	0.5	U	2.3		
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	170.92	0.5	U	3.5		
Ethylbenzene	100-41-4	106.17	0.65		2.8		
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	120.2	0.88		4.3		
n-Heptane	142-82-5	100.21	0.5	U	2		
Hexachlorobutadiene	87-68-3	260.76	0.5	U	5.3		
n-Hexane	110-54-3	86.172	0.8		2.8		
Methylene Chloride	75-09-2	84.93	1.3	U	4.5		
4-Methyl-2-pentanone (MIBK)	108-10-1	100.16	1.3	U	5.3		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	1.3	U	4.7		
Styrene	100-42-5	104.15	0.5	U	2.1		
Tertiary butyl alcohol (TBA)	75-65-0	74.12	13	U	39		
1,1,2,2-Tetrachloroethane	79-34-5	167.85	0.5	U	3.4		

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Tetrachloroethene (PCE)	127-18-4	165.83	5.5		37		
Toluene	108-88-3	92.14	5.6		21		
1,2,4-Trichlorobenzene	120-82-1	181.45	1.3	U	9.6		
1,1,1-Trichloroethane	71-55-6	133.41	0.5	U	2.7		
1,1,2-Trichloroethane	79-00-5	133.41	0.5	U	2.7		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	187.38	0.5	U	3.8		
Trichloroethene (TCE)	79-01-6	131.39	0.5	U	2.7		
Trichlorofluoromethane (Freon 11)	75-69-4	137.37	0.5	U	2.8		
1,2,4-Trimethylbenzene	95-63-6	120.2	1.3		6.4		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.5	U	2.5		
2,2,4-Trimethylpentane	540-84-1	114.23	0.5	U	2.3		
Vinyl Chloride	75-01-4	62.5	0.5	U	1.3		
Xylene (m&p)	1330-20-7	106.17	2.2		9.6		
Xylene (o)	95-47-6	106.17	0.82		3.6		

Project: 25000
 Field ID Number: 91L-7.3
 Laboratory ID Number: 625047

TARGET ANALYTES -
 AIR RESULTS - 91L-7.3

Sampling Date: 6/10/05
 Analysis Date: 6/24/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Benzene	71-43-2	78.108	0.96		3.1		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Ethylbenzene	100-41-4	106.17	0.65		2.8		
n-Heptane	142-82-5	100.21	0.5	U	2		
n-Hexane	110-54-3	86.172	0.8		2.8		
Toluene	108-88-3	92.14	5.6		21		
1,2,4-Trimethylbenzene	95-63-6	120.2	1.3		6.4		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.5	U	2.5		
2,2,4-Trimethylpentane	540-84-1	114.23	0.5	U	2.3		
Xylene (m&p)	1330-20-7	106.17	2.2		9.6		
Xylene (o)	95-47-6	106.17	0.82		3.6		
Xylenes					13.2		

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
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Chemical	Generates Results in ug/m3
Benzene	3.1
Cyclohexane	1.7
Ethylbenzene	2.8
n-Heptane	2
n-Hexane	2.8
Toluene	21
1,2,4-Trimethylbenzene	6.4
1,3,5-Trimethylbenzene	2.5
2,2,4-Trimethylpentane	2.3
Xylene (m&p)	9.6
Xylene (o)	3.6
Xylenes	13.2

