DATA SUMMARY REPORT
SOIL VAPOR INTRUSION INVESTIGATION
SITE 1 – FORMER DRUM MARSHALLING AREA

NWIRP BETHPAGE
Bethpage, New York

DEPARTMENT OF THE NAVY
UNITED STATES OF AMERICA

Naval Facilities Engineering Command
Mid-Atlantic

Contract No. N62470-08-D-1001
Contract Task Order WE06

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NOTICE PAGE

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DATA SUMMARY REPORT
SOIL VAPOR INTRUSION INVESTIGATION

NAVAL FACILITIES ENGINEERING COMMAND
MID-ATLANTIC

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

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ACRONYMS

APU	air purification unit
AS/SVE	air sparging/soil vapor extraction
CLEAN	Comprehensive Long-Term Environmental Action Navy
COC	chemicals of concern
CTO	contract task order
DPT	direct-push technology
ELAP	Environmental Laboratory Approval Program
EPA	Environmental Protection Agency
IS	initial sampling
L	liter
ml	milliliter
NFA	no further action
NWIRP	Naval Weapons Industrial Reserve Plant
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCE	tetrachloroethene
PID	photoionization detector
PUS	post air purification unit sampling
sq ft	square feet
SVE	soil vapor extraction
SSD	sub-slab depressurization
SVI	Soil Vapor Intrusion
TCA	1, 1, 1-trichloroethane
TCE	trichloroethene
Tetra Tech	Tetra Tech NUS, Inc.
VOC	volatile organic compound
µg/m^3	micrograms per cubic meter

1.0 INTRODUCTION

This Data Summary Report presents sub-slab vapor and indoor air sampling results from offsite residential properties adjacent to the Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage, Long Island, New York (Figures 1 and 2). This Data Summary Report was prepared by Tetra Tech NUS (Tetra Tech) under Contract Task Order (CTO) WE06 for the Naval Facilities Engineering Command Mid-Atlantic under the Comprehensive Long-Term Environmental Action Navy (CLEAN) contract number N62472-08-D-1001. Site 1 – Former Drum Marshalling Area was identified as having been impacted by the historic releases of chlorinated solvents and was remediated via an air sparging/soil vapor extraction (AS/SVE) system between 1998 and 2002. The treatment and remedial goals were based on protection of groundwater. Soil gas testing conducted in January 2008 indicated elevated concentrations of VOCs existing along the eastern boundary of Site 1 that may affect the adjacent residential neighborhood. Additional soil gas testing was conducted in the Town of Oyster Bay right-of-ways from October 2008 through January 2009 to evaluate the potential migration of contaminated soil vapor offsite. After evaluation of this soil gas data, indoor air and sub-slab soil vapor sampling was recommended to evaluate potential vapor intrusion into residential homes.

The soil vapor intrusion sampling activities consisted of indoor air, sub-slab vapor, and outdoor air sampling in the residential neighborhood located east and adjacent to Site 1. A total of 18 residential homes were sampled during investigation activities, which were conducted from January 2009 through May 2009. Air and vapor samples were analyzed for volatile organic compounds (VOCs) via United States Environmental Protection Agency (EPA) TO-15 method. The fieldwork was conducted in accordance with the project Work Plan (Tetra Tech, 2008) and New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, 2006).

2.0 FIELD AND SAMPLING ACTIVITIES

Vapor and air sampling activities were conducted from January 2009 through May 2009 in the residential neighborhood adjacent to Site 1. A total of 18 homes were sampled to evaluate potential soil vapor intrusion. The activities, including planning of fieldwork and evaluation of the data, were coordinated with the NYSDOH and the New York State Department of Environmental Conservation (NYSDEC). The sampling approach, field activities and procedures, and the initial mitigation measures conducted in residential homes are detailed in the following sections.

2.1 SAMPLING APPROACH

Based on the soil gas investigations, six residential homes along Eleventh Street, nearest to Site 1, and one home on Ninth Street (reference location) were initially targeted for evaluation. Homeowners were contacted and access agreements were obtained for five of the seven homes. Sampling activities began in January 2009 and included four of the six homes initially targeted along Eleventh Street and the home on Ninth Street as a reference location.

The initial or baseline sub-slab vapor and indoor air sampling results from the first five homes were compared to the NYSDOH decision matrices presented in the Guidance for Evaluating Soil Vapor Intrusion (SVI) in the State of New York (NYSDOH, 2006). In addition, the results from the October 2008 through January 2009 soil gas evaluation, which considered a larger area, were compared to the home test results. This evaluation found a reasonable correlation between soil gas and sub-slab soil vapor results and bounded the area to be investigated. Based on this evaluation, the Navy targeted twelve additional homes for soil vapor intrusion investigation. Homeowners were contacted and access agreements were obtained for ten homes (Home #6 through Home #15) and subsequent sampling was conducted in February and March 2009.

Because of elevated indoor air concentrations detected in four of the initial homes sampled, granular activated carbon-based air purification units (APUs) were installed. These APUs were installed as a temporary mitigation measure in the first four homes sampled along Eleventh Street and as a precaution, were also placed in each of the additional (ten) homes immediately after initial or baseline air samples were collected. Between February and April 2009, Post Air Purification Unit Sampling (PUS) events were then conducted to monitor indoor air quality and verify effectiveness of the APUs. Additional details regarding these sampling events are provided in Sections 3.0 and 4.0.

Indoor air and sub-slab vapor sampling results from the additional ten homes were evaluated and compared to NYSDOH decision matrices. Based on the evaluation and discussions with the NYSDOH in March 2009, three additional homes were selected for indoor air sampling to verify that the affected area was properly bounded (Home's #16, #17, and #18). After access agreements were obtained from these residents, sampling was scheduled and conducted in April and May 2009.

Based on the results from the October 2008 through January 2009 soil gas investigation and the sub-slab vapor and indoor air sampling in the residential homes, the Navy, NYSDOH, and NYSDEC determined that the extent of contaminated soil vapor was adequately delineated and no additional homes would be targeted for SVI investigation. The sub-slab vapor and indoor air sampling results for all eighteen homes are presented and discussed in Section 3.0. Photographs taken during the investigation are presented in Appendix A.

The sub-slab vapor and indoor air investigation area, including the eighteen homes where indoor air sampling was conducted, is presented in Figure 3. Outdoor air samples were collected in addition to the indoor air and sub-slab vapor samples to evaluate the potential influence of outdoor or ambient air on indoor air quality. Outdoor air samples were generally collected from upwind locations (at the start of the sampling event) to provide representative ambient air samples for evaluation. The outdoor air samples were not adjusted during the sampling period to account for variable wind directions. The outdoor air sample locations are depicted on Figure 3. Each of the indoor air, sub-slab vapor, and outdoor air samples were collected over a 24-hour time period and analyzed according to United States Environmental Protection Agency (EPA) Method TO-15 VOCs by Air Toxics, Ltd in Folsom, CA. The initial samples and the majority of post air purifying unit samples were analyzed for full TCL analysis. Later samples were analyzed for the nine site-related VOCs, as determined through data evaluation by the Navy and NYSDOH.

2.2 FIELD ACTIVITIES

Indoor air, sub-slab vapor, and outdoor air sampling was conducted at eighteen residential homes located in the neighborhood adjacent to Site 1. The general field activities for the sampling are summarized as follows:

1. Obtained residential access agreement
2. Scheduled fieldwork
3. Completed home questionnaire and inventory sheets
4. Established sampling locations
5. Drilled and installed temporary sub-slab vapor sampling points

6. Collected indoor air, sub-slab vapor, and outdoor air samples
7. Filled and sealed sub-slab holes and large cracks
8. Shipped and analyzed samples for TO-15 VOCs

After signed access agreements were obtained from the homes, homeowners were contacted to coordinate field sampling activities. Prior to sampling, an indoor air quality questionnaire and building inventory form was completed for each home, see Appendix B. The basement floors were inspected and any penetrations including cracks, drains, utilities, sumps, were documented in field log books and/or on the questionnaire form. Observed areas of concern and suspect odors (e.g. petroleum, chemical, etc.) were screened with a photoionization detector (PID). No elevated PID readings were observed in indoor air in the homes sampled.

Based on home specific conditions, such as type of flooring, location of sewer sump, and utilities, sub-slab vapor sample locations were selected. Most of the sub-slab vapor sampling points were placed in unfinished areas of the basement where possible. A small diameter hole (3/8 or 1/2 inch) was drilled into the basement slab for the installation of temporary sampling probes. The temporary probes were constructed of polyethylene tubing and were placed no more then 2 inches into the sub-slab material and sealed to the surface with inert modeling clay. After installation of the probes, three tubing volumes of air (approximately 180 milliliters [ml]) were purged via 60 ml syringe prior to collecting samples to ensure a representative sample. Each of the three purged volumes was screened with a PID and results were recorded on the air sampling logsheets. Sub-slab vapor samples were then collected over a 24-hour period. Sample logsheets are presented in Appendix C. After sample collection, each temporary probe was removed and the probe hole was abandoned by removing the tubing and surface seal followed by filling/patching the resulting hole with cement.

Indoor and outdoor air samples were collected at the same time as the sub-slab vapor sampling. SUMMA® canisters (6 liter [L]) with pre-set regulators were utilized for collecting the air and vapor samples. The samples were shipped to Air Toxics Ltd. in Folsom, CA via overnight carrier (Federal Express) for analysis. Actual indoor and outdoor air sample locations were determined in the field based on site specific conditions, such as sewer sump location, floor plan, and wind direction. Outdoor air samples were positioned in an upwind direction (at the start of the sampling period) approximately 50 to 200 feet from the associated indoor air sampling locations, at a height of approximately 3 feet above grade. Some of the outdoor air samples were used in evaluating more then one home given the proximity of the homes being sampled at that time. The outdoor air samples were obtained over a 24-hour period to be consistent with the indoor air and sub-slab vapor samples. The sampling procedures for indoor air, outdoor air, and sub-slab vapor sampling were in accordance with NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, 2006).

The field sampling team maintained an air sampling log sheet and field logbook that summarized the following information:

- sample identification
- date and time of sample collection
- sample location description
- identity of samplers
- sampling methods and devices (including canister and regulator ID numbers)
- purge volumes
- volume of soil vapor extracted
- vacuum before and after samples were collected
- wind speed and direction (for outdoor air sampling)
- ambient temperature

Table 2-1 presents a sample summary of the indoor air and sub-slab vapor samples collected, corresponding sample nomenclature, sample type, event type, and date collected. Sample dates indicate the day when the sample was actually collected and represents the end of the 24-hour collection period. Sample containers were labeled with a unique sample identifier. The sample identification consisted of the following:

- The first four characters indicated the site from which the sample was collected:
  BPS1 (Bethpage Site 1)

- The next two characters indicated the matrix:
  BPS1-AR (Air Sample)

- The next three characters indicated the corresponding location:
  BPS1-AR001 (Home #1)

- The next three characters indicated the type of the sample:
  BPS1-AR001-SSB (Sub-Slab), IND (Indoor Air), and ODA (Outdoor Air)

- The next character indicated the number of subsequent samples:
  BPS1-AR001- IND3 (Third sample collected)

Additional information regarding sample identification and sample collection was recorded in the field logbook and/or on the corresponding sample log sheets. In April 2009, after collecting several rounds of air samples for basement air and living space air, the sample identification was modified to distinguish between these types of indoor air samples. A qualifying character, “B’ for basement air and “L” for living space air were added to the end of the “IND” sample type. Air samples labeled with an “INDB” were collected from basement air and samples labeled with an “INDL” were collected from living space air.

2.3 ADDITIONAL FIELD ACTIVITIES

Based on review of the residential questionnaires, field notes, and other observations made in the residential homes, it was determined that sewer cleanouts or sewer access sumps in basements were potential pathways for soil vapor to enter residential homes. These sewer access sumps were not observed in every home. These sewer access sumps may not have been installed in some homes, were not needed, or in some cases may have been sealed and covered by flooring, stairs, or other indoor structures.

Based on the initial sampling results at Home’s #2, #3, and #4 that indicated elevated concentrations of TCE in indoor air and sub-slab vapor samples, the sewer access sumps were sealed (see Section 3.0). Home #3 had an unfinished basement and several cracks were observed in the basement floor and walls. The observed cracks in Home #3 were also sealed to address these potential pathways into the home. Home’s #2 and #4 had finished basements and no cracks, drains, or other penetrations were observed during the home evaluation.

3.0 ANALYTICAL RESULTS

Sub-slab vapor samples and indoor air samples were collected from 18 residential homes. This section summarizes the analytical results from the initial sampling (IS) and post air purification unit sampling events conducted from January 20, 2009 through May 21, 2009. Based on evaluation of sampling results and a comparison of these results with the soil gas testing conducted at NWIRP Bethpage, it was determined that trichloroethylene (TCE), tetrachloroethene (PCE), and 1,1,1-trichloroethane (TCA) represented the primary chemicals of concern (COCs). Therefore, the analytical results for TCE, PCE, and TCA are the focus of the analytical discussions in the following sections. Table 3-1 presents an analytical summary for these three compounds in the 18 homes investigated. Figure 4 provides a summary of the initial sampling results for TCE, PCE, and TCA. Indoor air samples collected during post air purification unit sampling events were positioned in the same location as initial sampling events. Results are also presented on Table 3-1. Details for air samples collected from each home is presented on the indoor air sample summary sheets provided in Appendix C. The chain of custody forms and a complete analytical summary can be found in Appendix D and E, respectively.

The following sections summarize the analytical results and also compare concentrations of TCE, PCE, and TCA to NYSDOH air guideline values and decision matrices presented in the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, 2006). The air guideline values derived by the NYSDOH for evaluation of indoor air are summarized in the table below.

Air Guideline Values for Indoor Air

Chemical		Air Guideline Value (µg/m^3)
tetrachloroethene	PCE	100
trichloroethane	TCE	5
1,1,1-trichloroethane	TCA	100*

* = value derived from NYSDOH guidance (2006), Table 3.3 (Matrix 2)
µg/m^3 = micrograms per cubic meter of air

On a home by home basis, the initial sampling results, which included both indoor air and sub-slab vapor samples, were compared to the NYSDOH decision matrices. A copy of the NYSDOH decision matrices (Matrix 1 and Matrix 2) are provided in Appendix F. Based on the NYSDOH guidance, TCE should be evaluated using Matrix 1 and PCE and TCA should be evaluated using Matrix 2. Based on a comparison of the indoor air concentrations and sub-slab vapor concentrations to the NYSDOH matrices, recommendations to address soil vapor intrusion for each home were determined. Section 4.0 summarizes the data evaluation and recommendations presented in the following sections.

3.1 Home #1

Home #1 is a raised ranch on slab with no basement and was built in 1962. The footprint of the home is approximately 1,200 Square feet (sq ft) and includes an attached garage. A residential summary sheet presenting the sampling results is provided as Table 3-2.

The home was initially sampled on January 20, 2009 and the sampling consisted of an indoor air and sub-slab (slab-on-grade) vapor sample, as well as a sub-slab duplicate sample. The samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. Home #1 does not have a basement, and the indoor air sample was collected from the ground floor living space. Floor plans sketches depicting sample locations are provided in the NYSDOH Air Quality Questionnaires presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 2.2 and 160 µg/m^3 in the living space air and sub-slab vapor samples, respectively. PCE was detected at 10 and 550 µg/m^3 and TCA at 2.1 and 690 µg/m^3 in the living space air and sub-slab vapor samples, respectively. Analytical results were evaluated against NYSDOH decision matrices (see Appendix F) and mitigation was the recommended action for TCE, while monitoring was recommended for PCE and TCA. To provide an interim mitigation measure for exposure to TCE, an APU was installed in Home #1 on February 17, 2009.

A post air purification unit sampling event was conducted on February 24, 2009. An indoor air sample was collected from the ground floor living space during this event. Results of the sampling showed a decrease in each of the VOC concentrations, with detections of TCE at 0.44 µg/m^3, PCE at 2.2 µg/m^3 and TCA at 0.87 µg/m^3. The APU installed in the ground floor living space is currently in operation.

3.2 Home #2

Home #2 is a ranch with a full basement and was built in 1962. The footprint of the home is approximately 1,200 sq ft and has a detached garage. A residential summary sheet presenting the sampling results is provided as Table 3-3.

The home was initially sampled on January 21, 2009 and the sampling consisted of the collection of an indoor air sample and sub-slab vapor sample in the basement. These samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations are provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 140 and 16,000 µg/m^3 in the basement air and sub-slab vapor samples, respectively. PCE was detected at 7.6 and 310 µg/m^3 and TCA was detected at 92 and 15,000 µg/m^3 in the basement air and sub-slab vapor samples, respectively. Analytical results were evaluated against the NYSDOH decision matrices (see Appendix F). Based on these matrices, the recommended action for TCE and TCA was mitigation, while mitigation/monitoring were recommended for PCE.

Based on the results of the initial sampling, on February 19, 2009 an indoor air sample was collected from the first floor living space to further evaluate indoor air quality. After collection of the living space sample, an APU was installed in the basement as an interim mitigation measure. The sewer utility sump in the basement was sealed at this time to address this potential pathway for soil vapor to enter the home. The initial first floor living space sample detected concentrations of TCE at 100 µg/m^3, PCE at 4.9 µg/m^3 and TCA at 73 µg/m^3.

The first post air purification unit sampling event was conducted on February 24, 2009 and a basement air sample was collected. Sample results indicated a concentration of TCE at 46 µg/m^3, which remained above the NYSDOH Air Guideline Value of 5 µg/m^3 for TCE. However, the sampling results did show a decrease in VOC concentrations. Because TCE was detected above the NYSDOH Air Guideline Value of 5 µg/m^3 in the first floor living space, an APU was also installed on the first floor on March 10, 2009.

On March 24, 2009, a second post unit sampling event was conducted and air samples were collected from the basement and first floor living space. The basement air sample results indicated concentrations of TCE at 4.2 µg/m^3 and TCA at 11 µg/m^3. PCE was not detected. Results from the first floor living space showed concentrations of TCE at 3.1 µg/m^3, PCE at 0.91 µg/m^3 and TCA at 4.8 µg/m^3. These VOC concentrations in the basement and first floor living spaces were below their respective NYSDOH Air Guideline Values. The APUs installed in the basement and first floor remain in operation.

3.3 Home #3

Home #3 is a ranch with a full unfinished basement and was built in 1958. The footprint of the home is approximately 1,200 sq ft, not including the attached garage. A residential summary sheet presenting the sampling results is provided as Table 3-4.

The home was initially sampled on January 22, 2009 and included the collection of a basement air, basement air duplicate sample and a basement sub-slab vapor sample. The samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations are provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 180 and 13,000 µg/m^3 in the basement air and sub-slab vapor samples, respectively. PCE was detected at 4.3 and 130 µg/m^3 and TCA was detected at 98 and 10,000 µg/m^3 in the basement air and sub-slab vapor samples, respectively. Analytical results were evaluated against the NYSDOH decision matrices (see Appendix F). Based on these matrices, the recommended action for TCE and TCA was mitigation, while mitigation/monitoring were recommended for PCE.

Based on the results of the initial sampling, on February 18, 2009 an indoor air sample was collected from the first floor living space to further evaluate indoor air quality. After collection of the living space sample, an APU was installed in the basement as an interim mitigation measure. The sewer utility sump and observable cracks in the basement floor were sealed at this time to address these potential pathways for soil vapor to enter the home. A portion of the basement floor and walls could not be inspected or sealed, because some areas were covered with storage containers. Results from the initial first floor living space sample indicated concentrations of TCE at 110 µg/m^3, PCE at 3.1 µg/m^3 and TCA at 74 µg/m^3. Because TCE was detected above the NYSDOH Air Guideline Value of 5 µg/m^3, an APU was also installed in the first floor living space on February 26, 2009.

The first post air purification unit sampling event was also conducted on February 26, 2009 and a basement air sample and duplicate were collected during this event. After sample collection, additional cracks observed in the basement floor and some large cracks in the basement walls were sealed. The sampling results from this event indicated concentrations of TCE at 34 µg/m^3, which remained above the NYSDOH Air Guideline Value of 5 µg/m^3 for TCE.

On March 12, 2009 a second post unit sampling event was conducted. Samples were collected from the basement air, first floor living space, and also included a duplicate sample from the first floor living space during this event. The basement air sample detected concentrations of TCE at 32 µg/m^3, PCE at 0.49 µg/m^3 and TCA at 41 µg/m^3. Results from the first floor living space indicated concentrations of TCE at 3.0 µg/m^3 and TCA at 5.5 µg/m^3, PCE was not detected in the first floor living space sample. During this sampling event, the detection of TCE in the basement air was the only compound that exceeded its respective NYSDOH Air Guideline Value.

A third post unit sampling event was conducted on April 30, 2009. A basement air sample and duplicate sample were collected during this event. The sampling results indicated concentrations of TCE at 52 µg/m^3, PCE at 0.54 µg/m^3 and TCA at 65 µg/m^3. A first floor living space sample was not collected during this event since VOC concentrations from this area during the previous sampling event (March 12, 2009) did not exceed NYSDOH Air Guideline Values. The APUs installed in the basement and first floor remain in operation.

3.4 Home #4

Home #4 is a ranch with a full basement and was built in the 1950's. The footprint of the home is approximately 1,100 sq ft and includes a separate basement apartment in the north central portion of the home. A residential summary sheet presenting the sampling results is provided as Table 3-5.

The home was initially sampled on January 21, 2009 and the sampling included the collection of two basement indoor air samples and a basement sub-slab vapor sample. The indoor air samples were collected from the basement apartment (northern portion of the basement) and from the separate small basement area located in the southern portion of the home. The samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 6.8, 2.9 and 1,400 µg/m^3 in the basement air, basement apartment air and sub-slab vapor samples, respectively. PCE was detected at 2.2 and 42 µg/m^3 in the basement apartment air and sub-slab vapor samples, respectively. PCE was not detected in the basement air sample. TCA was detected at 6.4, 2.7 and 2,100 µg/m^3 in the basement air, basement apartment air and sub-slab vapor samples, respectively. Analytical results were evaluated against the NYSDOH decision matrices (see Appendix F). The recommended action for TCE and TCA was mitigation, while no further action (NFA) was recommended for PCE.

Based on the results of the initial sampling, on February 18, 2009 an indoor air sample was collected from the first floor living space to further evaluate indoor air quality. After collection of the living space sample, an APU was installed in the southern portion of the basement as an interim mitigation measure. The sewer utility sump, also located in this southern portion of the basement, was sealed to address this potential pathway for soil vapor to enter the home. Results from the initial first floor living space sample indicated a concentration of TCE at 6.1 µg/m^3, which was above the NYSDOH Air Guideline Value of 5 µg/m^3. PCE and TCA were detected at concentrations of 0.82 µg/m^3 and 6.2 µg/m^3, respectively, which are less than the respective NYSDOH air guideline values.

The first post air purification unit sampling event was conducted on February 26, 2009 and an indoor air sample was collected from the basement air (southern portion of home). Sample results indicated concentrations of TCE at 1.2 µg/m^3 and TCA at 1.6 µg/m^3, which were below the NYSDOH Air Guideline Values. PCE was not detected in this basement air sample.

On March 24, 2009 a second post unit sampling event was conducted and an indoor air sample was collected from the first floor living space. Sample results indicated concentrations of TCE at 1.1 µg/m^3 and TCA at 1.2 µg/m^3, which were below the NYSDOH Air Guideline Values. PCE was not detected in this living space air sample. The APU installed in the basement remains in operation.

3.5 Home #5

Home #5 is a split-level home with a partial basement built in the 1950's. The footprint of the home is approximately 1,200 sq ft and includes a small basement area in the north central portion of the home. A residential summary sheet presenting the sampling results is provided as Table 3-6.

The home was initially sampled on January 21, 2009 and included the collection of a basement air and basement sub-slab vapor samples. These samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B. It should be noted that the homeowner was a professional painter and worked in the basement portion of the home. Paints, thinners, and other painting supplies were stored in the basement. The homeowner had an existing APU in the basement that was not in operation during the initial sampling.

Sample results from the basement sub-slab vapor sample indicated concentrations of TCE at 0.35 µg/m^3, PCE at 4.5 µg/m3 and TCA at 1.7 µg/m^3. Sample results from the basement air indicated TCA at a concentration of 0.72 µg/m^3. TCE and PCE were not detected in the basement air sample. Analytical results were evaluated against the NYSDOH decision matrices (see Appendix F) and NFA was the recommended action for site-related VOCs in this home. Therefore, no interim mitigation measures were conducted.

3.6 Home #6

Home #6 is a ranch with a full basement and was built in the late 1950's to early 1960's. The footprint of the home is approximately 1,200 sq ft and includes a full basement. A residential summary sheet presenting the sampling results is provided as Table 3-7.

The home was initially sampled on February 19, 2009 and the sampling included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. The samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 6.6, 43, and 740 µg/m^3 in the first floor living space, basement air, and sub-slab vapor samples, respectively. PCE was detected at 8.8, 56, and 650 µg/m^3 and TCA was detected at 8.8, 40, and 1,600 µg/m^3 in the first floor living space, basement air, and sub-slab vapor samples, respectively. The analytical results were evaluated against the NYSDOH decision matrices (see Appendix F). Based on these matrices, mitigation was the recommended action for TCE and TCA, while monitoring was recommended for PCE.

As an interim mitigation measure for potential exposure to soil vapor intrusion, an APU was installed in the basement immediately after sample collection on February 19, 2009. On February 26, 2009, the first post air purification unit sampling event was conducted and an indoor air sample was collected from the basement. Sample results indicated concentrations of TCE at 2.1 µg/m^3, PCE at 2.4 µg/m^3 and TCA at 2.4 µg/m^3. These detections of VOCs were below their respective NYSDOH Air Guideline Values.

On March 24, 2009 a second post unit sampling event was conducted and an indoor air sample was collected from the first floor living space. Sample results indicated concentrations of TCE at

1.2 µg/m^3, PCE at 1.6 µg/m^3 and TCA at 7.0 µg/m^3. These detections were below their respective NYSDOH Air Guideline Values. The APU installed in the basement remains in operation.

3.7 Home #7

Home #7 is a two story colonial style home with a full basement and was built in the 1950's. The footprint of the home is approximately 1,100 sq ft and includes a full basement. A residential summary sheet presenting the sampling results is provided as Table 3-8.

The home was initially sampled on February 20, 2009 and the sampling included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. These samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 0.40, 0.75, and 170 µg/m^3 in the first floor living space, basement air, and sub-slab vapor samples, respectively. PCE was detected at 1.6, 3.2, and 310 µg/m^3 and TCA was detected at 0.51, 1.0, and 370 µg/m^3 in the first floor living space, basement air, and sub-slab vapor samples, respectively. The analytical results were evaluated against the NYSDOH decision matrices (see Appendix F). Based on these matrices, the recommended action for TCE and PCE was mitigation/monitoring, while monitoring was recommended for TCA.

As an interim mitigation measure for potential exposure to soil vapor intrusion, an APU was installed in the basement immediately after sample collection on February 20, 2009. On March 25, 2009 a post air purification unit sampling event was conducted and an air sample was collected from the basement. Sample results indicated concentrations of TCE at 0.20 µg/m^3, PCE at 0.90 µg/m^3 and TCA at 0.47 µg/m^3, which were below their respective NYSDOH Air Guideline Values. The APU installed in the basement remains in operation.

3.8 Home #8

Home #8 is a two story colonial style home and was built in 1960. The footprint of the home is approximately 1,100 sq ft and includes a full basement. A residential summary sheet presenting the sampling results is provided as Table 3-9.

The home was initially sampled on February 20, 2009 and included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. These samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling, TCE was detected at a concentration of 16 $\mu g/m^3$ in the sub-slab vapor sample. TCE was not detected in the basement or first floor living space samples. PCE was detected at 2.6, 0.34, and 3.4 $\mu g/m^3$ in the first floor living space, basement air, and sub-slab vapor samples, respectively. TCA was detected at 0.49 and 45 $\mu g/m^3$ in the basement air and sub-slab vapor samples, respectively. TCA was not detected in the first floor living space sample. The analytical results were evaluated against the NYSDOH decision matrices (see Appendix F) and NFA was the recommended action for TCE, PCE and TCA.

As an interim mitigation measure for potential exposure to soil vapor intrusion, an APU was installed in the basement immediately after sample collection on February 20, 2009. Based on the sampling results and the NYSDOH matrix evaluation, post air purification unit sampling was not conducted and the APU was removed on April 29, 2009.

3.9 Home #9

Home #9 is a ranch home and was built in the 1950s. The footprint of the home is approximately 1,100 sq ft and includes a full basement. A residential summary sheet presenting the sampling results is provided as Table 3-10.

The home was initially sampled on February 25, 2009 and the sampling included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. A duplicate air sample was collected from the basement air and the samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 0.34, 0.50, and 21 $\mu g/m^3$ in the first floor living space, basement air and sub-slab vapor, respectively. PCE was detected at 0.33, 0.62, and 8.8 $\mu g/m^3$ and TCA was detected at 0.61, 1.8 and 140 $\mu g/m^3$ in the first floor living space, basement air and sub-slab vapor samples, respectively. The analytical results were evaluated against the NYSDOH decision matrices (see Appendix F) and NFA was recommended for TCE and PCE, while monitoring was recommended for TCA.

As an interim mitigation measure for potential exposure to soil vapor intrusion, an APU was installed in the basement immediately after sample collection on February 25, 2009. At the homeowner's request, the APU was removed on March 10, 2009. However, the homeowner later decided that they would like to have an APU re-installed in their home. On April 30, 2009, an APU was re-installed and is currently in operation.

3.10 Home #10

Home #10 is a ranch home and was built in the late 1950's or early 1960's. The footprint of the home is approximately 1,200 sq ft and includes a full basement. A residential summary sheet presenting the sampling results is provided as Table 3-11.

The home was initially sampled on February 26, 2009 and the sampling included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. The samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 2.9 and 300 µg/m^3 in the basement air and sub-slab vapor samples, respectively. TCE was not detected in the first floor living space sample. PCE was detected at 2.1, 16, and 670 µg/m^3 and TCA was detected at 0.58, 3.9 and 590 µg/m^3 in the first floor living space, basement air, and sub-slab vapor samples, respectively. Analytical results were evaluated against the NYSDOH decision matrices (see Appendix F) and the recommended action for TCE was mitigation. Monitoring was the recommended action for PCE and TCA.

As an interim mitigation measure for potential exposure to soil vapor intrusion, an APU was installed in the basement immediately after sample collection on February 26, 2009. A post air purification unit sampling event was conducted on March 24, 2009. An air sample and duplicate were collected from the basement air and the results indicated concentrations of TCE at 1.5 µg/m^3, PCE at 7.4 µg/m^3 and TCA at 2.2 µg/m^3. These concentrations were below their respective NYSDOH Air Guideline Values. The APU installed in the basement remains in operation.

3.11 Home #11

Home #11 is a ranch home and was built in 1966. The footprint of the home is approximately 1,200 sq ft and includes a full basement and no garage. A residential summary sheet presenting the sampling results is provided as Table 3-12.

The home was initially sampled on February 25, 2009, which included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. These samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE and TCA were detected in the sub-slab vapor sample at a concentration of 15 µg/m^3 and 50 µg/m^3, respectively. TCE and TCA were not detected in the first floor living space or basement air samples. PCE was detected at 0.29 and 40 µg/m^3 in the basement air and sub-slab vapor samples, respectively. PCE was not detected in the first floor living space sample. The analytical results were evaluated against the NYSDOH decision matrices (see Appendix F) and NFA was recommended for these three compounds.

As an interim mitigation measure for potential exposure to soil vapor intrusion, an APU was installed in the basement immediately after sample collection on February 25, 2009. Based on the sampling results and the NYSDOH matrix evaluation, post air purification unit sampling was not conducted and the APU was removed on April 29, 2009.

3.12 Home #12

Home #12 is a ranch home and was built in 1952. The footprint of the home is approximately 1,100 sq ft and includes a full basement. A residential summary sheet presenting the sampling results is provided as Table 3-13.

The home was initially sampled on February 26, 2009 and the sampling included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. The samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 0.55 and 94 µg/m^3 in the basement air and sub-slab vapor samples, respectively. TCE was not detected in the first floor living space sample. PCE was detected at 0.83, 0.85, and 19 µg/m^3 and TCA was detected at 0.81, 2.2, and 330 µg/m^3 in the first floor living space, basement air, and sub-slab vapor samples, respectively. Analytical results were evaluated against the NYSDOH decision matrices (see Appendix F) and the recommended actions were mitigation for TCE, NFA for PCE, and monitoring for TCA.

As an interim mitigation measure for potential exposure to soil vapor intrusion, an APU was installed in the basement immediately after sample collection on February 26, 2009. A post air purification unit sampling event was conducted on March 25, 2009. An air sample was collected from the basement air and results indicated concentrations of TCE at 0.21 µg/m^3 and TCA at 1.0 µg/m^3. PCE was not detected in this basement air sample. These concentrations were below the NYSDOH Air Guideline Values. The APU installed in the basement remains in operation.

3.13 Home #13

Home #13 is a remodeled ranch home with a second floor loft and was originally built in 1890. The footprint of the home is approximately 1,300 sq ft and includes a partial basement in the southern portion of the home and a separate detached garage. A residential summary sheet presenting the sampling results is provided as Table 3-14.

The home was initially sampled on February 26, 2009 and the sampling included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. A duplicate sample was collected from the sub-slab vapor sample location. The samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 1.5 and 250 µg/m^3 in the basement air and sub-slab vapor samples, respectively. TCE was not detected in the first floor living space sample. PCE was detected at 0.58, 0.56, and 12 µg/m^3 and TCA was detected at 0.90, 2.3, and 440 µg/m^3 in the first floor living space, basement air and sub-slab vapor samples, respectively. Analytical results were evaluated against the NYSDOH decision matrices (see Appendix F) and the recommended action was mitigation for TCE, NFA for PCE, and monitoring for TCA.

As an interim mitigation measure for potential exposure to soil vapor intrusion, an APU was installed in the basement immediately after sample collection on February 26, 2009. A post air purification unit sampling event was conducted on March 24, 2009 in which an air sample was collected from the basement air. The sample results indicated concentrations of TCE at 0.50 µg/m^3 and TCA at 1.2 µg/m^3. PCE was not detected in the basement air sample. These concentrations were below the NYSDOH Air Guideline Values. The APU installed in the basement remains in operation.

3.14 Home #14

Home #14 is a ranch home with an attached garage and was built in 1968. The footprint of the home is approximately 1,100 sq ft and has a full basement. This home is currently being used as a rental property and includes the first floor and a separate rental unit in the basement. A residential summary sheet presenting the sampling results is provided as Table 3-15.

The home was initially sampled on March 11, 2009 and the sampling included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. A duplicate sample was collected from the sub-slab vapor sample location. The samples were submitted to Air Toxics Ld. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 0.73, 1.9, and 290 µg/m^3 in the first floor living space, basement air and sub-slab vapor samples, respectively. PCE was detected at concentrations of 0.36, 0.46, and 15 µg/m^3 and TCA was detected at 1.3, 2.6, and 970 µg/m^3 in the first floor living space, basement air and sub-slab vapor samples, respectively. Analytical results were evaluated against the NYSDOH decision matrices (see Appendix F) and the recommended action was mitigation for TCE, NFA for PCE, and monitoring for TCA.

As an interim mitigation measure for potential exposure to soil vapor intrusion, an APU was installed in the basement immediately after sample collection on March 11, 2009. A post air purification unit sampling event was conducted on March 25, 2009 and an air sample was collected from the basement air. The sample results detected a concentration of TCA at 0.41 µg/m^3. TCE and PCE were not detected in this basement air sample. The APU installed in the basement remains in operation.

3.15 Home #15

Home #15 is a ranch home with an attached garage and was built in 1960. The footprint of the home is approximately 1,100 sq ft and has a full basement. A residential summary sheet presenting the sampling results is provided as Table 3-16.

The home was initially sampled on March 11, 2009 and the sampling included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. The samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at 25 µg/m^3 in the sub-slab vapor sample. TCE was not detected in the basement air and living space samples. PCE was detected at concentrations of 0.3, 0.62, and 38 µg/m^3 in the first floor living space, basement air and sub-slab vapor samples, respectively. TCA was detected at 0.66 and 160 µg/m^3 in the basement air and sub-slab vapor samples, respectively. TCA was not detected in the first floor living space sample. Analytical results were evaluated against the NYSDOH decision matrices (see Appendix F) and NFA was recommended for TCE and PCE, while monitoring was recommended for TCA.

As an interim mitigation measure for potential exposure to soil vapor intrusion, an APU was installed in the basement immediately after sample collection on March 11, 2009. Since the initial sampling results did not indicate VOC concentrations exceeding the NYSDOH air guideline values, additional air sampling was not conducted. Based on the homeowner's request, the APU installed in the basement remains in operation.

3.16 Home #16

Based on an evaluation of the indoor air sampling conducted in Homes #1 through #15, the Navy and NYSDOH selected Home #16 for indoor air sampling to verify that the home was outside of the delineated soil vapor plume. Since Home #16 was considered less likely to be impacted by contaminated soil vapor, an APU was not installed immediately after Initial sampling.

Home #16 is a two story colonial style home with a full basement and was built in the 1960's. The footprint of the home is approximately 1,100 sq ft. A residential summary sheet presenting the sampling results is provided as Table 3-17.

The home was initially sampled on April 28, 2009 and the sampling included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. The samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at 9.1 µg/m^3 in the sub-slab vapor sample. TCE was not detected in the basement air and living space samples. PCE was detected at concentrations of 0.31 and 3.8 µg/m^3 in the first floor living space and sub-slab vapor samples, respectively. PCE was not detected in the basement air sample. TCA was detected at 0.27, 0.51, and 24 µg/m^3 in the first floor living space, basement air and sub-slab vapor samples, respectively. Analytical results were evaluated against the NYSDOH decision matrices (see Appendix F) and NFA was the recommended action for this home. Therefore, no interim mitigation measures were conducted.

3.17 Home #17

Based on an evaluation of the indoor air sampling conducted in Homes #1 through #15, the Navy and NYSDOH selected Home #17 for indoor air sampling to verify that the home was outside of the delineated soil vapor plume. Since Home #17 was considered less likely to be impacted by contaminated soil vapor, an APU was not installed immediately after Initial sampling.

Home #17 is a ranch home with a detached garage and was built around 1956. The footprint of the home is approximately 1,100 sq ft and has a full basement. A residential summary sheet presenting the sampling results is provided as Table 3-18.

The home was initially sampled on April 28, 2009 and the sampling included the collection of two indoor air samples (basement and first floor living space) and a basement sub-slab vapor sample. The samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at 11 µg/m^3 in the sub-slab vapor sample. TCE was not detected in the basement air and living space air samples. PCE was detected at concentrations of 3, 6.2, and 5 µg/m^3 in the first floor living space, basement air, and sub-slab vapor samples, respectively. TCA was detected at 0.15 and 26 µg/m^3 in the basement air and sub-slab vapor samples, respectively. TCA was not detected in the first floor living space sample.

Analytical results were evaluated against the NYSDOH decision matrices (see Appendix F) and NFA was the recommended action for this home. Therefore, no interim mitigation measures were conducted.

3.18 Home #18

Based on an evaluation of the indoor air sampling conducted in Homes #1 through #15, the Navy and NYSDOH selected Home #18 for indoor air sampling to verify that the home was outside of the delineated soil vapor plume. Since Home #18 was considered less likely to be impacted by contaminated soil vapor, an APU was not installed immediately after Initial sampling.

Home #18 is a ranch home with a detached garage and was built around 1958. The footprint of the home is approximately 1,100 sq ft and has a full basement. A residential summary sheet presenting the sampling results is provided as Table 3-19.

The home was initially sampled on April 29, 2009 and the sampling included the collection of a basement air and basement sub-slab vapor. A first floor living space sample was not collected during the April 29, 2009 sampling event due to painting being conducted in the first floor living space. The samples were submitted Air Toxics Ltd. for TO-15 VOC analysis. A floor plan sketch depicting sample locations is provided in the NYSDOH Indoor Air Quality Questionnaire presented in Appendix B.

During the initial sampling event, TCE was detected at concentrations of 1.8 and 64 µg/m^3, PCE at 1.8 and 8.4 µg/m^3, and TCA at 0.84 and 68 µg/m^3 in the basement air and sub-slab vapor samples, respectively. These VOC concentrations were below the respective NYSDOH guideline values. However, analytical results from the ambient outdoor air sample (BPS1-AR018-ODA), associated with these indoor air samples, contained concentrations of VOCs greater than those detected in the basement air sample. In particular, TCE and PCE were detected at concentrations of 27 and 3.8 µg/m^3, respectively. Therefore, the Navy and NYSDOH concluded that re-sampling should be conducted at Home #18 to determine whether the TCE and PCE detections were potentially related to soil vapor intrusion. Further detail regarding outdoor air samples is provided in Section 3.19.

The re-sampling event was conducted on May 20, 2009 and samples were collected from the basement air, first floor living space, and ambient outdoor air. The analytical results from the outdoor air sample did not show the elevated levels of VOCs as detected in the initial outdoor air sample collected. During the re-sampling event, TCE was detected at 0.41 µg/m^3, in the basement air sample. TCE was not detected in the first floor living space sample. PCE was detected at 0.39 and 0.58 µg/m^3 in the first floor living space and basement air samples, respectively. TCA was not detected in the first floor living space and basement air samples. The analytical results from this re-sampling event and the sub-slab vapor results from the April 29, 2009 sampling event were evaluated against the NYSDOH decision matrices (see Appendix F) and monitoring/mitigation was recommended for TCE, while NFA was recommended for PCE and TCA. Therefore, interim mitigation measures were not conducted.

3.19 Outdoor Air Samples

During each of the sampling events conducted at the 18 residential homes, outdoor air samples were collected at the same time as the indoor air and sub-slab vapor samples. Outdoor air samples were used to evaluate the potential influence of outdoor air on indoor air quality. The outdoor air samples were collected to represent upwind ambient air data for the residential area. For some samples, a single upwind outdoor air sample was used to evaluate two nearby homes. A total of 14 outdoor air samples were collected throughout the sampling program. Outdoor air samples were submitted to Air Toxics Ltd. for TO-15 VOC analysis. Figure 3 presents the locations of the outdoor air samples collected during this investigation. Table 3-20 provides an analytical summary of detections for the outdoor air sampling.

Sample results from outdoor air samples associated with Homes #1 through #17 did not contain concentrations of VOCs that suggested a potential outdoor air influence on indoor air quality. For example, the maximum concentration observed in outdoor air for TCE was 0.4 µg/m^3, PCE was 1.2 µg/m^3, and TCA was 0.24 µg/m^3. However, outdoor air sample BPS1-AR018-ODA, associated with the April 29, 2009 sampling event at Home #18 did contain concentrations of VOCs at concentrations greater than those detected in the corresponding indoor air sample. In particular, TCE was detected at 27 µg/m^3, PCE was detected at 3.8 µg/m^3, and cis-1,2-dichloroethene was detected at 24 µg/m^3 in this outdoor air sample. As a result of this anomaly, Home #18 was re-sampled in May 2009. Results from the re-sampling of outdoor air at Home #18, presented in Table 3-20, did not indicate elevated levels of VOCs in outdoor air (BPS1-AR018-ODA2) and much lower concentrations were observed in the indoor air samples. Therefore, the indoor air results from the re-sampling at Home #18 were considered valid and used in evaluating future action as presented in Section 3.18.

4.0 DATA EVALUATION SUMMARY

TCE, PCE, and TCA represent the primary COCs and are the primary focus for evaluating sub-slab vapor and indoor air data for this soil vapor intrusion investigation. The NYSDOH Soil Vapor Intrusion Guidance document presents decision matrices (presented in Appendix F) for these compounds and provides the basis for evaluation of the analytyical data collected. The matrices also provide the guidelines for determining future action at each home in regards to mitigation, monitoring, and/or NFA. Analytical results were compared to the decision matrices, as initially presented in Section 3.0, to determine future action at each of the homes. The following sections summarize the evaluation of analytical data collected during the soil vapor investigation activities.

4.1 SOIL VAPOR INTRUSION SAMPLING

The sub-slab vapor and indoor air sampling results for TCE, PCE and TCA collected from the initial sampling events were evaluated against the NYSDOH decision matrices provided in Appendix F. Table 4-1 provides a summary of this evaluation by home for TCE, PCE, and TCA.

Based on the comparison of initial sampling results to the NYSDOH matrices, the following summarizes the NYSDOH matrix evaluation for TCE:

- 7 homes were recommended for mitigation
- 4 homes were recommended for mitigation/monitoring
- 1 home was recommended for monitoring only
- 6 homes were recommended for NFA

The following summarizes the NYSDOH matrix evaluation for PCE:

- 3 homes were recommended for mitigation/monitoring
- 3 homes were recommended for monitoring only
- 12 homes were recommended for NFA

The following summarizes the NYSDOH matrix evaluation for TCA:

- 4 homes were recommended for mitigation
- 7 homes were recommended for monitoring only
- 7 homes were recommended for NFA

Based on the indoor air evaluation summary presented above and detailed in Table 4-1, additional mitigation measures and monitoring are needed to address indoor air concentrations of

TCE, PCE, and TCA. Conclusions and recommendations for each home are presented in Section 5.0.

4.2 POST AIR PURIFICATION UNIT SAMPLING RESULTS

During the soil vapor intrusion investigation, APUs were installed in 14 homes. Some of the units were installed based on analytical results; other units were installed as a precautionary measure until sampling results were received. Post APU sampling events were conducted to assess the effectiveness of these units in 10 of the 14 homes where APUs were installed. Post unit sampling events were conducted in Homes #1, #2, #3, #4, #6, #7, #10, #12, #13, and #14. Results of the post unit sampling events can be found in Table 3-1. APUs were also installed in homes #8, #9, #11 and #15 immediately after the initial samples were collected. Based on the initial sampling results for these homes, in which TCE, PCE, and TCA were less than the NYSDOH guideline values, and mitigation was not recommended, post unit sampling events were not conducted in these homes.

The post APU sampling results for TCE, PCE and TCA were less than the initial sampling results. Except for TCE in Home #3 basement samples, the post APU sampling results were less than the NYSDOH air guideline value. A total of three post APU sampling events were conducted in the basement of Home #3 and a summary of the analytical results is provided in Table 4-1. The first post APU sampling event was conducted on February 26, 2009 one week after APU installation. Results from the first sampling event detected TCE at a lower concentration in comparison to the initial basement air results (34 µg/m^3 versus 180 µg/m^3), but TCE still exceeded the NYSDOH air guideline value of 5 µg/m^3. A second and third post APU sampling event was conducted on March 12, and April 30, 2009. TCE was detected at 31 µg/m^3 and 52 µg/m^3, respectively. Operation of the APU was checked during each sampling event and the carbon filters were changed on March 23, 2009 after the second sampling event indicated the TCE concentration in basement air remained above the NYSDOH air guideline value. It is suspected that home specific conditions (i.e. tightness, unfinished basement, humidity, etc.) may be affecting the sampling results and additional mitigation measures may be necessary to address indoor basement air at Home #3.

With the exception of Home #3, analytical results from post APU sampling events have shown that the APUs have been effective in lowering concentrations of TCE, PCE, and TCA in the residential homes. As seen in Table 4-1, Home #2, #4, and #6 had initial concentrations of TCE above the NYSDOH guideline value of 5 µg/m^3. Sampling results obtained after APUs were in operation for 1 to 2 months indicated TCE concentrations below 5 µg/m^3 in these three homes.

Future indoor air sampling will be conducted to monitor APU performance and also evaluate any additional mitigation measures needed to address contaminated soil vapor in the neighborhood.

4.3 FUTURE SAMPLING

Based on evaluation of the indoor air sampling results and discussions between the Navy and NYSDOH and NYSDEC, it was determined that the following nine compounds represent the compounds of concern for soil vapor intrusion investigation activities associated with Site 1: TCE, PCE, TCA, 1,2-dichloroethane, 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2 dichloroethene, trans-1,2-dichloroethene, and vinyl chloride. Therefore, only these nine compounds will be reported in future air sampling at Site 1 and in the residential neighborhood.

Additional indoor air, sub-slab vapor, and outdoor air sampling will be conducted as needed to verify effectiveness of selected mitigation methods and monitor indoor air quality in the impacted homes.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the evaluation of the indoor air sampling results the following conclusions were developed:

1. TCE, PCE, and TCA are the primary COCs for evaluating soil vapor intrusion in residential homes adjacent to NWIRP Bethpage - Site 1.

2. TCE was detected at concentrations above the NYSDOH maximum sub-slab soil vapor guideline value of 250 µg/m^3 in Homes #2, #3, #4, #6, #10, #13, and #14.

3. TCE was detected at concentrations above the NYSDOH indoor air guideline value of 5 µg/m^3 in Homes #2, #3, #4, and #6.

4. APUs were effective in reducing contaminant concentrations below NYSDOH air guideline values in all but one residential home (Home #3 – basement air only).

5. Based on the NYSDOH decision matrices, mitigation was recommended in Homes #2, #3, #4, #6, #10, #13, and #14.

6. Based on the NYSDOH decision matrices, mitigation and/or monitoring were recommended in Homes #1, #7, #9, #14, #15, and #18.

7. Based on the NYSDOH decision matrices, no further action was required for Homes #5, #8, #11, #16, and #17.

Recommendations to address soil vapor intrusion from Site 1 are as follows:

1. Install a Soil Vapor Extraction (SVE) at NWIRP Bethpage to address long term remediation of contaminated soil vapor on or near Site 1.

2. Install sub-slab depressurization systems (SSD) in homes exhibiting sub-slab TCE concentrations greater than 250 µg/m^3, which includes Homes #2, #3, #4, #6, #10, #13, and #14.

3. Conduct future indoor air sampling in Homes #1, #7, #9, #14, #15, and #18 to evaluate and monitor indoor air quality in these homes.

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TABLES

TABLE 2-1
SUMMARY OF OFFSITE INDOOR AIR AND SUB-SLAB VAPOR SAMPLING
SITE 1 - FORMER DRUM MARSHALING AREA
NWIRP BETHPAGE, NEW YORK

Home #	Date Collected	Sample ID	Sample Type	Event Type
1	1/20/2009	BPS1-AR001-SSB	Sub-slab	IS
	1/20/2009	BPS1-DUP-01	QA/QC (SSB)	IS
	1/20/2009	BPS1-AR001-IND	Living Space	IS
	2/24/2009	BPS1-AR001-IND2	Living Space	PUS
2	1/21/2009	BPS1-AR002-SSB	Sub-slab	IS
	1/21/2009	BPS1-AR002-IND	Basement	IS
	2/19/2009	BPS1-AR002-IND2	Living Space	IS
	2/24/2009	BPS1-AR002-IND3	Basement	PUS
	3/24/2009	BPS1-AR002-IND4	Living Space	PUS
	3/24/2009	BPS1-AR002-IND5	Basement	PUS
3	1/22/2009	BPS1-AR003-SSB	Sub-slab	IS
	1/22/2009	BPS1-AR003-IND	Basement	IS
	1/22/2009	BPS1-DUP-02	QA/QC (IND)	IS
	2/18/2009	BPS1-AR003-IND2	Living Space	IS
	2/26/2009	BPS1-AR003-IND3	Basement	PUS
	2/26/2009	BPS1-DUP-IND	QA/QC (IND3)	PUS
	3/12/2009	BPS1-AR003-IND4	Basement	PUS
	3/12/2009	BPS1-AR003-IND5	Living Space	PUS
	3/12/2009	BPS1-DUP-IND3	QA/QC (IND5)	PUS
	4/30/2009	BPS1-AR003-INDB	Basement	PUS
	4/30/2009	BPS1-DUP	QA/QC (IND)	PUS
4	1/21/2009	BPS1-AR004-SSB	Sub-slab	IS
	1/21/2009	BPS1-AR004-IND	Basement	IS
	1/21/2009	BPS1-AR004-IND2	Basement-APT	IS
	2/18/2009	BPS1-AR004-IND3	Living Space	IS
	2/26/2009	BPS1-AR004-IND4	Basement	PUS
	3/24/2009	BPS1-AR004-IND5	Living Space	PUS
5	1/21/2009	BPS1-AR005-SSB	Sub-slab	IS
	1/21/2009	BPS1-AR005-IND	Basement	IS
6	2/19/2009	BPS1-AR006-SSB	Sub-slab	IS
	2/19/2009	BPS1-AR006-IND	Basement	IS
	2/19/2009	BPS1-AR006-IND2	Living Space	IS
	2/26/2009	BPS1-AR006-IND3	Basement	PUS
	3/24/2009	BPS1-AR006-IND4	Living Space	PUS
7	2/20/2009	BPS1-AR007-SSB	Sub-slab	IS
	2/20/2009	BPS1-AR007-IND	Basement	IS
	2/20/2009	BPS1-AR007-IND2	Living Space	IS
	3/25/2009	BPS1-AR007-IND3	Basement	PUS
8	2/20/2009	BPS1-AR008-SSB	Sub-slab	IS
	2/20/2009	BPS1-AR008-IND	Basement	IS
	2/20/2009	BPS1-AR008-IND2	Living Space	IS

NOTES:

IND = Indoor Air sample
SSB = Sub-slab Air Sample
IS = Initial Sampling
PUS = Post Air Purification Unit Sampling
Basement or "B" = Basement Air

Living Space or "L" = Living Space A
DUP = duplicate sample
APT = apartment
QA/QC = quality assurance/quality c

Sample collection date refers to the end of a 24-hour sampling period in which the sample was collected

TABLE 2-1
SUMMARY OF OFFSITE INDOOR AIR AND SUB-SLAB VAPOR SAMPLING
SITE 1 - FORMER DRUM MARSHALING AREA
NWIRP BETHPAGE, NEW YORK

Home #	Date Collected	Sample ID	Sample Type	Event Type
9	2/25/2009	BPS1-AR009-SSB	Sub-slab	IS
	2/25/2009	BPS1-AR009-IND	Basement	IS
	2/25/2009	BPS1-DUP-IND	QA/QC (IND)	IS
	2/25/2009	BPS1-AR009-IND2	Living Space	IS
10	2/26/2009	BPS1-AR010-SSB2	Sub-slab	IS
	2/25/2009	BPS1-AR010-IND	Basement	IS
	2/25/2009	BPS1-AR010-IND2	Living Space	IS
	3/24/2009	BPS1-AR010-IND3	Basement	PUS
	3/24/2009	BPS1-DUP-IND4	QA/QC (IND3)	PUS
11	2/25/2009	BPS1-AR011-SSB	Sub-slab	IS
	2/25/2009	BPS1-AR011-IND	Basement	IS
	2/25/2009	BPS1-AR011-IND2	Living Space	IS
12	2/26/2009	BPS1-AR012-SSB	Sub-slab	IS
	2/26/2009	BPS1-AR012-IND	Basement	IS
	2/26/2009	BPS1-AR012-IND2	Living Space	IS
	3/25/2009	BPS1-AR012-IND3	Basement	PUS
13	2/26/2009	BPS1-AR013-SSB	Sub-slab	IS
	2/26/2009	BPS1-DUP-SSB	QA/QC (SSB)	IS
	2/26/2009	BPS1-AR013-IND	Basement	IS
	2/26/2009	BPS1-AR013-IND2	Living Space	IS
	3/24/2009	BPS1-AR013-IND3	Basement	PUS
14	3/11/2009	BPS1-AR014-SSB	Sub-slab	IS
	3/11/2009	BPS1-AR014-IND	Basement	IS
	3/11/2009	BPS1-AR014-IND2	Living Space	IS
	3/25/2009	BPS1-AR014-IND3	Basement	PUS
15	3/11/2009	BPS1-AR015-SSB	Sub-slab	IS
	3/11/2009	BPS1-AR015-IND	Basement	IS
	3/11/2009	BPS1-AR015-IND2	Living Space	IS
16	4/28/2009	BPS1-AR016-SSB	Sub-slab	IS
	4/28/2009	BPS1-AR016-INDB	Basement	IS
	4/28/2009	BPS1-AR016-INDL	Living Space	IS
17	4/28/2009	BPS1-AR017-SSB	Sub-slab	IS
	4/28/2009	BPS1-AR017-INDB	Basement	IS
	4/28/2009	BPS1-AR017-INDL	Living Space	IS
18	4/29/2009	BPS1-AR018-SSB	Sub-slab	IS
	4/29/2009	BPS1-AR018-INDB	Basement	IS
	5/21/2009	BPS1-AR018-INDB-2	Basement	RE-IS
	5/21/2009	BPS1-AR018-INDL	Living Space	RE-IS

NOTES:

IND = Indoor Air sample
SSB = Sub-slab Air Sample
IS = Initial Sampling
PUS = Post Air Purification Unit Sampling
Basement or "B" = Basement Air
Living Space or "L" = Living Space A
DUP = duplicate sample
APT = apartment
QA/QC = quality assurance/quality c
RE = re-sampling

Sample collection date refers to the end of a 24-hour sampling period in which the sample was collected

TABLE 3-1
INDOOR AIR AND SUB-SLAB VAPOR ANALYTICAL RESULTS
SITE 1 - FORMER DRUM MARSHALING AREA
NWIRP BETHPAGE, NEW YORK

Home #	Date Collected	Sample ID	Sample Type	Event Type	TCE (µg/m^3)	PCE (µg/m^3)	TCA (µg/m^3)
1	1/20/2009	BPS1-AR001-SSB	Sub-slab	IS	160	520	660
	1/20/2009	BPS1-DUP-01	QA/QC (SSB)	IS	160	550	690
	1/20/2009	BPS1-AR001-IND	Living Space	IS	2.2	10.0	2.1
	2/24/2009	BPS1-AR001-IND2	Living Space	PUS	0.44	2.2	0.87
2	1/21/2009	BPS1-AR002-SSB	Sub-slab	IS	**16,000**	310	**15,000**
	1/21/2009	BPS1-AR002-IND	Basement	IS	**140**	7.6	92.0
	2/19/2009	BPS1-AR002-IND2	Living Space	IS	**100**	4.9	73
	2/24/2009	BPS1-AR002-IND3	Basement	PUS	**46**	2.1	42
	3/24/2009	BPS1-AR002-IND4	Living Space	PUS	3.1	0.91	4.8
	3/24/2009	BPS1-AR002-IND5	Basement	PUS	4.2	ND	11
3	1/22/2009	BPS1-AR003-SSB	Sub-slab	IS	**13,000**	130	**10,000**
	1/22/2009	BPS1-AR003-IND	Basement	IS	**180**	4.3	95
	1/22/2009	BPS1-DUP-02	QA/QC (IND)	IS	**180**	4.2	98
	2/18/2009	BPS1-AR003-IND2	Living Space	IS	**110**	3.1	74
	2/26/2009	BPS1-AR003-IND3	Basement	PUS	**34**	0.75	27
	2/26/2009	BPS1-DUP-IND	QA/QC (IND3)	PUS	**31**	0.72	27
	3/12/2009	BPS1-AR003-IND4	Basement	PUS	**32**	0.49 J	41
	3/12/2009	BPS1-AR003-IND5	Living Space	PUS	2.8	ND	5.2
	3/12/2009	BPS1-DUP-IND3	QA/QC (IND5)	PUS	3.0	ND	5.5
	4/30/2009	BPS1-AR003-INDB	Basement	PUS	**52**	0.38 J	65
	4/30/2009	BPS1-DUP	QA/QC (IND)	PUS	**50**	0.54	64
4	1/21/2009	BPS1-AR004-SSB	Sub-slab	IS	**1,400**	42	**2,100**
	1/21/2009	BPS1-AR004-IND	Basement	IS	**6.8**	ND	6.4
	1/21/2009	BPS1-AR004-IND2	Basement-APT	IS	2.9	2.2	2.7
	2/18/2009	BPS1-AR004-IND3	Living Space	IS	**6.1**	0.82 J	6.2
	2/26/2009	BPS1-AR004-IND4	Basement	PUS	1.2	ND	1.6
	3/24/2009	BPS1-AR004-IND5	Living Space	PUS	1.1	ND	1.2
5	1/21/2009	BPS1-AR005-SSB	Sub-slab	IS	0.35 J	4.5	1.7
	1/21/2009	BPS1-AR005-IND	Basement	IS	ND	ND	0.72
6	2/19/2009	BPS1-AR006-SSB	Sub-slab	IS	**740**	650	**1,600**
	2/19/2009	BPS1-AR006-IND	Basement	IS	**43**	56	40
	2/19/2009	BPS1-AR006-IND2	Living Space	IS	**6.6**	8.8	8.8
	2/26/2009	BPS1-AR006-IND3	Basement	PUS	2.1	2.4	2.4
	3/24/2009	BPS1-AR006-IND4	Living Space	PUS	1.2	1.6	7.0
7	2/20/2009	BPS1-AR007-SSB	Sub-slab	IS	170	310	370
	2/20/2009	BPS1-AR007-IND	Basement	IS	0.75	3.2	1.0
	2/20/2009	BPS1-AR007-IND2	Living Space	IS	0.40	1.6	0.51
	3/25/2009	BPS1-AR007-IND3	Basement	PUS	0.2 J	0.90	0.47
8	2/20/2009	BPS1-AR008-SSB	Sub-slab	IS	16	3.4	45
	2/20/2009	BPS1-AR008-IND	Basement	IS	ND	0.34 J	0.49 J
	2/20/2009	BPS1-AR008-IND2	Living Space	IS	ND	2.6 J	ND

NOTES:

IND = Indoor Air sample
SSB = Sub-slab Air Sample
IS = Initial Sampling
PUS = Post Air Purification Unit Sampling
Basement or "B" = Basement Air
Living Space or "L" = Living Space Air Sample

µg/m^3 = micrograms per cubic meter
J = Estimated value
APT = apartment
TCE = trichloroethene
PCE = tetrachloroethene
TCA = 1,1,1-trichloroethane

BOLD = Concentration exceeds NYSDOH Air guidelines values or NYSDOH sub-slab matrix values

TABLE 3-1
INDOOR AIR AND SUB-SLAB VAPOR ANALYTICAL RESULTS
SITE 1 - FORMER DRUM MARSHALING AREA
NWIRP BETHPAGE, NEW YORK

Home #	Date Collected	Sample ID	Sample Type	Event Type	TCE (µg/m^3)	PCE (µg/m^3)	TCA (µg/m^3)
9	2/25/2009	BPS1-AR009-SSB	Sub-slab	IS	21	8.8	140
	2/25/2009	BPS1-AR009-IND	Basement	IS	0.50	0.62	1.8
	2/25/2009	BPS1-DUP-IND	QA/QC (IND)	IS	0.41 J	0.62 J	1.5
	2/25/2009	BPS1-AR009-IND2	Living Space	IS	0.34 J	0.33 J	0.61
10	2/26/2009	BPS1-AR010-SSB2	Sub-slab	IS	**300**	670	590
	2/25/2009	BPS1-AR010-IND	Basement	IS	2.9	16	3.9
	2/25/2009	BPS1-AR010-IND2	Living Space	IS	ND	2.1	0.58 J
	3/24/2009	BPS1-AR010-IND3	Basement	PUS	1.5	7.4	2.2
	3/24/2009	BPS1-DUP-IND4	QA/QC (IND3)	PUS	1.2	6.60	2.2
11	2/25/2009	BPS1-AR011-SSB	Sub-slab	IS	15	40	50
	2/25/2009	BPS1-AR011-IND	Basement	IS	ND	0.29 J	ND
	2/25/2009	BPS1-AR011-IND2	Living Space	IS	ND	ND	ND
12	2/26/2009	BPS1-AR012-SSB	Sub-slab	IS	94	19	330
	2/26/2009	BPS1-AR012-IND	Basement	IS	0.55	0.85	2.2
	2/26/2009	BPS1-AR012-IND2	Living Space	IS	ND	0.83 J	0.81 J
	3/25/2009	BPS1-AR012-IND3	Basement	PUS	0.21 J	ND	1.0
13	2/26/2009	BPS1-AR013-SSB	Sub-slab	IS	**230**	11	420
	2/26/2009	BPS1-DUP-SSB	QA/QC (SSB)	IS	**250**	12	440
	2/26/2009	BPS1-AR013-IND	Basement	IS	1.5	0.56	2.3
	2/26/2009	BPS1-AR013-IND2	Living Space	IS	ND	0.58 J	0.9 J
	3/24/2009	BPS1-AR013-IND3	Basement	PUS	0.50	ND	1.2
14	3/11/2009	BPS1-AR014-SSB	Sub-slab	IS	**290**	15	970
	3/11/2009	BPS1-AR014-IND	Basement	IS	1.9	0.46 J	2.6
	3/11/2009	BPS1-AR014-IND2	Living Space	IS	0.73	0.36 J	1.3
	3/25/2009	BPS1-AR014-IND3	Basement	PUS	ND	ND	0.41 J
15	3/11/2009	BPS1-AR015-SSB	Sub-slab	IS	25	38	160
	3/11/2009	BPS1-AR015-IND	Basement	IS	ND	0.62	0.66
	3/11/2009	BPS1-AR015-IND2	Living Space	IS	ND	0.3 J	ND
16	4/28/2009	BPS1-AR016-SSB	Sub-slab	IS	9.1	3.8	24
	4/28/2009	BPS1-AR016-INDB	Basement	IS	ND	ND	0.51
	4/28/2009	BPS1-AR016-INDL	Living Space	IS	ND	0.31 J	0.27 J
17	4/28/2009	BPS1-AR017-SSB	Sub-slab	IS	11	5	26
	4/28/2009	BPS1-AR017-INDB	Basement	IS	ND	6.20	0.15 J
	4/28/2009	BPS1-AR017-INDL	Living Space	IS	ND	3	ND
18	4/29/2009	BPS1-AR018-SSB	Sub-slab	IS	64	8.4	68
	4/29/2009	BPS1-AR018-INDB	Basement	IS	1.8	1.8	0.84
	5/21/2009	BPS1-AR018-INDB-2	Basement	RE-IS	0.41 J	0.58	ND
	5/21/2009	BPS1-AR018-INDL	Living Space	RE-IS	ND	0.39 J	ND

NOTES:

IND = Indoor Air sample
SSB = Sub-slab Air Sample
IS = Initial Sampling
PUS = Post Air Purification Unit Sampling
Basement or "B" = Basement Air
Living Space or "L" = Living Space Air Sample

µg/m^3 = micrograms per cubic meter
J = Estimated value
APT = apartment
TCE = trichloroethene
PCE = tetrachloroethene
TCA = 1,1,1-trichloroethane

BOLD = Concentration exceeds NYSDOH Air guidelines values or NYSDOH sub-slab matrix values

Table 3-2
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #1

Name: [redacted]
Address: [redacted]

Home Type: Raised Ranch on slab
Year built: 1962

Initial Sampling (IS)					
Sample ID	**Location**	**Date of Collection**	**TCE (µg/m^3)**	**PCE (µg/m^3)**	**TCA (µg/m^3)**
BPS1-AR001-SSB	Slab Grade	1/20/2009	160	520	660
BPS1-DUP-01	Slab Grade	1/20/2009	160	550	690
BPS1-AR001-IND	LS	1/20/2009	2.2	10	2.1
NYSDOH Decision Matrix and Air Guidline Values (µg/m^3)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	Monitor/mitigate	Monitor	Monitor

Portable Air Filtration Unit					
Installation Date	**Unit #**	**Serial #**	**Model**	**Filter Types**	**Unit Location**
2/17/2009	2	085-108486	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	1st floor east central living space
Maintenance Log	**Unit #**	**Date**	**Unit Condition**	**Notes**	
HEPA filter change	2	6/23/2009	good	Indicator light flashing red, HEPA clogged with cat hair	

APU Evaluation							
Sample ID	**Location**	**Date of Collection**	**TCE (µg/m^3)**	**PCE (µg/m^3)**	**TCA (µg/m^3)**	**Sampling Event**	**Timeframe**
BPS1-AR001-IND	LS	1/20/2009	2.2	10	2.1	IS	Initial Sampling
BPS1-AR001-IND2	LS	2/24/2009	0.44	2.2	0.87	PUS Event 1	1 week

COMMENTS/NOTES
Sewer utility sump was located in attached garage. Based on initial sampling results below NYSDOH air guideline values, the sewer utility sump was not sealed.