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Acetone (2-propanone)	67-64-1	58.078	23		55		
Benzene	71-43-2	78.108	1.2		3.8		
Bromodichloromethane	75-27-4	163.83	0.5	U	3.4		
Bromoethene	593-60-2	106.96	0.5	U	2.2		
Bromoform	75-25-2	252.75	0.5	U	5.2		
Bromomethane (Methyl bromide)	74-83-9	94.94	0.5	U	1.9		
1,3-Butadiene	106-99-0	54.09	0.5	U	1.1		
2-Butanone (Methyl ethyl ketone)	78-93-3	72.11	5.1		15		
Carbon disulfide	75-15-0	76.14	1.3	U	4		
Carbon tetrachloride	56-23-5	153.81	0.5	U	3.1		
Chlorobenzene	108-90-7	112.55	0.5	U	2.3		
Chloroethane	75-00-3	64.52	0.5	U	1.3		
Chloroform	67-66-3	119.38	0.5	U	2.4		
Chloromethane (Methyl chloride)	74-87-3	50.49	1.3	U	2.7		
3-Chloropropene (allyl chloride)	107-05-1	76.53	0.5	U	1.6		
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	126.59	0.5	U	2.6		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Dibromochloromethane	124-48-1	208.29	0.5	U	4.3		
1,2-Dibromoethane	106-93-4	187.87	0.5	U	3.8		
1,2-Dichlorobenzene	95-50-1	147	0.5	U	3		
1,3-Dichlorobenzene	541-73-1	147	0.5	U	3		
1,4-Dichlorobenzene	106-46-7	147	0.5	U	3		
Dichlorodifluoromethane	75-71-8	120.91	1.3	U	6.4		
1,1-Dichloroethane	75-34-3	98.96	0.5	U	2		
1,2-Dichloroethane	107-06-2	98.96	0.5	U	2		
1,1-Dichloroethene	75-35-4	96.94	0.5	U	2		
1,2-Dichloroethene (cis)	156-59-2	96.94	0.5	U	2		
1,2-Dichloroethene (trans)	156-60-5	96.94	0.5	U	2		
1,2-Dichloropropane	78-87-5	112.99	0.5	U	2.3		
1,3-Dichloropropene (cis)	10061-01-5	110.97	0.5	U	2.3		
1,3-Dichloropropene (trans)	10061-02-6	110.97	0.5	U	2.3		
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	170.92	0.5	U	3.5		
Ethylbenzene	100-41-4	106.17	0.57		2.5		
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	120.2	1.6		7.9		
n-Heptane	142-82-5	100.21	0.57		2.3		
Hexachlorobutadiene	87-68-3	260.76	0.5	U	5.3		
n-Hexane	110-54-3	86.172	1.3		4.6		
Methylene Chloride	75-09-2	84.93	1.3	U	4.5		
4-Methyl-2-pentanone (MIBK)	108-10-1	100.16	1.3	U	5.3		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	1.5		5.4		
Styrene	100-42-5	104.15	0.5	U	2.1		
Tertiary butyl alcohol (TBA)	75-65-0	74.12	13	U	39		
1,1,2,2-Tetrachloroethane	79-34-5	167.85	0.5	U	3.4		

Project: 25000
 Field ID Number: DUP-91L
 Laboratory ID Number: 625048

TARGET ANALYTES -
 AIR RESULTS - DUP-91L

Sampling Date: 6/10/05
 Analysis Date: 6/24/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Tetrachloroethene (PCE)	127-18-4	165.83	3.4		23		
Toluene	108-88-3	92.14	4.3		16		
1,2,4-Trichlorobenzene	120-82-1	181.45	1.3	U	9.6		
1,1,1-Trichloroethane	71-55-6	133.41	0.5	U	2.7		
1,1,2-Trichloroethane	79-00-5	133.41	0.5	U	2.7		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	187.38	0.5	U	3.8		
Trichloroethene (TCE)	79-01-6	131.39	0.5	U	2.7		
Trichlorofluoromethane (Freon 11)	75-69-4	137.37	0.5	U	2.8		
1,2,4-Trimethylbenzene	95-63-6	120.2	3.5		17		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.87		4.3		
2,2,4-Trimethylpentane	540-84-1	114.23	0.72		3.4		
Vinyl Chloride	75-01-4	62.5	0.5	U	1.3		
Xylene (m&p)	1330-20-7	106.17	2		8.7		
Xylene (o)	95-47-6	106.17	0.83		3.6		