Table 3-2
Residential Summary
Indoor Air Sampling
Bethpage, NY

PARCEL MAP

Notes

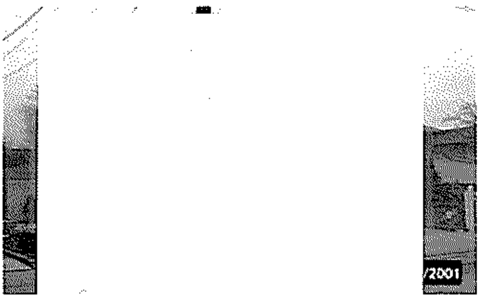
IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
μg/m^3 : micrograms per cubic meter
LS : Living Space
SSB : Subslab
DUP : Duplicate
NA : Not Applicable

Table 3-3
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #2
Name: [redacted]
Address: [redacted]

Home Type: Ranch
Year built: 1962

Initial Sampling (IS)					
Sample ID	**Location**	**Date of Collection**	**TCE (µg/m^3)**	**PCE (µg/m^3)**	**TCA (µg/m^3)**
BPS1-AR002-SSB	Subslab	1/21/2009	16,000	310	15,000
BPS1-AR002-IND	BT	1/21/2009	140	7.6	92
BPS1-AR002-IND2	LS	2/19/2009	100	4.9	73
NYSDOH Decision Matrix and Air Guidline Values (µg/m^3)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	Mitigate	Monitor/Mitigate	Mitigate



Portable Air Filtration Unit					
Installation Date	**Unit #**	**Serial #**	**Model**	**Filter Types**	**Unit Location**
2/19/2009	4	085-108478	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	West room in basement/workout room
3/10/2009	8	085-108475	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	South central section of home - dining room area
Maintenance Log		**Date**	**Unit Condition**	**Notes**	
HEPA filter change	4	5/19/2009	good	Indicator light red, HEPA filter slightly dirty	

APU Evaluation							
Sample ID	**Location**	**Date of Collection**	**TCE (µg/m^3)**	**PCE (µg/m^3)**	**TCA (µg/m^3)**	**Sampling Event**	**Timeframe**
BPS1-AR002-IND	BT	1/21/2009	140	7.6	92	IS	Initial Sampling
BPS1-AR002-IND2	LS	2/19/2009	100	4.9	73	IS	Initial Sampling
BPS1-AR002-IND3	BT	2/24/2009	46	2.1	42	PUS Event 1	1 week
BPS1-AR002-IND4	LS	3/24/2009	3.1	0.91	4.8	PUS Event 2	1 month
BPS1-AR002-IND5	BT	3/24/2009	4.2	ND	11	PUS Event 2	1 month

COMMENTS/NOTES
Sewer utility sump sealed on 2/19/2009

Table 3-3
Residential Summary
Indoor Air Sampling
Bethpage, NY

Notes

IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
μg/m^3 : micrograms per cubic meter
LS : Living Space
SSB : Subslab
BT : Basement
NA : Not Applicable

PARCEL MAP

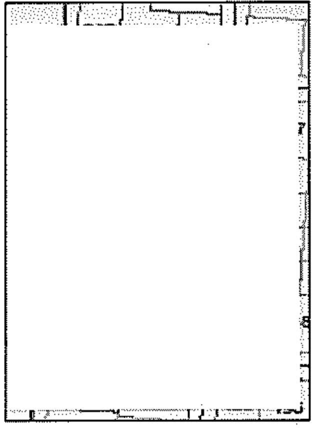


Table 3-4
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #3

Name: [redacted]
Address: [redacted]

Home Type: Ranch
Year built: 1958

Initial Sampling (IS)

Sample ID	Location	Date of Collection	TCE (µg/m^3)	PCE (µg/m^3)	TCA (µg/m^3)
BPS1-AR003-SSB	Subslab	1/22/2009	13,000	130	10,000
BPS1-AR003-IND	BT	1/22/2009	180	4.3	95
BPS1-DUP-02	BT	1/22/2009	180	4.2	98
BPS1-AR003-IND2	LS	2/18/2009	110	3.1	74
NYSDOH Decision Matrix and Air Guidline Values (µg/m^3)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	Mitigate	Monitor	Mitigate

Portable Air Filtration Unit

Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
2/18/2009	3	085-108484	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	NW corner of basement
2/26/2009	13	085-108479	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	1st floor dining room area
Maintenance Log	**Unit #**	**Date**	**Unit Condition**	**Notes**	
Carbon filter change	3	3/23/2009	good		
HEPA filter change	3	4/20/2009	good	Red indicator light, HEPA filter was dirty	
HEPA filter change	13	5/28/2009	good	Red indicator light, HEPA filter was not visually dirty	

APU Evaluation

Sample ID	Location	Date of Collection	TCE (µg/m^3)	PCE (µg/m^3)	TCA (µg/m^3)	Sampling Event	Timeframe
BPS1-AR003-IND	BT	1/22/2009	180	4.3	95	IS	Initial Sampling
BPS1-DUP-02	BT	1/22/2009	180	4.2	98	IS	Initial Sampling
BPS1-AR003-IND2	LS	2/18/2009	110	3.1	74	IS	Initial Sampling
BPS1-AR003-IND3	BT	2/26/2009	34	0.75	27	PUS Event 1	1 week
BPS1-DUP-IND	BT	2/26/2009	31	0.72	27	PUS Event 1	1 week
BPS1-AR003-IND4	BT	3/12/2009	32	0.49 J	41	PUS Event 2	1 month
BPS1-AR003-IND5	LS	3/12/2009	2.8	ND	5.2	PUS Event 2	1 month
BPS1-DUP-IND3	LS	3/12/2009	3.0	ND	5.5	PUS Event 2	1 month
BPS1-AR003-INDB	BT	4/30/2009	52	0.38 J	65	PUS Event 3	2 month
BPS1-DUP	BT	4/30/2009	50	0.54	64	PUS Event 3	2 month

COMMENTS/NOTES

Sewer utility sump was sealed on 2/18/2009, observable large cracks in basement floor and some on basement walls were sealed on 2/18/09 and 2/26/09

Table 3-4
Residential Summary
Indoor Air Sampling
Bethpage, NY

PARCEL MAP

Notes

IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
μg/m^3 : micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
DUP : Duplicate
NA : Not Applicable

Table 3-5
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #4

Name: [redacted]
Address: [redacted]

Home Type: Ranch
Year built: approx date 1950s

Initial Sampling (IS)					
Sample ID	Location	Date of Collection	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)	TCA ($\mu g/m^3$)
BPS1-AR004-SSB	Subslab	1/21/2009	1,400	42	2,100
BPS1-AR004-IND	BT	1/21/2009	6.8	ND	6.4
BPS1-AR004-IND2	BT-APT	1/21/2009	2.9	2.2	2.7
BPS1-AR004-IND3	LS	2/18/2009	6.1	0.82 J	6.2
NYSDOH Decision Matrix and Air Guidline Values ($\mu g/m^3$)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	Mitigate	NFA	Mitigate

Portable Air Filtration Unit					
Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
2/18/2009	1	085-108486	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	south basement/playroom
Maintenance Log	Unit #	Date	Unit Condition	Notes	
HEPA filter change	1	6/25/2009	good	Indicator light was flashing red, HEPA was dirty	

APU Evaluation								
Sample ID	Location	Date of Collection	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)	TCA ($\mu g/m^3$)	Sampling Event	Timeframe
BPS1-AR004-IND	BT	1/21/2009	6.8	ND	6.4	IS	Initial Sampling
BPS1-AR004-IND2	BT-APT	1/22/2009	2.9	2.2	2.7	IS	Initial Sampling
BPS1-AR004-IND3	LS	2/18/2009	6.1	0.82 J	6.2	IS	Initial Sampling
BPS1-AR004-IND4	BT	2/26/2009	1.2	ND	1.6	PUS Event 1	1 week
BPS1-AR004-IND5	LS	3/24/2009	1.1	ND	1.2	PUS Event 2	1 month

COMMENTS/NOTES
Sewer utility sump sealed on 2/18/2009

Table 3-5
Residential Summary
Indoor Air Sampling
Bethpage, NY

PARCEL MAP

Notes

IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
$\mu g/m^3$: micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
ND : Non Detect
NA : Not Applicable
NFA : No Further Action

Table 3-6
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #5

Name: [redacted]
Address: [redacted]

Home Type: Split Level
Year built: approx 1950s

Initial Sampling (IS)

Sample ID	Location	Date of Collection	TCE (µg/m^3)	PCE (µg/m^3)	TCA (µg/m^3)
BPS1-AR005-SSB	Subslab	1/21/2009	0.35 J	4.5	1.7
BPS1-AR005-IND	BT	1/21/2009	ND	ND	0.72
NYSDOH Decision Matrix and Air Guidline Values (µg/m^3)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	NFA	NFA	NFA

COMMENTS/NOTES
NA

Notes

IS : Initial Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
µg/m^3 : micrograms per cubic meter
BT : Basement
SSB : Subslab
NFA : No Further Action
NA : Not Applicable
ND : Non Detect

Table 3-7
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #6

Name: [redacted]
Address: [redacted]

Home Type: Ranch
Year built: approx 1950s-1960s

Initial Sampling (IS)

Sample ID	Location	Date of Collection	TCE (μg/m^3)	PCE (μg/m^3)	TCA (μg/m^3)
BPS1-AR006-SSB	Subslab	2/19/2009	740	650	1,600
BPS1-AR006-IND	BT	2/19/2009	43	56	40
BPS1-AR006-IND2	LS	2/19/2009	6.6	8.8	8.8
NYSDOH Decision Matrix and Air Guidline Values (μg/m^3)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	Mitigate	Monitor	Mitigate

Portable Air Filtration Unit

Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
2/19/2009	5	085-108482	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	south central basement

Maintenance Log	Unit #	Date	Unit Condition	Notes
HEPA filter change	5	6/25/2009	good	Indicator light was red, HEPA slightly dirty

APU Evaluation

Sample ID	Location	Date of Collection	TCE (μg/m^3)	PCE (μg/m^3)	TCA (μg/m^3)	Sampling Event	Timeframe
BPS1-AR006-IND	BT	2/19/2009	43.0	56	40.0	IS	Initial Sampling
BPS1-AR006-IND2	LS	2/19/2009	6.6	8.8	8.8	IS	Initial Sampling
BPS1-AR006-IND3	BT	2/26/2009	2.1	2.4	2.4	PUS Event 1	1 week
BPS1-AR006-IND4	LS	3/24/2009	1.2	1.6	7.0	PUS Event 2	1 month

COMMENTS/NOTES
Sewer utility sump not found

Table 3-7
Residential Summary
Indoor Air Sampling
Bethpage, NY

PARCEL MAP

Notes

IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
$\mu g/m^3$: micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
NA : Not Applicable

Table 3-8
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #7

Name: [redacted]

Address: [redacted]

Home Type: 2-Story Colonial

Year built: Aprrox Mid-1950s

Initial Sampling (IS)					
Sample ID	Location	Date of Collection	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)	TCA ($\mu g/m^3$)
BPS1-AR007-SSB	Subslab	2/20/2009	170	310	370
BPS1-AR007-IND	BT	2/20/2009	0.75	3.2	1.0
BPS1-AR007-IND2	LS	2/20/2009	0.40	1.6	0.51
NYSDOH Decision Matrix and Air Guidline Values ($\mu g/m^3$)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	Monitor/Mitigate	Monitor/Mitigate	Monitor

Portable Air Filtration Unit					
Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
2/20/2009	6	085-108485	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	north central basement/family room
Maintenance Log	Unit #	Date	Condition	Notes	
HEPA filter change	6	5/20/2009	good	Red indicator light, HEPA filter slightly dirty	

APU Evaluation							
Sample ID	Location	Date of Collection	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)	TCA ($\mu g/m^3$)	Sampling Event	Timeframe
BPS1-AR007-IND	BT	2/20/2009	0.75	3.2	1.0	IS	Initial Sampling
BPS1-AR007-IND2	LS	2/20/2009	0.4	1.6	0.51	IS	Initial Sampling
BPS1-AR007-IND3	BT	3/25/2009	0.2 J	0.90	0.47	PUS Event 1	1 month

COMMENTS/NOTES
Sewer utility sump covered by stairs, not sealed.

Table 3-8
Residential Summary
Indoor Air Sampling
Bethpage, NY

PARCEL MAP

Notes

IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
$\mu g/m^3$: micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
NA : Not Applicable

Table 3-9
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #8

Name: [redacted]
Address:

Home Type: 2-Story Colonial
Year built: 1960

Initial Sampling (IS)

Sample ID	Location	Date of Collection	TCE (µg/m^3)	PCE (µg/m^3)	TCA (µg/m^3)
BPS1-AR008-SSB	Subslab	2/20/2009	16	3.4	45
BPS1-AR008-IND	BT	2/20/2009	ND	0.34 J	0.49 J
BPS1-AR008-IND2	LS	2/20/2009	ND	2.6 J	ND
NYSDOH Decision Matrix and Air Guidline Values (µg/m^3)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	NFA	NFA	NFA

Portable Air Filtration Unit

Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
2/21/2009	7	085-108481	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	SW corner of basement/gameroom
Maintenance Log	**Unit #**	**Date**	**Condition**	**Notes**	
Unit removed	7	4/29/2009	good	Unit in fairly new condition	

COMMENTS/NOTES

Initial sampling results indicated no elevated levels above NYSDOH air guideline values. APU removed on April 29, 2009.

PARCEL MAP

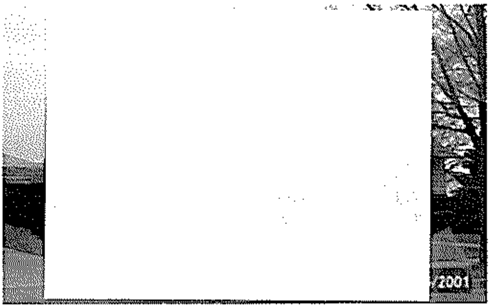
Notes
IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
µg/m^3 : micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
ND : Non Detect
NA : Not Applicable
NFA : No further action

Table 3-10
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #9

Name: [redacted]
Address: [redacted]

Home Type: Ranch
Year built: Approx 1950s



Initial Sampling (IS)

Sample ID	Location	Date of Collection	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)	TCA ($\mu g/m^3$)
BPS1-AR009-SSB	Subslab	2/25/2009	21	8.8	140
BPS1-AR009-IND	BT	2/25/2009	0.50	0.62	1.8
BPS1-DUP-IND	BT	2/25/2009	0.41 J	0.62 J	1.5
BPS1-AR009-IND2	LS	2/25/2009	0.34 J	0.33 J	0.61
NYSDOH Decision Matrix and Air Guidline Values ($\mu g/m^3$)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	NFA	NFA	Monitor

Portable Air Filtration Unit

Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
2/25/2009	8	085-108475	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	north central basement/family room
4/30/2009	7	085-108481	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	north central basement/family room
Maintenance Log	**Unit #**	**Date**	**Condition**	**Notes**	
Unit removed	8	3/10/2009	new	At resident request, unit was removed	
Unit installed	7	4/30/2009	good	At resident request, unit was installed	

COMMENTS/NOTES

Initial sampling results indicate no elevated levels above NYSDOH air guidelines: Portable Air Filtration Unit removed (at residents request) on 3/10/09. Another unit was installed at the residents request on 4/30/09.

PARCEL MAP

Notes

IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
$\mu g/m^3$: micrograms per cubic meter
BT : Basement
LS : Living Space
SSB : Subslab
DUP : Duplicate
NA : Not Applicable
NFA : No further action

Table 3-11
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #10

Name: [redacted]

Address [redacted]

Home Type: Ranch

Year built: pre-1969

Initial Sampling (IS)					
Sample ID	**Location**	**Date of Collection**	**TCE (µg/m³)**	**PCE (µg/m³)**	**TCA (µg/m³)**
BPS1-AR010-SSB2	Subslab	2/26/2009	300	670	590
BPS1-AR010-IND	BT	2/25/2009	2.9	16	3.9
BPS1-AR010-IND2	LS	2/25/2009	ND	2.1	0.58 J
NYSDOH Decision Matrix and Air Guidline Values (µg/m³)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	Mitigate	Monitor/Mitigate	Monitor/Mitigate

Portable Air Filtration Unit					
Installation Date	**Unit #**	**Serial #**	**Model**	**Filter Types**	**Unit Location**
2/26/2009	10	085-108476	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	west basement/ family room
Maintenance Log	**Unit #**	**Date**	**Unit Condition**	**Notes**	
HEPA filter change	10	4/30/2009	good	Indicator light flashing red, HEPA dirty	

APU Evaluation							
Sample ID	**Location**	**Date of Collection**	**TCE (µg/m³)**	**PCE (µg/m³)**	**TCA (µg/m³)**	**Sampling Event**	**Timeframe**
BPS1-AR010-IND	BT	2/25/2009	2.9	16	3.9	IS	Initial Sampling
BPS1-AR010-IND2	LS	2/25/2009	ND	2.1	0.58 J	IS	Initial Sampling
BPS1-AR010-IND3	BT	3/24/2009	1.5	7.4	2.2	PUS Event 1	1 month
BPS1-DUP-IND4	BT	3/24/2009	1.2	6.6	2.2	PUS Event 1	1 month

COMMENTS/NOTES
Sewer utility sump covered with carpet, sump was not sealed.

Table 3-11
Residential Summary
Indoor Air Sampling
Bethpage, NY

Notes

IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
$\mu g/m^3$: micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
DUP : Duplicate
NA : Not Applicable

PARCEL MAP

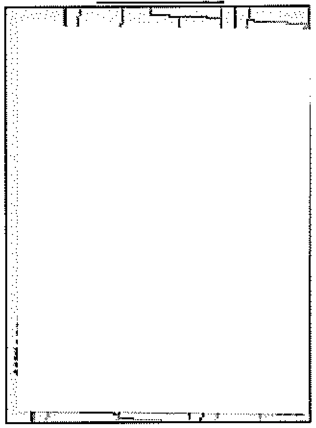


Table 3-12
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #11

Name: [redacted]
Address: [redacted]

Home Type: Ranch
Year built: 1966

Initial Sampling (IS)					
Sample ID	**Location**	**Date of Collection**	**TCE (µg/m^3)**	**PCE (µg/m^3)**	**TCA (µg/m^3)**
BPS1-AR011-SSB	Subslab	2/25/2009	15	40	50
BPS1-AR011-IND	BT	2/25/2009	ND	0.29 J	ND
BPS1-AR011-IND2	LS	2/25/2009	ND	ND	ND
NYSDOH Decision Matrix and Air Guidline Values (µg/m^3)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	NFA	NFA	NFA

Portable Air Filtration Unit					
Installation Date	**Unit #**	**Serial #**	**Model**	**Filter Types**	**Unit Location**
2/25/2009	9	078-092211	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	south central basement/family room
Maintenance Log	**Unit #**	**Date**	**Condition**	**Notes**	
Unit removed	9	4/29/2009	good		

COMMENTS/NOTES
Initial sampling results indicate no elevated levels above NYSDOH air guideline values. APU removed on 4/29/09.

PARCEL MAP

Notes
IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
µg/m^3 : micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
ND : Non Detect
NA : Not Applicable
NFA : No further action

Table 3-13
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #12

Name: [redacted]

Address: [redacted]

Home Type: Ranch

Year built: 1952

Initial Sampling (IS)

Sample ID	Location	Date of Collection	TCE (µg/m³)	PCE (µg/m³)	TCA (µg/m³)
BPS1-AR012-SSB	Subslab	2/26/2009	94	19	330
BPS1-AR012-IND	BT	2/26/2009	0.55	0.85	2.2
BPS1-AR012-IND2	LS	2/26/2009	ND	0.83 J	0.81 J
NYSDOH Decision Matrix and Air Guidline Values (µg/m³)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	Monitor/Mitigate	NFA	Monitor

Portable Air Filtration Unit

Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
2/25/2009	11	078-092212	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	central basement/family room
Maintenance Log	**Unit #**	**Date**	**Unit Condition**	**Notes**	
Maintenance Check	11	6/23/2009	good	unit in good working condition	

APU Evaluation

Sample ID	Location	Date of Collection	TCE (µg/m³)	PCE (µg/m³)	TCA (µg/m³)	Sampling Event	Timeframe
BPS1-AR012-IND	BT	2/26/2009	0.6	0.85	2.2	IS	Initial Sampling
BPS1-AR012-IND2	LS	2/26/2009	ND	0.83 J	0.81 J	IS	Initial Sampling
BPS1-AR012-IND3	BT	3/25/2009	0.21 J	ND	1.0	PUS Event 1	1 month

COMMENTS/NOTES
Sewer utility sump already sealed.

Table 3-13
Residential Summary
Indoor Air Sampling
Bethpage, NY

PARCEL MAP

Notes

IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
μg/m^3 : micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
ND : Non Detect
NA : Not Applicable
NFA : No Further Action

Table 3-14
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #13

Name: [redacted]
Address: [redacted]

Home Type: Remodeled Ranch with Loft
Year built: 1890

Initial Sampling (IS)

Sample ID	Location	Date of Collection	TCE (µg/m^3)	PCE (µg/m^3)	TCA (µg/m^3)
BPS1-AR013-SSB	Subslab	2/26/2009	230	11	420
BPS1-DUP-SSB	Subslab	2/26/2009	250	12	440
BPS1-AR013-IND	BT	2/26/2009	1.5	0.56	2.3
BPS1-AR013-IND2	LS	2/26/2009	ND	0.58 J	0.9 J
NYSDOH Decision Matrix and Air Guidline Values (µg/m^3)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	Mitigate	NFA	Monitor

Portable Air Filtration Unit

Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
2/26/2009	12	085-108480	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	center basement/unfinished
Maintenance Log	**Unit #**	**Date**	**Unit Condition**	**Notes**	
HEPA filter change	12	4/29/2009	good	Indicator light was red, resident turned off unit week of 4/20/09	

APU Evaluation

Sample ID	Location	Date of Collection	TCE (µg/m^3)	PCE (µg/m^3)	TCA (µg/m^3)	Sampling Event	Timeframe
BPS1-AR013-IND	BT	2/26/2009	1.5	0.56	2.3	IS	Initial Sampling
BPS1-AR013-IND2	LS	2/26/2009	ND	0.58 J	0.9 J	IS	Initial Sampling
BPS1-AR013-IND3	BT	3/24/2009	0.50	ND	1.2	PUS Event 1	1 Month

COMMENTS/NOTES
A sewer utility sump does not exist in Home #13.

Table 3-14
Residential Summary
Indoor Air Sampling
Bethpage, NY

PARCEL MAP

Notes

IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
$\mu g/m^3$: micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
DUP : Duplicate
NA : Not Applicable
NFA : No Further Action
ND : Non Detect

Table 3-15
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #14
Name: [redacted]
Address:

Home Type: Ranch
Year built: 1968

Initial Sampling (IS)

Sample ID	Location	Date of Collection	TCE (µg/m^3)	PCE (µg/m^3)	TCA (µg/m^3)
BPS1-AR014-SSB	Subslab	3/11/2009	290	15	970
BPS1-AR014-IND	BT	3/11/2009	1.9	0.46 J	2.6
BPS1-AR014-IND2	LS	3/11/2009	0.73	0.36 J	1.30
NYSDOH Decision Matrix and Air Guidline Values (µg/m^3)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	Mitigate	NFA	Monitor

Portable Air Filtration Unit

Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
3/11/2009	14	078-092221	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	north central basement
Maintenance Log	**Unit #**	**Date**	**Unit Condition**	**Notes**	
HEPA filter change	14	4/29/2009	good	Indicator light was orange, HEPA was slighly dirty	

Post Unit Sampling (PUS)

Sample ID	Location	Date of Collection	TCE (µg/m^3)	PCE (µg/m^3)	TCA (µg/m^3)	Sampling Event	Timeframe
BPS1-AR014-IND	BT	3/11/2009	1.9	0.46 J	2.6	IS	Initial Sampling
BPS1-AR014-IND2	LS	3/11/2009	0.73	0.36 J	1.3	IS	Initial Sampling
BPS1-AR014-IND3	BT	3/25/2009	ND	ND	0.41	PUS Event 1	1 week

COMMENTS/NOTES
Sewer utility sump in eastern portion of basement. May need sealed prior to further mitigation measuress.

Table 3-15
Residential Summary
Indoor Air Sampling
Bethpage, NY

PARCEL MAP

Notes

IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
$\mu g/m^3$: micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
NA : Not Applicable
NFA : No Further Action
ND : Non Detect

Table 3-16
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #15
Name: [redacted]
Address: [redacted]

Home Type: Ranch
Year built: 1960

Initial Sampling (IS)

Sample ID	Location	Date of Collection	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)	TCA ($\mu g/m^3$)
BPS1-AR015-SSB	Subslab	3/11/2009	25	38	160
BPS1-AR015-IND	BT	3/11/2009	ND	0.62	0.66
BPS1-AR015-IND2	LS	3/11/2009	ND	0.3 J	ND
NYSDOH Decision Matrix and Air Guidline Values ($\mu g/m^3$)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	NFA	NFA	Monitor

Portable Air Filtration Unit

Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
3/11/2009	15	085-108477	IQ Air - GCX Series	MultiGas Carbon, HEPA, post filter	northwest portion of basement
Maintenance Log	**Unit #**	**Date**	**Condition**	**Notes**	

COMMENTS/NOTES
Initial sampling results indicate no elevated levels above NYSDOH air guideline values.

Notes
IS : Initial Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
$\mu g/m^3$: micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
ND : Non Detect
NA : Not Applicable
NFA : No further action

PARCEL MAP

Table 3-17
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #16

Name: [redacted]
Address: [redacted]

Home Type: Colonial
Year built: approx 1960s

Initial Sampling (IS)					
Sample ID	Location	Date of Collection	TCE (µg/m^3)	PCE (µg/m^3)	TCA (µg/m^3)
BPS1-AR016-SSB	Subslab	4/28/2009	9.1	3.8	24
BPS1-AR016-INDB	BT	4/28/2009	ND	ND	0.51
BPS1-AR016-INDL	LS	4/28/2009	ND	0.31 J	0.27 J
NYSDOH Decision Matrix and Air Guidline Values (µg/m^3)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	NFA	NFA	NFA

Portable Air Filtration Unit					
Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
NA					
Maintenance Log	Unit #	Date	Condition	Notes	

COMMENTS/NOTES
Initial sampling results indicate no elevated levels above NYSDOH air guideline values.

PARCEL MAP

Notes

IS : Initial Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichloroethane
µg/m^3 : micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
NA : Not Applicable
NFA : No further action
J : Analytical result is approximate
ND : Non Detect

Table 3-18
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #17

Name: [redacted]
Address: [redacted]

Home Type: Ranch
Year built: approx 1956

Initial Sampling (IS)

Sample ID	Location	Date of Collection	TCE (µg/m³)	PCE (µg/m³)	TCA (µg/m³)
BPS1-AR017-SSB	Subslab	4/28/2009	11.0	5	26
BPS1-AR017-INDB	BT	4/28/2009	ND	6.2	0.15 J
BPS1-AR017-INDL	LS	4/28/2009	ND	3.00	ND
NYSDOH Decision Matrix and Air Guidline Values (µg/m³)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	NFA	NFA	NFA

Portable Air Filtration Unit

Installation Date	Unit #	Serial #	Model	Filter Types	Unit Location
NA					
Maintenance Log	**Unit #**	**Date**	**Condition**	**Notes**	

COMMENTS/NOTES
Initial sampling results indicate no elevated levels above NYSDOH air guideline values.

PARCEL MAP

Notes

IS : Initial Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichchloroethane
µg/m³ : micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
NA : Not Applicable
NFA : No further action
ND : Non-Detect

Table 3-19
Residential Summary
Indoor Air Sampling
Bethpage, NY

Home #18

Name: [redacted] **Home Type:** Ranch

Address: [redacted] **Year built:** approx 1958

Initial Sampling (IS)					
Sample ID	Location	Date of Collection	TCE (µg/m³)	PCE (µg/m³)	TCA (µg/m³)
BPS1-AR018-SSB	Subslab	4/29/2009	64	8.4	68
BPS1-AR018-INDB	BT	4/29/2009	1.8	1.8	0.84
BPS1-AR018-INDL	LS	5/21/2009	ND	0.39 J	ND
BPS1-AR018-INDB-2	BT	5/21/2009	0.41 J	0.58	ND
NYSDOH Decision Matrix and Air Guidline Values (µg/m³)		Sub-Slab	250	1000	1000
		Indoor Air	5	100	NA
		Matrix Evaluation	Monitor/Mitigate	NFA	NFA

Portable Air Filtration Unit							
Installation Date	Unit #	Serial #	Model	Filter Types		Unit Location	
NA							
Maintenance Log		Date	Condition	Notes			

COMMENTS/NOTES

Ground Floor Living Space sample not collected on 4/29/09 due to homeowner painting at the time of sampling. Residence re-sampled on 5/21/09 due to elevated background outdoor air sample results collected on 4/29/09.

Notes

IS : Initial Sampling
PUS : Post Unit Sampling
TCE : Trichloroethene
PCE : Tetrachloroethene
TCA : 1,1,1-Trichchloroethane
µg/m³ : micrograms per cubic meter
LS : Living Space
BT : Basement
SSB : Subslab
NA : Not Applicable
NFA : No further action
ND : Non Detect

PARCEL MAP

Table 3-20
Outdoor Air Analytical Summary of Detections
Indoor Air Sampling
Bethpage, NY

Sample ID	**BPS1-AR001-ODA**	**BPS1-AR003-ODA**	**BPS1-AR004-ODA**	**BPS1-AR005-ODA**	**BPS1-AR006-ODA**	**BPS1-AR007-ODA**	**BPS1-AR008-ODA**	**BPS1-AR009-ODA**
Sample date	20090120	20090122	20090121	20090121	20090219	20090220	20090220	20090225
Volatile Organics (ug/M3)								
1,1,1-TRICHLOROETHANE	0.46 U	0.36 U	0.42 U	0.36 U	0.43 U	0.39 U	0.42 U	0.49 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.77	0.76	0.66	0.62	0.59 J	0.95	0.99	0.62 J
1,2,4-TRIMETHYLBENZENE	0.3 J	0.46 J	0.23 J	0.17 J	0.17 J	0.71 U	0.76 U	0.88 U
1,2-DICHLOROETHANE	0.68 U	0.54 U	0.63 U	0.54 U	0.64 UJ	0.58 U	0.63 U	0.72 U
1,3,5-TRIMETHYLBENZENE	0.82 U	0.11 J	0.76 U	0.66 U	0.78 U	0.71 U	0.76 U	0.88 U
1,4-DICHLOROBENZENE	0.5 U	0.4 U	0.46 U	0.4 U	0.33 J	0.43 U	0.46 U	0.54 U
2,2,4-TRIMETHYLPENTANE	0.55 J	0.58 J	0.72 U	0.62 U	0.74 U	0.67 U	0.72 U	0.84 U
2-BUTANONE	0.95 U	1	1.3 U	2.9	1.1	0.99 J	1.4 J	0.36 J
4-METHYL-2-PENTANONE	0.12 J	0.14 J	0.091 J	0.23 J	0.65 U	0.59 U	0.63 U	0.73 U
BENZENE	1.2	1.2	1.2	1.2	0.73 U	0.85 U	0.66 U	0.73
CARBON TETRACHLORIDE	0.66	0.49	0.56	0.49	0.52	0.58	0.59	0.53 J
CHLOROMETHANE	1.2	1.2	0.98	1.2	1.2	1.4	1.2	1.4
CIS-1,2-DICHLOROETHENE	0.67 U	0.53 U	0.61 U	0.53 U	0.63 U	0.57 U	0.61 U	0.71 U
CYCLOHEXANE	0.58 U	0.46 U	0.53 U	0.46 U	0.41 J	0.5 U	0.53 U	0.62 U
DICHLORODIFLUOROMETHANE	2.6	2.7	2.3	2.3	2.7	3.2	3.4	2.3
ETHANOL	6.1	12	5.4	4.4	3.8	3.7	3.5	2.3 U
ETHYLBENZENE	0.28 J	0.42 J	0.2 J	0.19 J	0.69 U	0.18 J	0.67 U	0.78 U
HEXANE	0.76	0.89	0.49 J	0.4 J	0.43 J	0.18 J	0.24 J	0.79
M+P-XYLENES	0.74	1	0.38 J	0.48 J	0.4 J	0.25 J	0.22 J	0.34 J
METHYLENE CHLORIDE	0.44 J	0.48 J	0.3 J	0.3 J	0.51 J	0.6 J	0.63 J	0.36 J
O-XYLENE	0.3 J	0.41 J	0.2 J	0.23 J	0.19 J	0.62 U	0.12 J	0.14 J
STYRENE	0.72 U	0.11 J	0.66 U	0.57 U	0.67 U	0.61 U	0.66 U	0.76 U
TERTIARY-BUTYL ALCOHOL	2.5 U	2 U	2.3 U	0.57 J	2.4 U	2.2 U	2.3 U	2.7 U
TETRACHLOROETHENE	0.57 U	0.45 U	0.52 U	0.45 U	0.54 U	0.49 U	0.27 J	0.61 U
TOLUENE	1.9	2.8	1.1	1.2	1.2	1.1	0.99	1.1
TRANS-1,2-DICHLOROETHENE	0.67 U	0.53 U	0.61 U	0.53 U	0.63 U	0.57 U	0.61 U	0.71 U
TRICHLOROETHENE	0.45 U	0.36 U	0.42 U	0.36 U	0.42 U	0.39 U	0.42 U	0.48 U
TRICHLOROFLUOROMETHANE	1.5	1.8	1.2	1.3	1.8	2.3	2.4	1.2
VINYL CHLORIDE	0.43 U	0.34 U	0.4 U	0.34 U	0.4 U	0.37 U	0.4 U	0.46 U

NOTES:

Bold and shaded results indicated elevated concentrations that may influence indoor air quality

Table 3-20
Outdoor Air Analytical Summary of Detections
Indoor Air Sampling
Bethpage, NY

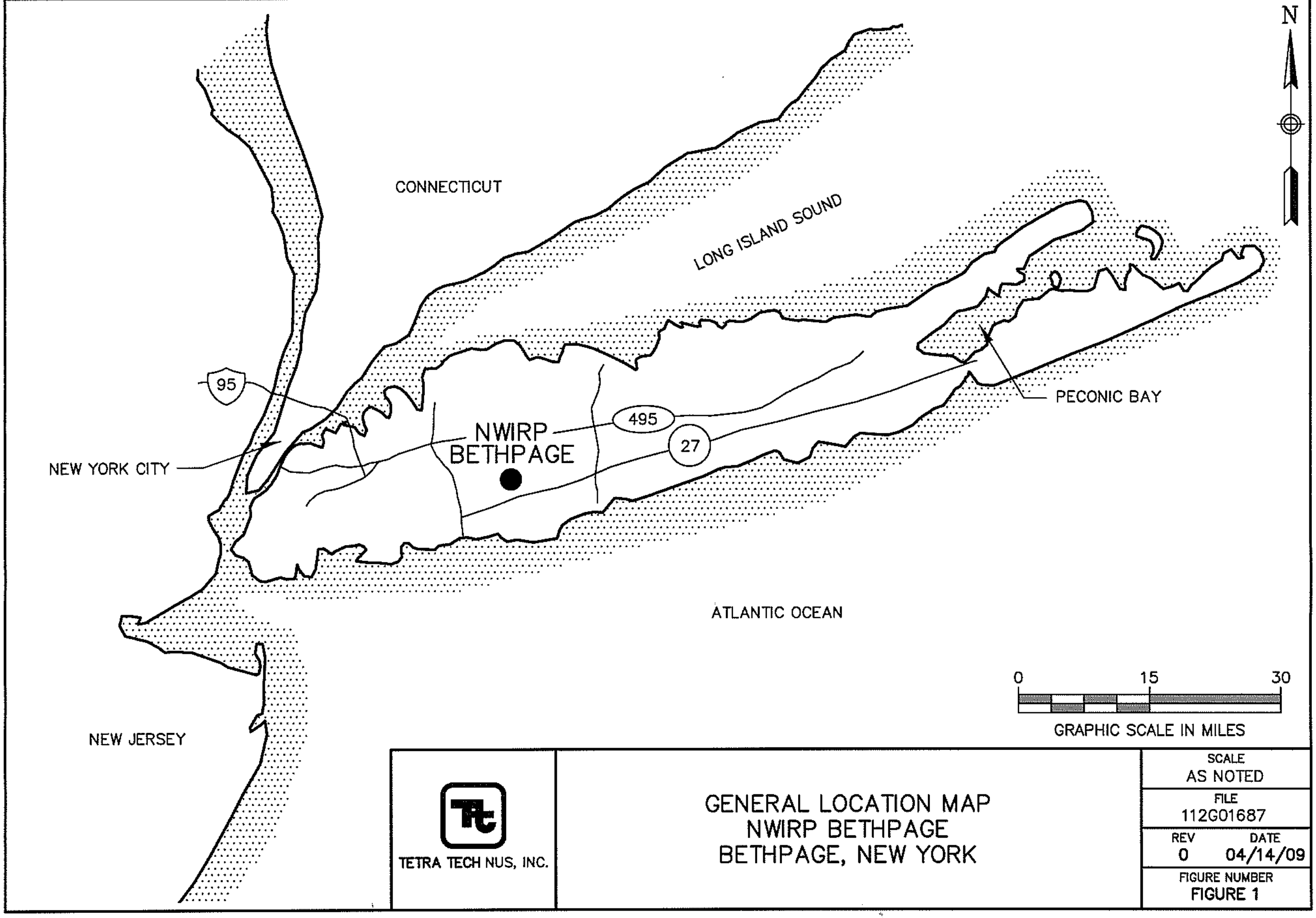
Sample ID Sample date	**BPS1-AR011-ODA** 20090225	**BPS1-AR012-ODA** 20090226	**BPS1-AR014-ODA** 20090311	**BPS1-AR016-ODA** 20090428	**BPS1-AR018-ODA** 20090429	**BPS1-AR018-ODA-2** 20090521	**Frequency of Detections**	**Range of Detections**
Volatile Organics (ug/M3)								
1,1,1-TRICHLOROETHANE	0.4 U	0.24 J	0.4 U	0.43 U	0.64 U	0.56 U	1 of 14	ND - 0.24
1,1,2-TRICHLOROTRIFLUOROETHANE	0.67	0.72	0.8	0.71	0.8 J		13 of 13	0.59 -0.99
1,2,4-TRIMETHYLBENZENE	0.16 J	0.44 J	0.16 J	0.7 J	0.46 J		10 of 13	ND - 0.7
1,2-DICHLOROETHANE	0.59 U	0.65 U	0.59 U	0.64 UJ	0.3 J	0.83 U	1 of 14	ND - 0.3
1,3,5-TRIMETHYLBENZENE	0.72 U	0.11 J	0.72 U	0.24 J	1.2 U		3 of 13	ND - 0.24
1,4-DICHLOROBENZENE	0.44 U	0.48 U	0.44 U	0.48 U	0.71 U		1 of 13	ND - 0.33
2,2,4-TRIMETHYLPENTANE	0.68 U	0.75 U	0.68 U	0.71 J	1.1 U		3 of 13	ND - 0.71
2-BUTANONE	0.76	1.2	2.4	0.94	2.2 J		11 of 13	ND - 2.9
4-METHYL-2-PENTANONE	0.6 U	0.66 U	0.24 J	0.15 J	0.44 J		7 of 13	ND - 0.44
BENZENE	0.65	1	0.47 U	0.64 U	0.75 U		7 of 13	ND - 1.2
CARBON TETRACHLORIDE	0.48	0.63	0.61	0.57	0.74 U		12 of 13	ND - 0.66
CHLOROMETHANE	1	1.2	1.3	1.4	1.2		13 of 13	0.98 - 1.4
CIS-1,2-DICHLOROETHENE	0.58 U	0.64 U	0.58 U	0.63 U	**24**	0.82 U	1 of 14	ND - 24
CYCLOHEXANE	0.5 U	0.55 U	0.5 U	0.54 U	0.81 U		1 of 13	ND - 0.41
DICHLORODIFLUOROMETHANE	2.2	1.9	2.4	2.8 J	2.3		13 of 13	1.9 - 3.4
ETHANOL	4.9	7.7	2	10 J	6.5 J		12 of 13	ND - 12
ETHYLBENZENE	0.16 J	0.36 J	0.63 U	0.39 J	0.33 J		9 of 13	ND - 0.42
HEXANE	0.51 U	0.66	0.51 U	0.68	0.83 U		10 of 13	ND - 0.89
M+P-XYLENES	0.39 J	1	0.25 J	1.1	0.97 J		13 of 13	0.22 - 1.1
METHYLENE CHLORIDE	0.36 J	0.4 J	0.27 J	0.48 J	4.1 U		12 of 13	ND - 0.63
O-XYLENE	0.18 J	0.4 J	0.13 J	0.53 J	0.36 J		12 of 13	ND - 0.53
STYRENE	0.62 U	0.12 J	0.62 U	0.11 J	0.32 J		4 of 13	ND - 0.32
TERTIARY-BUTYL ALCOHOL	2.2 U	2.4 U	0.46 J	2.4 U	3.6 U		2 of 13	ND - 0.57
TETRACHLOROETHENE	0.28 J	0.42 J	0.5 U	1.2	**3.8**	0.4 J	6 of 14	ND - 3.8
TOLUENE	1	2.7	0.63	2.6	4		13 of 13	0.63 - 4
TRANS-1,2-DICHLOROETHENE	0.58 U	0.64 U	0.58 U	0.63 U	**0.37 J**	0.82 U	1 of 14	ND - 0.37
TRICHLOROETHENE	0.39 U	0.43 U	0.39 U	0.4 J	**27**	0.55 U	2 of 14	ND - 27
TRICHLOROFLUOROMETHANE	1	1.4	1.7	1.7	1.5		13 of 13	1 - 2.4
VINYL CHLORIDE	0.37 U	0.41 U	0.37 U	0.4 U	**0.51 J**	0.53 U	1 of 14	ND - 0.51

NOTES:

Bold and shaded results indicated elevated concentrations that may influence indoor air quality

FIGURES

112G01687/0510/112G01687CM01.DWG 04/14/09 MKB



TETRA TECH NUS, INC.

GENERAL LOCATION MAP
NWIRP BETHPAGE
BETHPAGE, NEW YORK

SCALE
AS NOTED

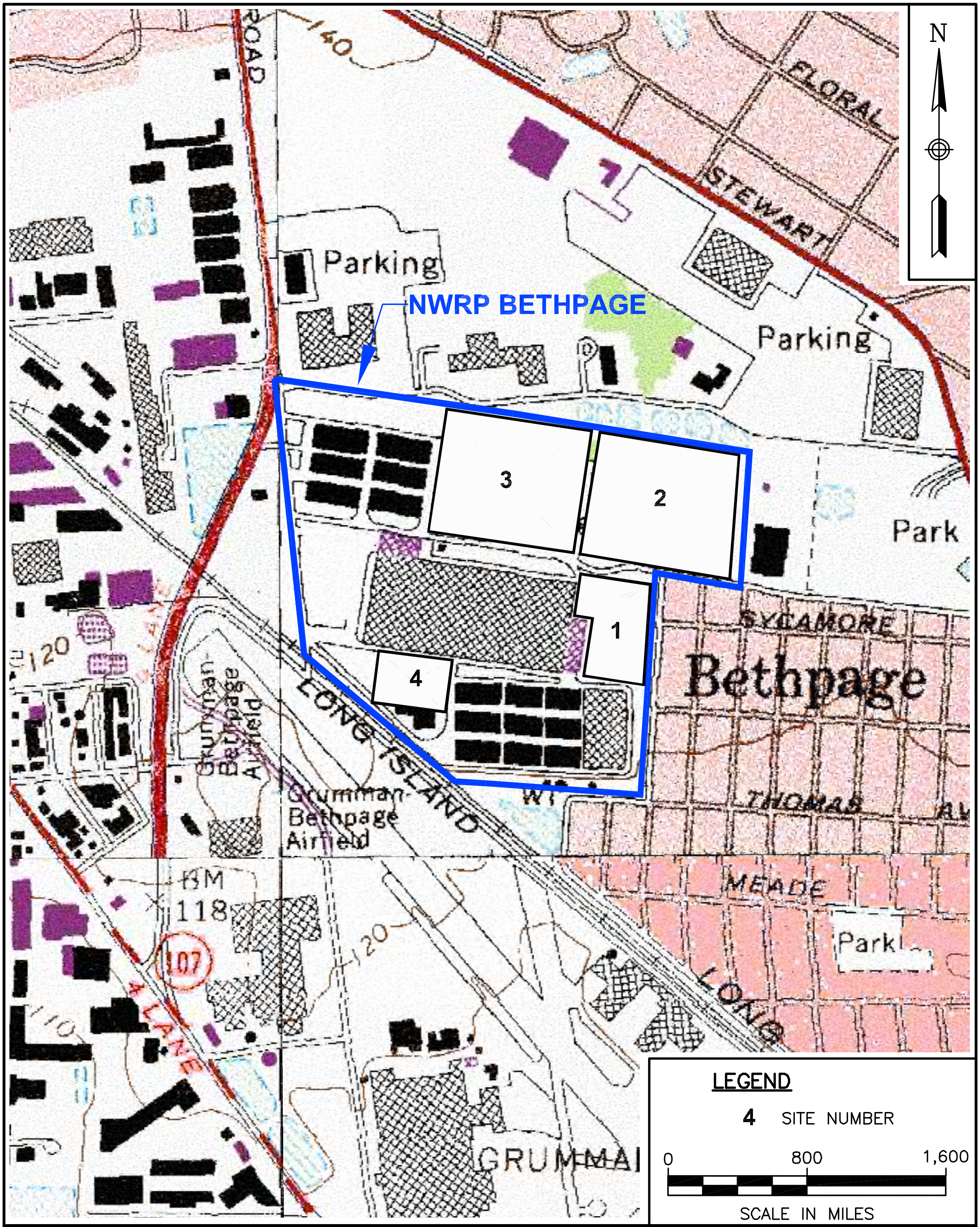
FILE
112G01687

REV
0

DATE
04/14/09

FIGURE NUMBER
FIGURE 1

112G01687/0510/112G01687CM02.DWG 04/14/09 MKB



TETRA TECH NUS, INC.

SITE LOCATION MAP
SITE 1
NWIRP
BETHPAGE, NEW YORK

SCALE AS NOTED	
FILE 112G01687CM02	
REV 0	DATE 04/14/09
FIGURE NUMBER FIGURE 2	

FIGURE 3

Figure of Offsite Investigative Area

(Figure Redacted for Homeowner Personal Privacy Reasons)

FIGURE 4

Figure of Initial Indoor Air and Sub-slab Results

(Figure Redacted for Homeowner Personal Privacy Reasons)

APPENDIX A

SITE PHOTOS

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 1: Sub-slab sample location with duplicate from Home #1.

Photo 2: Indoor air sample location in living space of Home #1.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 3: Outdoor air sample location at Home #1.

Photo 4: Sub-slab sample location at Home #2

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 5: Indoor air sample location in basement of Home #2.

Photo 6: Home #2 sump before being sealed.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 7: Home #2 sump after being sealed.

Photo 8: Sub-slab sample location at Home #3.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 9: Indoor air sample location with duplicate from basement of Home #3.

Photo 10: Outdoor air sample location at Home #3.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 11: Home #3 sump before being sealed.

Photo 12: Sealed sump at Home #3.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 13: Sub-slab sample location at Home #4.

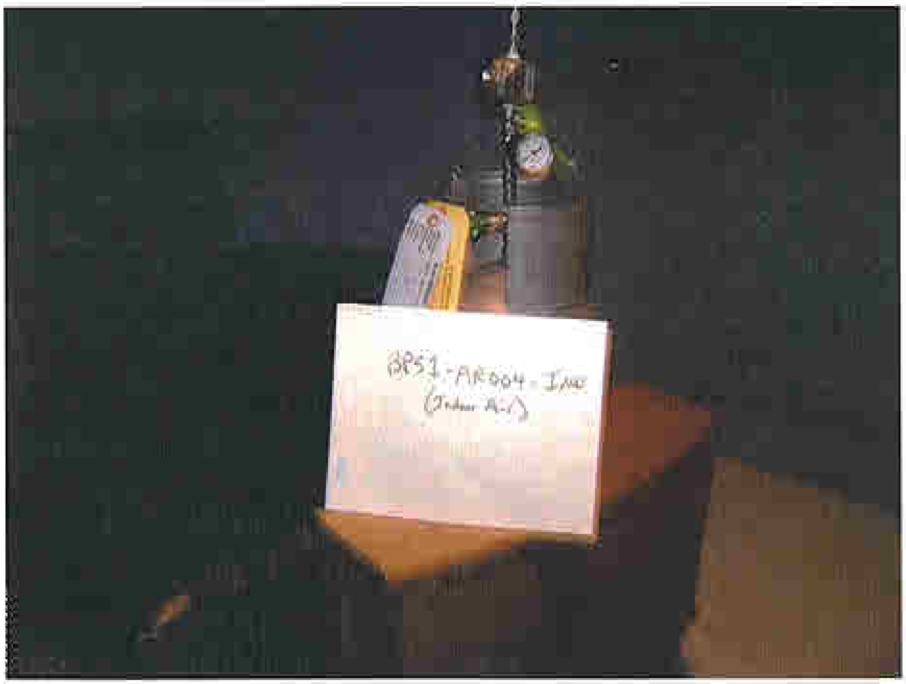


Photo 14: Indoor air sample location in basement of Home #4.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 15: Indoor air sample location in basement apartment of Home #4.

Photo 16: Outdoor air sample location at Home #4.

Photo 17: Home #4 sump before being sealed.

Photo 18: Sealed sump at Home #4.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 19: Sub-slab sample location at Home #5.

Photo 20: Indoor air sample location in basement of Home #5.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 21: Outdoor air sample location at Home #5.

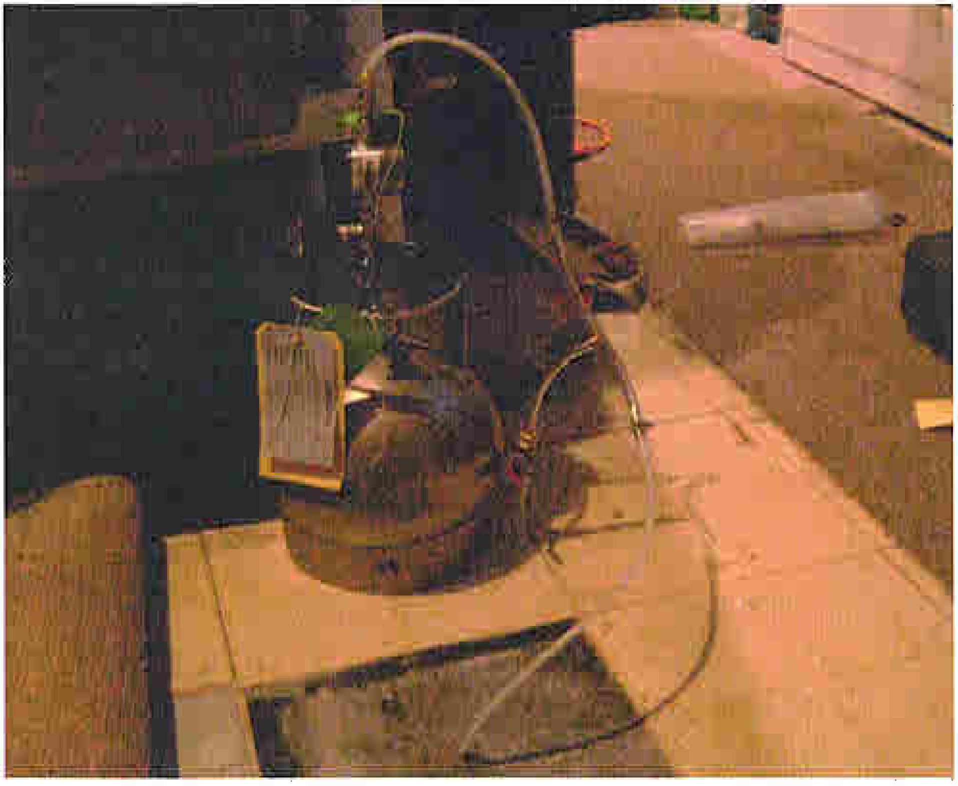


Photo 22: Sub-slab sample location at Home #6.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 23: Indoor air sample location in the basement of Home #6.

Photo 24: Sub-slab sample location at Home #7.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 25: Indoor air sample location in basement of Home #7.

Photo 26: Indoor air sample location in the 1st floor living space of Home #7.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 27: Outdoor air sample location at Home #7.

Photo 28: Sub-slab sample location at Home #8.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 29: Indoor air sample location in basement of Home #8.

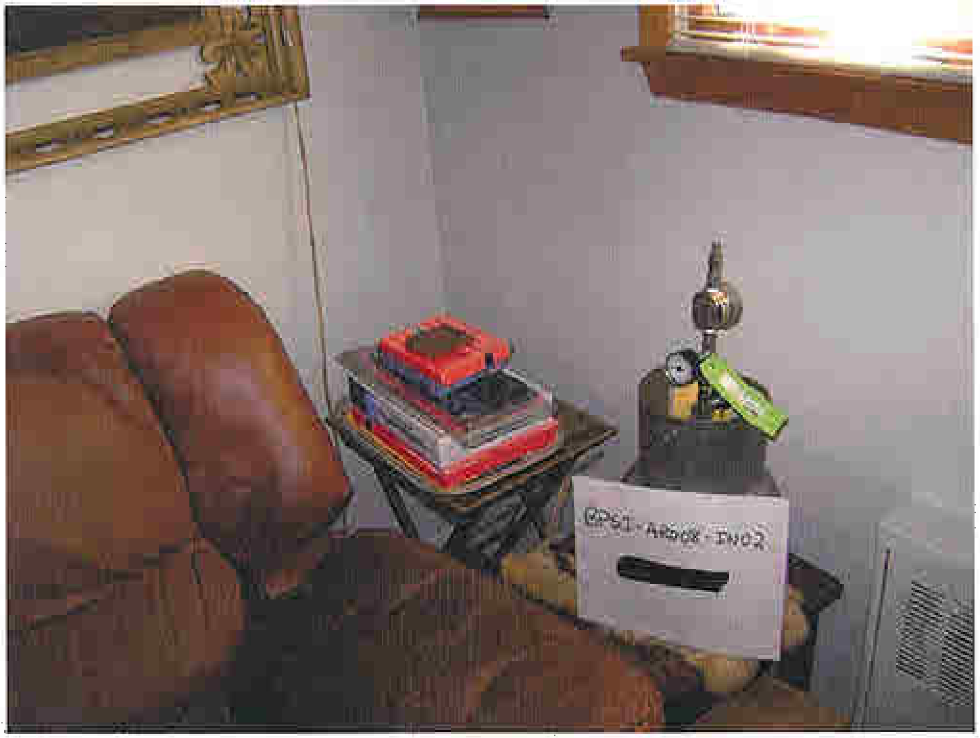


Photo 30: Indoor air sample location in 1st floor living space of Home #8.

Photo 31: Outdoor air sample location at Home #8.

Photo 32: Drilling of basement floor to collect sub-slab sample at Home #9.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 33: Sub-slab sample at Home #9.

Photo 34: Indoor air sample location in the basement of Home #9.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

[redacted]

Photo 35: Indoor air sample located in 1st floor living space of Home #9.

[redacted]

Photo 36: Outdoor air sample collected at Home #9.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 37: Sub-slab sample (BPSI-AR010-SSB2) location at Home #10.

[redacted]

Photo 38: Indoor air sample location in basement of Home #10.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 39: Sub-slab sample location in Home #11.