Chemical	CAS Number	Molecular Weight	Qualifier	91L-7.3 Results in ug/m3	Qualifier	91L-7.3dup Results in ug/m3	Relative Percent Difference
Acetone (2-propanone)	67-64-1	58.078		43		55	24.5
Benzene	71-43-2	78.108		3.1		3.8	20.3
Bromodichloromethane	75-27-4	163.83	U	3.4	U	3.4	
Bromoethene	593-60-2	106.96	U	2.2	U	2.2	
Bromoform	75-25-2	252.75	U	5.2	U	5.2	
Bromomethane (Methyl bromide)	74-83-9	94.94	U	1.9	U	1.9	
1,3-Butadiene	106-99-0	54.09	U	1.1	U	1.1	
2-Butanone (Methyl ethyl ketone)	78-93-3	72.11		7.7		15	64.3
Carbon disulfide	75-15-0	76.14	U	4	U	4	
Carbon tetrachloride	56-23-5	153.81	U	3.1	U	3.1	
Chlorobenzene	108-90-7	112.55	U	2.3	U	2.3	
Chloroethane	75-00-3	64.52	U	1.3	U	1.3	
Chloroform	67-66-3	119.38	U	2.4	U	2.4	
Chloromethane (Methyl chloride)	74-87-3	50.49	U	2.7	U	2.7	
3-Chloropropene (allyl chloride)	107-05-1	76.53	U	1.6	U	1.6	
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	126.59	U	2.6	U	2.6	
Cyclohexane	110-82-7	84.16	U	1.7	U	1.7	
Dibromochloromethane	124-48-1	208.29	U	4.3	U	4.3	
1,2-Dibromoethane	106-93-4	187.87	U	3.8	U	3.8	
1,2-Dichlorobenzene	95-50-1	147	U	3	U	3	
1,3-Dichlorobenzene	541-73-1	147	U	3	U	3	
1,4-Dichlorobenzene	106-46-7	147	U	3	U	3	
Dichlorodifluoromethane	75-71-8	120.91	U	6.4	U	6.4	
1,1-Dichloroethane	75-34-3	98.96	U	2	U	2	
1,2-Dichloroethane	107-06-2	98.96	U	2	U	2	
1,1-Dichloroethene	75-35-4	96.94	U	2	U	2	
1,2-Dichloroethene (cis)	156-59-2	96.94	U	2	U	2	
1,2-Dichloroethene (trans)	156-60-5	96.94	U	2	U	2	
1,2-Dichloropropane	78-87-5	112.99	U	2.3	U	2.3	
1,3-Dichloropropene (cis)	10061-01-5	110.97	U	2.3	U	2.3	
1,3-Dichloropropene (trans)	10061-02-6	110.97	U	2.3	U	2.3	
1,2-Dichlorotetrafluoroethane (Freon 1	76-14-2	170.92	U	3.5	U	3.5	
Ethylbenzene	100-41-4	106.17		2.8		2.5	11.3
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	120.2		4.3		7.9	59.0
n-Heptane	142-82-5	100.21	U	2		2.3	
Hexachlorobutadiene	87-68-3	260.76	U	5.3	U	5.3	
n-Hexane	110-54-3	86.172		2.8		4.6	48.6
Methylene Chloride	75-09-2	84.93	U	4.5	U	4.5	
4-Methyl-2-pentanone (MIBK)	108-10-1	100.16	U	5.3	U	5.3	
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	U	4.7		5.4	
Styrene	100-42-5	104.15	U	2.1	U	2.1	
Tertiary butyl alcohol (TBA)	75-65-0	74.12	U	39	U	39	
1,1,2,2-Tetrachloroethane	79-34-5	167.85	U	3.4	U	3.4	
Tetrachloroethene (PCE)	127-18-4	165.83		37		23	46.7
Toluene	108-88-3	92.14		21		16	27.0
1,2,4-Trichlorobenzene	120-82-1	181.45	U	9.6	U	9.6	
1,1,1-Trichloroethane	71-55-6	133.41	U	2.7	U	2.7	
1,1,2-Trichloroethane	79-00-5	133.41	U	2.7	U	2.7	
1,1,2-Trichloro-1,2,2-trifluoroethane (F	76-13-1	187.38	U	3.8	U	3.8	

91L-7.3
91L-7.3 dup (DUP-91L)

TARGET AIR ANALYTES - AIR RESULTS OF FIELD DUPLICATE ANALYSES

023-6124C

Trichloroethene (TCE)	79-01-6	131.39	U	2.7	U	2.7	
Trichlorofluoromethane (Freon 11)	75-69-4	137.37	U	2.8	U	2.8	
1,2,4-Trimethylbenzene	95-63-6	120.2		6.4		17	90.6
1,3,5-Trimethylbenzene	108-67-8	120.2	U	2.5		4.3	
2,2,4-Trimethylpentane	540-84-1	114.23	U	2.3		3.4	
Vinyl Chloride	75-01-4	62.5	U	1.3	U	1.3	
Xylene (m&p)	1330-20-7	106.17		9.6		8.7	9.8
Xylene (o)	95-47-6	106.17		3.6		3.6	0.0