Photo 40: Indoor air sample location in basement of Home #11.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

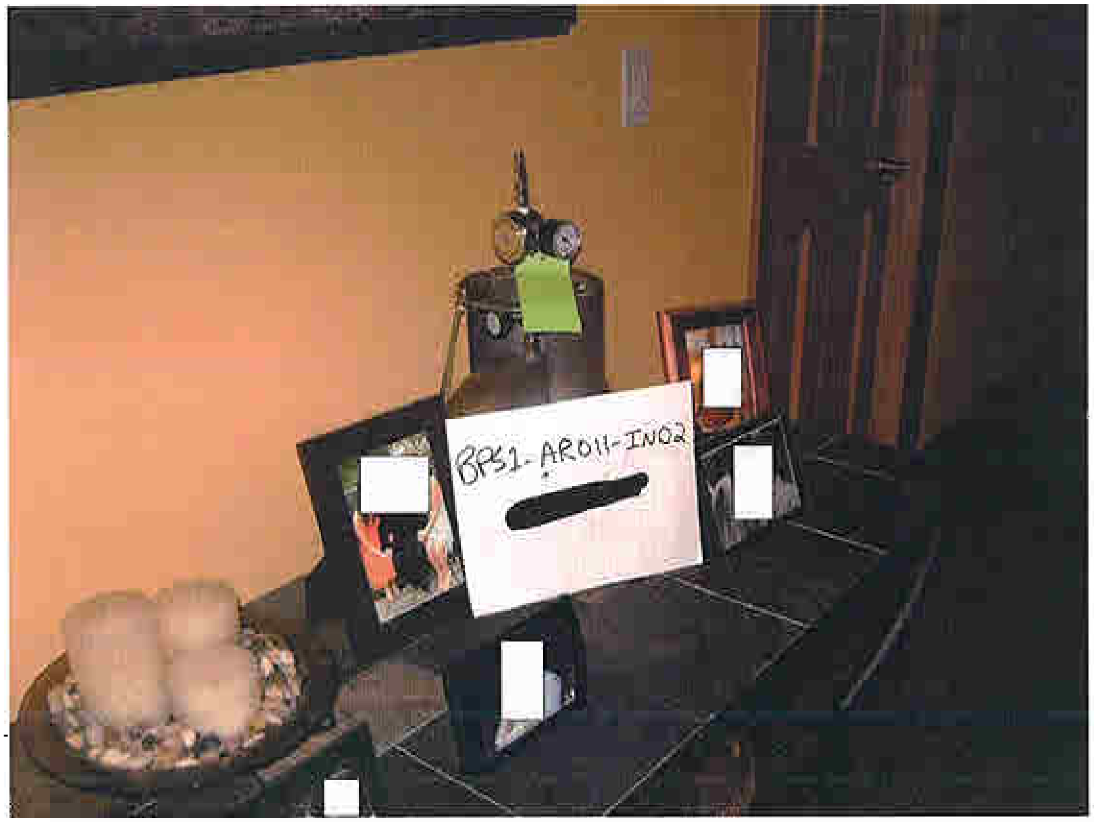


Photo 41: Indoor air sample location from 1st floor living space of Home #11.

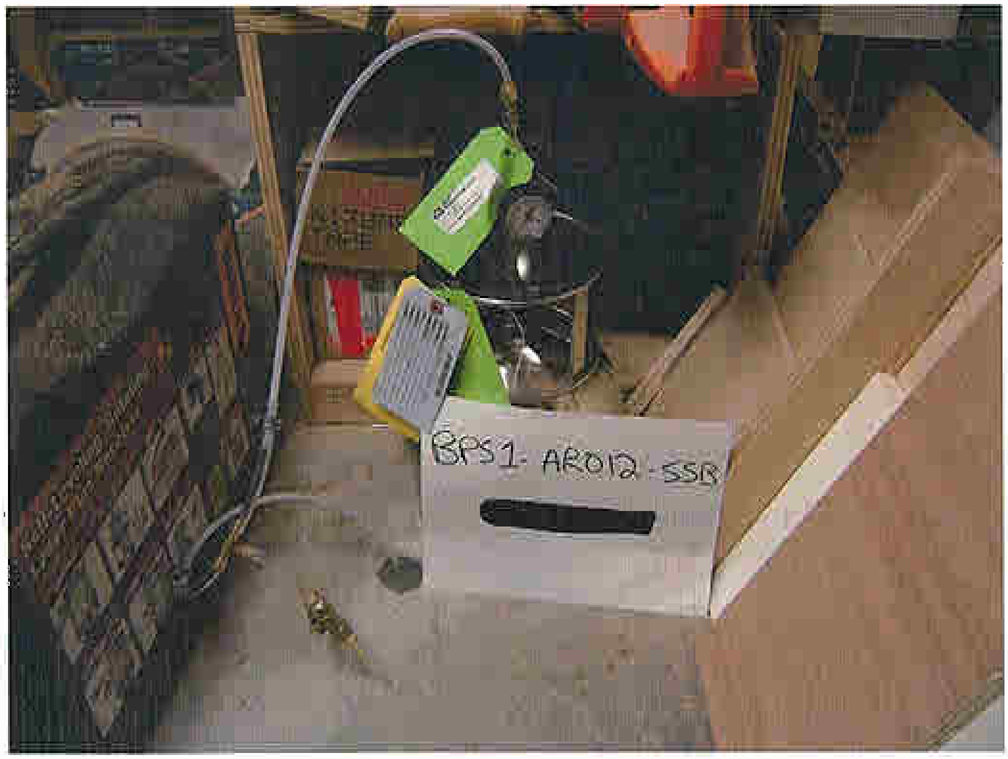
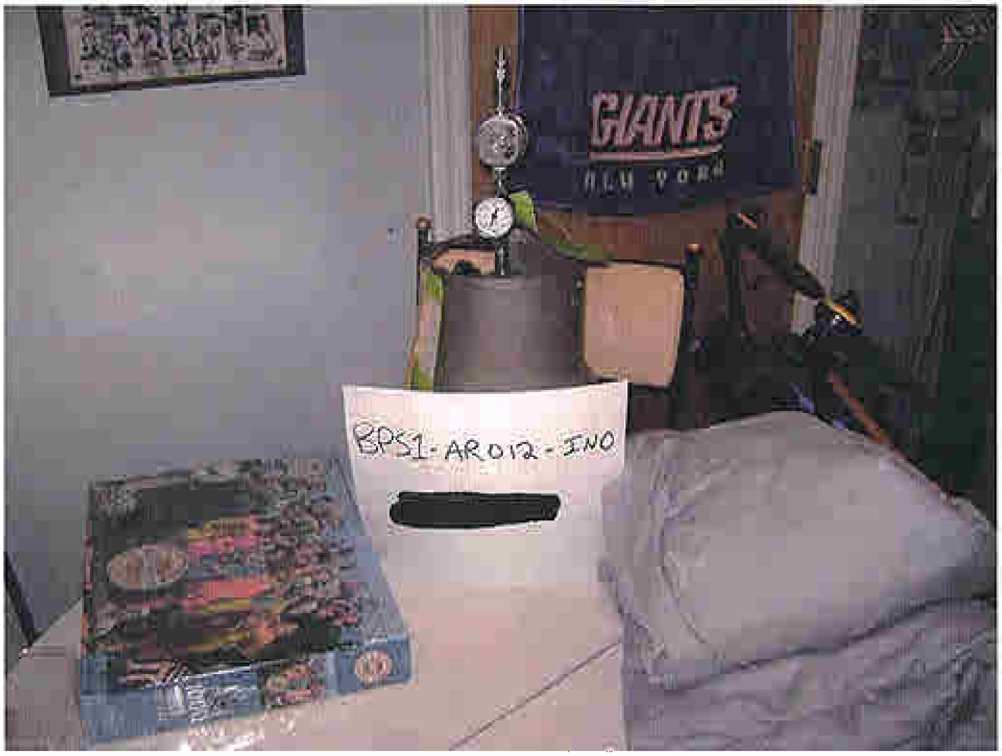


Photo 42: Sub-slab sample location at Home #12.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009



[redacted]

Photo 43: Indoor air sample location in basement of Home #12.

[redacted]

Photo 44: Indoor air sample location from 1st floor living space of Home #12.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

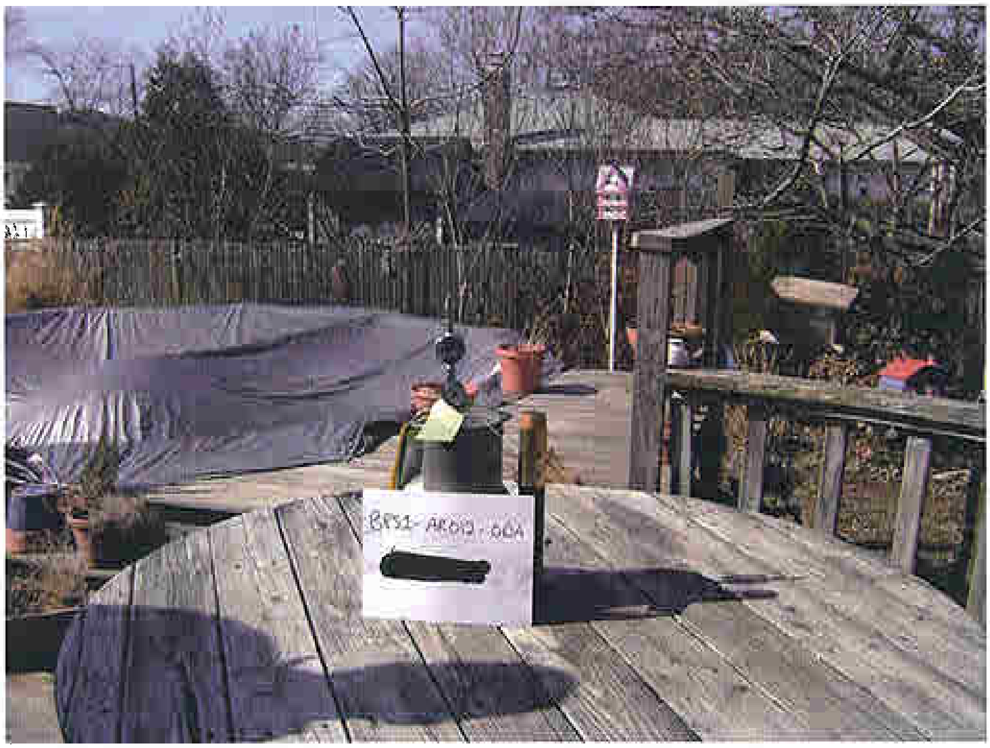


Photo 45: Outdoor air sample location in back of Home #12.

Photo 46: Sub-slab sample with duplicate collected from Home #13.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 47: Indoor air sample location in basement of Home #13.

Photo 48: Indoor air sample location in1st floor living area of Home #13.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

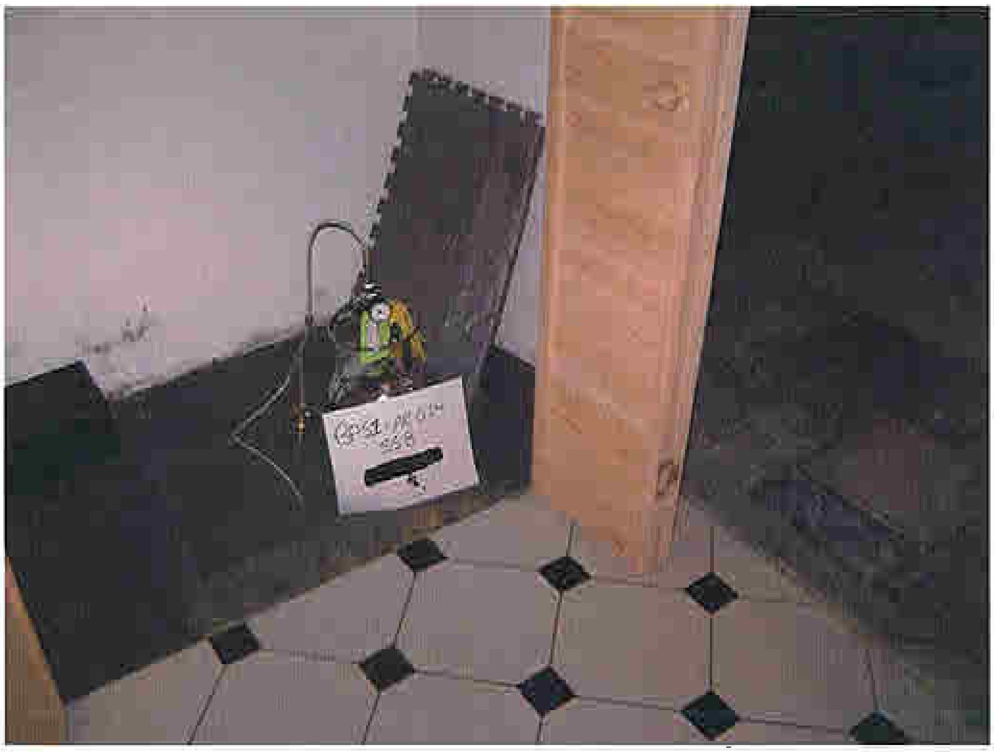


Photo 49: Sub-slab sample location in Home #14.

Photo 50: Indoor air sample location in basement of Home #14.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 51: Outdoor air sample location at Home #14.

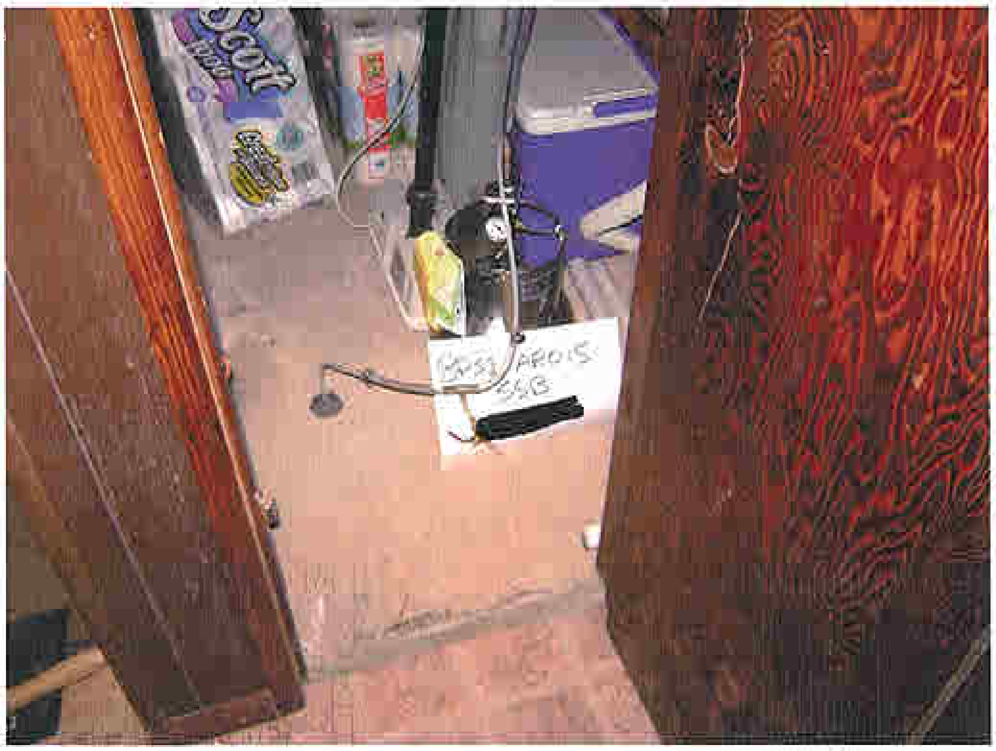


Photo 52: Sub-slab sample location in Home #15.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 53: Indoor air sample location in basement of Home #15.

Photo 54: Indoor air sample location in 1st floor living space of Home #15.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

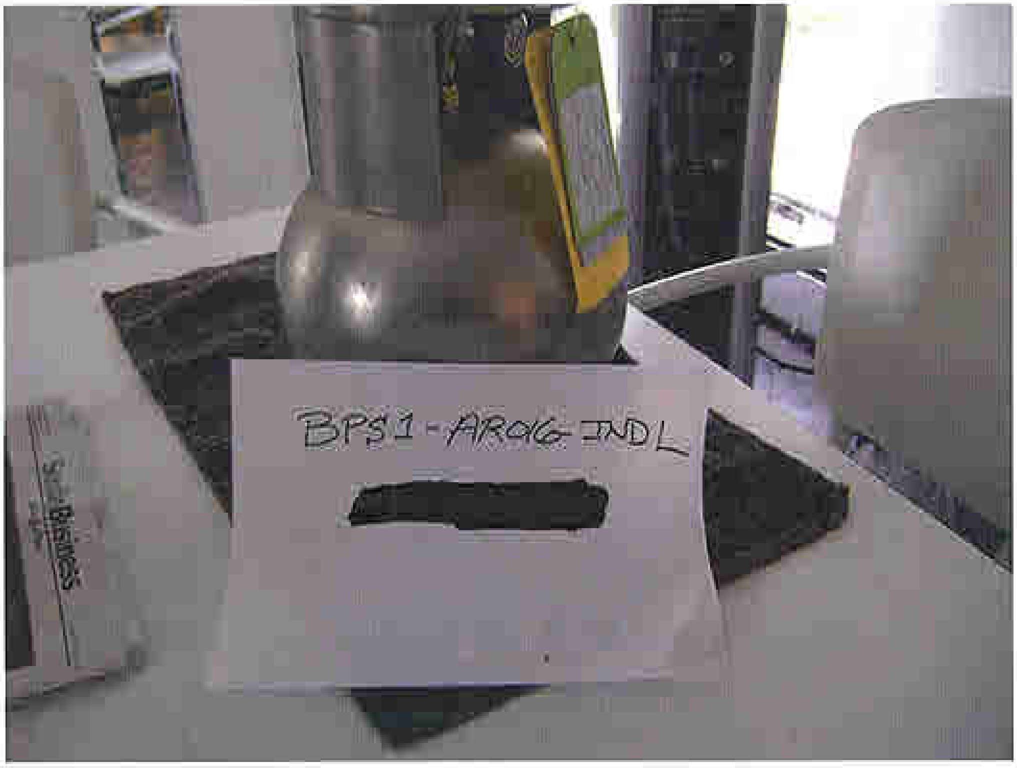
[redacted]

Photo 55: Sub-slab sample location at Home #16.

[redacted]

Photo 56: Indoor air sample location in basement of Home #16.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009



[redacted]

Photo 57: Indoor air sample location in 1st floor living space of Home #16.

[redacted]

Photo 58: Outdoor air sample location at Home #16.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 59: Sub-slab sample location at H[redacted]17.

Photo 60: Indoor air sample location in basement of Home #17.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

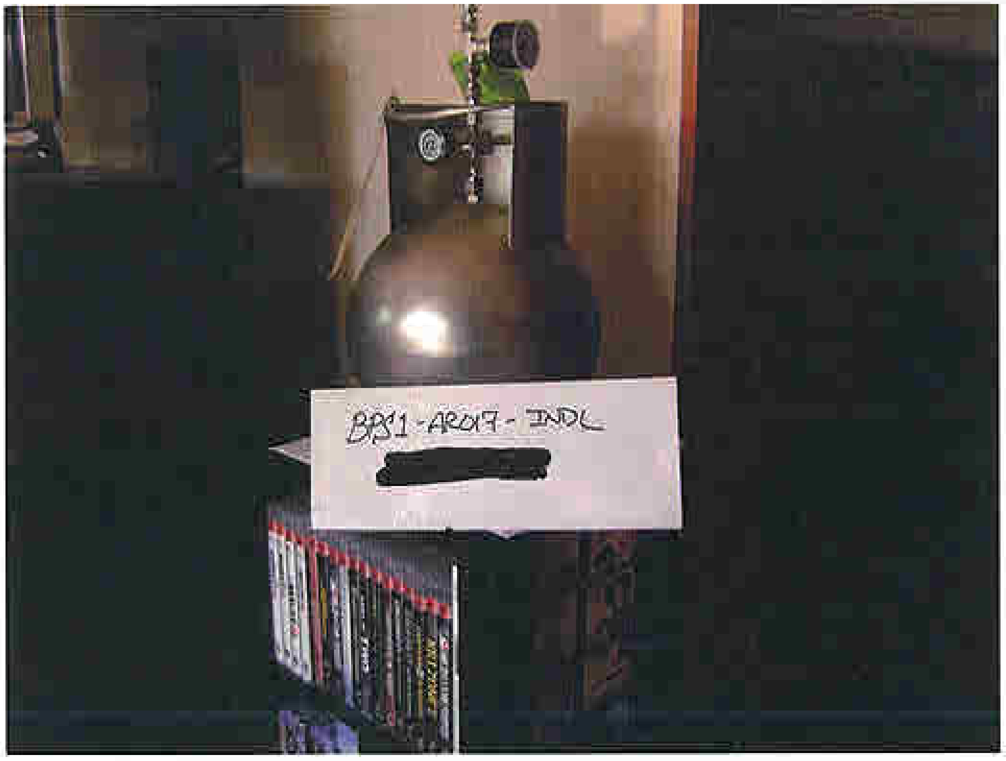


Photo 61: Indoor air sample location in 1st floor living space of Home # 17.

Photo 62: Sub-slab sample location at Home #18.

Indoor Air Sampling Photo Log
Bethpage, New York
January 2009 through May 2009

Photo 63: Indoor air sample location in basement of Home #18.

Photo 64: Outdoor air sample location at Home #18.

APPENDIX B

INDOOR AIR QUALITY QUESTIONNAIRES AND HOME INVENTORIES

OSR-3

Home #1

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Robert Sok Date/Time Prepared 1/19/09 (1530)

Preparer's Affiliation TetraTech NUS Phone No. 757-466-4904

Purpose of Investigation NWIRP Bethpage, Site 1 Soil Vapor Investigation

1. OCCUPANT:

Interviewed: [✓ Y] N

Last Name: [redacted] First Name: [redacted]

Address: [redacted]

County: Nassau

Home Phone: [redacted] Office Phone:

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: First Name:

Address:

County:

Home Phone: Office Phone:

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use
Industrial Church Other:

If the property is residential, type? (Circle appropriate response)

Ranch
[✓ Raised Ranch]
Cape Cod
Duplex
Modular
2-Family
Split Level
Contemporary
Apartment House
Log Home
3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:__________

*ON SLAB (NO BASEMENT)

If multiple units, how many? NA

If the property is commercial, type?

Business Type(s) ____________________

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors 2

Building age ~ 50 yrs

Is the building insulated? [✓ Y] / N

How air tight? Tight / [✓ Average] / Not Tight
see below

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Living space is fairly integrated with open stairwell connecting the 1st & 2nd floors. Baseboard heating (oil) in home and true airflow could not be determined

Airflow near source

Could not be determined. Minimal flow from baseboard heating/more radiant heat.

Outdoor air infiltration

Front door is fairly tight, but does allow some air during warmer weather (when open). Some outside air can infiltrate from attached garage. Attic access in hallway was sealed (owner sealed & latched when noticed)
heat loss

Infiltration into air ducts

No air ducts observed.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick

b. Basement type: full crawlspace [✓ slab] other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: uncovered [✓ covered] covered with ____________

e. Concrete floor: ? [✓ unsealed] sealed sealed with ____________
no visual verification

f. Foundation walls: [✓ poured] + [✓ block] stone other ________

g. Foundation walls: [✓ unsealed] sealed sealed with ____________

h. The basement is: (NA) wet damp dry moldy

i. The basement is: (NA) finished unfinished partially finished

j. Sump present? Y / [✓ N]

k. Water in sump? Y / ~~N~~ [✓ / not applicable]

Basement/Lowest level depth below grade: 0 - 2 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Utility access in garage (SW corner).
Cracks in garage floor observed near front of garage.
No drains observed

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	[✓ Hot water baseboard]	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other ________

The primary type of fuel used is:

Natural Gas	[✓ Fuel Oil]	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: Oil

Boiler/furnace located in: Basement Outdoors Main Floor Other Garage (SE corner)

Air conditioning: Central Air [✓ Window units] Open Windows None

Are there air distribution ducts present? Y / [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

No ductwork present in home.

7. OCCUPANCY

Is basement/lowest level occupied? Full-time [✓ Occasionally] Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	NA
1st Floor	Living space (den, computer) / Rec-room or playroom / Bathroom & laundry / Attached Garage
2nd Floor	Bedrooms / Living room / Dining room / kitchen
3rd Floor	NA
4th Floor	NA

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? [✓ Y] / N

b. Does the garage have a separate heating unit? Y / [✓ N] / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) [✓ Y] / N / NA Please specify____________

d. Has the building ever had a fire? Y / [✓ N] When?____________

e. Is a kerosene or unvented gas space heater present? Y / [✓ N] Where?____________

f. Is there a workshop or hobby/craft area? Y / [✓ N] Where & Type?____________

g. Is there smoking in the building? [✓ Y] / N How frequently? Not frequently

h. Have cleaning products been used recently? [✓ Y] / N When & Type? 2 days ago

i. Have cosmetic products been used recently? [✓ Y] / N When & Type? daily (unknown types)

j. Has painting/staining been done in the last 6 months? Y / [✓ N] Where & When? ______________

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? ______________

l. Have air fresheners been used recently? [✓ Y] / N When & Type? Bathrooms / Scented Candles

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? back of home

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented? Not in use / ? broken

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? Y / [✓ N] When & Type? ______________

Are there odors in the building? Y / [✓ N]
If yes, please describe: ____

Do any of the building occupants use solvents at work? Y / [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? ____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

[✓ Yes, use dry-cleaning regularly (weekly)]
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
No
Unknown

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: __________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: _______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: _______

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: ________________________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

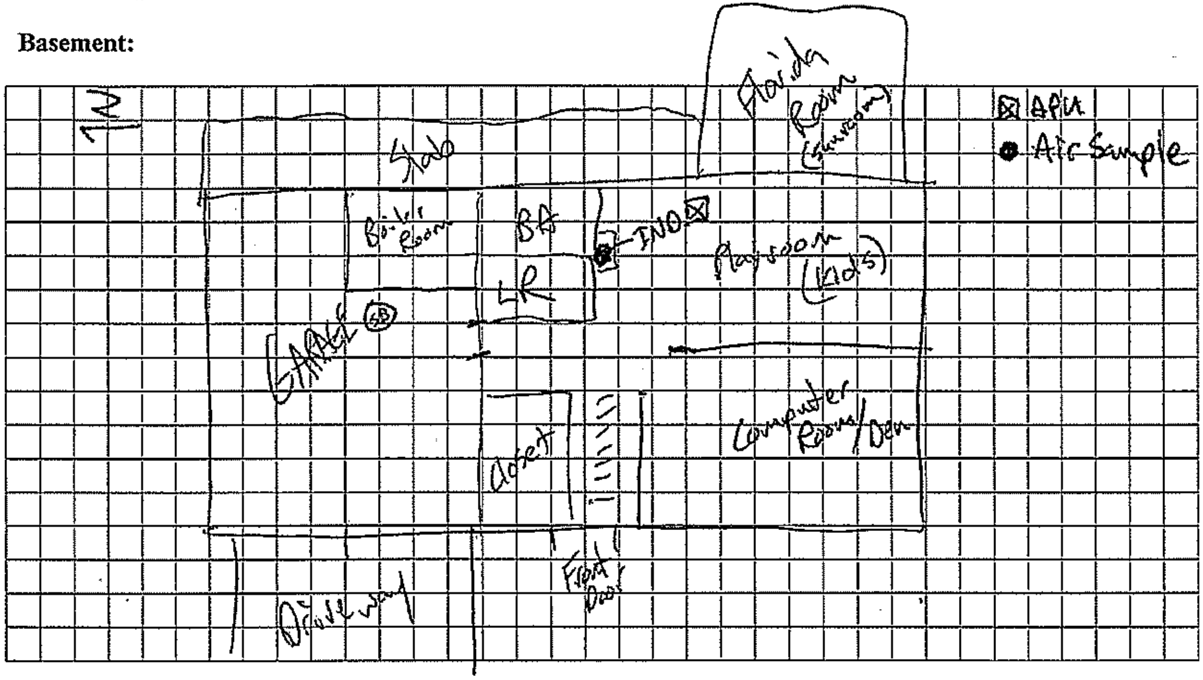
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

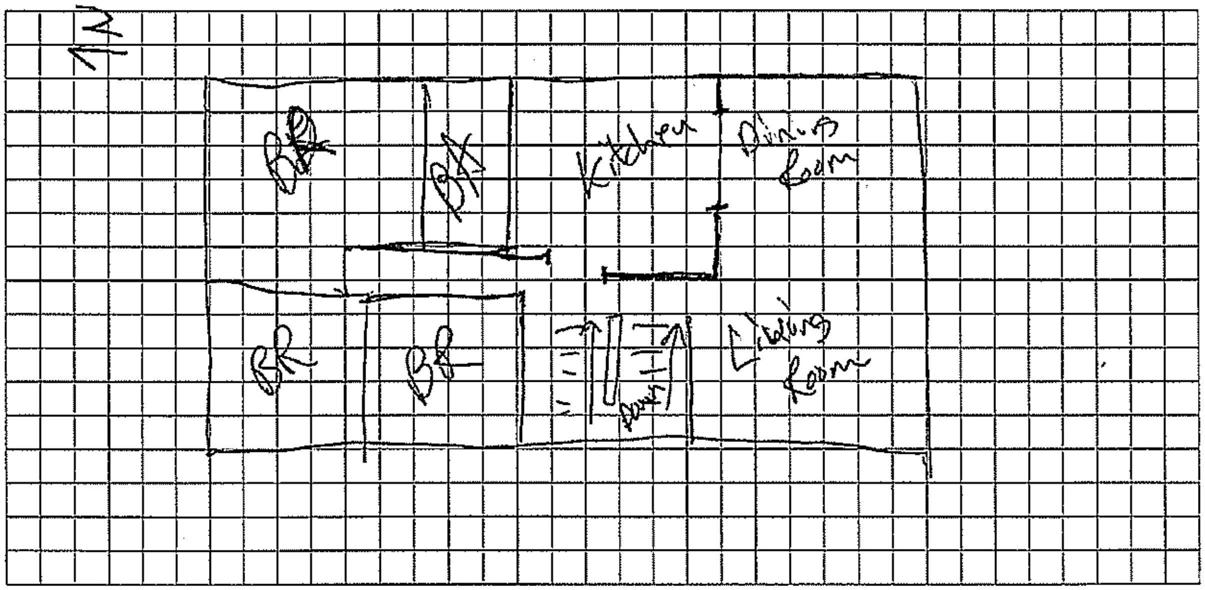
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



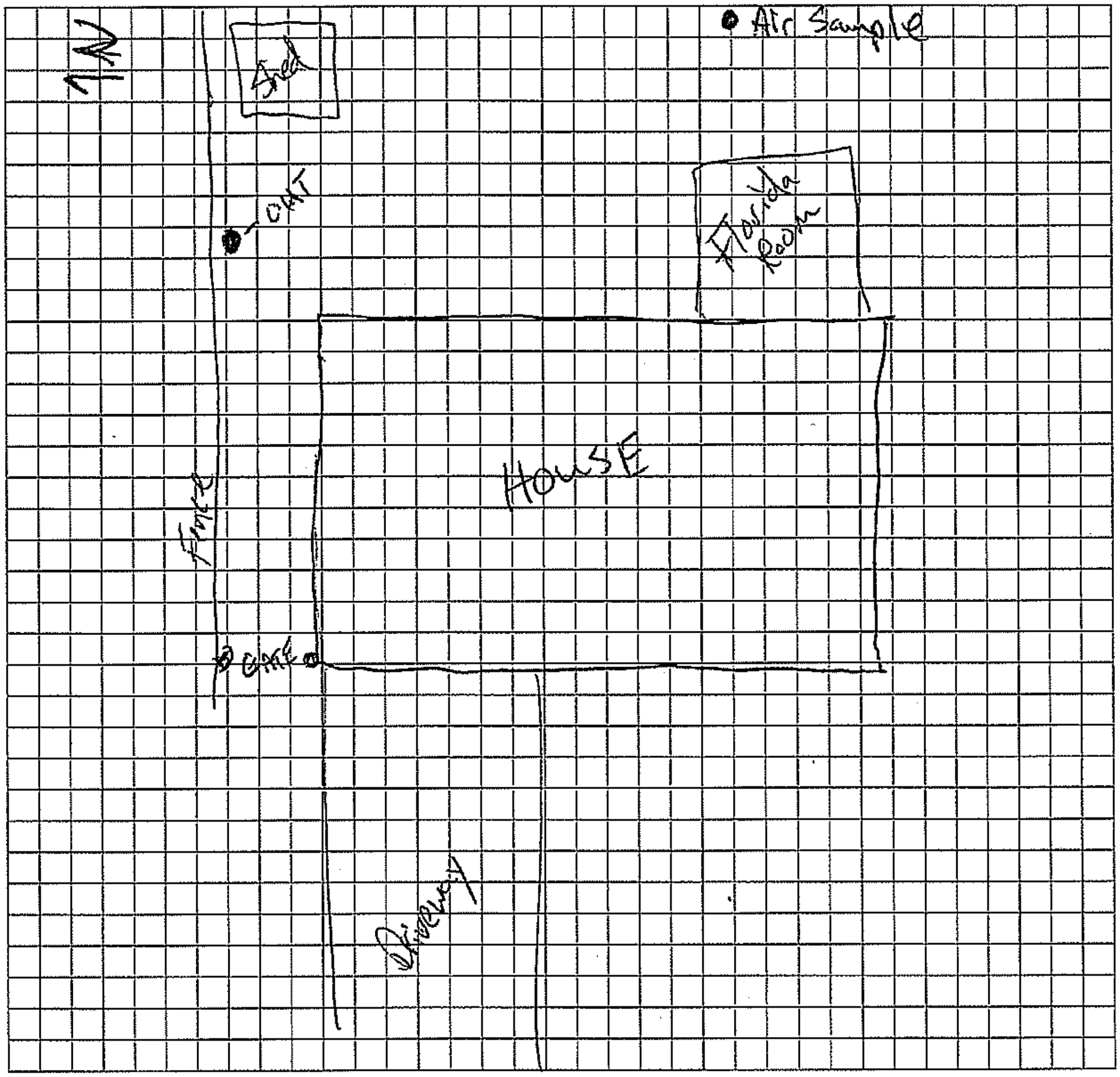
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: NA

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
1st Floor.	Resolve	22oz	good (U)		NA	N
LR	Windex	22oz	good (U)			
	Fabric Softner	1gal	good (U)			
	Detergent	1gal	good (U)			
	Lysol wipes		good (U)			
↓	Bleach	½gal	good (U)			
Garage	Gasoline		good (U)			
	Snow Blower		New			
↓	Misc Oils + fluids		good (U)	Brake fluid / 2 in 1 oil / motor oil	↓	
1st FL BA	Lysol spray	2cans	good (1 new) (1 used)			
	bathroom cleaner	22oz			↓	↓

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Home #2

OSR – 3

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Donna Caldwell / Rob Sok Date/Time Prepared 1/20/09 (1415)

Preparer's Affiliation NAVFAC / Tetra Tech NUS Phone No. 757.322.4816 / 757.466.4904

Purpose of Investigation NWIRP Bethpage, Site 1 Soil Vapor Investigation

1. OCCUPANT:

Interviewed: [✓ Y] / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted]

County: Nassau

Home Phone: [redacted] Office Phone:

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: First Name:

Address:

County:

Home Phone: Office Phone:

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential]	School	Commercial/Multi-use
Industrial	Church	Other:

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular
2-Family
Split Level
Contemporary
Apartment House
Log Home
3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:______________

If multiple units, how many? N/A

If the property is commercial, type? No

Business Type(s) N/A

Does it include residences (i.e., multi-use)? Y / N   If yes, how many? —

Other characteristics:

Number of floors 2   Building age (1962) Residents last 5 yrs (June)

Is the building insulated? [✓ Y] / N   How air tight? Tight / [✓ Average] / Not Tight
fairly tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Whole house fan - not used.; Bath & Range vent outside.

Airflow near source

Difficult to assess flow, likely pulling some air from basement.

Outdoor air infiltration

House seems fairly tight - no outdoor air infiltration observed by homeowner.

Infiltration into air ducts

None - no air ducts.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: uncovered [✓ covered] covered with tile (ceramic)

e. Concrete floor: [✓ unsealed] sealed sealed with ________________

f. Foundation walls: poured [✓ block] stone other ________

g. Foundation walls: unsealed [✓ sealed] sealed with "Ultra Seal"

h. The basement is: wet damp [✓ dry] moldy

i. The basement is: [✓ finished] unfinished partially finished

j. Sump present? Y / [✓ N]

k. Water in sump? Y / N / [✓ not applicable]

ThoroSeal used around the footings of the house (3½ yrs).

Basement/Lowest level depth below grade: 8 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Basement utility closet with sewer clean out and water piping; laundry room area – furnace, cracks.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation Heat pump [✓ ~~Hot water~~ baseboard]
Space Heaters Stream radiation Radiant floor
Electric baseboard Wood stove Outdoor wood boiler Other ________

The primary type of fuel used is:

Natural Gas [✓ Fuel Oil] Kerosene
Electric Propane Solar
Wood Coal

Domestic hot water tank fueled by: oil furnace

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other ________

Air conditioning: Central Air [✓ Window units] Open Windows None

Wall units (living room) etc.

Are there air distribution ducts present? Y / [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

Wall air conditioning units in living, master, den and another bed room. Appears fairly sealled off from outside

7. OCCUPANCY

Is basement/lowest level occupied? Full-time [✓ Occasionally] Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Second office, entertainment room, gym, laundry
1st Floor	Living room, kitchen, dining, 3 bedrooms
2nd Floor	—
3rd Floor	—
4th Floor	—

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? [✓ Y] / N

b. Does the garage have a separate heating unit? Y / [✓ N] / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) [✓ Y] / ~~N~~ / NA aES 1/20/09
Please specify Car - and tools. outdoor sled also stores lawnmower

d. Has the building ever had a fire? Y / [✓ N] When?

e. Is a kerosene or unvented gas space heater present? Y / [✓ N] Where? Electric heater

f. Is there a workshop or hobby/craft area? Y / [✓ N] Where & Type?

g. Is there smoking in the building? Y / [✓ N] How frequently?

h. Have cleaning products been used recently? [✓ Y] / N When & Type? Normal / household cleaners

i. Have cosmetic products been used recently? [✓ Y] / N When & Type? Normal / daily

j. Has painting/staining been done in the last 6 months? Y / [✓ N] Where & When? ______________

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? ______________

l. Have air fresheners been used recently? [✓ Y] / N When & Type? kitchen / scented candle

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? outside

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented? outside

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] N (in Basement)

p. Has there been a pesticide application? Y / [✓ N] When & Type? ______________

Are there odors in the building? Y / [✓ N]
If yes, please describe: ____

Do any of the building occupants use solvents at work? Y / [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? N/A

If yes, are their clothes washed at work? ~~Y / N~~

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
[✓ Yes, use dry-cleaning infrequently (monthly or less)]
Yes, work at a dry-cleaning service
No
Unknown

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ____________
Is the system active or passive? ~~Active/Passive~~

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: _______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: _______

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: ______________________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

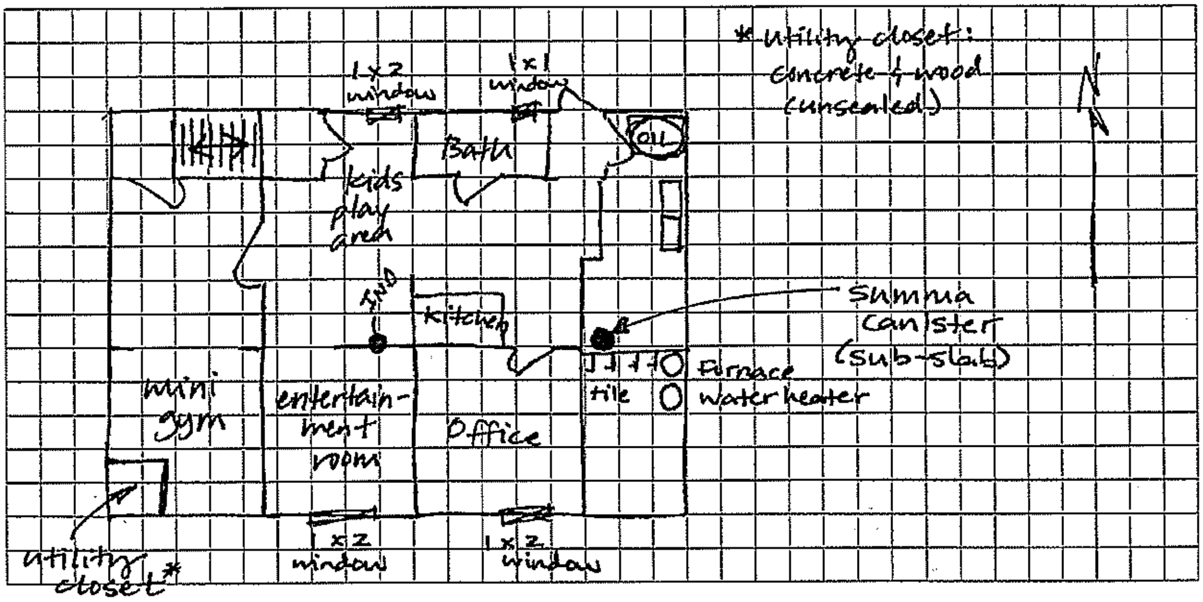
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

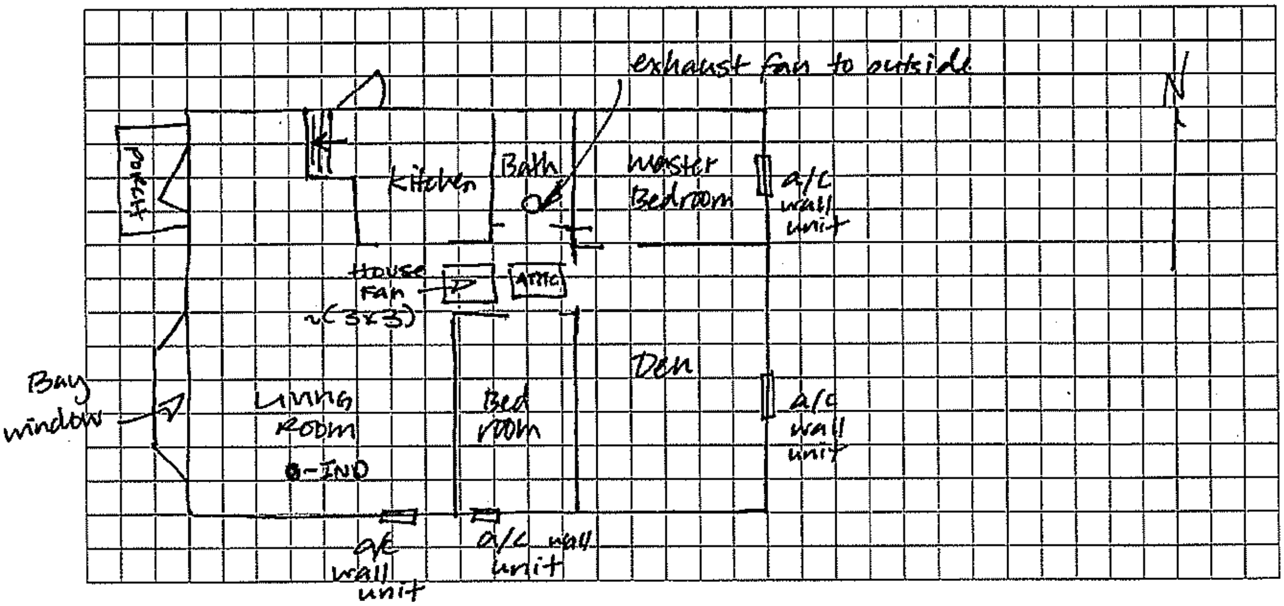
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



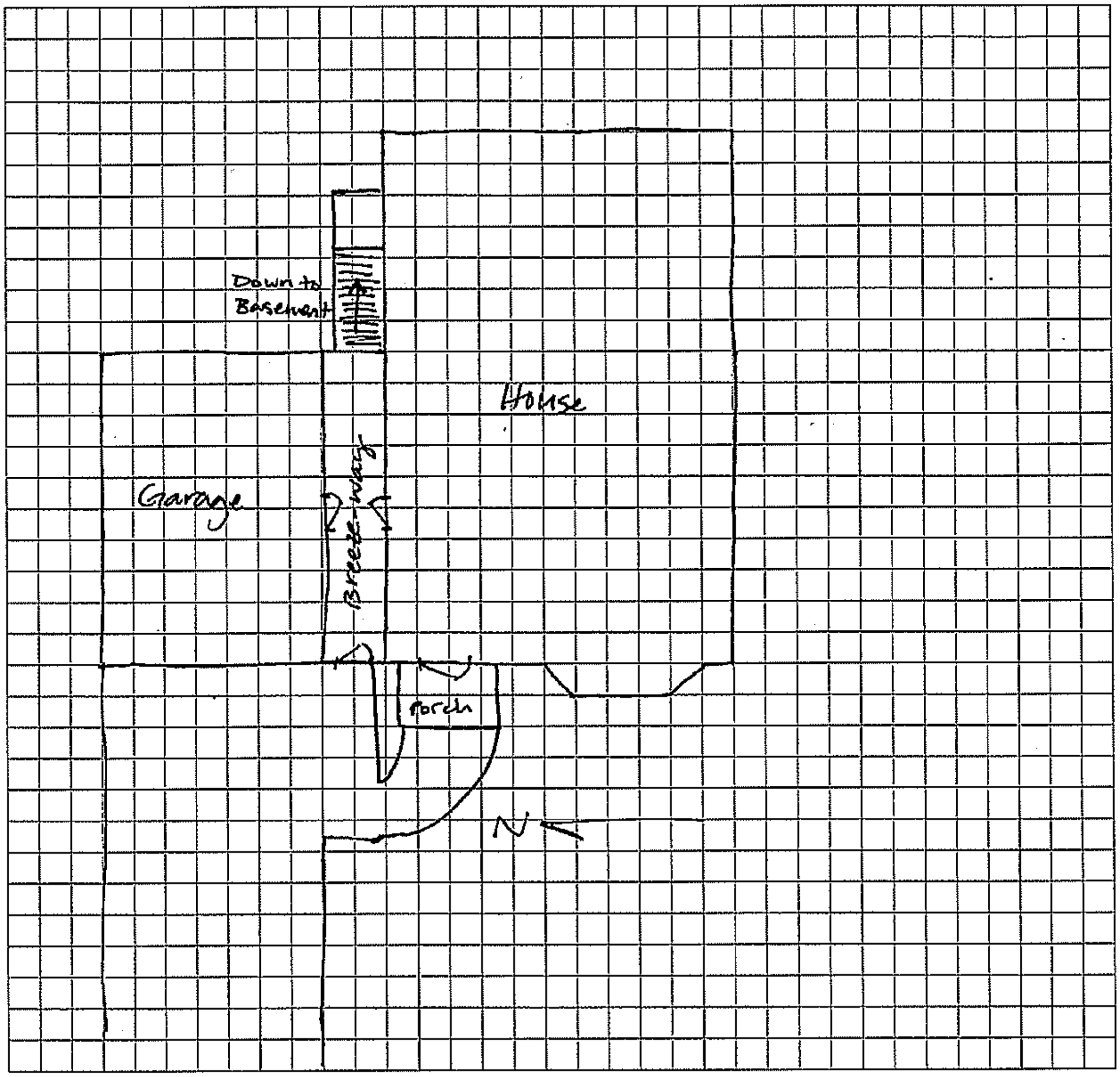
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Near Furnace + Water heater in basement	Wood Stain	1or2 2 gal tin	good used			Y but overall pic not detail
	Calking	3-4 tubes	good unopened ~~used~~ (UO)			
	Antifreeze	1.5 gal	used good			
	Spackle	1 1gal bucket	used good			
	Paint	2-3 1gal tins	used good			
	Wood Finish (Varnish)	3-4 1gal tins	used good			
laundry room	Chlorox Bleach	2 2gal bottles	good (u)			
	Washer Detergent	1 2-gal bottle	good (u)			
	Dryer Sheet	~1 box	good (u)			
	Spray + Wash	3 spray bottles	good (u)			
	Air Freshner (defuser)	1	good (u)			
	Febreeze	1	good (u)			
Kitchen sink	Real-Kill Home Insect Control	1 gal	good (u)			
	Air Freshner Spray	1 can	good (u)			

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Home #3

OSR – 3

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Robert Sok Date/Time Prepared 1/21/09, 1800

Preparer's Affiliation TetraTech NUS Phone No. 757-466-4904

Purpose of Investigation NWIRP Bethpage Soil Vapor Investigation

1. OCCUPANT:

Interviewed: Y / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted]

County: Nassau

Home Phone: [redacted] ~~Office~~ Cell Phone: [redacted]

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use
Industrial Church Other: _____

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:______________

If multiple units, how many? ________

If the property is commercial, type?

Business Type(s) NA

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors 1

Building age 50 - 60 years old 1958

Is the building insulated? [✓ Y] / N

How air tight? Tight / [✓ Average] / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

No observed or relative air flow between floors

Airflow near source

Very little air flow near boiler

Outdoor air infiltration

Home fairly tight, good windows, and doors have good seal

Infiltration into air ducts

Only air ducts are in attic for AC.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: [✓ uncovered] covered covered with ____________

e. Concrete floor: unsealed [✓ sealed] sealed with ____________

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: [✓ unsealed] sealed sealed with ____________

h. The basement is: wet damp [✓ dry] moldy

i. The basement is: finished [✓ unfinished] partially finished

j. Sump present? Y [✓ N] (water) → Sewer access sump present in NW corner of basement

k. Water in sump? Y / N / [✓ not applicable]

Basement/Lowest level depth below grade: 8 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Some floor cracks SE & NW corners of basements and a few along basement walls (west wall near heater & south wall near tanks no drains), sewer & water / bathroom & Kitchen drains straight to floor and under slab

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation Heat pump [✓ Hot water baseboard]
Space Heaters Stream radiation Radiant floor
[redacted] baseboard Wood stove Outdoor wood boiler Other ________

The primary type of fuel used is:

Natural Gas [✓ Fuel Oil] Kerosene
Electric Propane Solar
Wood Coal

Domestic hot water tank fueled by: Oil

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other________

Air conditioning: [✓ Central Air] Window units Open Windows None

Are there air distribution ducts present? [✓ Y] / N Air Conditioning

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

AC vents present in ceilings of first floor rooms. Return is located in hallway

7. OCCUPANCY

Is basement/lowest level occupied? Full-time [✓ Occasionally] Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Laundry & storage
1st Floor	Living Space (3BR, FR, DR, BA)
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?	[✓ Y] / N
b. Does the garage have a separate heating unit?	Y / [✓ N] / NA
c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)	[✓ Y] / N / NA Please specify lawnmower
d. Has the building ever had a fire?	Y / [✓ N] When?
e. Is a kerosene or unvented gas space heater present?	Y / [✓ N] Where?
f. Is there a workshop or hobby/craft area?	Y / [✓ N] Where & Type?
g. Is there smoking in the building?	Y / [✓ N] How frequently?
h. Have cleaning products been used recently?	[✓ Y] / N When & Type?
i. Have cosmetic products been used recently?	Y / [✓ N] When & Type?

j. Has painting/staining been done in the last 6 months? Y / [✓ N] Where & When? ______

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? ______

l. Have air fresheners been used recently? [✓ Y] / N When & Type? Fabreeze

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? Microwave to attic

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented? ______

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? Y / [✓ N] When & Type? ______
Weed-n-Feed

Are there odors in the building? Y / [✓ N]
If yes, please describe: ______

Do any of the building occupants use solvents at work? Y / [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? ______

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
[✓ Yes] use dry-cleaning infrequently (monthly or [✓ less])
Yes, work at a dry-cleaning service
No
Unknown

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ______
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: ______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: ______

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: ______

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

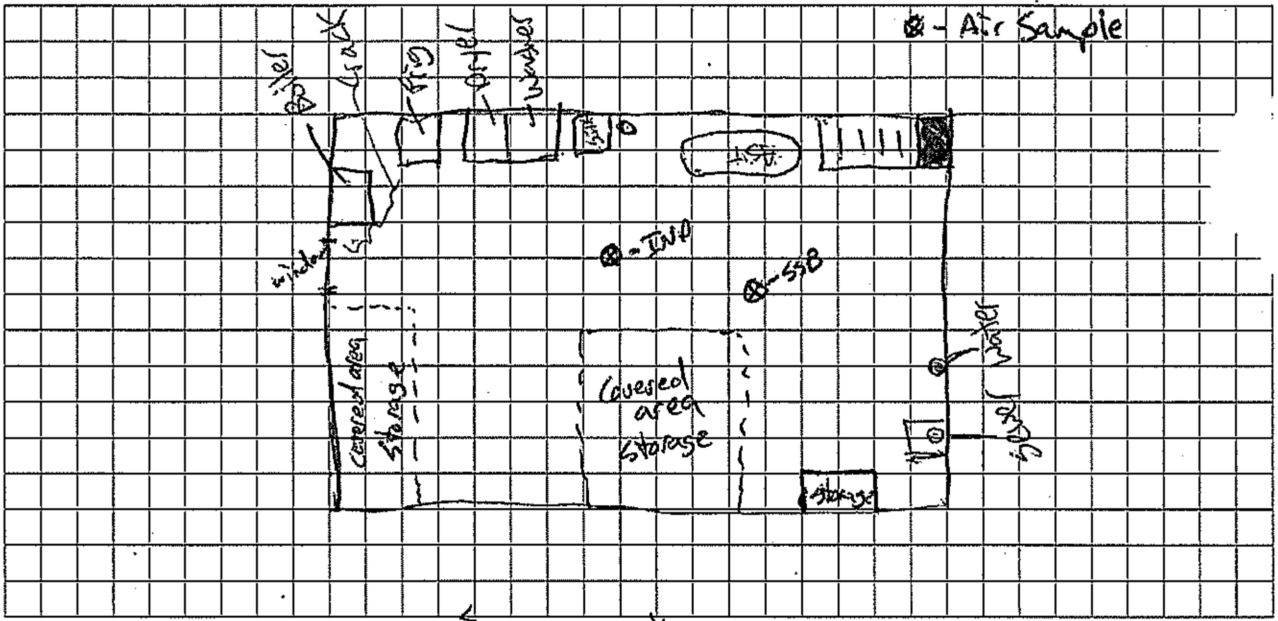
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

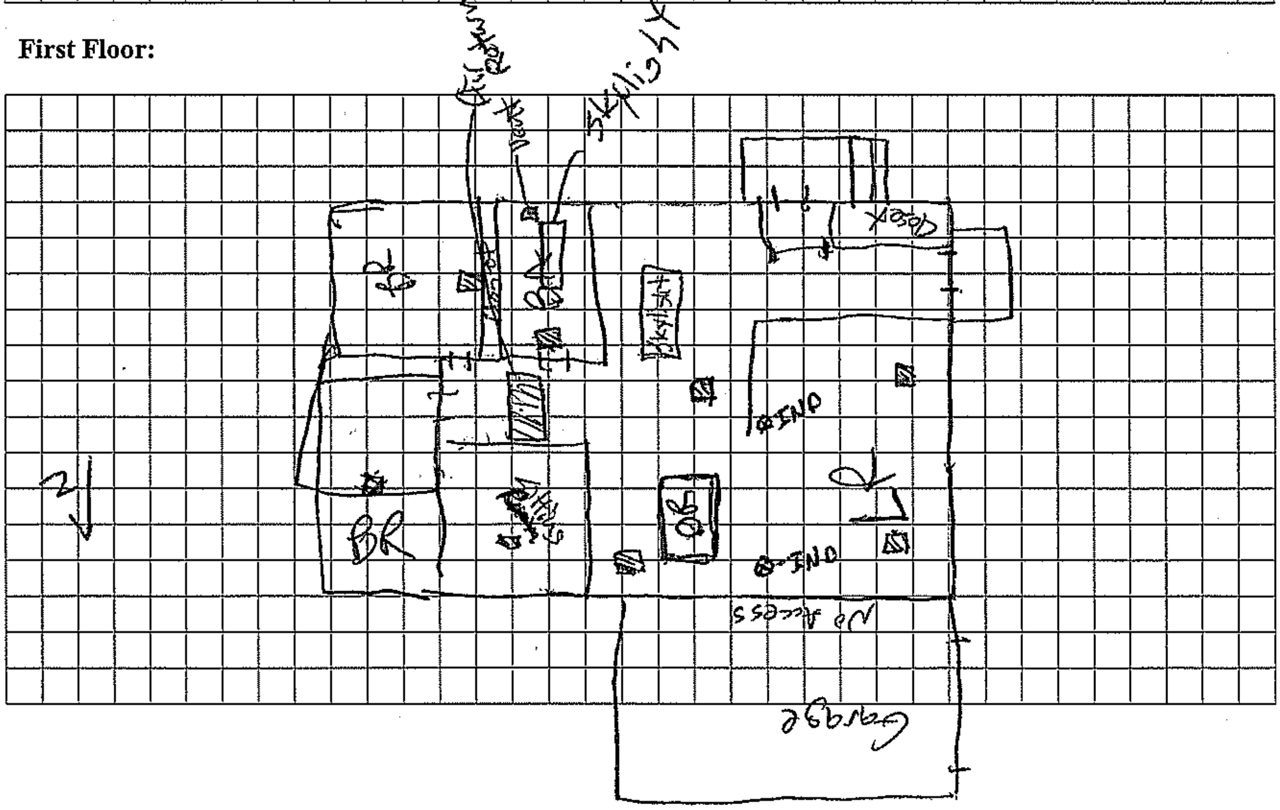
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



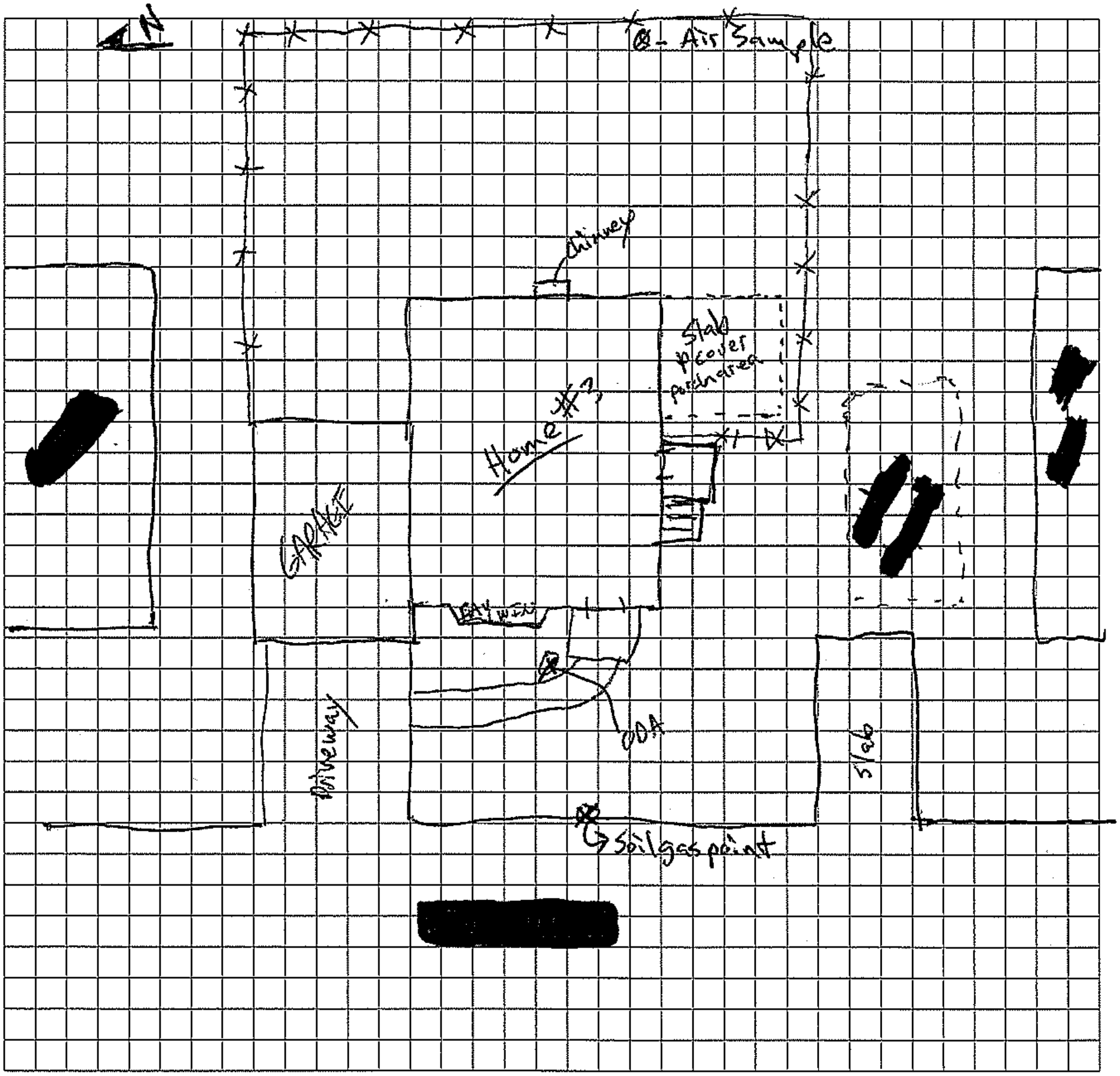
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



[redacted]

[redacted]

[redacted]

[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Basement	Dow/Lysol	1 can			NA	Y but of overall
	Pinesol	1 L				
	Mr Clean	1 gal				
	Windex	2 spray bottles				
	Laundry detergent	2 gal				
	Fabric softner	1 gal				
	Powder Dish Soap (Cascade)	1 lrg box				
	Chlorox Wipes	1 canister				
1st Floor	Bathroom cleaners	2 btls				NO
	Dish Soap / Dishwasher	1 box 1 btl				NO
Garage	gasoline	5 gal	→	typical for lawn mower		NO

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Home#4

OSR – 3

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Ashley Severin / Donna Caldwell Date/Time Prepared 01/20/09 9:00 AM (0900)

Preparer's Affiliation NAVFAC Phone No. 757. 322. 4816

Purpose of Investigation NWIRP Bethpage, Site 1 Soil Vapor Investigation

1. OCCUPANT:

Interviewed: [✓ Y] / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted]

County: Nassau

Home Phone: [redacted] Office Phone: ______

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: ______ First Name: ______

Address: ______

County: ______

Home Phone: ______ Office Phone: ______

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use
Industrial Church Other: ______

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:______________

If multiple units, how many? 2, PRIMARY HOME & BASEMENT APARTMENT

If the property is commercial, type? No

Business Type(s) N/A

Does it include residences (i.e., multi-use)? Y [✓ N]   If yes, how many? —

Other characteristics:

Number of floors 2   Building age ~50-60yrs old

Is the building insulated? [✓ Y] N   How air tight? ~~Tight~~ [✓ Average] Not Tight

aes 1/20/09

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Laundry vent and bathroom exhaust outside. A/C ducts in ceiling throughout primary home - no connection with basement apartment. Separate window a/c unit for apt.

Airflow near source

minimal air flow from base boards, in winter.

Outdoor air infiltration

None - normal. (from windows and front door)

Infiltration into air ducts

None - normal.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick

b. Basement type: [✓ full] crawlspace slab other Full, but separated

c. Basement floor: [✓ concrete] dirt stone other tile, vinyl, carpet

d. Basement floor: uncovered [✓ covered] covered with ______

e. Concrete floor: unsealed [✓ sealed] sealed with ______

f. Foundation walls: AES 1/21/09 [✓ ~~poured~~] [✓ block] stone other ______

g. Foundation walls: unsealed [✓ sealed] sealed with ______

h. The basement is: wet damp [✓ dry] moldy NOTE: Dehumidifier in basement apt.

i. The basement is: [✓ finished] unfinished partially finished

j. Sump present? [✓ Y] / N (Not observed - ?)

k. Water in sump? Y / [✓ N] / not applicable

Basement/Lowest level depth below grade: 8 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Sewer cleanout, sprinkler/water system piping in SE corner of basement;

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation
Space Heaters
Electric baseboard
Heat pump
Stream radiation
Wood stove
[✓ ~~Hot water~~ baseboard] PRIMARY
Radiant floor
Outdoor wood boiler
Other Gas Fireplace, not used

The primary type of fuel used is:

Natural Gas
Electric
Wood
[✓ Fuel Oil]
Propane
Coal
Kerosene
Solar

Domestic hot water tank fueled by: Fuel Oil

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other ______

Air conditioning: [✓ Central Air] primary home [✓ Window units] in basement apt. Open Windows None

Are there air distribution ducts present? [✓ Y] / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

Ducts are identified on the floor plan drawings/sketches as circles.

7. OCCUPANCY

Is basement/lowest level occupied? [✓ Full-time] Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Separate full apt. w/ living, bed, bath & kitchen
1st Floor	Living, 3bed, bath, kitchen
2nd Floor	—
3rd Floor	—
4th Floor	—

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / [✓ N]

b. Does the garage have a separate heating unit? Y / N / [✓ NA]

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / [✓ NA] Please specify outside shed; power equip

d. Has the building ever had a fire? Y / [✓ N] When? Unknown; current owners 2yrs

e. Is a kerosene or unvented gas space heater present? Y / [✓ N] Where? ________

f. Is there a workshop or hobby/craft area? Y / [✓ N] Where & Type? ________

g. Is there smoking in the building? Y / [✓ N] How frequently? ________

h. Have cleaning products been used recently? Y / [✓ N] When & Type? Normal use

i. Have cosmetic products been used recently? Y / [✓ N] When & Type? ________

j. Has painting/staining been done in the last 6 months? Y / [✓ N] Where & When? ______

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? ______

l. Have air fresheners been used recently? [✓ Y] / N When & Type? Candle – Normal/Occasional use

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? outside

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented? outside

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N (in Basement)

p. Has there been a pesticide application? Y / [✓ N] When & Type? ______

Are there odors in the building? [✓ Y] / N
If yes, please describe: Fuel oil odors in basement near water heater & furnace (dried fuel oil spill)

Do any of the building occupants use solvents at work? Y / [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? —

If yes, are their clothes washed at work? Y / N N/A

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) [✓ No]
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ______
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: ______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: ______

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: ______

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

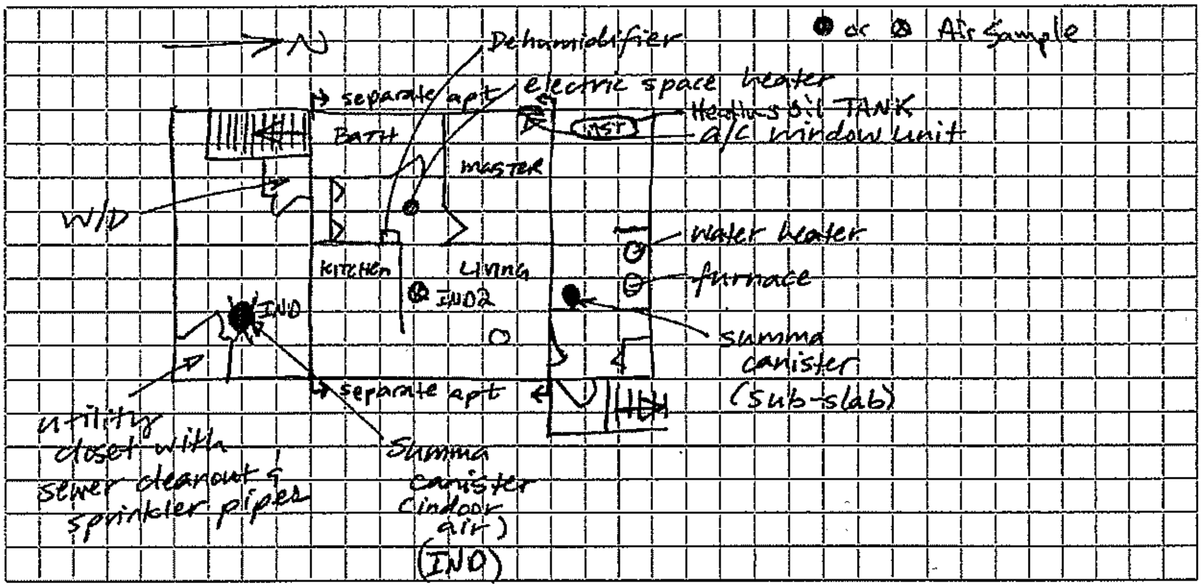
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

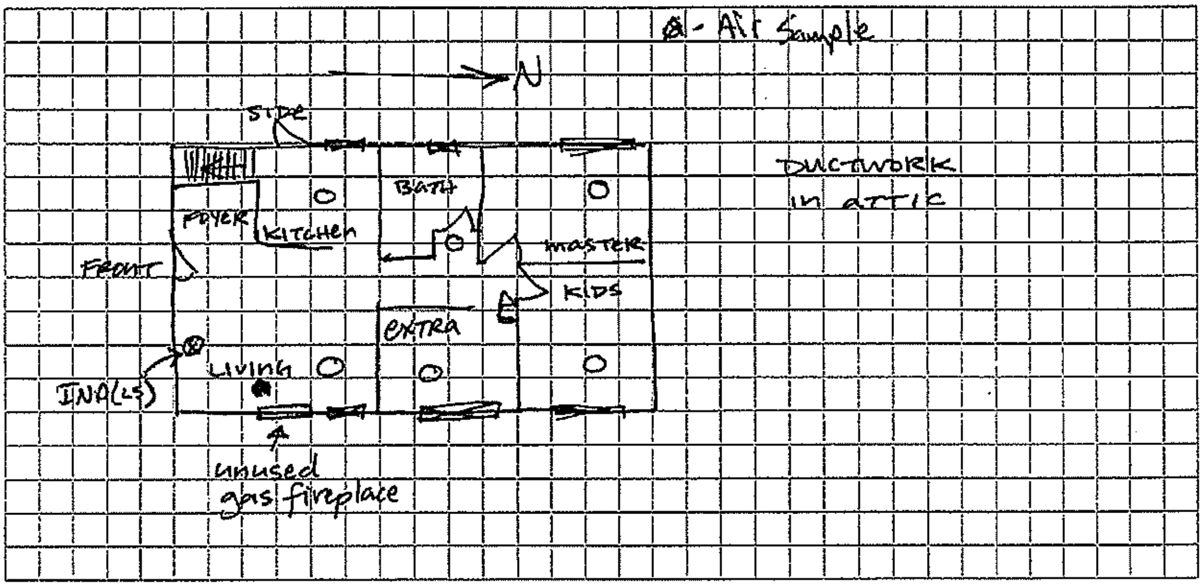
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



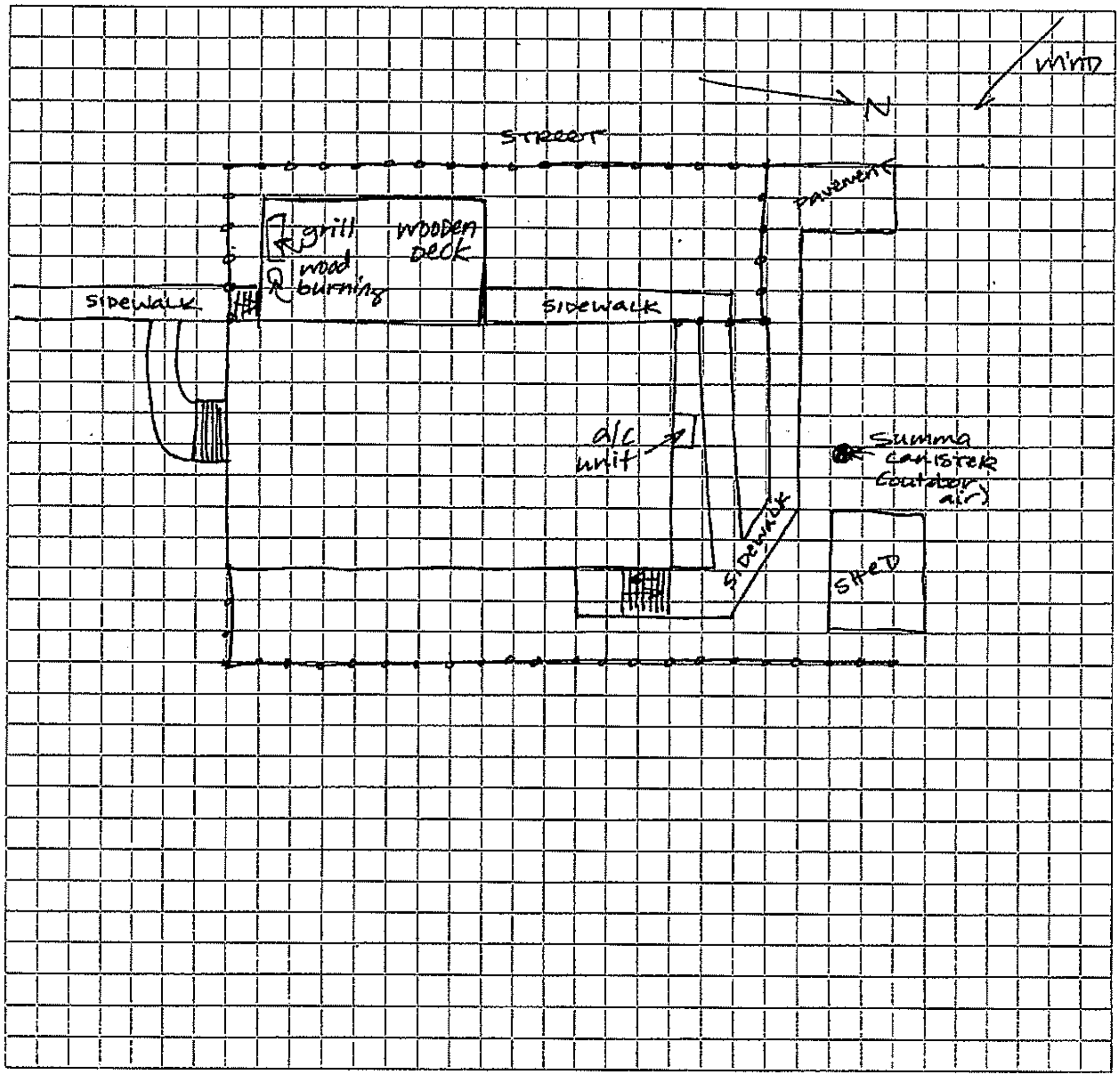
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Basement	Paint cans (gallon)	3	(good) Used		N/A	
BM	Paint can (30.5 fl.oz)	1	(good) UO		"	
BM	ChromaBase (~15 fl.oz)	1	Used	VOCs, xylene, ethylbenzene, acetate, acetone	"	
BM/1st FL	(kitchen) cleaning materials	multiple	Used		"	
BM	Lysol spray		Used		"	
BM	Lysol wipes		Used		"	
BM	Detergent	1 gal	Used		"	
BM	Fabric Softener	1gal	Used		"	

* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Home #5

OSR – 3

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Donna Caldwell Date/Time Prepared 1/20/09 (0930)

Preparer's Affiliation NAVFAC Phone No. 757 322-4816

Purpose of Investigation NWIRP Bethpage Site / Soil Vapor Investigation

1. OCCUPANT:

Interviewed: Y / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted]

County: Nassau

Home Phone: [redacted] Office Phone: ______

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / N

Last Name: ______ First Name: ______

Address: ______

County: ______

Home Phone: ______ Office Phone: ______

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use
Industrial Church Other: ______

Notes on back of last page

If the property is residential, type? (Circle appropriate response)

Ranch
Raised Ranch
Cape Cod
Duplex
Modular
2-Family
[✓ Split Level] 1800 ft^2
Contemporary
Apartment House
Log Home
3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:______________

Basement
1st Den / bathroom - converted from garage space
2nd living / kitchen
3rd 2 bedrooms / 1 bath
4th Attic bedroom

If multiple units, how many? NA

If the property is commercial, type?

Business Type(s) N A

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors Basement + 4 Building age ≈ 55 yrs

Is the building insulated? [✓ Y] / N How air tight? Tight / [✓ Average] / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

No Forced air throughout house
laundary in basement vents outside ; exhaust in 1st Floor bath and 2nd Floor kitchen vent outside

Airflow near source

No Forced air throughout house ;
IQ Air GC VOC air purifier in basement (with carbon filters) ; also a dehumidifier in basement (locations shown on floor plan).

Outdoor air infiltration

NONE

Infiltration into air ducts

N/A

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: [✓ uncovered] covered covered with few throw rugs

e. Concrete floor: unsealed [✓ sealed] sealed with paint

f. Foundation walls: poured [✓ block] stone other ________

g. Foundation walls: [✓ unsealed] sealed sealed with ________

h. The basement is: wet damp [✓ dry] moldy

i. The basement is: finished unfinished [✓ partially finished] perforated drywall separates basement into laundary / storage area [redacted]

j. Sump present? Y / [✓ N]

k. Water in sump? Y / N / [✓ not applicable]

Basement/Lowest level depth below grade: ~ 7 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

No cracks visible, no drains, 3 windows near basement ceiling, each ≈ 2x3' 1 in painter's work area, 2 in laundary area. Owner noted windows are always closed / boarded up

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation
Space Heaters
Electric baseboard
Heat pump
Stream radiation
Wood stove
[✓ Hot water baseboard]
Radiant floor
Outdoor wood boiler
Other ________

The primary type of fuel used is:

Natural Gas
Electric
Wood
[✓ Fuel Oil]
Propane
Coal
Kerosene
Solar

Domestic hot water tank fueled by: Fuel Oil

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other ________

Air conditioning: Central Air [✓ Window units] Open Windows None

Are there air distribution ducts present? Y [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

No forced air throughout home, exhaust Fans in kitchen and bath on 1st / 2nd Floors vent to outside

7. OCCUPANCY

Is basement/lowest level occupied? [✓ Full-time] Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	space divided professional artist workspace (Full time) / laundary, storage, Furnace
1st Floor	den / living / bath converted from garage, concrete floor carpeted
2nd Floor	living space / kitchen hardwood Floor / carpets
3rd Floor	2 bedrooms bath
4th Floor	attic bedroom

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y [✓ N]

b. Does the garage have a separate heating unit? Y / N / [✓ NA]

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / [✓ NA] Please specify________

d. Has the building ever had a fire? Y [✓ N] When?________

e. Is a kerosene or unvented gas space heater present? Y [✓ N] Where?________

f. Is there a workshop or hobby/craft area? [✓ Y] N Where & Type? basement / artist studio

g. Is there smoking in the building? Y [✓ N] How frequently?________

h. Have cleaning products been used recently? Y / [✓ N] When & Type?________

i. Have cosmetic products been used recently? Y / [✓ N] When & Type?________

j. Has painting/staining been done in the last 6 months? [✓ Y] / N Where & When? basement/artist studio / daily work

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? ________

l. Have air fresheners been used recently? Y / [✓ N] When & Type? ________

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? hood above stove / outside

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented? outside

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N basement

p. Has there been a pesticide application? Y / [✓ N] When & Type? ________

Are there odors in the building? [✓ Y] / ~~N~~ OES 1/21/09
If yes, please describe: Strong chemical smell in basement workshop area due to his painting supplies

Do any of the building occupants use solvents at work? [✓ Y] / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? [redacted] / turpentine, varnish, oil paints, works in basement, laundary done at home
If yes, are their clothes washed at work? N/A Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) [✓ No]
Yes, use dry-cleaning infrequently (monthly or [✓ less]) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: ______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: ______

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: ________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

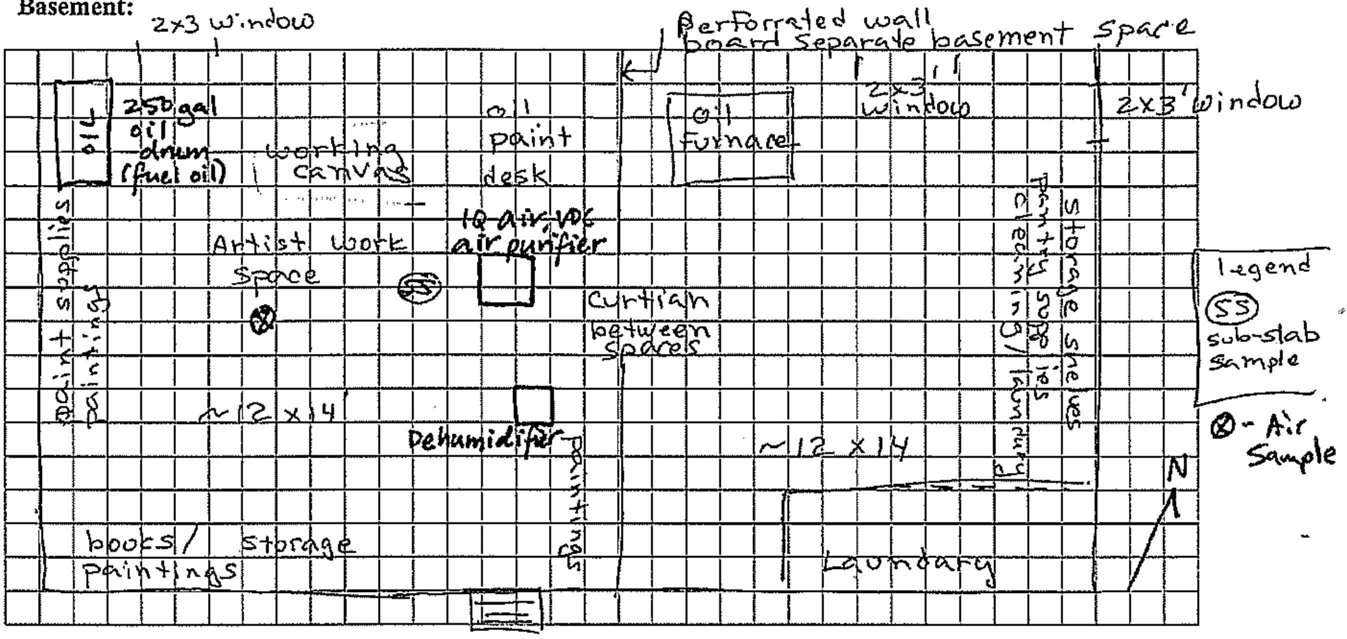
d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

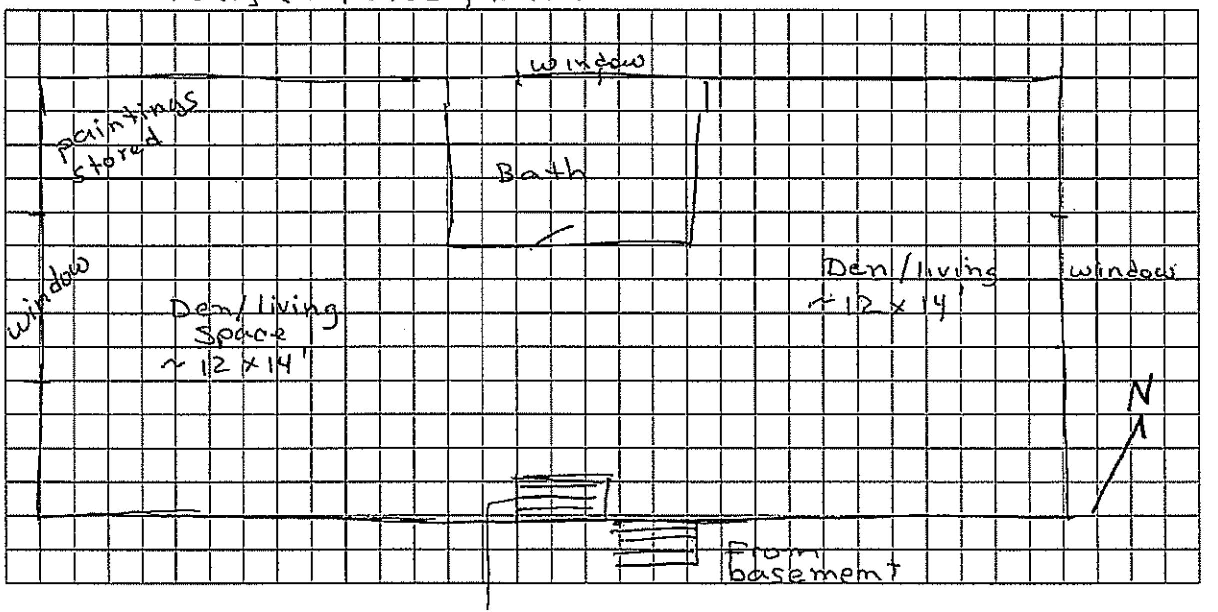
Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

owner notes windows always stay closed, boarded up

Basement: Concrete Floor, good condition, Few throw rugs



First Floor: Garage converted to den/living space, concrete Floor Fully carpeted, bath



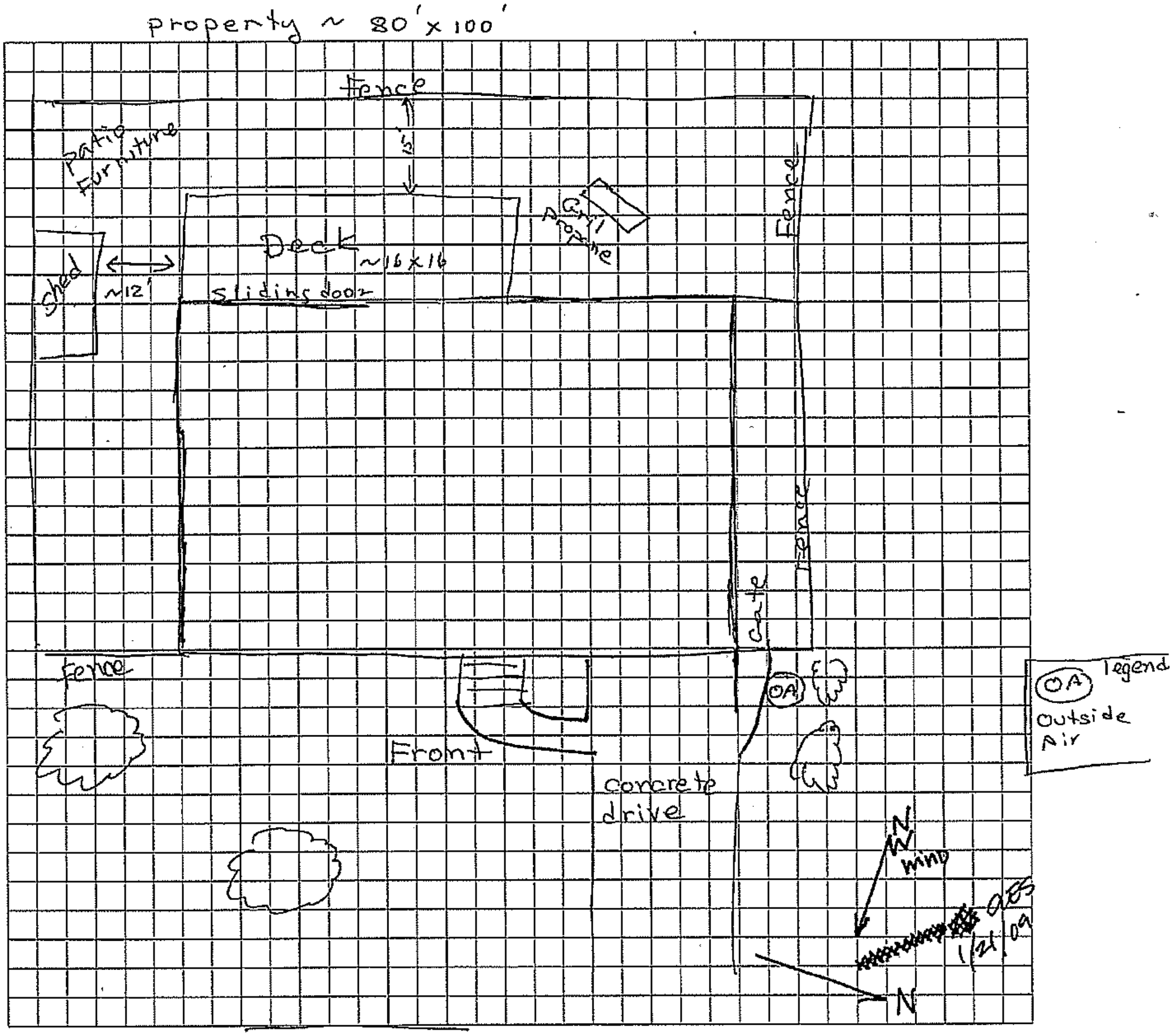
Stairs to upstairs living space

photos of 2nd Floor living/kitchen space

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ____________________

List specific products found in the residence that have the potential to affect indoor air quality.

PID in basement ≈ 6-8 ppm

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Basement	Krylon Can	11 oz	good			Y
"	Acrylic (Gesso)	8 oz	can good			
"	Varnish	32 oz	Glass	bottle		
"	Galkyd	20 oz		Stand Oil (http Gamblincolors.com)		
"	Acrylic	8 oz	Good			
"	Varnish	250ml	good	re-touch varnish		
"	Polycrylic Finish	6 oz	good	} only used outdoors		
"	wood Finish	6 oz	good	/ stored in work space		
"	Oil paints	1 dozen	60 ml tubes			
"	Turpentine	1 gal	can			
Basement	Laundry Area					
	Cleaning					
	Clorox					
1st F Bath	Few cleaning products		good			

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Notes:

No Fireplace or wood stove

cleaning products kitchen space normal household soaps

cosmetic products 3rd Floor bedroom space

Yard service ⇒ no lawn mowers etc.. detached shed for storage

No building repairs in many years

OSR – 3

3:00pm
House #6

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Lora Fry Date/Time Prepared 2/18/09 / 3:15

Preparer's Affiliation US Navy Phone No.________

Purpose of Investigation Indoor air sampling

1. OCCUPANT:

Interviewed: [✓ Y] / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted], Bethpage VA

County: Nassau

Home Phone: [redacted] Office Phone: N/A

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

Live 40year

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: ________ First Name: ________

Address: ________

County: ________

Home Phone: ________ Office Phone: ________

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use
Industrial Church Other: ________

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouses/Condos
Other: w/ basement

If multiple units, how many? N/A

If the property is commercial, type? N/A

Business Type(s) ______

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics: N/A

Number of floors 1

Building age ~50 yrs

Is the building insulated? [✓ Y] N

How air tight? Tight / [✓ Average] / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Can not assess because of base board heat.

Airflow between floors

No observable airflow between basement & 1st floor.

Airflow near source

Minimal air flow near boiler. Not able to measure.

Outdoor air infiltration

Through doors & windows on 1st floor. Nothing observed in basement other than small windows

Infiltration into air ducts

No air ducts in home

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick veneer / Siding – outside

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ~~Unknown~~

d. Basement floor: uncovered [✓ covered] covered with limenoum

e. Concrete floor: unsealed sealed sealed with unknown

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: unsealed sealed sealed with both seal & unsealed

h. The basement is: wet damp [✓ dry] moldy

i. The basement is: finished unfinished [✓ partially finished]

j. Sump present? Y / [✓ N] – couldn't locate sewer cleanout.

k. Water in sump? Y / N / not applicable unknown

[✓ Basement]/Lowest level depth below grade: 8.5 (feet)

mostly sealed & painted ↓ 90% of walls are covered w/ tile/paneling & wallpaper

***Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)**

No cracks or other vapor entry points observed in basement.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation
Space Heaters
Electric baseboard
Heat pump
Stream radiation
Wood stove
[✓ Hot water baseboard]
Radiant floor
Outdoor wood boiler
Other ~~Oil~~

The primary type of fuel used is:

Natural Gas
Electric
Wood
Fuel Oil X
Propane
Coal
Kerosene
Solar

Domestic hot water tank fueled by: Oil heat

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other________

Air conditioning: Central Air [✓ Window units] Open Windows None

Are there air distribution ducts present? Y / [✓ N] (verify)

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

base board heat

none seen - no duct work

7. OCCUPANCY used to wash clothes

Is basement/lowest level occupied? Full-time Occasionally [✓ Seldom] Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	laundry
1st Floor	living area - spend most of time
2nd Floor	N/A
3rd Floor	N/A
4th Floor	N/A

two car garage on a slab

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? [✓ Y] / N

b. Does the garage have a separate heating unit? Y / [✓ N] / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / NA Please specify shed behind house

d. Has the building ever had a fire? Y / [✓ N] When? ______

e. Is a kerosene or unvented gas space heater present? Y / [✓ N] Where? ______

f. Is there a workshop or hobby/craft area? Y / [✓ N] Where & Type? ______

g. Is there smoking in the building? Y / [✓ N] How frequently? ______

h. Have cleaning products been used recently? Y / [✓ N] When & Type? ______

i. Have cosmetic products been used recently? Y / [✓ N] When & Type? ______

j. Has painting/staining been done in the last 6 months? [✓ Y] / N Where & When? ceiling last few month

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? ________

l. Have air fresheners been used recently? Y / N When & Type? Spray owner doesn't know

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? ________

n. Is there a bathroom exhaust fan? Y / [✓ N] If yes, where vented? ________

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / [✓ N] When & Type? ________

attic fan - just serviced last week

Are there odors in the building? Y / N
If yes, please describe: ________________

Do any of the building occupants use solvents at work? Y / [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? ________________

If yes, are their clothes washed at work? Y / N N/A

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
[✓ No]
Unknown

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: ______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: ______

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: ________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units) (approx.)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y / N
Basement	Bleach	2gal	U			Yes; photos taken of entire basement
	Adhesive/Grout	1gal	U			
	Floor Polish	1gal	U			
	Paint	8gals	U	*several cans of used latex paint (Behr)		
	Rug Doctor - cleaner	1gal	U			
	Joint Compound	1gal	U			
	Wallpaper Stripper (Remover)	1gal	U			
	Drain Opener	1gal	New (UO)			
	polyurethane	small can	U			
	Minwax wood stain	4pts	U	several cans (used)		
	Insect spray/flea killer	1can	U			
	Dupont - One coat Majic Onco	1can	U			
	Hercules cleaner	1btl	U			
	Enamel paint	small cans	U	*several cans observed		
	Gold Seal wood cream	1btl	U			
	Shur-Stik standard duty cleaner	1btl	U			
	Wall covering adhesive	1gal	U			
	DIF	22 oz	U			
	Laundry detergent	2gal	U			

*several other products observed (see photos)

* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

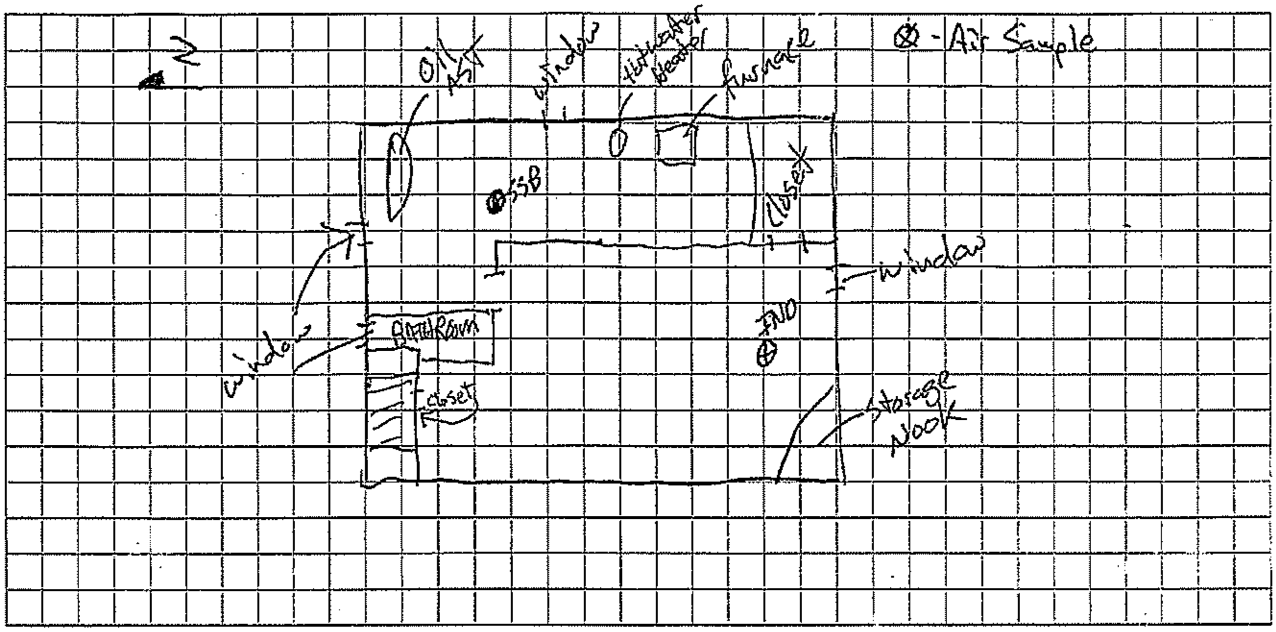
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

* Note that there is no organization of products and scattered throughout laundry room area. Some canned food products mixed with cleaning/painting product. See photos for details

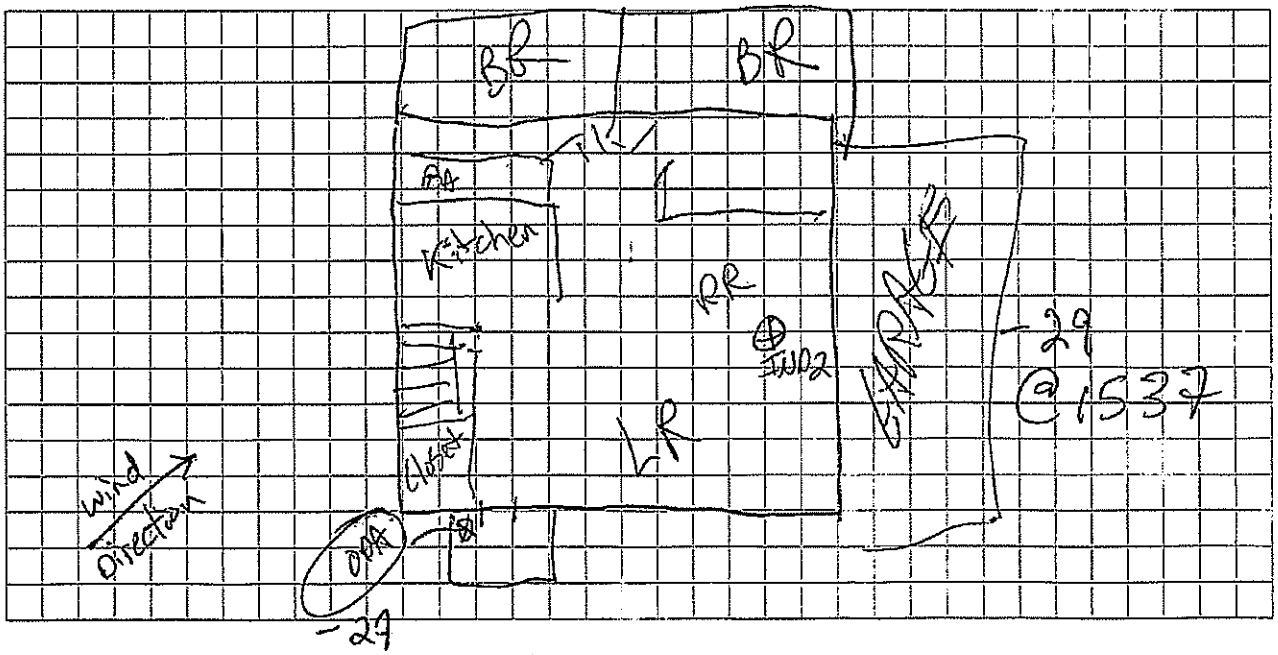
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



First Floor:

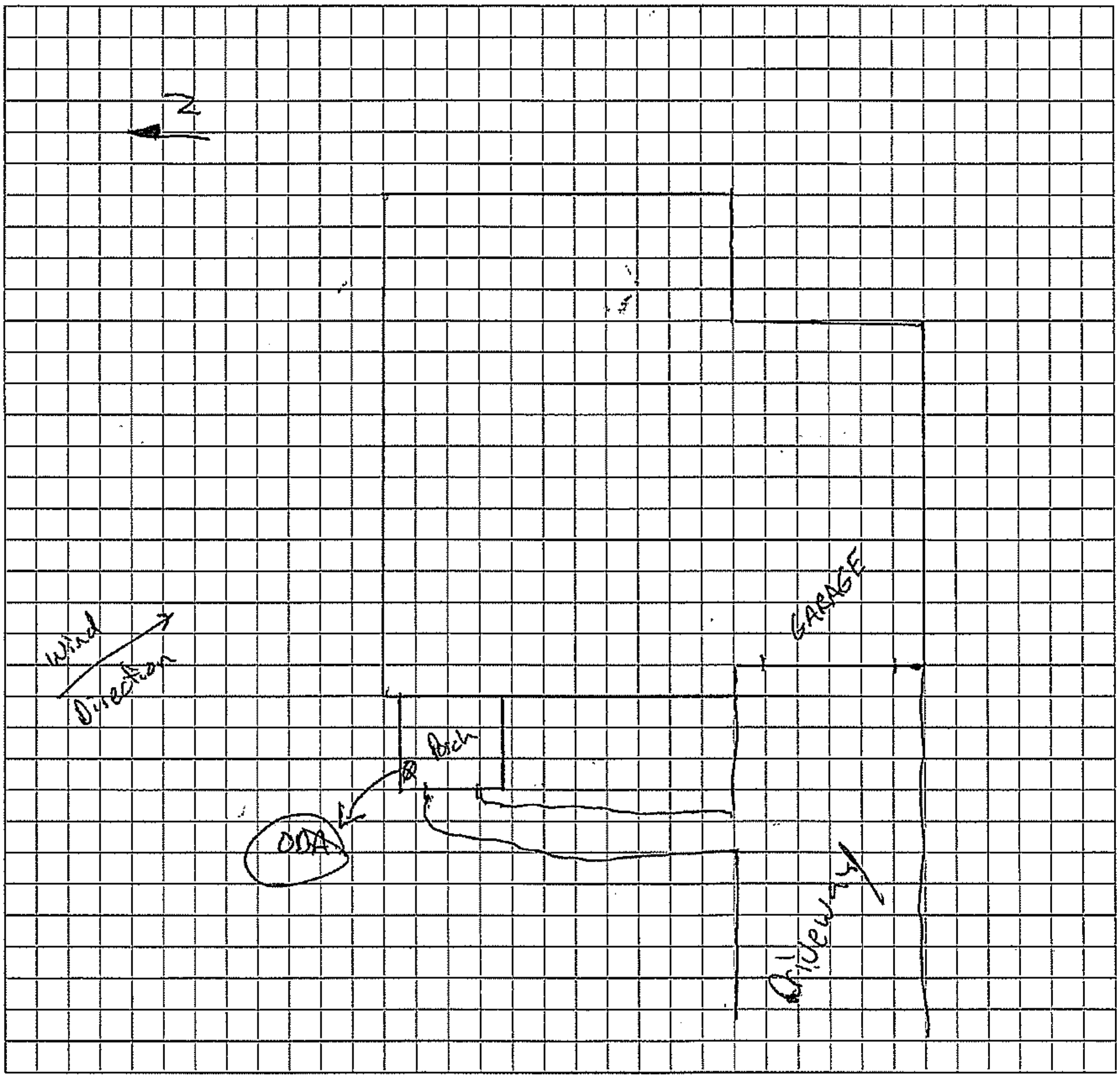


Summa #33580

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



OSR – 3

House #7

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Donna Caldwell / Lora Fly Date/Time Prepared 2/19/09 0800

Preparer's Affiliation NAVFAC Phone No. 757 444 0781

Purpose of Investigation Soil Vapor Investigation NWIRP Bethpage Site 1

1. OCCUPANT:

Interviewed: Y / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted], Bethpage NY

County: Nassau Co

Home Phone: [redacted] Office Phone: ______

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant X)

Interviewed: Y / N

Last Name: ______ First Name: ______

Address: ______

County: ______

Home Phone: ______ Office Phone: ______

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use
Industrial Church Other: ______

If the property is residential, type? (Circle appropriate response)

Ranch
Raised Ranch
Cape Cod
Duplex
Modular
2-Family
Split Level
Contemporary
Apartment House
Log Home
3-Family
[✓ Colonial] 2-story
Mobile Home
Townhouses/Condos
Other:______________

If multiple units, how many? NA

If the property is commercial, type? NA

Business Type(s) ______________________________

Does it include residences (i.e., multi-use)? Y / N

If yes, how many? ______

Other characteristics:

Number of floors Basement +2

Building age ~50 yrs

Is the building insulated? [✓ Y] N

How air tight? Tight / [✓ Average] / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

No Forced air. No observable air flow between floors.

Airflow near source

No noticable airflow near boiler.

Outdoor air infiltration

Via windows and doors on 1st floor

Infiltration into air ducts

No air ducts present

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick (siding)

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: uncovered [✓ covered] covered with carpet

e. Concrete floor: unsealed sealed sealed with unknown

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: unsealed sealed sealed with unknown

h. The basement is: wet damp [✓ dry] moldy

i. The basement is: [✓ finished] unfinished partially finished

j. Sump present? [✓ Y] / N sewer cleanout in basement

k. Water in sump? Y / N / [✓ not applicable]

Basement/Lowest level depth below grade: 8.5 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

most of the basement was finished. The part that was LOF not finished, no cracks observed.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation
Space Heaters
Electric baseboard
Heat pump
Stream radiation
Wood stove
[✓ Hot water baseboard]
Radiant floor
Outdoor wood boiler
Other ________

The primary type of fuel used is:

Natural Gas
Electric
Wood
[✓ Fuel Oil]
Propane
Coal
Kerosene
Solar

staining around boiler high PID concentrations (8-12 ppm) detected in the air

Domestic hot water tank fueled by: Oil

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other ________

Air conditioning: Central Air Window units Open Windows None [✓ wall units]

Are there air distribution ducts present? Y [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

No ductwork present.

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally [✓ Seldom] Almost Never used for laundry /storage

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	storage, laundry
1st Floor	living area / Kitchen / playroom / family room
2nd Floor	3 bedrooms
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / [✓ N]

b. Does the garage have a separate heating unit? Y [✓ N] / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) [✓ Y] / N / NA Please specify detached garage

d. Has the building ever had a fire? Y / [✓ N] When?

e. Is a kerosene or unvented gas space heater present? Y / [✓ N] Where?

f. Is there a workshop or hobby/craft area? Y / [✓ N] Where & Type?

g. Is there smoking in the building? Y / [✓ N] How frequently?

h. Have cleaning products been used recently? [✓ Y] / N When & Type? General Use

i. Have cosmetic products been used recently? [✓ Y] N When & Type? General Use

j. Has painting/staining been done in the last 6 months? Y / [✓ N] Where & When? __________

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? __________

l. Have air fresheners been used recently? Y / N When & Type? plug ins used occassionally

m. Is there a kitchen exhaust fan? Y / [✓ N] If yes, where vented? w/in microwave no outside vent

n. Is there a bathroom exhaust fan? Y / N If yes, where vented? __________

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] N

p. Has there been a pesticide application? Y / [✓ N] When & Type? __________

Are there odors in the building? Y / [✓ N]
If yes, please describe: ________________________

Do any of the building occupants use solvents at work? Y / [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? ________________________

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) [✓ No]
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y [✓ N] Date of Installation: __________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: ______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: ______

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: ________________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

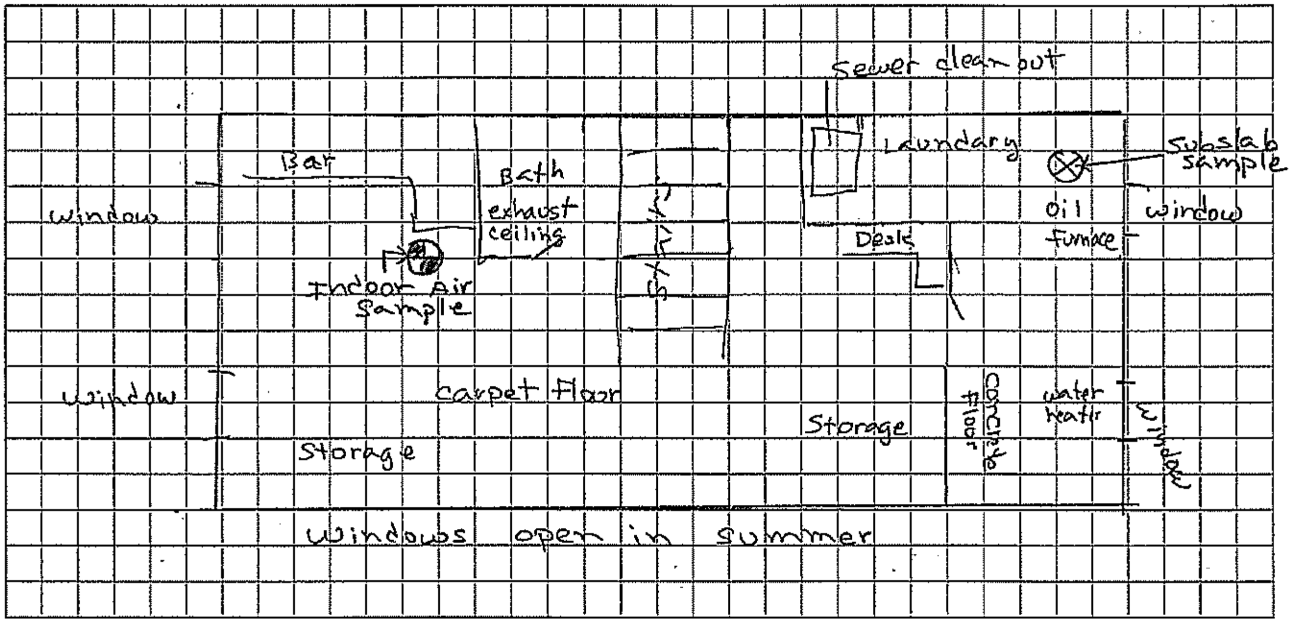
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

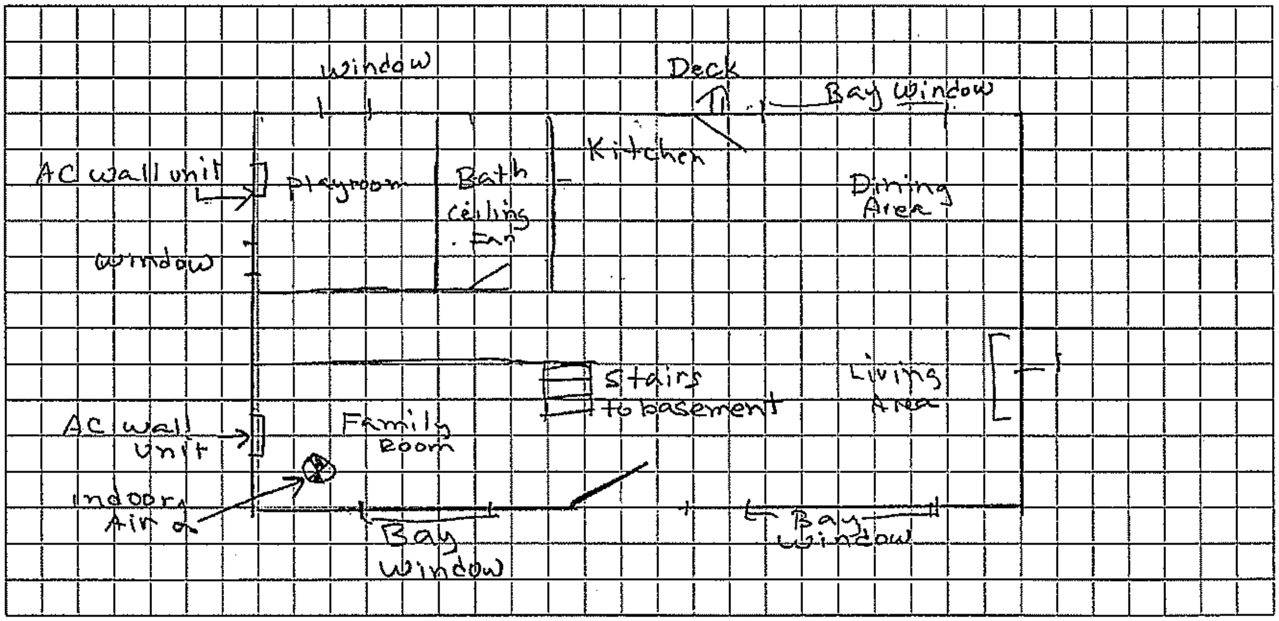
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



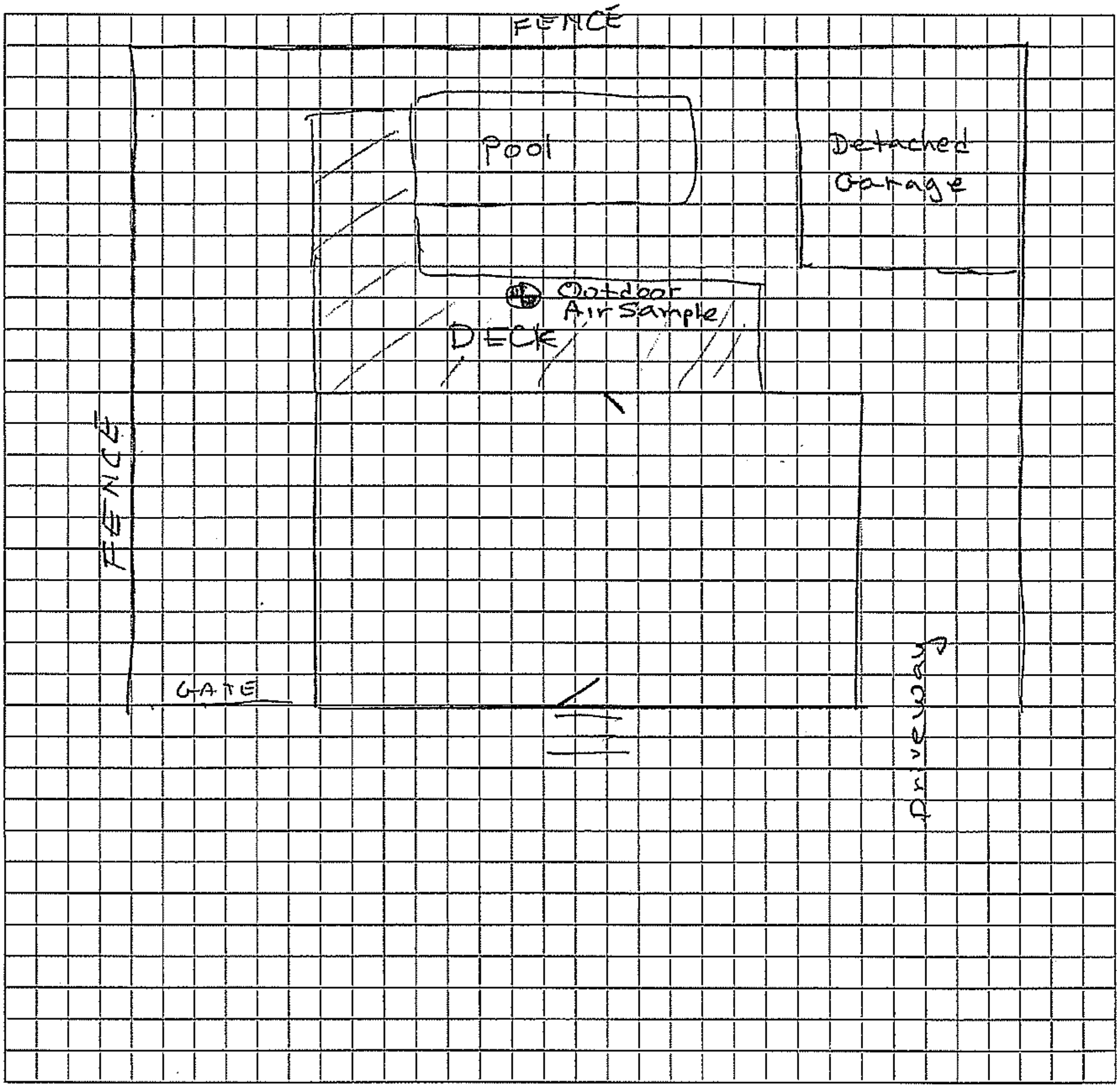
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ____________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y/N
Laundry	Fabric Softner	1.3 L	new			NO
Room	Spray n-wash		new			
	Pet Odor	49 oz	new			
	Fabric Sheets	1oz	new			
	Baking Soda	1oz	½ used			
	Dust All cloth refill	1 1oz				
	Puppy Shampoo	16 oz	new			
	Fabric Wash					
	Tide w/ bleach powder					
	Windex	1.3g	½ used			
	Spectracide					
	Immun ox Fertilizer	32 oz				
	Cascade	125oz	new			
	Latex Paint	3=5gal	used			
	Primer Seal	5 gal	Used			
	Joint Compound (2)	5 gal	Used			↓✓

* Describe the condition of the product containers as **Unopened (UO), Used (U), or Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

OSR – 3

House #8

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Donna Caldwell / Lora Fly Date/Time Prepared 2/19/09 10:00

Preparer's Affiliation NAVFAC Phone No. ________

Purpose of Investigation Soil Vapor Investigation NWIRP Bethpage Site 1

1. OCCUPANT:

Interviewed: [✓ **Y**] / **N**

Last Name: [redacted] First Name: [redacted]

Address: [redacted], Bethpage NY

County: Nassau

Home Phone: [redacted] Office Phone: N/A

Number of Occupants/persons at this location ______ Age of Occupants ______

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: ______ First Name: ______

Address: ______

County: ______

Home Phone: ______ Office Phone: ______

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential]
Industrial

School
Church

Commercial/Multi-use
Other: ______

If the property is residential, type? (Circle appropriate response)

Ranch
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
[✓ Colonial]
Mobile Home
Townhouses/Condos
Other: 3 stories (basement & 2 stories)

If multiple units, how many? NA

If the property is commercial, type? N/A

Business Type(s) __________

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors 3-basement & 2 floors Building age 1960

Is the building insulated? [✓ Y] / N How air tight? Tight / [✓ Average] / Not Tight

How long have you lived in the home 20 year

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Heating vent in Kitchen, 2 Air conditioning wall units on 2nd Floor. No real air flow observed between floors.

Airflow near source

No observable air flow near boiler.

Outdoor air infiltration

Via doors & windows on 1st floor.