Project: 25000
 Field ID Number: 103F-6.0
 Laboratory ID Number: 625049

TARGET ANALYTES -
 AIR RESULTS - 103F-6.0

Sampling Date: 6/10/05
 Analysis Date: 6/24/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Acetone (2-propanone)	67-64-1	58.078	22		52		
Benzene	71-43-2	78.108	0.5	U	1.6		
Bromodichloromethane	75-27-4	163.83	0.5	U	3.4		
Bromoethene	593-60-2	106.96	0.5	U	2.2		
Bromoform	75-25-2	252.75	0.5	U	5.2		
Bromomethane (Methyl bromide)	74-83-9	94.94	0.5	U	1.9		
1,3-Butadiene	106-99-0	54.09	0.5	U	1.1		
2-Butanone (Methyl ethyl ketone)	78-93-3	72.11	5.6		17		
Carbon disulfide	75-15-0	76.14	1.3	U	4		
Carbon tetrachloride	56-23-5	153.81	0.5	U	3.1		
Chlorobenzene	108-90-7	112.55	0.5	U	2.3		
Chloroethane	75-00-3	64.52	0.5	U	1.3		
Chloroform	67-66-3	119.38	0.5	U	2.4		
Chloromethane (Methyl chloride)	74-87-3	50.49	1.3	U	2.7		
3-Chloropropene (allyl chloride)	107-05-1	76.53	0.5	U	1.6		
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	126.59	0.5	U	2.6		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Dibromochloromethane	124-48-1	208.29	0.5	U	4.3		
1,2-Dibromoethane	106-93-4	187.87	0.5	U	3.8		
1,2-Dichlorobenzene	95-50-1	147	0.5	U	3		
1,3-Dichlorobenzene	541-73-1	147	0.5	U	3		
1,4-Dichlorobenzene	106-46-7	147	0.5	U	3		
Dichlorodifluoromethane	75-71-8	120.91	1.3	U	6.4		
1,1-Dichloroethane	75-34-3	98.96	0.5	U	2		
1,2-Dichloroethane	107-06-2	98.96	0.5	U	2		
1,1-Dichloroethene	75-35-4	96.94	0.5	U	2		
1,2-Dichloroethene (cis)	156-59-2	96.94	0.5	U	2		
1,2-Dichloroethene (trans)	156-60-5	96.94	0.5	U	2		
1,2-Dichloropropane	78-87-5	112.99	0.5	U	2.3		
1,3-Dichloropropene (cis)	10061-01-5	110.97	0.5	U	2.3		
1,3-Dichloropropene (trans)	10061-02-6	110.97	0.5	U	2.3		
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	170.92	0.5	U	3.5		
Ethylbenzene	100-41-4	106.17	0.5	U	2.2		
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	120.2	0.62		3		
n-Heptane	142-82-5	100.21	0.5	U	2		
Hexachlorobutadiene	87-68-3	260.76	0.5	U	5.3		
n-Hexane	110-54-3	86.172	0.5	U	1.8		
Methylene Chloride	75-09-2	84.93	1.3	U	4.5		
4-Methyl-2-pentanone (MIBK)	108-10-1	100.16	1.3	U	5.3		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	1.3	U	4.7		
Styrene	100-42-5	104.15	0.5	U	2.1		
Tertiary butyl alcohol (TBA)	75-65-0	74.12	13	U	39		
1,1,2,2-Tetrachloroethane	79-34-5	167.85	0.5	U	3.4		