Infiltration into air ducts

No air ducts present.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	[✓ wood frame]	concrete	stone	brick	(Aluminum Siding)
b. Basement type:	[✓ full]	crawlspace	slab	other ________	
c. Basement floor:	[✓ concrete]	dirt	stone	other ________	
d. Basement floor:	uncovered	[✓ covered]	covered with carpet/tile		
e. Concrete floor:	[✓ unsealed]	sealed	sealed with ____________		
f. Foundation walls:	[✓ poured]	block	stone	other ________	
g. Foundation walls:	[✓ unsealed]	sealed	sealed with ____________		
h. The basement is:	wet	damp	[✓ dry]	moldy	
i. The basement is:	[✓ finished]	unfinished	partially finished		
j. Sump present?	[✓ Y] / N	Sewer clean-out			
k. Water in sump?	Y / N / not applicable				

Basement/Lowest level depth below grade: ________(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Sewer clean out in basement / utility piping in basement

____

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	[✓ Hot water baseboard]	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other __________

The primary type of fuel used is:

Natural Gas	[✓ Fuel Oil]	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: Fuel oil

Boiler/furnace located in:	[✓ Basement]	Outdoors	Main Floor	Other__________
Air conditioning:	Central Air	Window units	Open Windows	None

2 wall units upstairs 2nd Floor

Are there air distribution ducts present? Y [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Frequently ~~Occasionally~~ Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	work-out area, office/desk area, laundary, game/playarea -
1st Floor	kitchen / living / 2 bedrooms
2nd Floor	4 bedrooms
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?	[✓ Y] N	
b. Does the garage have a separate heating unit?	Y / [✓ N] / NA	
c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)	[✓ Y] / N / NA	car, snowblower Please specify lawn mower
d. Has the building ever had a fire?	~~Y~~ [✓ N]	When? No
e. Is a kerosene or unvented gas space heater present?	Y / [✓ N]	Where?
f. Is there a workshop or hobby/craft area?	[✓ Y] N	Where & Type? garage / electrical hobby work area
g. Is there smoking in the building?	[✓ Y] / N	How frequently? daily 1 person
h. Have cleaning products been used recently?	Y / [✓ N]	When & Type? General use
i. Have cosmetic products been used recently?	Y / [✓ N]	When & Type? General use

j. Has painting/staining been done in the last 6 months? Y / [✓ N] Where & When? ____________

k. Is there new carpet, drapes or other textiles? Y [✓ N] Where & When? ____________

l. Have air fresheners been used recently? Y / [✓ N] When & Type? Candles occasionally

m. Is there a kitchen exhaust fan? [✓ Y] N If yes, where vented? outside

n. Is there a bathroom exhaust fan? [✓ Y] N If yes, where vented? outside

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? Y [✓ N] When & Type? ____________

Are there odors in the building? Y [✓ N]
If yes, please describe: ____

Do any of the building occupants use solvents at work? Y [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? ____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently ([✓ monthly] or less)
Yes, work at a dry-cleaning service
No
Unknown

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ____________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: ________

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: ________

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: ____________________________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

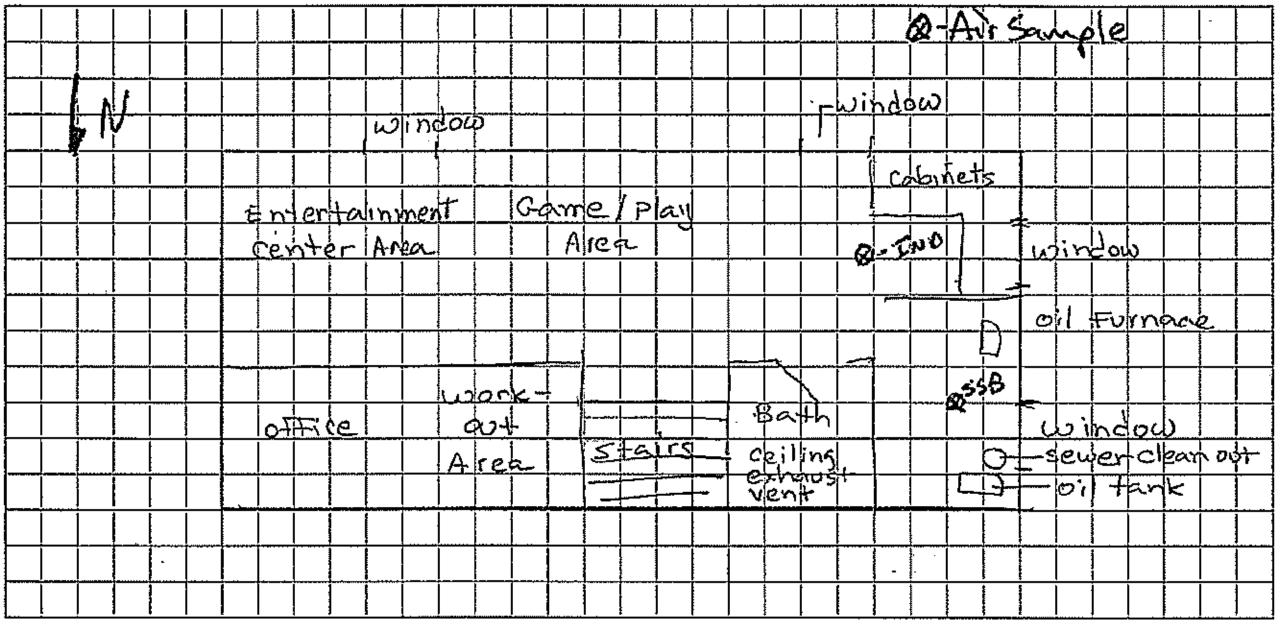
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

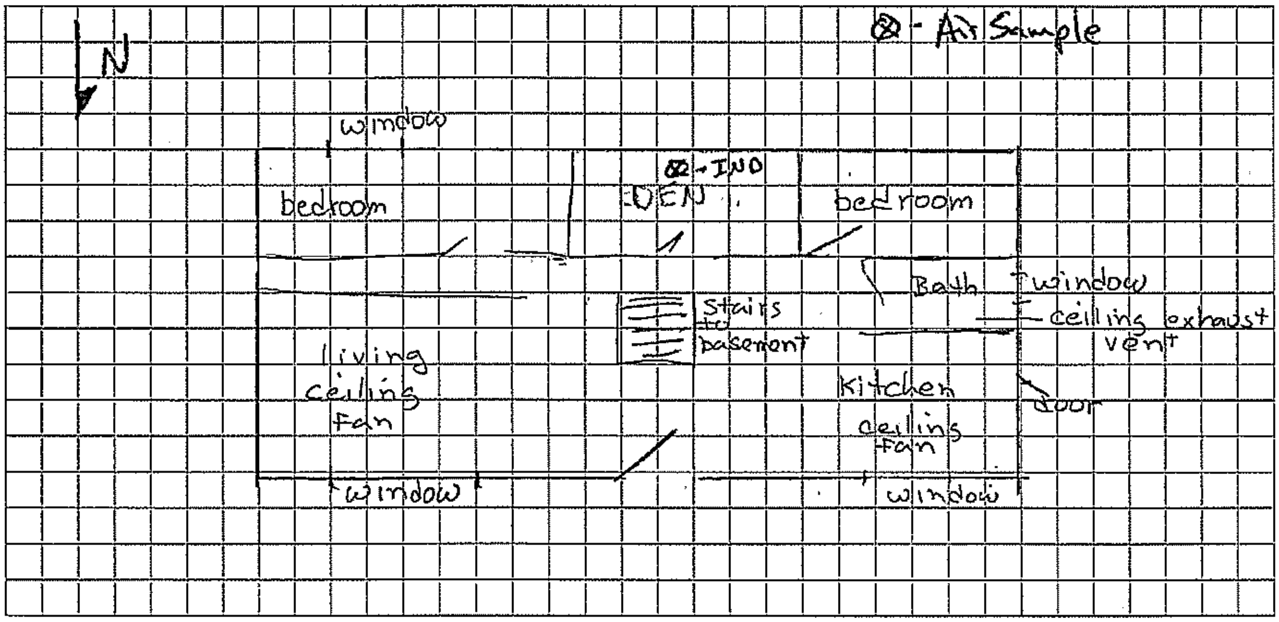
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



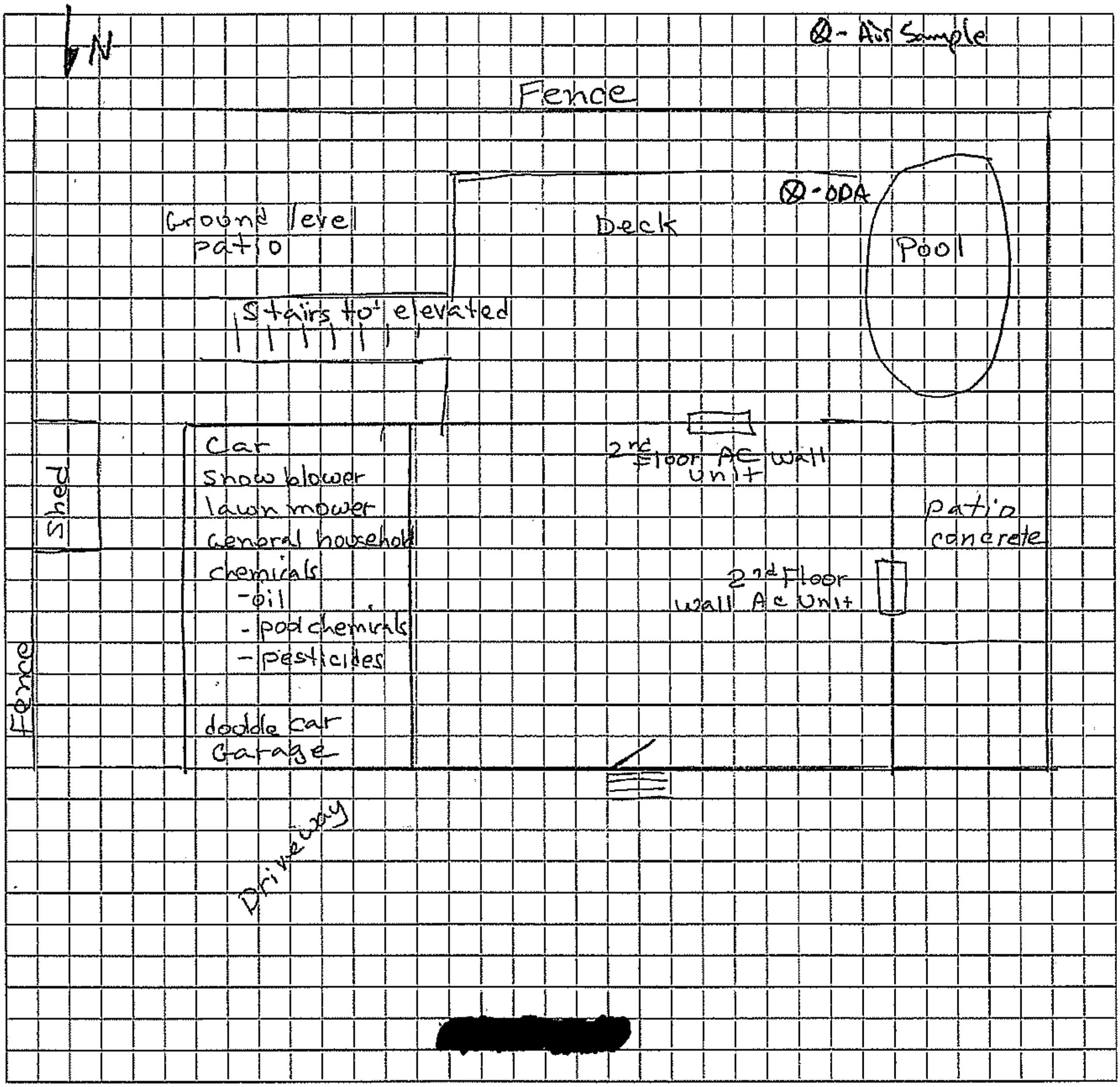
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



[redacted]

[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ____________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Laundry	Laundry Detergent					
	Fab	(6) 100 oz	new	Lysol Basin	Tub & Tile	
	Ajax	(17-50oz	new			
	Bleach (3)	96 oz				
	Fantastick Window		Cleaner (3)	26oz		
	Lysol Bowl	Cleaner				
	Electrosol	1 45oz	used			
	Spray N Wash					
	Raid-Anti Roach	(1)	17oz			
	Scrubbing Bubbles	(1)	22oz			
	Clorox Disinfecting	Cleaner	(1) 30oz			
	Fabric Softner	(1)	66 oz			
	Paint					
	Behr Enamel	UnderCoater		Primer & Sealer	1 gal	
	" Kitchen &	Bath	Paint gal			
	" Interior	Satin	Enamel (2) Qt			
	Rustoleum	-1 latex	paint Qt			
	Benjamin Moore	Exterior		acrylic house	Paint	1 gal
	Dutch Boy	Gloss	Enamel	Paint 1 gal		

* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Benjamin Moore - Matte Finish Qt

" " " " gal

Behr interior Satin Paint gal

Behr Semi Gloss enamel Qt

12 - gall 7 qut

Joint compound 5gal

Polyurethane Concrete Crack & Masonry Sealant
(PL)

DAP Chaulking

- Bring in unit

OSR – 3

House #9

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Lora Fly Date/Time Prepared 24 Feb 09/9:15A

Preparer's Affiliation NAVFAC Midlant Phone No. 757-444-0781

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: [✓ Y] / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted], Bethpage NY, 11714

County: USA

Home Phone: [redacted] Office Phone: N/A

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: ____________ First Name: ____________

Address: ____________

County: ____________

Home Phone: ____________ Office Phone: ____________

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use
Industrial Church Other: ____________

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular
2-Family
Split Level
Contemporary
Apartment House
Log Home
3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:______________

If multiple units, how many? N/A

If the property is commercial, type? N/A

Business Type(s) ______________________________

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors 1
Basement & Attic

Building age ≥ 59

Is the building insulated? [✓ Y] / N
spray-in foam

How air tight? Tight / [✓ Average] / Not Tight

How long have you lived in the house [redacted]

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

No noticable air flow - use base board / radiant heat and window / wall unit AC units.

Airflow between floors

____

Airflow near source

____

Outdoor air infiltration

____

Infiltration into air ducts

____

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick siding

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: uncovered covered covered with Carpet/tile

e. Concrete floor: unsealed sealed sealed with unknown

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: unsealed sealed sealed with unknown

h. The basement is: wet damp [✓ dry] moldy

i. The basement is: [✓ finished] unfinished partially finished

j. Sump present? [✓ Y] N

k. Water in sump? Y [✓ N] / not applicable

Basement/Lowest level depth below grade: 8.5 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Walls were paneled - no noticable cracks

Sump noted behind column w/ removable panel

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	[✓ Hot water baseboard]	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other radiators

The primary type of fuel used is:

Natural Gas	[✓ Fuel Oil]	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: fuel oil

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other__________

Air conditioning: Central Air [✓ Window units] Open Windows None

and Wall units

Are there air distribution ducts present? Y [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

7. OCCUPANCY

Is basement/lowest level occupied? [✓ Full-time] Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
* Basement	laundry room Office | living room / work out area / Kitchen / bathroom
1st Floor	living area | bedrooms
2nd Floor	N|A
3rd Floor	N |A
4th Floor	N |A

* Son spends most of his time in the basement

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / [✓ N]

b. Does the garage have a separate heating unit? Y / [✓ N] NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / [✓ N] NA
Please specify Stored in tin Shed

d. Has the building ever had a fire? Y / [✓ N] When?

e. Is a kerosene or unvented gas space heater present? Y / [✓ N] Where?

f. Is there a workshop or hobby/craft area? Y / [✓ N] Where & Type?

g. Is there smoking in the building? Y / [✓ N] How frequently?

h. Have cleaning products been used recently? [✓ Y] / N When & Type? General Use

i. Have cosmetic products been used recently? [✓ Y] / N When & Type? General Use

j. Has painting/staining been done in the last 6 months? Y / [✓ N] Where & When? ______________
Painting last occurred in July 2008 in basement & 1st floor

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? ______________

l. Have air fresheners been used recently? [✓ Y] / N When & Type? wall units plug-ins
Stopped using 24 hours prior to sampling

m. Is there a kitchen exhaust fan? [✓ Y] N If yes, where vented? attic
Not working currently

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented? attic

o. Is there a clothes dryer? [✓ Y] N If yes, is it vented outside? [✓ Y] N

p. Has there been a pesticide application? Y / [✓ N] When & Type? ______________

Are there odors in the building? Y / [✓ N]
If yes, please describe: ____

Do any of the building occupants use solvents at work? Y / [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? ______________________________________

If yes, are their clothes washed at work? Y / [✓ N]

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) [✓ No]
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ____________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: _______
Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: _______

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: ______________________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

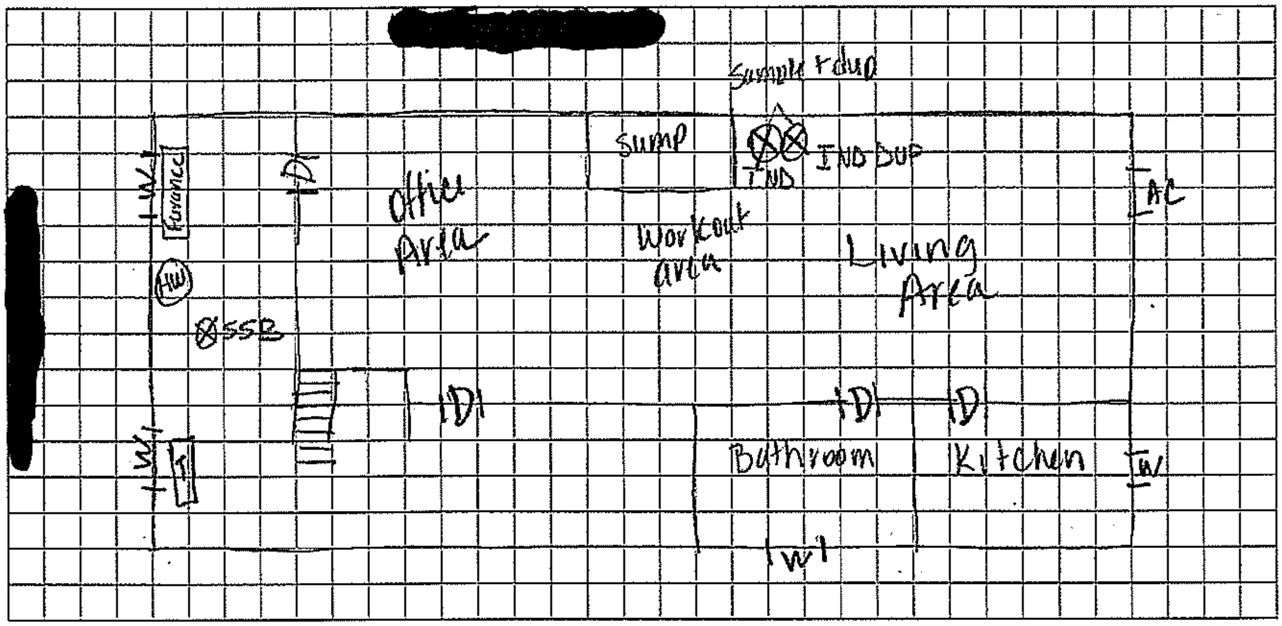
d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

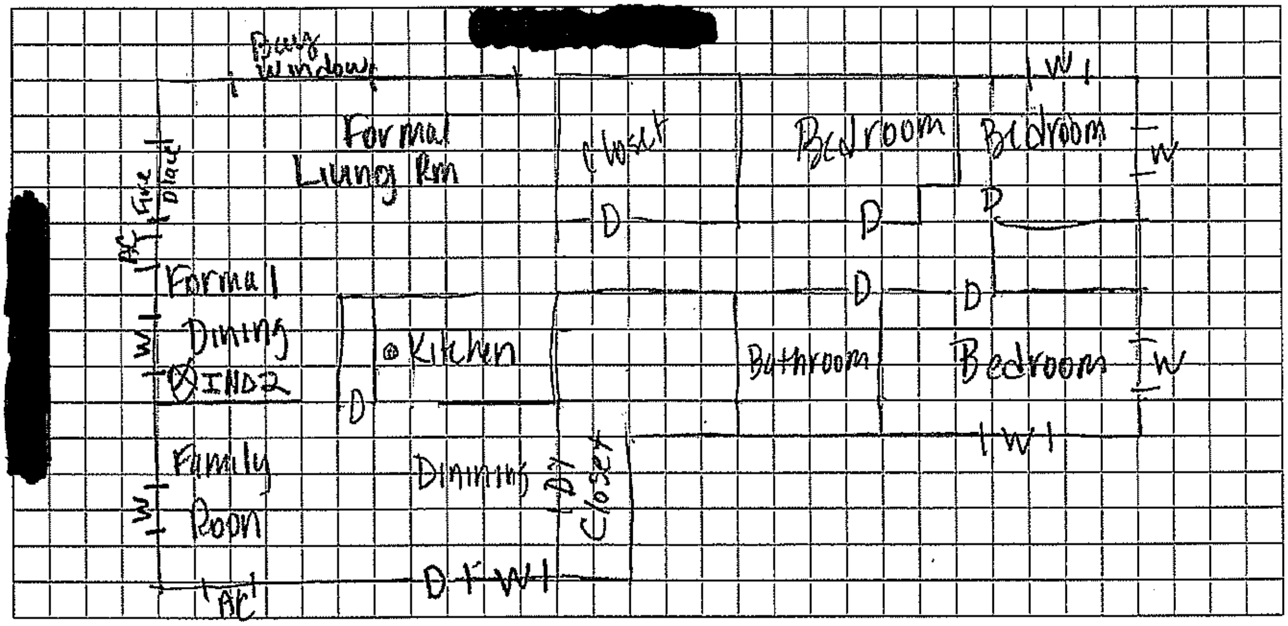
Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

⊗ - Sample Location W = window
HW = hot water heater A/C - air conditioning unit
T = fuel oil tank D = Door

Basement:



First Floor:



⊕ - Ceiling fan (not operational)

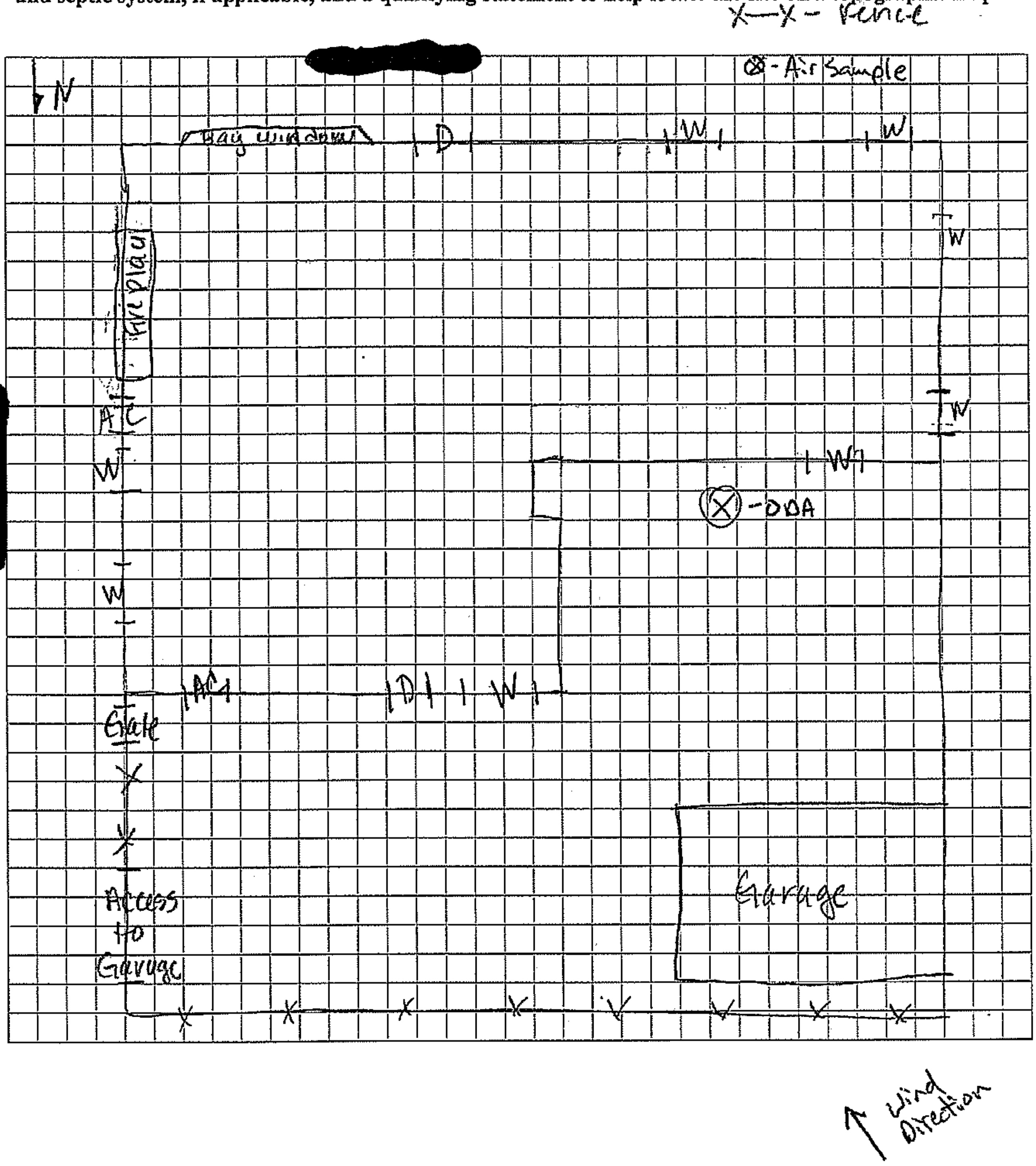
12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

[redacted]

[redacted]



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Laundry	Armstrong Floor Stripper	64oz	partically used			
	Armstrong Floor Cleaner	64oz				
	Armstrong Floor Polish	64oz				
	Bleach	64oz				
	Laundry Soap (2)	100oz				
	Windex (9)	32.5oz				
	Shoe Polish	3oz				
	Murphy Oil Soap	32oz				
	Woolite (1)	50oz				
	Fantastick	14oz				
	Tilex	14oz				
	Auto Spray Paint	6oz				
	State Chemical Window Cleaner	100oz				
	Hot Shot Fly Spray	19oz				
	Fix-o Foam Cleaner Deodorizer Disinfectant	14oz				
	Old English Furniture (2)	12oz				
	Tube-N-Tile Cleaner	16oz				
	Lighter Fuel (2)	4oz				
↓	Zep Old Smoky Cleaner	6oz	↓			

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

*See back of this sheet for additional inventory

Location	Product Description	Size	Condition
Laundry	Easy Off	16oz	partially used
	Tarnish Silver Cleaner	6oz	
	mycode - aqua spray w/ Pyrethrins	16 oz	
	Y-14 Soap Scrum	16oz	
	Brass Bright Metal Cleaner	6oz	
	Dap Tex-insulation foam sealer	16 oz	
	Tire Cleaner (4)	24oz	
	Liquid Nail (2)	6oz	
	Spray Paint Enamel	16oz	
	Pine Oil Cleaner	16 oz	
	Turtle Wax	16 oz	
	Car Wash	16 oz	
	Chalk Board Coating	15oz	
	WD-40	6oz	
	APC - All Purpose Cleaner	15oz	
	Propane Fuel	14oz	
	Stainless Plumber Putty	14oz	
	Carpenter Glue	4oz	
	Plumber Grease	2oz	
	Resolve Carpet Cleaner	8oz	
	Compress Gas Dust(2)	10oz	

OSR – 3

House #10

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Lora Fly Date/Time Prepared 24 Feb 09 / 1:15

Preparer's Affiliation NAVFAC Midlant Phone No. 757-444-0781

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: [✓ Y] / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted], Bethpage, NY [redacted]

County: USA

Home Phone: [redacted] Cell ~~Office~~ Phone: [redacted]

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: ______ First Name: ______

Address: ______

County: ______

Home Phone: ______ Office Phone: ______

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential]	School	Commercial/Multi-use
Industrial	Church	Other: ______

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:_______________

If multiple units, how many? N/A

If the property is commercial, type? N/A

Business Type(s) ___________________________________

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors 1

Building age 1972 (based on aerial photos pre-1969 construction)

Is the building insulated? [✓ Y] / N

How air tight? Tight / [✓ Average] / Not Tight

How long have you lived in the house July 2008

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Base board heat | Central Air on 1st floor / no air conditioning vents noted in basement - all duct in ceiling 1st floor

Airflow between floors

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick veener siding

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: uncovered [✓ covered] covered with Carpet / vinyl tile

e. Concrete floor: unsealed sealed sealed with unknown
Floor painted grey

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: unsealed sealed sealed with unknown
Walls painted grey

h. The basement is: wet [✓ damp] Summer [✓ dry] winter moldy

i. The basement is: [✓ finished] unfinished partially finished

j. Sump present? Y / N I believe present in work out room in basement under carpet.

k. Water in sump? Y / N / not applicable unknown

Basement/Lowest level depth below grade: 8.5 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Crack observed in floor in laundry room
Potential sewer clean out in work out room

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation Heat pump [✓ Hot water baseboard]
Space Heaters Stream radiation Radiant floor
Electric baseboard Wood stove Outdoor wood boiler Other ________

The primary type of fuel used is:

Natural Gas [✓ Fuel Oil] Kerosene
Electric Propane Solar
Wood Coal

Domestic hot water tank fueled by: Fuel Oil

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other ________

Air conditioning: [✓ Central Air] Window units Open Windows None
Installed Summer 2008

Are there air distribution ducts present? [✓ Y] N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

All duct work is in the attic

7. OCCUPANCY

Is basement/lowest level occupied? Full-time [✓ Occasionally] Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Laundry | Workout
1st Floor	Living area | Bedrooms
2nd Floor	N|A
3rd Floor	N|A
4th Floor	N|A

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? [✓ Y] N

b. Does the garage have a separate heating unit? Y / [✓ N] / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / [✓ N] NA Please specify__________

No petro tools - all electric

d. Has the building ever had a fire? Y / [✓ N] When?__________

e. Is a kerosene or unvented gas space heater present? Y / [✓ N] Where?__________

f. Is there a workshop or hobby/craft area? Y [✓ N] Where & Type?__________

g. Is there smoking in the building? Y / [✓ N] How frequently?__________

h. Have cleaning products been used recently? [✓ Y] N When & Type? General Use

i. Have cosmetic products been used recently? [✓ Y] N When & Type? General Use

j. Has painting/staining been done in the last 6 months? [✓ Y] / N Where & When? August 2008

k. Is there new carpet, drapes or other textiles? [✓ Y] / N Where & When? August 2008

l. Have air fresheners been used recently? [✓ Y] / N When & Type? Plug-ins

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? Attic
Not hooked-up

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented?
Bathroom in basement vents thru foundation to outside 1st floor to attic

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? [✓ Y] / N When & Type? Ortho / September
home applied

Are there odors in the building? Y / [✓ N]
If yes, please describe:

Do any of the building occupants use solvents at work? [✓ Y] / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? polyurthenane / laquer

If yes, are their clothes washed at work? Y / [✓ N]

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
[✓ No]
Unknown

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation:
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other:

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other:

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended:

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

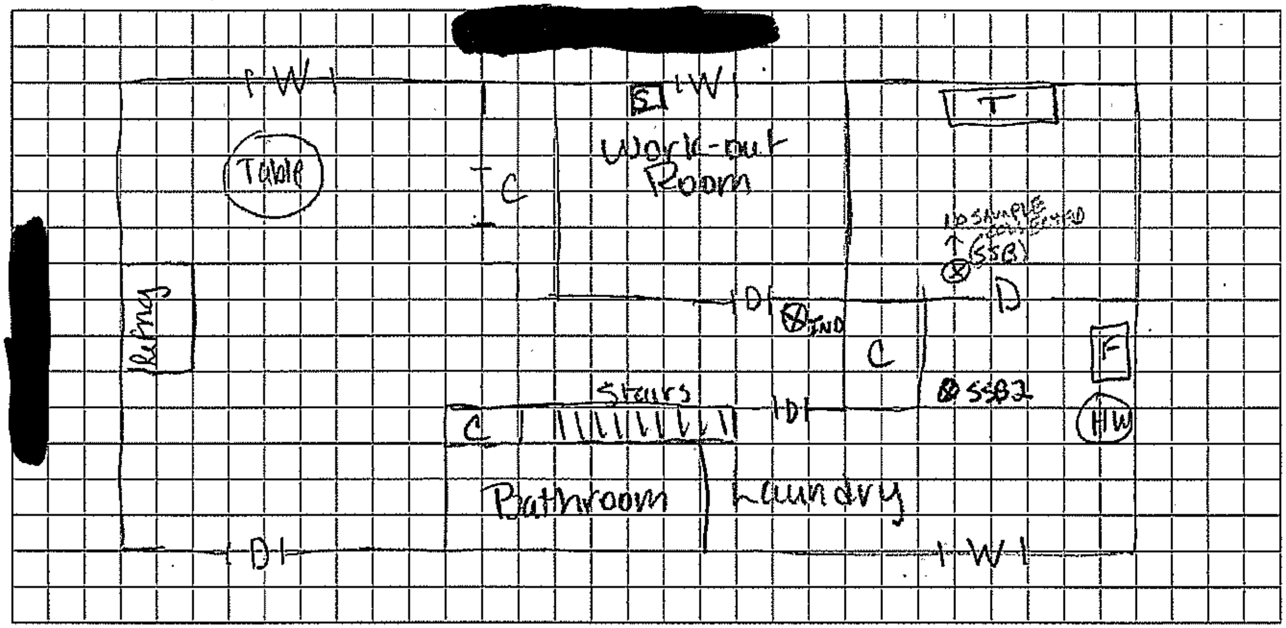
d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

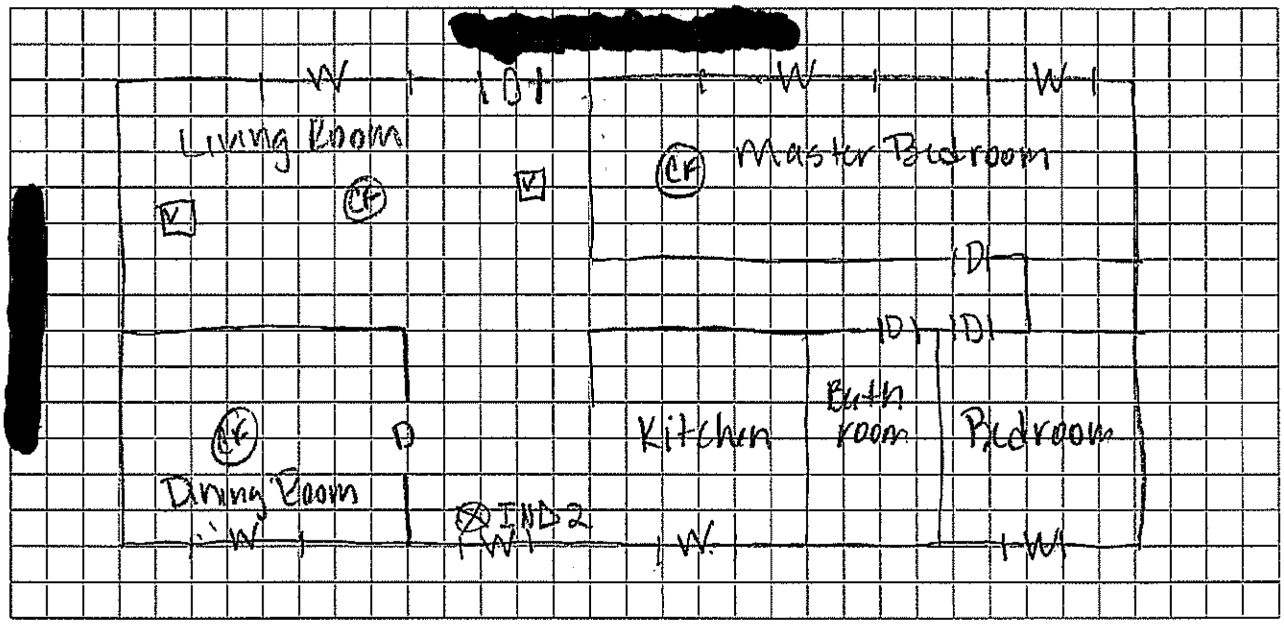
F= furunce
T- fuel tank
HW- hotwater heater
C - closet
D = door
W = windows
⊗ sample
☒-sump?

Basement:



First Floor:

CF = ceiling fan
V- ceiling vent

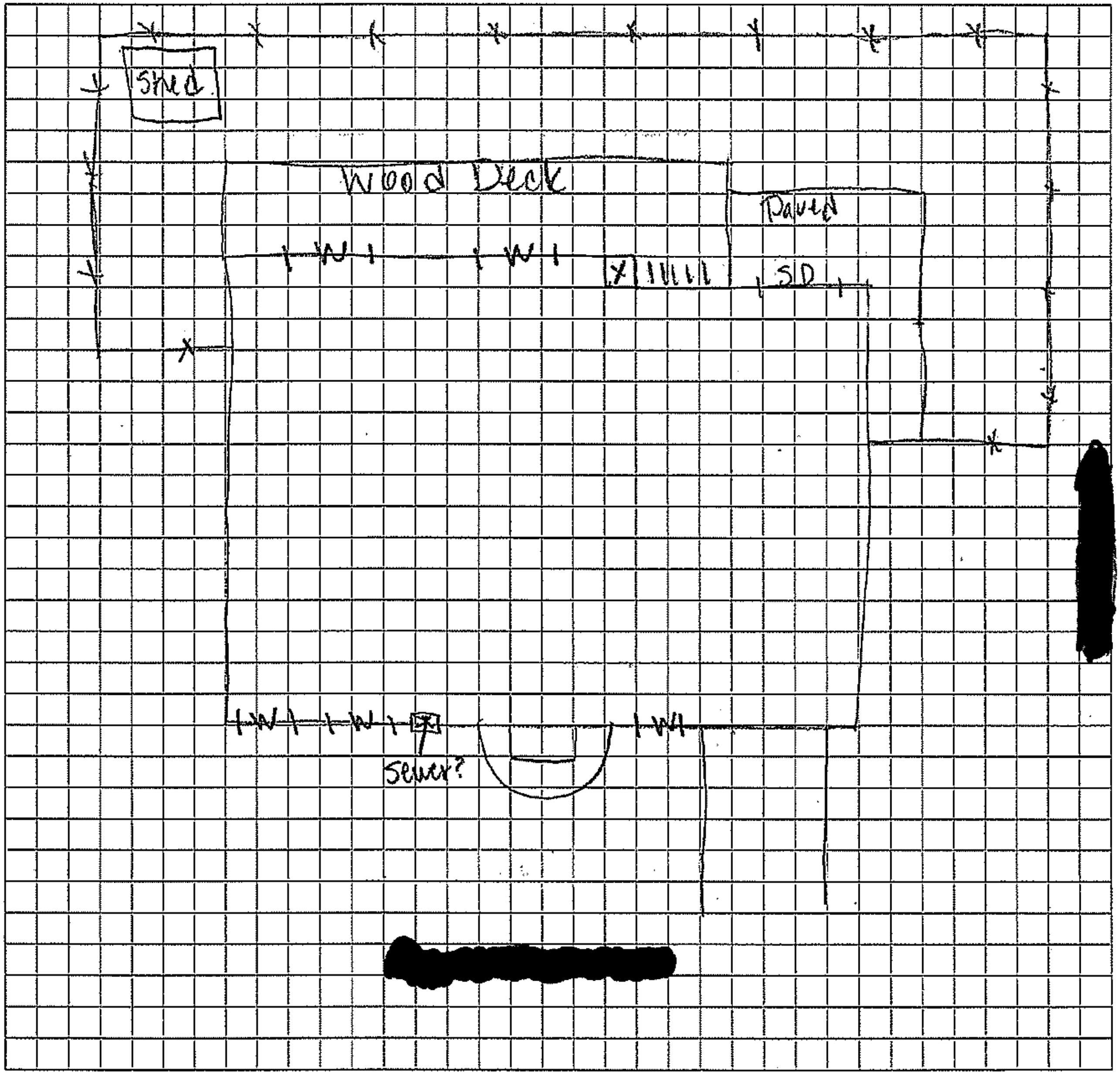


12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

D = door W = windows SD- sliding glass door



[redacted]

[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Laundry	Spray-n-Wash	22oz	Partially used			
	WP Chomp-Wall Stripper	32oz				
	Resolve Carpet Cleaner	22oz				
	DIF Wall Stripper (2)	32oz				
	Clorox Clean Up	32oz				
	Tide	150oz				
	Isopropyl Alcohol	16oz				
	Ecover toilet bowl clean	25oz				
	Lysol	10oz				
	Clorox	24oz				
	Murphy Oil Soap	16oz				
↓	Ortho-Home Defense Max	1.3gal				
Full Tun	Paint acrylic (5)	1gal				
	PVC Primer	8oz				
	PVC Cement	8oz				
	Paint latex (2)	5gal				
	Joint Compound	3lbs				
	Plumbers Putty	14oz				
↓	Liquid Nail	10oz	↓			
closet	Scrubbing Bubbles	22oz	|			

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**

** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

OSR – 3

House #11

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Lora Fly Date/Time Prepared 24 Feb 09 / 5:10p

Preparer's Affiliation NAVFAC Midlant Phone No. 757-444-0781

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: [✓ Y] / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted], Bethpage, NY 11714

County: USA

Home Phone: [redacted] Cell ~~Office~~ Phone: [redacted]

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: ____ First Name: ____

Address: ____

County: ____

Home Phone: ____ Office Phone: ____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential]	School	Commercial/Multi-use
Industrial	Church	Other: ____

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:__________

If multiple units, how many? N/A

If the property is commercial, type? N/A

Business Type(s) __________

Does it include residences (i.e., multi-use)? Y / N   If yes, how many? ______

Other characteristics:

Number of floors 1
Attic + Basement

Building age 1966 (43 years)

Is the building insulated? [✓ Y] / N

How air tight? Tight / [✓ Average] / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors
Installed central air - vents are located in the ceiling on 1st floor and basement - Central air distributed to basement thru duct work in the walls.

Airflow near source
No observable air flow near boiler in basement

Outdoor air infiltration
Via doors and windows on 1st floor

Infiltration into air ducts
Not observed.

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

a. Above grade construction:	[✓ wood frame]	concrete	stone	brick Veener siding
b. Basement type:	[✓ full]	crawlspace	slab	other ________
c. Basement floor:	[✓ concrete]	dirt	stone	other ________
d. Basement floor:	uncovered	[✓ covered]	covered with carpet	
e. Concrete floor:	[✓ unsealed]	sealed	sealed with ________	
f. Foundation walls:	[✓ poured]	block	stone	other ________
g. Foundation walls:	[✓ unsealed]	sealed	sealed with ________	
h. The basement is:	wet	damp	[✓ dry]	moldy
i. The basement is:	[✓ finished]	unfinished	partially finished	
j. Sump present?	[✓ Y] / N located near fuel oil tank			
k. Water in sump?	Y / [✓ N] / not applicable			

Basement/Lowest level depth below grade: 8.5 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Paneling on the majority of the walls. Floor covered by carpet - No noticable cracks

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	[✓ Hot water baseboard]	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other ________

The primary type of fuel used is:

Natural Gas	[✓ Fuel Oil]	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: Fuel Oil

Boiler/furnace located in:	[✓ Basement]	Outdoors	Main Floor	Other________
Air conditioning:	[✓ Central Air]	Window units	Open Windows	None

Are there air distribution ducts present? [✓ Y] N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

No ductwork observed. Return duct located in 1st floor hallway (see sketch). Newer system and duct joints likely tight.

7. OCCUPANCY

Is basement/lowest level occupied? Full-time [✓ Occasionally] Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Office space / workout area / playroom
1st Floor	Living area / bedrooms
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? [✓ Y] N – converted into living space in house

b. Does the garage have a separate heating unit? Y / [✓ N] / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / [✓ N] / NA – kept in shed
Please specify______

d. Has the building ever had a fire? Y [✓ N] When?______

e. Is a kerosene or unvented gas space heater present? Y [✓ N] Where?______

f. Is there a workshop or hobby/craft area? Y / [✓ N] Where & Type?______

g. Is there smoking in the building? Y [✓ N] How frequently?______

h. Have cleaning products been used recently? [✓ Y] N When & Type? General use

i. Have cosmetic products been used recently? [✓ Y] N When & Type? General use

j. Has painting/staining been done in the last 6 months? Y / [✓ N] Where & When? ____________

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? ____________

l. Have air fresheners been used recently? Y / [✓ N] When & Type? ____________

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? circulats w/in the kitchen area

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented? Attic

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? Y / [✓ N] When & Type? ____________

Are there odors in the building? Y / [✓ N]
If yes, please describe: ____

Do any of the building occupants use solvents at work? Y / [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? ____________________________________

If yes, are their clothes washed at work? Y / [✓ N]

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently [✓ (monthly or less)]
Yes, work at a dry-cleaning service
No
Unknown

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: __________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: ______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: ______

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: ____________________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

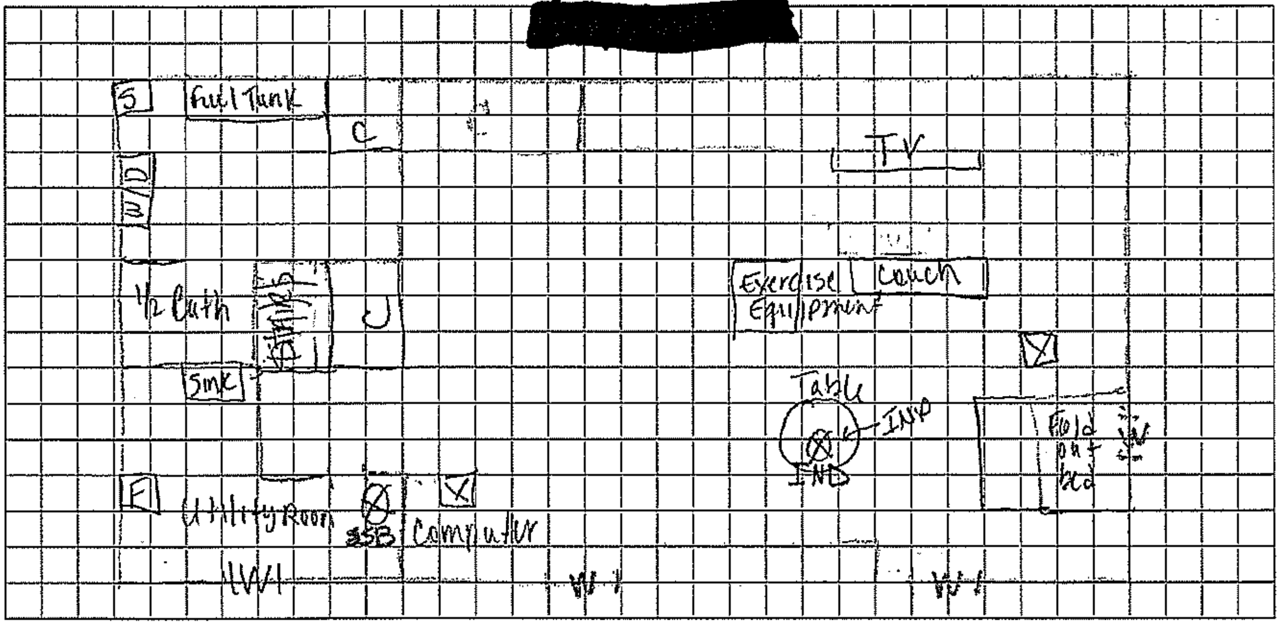
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

⊠ - vent
D = door
W = window
C = Closet
S - sump
⊗ = Sample
F - furance

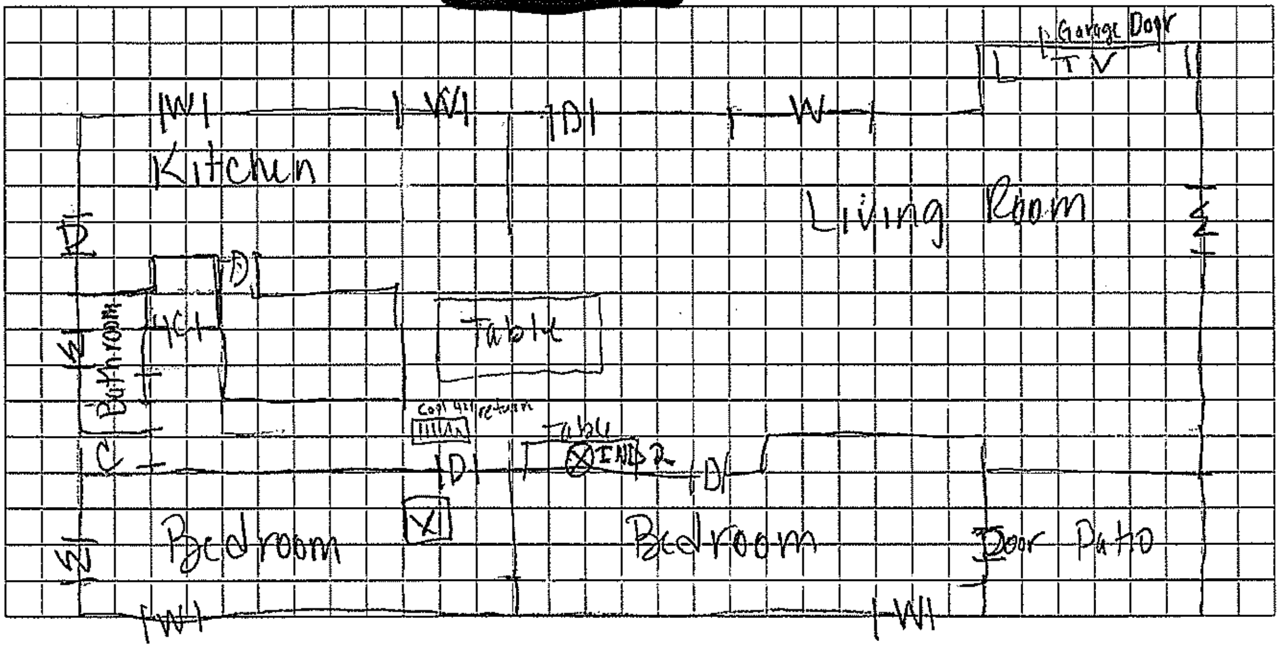
Basement:

[redacted]



First Floor:

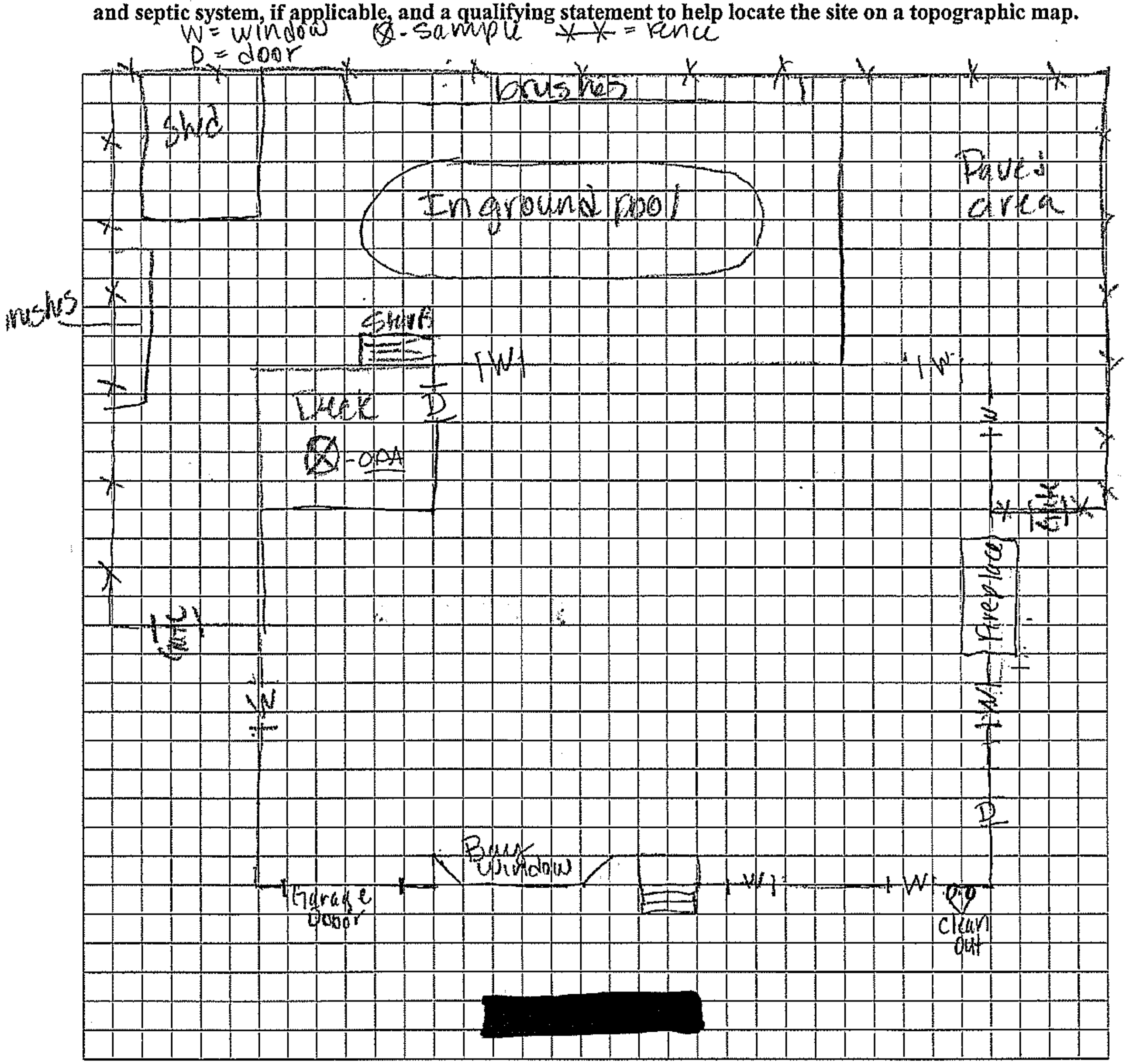
[redacted]



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ________________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Laundry	Latex Paint (5)	1 gal	Partially Used			
	Bleach	96oz				
	Fabric Softener	80 oz				
	De-Icer (2)	12oz				
	Mini Wax - Water Based Polycrylic Finisher	8oz				
	Mini Wax Wood Finish	8oz				
	Denatured Alcohol (2)	1gal				
	Zinnsser DIF Wallpaper Stripper	22oz				
	Windshield Washer	1 gal				
	All Laundry Soap	96 oz				
Utilities Room	Cabot Acrylic Stain (4)	1gal				
	Benjamin Moore Latex Paint (9)	1gal				
	OFF Bug Spray	6oz				
	Raid Ant Roach	17.5oz				
	De-Icer	12oz				
	Rust-oleum Gloss Protective Enamel	12oz				
	Chaulking	6oz				
	water base wood Putty	8oz				
	Air Freshner Vanillaroma	70g				

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

* see back of this sheet for additional Inventory

Location	Product Description	Size
Utility Room	Pine-Sol	48oz
	Gentle Puppy Shampoo	16 oz
	Mr Clean Fabreze	40 oz
	Joint Compound	5gal
	Lysol Bathroom Cleaner	32 oz

OSR – 3

House #12

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Lora Fly Date/Time Prepared 25 Feb 09 / 10:40

Preparer's Affiliation NAVFAC Midlant Phone No. 757-444-0781

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: [✓ Y] / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted], Bethpage, NY 11714

County: USA

Home Phone: [redacted] Office Phone: ______

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: ______ First Name: ______

Address: ______

County: ______

Home Phone: ______ Office Phone: ______

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use

Industrial Church Other: ______

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular
2-Family
Split Level
Contemporary
Apartment House
Log Home
3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:__________

If multiple units, how many? N/A

If the property is commercial, type? N/A

Business Type(s) __________

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors 1
Basement, Attic, 1st Floor
Building age 1952

Is the building insulated? [✓ Y] / N
How air tight? Tight / [✓ Average] / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

* No noticable air flow observed Window & wall units for A/C

Airflow between floors

Airflow near source

No airflow observed.

Outdoor air infiltration

Via windows & doors on 1st floor. Door to workshop in basement.

Infiltration into air ducts

No ducts present

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick/siding

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: uncovered [✓ covered] covered with Carpet

e. Concrete floor: [✓ unsealed] sealed sealed with ____________

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: [✓ unsealed] sealed sealed with water proofed on outside

h. The basement is: wet damp [✓ dry] moldy

i. The basement is: [✓ finished] unfinished partially finished

j. Sump present? Y / [✓ N] (trap for sewage - no sump)

k. Water in sump? Y / N / [✓ not applicable]

Basement/Lowest level depth below grade: 5.0 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Drilled holes around hot water heater to allow water to drain

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation Heat pump [✓ Hot water baseboard]
Space Heaters Stream radiation Radiant floor
Electric baseboard Wood stove Outdoor wood boiler Other ________

The primary type of fuel used is:

Natural Gas [✓ Fuel Oil] Kerosene
Electric Propane Solar
Wood Coal

Domestic hot water tank fueled by: Furance sends hot water to tank

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other________

Air conditioning: Central Air [✓ Window units] Open Windows None
Wall units

Are there air distribution ducts present? Y [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

No ductwork present.

7. OCCUPANCY

Is basement/lowest level occupied? [✓ Full-time] Occasionally Seldom Almost Never

Son lives in basement

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Son lives downstairs | Shop
1st Floor	Living Area (4) | bedrooms
2nd Floor	N/A
3rd Floor	N/A
4th Floor	N/A

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / [✓ N]

b. Does the garage have a separate heating unit? Y / [✓ N] / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / [✓ N] / NA
Please specify Shed; basement

d. Has the building ever had a fire? Y / [✓ N] When?
Not since he has lived in the home, but some rafters are "smoky"

e. Is a kerosene or unvented gas space heater present? Y / N Where?

f. Is there a workshop or hobby/craft area? [✓ Y] / N Where & Type? basement / carpentry

g. Is there smoking in the building? Y / [✓ N] How frequently?

h. Have cleaning products been used recently? [✓ Y] / N When & Type? general use

i. Have cosmetic products been used recently? [✓ Y] N When & Type? General use

j. Has painting/staining been done in the last 6 months? [✓ Y] / N Where & When? Varnish last week in Shop

k. Is there new carpet, drapes or other textiles? [✓ Y] / N Where & When? 1st floor in Dec

l. Have air fresheners been used recently? [✓ Y] / N When & Type? normal use

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? Outside

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented? Outside

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? [✓ Y] / N When & Type? last summer-ants

Are there odors in the building? Y / [✓ N]
If yes, please describe: Used solder and flux today. Used silicon chalking & used polyurethane adhesive yesterday. Normal burns candles frequently uses purfume

Do any of the building occupants use solvents at work? [✓ Y] / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? Carpentry Shop-fixing boats

If yes, are their clothes washed at work? Y / [✓ N]

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
[✓ No]
Unknown

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ____________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: _______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: _______

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: ________________________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

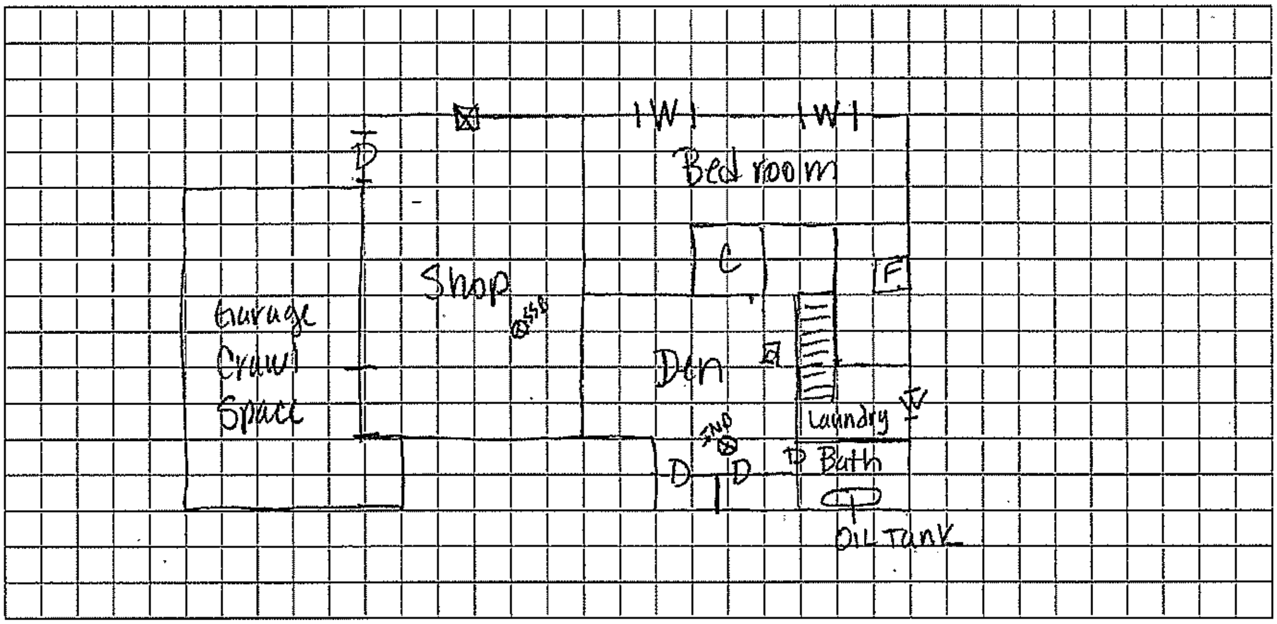
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

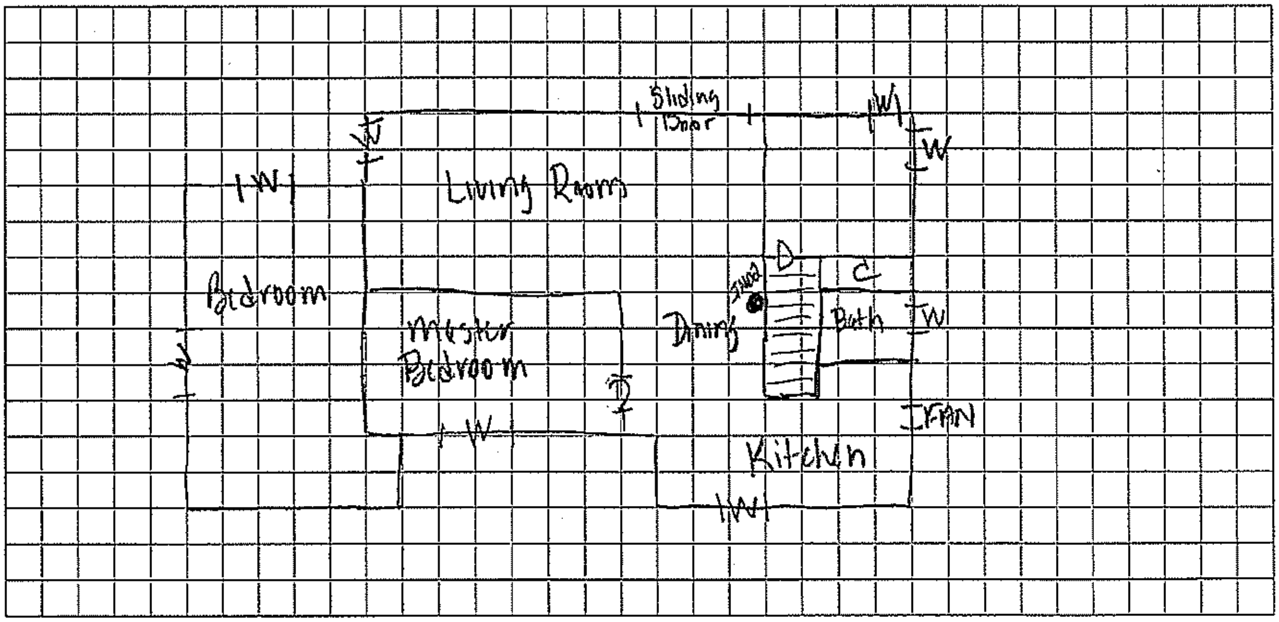
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note. ☒-Fan D-door C= closet ⊡ = IQ Unit
W-window F-furance ⊗=Sample

Basement:



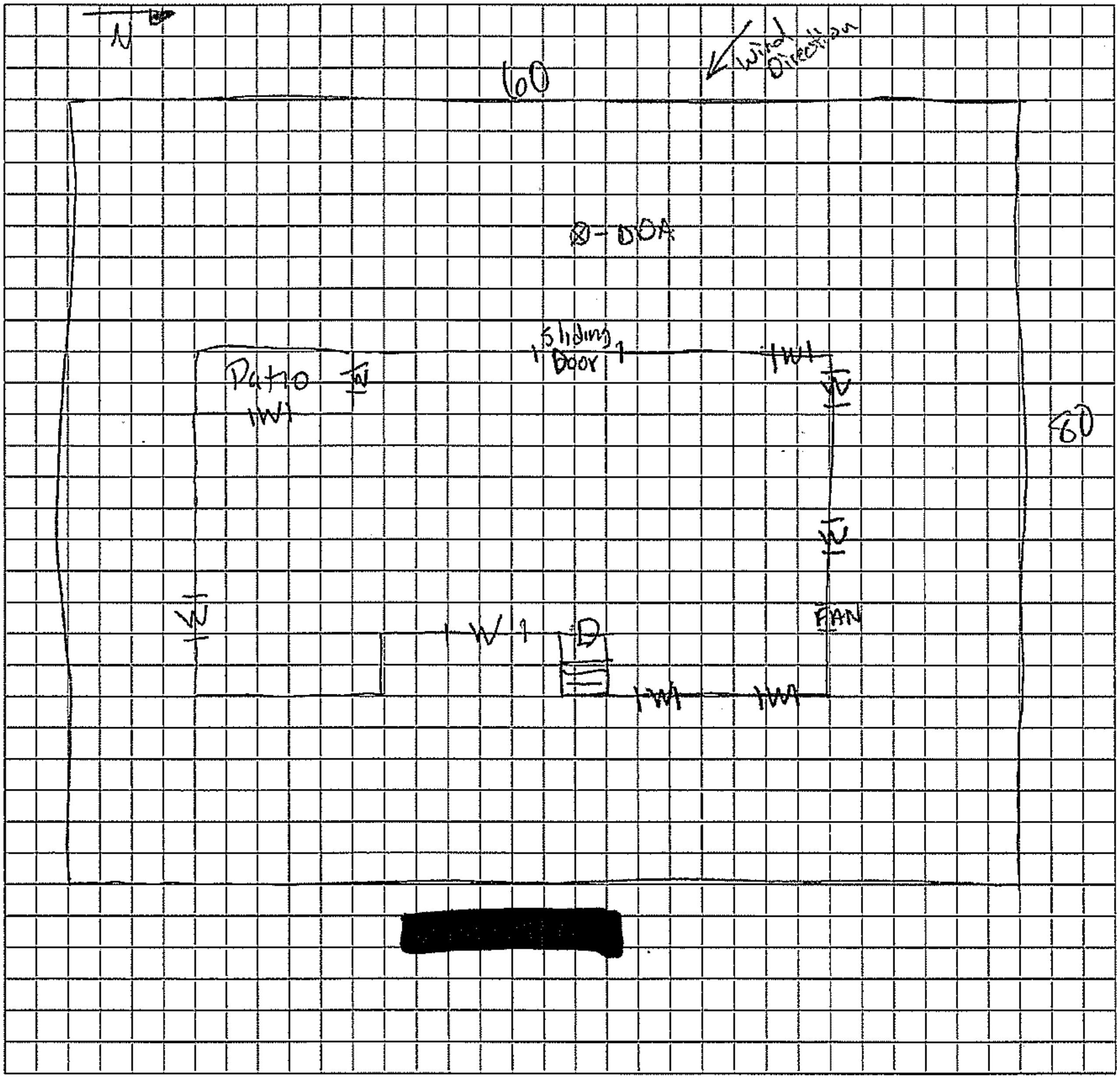
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________

List specific products found in the residence that have the potential to affect indoor air quality.

* See photographs

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Basement	Mini Wax Wood Stains					
	Varnish					
	Regetta Bottom Paint Anti fouling (Salt plate)					
	Laquer Thinners					
	Paint Thinners					
	House Paint - Latex & Enamel					
	Xylene					
	all Laundry Detergent					
	Snuggle Fabric Softner					
	Clorox Beach					
	Hornet Spray					
*Basement workshop contains many paints, stains, resins, adhesives.						
Resident does much work in wood building & boat repair.						
	* See photo's for further details					

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**

** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

OSR-3

House #13

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Lora Fly Date/Time Prepared 25 Feb 09/2:45p

Preparer's Affiliation NAVFAC Midlant Phone No. 757-444-0781

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: [✓ Y] / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted]; Bethpage, NY 11714

County: USA

Home Phone: [redacted] ~~Office~~ Cell Phone: [redacted]

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: ____ First Name: ____

Address: ____

County: ____

Home Phone: ____ Office Phone: ____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use
Industrial Church Other: ____

If the property is residential, type? (Circle appropriate response)

Ranch
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouses/Condos
Other: Modify Ranch w/ Loft

If multiple units, how many? N/A

If the property is commercial, type? N/A

Business Type(s) ____________________

Does it include residences (i.e., multi-use)? Y / N   If yes, how many? ______

Other characteristics:

Number of floors 3
Basement, 1st, Loft

Building age [redacted] (Not in same Location in aerials)

Is the building insulated? [✓ Y] / N
Renovated 1994-95

How air tight? [✓ Tight] / Average / Not Tight
How Long did you live in the home [redacted]

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

No noticable air flow in home

Airflow between floors

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick siding

b. Basement type: [✓ 3/4 full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: [✓ uncovered] covered covered with ______________

e. Concrete floor: [✓ unsealed] sealed sealed with ______________

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: [✓ unsealed] sealed sealed with ______________

h. The basement is: wet damp [✓ dry] moldy

i. The basement is: finished [✓ unfinished] partially finished

In the process of being refinished

j. Sump present? [✓ Y] / N

k. Water in sump? Y / N / not applicable unknown

Basement/Lowest level depth below grade: 5 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Minor cracks in walls and floor

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation
Space Heaters
Electric baseboard

Heat pump
Stream radiation
Wood stove

[✓ Hot water baseboard]
Radiant floor
Outdoor wood boiler

Other ________

The primary type of fuel used is:

[✓ Natural Gas]
Electric
Wood

Fuel Oil
Propane
Coal

Kerosene
Solar

Domestic hot water tank fueled by: Natural Gas

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other ________

Air conditioning: Central Air [✓ Window units] Open Windows None

Wall unit

Are there air distribution ducts present? Y / [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally [✓ Seldom] Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Refinishing
1st Floor	Living Area | Bedrooms
2nd Floor	Bedroom | Office
3rd Floor	N/A
4th Floor	N/A

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / [✓ N]

b. Does the garage have a separate heating unit? [✓ Y] / N / NA
Electric heater

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / [✓ N] / NA
Please specify Shed
in basement and shop in detached garage - electric tools | some gas

d. Has the building ever had a fire? Y / [✓ N] When? ____________

e. Is a kerosene or unvented gas space heater present? Y / [✓ N] Where? ____________

f. Is there a workshop or hobby/craft area? [✓ Y] / N Where & Type? detached garage

g. Is there smoking in the building? Y / [✓ N] How frequently? ____________

h. Have cleaning products been used recently? [✓ Y] / N When & Type? General Use
-Use Envir Safe Products

i. Have cosmetic products been used recently? [✓ Y] / N When & Type? General Use

j. Has painting/staining been done in the last 6 months? [✓ Y] / N Where & When? Bedroom (1st) / JAN 09

k. Is there new carpet, drapes or other textiles? [✓ Y] / N Where & When? Bedroom (1st) Jan 09

l. Have air fresheners been used recently? Y / [✓ N] When & Type? ______________

m. Is there a kitchen exhaust fan? Y / [✓ N] If yes, where vented? ___________

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented? outside

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? Y / [✓ N] When & Type? ______________

Are there odors in the building? Y / [✓ N]
If yes, please describe: ____

Do any of the building occupants use solvents at work? [✓ Y] / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? laquer / mineral spirits - used occasionally

If yes, are their clothes washed at work? Y / [✓ N]

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
[✓ Yes, use dry-cleaning infrequently (monthly or less)]
Yes, work at a dry-cleaning service
No
Unknown

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ___________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: _______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: _______

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: ______________________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

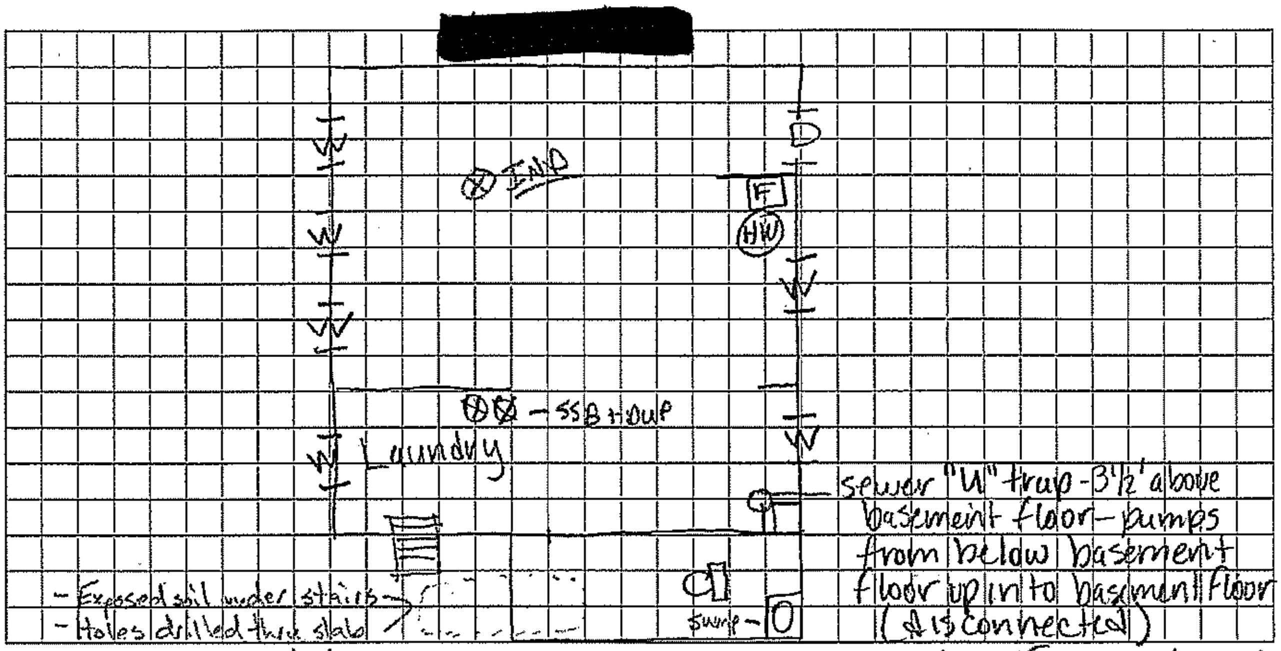
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

O - sump
W = window
D = door
⊗ - Sample
F - furance
HW - hot water heater

Basement:

[redacted]



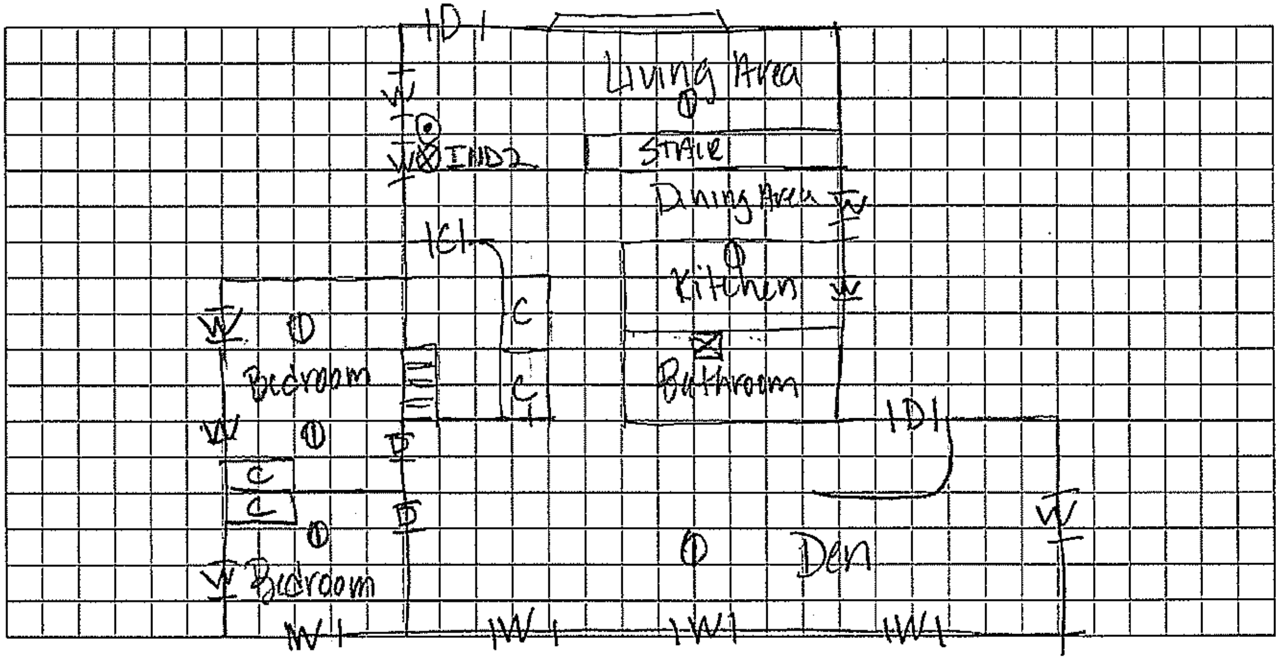
sewer "U" trap - 3½' above basement floor - pumps from below basement floor up into basement floor (disconnected)

- Exposed soil under stairs
- Holes drilled thru slab

⊙ - wood stove
⦶ - Ceiling Fan
☒ - vent

First Floor:

[redacted]

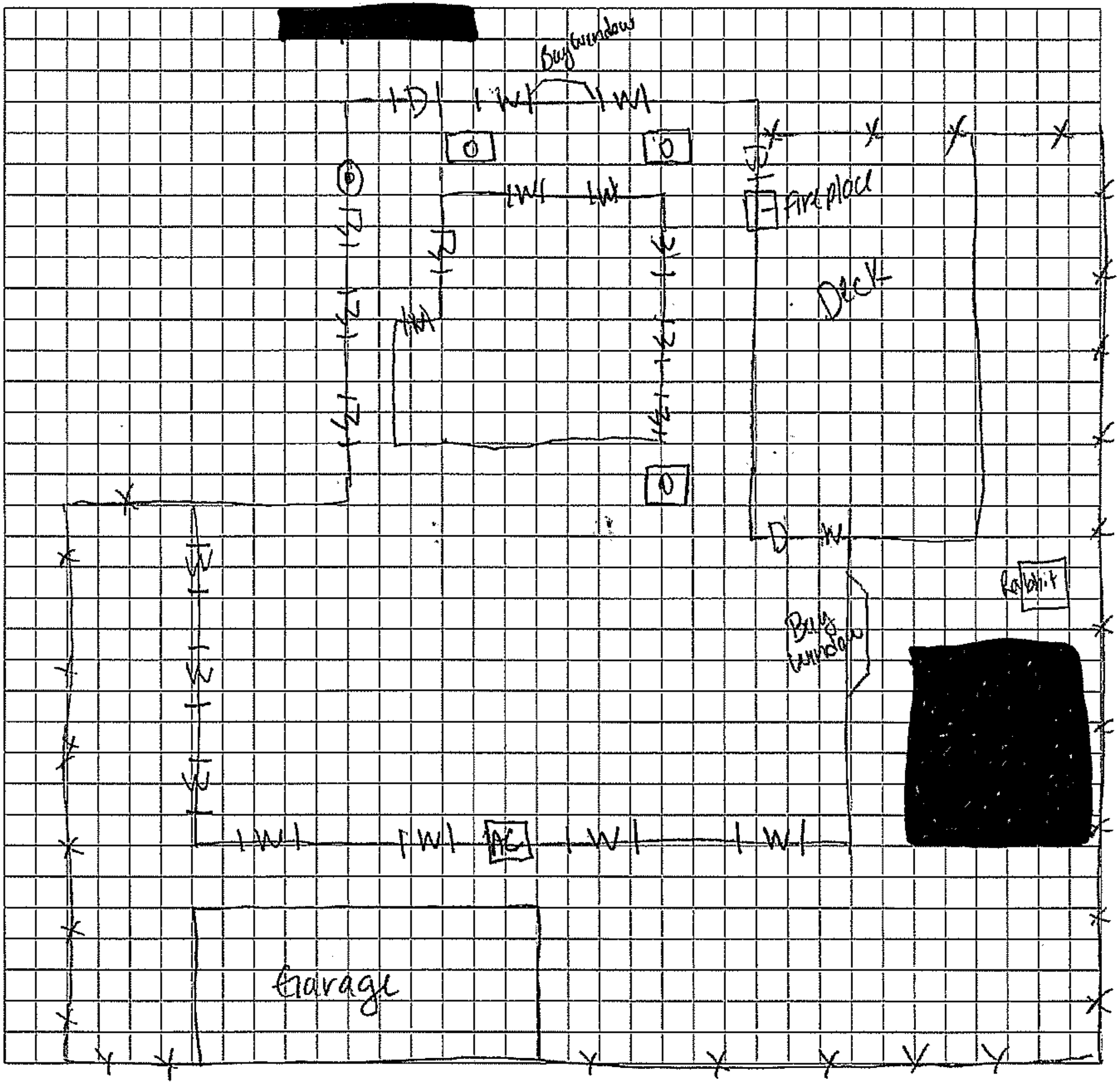


12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

☐ -skylight. ◎ wood stove AC air conditioning unit



[redacted]

[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y / N
Basement	Clorox Bleach	1.42g				
	Purex Laundry Soap (4)	88oz				
	Purex Fabric Softner (3)	44oz				
	Sealant (Chalking)	tube				
	Acrylic Paint					
	(2 at 9gal 1pt)					
*	Homeowner was in	the	process of	finishing basement.	Some flooring	
	present along with	tools &	supplies in	basement. *see	photos.	

* Describe the condition of the product containers as **Unopened (UO), Used (U), or Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

OSR-3

House #19

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Lora Fly Date/Time Prepared 10 Feb 09

Preparer's Affiliation NAVFAC Midlant Phone No. 757-444-0781

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: Y / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted], Bethpage, NY 11714

County: USA

Home Phone: ______ Cell ~~Office~~ Phone: [redacted]

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: [✓ Y] N

Last Name: [redacted] First Name: [redacted]

Address: [redacted], NY 11720

County: USA

Home Phone: ______ Cell ~~Office~~ Phone: [redacted]

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use

Industrial Church Other: ______

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:______________

If multiple units, how many? N/A

If the property is commercial, type? N/A

Business Type(s) ______________________________

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors 1
Basement, 1st Floor, Unfinished attic

Building age 1968

Is the building insulated? [✓ Y] / N

How air tight? Tight / [✓ Average] / Not Tight

*How long have you lived in the house
tenant 3years

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

No flow movement noted

Airflow between floors

____

Airflow near source

____

Outdoor air infiltration

____

Infiltration into air ducts

____

* Note: Family member lived in the basement until Jan 2009 (2 months ago)
for 3 years ~~[illegible]~~ duration.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick

brick facade in front asbestos shingles on remaining exterior

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: uncovered [✓ covered] covered with tile

e. Concrete floor: [✓ unsealed] sealed sealed with ________

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: unsealed sealed sealed with ________ unknown

* exterior walls sealed

h. The basement is: wet damp [✓ dry] moldy

i. The basement is: [✓ finished] unfinished partially finished

j. Sump present? [✓ Y] / N

k. Water in sump? Y / [✓ N] / not applicable

Basement/Lowest level depth below grade: 5.5' (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Foundation walls are drywalled. The basement has been an apartment for 20 years

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation
Space Heaters
Electric baseboard

Heat pump
Stream radiation
Wood stove

[✓ Hot water baseboard]
Radiant floor
Outdoor wood boiler

Other ________

The primary type of fuel used is:

Natural Gas
Electric
Wood

[✓ Fuel Oil]
Propane
Coal

Kerosene
Solar

Domestic hot water tank fueled by: Fuel Oil

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other ________

Air conditioning: Central Air Window units Open Windows None

wall unit - vent to garage

Are there air distribution ducts present? Y / [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

No duct work in house

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally [✓ *Seldom] Almost Never

* For last 2 months

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Laundry room | Former apartment
1st Floor	living area | bedrooms
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? [✓ Y] / N

b. Does the garage have a separate heating unit? Y / [✓ N] / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / [✓ N] / NA Please specify__________

d. Has the building ever had a fire? Y / [✓ N] When?__________

e. Is a kerosene or unvented gas space heater present? Y / [✓ N] Where?__________

f. Is there a workshop or hobby/craft area? Y / [✓ N] Where & Type?__________

g. Is there smoking in the building? Y / [✓ N] How frequently?__________

h. Have cleaning products been used recently? Y / [✓ N] When & Type?__________

i. Have cosmetic products been used recently? Y / [✓ N] When & Type?__________

j. Has painting/staining been done in the last 6 months? Y / [✓ N] Where & When? ________

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? ________

l. Have air fresheners been used recently? [✓ Y] / N When & Type? ________
within the past week in the living area 1st floor

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? outside

n. Is there a bathroom exhaust fan? Y / [✓ N] If yes, where vented? ________

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? Y / [✓ N] When & Type? ________

Are there odors in the building? Y / [✓ N]
If yes, please describe: ________

Do any of the building occupants use solvents at work? Y / [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? ________

If yes, are their clothes washed at work? Y / [✓ N]

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

[✓ Yes, use dry-cleaning regularly (weekly)]	No
Yes, use dry-cleaning infrequently (monthly or less)	Unknown
Yes, work at a dry-cleaning service	

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply:	[✓ Public Water]	Drilled Well	Driven Well	Dug Well	Other: ______
Sewage Disposal:	[✓ Public Sewer]	Septic Tank	Leach Field	Dry Well	Other: ______

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: ________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

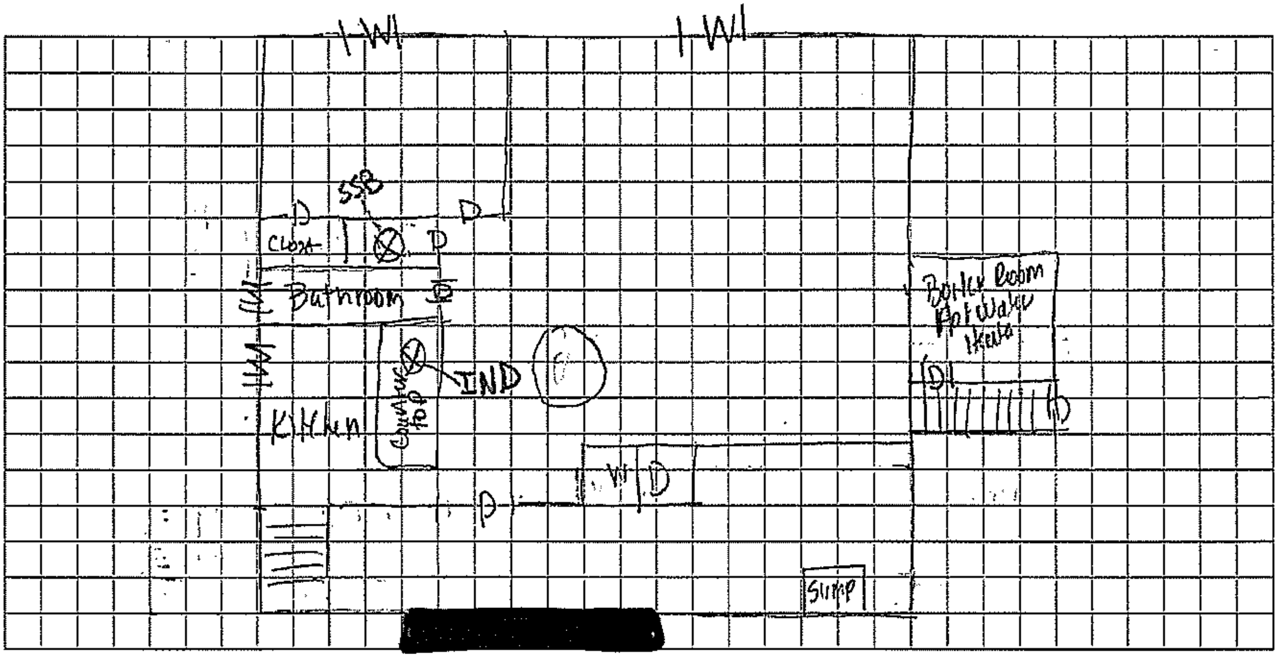
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

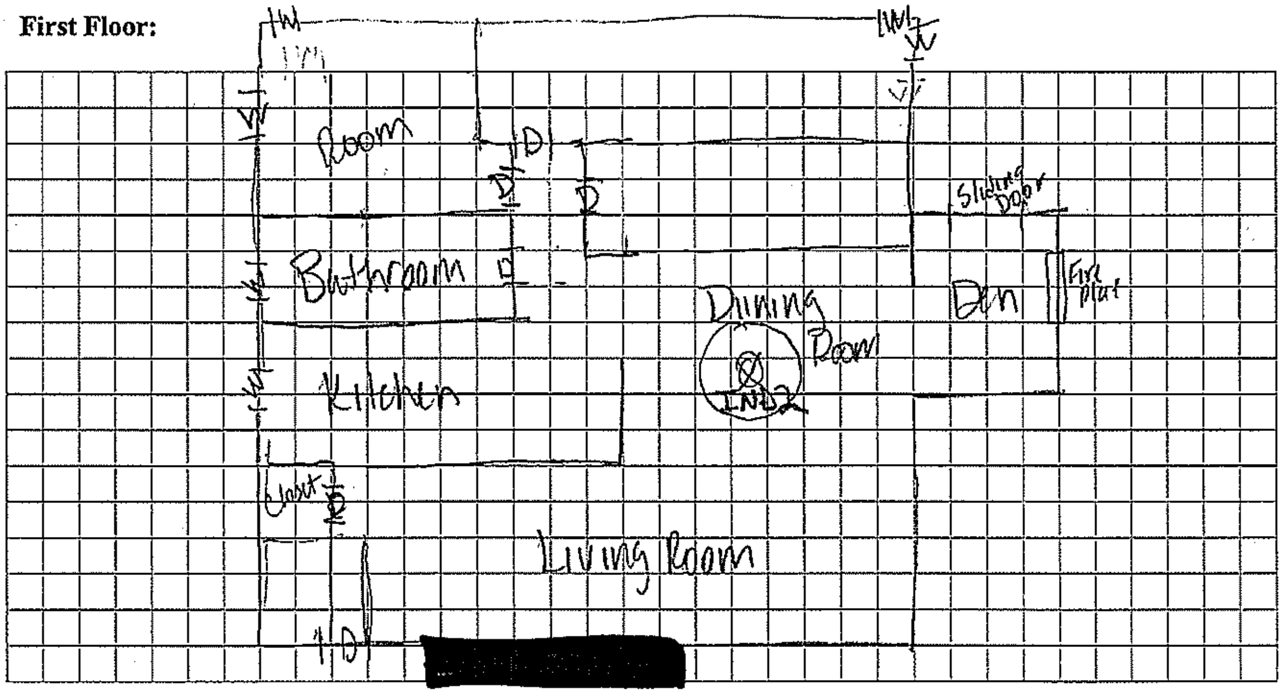
Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note. W= window D = door ⊗ = Sample

Basement:



[redacted]

First Floor:



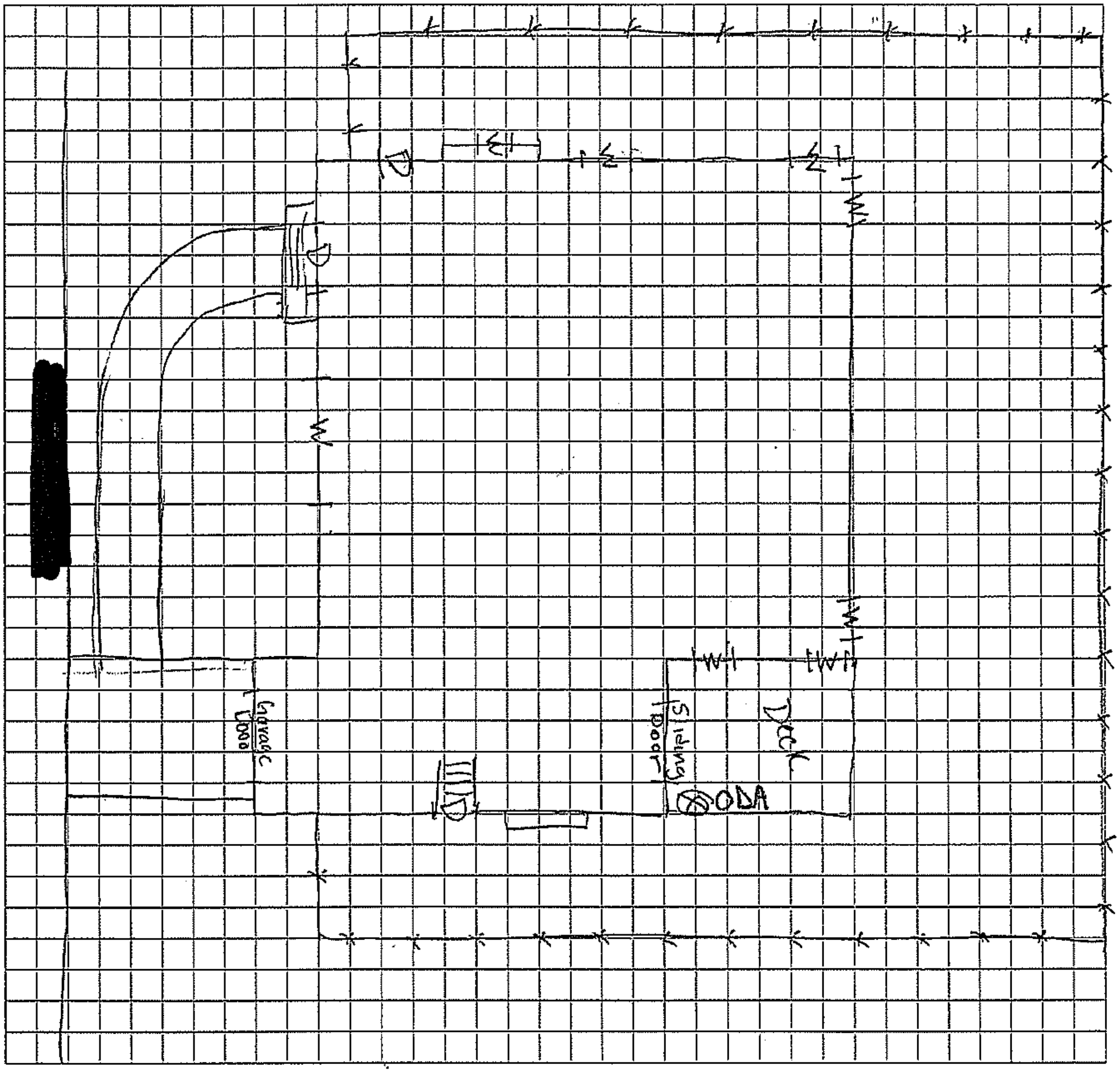
[redacted]

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

D = door W = window *-* = fence ⊗- Sample



[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y / N
Laundry Room	Paint (17 cans)	1gal	Used			
↓	Hardwood laminate & Floor Cleaner	1gal	↓			
	Tide	150oz				
	Shout (2)	30oz/60oz				
	Clorox Bleach (2)	90oz/1.4gal				
	Downey (2)	103oz				
	Purex	50oz				
	Scotchguard (2)	4oz				
	Chalking	1 tube				
	Citronella Torch fuel	1gal				

* Describe the condition of the product containers as **Unopened (UO), Used (U), or Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

OSR – 3

House #15

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Lora Fly Date/Time Prepared 10 Feb 09

Preparer's Affiliation NAVFAC Midlant Phone No. 757-444-0781

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: [✓ Y] / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted] Bethpage, NY 11714

County: USA

Home Phone: [redacted] ~~Office~~ Cell Phone: [redacted]

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / N

Last Name: ________ First Name: ________

Address: ________

County: ________

Home Phone: ________ Office Phone: ________

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use
Industrial Church Other: ________

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:______________

If multiple units, how many? N/A

If the property is commercial, type? N/A

Business Type(s) ________________________________

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors 1 Building age 1960

Basement, 1st floor, Unfinished Attic

Is the building insulated? [✓ Y] / N How air tight? Tight / [✓ Average] / Not Tight

How long have you lived in the house 1.5 years

4. **AIRFLOW**

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

No air flow noted

Airflow between floors

____

Airflow near source

____

Outdoor air infiltration

____

Infiltration into air ducts

____

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: uncovered [✓ covered] covered with carpet

e. Concrete floor: unsealed [✓ sealed] sealed with ________________

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: unsealed [✓ sealed] sealed with ________________

Exterior walls only

h. The basement is: wet damp [✓ dry] moldy

i. The basement is: [✓ finished] unfinished partially finished

j. Sump present? [✓ Y] N

k. Water in sump? Y [✓ N] not applicable

Basement/Lowest level depth below grade: 5.5' (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

No visible cracks

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation
Space Heaters
Electric baseboard
Heat pump
Stream radiation
Wood stove
[✓ Hot water baseboard]
Radiant floor
Outdoor wood boiler
Other ________

The primary type of fuel used is:

[✓ Natural Gas]
Electric
Wood
Fuel Oil
Propane
Coal
Kerosene
Solar

Domestic hot water tank fueled by: Natural Gas

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other________

Air conditioning: Central Air [✓ Window units] Open Windows None

Are there air distribution ducts present? Y / [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

No duct work

7. OCCUPANCY

Is basement/lowest level occupied? Full-time [✓ Occasionally] Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Laundry
1st Floor	Living Area | bedrooms
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? [✓ Y] N

b. Does the garage have a separate heating unit? Y / [✓ N] / NA

garage was not insulated

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / [✓ N] / NA
Please specify

d. Has the building ever had a fire? Y [✓ N] When?

e. Is a kerosene or unvented gas space heater present? Y [✓ N] Where?

f. Is there a workshop or hobby/craft area? Y [✓ N] Where & Type?

g. Is there smoking in the building? Y [✓ N] How frequently?

h. Have cleaning products been used recently? [✓ Y] N When & Type? normal usage

i. Have cosmetic products been used recently? [✓ Y] N When & Type? normal usage

j. Has painting/staining been done in the last 6 months? [✓ Y] N Where & When? Basement Bathroom 2months ago
* repaired area 3x5'

k. Is there new carpet, drapes or other textiles? Y [✓ N] Where & When? ______________

l. Have air fresheners been used recently? [✓ Y] N When & Type? candles

m. Is there a kitchen exhaust fan? [✓ Y] N If yes, where vented? attic

n. Is there a bathroom exhaust fan? [✓ Y] N If yes, where vented? outside

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? Y [✓ N] When & Type? ______________

Are there odors in the building? Y [✓ N]
If yes, please describe: ______________________________

Do any of the building occupants use solvents at work? Y / [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? ______________________________

If yes, are their clothes washed at work? Y [✓ N]

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
[✓ Yes, use dry-cleaning infrequently (monthly or less)]
Yes, work at a dry-cleaning service
No
Unknown

Is there a radon mitigation system for the building/structure? Y [✓ N] Date of Installation: ____________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: _______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: _______

10. RELOCATION INFORMATION (for oil spill residential emergency) N/A

a. Provide reasons why relocation is recommended: ______________________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

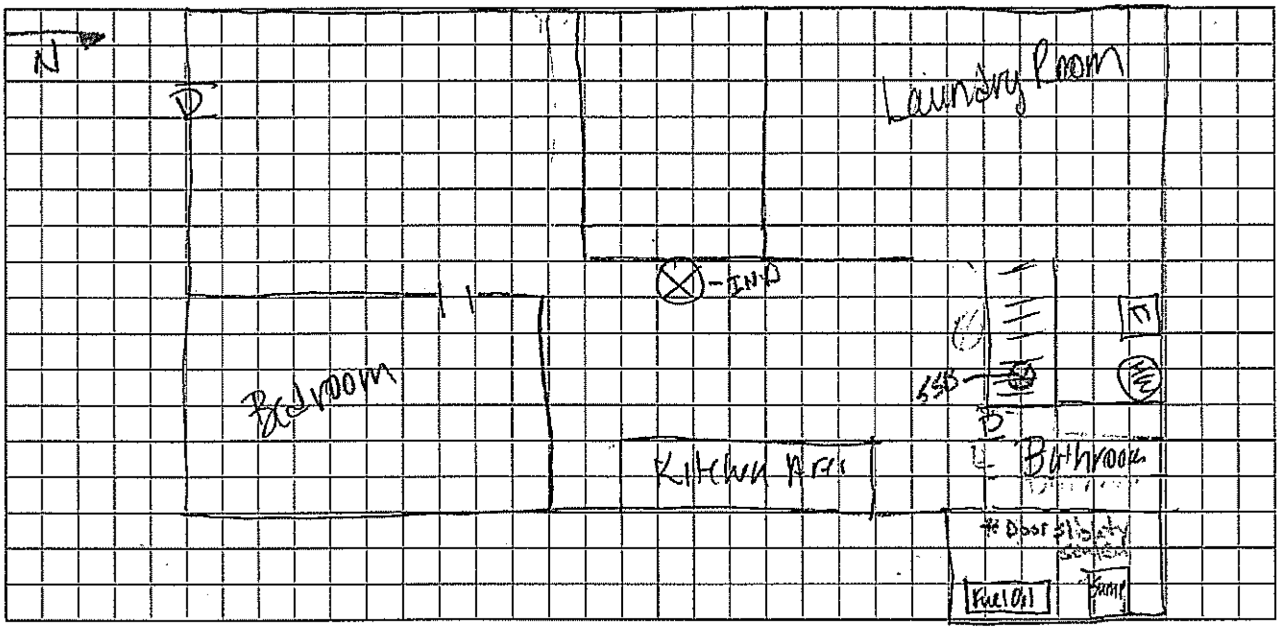
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

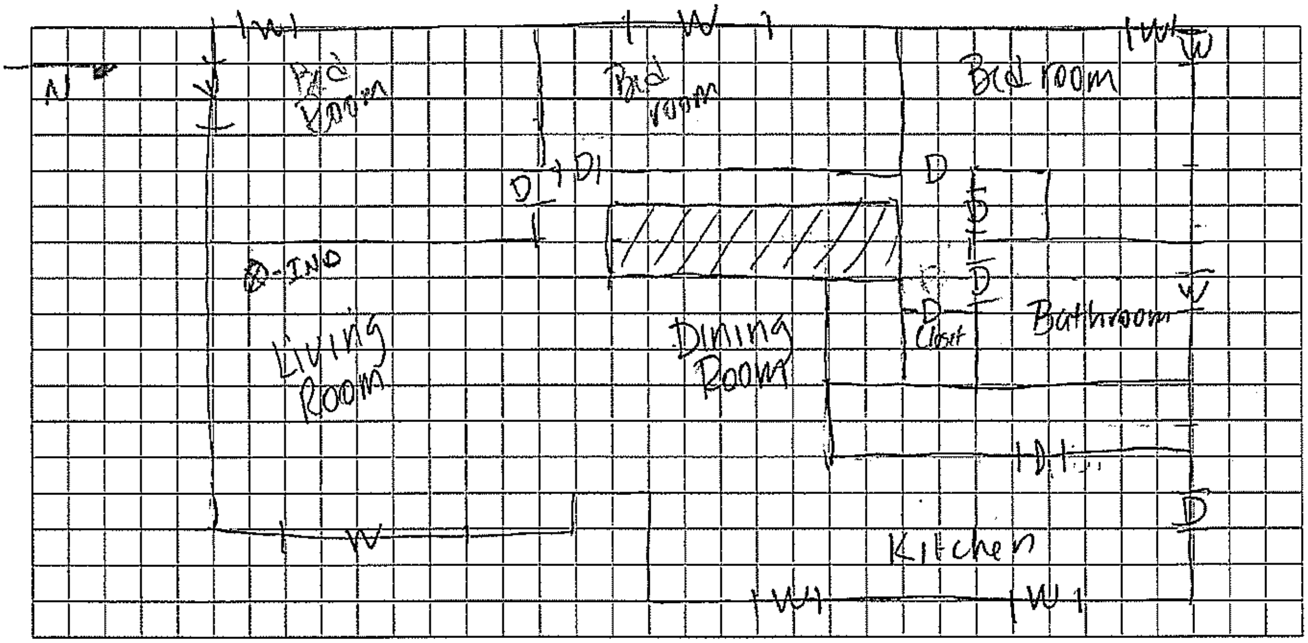
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



First Floor:

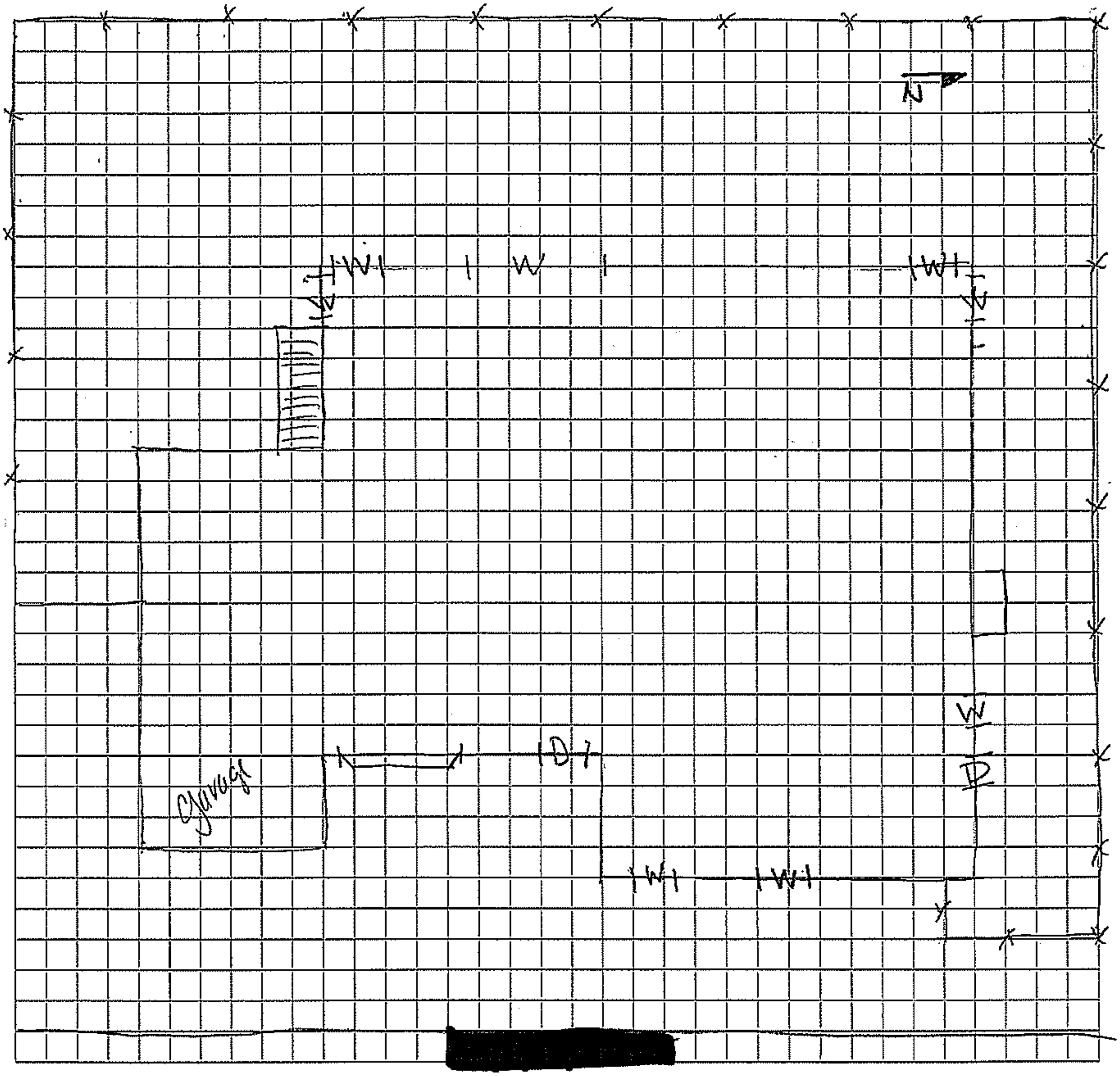


[redacted]

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ____________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Basement	Clorox	3gal	Used			
↓	Paint	—	↓	*several gallons observed		
↓	Laundry Products	4gals	↓			
↓	Sealing Compound	5gal	↓			
1st floor	Bathroom cleaners	—	U			
Basement	Oxy clean	22oz	U			

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

OSR-3

Home #16

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Robert Sok Date/Time Prepared 4/27/09 ~2PM

Preparer's Affiliation Tetra Tech NUS Phone No. 757-466-4904

Purpose of Investigation Site 1 - Soil Vapor Investigation

1. OCCUPANT:

Interviewed: [✓ Y] N

Last Name: [redacted] First Name: [redacted]

Address: [redacted] Bethpage, NY

County: Nassau

Home Phone: [redacted] Office Phone: N/A

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: ______ First Name: ______

Address: ______

County: ______

Home Phone: ______ Office Phone: ______

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use
Industrial Church Other: ______

If the property is residential, type? (Circle appropriate response)

Ranch
Raised Ranch
Cape Cod
Duplex
Modular
2-Family
Split Level
Contemporary
Apartment House
Log Home
3-Family
[✓ Colonial]
Mobile Home
Townhouses/Condos
Other:__________

If multiple units, how many? NA

If the property is commercial, type?

Business Type(s) NA

Does it include residences (i.e., multi-use)? Y / N   If yes, how many? ______

Other characteristics:

Number of floors 2   Building age ~ 50yrs (1960's)

Is the building insulated? [✓ Y] / N   How air tight? [✓ Tight] / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

No observable airflow between floors

Airflow near source

Baseboard heating, no observable airflow

Outdoor air infiltration

Mostly via doors & windows, Front door & sliding glass door to back deck

Infiltration into air ducts

N/A – no air ducts in home

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: uncovered [✓ covered] covered with tile + carpet

> most entire basement (95%)

e. Concrete floor: unsealed [✓ sealed] sealed with ____________

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: [✓ unsealed] sealed sealed with ____________

h. The basement is: wet damp [✓ dry] moldy

i. The basement is: [✓ finished] unfinished partially finished

j. Sump present? Y / [✓ N]

k. Water in sump? Y / N / [✓ not applicable]

Basement/Lowest level depth below grade: ~6' (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Sewer utility access in east central basement (closet), no cracks, no drains inside (drain in concrete pad, outside door to basement)

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation Heat pump [✓ Hot water baseboard]
Space Heaters Stream radiation Radiant floor
Electric baseboard Wood stove Outdoor wood boiler Other ________

The primary type of fuel used is:

Natural Gas [✓ Fuel Oil] Kerosene
Electric Propane Solar
Wood Coal

Domestic hot water tank fueled by: Fuel Oil

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other________

Air conditioning: Central Air [✓ Window units] Open Windows None

Are there air distribution ducts present? Y [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

* Only ductwork in home is associated with exhaust fans (1) Kitchen, (1) basement kitchen, (1) in each of the three bathrooms

7. OCCUPANCY

Is basement/lowest level occupied? Full-time [✓ Occasionally] Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Finished living space (apartment), laundry
1st Floor	Den/Kitchen/Living room/Dining room
2nd Floor	Bedrooms
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y [✓ N]

b. Does the garage have a separate heating unit? Y / [✓ N] / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y [✓ N] NA
Please specify

d. Has the building ever had a fire? Y / [✓ N] When?

e. Is a kerosene or unvented gas space heater present? Y / [✓ N] Where?

f. Is there a workshop or hobby/craft area? Y / [✓ N] Where & Type?

g. Is there smoking in the building? Y [✓ N] How frequently?

h. Have cleaning products been used recently? [✓ Y] / N When & Type? Typical cleaning products on weekly basis

i. Have cosmetic products been used recently? [✓ Y] / N When & Type? Many types Daily

j. Has painting/staining been done in the last 6 months? [✓ Y] / N Where & When? Inside (1st floor)

k. Is there new carpet, drapes or other textiles? [✓ Y] N Where & When? Drapes (2 weeks ago) basement carpet (8 months ago)

l. Have air fresheners been used recently? [✓ Y] N When & Type? Plug Ins

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? ? outside

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented? Outside / via attic

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? [✓ Y] N When & Type? several weeks ago on lawn

Are there odors in the building? Y / [✓ N]
If yes, please describe: ______

Do any of the building occupants use solvents at work? [✓ Y] / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? Unknown / [redacted] works in office of Trucking Co. with no real interaction with solvents

If yes, are their clothes washed at work? Y / [✓ N]

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
[✓ Yes, use dry-cleaning infrequently (monthly or less)]
Yes, work at a dry-cleaning service
No
Unknown

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ______
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: ______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: ______

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: ______

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

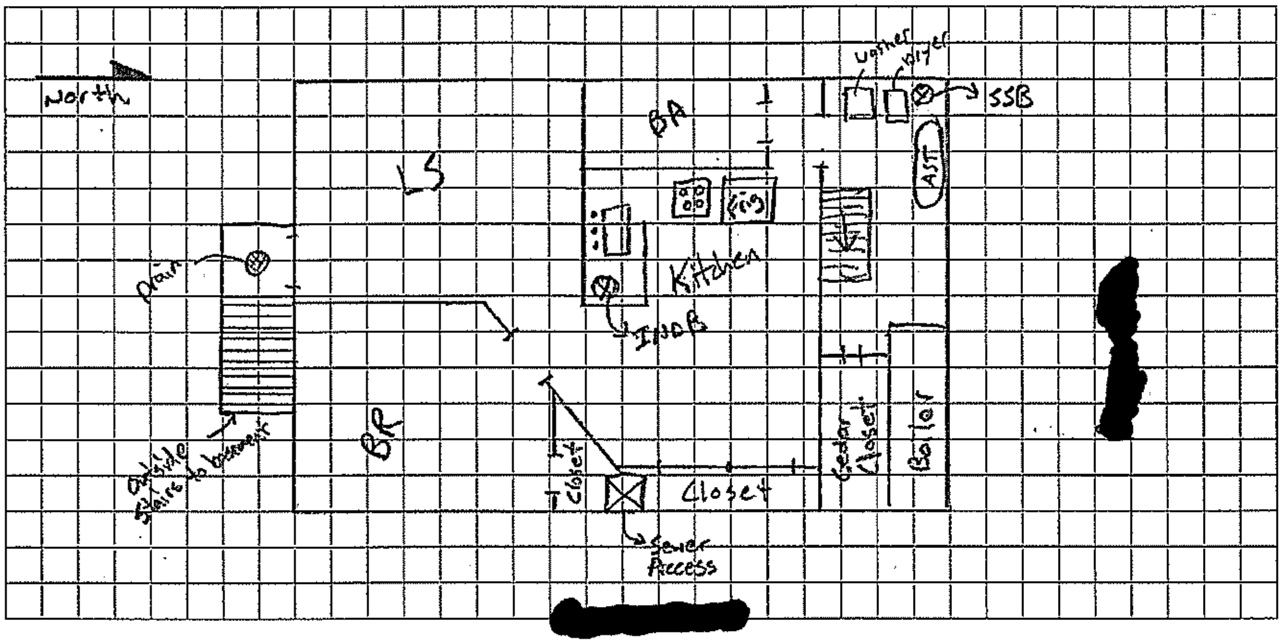
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

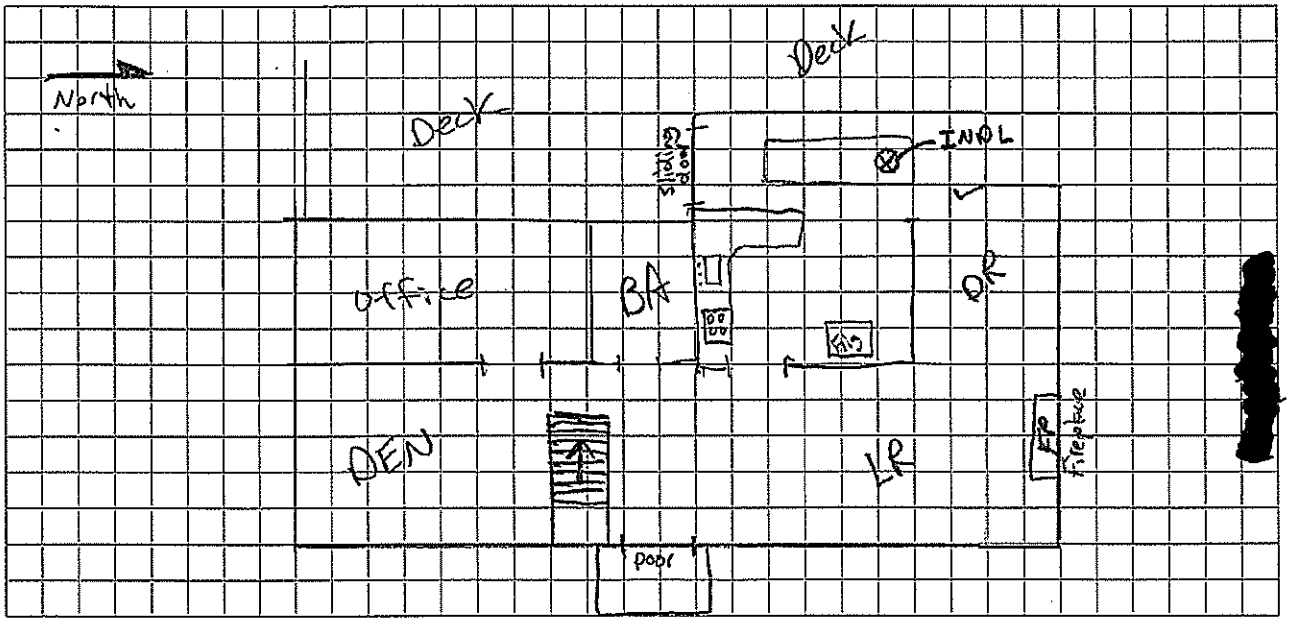
Basement:



[redacted]

[redacted]

First Floor:



[redacted]

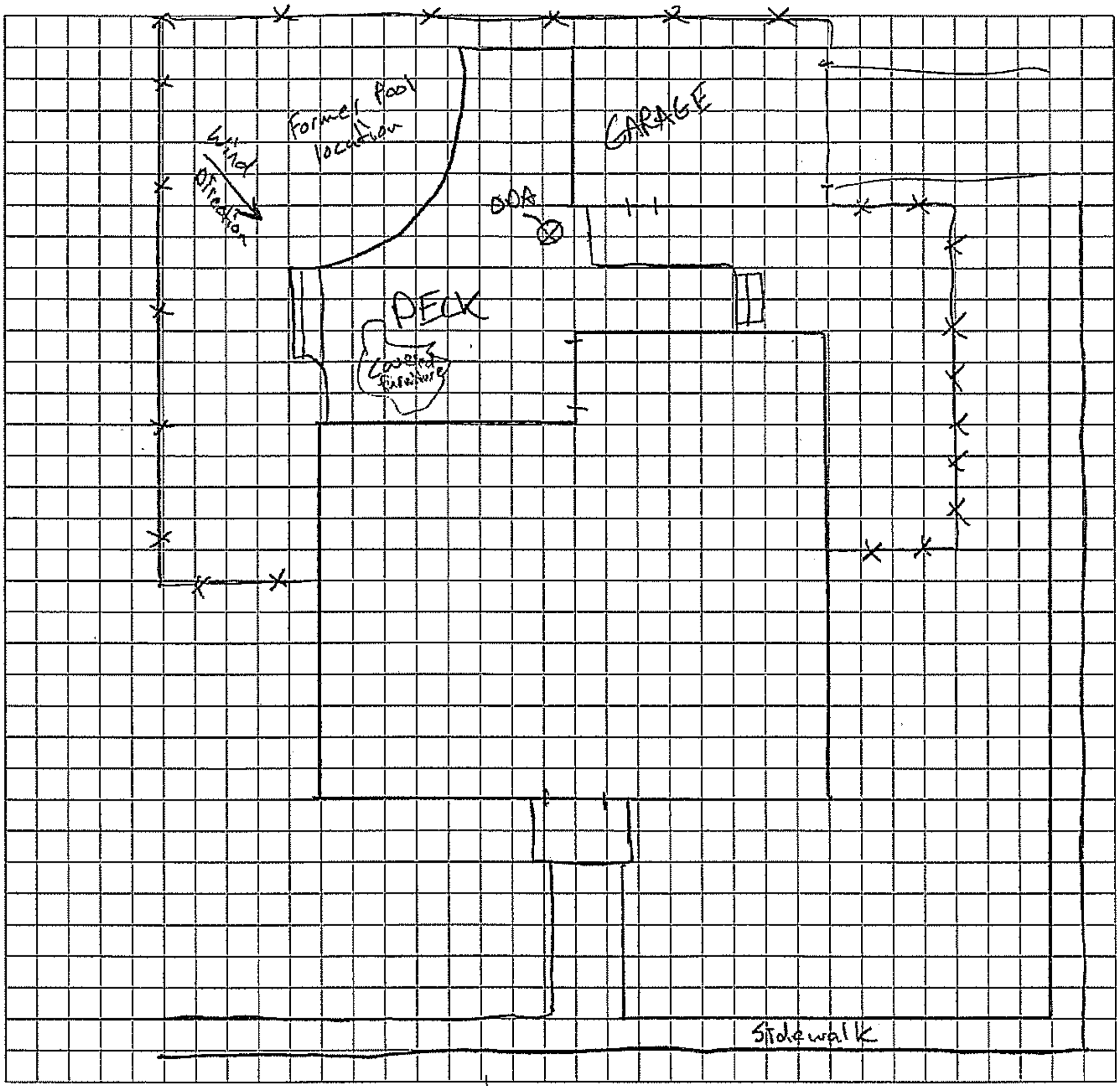
2nd Floor -
SAME FOOTPRINT
WITH 3 BR's, 1BA

[redacted]

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



[redacted]

[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y / N
Basement	Laundry Detergent	5-8 gallons	UO & U			
↓	Bleach (Tide)	20 lbs	U	Powder		
	Liquid Plummer	½ gal	U			
	3 x LP Gel (Snake)	3 btls	UO			
	Pledge	1 can	U			
	WD-40	1 can	U			
	Windex	1 gal	U			
	Latex Paint	6-8 gals	U			
	Oxyclean	2 btls	UO & U			
	Mistolin	4 gals	UO & U	Lavender		

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

OSR-3

Home #17

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Robert Sok Date/Time Prepared 4/27/09 / 1600

Preparer's Affiliation Tetra Tech NUS Phone No. 757-466-4904

Purpose of Investigation Site 1 Soil Vapor Investigation

1. OCCUPANT:

Interviewed: [✓ Y] N

Last Name: [redacted] First Name: [redacted]

Address: [redacted], Bethpage, NY

County: Nassau

Home Phone: [redacted] Office Phone:

Number of Occupants/persons at this location [redacted] Age of Occupants [redacted]

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: First Name:

Address:

County:

Home Phone: Office Phone:

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use

Industrial Church Other:

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular
2-Family
Split Level
Contemporary
Apartment House
Log Home
3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:____________

If multiple units, how many? NA

If the property is commercial, type?

Business Type(s) N.A

Does it include residences (i.e., multi-use)? Y / N If yes, how many? ______

Other characteristics:

Number of floors 1

Building age ~50yrs (?1956)

Is the building insulated? [✓ Y] / N

How air tight? Tight / [✓ Average] / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

No observable airflow between floors

Airflow near source

Baseboard heating; no observable airflow

Outdoor air infiltration

Via doors & windows (owner claims that much air comes in via old windows)

Infiltration into air ducts

No ducts present

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: [✓ uncovered] → [✓ covered] Partially covered covered with tile & carpet

e. Concrete floor: [✓ unsealed] sealed sealed with ______________

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: [✓ unsealed] sealed sealed with ______________

h. The basement is: wet [✓ damp] dry moldy

i. The basement is: finished unfinished [✓ partially finished]

j. Sump present? Y / [✓ N]

k. Water in sump? Y / [✓ N] [✓ not applicable]

Basement/Lowest level depth below grade: ~6' (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

No sewer access found; drain in laundry room (basement), no other potential entry points observed

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation Heat pump [✓ Hot water baseboard]
Space Heaters Stream radiation Radiant floor
Electric baseboard Wood stove Outdoor wood boiler Other ________

The primary type of fuel used is:

Natural Gas [✓ Fuel Oil] Kerosene
Electric Propane Solar
Wood Coal

Domestic hot water tank fueled by: Fuel Oil / ?Gas line into home

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other________

Air conditioning: Central Air [✓ Window units] Open Windows None

Are there air distribution ducts present? Y [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

No ductwork in home

7. OCCUPANCY

Is basement/lowest level occupied? Full-time [✓ Occasionally] Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Laundry / Workshop / Bar (Former owner did photography in NW room Storage)
1st Floor	BR's / BA / DR / LR / Kitchen
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?	Y / [✓ N]	No / Detached
b. Does the garage have a separate heating unit?	Y / [✓ N] / NA	
c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)	[✓ Y] / N / NA	Please specify snowblower lawnmower
d. Has the building ever had a fire?	Y / [✓ N]	When?
e. Is a kerosene or unvented gas space heater present?	Y / [✓ N]	Where?
f. Is there a workshop or hobby/craft area?	[✓ Y] / N	Where & Type? basement general workshop non-descript
g. Is there smoking in the building?	Y [✓ N]	How frequently?
h. Have cleaning products been used recently?	[✓ Y] / N	When & Type? 3 day ago / whole house / weekly basis
i. Have cosmetic products been used recently?	[✓ Y] / N	When & Type? Daily / Unknown types

j. Has painting/staining been done in the last 6 months? Y / [✓ N] Where & When? ____________

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? ____________

l. Have air fresheners been used recently? Y / [✓ N] When & Type? Do use scented candles & Fabreeze

m. Is there a kitchen exhaust fan? [✓ Y] N If yes, where vented? outside

n. Is there a bathroom exhaust fan? [✓ Y] / N If yes, where vented? attic

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? Y / [✓ N] When & Type? ____________

Are there odors in the building? Y [✓ N]
If yes, please describe: ______________________________

Do any of the building occupants use solvents at work? [✓ Y] / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? Facility Maintenance Worker grease/oil/and misc. solvents (types unknown)

If yes, are their clothes washed at work? Y / [✓ N]

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
[✓ Yes, use dry-cleaning infrequently (monthly or less)] → 2 or 3 times a year
Yes, work at a dry-cleaning service

No
Unknown

Is there a radon mitigation system for the building/structure? Y [✓ N] Date of Installation: ____________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: ______

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: ______

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: ______________________________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

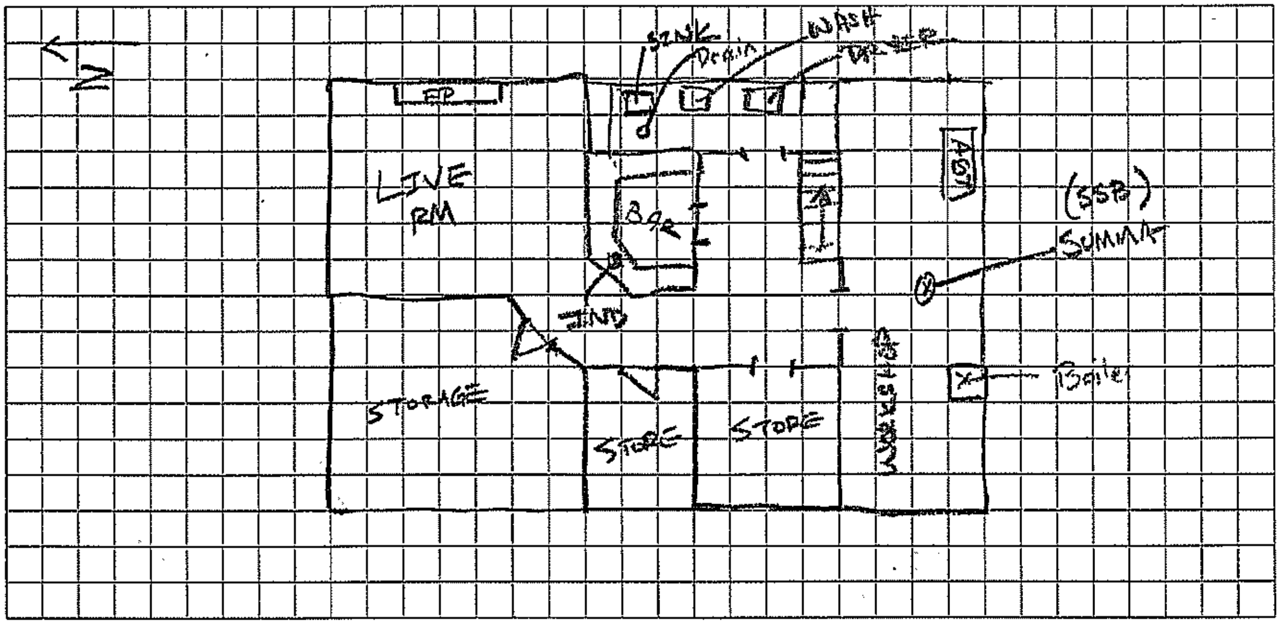
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

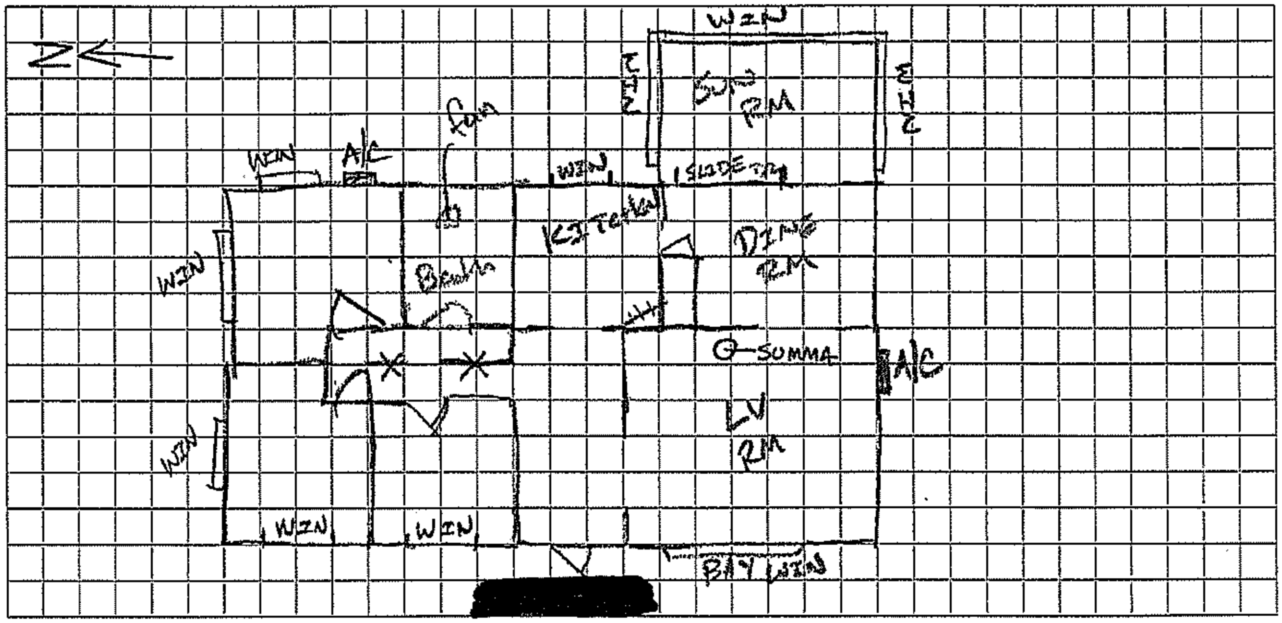
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



First Floor:

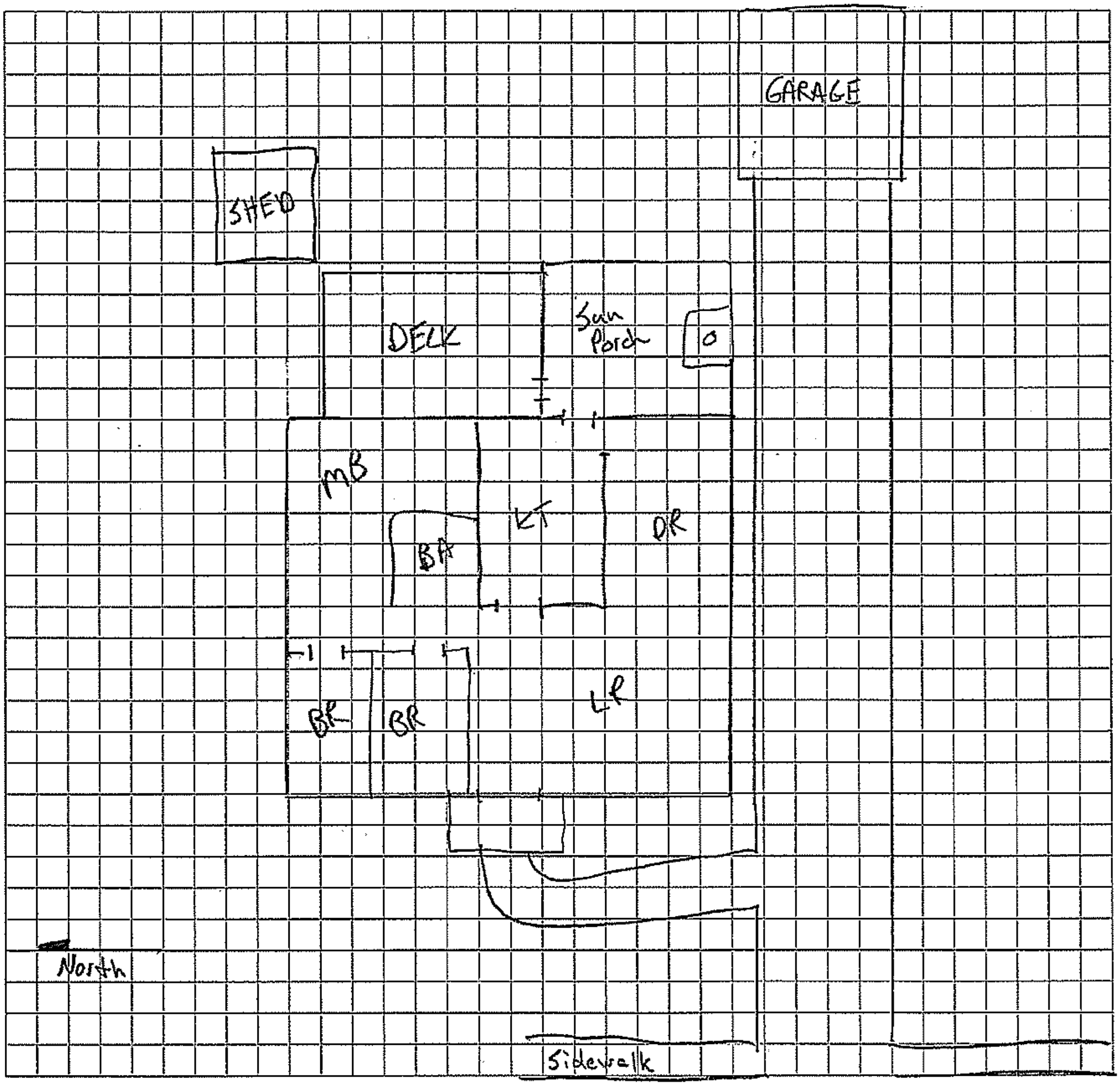


[redacted]

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
GARAGE	Gasoline	5gals	U			
↓	Paint	5+gals	U			
↓	Cement/Thinsete	?	U			
Basement	laundry soap	3gals	U			
↓	Shout	2gals	UO + U			
↓	Bleach	1gal	U			
↓	Weed killer	32oz	U			
↓	Tile Sealer	30oz	U			
↓	Pesticides	32oz	U			
↓	Insect Spray	30oz can	U			
↓	Weed Killer	32oz				

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**

** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

OSR – 3

Home #18

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Robert Sok Date/Time Prepared 4/28/09 / 1630

Preparer's Affiliation Tetra Tech NUS Phone No. 757-466-4904

Purpose of Investigation Site 1 - Soil Vapor Investigation

1. OCCUPANT:

Interviewed: [✓ Y] / N

Last Name: [redacted] First Name: [redacted]

Address: [redacted] Bethpage, NY

County: Nassau *[redacted]

Home Phone: [redacted] Office Phone: ________

Number of Occupants/persons at this location [redacted] Age of Occupants NA

2. OWNER OR LANDLORD: (Check if same as occupant ✓)

Interviewed: Y / N

Last Name: ________ First Name: ________

Address: ________

County: ________

Home Phone: ________ Office Phone: ________

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

[✓ Residential] School Commercial/Multi-use
Industrial Church Other: ________

If the property is residential, type? (Circle appropriate response)

[✓ Ranch]
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouses/Condos
Other:______________

If multiple units, how many? NA

If the property is commercial, type?