Project: 25000
 Field ID Number: 103F-6.0
 Laboratory ID Number: 625049

TARGET ANALYTES -
 AIR RESULTS - 103F-6.0

Sampling Date: 6/10/05
 Analysis Date: 6/24/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Tetrachloroethene (PCE)	127-18-4	165.83	3.8		26		
Toluene	108-88-3	92.14	3.5		13		
1,2,4-Trichlorobenzene	120-82-1	181.45	1.3	U	9.6		
1,1,1-Trichloroethane	71-55-6	133.41	0.5	U	2.7		
1,1,2-Trichloroethane	79-00-5	133.41	0.5	U	2.7		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	187.38	0.5	U	3.8		
Trichloroethene (TCE)	79-01-6	131.39	0.5	U	2.7		
Trichlorofluoromethane (Freon 11)	75-69-4	137.37	0.5	U	2.8		
1,2,4-Trimethylbenzene	95-63-6	120.2	1		4.9		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.5	U	2.5		
2,2,4-Trimethylpentane	540-84-1	114.23	0.5	U	2.3		
Vinyl Chloride	75-01-4	62.5	0.5	U	1.3		
Xylene (m&p)	1330-20-7	106.17	1.4		6.1		
Xylene (o)	95-47-6	106.17	0.52		2.3		

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
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Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Benzene	71-43-2	78.108	0.5	U	1.6		
Cyclohexane	110-82-7	84.16	0.5	U	1.7		
Ethylbenzene	100-41-4	106.17	0.5	U	2.2		
n-Heptane	142-82-5	100.21	0.5	U	2		
n-Hexane	110-54-3	86.172	0.5	U	1.8		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	1.3	U	4.7		
Toluene	108-88-3	92.14	3.5		13		
1,2,4-Trimethylbenzene	95-63-6	120.2	1		4.9		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.5	U	2.5		
2,2,4-Trimethylpentane	540-84-1	114.23	0.5	U	2.3		
Xylene (m&p)	1330-20-7	106.17	1.4		6.1		
Xylene (o)	95-47-6	106.17	0.52		2.3		
Xylenes					8.4		

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
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Chemical	Generates Results in ug/m3
Benzene	1.6
Cyclohexane	1.7
Ethylbenzene	2.2
n-Heptane	2
n-Hexane	1.8
MTBE (Methyl tert-butyl ether)	4.7
Toluene	13
1,2,4-Trimethylbenzene	4.9
1,3,5-Trimethylbenzene	2.5
2,2,4-Trimethylpentane	2.3
Xylene (m&p)	6.1
Xylene (o)	2.3
Xylenes	8.4

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Acetone (2-propanone)	67-64-1	58.078	5	U	12		
Benzene	71-43-2	78.108	0.2	U	0.64		
Bromodichloromethane	75-27-4	163.83	0.2	U	1.3		
Bromoethene	593-60-2	106.96	0.2	U	0.87		
Bromoform	75-25-2	252.75	0.2	U	2.1		
Bromomethane (Methyl bromide)	74-83-9	94.94	0.2	U	0.78		
1,3-Butadiene	106-99-0	54.09	0.2	U	0.44		
2-Butanone (Methyl ethyl ketone)	78-93-3	72.11	0.5	U	1.5		
Carbon disulfide	75-15-0	76.14	0.5	U	1.6		
Carbon tetrachloride	56-23-5	153.81	0.2	U	1.3		
Chlorobenzene	108-90-7	112.55	0.2	U	0.92		
Chloroethane	75-00-3	64.52	0.2	U	0.53		
Chloroform	67-66-3	119.38	0.2	U	0.98		
Chloromethane (Methyl chloride)	74-87-3	50.49	0.5	U	1		
3-Chloropropene (allyl chloride)	107-05-1	76.53	0.2	U	0.63		
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	126.59	0.2	U	1		
Cyclohexane	110-82-7	84.16	0.2	U	0.69		
Dibromochloromethane	124-48-1	208.29	0.2	U	1.7		
1,2-Dibromoethane	106-93-4	187.87	0.2	U	1.5		
1,2-Dichlorobenzene	95-50-1	147	0.2	U	1.2		
1,3-Dichlorobenzene	541-73-1	147	0.2	U	1.2		
1,4-Dichlorobenzene	106-46-7	147	0.2	U	1.2		
Dichlorodifluoromethane	75-71-8	120.91	0.5	U	2.5		
1,1-Dichloroethane	75-34-3	98.96	0.2	U	0.81		
1,2-Dichloroethane	107-06-2	98.96	0.2	U	0.81		
1,1-Dichloroethene	75-35-4	96.94	0.2	U	0.79		
1,2-Dichloroethene (cis)	156-59-2	96.94	0.2	U	0.79		
1,2-Dichloroethene (trans)	156-60-5	96.94	0.2	U	0.79		
1,2-Dichloropropane	78-87-5	112.99	0.2	U	0.92		
1,3-Dichloropropene (cis)	10061-01-5	110.97	0.2	U	0.91		
1,3-Dichloropropene (trans)	10061-02-6	110.97	0.2	U	0.91		
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	170.92	0.2	U	1.4		
Ethylbenzene	100-41-4	106.17	0.2	U	0.87		
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	120.2	0.2	U	0.98		
n-Heptane	142-82-5	100.21	0.2	U	0.82		
Hexachlorobutadiene	87-68-3	260.76	0.2	U	2.1		
n-Hexane	110-54-3	86.172	0.2	U	0.7		
Methylene Chloride	75-09-2	84.93	0.5	U	1.7		
4-Methyl-2-pentanone (MIBK)	108-10-1	100.16	0.5	U	2		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	0.5	U	1.8		
Styrene	100-42-5	104.15	0.2	U	0.85		
Tertiary butyl alcohol (TBA)	75-65-0	74.12	5	U	15		