Business Type(s) NA

Does it include residences (i.e., multi-use)? Y / N   If yes, how many? ______

Other characteristics:

Number of floors 1   Building age ?1958

Is the building insulated? [✓ Y] / N   How air tight? Tight [✓ Average] Not Tight

* New in attic

4. **AIRFLOW**

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors
No observable airflow between floors

Airflow near source
No observable airflow

Outdoor air infiltration
Doors & windows / New windows installed few years ago

Infiltration into air ducts
No ducts

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: [✓ wood frame] concrete stone brick

b. Basement type: [✓ full] crawlspace slab other ________

c. Basement floor: [✓ concrete] dirt stone other ________

d. Basement floor: [✓ uncovered] & [✓ covered] covered with carpet & linoleum

e. Concrete floor: [✓ unsealed] sealed sealed with ____________

f. Foundation walls: [✓ poured] block stone other ________

g. Foundation walls: unsealed [✓ sealed] sealed with Paint

h. The basement is: wet [✓ damp] dry moldy

i. The basement is: finished unfinished [✓ partially finished]

j. Sump present? Y / [✓ N]

k. Water in sump? Y / N / [✓ not applicable]

Basement/Lowest level depth below grade: ~6' (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Sewer access in closet (south central basement)

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation
Space Heaters
Electric baseboard
Heat pump
Stream radiation
Wood stove
[✓ Hot water baseboard]
Radiant floor
Outdoor wood boiler
Other ________

The primary type of fuel used is:

Natural Gas
Electric
Wood
[✓ Fuel Oil]
Propane
Coal
Kerosene
Solar

Domestic hot water tank fueled by: fuel Oil

Boiler/furnace located in: [✓ Basement] Outdoors Main Floor Other ________

Air conditioning: Central Air [✓ Window units] Open Windows None

☆ None currently installed

Are there air distribution ducts present? Y / [✓ N]

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

No ductwork / NA

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom [✓ Almost Never]

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Laundry / Storage
1st Floor	Living Space (BR's / BA / Kitchen / DR/LR)
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / [✓ N] Detached

b. Does the garage have a separate heating unit? Y / [✓ N] / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) [✓ Y] / N / NA Please specify lawnmower

d. Has the building ever had a fire? Y / [✓ N] When? ________

e. Is a kerosene or unvented gas space heater present? Y / [✓ N] Where? ________

f. Is there a workshop or hobby/craft area? Y / [✓ N] Where & Type? ________

g. Is there smoking in the building? Y / [✓ N] How frequently? ________

h. Have cleaning products been used recently? Y / [✓ N] When & Type? ________

i. Have cosmetic products been used recently? Y / [✓ N] When & Type? ________

j. Has painting/staining been done in the last 6 months? Y / [✓ N] Where & When? However, presently painting on 1st floor

k. Is there new carpet, drapes or other textiles? Y / [✓ N] Where & When? ____________

l. Have air fresheners been used recently? Y / [✓ N] When & Type? ____________

m. Is there a kitchen exhaust fan? [✓ Y] / N If yes, where vented? Kitchen

n. Is there a bathroom exhaust fan? Y / [✓ N] If yes, where vented? ____________

o. Is there a clothes dryer? [✓ Y] / N If yes, is it vented outside? [✓ Y] / N

p. Has there been a pesticide application? Y / [✓ N] When & Type? (not recently)

Are there odors in the building? Y / [✓ N]
If yes, please describe: ____________

Do any of the building occupants use solvents at work? Y / [✓ N]
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? NA

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
[✓ No]
Unknown

Is there a radon mitigation system for the building/structure? Y / [✓ N] Date of Installation: ____________
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: [✓ Public Water] Drilled Well Driven Well Dug Well Other: ________

Sewage Disposal: [✓ Public Sewer] Septic Tank Leach Field Dry Well Other: ________

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: ____________

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

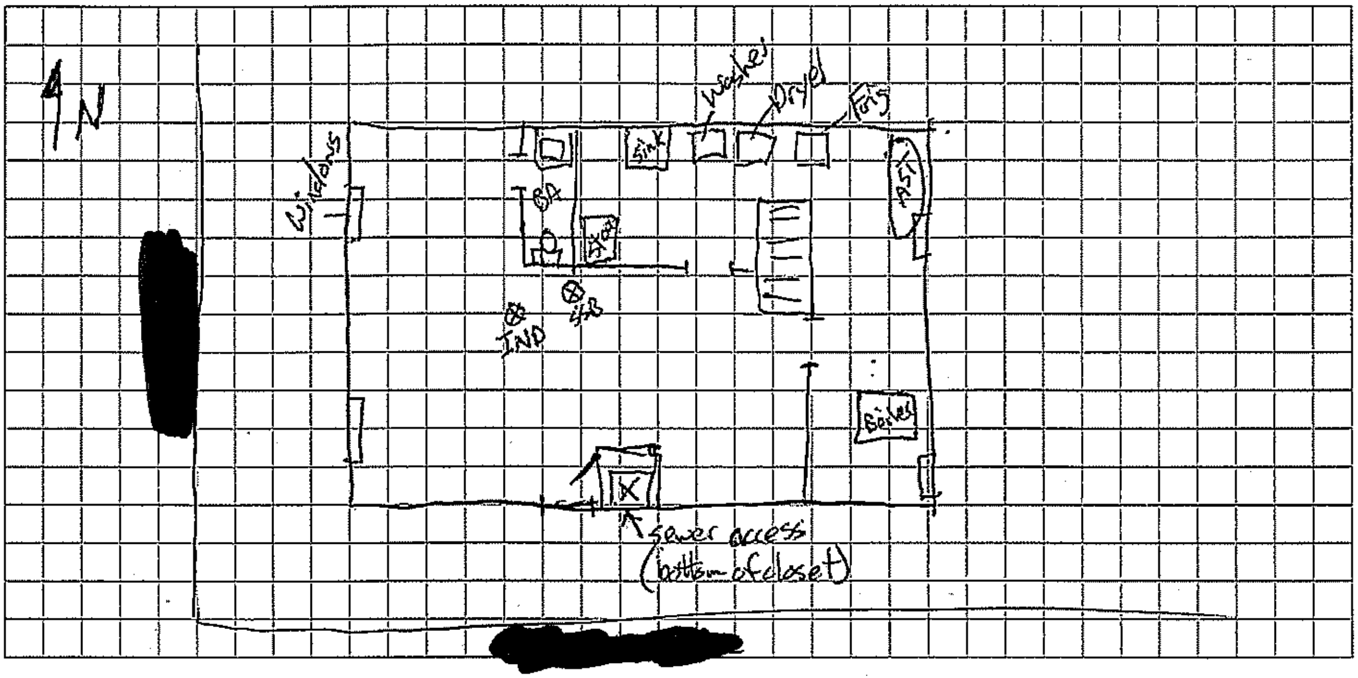
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

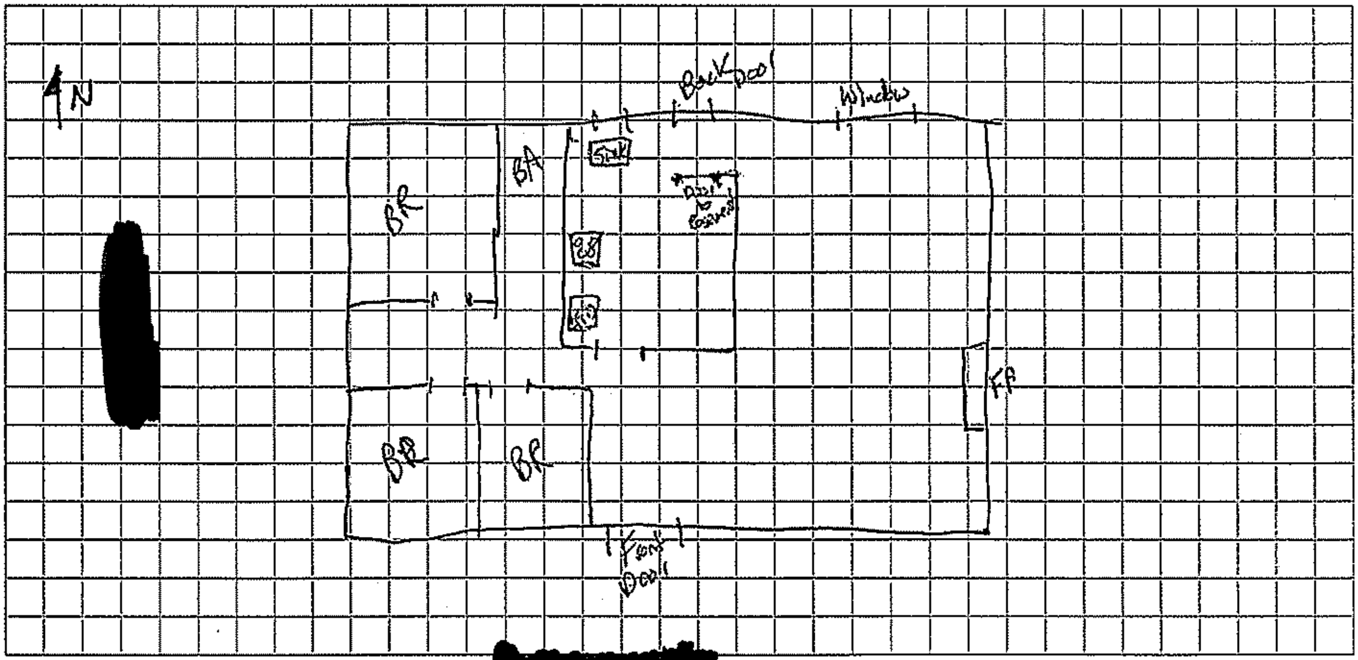
Basement:



[redacted]

[redacted]

First Floor:



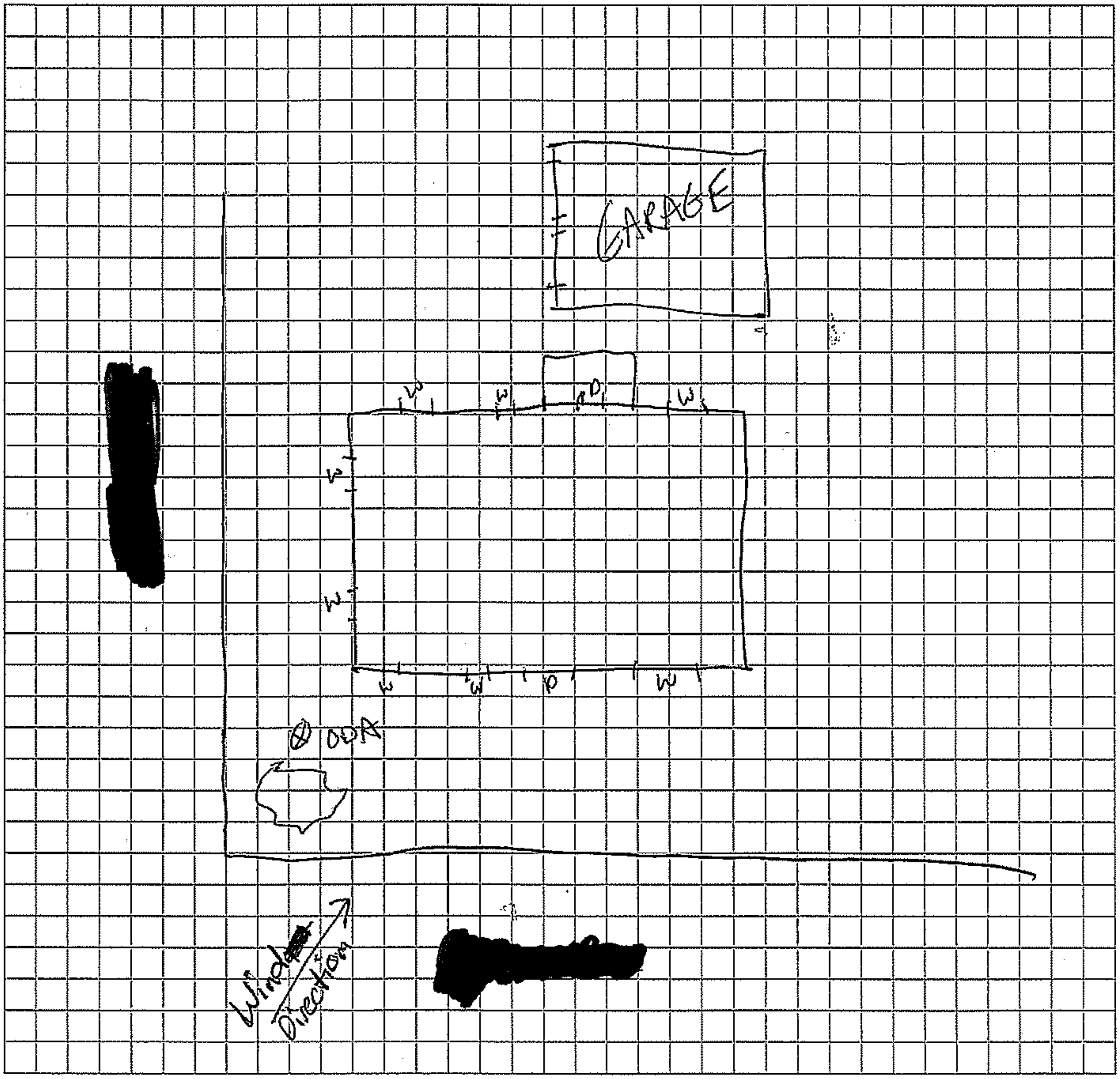
[redacted]

[redacted]

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



[redacted]

[redacted]

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Basement	Caulking	3-4 tubes	UO & U			
	Paint (1gal)	7 cans	U			
	Air freshner	1 can	U			
	Motor Oil	1qt	U			
	Gear Oil	1 btl	U			
	Paint (enamel)	12 small cans	U			
	Paint Thinner	1 can	U	VM&P Naphtha		
	Decon Foursgone	1 can	U			
	Crack spackling	2 containers	U			

* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

APPENDIX C

SOIL GAS SAMPLING LOG SHEETS

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage

Project No.: 112G01687

C.O.C. No.:

Sample ID No.: BPS1-AR001-00A

Sample Location:

Sampled By: Vince Shickora

SAMPLING DATA:							
Date: 1-19-08 **Time:** 1500	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (⁰C)	**Barometric Pressure** (⁰C)	**Relative Humidity** (%)	Other
Method: Summa Cannister	calm	North	9°	1006 Mb	—	

Summa Canister #	33918
Filter Type/Flow	— 24 hr.

Start Time Vacuum	1625	in Hg -22.5
End Time Vacuum	1420 1-20-09	in Hg 0.0

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
NA	—	—	—

Readings:

Liters/minute

NA @ ______

______ @ ______

______ @ ______

Notes:

PID: No elevated PID reading observed in sample area.

-Sampler located outside NE corner of home

-

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1 - AR003 - ODA
Sample Location:
Sampled By: Vince Shickora

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 1-21-09						
Time:						
Method: Summa Canister (VAS)	calm	NW	4°c (outdoor)	1115 mb	–	–

Summa Canister #	~~182~~ 33665
Filter Type/Flow	– 24 hr.

Start Time Vacuum	1828	in Hg -28
End Time Vacuum	1640 1/22/09	in Hg -3

He check	**Start**	**Stop**	**Reading**
NA	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
NA	—	—	—

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID: - No elevated PID readings outside home
- Sampler set [redacted]djacent to Front Door Steps

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPSI-AR004-00A
Sample Location:
Sampled By: Robert Sok

SAMPLING DATA:						
	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 1/20/09						
Time: 1000						
Method: Summa	calm	North	4°C (outdoor)	1007 mb	–	–

(VAS)

Summa Canister #	~~3365~~ 1577
Filter Type/Flow	24hr

Start Time Vacuum	1030	in Hg -29.0
End Time Vacuum	0845	in Hg -7.5

1-21-09

He check	Start	Stop	Reading
–	–	–	–

Purge Data	Start	Stop	Notes:
–	–	–	NA

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID: - Sampler set at North side of home [redacted]
- No elevated PID readings observed in sample area.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPSI-AR005-ODA
Sample Location:
Sampled By: Vince Shickora

SAMPLING DATA:						
Date: 1-20-09 **Time:** 0810	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Method: Summa Canister	Calm	North	4°C (outdoor)	1007 mb	—	—

Summa Canister #	35994
Filter Type/Flow	— 24 hr

Start Time Vacuum	0915	in Hg -28.0
End Time Vacuum	0825 1-21-09	in Hg -1.0

He check	**Start**	**Stop**	**Reading**
NA	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
NA	—	—	—

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID: - No elevated PID reading observed in sample area
- Sampler set outside NE corner of home

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1 - AR006 - 00A
Sample Location: Front porch
Sampled By: RMS/VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/18/09 **Time:** 1535 **Method:** Summa	calm	North	16°C	1012 mb	NA	—

Summa Canister #	33580
Filter Type/Flow	24hr

Start Time Vacuum	-29	in Hg
End Time Vacuum	-1	in Hg

1500 on 2/19/09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
NA →			

Readings:
Liters/minute
NA @ ____
____ @ ____
____ @ ____

Notes:

PID: No elevated PID readings observed.

- Sampler located on Front porch of home (West side of residence)

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR007-00A
Sample Location: [redacted]
Sampled By: VAS

SAMPLING DATA:

Date: 2-19-09 **Time:** 0850	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Method: Summa Cannister	mild	west	16°c	998 mb	NA	—

Summa Canister #	34029
Filter Type/Flow	24-hour

Start Time Vacuum	2-19-09 0850	in Hg -28.5
End Time Vacuum	0817 2-20-09	in Hg -3.0

He check	**Start**	**Stop**	**Reading**
NA →			→

Purge Data	**Start**	**Stop**	**Notes:** Sampler set on deck at rear of home (south side)
NA →		→	

Readings:
Liters/minute

NA @ →
@
@

Notes:

PID: No elevated PID readings observed

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage

Project No.: 112G01687

C.O.C. No.:

Sample ID No.: BPS1-AR008-00A

Sample Location: [redacted]

Sampled By: RMS / VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2-19-09 **Time:** 1038 **Method:** Summa canister	Mild	Northwest	16°C	998 mb	NA	—

Summa Canister #	5639
Filter Type/Flow	24-hour

Start Time Vacuum	2-19-09 1038	in Hg -30.0
End Time Vacuum	1009 2-20-09	in Hg -6

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**
NA →		

Notes: Sampler set on deck at Southwest corner of home

Readings:
Liters/minute

NA @ ____
____ @ ____
____ @ ____

Notes:

PID: No elevated PID readings observed.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR009-00A
Sample Location: [redacted]
Sampled By: VAS

SAMPLING DATA:						
	Wind speed (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Date: 2-24-09 **Time:** 0948 **Method:** Summa cannister	Brisk	SW	14°C	1030 mb	NA	–

Summa Canister #	33785
Filter Type/Flow	24-hour

Start Time Vacuum	0948	in Hg -31.0	2-24-09
End Time Vacuum	0928	in Hg -10.5	2-25-09

He check	**Start**	**Stop**	**Reading**
NA			→

Purge Data	**Start**	**Stop**	**Notes:**
NA		→	

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID: No elevated PID readings observed.

- Sampler set on Table outside Northwest corner of home

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR011-ODA
Sample Location: [redacted]
Sampled By: VAS

SAMPLING DATA:						
Date: 2-24-09 **Time:** 1743	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Method: Summa canister	Brisk	SW	16°C	1030 mb	NA	—

Summa Canister #	34742
Filter Type/Flow	24-hour

Start Time Vacuum	1743	in Hg -31.0	2-24-09
End Time Vacuum	1726	in Hg -5.0	2-25-09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
NA →			

Readings:
Liters/minute
NA @
@
@

Notes:

PID: No elevated PID readings observed
- Sampler set on outside deck at southwest corner of residence

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR012-00A
Sample Location: [redacted] On Deck/West side of house
Sampled By: RWS/UAS

SAMPLING DATA:

Date: 2/25/09 Time: 1103	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (^{0}C)	Barometric Pressure (^{0}C)	Relative Humidity (%)	Other
Method: Summa	Calm	west	17°C	1033 mb	NA	—

Summa Canister #	34220
Filter Type/Flow	24hr

Start Time Vacuum	1103	in Hg -30
End Time Vacuum	1635	in Hg -6.0

He check	Start	Stop	Reading
NA →			→

Purge Data	Start	Stop	Notes:
NA →			→

Readings:
Liters/minute

NA @ ____
____ @ ____
____ @ ____

Notes:

PID: No elevated PID readings observed

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPSI-AR014-00A
Sample Location: [redacted]
Sampled By: VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 3-10-09						
Time: 1650						
Method: Summa Canister	~5-10	Southwest	14°c	1030 mb	NA	–

Summa Canister #	5694
Filter Type/Flow	24 hour

Start Time Vacuum	1650	in Hg -305	3-10-09
End Time Vacuum	1714	in Hg -2.5	3-11-09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**
NA →		

Notes:

Readings:
Liters/minute
NA @
@
@

Notes:

PID: No elevated PID readings observed
- Sampler located on outside deck (rear of home) at Northwest corner of home

Tetra Tech NUS, Inc. AIR SAMPLING LOG SHEET

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR016-~~OUT~~ ODA
Sample Location: [redacted]
Sampled By: EJW/EMS

SAMPLING DATA:						
Date: 4/27/09	Wind speed	Wind Direction	Ambient temperature	Barometric Pressure	Relative Humidity	Other
Time: 1448	(Visual)	(S.U.)	(°C)	(°C)	(%)	
Method: SUMMA (6L)	5-10	S	78-82°F			SUNNY

Summa Canister #	03787
Filter Type/Flow	24 hr

Start Time Vacuum	1457	in Hg -30	4-27-09
End Time Vacuum	1414	in Hg -3	4-28-09

He check	**Start**	**Stop**	**Reading**
N/A	—	—	—
Purge Data	**Start**	**Stop**	**Notes:**
N/A	—	—	

Readings:
Liters/minute
______ @ ______
______ @ ______
______ @ ______

Notes:

PID: 0.0 PID Reading. Canister on Deck, Center of Backyard

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR018-ODA
Sample Location: [redacted]
Sampled By: ESW/RMS

SAMPLING DATA:						
Date: 4/28/09 **Time:** 1120	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Method: Summa (6L)	~~5-10~~ 10-15	S/SW	82°F			

Summa Canister #	~~65602~~ 4115
Filter Type/Rate	24 HR

	Time	**Date**		
Start Time Vacuum	1120	4/28/09	-30	**in Hg**
End Time Vacuum	1045	4/29/09	-13.5	**in Hg**

He check	**Start**	**Stop**	**Reading**
N/A	—	—	—
Purge Data	**Start**	**Stop**	
N/A	—	—	
PID Readings	**ppm**	**Volume**	
N/A	—	—	

Notes:

Front yard on Fence Stake

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR018-ODA-2
Sample Location: [redacted]
Sampled By: E. Wu

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 5/21/09 **Time:** 1025 **Method:** Summa	5-10 mph	S/SW	78°-82°			

Summa Canister #	10788
Filter Type/Rate	24 hr.

	Time	Date		
Start Time Vacuum	1043	5/20/09	30	in Hg
End Time Vacuum	1025	5/21/09	10.5	in Hg

He check	Start	Stop	Reading
NA	—	—	—

Purge Data	Start	Stop
NA	—	—

PID Readings	ppm	Volume
NA	—	—

Notes:

SW corner of lot

Analysis TO-15 short list (9 compounds)

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR001-SSB
Sample Location:
Sampled By: Vince Shickora

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (^{0}C)	Barometric Pressure (^{0}C)	Relative Humidity (%)	Other
Date: 1-19-09 **Time:** 1500 **Method:** Summa Canister	calm		9°	1006 mb	—	

Summa Canister #	23887	4213	→ duplicate
Filter Type/Flow	— 24 hour		

			Can		Can
Start Time Vacuum	1530	in Hg -27	→ 23887	in Hg -28.5	→ 4213
End Time Vacuum	1422 1-20-09	in Hg -2	→ 23887	in. Hg -0.0	→ 4213

He check	**Start**	**Stop**	**Reading**
NA	—	—	—
Purge Data	**Start**	**Stop**	**Notes:**
(See below)	1525	1529	

Readings:
~~Liters/minute~~

⊛ purge 1 @ 0.5 ppm
purge 2 @ 1.4 ppm
purge 3 @ 1.4 ppm

⊛ Each purge → 60 ml

⊛ Duplicate Sample location
BPS1 - DUP-01

Notes:

PID: No elevated PID readings recorded within Garage area
- sample located in garage area of residence
- Concrete thickness in Garage ~ 3.5 inches. Total sub-slab hole depth ~ 5 inches. Probe set in hole at ~ 4 inches.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR001-IND
Sample Location:
Sampled By: Vince Shickora

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 1-19-09						
Time:						
Method: Summa Canister	calm		9° (outside) 12.5° (indoor)	1006 mb	—	

Summa Canister #	3746
Filter Type/Flow	— 24 hr.

Start Time Vacuum	1555	in Hg -29.5
End Time Vacuum	1425 1-20-09	in Hg -7.5

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
NA			

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID: No elevated PID readings observed in sample area
- Sample located on shelf in Basement Playroom

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR001-IND2
Sample Location: Same as IND [redacted]
Sampled By: RMS/VAS

SAMPLING DATA:

Date: 2/23/09	Wind speed	Wind Direction	Ambient temperature	Barometric Pressure	Relative Humidity	Other
Time: 1436	(Visual)	(S.U.)	(^{0}C)	(^{0}C)	(%)	
Method: Summa	calm	NW	16°	1024 mb	NA	—

Summa Canister #	5618
Filter Type/Flow	24hr

Start Time Vacuum	2-23-09 1436	in Hg -30	2-23-09
End Time Vacuum	1419 2-24-09	in Hg 0.0	2-24-09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
NA →			

Readings:
Liters/minute
NA @
@
@

Notes:

PID: No elevated PID readings observed

-Sampler set in same location as previous indoor air sample

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR002-SSB
Sample Location:
Sampled By: Vince Shickora

SAMPLING DATA:

Date: 1-20-09 Time: 1500	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (⁰C)	Barometric Pressure (⁰C)	Relative Humidity (%)	Other
Method: Summa Cannister	NA	NA	14°c (indoor)	1007 mb	—	—

Summa Canister #	5556
Filter Type/Flow	– 24 hr.

Start Time Vacuum	1510	in Hg -30
End Time Vacuum	1414 1-21-09	in Hg -12.5

He check	Start	Stop	Reading
NA	—	—	—

Purge Data	Start	Stop	Notes:
(See below	1505	1510	—

Readings: (purge)
~~Liters/minute~~
purge 1 @ 6.3 ppm
purge 2 @ 7.8 ppm
purge 3 @ 4.7 ppm

* each purge 60 ml

Notes:

PID: Sampler set in Basement utility Room adjacent to Furnace
- No elevated PID readings observed adjacent to sampler
- Concrete ~ 3.5 inches thick. - Hole drilled to ~ 4.5 inches depth.
Probe installed in hole at ~ 4.0 inches depth

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR002-IND
Sample Location:
Sampled By: Vince Shickora

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 1-20-09 **Time:** 1500 **Method:** Summa Canister	NA	NA	15°C (indoor)	1007 mb	—	—

Summa Canister #	35976
Filter Type/Flow	— 24 hr.

Start Time Vacuum	1528	in Hg -28
End Time Vacuum	1415 1-21-09	in Hg -6.5

He check	**Start**	**Stop**	**Reading**
NA	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
NA	—	—	—

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID: -Sampler set on shelf in family room area of basement near TV.
-No elevated PID readings observed in sample area

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR002-IN02
Sample Location: [redacted]
Sampled By: VAS

SAMPLING DATA:

Date: 2-18-09	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (^{0}C)	**Barometric Pressure** (^{0}C)	**Relative Humidity** (%)	Other
Time: 1155						
Method: Summa Canister	mild	North	16°	1014mb	NA	–

Summa Canister #	13664
Filter Type/Flow	24-hour

2-18-09

Start Time Vacuum	1155	in Hg -31.0
End Time Vacuum	1210	in Hg -9.5

2-19-09

He check	**Start**	**Stop**	**Reading**
NA ——————————————→			

Purge Data	**Start**	**Stop**
NA ——————————→		

Notes: Sampler set in upstairs living room area

Readings:
Liters/minute
NA @ ____
____ @ ____
____ @ ____

Notes:

PID: None

- No elevated PID readings observed in residence.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR002-IND3
Sample Location: Same as IND / Basement ([redacted]
Sampled By: RMS/VAS

SAMPLING DATA:						
	Wind speed (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Date: 2/23/09 **Time:** 1427 **Method:** Summa	Calm	NW	16°	1024 mb	NA	—

Summa Canister #	33990
Filter Type/Flow	24hr

2-23-09

Start Time Vacuum	1427	in Hg -28.5
End Time Vacuum	1413	in Hg -1.0

2-24-09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**
NA →		

Notes:

Readings:
Liters/minute
NA @
@
@

Notes:

PID: No elevated PID readings observed

- Sampler set in same location as previous indoor air sample.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name:	NWIRP Bethpage	**Sample ID No.:**	BPS1-AR002-IND4
Project No.:	112G01687	**Sample Location:**	1st Floor / SAME AS Prior location IND2
C.O.C. No.:		**Sampled By:**	RMS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (^{0}C)	Barometric Pressure (^{0}C)	Relative Humidity (%)	Other
Date: 3/23/09						
Time: 1500						
Method: Summa						

Summa Canister #	903
Filter Type/Flow	24 hr

Start Time Vacuum	1500	in Hg -32	3/23/09
End Time Vacuum	1445	in Hg -7	3/24/09

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
—	—	—	—

Readings:
Liters/minute
______ @ ______
______ @ ______
______ @ ______

Notes:

PID: Placed on end table in livingroom

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage

Project No.: 112G01687

C.O.C. No.:

Sample ID No.: BPS1- A R002 -IN05

Sample Location: Basement / SAME AS IN0

Sampled By: JBB

SAMPLING DATA:						
Date: 3/23/09 **Time:** 1505 **Method:** Summa	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other

Summa Canister #	34390
Filter Type/Flow	24 hr

Start Time Vacuum	1505	in Hg -32	3/23/09
End Time Vacuum	1447	in Hg -7.5	3/24/09

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
—	—	—	—

Readings:

Liters/minute

_____ @ _____

_____ @ _____

_____ @ _____

Notes:

PID: Placed on divider wall shelf near center of basement

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage

Project No.: 112G01687

C.O.C. No.:

Sample ID No.: BPS1-AR003-SSB

Sample Location:

Sampled By: Vince Shickora

SAMPLING DATA:

Date: 1-21-09 **Time:** 1805	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Method: summa Canisters	NA	NA	14°C (indoor)	1115 mb	—	—

Summa Canister #	05359
Filter Type/Flow	- 24 hr.

Start Time Vacuum	1805	in Hg -29.0
End Time Vacuum	1648 └ 1/22/09	in Hg -6

He check	**Start**	**Stop**	**Reading**
NA	—	—	—
Purge Data	**Start**	**Stop**	**Notes:**
(see below)	1757	1807	—

Readings: (purge)

~~**Liters/minute**~~

purge 1 @ 1.1 ppm

purge 2 @ 4.5 ppm

purge 3 @ 3.9 ppm

* each purge 60 Ml

Notes:

PID: - No elevated PID readings observed in basement

- Concrete ~ 3.5 inches thick. Hole drilled to ~ 4.5 inches depth. Probe installed to ~ 4 inches depth

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR003-IND
Sample Location:
Sampled By: Vince Shickora

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 1-21-09 **Time:** 1815 **Method:** summa cannister	NA	NA	14°C (indoor)	1115 mb	—	—

Summa Canister #	3734	25252 (Dup)
Filter Type/Flow	- 24 hr	

			can #
Start Time Vacuum	1815	in Hg -29 →	3734
End Time Vacuum	1645	in Hg -8.5 →	
		1/22/09	

	can # (Dup)
in Hg -30	25252
in Hg -11.5	
1/22/09	

He check	**Start**	**Stop**	**Reading**
NA	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
NA	—	—	—

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

* Duplicate sample location
BPS1 - DUP-02

Notes:

PID: - No elevated PID readings observed in basement
- Samplers located on shelf in basement near washer/dryer
- Duplicate (#DUP-02) For indoor air collected at this location

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR003-IA02
Sample Location: [redacted]
Sampled By: VAS/RMS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2-17-09						
Time: 1805						
Method: Summa Canister	Mild	North	14°c	1024.6	NA	—

Summa Canister #	34459
Filter Type/Flow	24-hour

2-17-09

Start Time Vacuum	1805	in Hg -33.0
End Time Vacuum	-8.5	in Hg -8.5

2-18-09 @ 1745

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**
NA →		

Notes: Sampler set in upstairs living room area

Readings:
Liters/minute

NA @ ____
____ @ ____
____ @ ____

Notes:

PID: NA

- No elevated PID readings observed in residence

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR003-IND3
Sample Location: [redacted]
Sampled By: RMS/VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (⁰C)	Barometric Pressure (⁰C)	Relative Humidity (%)	Other
Date: 2/25/09 **Time:** 1837 **Method:** Summa	Calm	west	21°C	1033 mb	NA	—

Summa Canister #	4257
Filter Type/Flow	24hr

Duplicate BPSI-DUP-IND (Time → 2400 hours)
#4128

Start Time Vacuum	1837	in Hg -23	2-25-09	-31	in Hg
End Time Vacuum	1605	in Hg -8.0	2-26-09	-7.5	in Hg

He check	**Start**	**Stop**	**Reading**
NA —	—	—	→

Purge Data	**Start**	**Stop**	**Notes:**
NA —	—	→	

Readings:
Liters/minute
NA @
@
@ →

Notes:

PID: No elevated PID readings observed.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:

Sample ID No.: BPS1-AR003-IND4
Sample Location: Basement (same as previous samples)
Sampled By: VAS

SAMPLING DATA:

Date: 3-11-09 **Time:**	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Method: summa canister	calm	west	17°C	1030 mb	NA	—

Summa Canister #	34741
Filter Type/Flow	24 hour

Start Time Vacuum	1456	in Hg -28.0	3-11-09
End Time Vacuum	1503	in Hg -4.0	3-12-09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
NA →			

Readings:
Liters/minute
NA @
@
@

Notes:

PID:

-located in basement (central area). Same position as previous samples

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1 - AR003 - IND5
Sample Location:
Sampled By:

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (⁰C)	Barometric Pressure (⁰C)	Relative Humidity (%)	Other
Date: 3/11/09 **Time:** 1457 **Method:** Summa	Calm	west	17°C	1030 mb	NA	—

Summa Canister #	32110
Filter Type/Flow	24hr

Can # 34746 *Duplicate Sample BPS1 - DUP - IND3
24hr

Start Time Vacuum	1457	in Hg -32
End Time Vacuum	1505	in Hg -7.0

→ 1457 | Hg -30 | 3/11/09
→ 1506 | Hg -6.5 | 3/12/09

He check	**Start**	**Stop**	**Reading**
NA			

Purge Data	**Start**	**Stop**	**Notes:**
NA			

Readings:
Liters/minute
NA @
@
@

Notes:

PID: Placed in center of home, living room/dining room area ~ 12' from unit. Unit is positioned were initial sample (IND 2) was collected.

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR003-INDB
Sample Location: [redacted]
Sampled By: RMS

SAMPLING DATA:						
	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (⁰C)	Barometric Pressure (⁰C)	Relative Humidity (%)	Other
Date: 4/29/09 **Time:** 1800 **Method:** Summa						

Duplicate BPS1-DUP
5717

Summa Canister #	25300
Filter Type/Rate	24 hr

	Time	**Date**	
Start Time Vacuum	1810	4/29/09	~~[illegible]~~ -30 in Hg
End Time Vacuum	1815	4/30/09	-7.5 in Hg

Time	Date	Vacuum
1810	4/29/09	-29.5
1815	4/30/09	-5

He check	**Start**	**Stop**	**Reading**
N/A	—	—	—

Purge Data	**Start**	**Stop**
N/A	—	—

PID Readings	**ppm**	**Volume**
N/A	—	—

Notes:

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR004-SSB
Sample Location:
Sampled By: Vince Shickora

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (⁰C)	Barometric Pressure (⁰C)	Relative Humidity (%)	Other
Date: 1-20-09 **Time:** 0900 **Method:** Summa Canister (VAS)	calm	NA	14⁰ (indoor)	1007 mb	—	—

Summa Canister #	~~3734~~ 34478
Filter Type/Flow	—

Start Time Vacuum	1005	in Hg -30.0
End Time Vacuum	0856 1-21-09	in Hg -9.0

He check	**Start**	**Stop**	**Reading**
NA	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
(see below)	0955	1000	—

Readings: (purge)
~~**Liters/minute**~~
purge 1 @ 2.4 ppm
purge 2 @ 2.2 ppm
purge 3 @ 2.1 ppm

(*) Each purge 60 ml

Notes:

PID: - No elevated PID readings recorded in room around sampler.
- Concrete thickness ~ 3 inches. Hole drilled to ~ 4.5 inches. Probe set in hole at ~ 3.5 inches.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR004-IN0
Sample Location:
Sampled By: Robert Sok

SAMPLING DATA:						
Date: 1/20/09 **Time:** 1000	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (⁰C)	**Barometric Pressure** (⁰C)	**Relative Humidity** (%)	Other
Method: Summa	NA	NA	(14°C) indoor	1007 mb	—	—

Summa Canister #	33943
Filter Type/Flow	24hr

1005 hours

Start Time Vacuum	~~-29~~ [illegible]	in Hg -29.
End Time Vacuum	0900, 1-21-09	in Hg - 18.5

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**	**Notes:** NA
—	—	—	

Readings:
Liters/minute
______ @ _______
______ @ _______
______ @ _______

Notes:

PID: NO elevated PID readings in sample area.
- Sampler set in Southeast section of basement on Table.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR004-IND2
Sample Location:
Sampled By: Robert Sok

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 1/20/09						
Time: 1140						
Method: Summa	NA	NA	14°c (indoor)	1007 mb	—	—

Summa Canister #	5694
Filter Type/Flow	24 hr

Start Time Vacuum	1200	in Hg -29
End Time Vacuum	0903 1-21-09	in Hg -9.0

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
—	—	—	—

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID: No elevated PID readings observed in sample area.
- Sampler set in basement apartment area

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR004-IND3
Sample Location: [redacted]
Sampled By: RMS / VAS

SAMPLING DATA:

	Wind speed (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (^{0}C)	**Barometric Pressure** (^{0}C)	**Relative Humidity** (%)	**Other**
Date: 2-17-09 **Time:** 1608						
Method: Summa Canister	mild	North	14°C	1024 mb	NA	—

Summa Canister #	34431
Filter Type/Flow	24-hour

2-17-09

Start Time Vacuum	1608	in Hg -31.5
End Time Vacuum	1600	in Hg -10.0

2-18-09

He check	**Start**	**Stop**	**Reading**
NA			

Purge Data	**Start**	**Stop**	**Notes:**
NA			Indoor Air sample

Readings:
Liters/minute
NA @
@
@

Notes:

PID: NA
- Sampler located in 1st Floor living Room at South central section of home

Tetra Tech NUS, Inc. AIR SAMPLING LOG SHEET

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR004-IN04
Sample Location[redacted] Same as IND / South East basement
Sampled By: RMS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/25/09						
Time: 1644						
Method: Summa	Calm	west	20°c	1033 mb	NA	—

Summa Canister #	35973
Filter Type/Flow	24hr

Start Time Vacuum	1644	in Hg -30	2/25/09
End Time Vacuum	1710	in Hg -4,5	2/26/09

He check	**Start**	**Stop**	**Reading**
NA →			→
Purge Data	**Start**	**Stop**	**Notes:**
NA →		→	

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID: No elevated PID readings observed

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR004-INDS
Sample Location: 1st Floor
Sampled By: JBG

SAMPLING DATA:						
Date: 3/23/09 **Time:** 1621	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (^{0}C)	**Barometric Pressure** (^{0}C)	**Relative Humidity** (%)	Other
Method: Summa						

Summa Canister #	32676
Filter Type/Flow	~~29~~ ~~Summa~~

24hr

Start Time Vacuum	1621	in Hg -29	3/23/09
End Time Vacuum	1724	in Hg 0.0	3/24/09

He check	**Start**	**Stop**	**Reading**

Purge Data	**Start**	**Stop**	**Notes:**

Readings:
Liters/minute

______ @ ______
______ @ ______
______ @ ______

Notes:

PID: Placed in same location as prior 1st floor sample

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR005-SSB
Sample Location:
Sampled By: Vince Shickora

SAMPLING DATA:						
Date: 1-20-09 **Time:** 0810	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Method: Summa Canister	calm	NA	18°C (indoor)	1007 mb	—	—

Summa Canister #	9947
Filter Type/Flow	— 24 hr

Start Time Vacuum	0844	in Hg -28.5
End Time Vacuum	0815 1-21-09	in Hg -7.5

He check	**Start**	**Stop**	**Reading**
NA	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
(see below)	0835		—

Readings: (Purge)
~~**Liters/minute**~~
purge 1 @ 0.4 ppm
purge 2 @ 1.1 ppm
purge 3 @ 1.0 ppm

* each purge 60 ml

Notes:

PID: - Sample located in "Painting" work Room in basement
- PID readings in basement range between 1.5 to 3.4 ppm in Painting room
- Concrete thickness in basement ~ 2.5 inches. Hole drilled to ~ 4 inches depth
Probe set in hole at ~ 3 inches depth.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR005-IND
Sample Location:
Sampled By: Vince Shickora

SAMPLING DATA:						
Date: 1-20-09 **Time:** 0810	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Method: Summa Canister	Calm	NA	18°C (indoor)	1007 mb	—	

Summa Canister #	34213
Filter Type/Flow	— 24 hr

Start Time Vacuum	0900	in Hg -30.0
End Time Vacuum	0812 1-21-09	in Hg -8.5

He check	**Start**	**Stop**	**Reading**
NA	—	—	—

Purge Data	**Start**	**Stop**	**Notes:** —
NA	—	—	

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID:
- Sampler set in "Painting" room of basement on work Table.
- PID readings in painting room range from 1.5 to 3.4 ppm.
- Numerous paints stored in area (see Air Sample Questionaire for inventory)

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage

Project No.: 112G01687

C.O.C. No.:

Sample ID No.: BPS1-AR006-SSB

Sample Location: [redacted]

Sampled By: RMS / VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/18/09						
Time: 1520						
Method: Summa	calm	North	16°c	1012 mb	NA	—

Summa Canister #	31430
Filter Type/Flow	24hr

2-18-09

Start Time Vacuum	-31.5	in Hg 1520
End Time Vacuum	1505	in Hg -11.0

2-19-09

He check	**Start**	**Stop**	**Reading**
NA			

Purge Data	**Start**	**Stop**	**Notes:** Sampler setup in unfinished
(see below			area of basement near east side of home

Purge Readings:

~~**Liters/minute**~~ VAS

* Purge 1 @ 1.9

Purge 2 @ 0.9

Purge 3 @ 0.2

No background

* Each purge ~ 60 ml

Notes;

PID: No elevated PID readings in basement

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS7-AR006-IND
Sample Location: Basement [redacted]
Sampled By: RMS

SAMPLING DATA:						
Date: 2/18/09 **Time:** 1515	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Method: Summa	mild	North	16°c	1014 mb	NA	—

Summa Canister #	35254
Filter Type/Flow	24hrs

Start Time Vacuum	-31	in Hg
End Time Vacuum	-8	in Hg

Collected 1503 - 2/19/09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
NA →			

Readings:
Liters/minute
NA @ ____
____ @ ____
____ @ ____

Notes:

PID:
No elevated PID readings observed.
- Sampler located in south central area of basement.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR006-IND2
Sample Location: 1st Floor [redacted]
Sampled By: RMS

SAMPLING DATA:

Date: 2/18/09
Time: 1537
Method: Summa

Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Calm	North	16°c	1012 mb	NA	—

Summa Canister #	14114
Filter Type/Flow	8hr

Start Time Vacuum	-29	in Hg
End Time Vacuum	0.0	in Hg

Collected @ 1510 → 2-19-09

He check	Start	Stop	Reading
NA →			

Purge Data	Start	Stop	Notes:
NA →			

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID: No elevated PID readings observed.

- Sampler located in Dining room (1st floor) at South central section of home.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR006-IND3
Sample Location: [redacted] SAME AS IND
Sampled By: RMS/JAS

SAMPLING DATA:

Date: 2/25/09	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Time: 1334						
Method: Summa	Calm	west	20°	1033 mb	NA	—

Summa Canister #	5558
Filter Type/Flow	24hr

Start Time Vacuum	1334	in Hg -29.5	2/25/09
End Time Vacuum	1335	in Hg -1.5	2/26/09

He check	**Start**	**Stop**	**Reading**
NA ———	———	———	→

Purge Data	**Start**	**Stop**	**Notes:**
NA ———	———	———	→

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID: No elevated PID readings observed at sample location

* Fuel oil leaking on Furnace - odor in basement at Time of sample shutdown.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS7 - AR006-IND4
Sample Location: 1st Floor Dining Room/SAME AS IND2
Sampled By: RMS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 3/23/09						
Time: 1401						
Method: Summa						

Summa Canister #	4167
Filter Type/Flow	24hr

Start Time Vacuum	1401	in Hg -30	3/23/09
End Time Vacuum	1629	in Hg -4	3/24/09

He check	**Start**	**Stop**	**Reading**

Purge Data	**Start**	**Stop**	**Notes:**

Readings:
Liters/minute
______ @ ______
______ @ ______
______ @ ______

Notes:

PID: Placed on dining room chair in same location as AR006-IND2

Tetra Tech NUS, Inc. AIR SAMPLING LOG SHEET

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR007-SSB
Sample Location: [redacted]
Sampled By: VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2-19-09 Time: 0835 Method: Summa Canister	mild	west	16°c	998 mb	NA	–

Summa Canister #:	940
Filter Type/Flow	24-hour

Start Time Vacuum	0835	in Hg -30.5	2-19-09
End Time Vacuum	0804	in Hg -9.0	2-20-09

He check	Start	Stop	Reading
NA ⟶			

Purge Data	Start	Stop	Notes: Sampler set in unfinished area of basement - west side of residence
(see below)			

Purge Readings:
~~Liters/minute~~ VAS

purge 1 @ 8.5 ppm
purge 2 @ 12.1 ppm
purge 3 @ 9.2 ppm

Notes:

PID: No elevated PID readings in breathing zone of basement.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR007-IND
Sample Location: [redacted]
Sampled By: RMS / VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2-19-09						
Time: 0820						
Method: Summa Canister	mild	west	16°c	998 mb	NA	—

Summa Canister #	911
Filter Type/Flow	24-hour

Start Time Vacuum	2-19-09 0820	in Hg -30.0	2-19-09
End Time Vacuum	0806 2-20-09	in Hg -4.5	2-20-09

He check	Start	Stop	Reading
NA →			

Purge Data	Start	Stop	Notes: Sampler set in Finished portion of basement - center of home
NA →			

Readings:
Liters/minute
NA @ ____
____ @ ____
____ @ ____

Notes:

PID: No elevated readings observed.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1 - AR007 - IW02
Sample Location: [redacted].
Sampled By: RMS / VAS

SAMPLING DATA:						
Date: 2/19/09 **Time:** 0849	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Method: Summa	Mild	west	16°c	998mb	NA	—

Summa Canister #	1601
Filter Type/Flow	24hr

0849

Start Time Vacuum	-29	in Hg
End Time Vacuum	-4	in Hg

0808 → 2/20/09

He check	**Start**	**Stop**	**Reading**
NA ———	———	———	——→

Purge Data	**Start**	**Stop**	**Notes:** sampler set in Family room
NA ———	———	——→	2nd floor - Northeast corner of home

Readings:
Liters/minute
NA @
@
@

Notes:

PID: No elevated PID readings observed

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS7-AR007-IN03
Sample Location: Same as IN0 / Basement / [redacted]
Sampled By: RMS/

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (⁰C)	Barometric Pressure (⁰C)	Relative Humidity (%)	Other
Date: 3/23/09 **Time:** 1341 **Method:** Summa						

Summa Canister #	31429
Filter Type/Flow	24hr

Start Time Vacuum	1341	in Hg -31
End Time Vacuum	1317	in Hg 0.0

3/23/09
~~3/24/09~~ JBB
↳ Collected on 3/25/09

Cannister @ -22.5 *Did not pull enough sample @ 1330 3/24/09
Need to come back tomorrow (3/25/09

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
—	—	—	

Readings:
Liters/minute
______ @ ______
______ @ ______
______ @ ______

Notes:

PID: Placed in same location as AR007-IN0

Tetra Tech NUS, Inc. AIR SAMPLING LOG SHEET

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR008-SSB
Sample Location: [redacted]
Sampled By: RMS / VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/19/09						
Time: 1023						
Method: Summa	Calm	west	16°C	998 mb	NA	—

Summa Canister #	33972
Filter Type/Flow	24hr

Start Time Vacuum	-23	in Hg
End Time Vacuum	-0.5	in Hg

1023 hours 2-19-09
1003 hours 2-20-09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**
(see below)	0818	1024

Notes: Sampler set in an finished area of basement along west side of home

Purge **Readings:**
Liters/minute

purge 1 @ 0.0
purge 2 @ 5.5
purge 3 @ 3.8

* Each purge ~ 60 ml

Notes:

PID: No elevated PID readings in basement.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR008-IND
Sample Location: Basement [redacted]
Sampled By: RMS/ VAS

SAMPLING DATA:

Date: 2/19/09
Time: 1017

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (^{0}C)	Barometric Pressure (^{0}C)	Relative Humidity (%)	Other
Method: Summa	calm	west	16°C	998 mb	NA	—

Summa Canister #	34330
Filter Type/Flow	24hr

Start Time Vacuum	-29.5	in Hg	1017 hours 2-19-09
End Time Vacuum	- 8.5	in Hg	1008 hours 2-20-09

He check	**Start**	**Stop**	**Reading**
NA →			
Purge Data	**Start**	**Stop**	**Notes:** Sampler set in finished area of basement near center of home
NA →			

Readings:
Liters/minute
NA @ ____
____ @ ____
____ @ ____

Notes:

PID: No elevated PID readings in basement.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR008-IN02
Sample Location: 1st Floor living space
Sampled By: RMS/VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/19/09						
Time: 1036						
Method: Summa	Calm	west	16°C	998 mb	NA	—

Summa Canister #	34392
Filter Type/Flow	24hr

Start Time Vacuum	-30	in Hg
End Time Vacuum	-6	in Hg

Collected
@1006 - 2/20/09

He check	**Start**	**Stop**	**Reading**
NA →			→
Purge Data	**Start**	**Stop**	**Notes:** Sampler set in Den of home
NA →		→	south central area of residence

Readings:
Liters/minute
NA @
@
@ →

Notes:

PID: No elevated PID readings in residence

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR009-SSB
Sample Location: [redacted] / East Central to NE
Sampled By: RMS/ VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/24/09						
Time: 0922						
Method: Summa	brisk	SW	15°C	1030 mb	NA	—

Summa Canister #	1589
Filter Type/Flow	24 hr

Start Time Vacuum	0922	in Hg -30.5	2-24-09
End Time Vacuum	0910	in Hg - 9.0	2/25/09

He check	**Start**	**Stop**	**Reading**
NA	→	→	→

Purge Data	**Start**	**Stop**
(see below)	0914	0920

Notes: 60ml Syringe used for purge

Readings:
Liters/minute
1 @ 0.0
2 @ 0.5
3 @ 1.1

60ml / 1 purge Volume

Notes:

PID: No elevated PID readings observed in basement

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage

Project No.: 112G02019

C.O.C. No.:

Sample ID No.: BPS1-AR009-IND

Sample Location: [redacted] / Basement / West Central

Sampled By: RMS/VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/24/09 **Time:** 0920 **Method:** Summa	Brisk	SW	16°c	1030 mb	NA	—

Summa Canister #	14879
Filter Type/Flow	24hr

Start Time Vacuum	0920	in Hg -31	2-24-09
End Time Vacuum	0908	in Hg -6.5	2/25/09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
NA →			

Readings:
Liters/minute

NA @

@

@

Summa # 14885

Duplicate Collected 0925 -30 2/24/09

BPS1-DUP-IND 0908 -12.5 2/25/09

2400

Notes:

PID: No elevated PID readings observed

- Sampler set in Dining Room of home (East-central portion of home)

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Sample ID No.: BPS1-AR009-IN02
Project No.: 112G02019
Sample Location: [redacted] / 1st Floor East
C.O.C. No.:
Sampled By: RMS/VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (⁰C)	Barometric Pressure (⁰C)	Relative Humidity (%)	Other
Date: 2/24/09 **Time:** 0958 **Method:** Summa	Brisk	SW	16°C	1030 mb	NA	–

Summa Canister #	12008
Filter Type/Flow	24hr

Start Time Vacuum	0958	in Hg -32	2-24-09
End Time Vacuum	0913	in Hg -11	2-25-09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
NA →			

Readings:
Liters/minute
NA @
@
@

Notes:

PID: No elevated PID readings observed.