Project: 25000
 Field ID Number: ABLKP5
 Laboratory ID Number: ABLKP5

TARGET ANALYTES -
 AIR RESULTS - BLANK SAMPLE

Sampling Date:
 Analysis Date: 6/22/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
1,1,2,2-Tetrachloroethane	79-34-5	167.85	0.2	U	1.4		
Tetrachloroethene (PCE)	127-18-4	165.83	0.2	U	1.4		
Toluene	108-88-3	92.14	0.2	U	0.75		
1,2,4-Trichlorobenzene	120-82-1	181.45	0.5	U	3.7		
1,1,1-Trichloroethane	71-55-6	133.41	0.2	U	1.1		
1,1,2-Trichloroethane	79-00-5	133.41	0.2	U	1.1		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	187.38	0.2	U	1.5		
Trichloroethene (TCE)	79-01-6	131.39	0.2	U	1.1		
Trichlorofluoromethane (Freon 11)	75-69-4	137.37	0.2	U	1.1		
1,2,4-Trimethylbenzene	95-63-6	120.2	0.2	U	0.98		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.2	U	0.98		
2,2,4-Trimethylpentane	540-84-1	114.23	0.2	U	0.93		
Vinyl Chloride	75-01-4	62.5	0.2	U	0.51		
Xylene (m&p)	1330-20-7	106.17	0.2	U	0.87		
Xylene (o)	95-47-6	106.17	0.2	U	0.87		

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
Acetone (2-propanone)	67-64-1	58.078	5	U	12		
Benzene	71-43-2	78.108	0.2	U	0.64		
Bromodichloromethane	75-27-4	163.83	0.2	U	1.3		
Bromoethene	593-60-2	106.96	0.2	U	0.87		
Bromoform	75-25-2	252.75	0.2	U	2.1		
Bromomethane (Methyl bromide)	74-83-9	94.94	0.2	U	0.78		
1,3-Butadiene	106-99-0	54.09	0.2	U	0.44		
2-Butanone (Methyl ethyl ketone)	78-93-3	72.11	0.5	U	1.5		
Carbon disulfide	75-15-0	76.14	0.5	U	1.6		
Carbon tetrachloride	56-23-5	153.81	0.2	U	1.3		
Chlorobenzene	108-90-7	112.55	0.2	U	0.92		
Chloroethane	75-00-3	64.52	0.2	U	0.53		
Chloroform	67-66-3	119.38	0.2	U	0.98		
Chloromethane (Methyl chloride)	74-87-3	50.49	0.5	U	1		
3-Chloropropene (allyl chloride)	107-05-1	76.53	0.2	U	0.63		
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	126.59	0.2	U	1		
Cyclohexane	110-82-7	84.16	0.2	U	0.69		
Dibromochloromethane	124-48-1	208.29	0.2	U	1.7		
1,2-Dibromoethane	106-93-4	187.87	0.2	U	1.5		
1,2-Dichlorobenzene	95-50-1	147	0.2	U	1.2		
1,3-Dichlorobenzene	541-73-1	147	0.2	U	1.2		
1,4-Dichlorobenzene	106-46-7	147	0.2	U	1.2		
Dichlorodifluoromethane	75-71-8	120.91	0.5	U	2.5		
1,1-Dichloroethane	75-34-3	98.96	0.2	U	0.81		
1,2-Dichloroethane	107-06-2	98.96	0.2	U	0.81		
1,1-Dichloroethene	75-35-4	96.94	0.2	U	0.79		
1,2-Dichloroethene (cis)	156-59-2	96.94	0.2	U	0.79		
1,2-Dichloroethene (trans)	156-60-5	96.94	0.2	U	0.79		
1,2-Dichloropropane	78-87-5	112.99	0.2	U	0.92		
1,3-Dichloropropene (cis)	10061-01-5	110.97	0.2	U	0.91		
1,3-Dichloropropene (trans)	10061-02-6	110.97	0.2	U	0.91		
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	170.92	0.2	U	1.4		
Ethylbenzene	100-41-4	106.17	0.2	U	0.87		
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	120.2	0.2	U	0.98		
n-Heptane	142-82-5	100.21	0.2	U	0.82		
Hexachlorobutadiene	87-68-3	260.76	0.2	U	2.1		
n-Hexane	110-54-3	86.172	0.2	U	0.7		
Methylene Chloride	75-09-2	84.93	0.5	U	1.7		
4-Methyl-2-pentanone (MIBK)	108-10-1	100.16	0.5	U	2		
MTBE (Methyl tert-butyl ether)	1634-04-4	88.15	0.5	U	1.8		
Styrene	100-42-5	104.15	0.2	U	0.85		
Tertiary butyl alcohol (TBA)	75-65-0	74.12	5	U	15		

Project: 25000
 Field ID Number: ABLKP9
 Laboratory ID Number: ABLKP9

TARGET ANALYTES -
 AIR RESULTS - BLANK SAMPLE

Sampling Date:
 Analysis Date: 6/23/05

Chemical	CAS Number	Molecular Weight	Insert Results in ppbv	Q	Generates Results in ug/m3	QAS Decision	Foot-notes
1,1,2,2-Tetrachloroethane	79-34-5	167.85	0.2	U	1.4		
Tetrachloroethene (PCE)	127-18-4	165.83	0.2	U	1.4		
Toluene	108-88-3	92.14	0.2	U	0.75		
1,2,4-Trichlorobenzene	120-82-1	181.45	0.5	U	3.7		
1,1,1-Trichloroethane	71-55-6	133.41	0.2	U	1.1		
1,1,2-Trichloroethane	79-00-5	133.41	0.2	U	1.1		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	187.38	0.2	U	1.5		
Trichloroethene (TCE)	79-01-6	131.39	0.2	U	1.1		
Trichlorofluoromethane (Freon 11)	75-69-4	137.37	0.2	U	1.1		
1,2,4-Trimethylbenzene	95-63-6	120.2	0.2	U	0.98		
1,3,5-Trimethylbenzene	108-67-8	120.2	0.2	U	0.98		
2,2,4-Trimethylpentane	540-84-1	114.23	0.2	U	0.93		
Vinyl Chloride	75-01-4	62.5	0.2	U	0.51		
Xylene (m&p)	1330-20-7	106.17	0.2	U	0.87		
Xylene (o)	95-47-6	106.17	0.2	U	0.87		

Table 2
Summa Canister Sample Field Information
Mt Holly, New Jersey

Location ID	Date	Sample Time	Canister #	Flow Control ID	Initial Pressure	Final Pressure
103F-4.5	6/10/2005	1020	1011	7249398	-30	-4
103F-6.0	6/10/2005	1341	1034	7228622	-30	-5
103L-5	6/10/2005	958	1078	7225876	-31	-5
103R-4.0	6/10/2005	940	1077	7248247	-30	-5
91F-6.25	6/10/2005	1056	1040	7242808	-33	-4
91L-7.25	6/10/2005	1116	1027	7242826	-31	-5
93R-6.25	6/10/2005	1044	1042	7242894	-31	-3.3
Dup-91L	6/10/2005	1139	1061	7279797	-30	-7