- Sampler located in 2nd floor Dining Room area - East central portion of home

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR010-SSB
Sample Location: [redacted]
Sampled By: VAS

SAMPLING DATA:						
Date: 2-24-09 **Time:** 1315 **Method:** Summa	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
	Brisk	SW	16°C	1030 mb	NA	—

Summa Canister #	05407
Filter Type/Flow	24hr

Start Time Vacuum	1315	in Hg ~31	2-24-09
End Time Vacuum	1810	in Hg -25.5	2-25-09

He check	**Start**	**Stop**	**Reading**
NA →			
Purge Data	**Start**	**Stop**	**Notes:**
(see below)			

*
Note
Cannister has only pulled 5.5 in Hg of vacuum
* Cannister was shipped to Lab and only checked for pressure. Another sample was collected as BPS1-AR010-SSB2 for analysis
(see seperate sample log for details)

purge
Readings:
~~**Liters/minute**~~ VAS

60mL Syringe = One purge volume

purge 1 @ 0.10
purge 2 @ 0.0
purge 3 @ 2.5

Notes:

PID: No elevated PID readings in basement.
- Sampler set in unfinished area of basement near northeast corner of home

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR010-SSB2
Sample Location: [redacted]
Sampled By: VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2-25-09 **Time:** 1835						
Method: Summa cannister	calm	west	17°c	1033 mb	NA	–

Summa Canister #	94611
Filter Type/Flow	24 hour

Start Time Vacuum	1835	in Hg -30.0	2-25-09
End Time Vacuum	1802	in Hg -5.0	2-26-09

He check	**Start**	**Stop**	**Reading**
NA ———	———	———	——→

Purge Data	**Start**	**Stop**	**Notes:**
(see below)	1830	1834	

Purge **Readings:**
~~**Liters/minute**~~ VAS

purge 1 @ 0.0 ppm
purge 2 @ 0.4 ppm
purge 3 @ 0.6 ppm

Each purge ~ 60 ml

Notes:

PID: No elevated PID readings observed in basement
- Sampler located in unfinished area of basement near southeast corner of home.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR010=IN0
Sample Location: [redacted] / near center basement
Sampled By: RMS/VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/24/09 **Time:** 1312 **Method:** Summa	variable	SW	23°F	1030mb	N/A	

Summa Canister #	12672
Filter Type/Flow	24hr

Start Time Vacuum	1312	in Hg -32	2/24/09
End Time Vacuum	1808	in Hg -0.5	2/25/09

He check	**Start**	**Stop**	**Reading**
NA →			→

Purge Data	**Start**	**Stop**	**Notes:**
NA →			→

Readings:
Liters/minute
NA @
@
@

Notes:

PID: No elevated PID readings observed

- Sample located in basement near center of home

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR010-IND2
Sample Location: South | Kitchen [redacted]
Sampled By: RMS / VAS

SAMPLING DATA:

Date: 2/24/09	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (^{0}C)	**Barometric Pressure** (^{0}C)	**Relative Humidity** (%)	Other
Time: 1333						
Method: Summa	calm	SW	23°F	1030 mb	N/A	—

Summa Canister #	4270
Filter Type/Flow	24hr

Start Time Vacuum	1333	in Hg -30	2-24-09
End Time Vacuum	1814	in Hg -6.5	2-25-09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
NA →			

Readings:
Liters/minute
NA @ ____
____ @ ____
____ @ ____

Notes:

PID: No elevated PID readings observed

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR010-IND3
Sample Location: [redacted] (Basement)
Sampled By: RMS/JBB

SAMPLING DATA:						
Date: 3/23/09 **Time:** 1752 **Method:** Summa	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** ~~()~~	**Relative Humidity** (%)	**Other**
	5-10mph	N	39° F	30.30 in	26	

		Dup.
Summa Canister #	1568	Can. 36029
Filter Type/Flow	24 hr	24 hr

-29 JBB 3/23

Duplicate

Start Time Vacuum	1752	in Hg ~~30~~ 30	Start time Vac	1752	in Hg -30
End Time Vacuum	1808	in Hg -5.5	END Time Vac.	1808	in Hg -6

BPS2-DUP-IND04
3-23-09
~~3~~ 3-24-09

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**	**Notes:** —
—	—	—	

Readings:
Liters/minute
_______ @ _______
_______ @ _______
_______ @ _______

Notes:

PID: Sample and duplicate collected near bottom of stairs in central portion of basement

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR011-SSB
Sample Location: [redacted] near NW corner of basement/utility room
Sampled By: RMS/VAS

SAMPLING DATA:							
Date: 2/24/09 **Time:** 1722	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	**Other**
Method: Summa	Brisk	SW	16°	1030 mb	NA	—

Summa Canister #	34727
Filter Type/Flow	24hr

Start Time Vacuum	1722	in Hg -24.5	2-24-09
End Time Vacuum	1705	in Hg -10.0	2-25-09

He check	**Start**	**Stop**	**Reading**
NA ⟶			⟶

Purge Data	**Start**	**Stop**	**Notes:**
(see below)			

Purge
Readings: 60mL syringe used for each purge volume.
VAS ~~**Liters/minute**~~ PID ppm
1 @ 1.5ppm
2 @ 51.5 ppm
3 @ 85.6 ppm

Notes:

PID: No elevated PID readings observed in basement.

- Sampler located in utility room (unfinished) area of basement near northwest corner of home

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR011-IND
Sample Location: [redacted] West Central portion of basement
Sampled By: RMS/VAS

SAMPLING DATA:

Date: 2/24/09
Time: 1714
Method: Summa

Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Brisk	SW	16°	1030 mb	NA	—

Summa Canister #	4098
Filter Type/Flow	24 hr

Start Time Vacuum	1714	in Hg -31	2/24/09
End Time Vacuum	1708	in Hg -7	2/25/09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
NA →			

Readings:
Liters/minute
NA @
@
@

Notes:

PID: No elevated PID readings observed in basement

- Sampler located in Finished area of basement at west central section of home

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR011-IN02
Sample Location: [redacted]
Sampled By: RMS/VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/24/09 **Time:** 1736 **Method:** Summa	Brisk	SW	16°C	1030 mb	NA	—

Summa Canister #	35258
Filter Type/Flow	24hr

Start Time Vacuum	1736	in Hg -29.5	2/24/09
End Time Vacuum	1725	in Hg -9.0	2/25/09

He check	**Start**	**Stop**	**Reading**
NA ⟶	⟶	⟶	⟶

Purge Data	**Start**	**Stop**	**Notes:**
NA ⟶	⟶	⟶	

Readings:
Liters/minute
NA @ ______
______ @ ______
______ @ ______

Notes:

PID: No elevated PID readings observed

- Sampler set in 2nd Floor Dining Room area near center of home.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G01687
C.O.C. No.:
Sample ID No.: BPS1-AR012-SSB
Sample Location: [redacted] South / Workshop Area
Sampled By: RMS / VAS

SAMPLING DATA:

Date: 2/25/09 **Time:** 1051	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Method: Summa	Calm	West	17°C	1033 mb	NA	–

Summa Canister #	3734
Filter Type/Flow	24 hr

Start Time Vacuum	1051	in Hg 30.5	2-25-09
End Time Vacuum	1034	in Hg -4.0	2-26-09

He check	**Start**	**Stop**	**Reading**
NA ——————→			

Purge Data	**Start**	**Stop**	**Notes:**
(see below)			

Purge **Readings:**
~~**Liters/minute**~~ VAS

*60mL Syringe used for each purge Volume

1 @ 0.0
2 @ 0.0
3 @ 0.0

Notes:

PID: - No elevated PID readings observed in basement.
- Sample located in basement work shop area at south-central area of home.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR012-IN0
Sample Location: East Central basement - [redacted]
Sampled By: RMS/VAS

SAMPLING DATA:	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/25/09						
Time: 1055						
Method: Summa	Calm	west	17°C	1033 mb	NA	—

Summa Canister #	35991
Filter Type/Flow	24hr

Start Time Vacuum	1055	in Hg -32	2/25/09
End Time Vacuum	1039	in Hg -8	2/26/09

He check	**Start**	**Stop**	**Reading**
NA →			→
Purge Data	**Start**	**Stop**	**Notes:**
NA →			→

Readings:
Liters/minute
NA @ ____
____ @ ____
____ @ ____

Notes:

PID: No elevated PID readings observed.
- Sample located in family room at east-central section of basement.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR012-IN02
Sample Location: [redacted]
Sampled By: RMS/VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/25/09 **Time:** 1106 **Method:** Summa	Calm	west	17°C	1033 mb	NA	—

Summa Canister #	4338
Filter Type/Flow	24 hr

Start Time Vacuum	1106	in Hg -31	2/25/09
End Time Vacuum	1033	in Hg -6	2/26/09

He check	**Start**	**Stop**	**Reading**
NA →			→
Purge Data	**Start**	**Stop**	**Notes:**
NA →			→

Readings:
Liters/minute
NA @ ____
____ @ ____
____ @ ____

Notes:

PID: No elevated PID readings observed

- Sample located on 2nd floor shelf in dining room of home

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR012-IND3
Sample Location: [redacted] SAME AS IND / BasemenT
Sampled By: RmS

SAMPLING DATA:

Date: 3/24/09 Time: 1649	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (^{0}C)	Barometric Pressure (^{0}C)	Relative Humidity (%)	Other
Method: Summa						

Summa Canister #	4139
Filter Type/Flow	24hr

Start Time Vacuum	1649	in Hg -32	3-24-09
End Time Vacuum	1633	in Hg -4	3-25-09

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
—	—	—	—

Readings:
Liters/minute
______ @ ______
______ @ ______
______ @ ______

Notes:

PID: Placed in same location as AR012-IND (Table in basement)

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR013-SSB
Sample Location: [redacted] North central basement
Sampled By: RMS/VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/25/09 **Time:** 1419 **Method:** Summa	calm	west	17°C	1033 mb	NA	–

Summa Canister #	33562
Filter Type/Flow	24hr

Sub-Slab Duplicate
#34341
24hr

BPS1-DUP[redacted]-SSB

Start Time Vacuum	1419	in Hg -30	2/25/09	-30 inHg
End Time Vacuum	1410	in Hg -4.5	2/26/09	-2.0 inHg

He check	**Start**	**Stop**	**Reading**
NA ⟶			

Purge Data	**Start**	**Stop**	**Notes:**
(see below)			

Purge **Readings:**
~~**Liters/minute**~~ VAS

60mL Syringe used for each purge volume

1 @ 0.0
2 @ 0.0
3 @ 6.0

Notes:

PID: No elevated PID readings observed in basement

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR013-IND
Sample Location: near SE corner of basement [redacted]
Sampled By: RMS/UAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/25/09						
Time: 1412						
Method: Summa	Calm	west	17°C	1033 mb	NA	–

Summa Canister #	5790
Filter Type/Flow	24hr

Start Time Vacuum	1412	in Hg -29	2/25/09
End Time Vacuum	1413	in Hg -4.0	2/26/09

He check	**Start**	**Stop**	**Reading**
NA →			→

Purge Data	**Start**	**Stop**	**Notes:**
NA →			→

Readings:
Liters/minute
NA @
@
@

Notes:

PID: No elevated PID readings observed.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR013-IN02
Sample Location: [redacted] 1st floor living space
Sampled By: RMS/VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 2/25/09 **Time:** 1448 **Method:** Summa	calm	west	17°C	1033 mb	NA	–

Summa Canister #	34344
Filter Type/Flow	24hr

Start Time Vacuum	1448	in Hg -32	2/25/09
End Time Vacuum	1417	in Hg -7	2/26/09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
NA →			

Readings:
Liters/minute
NA @
@
@

Notes:

PID: No elevated PID readings observed.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage

Project No.: 112G01687

C.O.C. No.:

Sample ID No.: BPS1-AR013-IND3

Sample Location: [redacted], Approx. same as IND

Sampled By: RMS

SAMPLING DATA:						
Date: 3/23/09 **Time:** 1443	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (⁰C)	**Barometric Pressure** (⁰C)	**Relative Humidity** (%)	Other
Method: Summa			39°F			

Summa Canister #	932
Filter Type/Flow	24hr

Start Time Vacuum	1443	in Hg -28	3/23/09
End Time Vacuum	1545	in Hg -5	3/24/09

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
—	—	—	—

Readings:
Liters/minute

______ @ ______
______ @ ______
______ @ ______

Notes:

PID: ~~Next to~~ Placed near AR013-INO location

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR014-SSB
Sample Location: [redacted]
Sampled By: RMS/VAS

SAMPLING DATA:						
Date: 3/10/09	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Time: 1631						
Method: Summa Canister	~ 5-10	S to SW	18°C	1030 mb	NA	–

Summa Canister #	5766
Filter Type/Flow	24 hr

Start Time Vacuum	1631	in Hg -30.5	3/10/09
End Time Vacuum	1731	in Hg -2.0	3/11/09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
(see below)			

Readings:
Liters/minute

1 @ NA
2 @ NA
3 @ NA

* 60mL Syringe used for each purge volume

No PID READINGS → PID malfunction

Notes:

PID: Placed in closet located in south central portion of basement under stairs.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR014-IND
Sample Location: [redacted]
Sampled By: RMS/NAS

SAMPLING DATA:						
Date: 3/10/09 **Time:** 1630	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Method: Summa Canister	5-10	5 to SW	18°C	1030 mb	NA	—

Summa Canister #	4119
Filter Type/Flow	24hr

Start Time Vacuum	1630	in Hg -33	3/10/09
End Time Vacuum	1705	in Hg - 8.0	3/11/09

He check	**Start**	**Stop**	**Reading**
NA →			

Purge Data	**Start**	**Stop**	**Notes:**
NA →			

Readings:
Liters/minute
NA @ ____
____ @ ____
____ @ ____

Notes:

PID: Placed in central portion of basement on counter top
No PID readings recorded.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR014-IN02
Sample Location: [redacted]
Sampled By: RMS/VAS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 3/10/09 **Time:** 1701 **Method:** Summa	5-10	S/SW	18°C	1030mb	NA	—

Summa Canister #	4244
Filter Type/Flow	24hr

Start Time Vacuum	1701	in Hg -33	3/10/09
End Time Vacuum	1718	in Hg -4	3/11/09

He check	**Start**	**Stop**	**Reading**
NA →			→

Purge Data	**Start**	**Stop**	**Notes:**
NA →		→	

Readings:
Liters/minute
NA @
@
@

Notes:

PID: Placed on Dining room table in central portion of 1st floor
No PID readings recorded.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

4. **Page 1 of 1**

Project Site Name: NWIRP Bethpage

Project No.: 112G02019

C.O.C. No.:

Sample ID No.: BPS1-AR01~~5~~4-IN03

Sample Location: [redacted]/SAME AS IND / Basement

Sampled By: EMS

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 3/24/09 **Time:** 1608 **Method:** Summa / TO-15						

Summa Canister #	23921
Filter Type/Flow	24hr

Start Time Vacuum	1608	in Hg -29.5	3-24-09
End Time Vacuum	1620	in Hg -7	3-25-09

[redacted]

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**	**Notes:**
—	—	—	—

Readings:
Liters/minute

_______ @ _______
_______ @ _______
_______ @ _______

Notes:

PID: placed on kitchen counter in basement in same location as AR015-IND

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR015-SSB
Sample Location: [redacted]
Sampled By: RMS/UAS

SAMPLING DATA:						
Date: 3/10/09 **Time:** 1723	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Method: Summa	calm	west	17°C	1030 mb	NA	—

Summa Canister #	95679
Filter Type/Flow	24hr

Start Time Vacuum	1723	in Hg -30	3/10/09
End Time Vacuum	1731	in Hg -5	3/11/09

He check	**Start**	**Stop**	**Reading**
NA ———	———	———	———→

Purge Data	**Start**	**Stop**	**Notes:**
(see below			

Purge
Readings: ~~**Liters/minute**~~ UAS

* 60mL syringe used for each purge volume

1 @ NA
2 @ NA
3 @ NA

} No PID READINGS – PID Malfunction

Notes:

PID:
-Sampler located in closet under stairs to basement.

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR015-FNO
Sample Location: [redacted]
Sampled By: RMS/VAS

SAMPLING DATA:							
Date: 3/10/09 **Time:** 1720	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Method: Summa	Calm	west	17°C	1030 mb	NA	—

Summa Canister #	36042
Filter Type/Flow	24hr

Start Time Vacuum	1720	in Hg -30	3/10/09
End Time Vacuum	1733	in Hg -7.5	3/11/09

He check	**Start**	**Stop**	**Reading**
NA ———	———	———	——→

Purge Data	**Start**	**Stop**	**Notes:**
NA ———	———	——→	

Readings:
Liters/minute
NA @ ____
____ @ ____
____ @ ____

Notes:

PID: placed in central portion of basement on stand
No PID readings recorded

Tetra Tech NUS, Inc. **AIR SAMPLING LOG SHEET**

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Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR015-IN02
Sample Location: [redacted]
Sampled By: RMS/VAS

SAMPLING DATA:

Date: 3/10/09	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Time: 1732						
Method: Summa Canister	calm	west	17°C	1030 mb	NA	—

Summa Canister #	34008
Filter Type/Flow	24 hr

Start Time Vacuum	1732	in Hg -30.5	3/10/09
End Time Vacuum	1732	in Hg -7.5	3/11/09

He check	**Start**	**Stop**	**Reading**
NA →	→	→	→

Purge Data	**Start**	**Stop**
NA →	→	→

Notes:

Readings:
Liters/minute
NA @ ____
____ @ ____
____ @ ____

Notes:

PID: Placed in south central portion of 1st floor in living room
No PID readings recorded.

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR016-SSB
Sample Location: [redacted]
Sampled By: EJW & RMS

SAMPLING DATA:						
Date: 4/27/09 **Time:** 1420	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Method: Summa (6L)						

Summa Canister #	4125
Filter Type/Rate	24hr

	Time	**Date**		
Start Time Vacuum	1420	4/27/09	-29	in Hg
End Time Vacuum	1410	4/28/09	-8	in Hg

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**
60 mL Syringe	1420 4/27/09	
PID Readings	**ppm**	**Volume**
1 vol	3.9	60
2 vol	2.5	120
3 vol	1.9	180

Notes:

Note that Canister was set up next to heating oil tank b/c only area w/ open slab.

Basement air 0.1 ppm PID reading

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

Page__1_ of __1_

Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR016~~8~~ -INDB
Sample Location: [redacted]
Sampled By: EJW & RMS

SAMPLING DATA:						
Date: 4/27/09	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (⁰C)	**Barometric Pressure** (⁰C)	**Relative Humidity** (%)	Other
Time: 1430						
Method: Summa (6L)						

Summa Canister #	31436
Filter Type/Rate	24 HR

	Time	**Date**		
Start Time Vacuum	1430	4/27/09	-30	in Hg
End Time Vacuum	1422	4/28/09	-6	in Hg

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**
~~100 ml Syringe~~	~~1430~~	
PID Readings	**ppm**	**Volume**
~~1 vol~~		~~60 ml~~
~~2 vol~~		~~120 ml~~
~~3 vol~~		~~180 ml~~

N/A EJW 4/27/09

Notes:

Canister Set on ~~Bo~~ [redacted] Central location of Residence
Indoor Air PID = 0.0 ppm

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR016-INDL
Sample Location: [redacted]
Sampled By: EJW/RMS

SAMPLING DATA:						
Date: 4/27/09	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Time: 1448						
Method: SUMMA (6L)						

Summa Canister #	20946
Filter Type/Rate	24 HR

	Time	**Date**		
Start Time Vacuum	1448	4/27/09	-30	in Hg
End Time Vacuum	1418	4/28/09	-6.5	in Hg

He check	**Start**	**Stop**	**Reading**
N/A	+ —	—	—
Purge Data	**Start**	**Stop**	
N/A	—	—	
PID Readings	**ppm**	**Volume**	
N/A	—	—	

Notes:

Dining Rm Table [redacted], Rm PID reading 0.1 ppm.

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR017-SSB
Sample Location: [redacted]
Sampled By: ESW/RMS

SAMPLING DATA:						
Date: 4/27/09 **Time:** 1629 **Method:** Summa (6L)	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other

Summa Canister #	~~65602~~ 34458
Filter Type/Rate	24hr

	Time	**Date**		
Start Time Vacuum	1629	4/27/09	-29	**in Hg**
End Time Vacuum	1625	4/28/09	-6	**in Hg**

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**
60 ml syringe	1628	1629
PID Readings	**ppm**	**Volume**
1	1.9	60 ml
2	2.3	120 ml
3	2.5	180 ml

Notes:

Basement Driveway side (boiler RM)
Basement air in boiler Rm 0.2 ppm PID reading

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

Page__1_ of __1_

Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR017-ID IND B
Sample Location: CENTER BASEMENT / [redacted]
Sampled By: EJW /RMS

SAMPLING DATA:						
Date: 4/27/09 **Time:** 1635	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (^{0}C)	**Barometric Pressure** (^{0}C)	**Relative Humidity** (%)	Other
Method: SUMMA (6L)						

Summa Canister #	~~65602~~ #912
Filter Type/Rate	24hr

	Time	**Date**		
Start Time Vacuum	1635	4/27/09	30	in Hg
End Time Vacuum	1633	4/28/09	-5	in Hg

He check	**Start**	**Stop**	**Reading**
N/A			

Purge Data	**Start**	**Stop**
N/A		

PID Readings	**ppm**	**Volume**
N/A		

Notes:

PID Reading
Center basement, on bar top

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

Page__1_ of __1_

Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-4R017-INDL
Sample Location: [redacted]
Sampled By: EJW/RMS

SAMPLING DATA:

Date: 4/27/09	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Time: 1635						
Method: SUMMA (6L)						

Summa Canister #	33590
Filter Type/Rate	24W

	Time	**Date**		
Start Time Vacuum	1650	4/27/09	-30	in Hg
End Time Vacuum	1635	4/28/09	-5.5	in Hg

He check	**Start**	**Stop**	**Reading**
N/A	—	—	—

Purge Data	**Start**	**Stop**
N/A	—	—

PID Readings	**ppm**	**Volume**
N/A	—	—

Notes:

Cannister placed in 1st Floor living room, see sketch in questionnaire for graphical location.

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR018-SSB
Sample Location: [redacted]
Sampled By: EBW/RMS

SAMPLING DATA:						
Date: 4/28/09 **Time:** 1103	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (°C)	**Barometric Pressure** (°C)	**Relative Humidity** (%)	Other
Method: SUMMA (6L)						

Summa Canister #	33934
Filter Type/Rate	24 hr

	Time	**Date**		
Start Time Vacuum	1103	4/28/09	-30	**in Hg**
End Time Vacuum	1040	4/29/09	-6.0	**in Hg**

He check	**Start**	**Stop**	**Reading**
—	—	—	—

Purge Data	**Start**	**Stop**
60 ml syringe	1103	
PID Readings	**ppm**	**Volume**
1	1.6	60 ml
2	2.0	120 ml
3	1.6	180 ml

Notes:

Subslab SG sample located in centeral portion of basement

Basement air PID reading 0.0 ppm

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

Page__1_ of __1_

Project Site Name: NWIRP Bethpage
Project No.: 112G02019
C.O.C. No.:
Sample ID No.: BPS1-AR018-INDB
Sample Location: [redacted]
Sampled By: EJW/RMS

SAMPLING DATA:						
Date: 4/28/08 **Time:** 1108 **Method:** Summa (62)	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (^0C)	**Barometric Pressure** (^0C)	**Relative Humidity** (%)	Other

Summa Canister #	34420
Filter Type/Rate	24 hr.

	Time	**Date**		
Start Time Vacuum	1108	4/28/08	-28	**in Hg**
End Time Vacuum	1035	4/29/09	-5	**in Hg**

He check	**Start**	**Stop**	**Reading**
N/A	—	—	—

Purge Data	**Start**	**Stop**
N/A	—	—

PID Readings	**ppm**	**Volume**
N/A	—	—

Notes:

Summa set up in central portion of Basement

Basement PID reading 0.0 ppm

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

Page__1_ of __1_

Project Site Name: NWIRP Bethpage

Project No.: 112G02019

C.O.C. No.:

Sample ID No.: BPS1-AR018-INDB-2

Sample Location: Basement [redacted]

Sampled By: E. Wu

SAMPLING DATA:

	Wind speed (Visual)	Wind Direction (S.U.)	Ambient temperature (°C)	Barometric Pressure (°C)	Relative Humidity (%)	Other
Date: 5/21/09 **Time:** 1017 **Method:** SUMMA						

Summa Canister #	4237
Filter Type/Rate	24 HR

	Time	**Date**		
Start Time Vacuum	5/20/09	1030	30	in Hg
End Time Vacuum	5/21/09	1017	8	in Hg

He check	**Start**	**Stop**	**Reading**
NA	—	—	—

Purge Data	**Start**	**Stop**
NA	—	—

PID Readings	**ppm**	**Volume**
NA	—	—

Notes:

Summa placed in same location as last sample. Basement Central

Analysis TO-15 short list (9 compounds)

Note that resident had basement window open about 1" during test. Resident was not aware of window opened at beginning of test

Tetra Tech NUS, Inc. **INDOOR AIR SAMPLING LOG SHEET**

Page 1 of 1

Project Site Name: NWIRP Bethpage

Project No.: 112G02019

C.O.C. No.:

Sample ID No.: BPS1-AR018-INDL

Sample Location: 1st FL Lvng [redacted]

Sampled By: E. Wu

SAMPLING DATA:						
Date: ~~10/21/09~~ JBB 5/29/09 5/21/09 **Time:** 1022	**Wind speed** (Visual)	**Wind Direction** (S.U.)	**Ambient temperature** (^0C)	**Barometric Pressure** (^0C)	**Relative Humidity** (%)	Other
Method: Summa						

Summa Canister #	5778
Filter Type/Rate	24 hr

	~~**Time**~~ Date	~~**Date**~~ Time		
Start Time Vacuum	~~10/20/09~~ JBB 5/29/09 5/20/09	1037	30	**in Hg**
End Time Vacuum	~~10/21/09~~ JBB 5/29/09 5/21/09	1022	8.5	**in Hg**

He check	**Start**	**Stop**	**Reading**
NA	—	—	—

Purge Data	**Start**	**Stop**
NA	—	—

PID Readings	**ppm**	**Volume**
NA	—	—

Notes:

Center of house. hallway

Analysis - TO-15 Short list (9 compounds)

APPENDIX D

CHAIN OF CUSTODY RECORDS

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 2

Project Manager Rob Sok
Collected by: (Print and Sign) Vinie Sheckera
Company Tetra Tech NUS Email rob.sok@tetratech.com
Address 5700 Lake Wright Dr City Norfolk State VA Zip 23502
Phone 757-466-4904 Fax 757-461-4148

Project Info:
P.O. #
Project # CTO-147
Project Name NWIRP Bethpage

Turn Around Time:
☐ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas:
N₂ He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	BPS1-AR001-IND	3746	1-20-09	1425	TO-15	-29.5	-7.5		
02A	BPS1-AR001-SSB	23887	1-20-09	1422	TO-15	-27.0	-2.0		
03A	BPS1-AR001-ODA	33918	1-20-09	1420	TO-15	-22.5	0		
04A	BPS1-DUP-01	4213	1-20-09	1400	TO-15	-28.5	0		
05A	BPS1-AR005-IND	34213	1-21-09	0812	TO-15	-30.0	-8.5		
06A	BPS1-AR005-SSB	9947	1-21-09	0815	TO-15	-28.5	-7.5		
07A	BPS1-AR005-ODA	35994	1-21-09	0825	TO-15	-28.0	-1.0		
08A	BPS1-AR004-ODA	1577	1-21-09	0845	TO-15	-29.0	-7.5		
09A	BPS1-AR004-SSB	34478	1-21-09	0856	TO-15	-30.0	-9.0		
10A	BPS1-AR004-IND	33943	1-21-09	0900	TO-15	-29.0	-19.5		

Relinquished by: (signature) Date/Time 1-22-09 1100
Received by: (signature) Date/Time Monica Greggen ATL 1/23/09 900
Notes:

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	[✓ Yes] No [✓ None]	0901435

1/23/09

Form 1293 rev.11

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 2 of 2

Project Manager Rob Sok
Collected by: (Print and Sign) Vince Shickora
Company Tetra Tech NUS Email
Address 5700 Lake Wright Dr City Norfolk State VA Zip 23502
Phone 757-466-4904 Fax

Project Info:
P.O. #
Project # CTO-147
Project Name NWIRP Bethpage

Turn Around Time:
☐ Normal
☑ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas:
N₂ He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Canister Pressure/Vacuum Final	Canister Pressure/Vacuum Receipt	Canister Pressure/Vacuum Final (psi)
11A	BPS1-AR004-IND2	5694	1-21-09	0903	TO-15	-29.0	-9.0		
12A	BPS1-AR002-SSB	5556	1-21-09	1414	TO-15	-30.0	-12.5		
13A	BPS1-AR002-IND	35976	1-21-09	1415	TO-15	-28.0	-6.5		

Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time	Notes:
1-22-09 1100	Monica Greggen ATL 1/23/09 900	
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time	
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx		NA	Good	[✓ Yes] No None	0901435

Form 1293 rev.11

0901444

TETRA TECH NUS, INC.

CHAIN OF CUSTODY | NUMBER 001001

PAGE 1 OF 1

PROJECT NO: CTO-147

SITE NAME: NWIRP Bethpage

PROJECT MANAGER AND PHONE NUMBER: Robert Sok (757) 618-2164 (mobile)

LABORATORY NAME AND CONTACT: Bryanna Langley (Air Toxics)

SAMPLERS (SIGNATURE)

FIELD OPERATIONS LEADER AND PHONE NUMBER: SAME

ADDRESS: 180-B Blue Ravine Rd.

CARRIER/WAYBILL NUMBER: FED EX 8686 9328 4206

CITY, STATE: Folsom, CA 95630

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G)

PRESERVATIVE USED

	DATE YEAR 2009	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS Summa #	Analysis		Initial Pressure	Final Pressure		COMMENTS
01A	1/22/09	1648	BPS1-AR003-SSB	AIR	G	1	05359	TO-15		-29	-6		Soil gas results near these locations were elevated (PID @ 5ppm during SSB purge)
02A	1/22/09	1645	BPS1-AR003-IND	AIR	G	1	5734	TO-15		-30	-3.5		
03A	1/22/09	1640	BPS1-AR003-ODA	AIR	G	1	33665	TO-15		-28	-3		
04A	1/22/09	0000	BPS1-DUP-02	AIR	G	1	25252	TO-15		-30	-11.5		

FedEx

CUSTODY SEAL INTACT Y N NONE TEMP N/A

1. RELINQUISHED BY	DATE 1/23/09	TIME 0900	1. RECEIVED BY	DATE 1/24/09	TIME 925
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 2

Project Manager Dave Brayack / Robert Sok

Collected by: (Print and Sign) Robert Sok

Company TetraTech NUS Email rob.sok@tetratech.com

Address 5700 Lake Wright Dr City Norfolk State VA Zip 23505

Phone (757)618-2104 (cell) Fax

Project Info:

P.O. #

Project # 112G02019 Indoor Air Sampling

Project Name CTO-WE06

Turn Around Time:

☐ Normal

☒ Rush 48hr specify

Lab Use Only

Pressurized by:

Date:

Pressurization Gas: N2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	BPS1-AR004-IN03	34431	2/18/09	1600	TO-15 (48hr)	-31.5	-10.0		
02A	BPS1-AR003-IN02	34459	2/18/09	1745	TO-15	-33	-8.5		
03A	BPS1-AR002-IN02	13664	2/19/09	1210	TO-15	-31	-9.5		
04A	BPS1-AR006-IN0	35254	2/19/09	1503	TO-15	-31	-8		
05A	BPS1-AR006-IN02	14114	2/19/09	1510	TO-15	-29	0.0		
06A	BPS1-AR006-SSB	31430	2/19/09	1505	TO-15	-31.5	-11		
07A	BPS1-AR006-OOA	35580	2/19/09	1500	TO-15	-29	-1		
08A	BPS1-AR007-IN0	911	2/20/09	0806	TO-15	-30	-4.5		
09A	BPS1-AR007-SSB	940	2/20/09	0807	TO-15	-30.5	-9.0		
10A	BPS1-AR007-IN02	1601	2/20/09	0808	TO-15	-29	-4		

2-20-09

Relinquished by: (signature) Date/Time 2/20/09 1300

Received by: (signature) Date/Time ATL 2-21-09 0805

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Notes: Please note that these samples are quick turn and should be invoiced on CTO-WE06

Lab Use Only

Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
FED EX		N/A	GOOD	Yes No [✓ None]	0902451

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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Page 2 of 2

Project Manager Dave Brayack / Robert Sok
Collected by: (Print and Sign) Robert Sok
Company Tetra Tech NUS Email
Address 5700 Lake Wright Dr City Norfolk State VA Zip 23505
Phone (757) 618-2104 Fax

Project Info:
P.O. #
Project # 112G02619
Project Name Indoor Air Sampling CTO-WE06

Turn Around Time:
☐ Normal
☒ Rush 48hr
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas:
N2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
11A	BPS1-AR007-004	34029	2/20/09	0817	TO-15 (48hr)	-28.5	-3.0		
12A	BPS1-AR008-IN0	34330	2/20/09	1008	TO-15	-29.5	-8.5		
13A	BPS1-AR008-IN02	34392	2/20/09	1006	TO-15	-30	-6.0		
14A	BPS1-AR008-SSB	33972	2/20/09	1003	TO-15	-23	-0.5		
15A	BPS1-AR008-00A	5639	2/20/09	1009	TO-15	-30	-6.0		

Relinquished by: (signature) Date/Time 2/20/09 1300
Received by: (signature) ATL Date/Time 2-21-09 0955
Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time
Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

Notes: Please note that these samples are quick turn and should be invoiced in CTO-WE06

Lab Use Only
Shipper Name FedEx
Air Bill #
Temp (°C) N/A
Condition Good
Custody Seals Intact? Yes No [✓ None]
Work Order # 0902451

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

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Page 1 of 2

Project Manager Dave Brayack / Rob Sok
Collected by: (Print and Sign) Robert Sok
Company TetraTech NUS Inc. Email
Address 5700 Lake Wright Dr City Norfolk State VA Zip 23505
Phone (757) 618-2104 Fax

Project Info:
P.O. #
Project # 112602019
Project Name CTO-WE06

Turn Around Time:
☐ Normal
☒ Rush 48hr
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas:
N2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	BPS1-AR001-IN02	5618	2/24/09	1419	TO-15 (RL	-30	0.0		
02A	BPS1-AR002-IN03	33990	2/24/09	1413		-28.5	-1.0		
03A	BPS1-AR009-IND	14879	2/25/09	0908		-31	-6.5		
04A	BPS1-AR009-SSB	1589	2/25/09	0910		-30.5	-9.0		
05A	BPS1-AR009-IN02	12008	2/25/09	0913		-32	-11		
06A	BPS1-AR009-ODA	33785	2/25/09	0928		-31	-10.5		
07A	BPS1-DUP-IND	14878	2/25/09	2400		-30	-12.5		
08A	BPS1-AR011-SSB	34727	2/25/09	1705	* High PID 85ppm	-24.5	-10		
09A	BPS1-AR011-IND	4098	2/25/09	1708		-31	-7		
10A	BPS1-AR011-IN02	35258	2/25/09	1725		-29.5	-9		

Relinquished by: (signature) Date/Time 2/26/09 1530
Received by: (signature) Date/Time Monica Breeden ATL 2/27/09
Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time 2/27/09 925
Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

Notes: * 48hr turn
BPS1-AR011-SSB → High PID Purge @ 85ppm

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx		NA	Good	[✓ Yes] No None	0902619

Form 1293 rev.11

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 2 of 2

Project Manager Dave Brayack / Rob Sok

Collected by: (Print and Sign) Robert Sok

Company Tetra Tech Email

Address 5700 Lake Wright City Norfolk State VA Zip 23505

Phone (757) 618-2104 Fax

Project Info:

P.O. #

Project # 112G02019

Project Name CTO - WE06

Turn Around Time:

☐ Normal

☐ Rush

specify

Lab Use Only

Pressurized by:

Date:

Pressurization Gas:

N₂ He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
11A	BPS1-AR011-ODA	34742	2/25/09	1726	TO-15 (RCL)	-31	-5		
12A	BPS1-AR012-IND2	4338	2/26/09	1033		-31	-6		
13A	BPS1-AR012-SSB	3734	2/26/09	1034		-30.5	-4		
14A	BPS1-AR012-ODA	34220	2/26/09	1035		-30	-6		
15A	BPS1-AR012-IND	35991	2/26/09	1039		-32	-8		
16A	BPS1-AR010-IND	12672	2/25/09	1808		-32	-0.5		
17A	BPS1-AR006-IND3	5558	2/26/09	1335		-29.5	-1.5		
18A	BPS1-AR013-IND	5790	2/26/09	1413		-29	-4		
19A	BPS1-AR013-IND2	34344	2/26/09	1417		-32	-7		
20A	BPS1-AR013-SSB	33562	2/26/09	1410		-30	-4.5		
21A	BPS1-DUP-SSB	34341	2/26/09	2400		-30	-2		

Relinquished by: (signature) Date/Time 2/26/09 1530

Received by: (signature) Monica Gregson ATL Date/Time 2/27/09 925

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	[✓ Yes] No None	0902619

Form 1293 rev 11

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager Rob Sok / Dave Brayack
Collected by: (Print and Sign) Vince Shickora
Company Tetra Tech NUS Email
Address 5900 Lake Wright Dr City Norfolk State VA Zip 23505
Phone (757) 618-2104 Fax

Project Info:
P.O. #
Project # 112G02019
Project Name CTO-WE06

Turn Around Time:
☐ Normal
☒ Rush 48 hr
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas:
N2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	BPSI-AR003-IND3	4257	2-26-09	1605	TO-15	-23.0	-8.0		
02A	BPSI-AR004-IND4	35973	2-26-09	1710	TO-15	-30.0	-4.5		
03A	BPSI-AUP-IND	4128	2-26-09	2400	TO-15	-31.0	-7.5		
04A	BPSI-AR010-IND2	4270	2-25-09	1814	TO-15	-30.0	-0.5		
05A	BPSI-AR010-SSB2	94611	2-26-09	1802	TO-15	-30.0	-5.0		
06A	BPSI-AR010-SSB	05407	2-25-09	1810	*DO NOT ANALYZE Check can pressure only	-31.0	-25.5		

Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
2/27/09 0930	Monica Gregson ATL 2/28/09 935
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time

*Notes:
*AR010-SSB was resampled as AR010-SSB2
Please check can for pressure, unsure whether enough volume was collected.
Only run TO-15 on AR010-SSB2

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex	936336552040	NA	Good	[✓ Yes] No None	0902647

Form 1293 rev 11

TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER 0903349

PAGE ____ OF ____

PROJECT NO: 112G02019

SITE NAME: NWIRP Bethpage Site 1

PROJECT MANAGER AND PHONE NUMBER: Dave Brayack

LABORATORY NAME AND CONTACT: Air Toxics / Bryanna Langley

SAMPLERS (SIGNATURE)

FIELD OPERATIONS LEADER AND PHONE NUMBER: Robert Sok (859) 618-2104

ADDRESS: 180-B Blue Ravine Road

CARRIER/WAYBILL NUMBER: 8641-8687-4634

CITY, STATE: Folsom, CA 95630

CONTAINER TYPE ~~PLASTIC (P) or GLASS (G)~~ Summa

PRESERVATIVE USED: None

STANDARD TAT ☐

RUSH TAT ☒

☐ 24 hr. ☒ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

TYPE OF ANALYSIS

	DATE YEAR 2009	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	Canister #	Canister Pressure (Initial)	Canister Pressure (Final)	Analysis Requested	COMMENTS
01A	3/11	1731	BPS1-AR014-SSB	Air	G	1	5766	-30.5	-2	TO-15	
02A	3/11	1705	BPS1-AR014-IND	Air	G	1	4119	-33	-8	TO-15	
03A	3/11	1718	BPS1-AR014-IN02	Air	G	1	4244	-33	-4	TO-15	
04A	3/11	1714	BPS1-AR014-OOA	Air	G	1	5691	-30.5	-2.5	TO-15	
05A	3/11	1731	BPS1-AR015-SSB	Air	G	1	95679	-30	-5	TO-15	
06A	3/11	1733	BPS1-AR015-IND	Air	G	1	36042	-30	-2.5	TO-15	
07A	3/11	1732	BPS1-AR015-IN02	Air	G	1	34008	-30.5	-7.5	TO-15	
08A	3/12	1503	BPS1-AR003-IN04	Air	G	1	34791	-28	-4.0	TO-15	
09A	3/12	1505	BPS1-AR003-IN05	Air	G	1	32110	-32	-7.0	TO-15	Fed Ex
10A	3/12	2400	BPS1-DUP-IN03	Air	G	1	34746	-30	-6.5	TO-15	
	3/12										

CUSTODY SEAL INTACT? [✓ Y] N NONE TEMP 10A

1. RELINQUISHED BY	DATE 3-12-09	TIME 1800	1. RECEIVED BY	DATE 3-13-09	TIME 0900
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99

FORM NO. TNUS-001

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager Robert Sok
Collected by: (Print and Sign) Robert Sok
Company Tetra Tech NUS Email rob.sok@tetratech.com
Address 5700 Lake Wright Dr City Norfolk State VA Zip 23505
Phone 757-466-4904 Fax

Project Info:
P.O. #
Project # 112G02019
Project Name NWIR & Bethpage LTO-WE06

Turn Around Time:
☐ Normal
☒ Rush 48hr (specify)

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Canister Pressure/Vacuum Final	Canister Pressure/Vacuum Receipt	Canister Pressure/Vacuum Final (psi)
01A	BPS1-AR002-IN04	903	3-24-09	1445	TO-15	-32	-7		
02A	BPS1-AR002-IN05	34390	3-24-09	1447	TO-15	-32	-7.5		
03A	BPS1-AR013-IN03	932	3-24-09	1545	TO-15	-28	-5		
04A	BPS1-AR006-IN04	4167	3-24-09	1629	TO-15	-30	-4		
05A	BPS1-AR004-IN05	32676	3-24-09	1724	TO-15	-29	0.0		
06A	BPS1-AR010-IN03	1568	3-24-09	1808	TO-15	-29	-5.5		
07A	BPS1-AR007-IN03	31429	3-25-09	1317	TO-15	-31	0.0		
08A	BPS1-AR015-IN03	23921	3-25-09	1620	TO-15	-29.5	-7		
09A	BPS1-AR012-IN03	4139	3-25-09	16[illegible]	TO-15	-32	-4		
10A	BPS1-DUP-IN04	36029	3-24-09	2400	TO-15	-30	-6		

Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
3-25-09 1730	Monica Gropen ATL 3/26/09 915
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	Yes No [✓ None]	0903659

Form 1293 rev.11

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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(916) 985-1000 FAX (916) 985-1020

Page ____ of ____

Project Manager Dave Brayack

Collected by: (Print and Sign) Robert Sak

Company Tetra Tech NUS Email rob.sak

Address 5700 Lake Wright Dr City Norfolk State VA Zip 23502

Phone 757-466-4904 Fax

Project Info:

P.O. #

Project # 112G02019

Project Name NWIRP Bethpage

Turn Around Time:

☐ Normal

☒ Rush 48hr (specify)

Lab Use Only

Pressurized by:

Date:

Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	BPS1-AR016-SSB	4125	4/28/09	1410	TO-15	-29	-8		
02A	BPS1-AR016-OOA	03787	4/28/09	1414	TO-15	-30	-3		
03A	BPS1-AR016-INDL	20946	4/28/09	1418	TO-15	-30	-6.5		
04A	BPS1-AR016-INDB	31436	4/28/09	1422	TO-15	-30	-6		
05A	BPS1-AR017-SSB	34458 ~~65602~~	4/28/09	1625	TO-15	-29	-6		
06A	BPS1-AR017-INDB	6912	4/28/09	1633	TO-15	-30	-5		
07A	BPS1-AR017-INDL	33596	4/29/09	1635	TO-15	-30	-5.5		
08A	BPS1-AR018-INDB	34420	4/29/09	1035	TO-15	-28	-5		
09A	BPS1-AR018-SSB	33934	4/29/09	1040	TO-15	-30	-6		
10A	BPS1-AR018-OOA	4115	4/29/09	1045	TO-15	-30	-13.5		

Relinquished by: (signature) Date/Time 4/29/09 1600

Received by: (signature) Date/Time Monica Gregson ATL 4/30/09 920

Notes:

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Lab Use Only

Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
Fed Ex		NA	Good	[✓ Yes] No None	0904658

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Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager Dave Brayack
Collected by: (Print and Sign) Robert Sok
Company Tetra Tech NUS Email rob.sok@tetratech.com
Address 5700 Lake Wright Dr City Norfolk State VA Zip 23502
Phone 757-466-4904 Fax

Project Info:
P.O. #
Project # 112G02019
Project Name NWIRP Bethpage

Turn Around Time:
☐ Normal
☒ Rush 7 day (specify)

Lab Use Only
Pressurized by:
Date:
Pressurization Gas:
N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	BPS1-AR003-INDB	25300	4/30/09	1815	TO-15	-30	-7.5		
02A	BPS1-Dup	5717	4/30/09	2400	TO-15	-29.5	-5		

Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time	Notes:
5/1/09 0900	Monica Bregen ATL 5/4/09 930	
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time	
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	Yes No [✓ None]	0905069

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Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager: Rob Sok

Collected by: (Print and Sign) Ernie Wu

Company Tetra Tech NUS Email

Address 5700 Lake Wright Dr City Norfolk State VA Zip 23

Phone 757-461-3768 Fax 757-461-4148

Project Info:

P.O. # C70 - 147

Project # 112G02019

Project Name NWIRP Bethpage

Turn Around Time:

☐ Normal

☒ Rush 7 day specify

Lab Use Only

Pressurized by:

Date:

Pressurization Gas:

N₂ He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	BPS1-AR018-INDB-2	4237	5/21/09	1017	TO-15 (short list)	30 Hg	8 Hg		
02A	BPS1-AR018-INDL	5778	5/21/09	1022	TO-15 (short list)	30 Hg	8.5 Hg		
03A	BPS1-AR018-ODA-2	10788	5/21/09	1025	TO-15 (short list)	30 Hg	10.5 Hg		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
	5/21/09 1330	Monica Freeman ATL	5/22/09 1005

Notes:
TO-15 short list (9 compounds) per discussed w/ PM (Rob Sok)

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	[✓ Yes] No None	0905536

Form 1293 rev.11

APPENDIX E

DATA ANALYTICAL REPORT

Appendix E
Indoor Air Validated Results
Indoor Air Sampling
Bethpage, NY

Sample ID	BPS1-AR001-SSB	BPS1-AR001-SSB-D	BPS1-AR001-IND	BPS1-AR001-IND2	BPS1-AR002-SSB	BPS1-AR002-IND	BPS1-AR002-IND2
Sample date	20090120	20090120	20090120	20090224	20090121	20090121	20090219
Volatile Organics (ug/m^3)							
1,1,1-TRICHLOROETHANE	660	690	2.1	0.87	16000	92	73
1,1,2,2-TETRACHLOROETHANE	5.1 U	3.9 U	0.6 U	0.46 U	58 U	0.63 U	2 U
1,1,2-TRICHLOROETHANE	4.1 U	3.1 U	0.48 U	0.36 U	46 U	0.5 U	1.6 U
1,1,2-TRICHLOROTRIFLUOROETHANE	2700	2600	5.6	1.9 J	130	1	0.86 J
1,1-DICHLOROETHANE	6 U	1.4 J	0.71 U	0.54 U	78	0.66 J	2.4 U
1,1-DICHLOROETHENE	10 J	7 J	0.69 U	0.53 U	130	0.89	2.3 U
1,2,4-TRICHLOROBENZENE	55 U	43 U	6.5 U	5 U	250 U	6.8 UJ	22 U
1,2,4-TRIMETHYLBENZENE	7.3 U	0.62 J	2.8	0.32 J	4.9 J	0.35 J	0.53 J
1,2-DIBROMOETHANE	5.7 U	4.4 U	0.67 U	0.51 U	65 U	0.7 U	2.2 U
1,2-DICHLOROBENZENE	4.5 U	3.4 U	0.53 U	0.4 U	51 U	0.55 U	1.8 U
1,2-DICHLOROETHANE	6 U	4.6 U	0.71 U	0.54 U	34 U	0.74 U	2.4 UJ
1,2-DICHLOROPROPANE	6.9 U	5.3 U	0.81 U	0.62 U	39 U	0.84 U	2.7 U
1,2-DICHLOROTETRAFLUOROETHANE	5.2 U	4 U	0.61 U	0.47 U	59 U	0.64 U	2 U
1,3,5-TRIMETHYLBENZENE	7.3 U	5.6 U	0.66 J	0.66 U	42 U	0.9 U	2.9 U
1,3-DICHLOROBENZENE	4.5 U	3.4 U	0.53 U	0.4 U	51 U	0.55 U	1.8 U
1,4-DICHLOROBENZENE	4.5 U	3.4 U	0.53 U	0.4 U	51 U	0.55 U	1.2 J
1,4-DIOXANE	5.4 U	4.1 U	0.63 U	0.48 U	120 U	0.25 J	2.1 U
2,2,4-TRIMETHYLPENTANE	7 U	5.4 U	3.6	0.62 U	40 U	0.85 U	2.7 U
2-BUTANONE	3.2 U	3.1 U	3.4	2	25 U	2.6	1.9
4-METHYL-2-PENTANONE	6.1 U	4.7 U	0.72 U	0.11 J	35 U	0.2 J	2.4 U
BENZENE	1.7 J	1.7 J	4.3	0.52	27 U	1.1	1.9 U
BENZYL CHLORIDE	7.7 U	6 U	0.9 U	0.69 UJ	44 U	0.95 U	3 UJ
BROMODICHLOROMETHANE	5 U	3.8 U	0.59 U	0.45 U	57 U	0.61 U	2 UJ
BROMOFORM	7.7 U	5.9 U	0.9 U	0.69 UJ	88 U	0.94 U	3 UJ
BROMOMETHANE	5.8 U	4.5 U	0.68 U	0.49 U	33 U	0.71 U	2.3 U
CARBON TETRACHLORIDE	3.2 J	2.2 J	0.7	0.42 U	53 U	0.51 J	1.8 U
CHLOROBENZENE	6.8 U	5.3 U	0.8 U	0.62 U	39 U	0.84 U	2.7 U
CHLORODIBROMOMETHANE	6.3 U	4.9 U	0.74 U	0.57 U	72 U	0.78 U	2.5 U
CHLOROETHANE	3.9 U	3 U	0.46 U	0.35 U	22 U	0.48 U	1.5 U
CHLOROFORM	26	26	0.85 U	0.65 U	19 J	0.89 U	2.8 U
CHLOROMETHANE	3.1 U	2.4 U	1.7	2	70 U	1.2	1.9
CIS-1,2-DICHLOROETHENE	5.9 U	4.6 U	0.69 U	0.53 U	7.2 J	0.72 U	2.3 U
CIS-1,3-DICHLOROPROPENE	6.8 U	5.2 U	0.79 U	0.61 U	38 U	0.83 U	2.6 U
CYCLOHEXANE	5.1 UJ	12 J	2.3	0.21 J	29 U	1.8	1.5 J
DICHLORODIFLUOROMETHANE	2.5 J	3.3	2.4	2.7	42 U	2.7	3
ETHANOL	14 U	2.6 U	350 J	150 J	64 U	64	910 J
ETHYLBENZENE	6.5 U	5 U	2.9	0.25 J	15 J	0.35 J	0.81 J
HEXACHLOROBUTADIENE	79 U	61 U	9.3 U	7.1 U	360 U	9.8 U	31 U
HEXANE	5.2 U	4 U	11	0.9	30 U	0.62 U	2 U
M+P-XYLENES	3.4 J	3.6 J	9.2	0.8	26 J	0.86	1.9 J
METHYL TERT-BUTYL ETHER	5.4 U	4.1 U	0.14 J	0.48 U	31 U	0.66 U	2.1 U
METHYLENE CHLORIDE	26 U	20 U	1.2 J	0.33 J	30 U	0.51 J	1 J
O-XYLENE	1.5 J	1.4 J	2.9	0.3 J	6.7 J	0.32 J	0.51 J
STYRENE	6.3 U	4.9 U	0.31 J	0.57 U	6.2 J	0.18 J	2.5 U
TERTIARY-BUTYL ALCOHOL	22 U	17 U	0.46 J	0.34 J	100 U	1.1 J	8.8 U
TETRACHLOROETHENE	520	550	10	2.2	310	7.6	4.9
TOLUENE	31	30	25	2.2	600	2	4
TRANS-1,2-DICHLOROETHENE	5.9 U	4.6 U	0.69 U	0.53 U	34 U	0.72 U	2.3 U
TRANS-1,3-DICHLOROPROPENE	6.8 U	5.2 U	0.79 U	0.61 U	38 U	0.83 U	2.6 U
TRICHLOROETHENE	160	160	2.2	0.44	16000	140	100
TRICHLOROFLUOROMETHANE	3.5 J	3.4	1.5	1.2	48 U	2.2	1.9
VINYL CHLORIDE	3.8 U	2.9 U	0.45 U	0.34 U	22 U	0.47 U	1.5 U

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Sample ID Sample date	BPS1-AR002-IND3 20090224	BPS1-AR002-IND4 20090324	BPS1-AR002-IND5 20090324	BPS1-AR003-SSB 20090122	BPS1-AR003-IND 20090122	BPS1-AR003-IND-D 20090122	BPS1-AR003-IND2 20090218
Volatile Organics (ug/m^3)							
1,1,1-TRICHLOROETHANE	42	4.8	11	10000	95	98	74
1,1,2,2-TETRACHLOROETHANE	0.52 U	0.55 U	0.58 U	45 U	0.67 U	0.74 U	1.2 U
1,1,2-TRICHLOROETHANE	0.41 U	0.44 U	0.46 U	36 U	0.53 U	0.59 U	0.92 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.48 J	0.32 J	0.35 J	50 U	0.72 J	0.59 J	1.3 U
1,1-DICHLOROETHANE	0.32 J	0.65 U	0.28 J	99	0.8	0.83 J	0.6 J
1,1-DICHLOROETHENE	0.66	0.64 U	0.33 J	120	0.83	0.98	0.81 J
1,2,4-TRICHLOROBENZENE	5.6 U	6 UJ	6.2 UJ	190 U	7.3 UJ	8 UJ	12 U
1,2,4-TRIMETHYLBENZENE	0.18 J	0.11 J	0.82 U	6.5 J	5.6	6.1	4.4
1,2-DIBROMOETHANE	0.58 U	0.62 U	0.64 U	50 U	0.75 U	0.83 U	1.3 U
1,2-DICHLOROBENZENE	0.46 U	0.48 U	0.5 U	39 U	0.59 U	0.65 U	1 U
1,2-DICHLOROETHANE	0.62 U	0.65 U	0.68 U	26 U	0.79 U	0.88 U	1.4 UJ
1,2-DICHLOROPROPANE	0.7 U	0.74 U	0.78 U	30 U	0.9 U	1 U	1.6 U
1,2-DICHLOROTETRAFLUOROETHANE	0.53 U	0.56 U	0.59 U	46 U	0.68 U	0.76 U	1.2 U
1,3,5-TRIMETHYLBENZENE	0.75 U	0.79 U	0.82 U	32 U	1.5	1.6	1.2 J
1,3-DICHLOROBENZENE	0.46 U	0.48 U	0.5 U	39 U	0.59 U	0.65 U	1 U
1,4-DICHLOROBENZENE	0.46 U	0.14 J	0.5 U	39 U	4.3	4.1	3.2
1,4-DIOXANE	0.55 U	0.58 U	0.6 U	94 U	0.71 U	0.78 U	1.2 U
2,2,4-TRIMETHYLPENTANE	0.71 U	0.75 U	0.78 U	30 U	8.2	8	6.2
2-BUTANONE	1.1	1.1	0.21 J	19 U	0.72	0.97	1.2
4-METHYL-2-PENTANONE	0.62 U	0.66 U	0.69 U	27 U	0.8 U	0.89 U	1.4 U
BENZENE	0.27 J	0.51 U	0.54 U	9.7 U	6.3	7	5.4
BENZYL CHLORIDE	0.79 UJ	0.83 U	0.87 U	34 U	1 U	1.1 U	1.7 UJ
BROMODICHLOROMETHANE	0.51 U	0.54 U	0.56 U	44 U	0.66 U	0.73 U	1.1 UJ
BROMOFORM	0.78 UJ	0.83 U	0.87 U	68 U	1 U	1.1 U	1.7 UJ
BROMOMETHANE	0.59 U	0.32 J	0.34 J	25 U	0.76 U	0.84 U	1.3 U
CARBON TETRACHLORIDE	0.48 U	0.51 U	0.53 U	41 U	0.6 J	0.65 J	1 U
CHLOROBENZENE	0.7 U	0.74 U	0.77 U	30 U	0.9 U	1 U	1.5 U
CHLORODIBROMOMETHANE	0.65 U	0.68 U	0.72 U	56 U	0.83 U	0.92 U	1.4 U
CHLOROETHANE	0.4 U	0.42 U	0.44 U	17 U	0.52 U	0.57 U	0.89 U
CHLOROFORM	0.74 U	0.79 U	0.82 U	9.7 J	0.96 U	1 U	1.6 U
CHLOROMETHANE	1.2	1.3	1.2	54 U	1.2	1.2	1.7
CIS-1,2-DICHLOROETHENE	0.6 U	0.64 U	0.67 U	15 J	0.78 U	0.86 U	1.3 U
CIS-1,3-DICHLOROPROPENE	0.69 U	0.73 U	0.76 U	30 U	0.89 U	0.98 U	1.5 U
CYCLOHEXANE	0.65	0.55 U	0.58 U	22 U	9.4	10	7.5
DICHLORODIFLUOROMETHANE	2.8	2.2	2.2	32 U	2.6	2.9	3.5
ETHANOL	34	300 J	31 J	100	41	41	570 J
ETHYLBENZENE	0.66 U	0.7 U	0.73 U	28 U	4.3	4.4	3.2
HEXACHLOROBUTADIENE	8.1 U	8.6 U	9 U	280 U	10 U	12 U	18 U
HEXANE	0.54 U	0.57 U	0.59 U	33	23	24	17
M+P-XYLENES	0.21 J	0.29 J	0.73 U	12 J	13	14	9.8
METHYL TERT-BUTYL ETHER	0.55 U	0.58 U	0.6 U	24 UJ	0.71 U	0.78 U	1.2 U
METHYLENE CHLORIDE	0.43 J	0.54 J	0.42 J	23 U	2.1 J	2.1 J	2.3 J
O-XYLENE	0.088 J	0.1 J	0.73 U	28 U	5	5	3.8
STYRENE	0.65 U	0.24 J	0.72 U	28 U	0.83 U	0.92 U	0.28 J
TERTIARY-BUTYL ALCOHOL	2.3 U	0.64 J	2.5 U	79 U	3 U	3.3 U	5.1 U
TETRACHLOROETHENE	2.1	0.91	0.57 U	130	4.3	4.2	3.1
TOLUENE	0.57	2	0.63 U	120	19	21	22
TRANS-1,2-DICHLOROETHENE	0.6 U	0.64 U	0.67 U	26 U	0.78 U	0.86 U	1.3 U
TRANS-1,3-DICHLOROPROPENE	0.69 U	0.73 U	0.76 U	30 U	0.89 U	0.98 U	1.5 U
TRICHLOROETHENE	46	3.1	4.2	13000	180	180	110
TRICHLOROFLUOROMETHANE	1.5	1.5	1.5	37 U	1.7	1.9	5
VINYL CHLORIDE	0.39 U	0.41 U	0.43 U	17 U	0.5 U	0.55 U	0.86 U

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Sample ID Sample date	BPS1-AR003-IND3 20090226	BPS1-AR003-IND3-D 20090226	BPS1-AR003-IND4 20090311	BPS1-AR003-IND5 20090311	BPS1-AR003-IND5-D 20090311	BPS1-AR003-INDB 20090430	BPS1-AR003-INDB-D 20090430
Volatile Organics (ug/m^3)							
1,1,1-TRICHLOROETHANE	27	27	41	5.2	5.5	65	64
1,1,2,2-TETRACHLOROETHANE	0.58 U	0.58 U	0.53 U	0.53 U	0.56 U		
1,1,2-TRICHLOROETHANE	0.46 U	0.46 U	0.42 U	0.42 U	0.45 U		
1,1,2-TRICHLOROTRIFLUOROETHANE	0.33 J	0.24 J	0.76	0.59 U	0.26 J		
1,1-DICHLOROETHANE	0.39 J	0.3 J	0.87	0.19 J	0.21 J	0.7 J	0.8
1,1-DICHLOROETHENE	0.51 J	0.44 J	1	0.61 U	0.47 J	0.48 J	0.47 J
1,2,4-TRICHLOROBENZENE	6.2 UJ	6.2 UJ	5.8 UJ	5.8 UJ	6.1 UJ		
1,2,4-TRIMETHYLBENZENE	2.2 J	1.1 J	3.4	0.42 J	0.4 J		
1,2-DIBROMOETHANE	0.64 U	0.64 U	0.6 U	0.6 U	0.63 U		
1,2-DICHLOROBENZENE	0.5 U	0.5 U	0.46 U	0.46 U	0.49 U		
1,2-DICHLOROETHANE	0.68 U	0.68 U	0.34 J	0.63 U	0.66 U	0.97	1.2
1,2-DICHLOROPROPANE	0.78 U	0.78 U	0.72 U	0.72 U	0.76 U		
1,2-DICHLOROTETRAFLUOROETHANE	0.59 U	0.59 U	0.54 U	0.54 U	0.57 U		
1,3,5-TRIMETHYLBENZENE	0.64 J	0.52 J	0.93	0.76 U	0.81 U		
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.46 U	0.46 U	0.49 U		
1,4-DICHLOROBENZENE	1.1 U	1 U	1.4	0.38 J	0.45 J		
1,4-DIOXANE	0.6 U	0.6 U	0.56 U	0.56 U	0.59 U		
2,2,4-TRIMETHYLPENTANE	3.1	3.4	3.6	0.72 U	0.77 U		
2-BUTANONE	0.51	0.49 U	1.7	0.58	1.2		
4-METHYL-2-PENTANONE	0.69 U	0.69 U	0.63 U	0.63 U	0.67 U		
BENZENE	2.8	3	3.6	0.5 U	0.52 U		
BENZYL CHLORIDE	0.87 U	0.87 U	0.8 U	0.8 U	0.85 U		
BROMODICHLOROMETHANE	0.56 U	0.56 U	0.52 U	0.52 U	0.55 U		
BROMOFORM	0.87 U	0.87 U	0.8 U	0.8 U	0.85 U		
BROMOMETHANE	0.56 J	0.65 U	0.6 U	0.6 U	0.64 U		
CARBON TETRACHLORIDE	0.53 U	0.53 U	0.39 J	0.48 J	0.52 U		
CHLOROBENZENE	0.77 U	0.77 U	0.71 U	0.71 U	0.76 U		
CHLORODIBROMOMETHANE	0.72 U	0.72 U	0.66 U	0.66 U	0.7 U		
CHLOROETHANE	0.44 U	0.44 U	0.41 U	0.41 U	0.43 U		
CHLOROFORM	0.82 U	0.82 U	0.76 U	0.76 U	0.8 U		
CHLOROMETHANE	1.1	1.1	1.1	1.2	1.3		
CIS-1,2-DICHLOROETHENE	0.67 U	0.67 U	0.61 U	0.61 U	0.65 U	0.69 U	0.63 U
CIS-1,3-DICHLOROPROPENE	0.76 U	0.76 U	0.7 U	0.7 U	0.74 U		
CYCLOHEXANE	4.8	5.2	8	0.56	0.5 J		
DICHLORODIFLUOROMETHANE	2.3	2.1	2.3	2.2	2.3		
ETHANOL	32	30	55	500 J	560 J		
ETHYLBENZENE	1.8	1.5	2.3	0.22 J	0.22 J		
HEXACHLOROBUTADIENE	9 U	9 U	8.3 U	8.3 U	8.7 U		
HEXANE	9.3	9.8	12	0.69	0.61		
M+P-XYLENES	5.4	3.8	6.7	0.58 J	0.57 J		
METHYL TERT-BUTYL ETHER	0.6 U	0.6 U	0.56 U	0.56 U	0.59 U		
METHYLENE CHLORIDE	1.5 J	1.4 J	1.4 J	0.77 J	0.77 J		
O-XYLENE	2	1.7	2.5	0.24 J	0.23 J		
STYRENE	0.72 U	0.72 U	0.66 U	0.66 U	0.7 U		
TERTIARY-BUTYL ALCOHOL	2.5 U	2.5 U	0.41 J	2.3 U	2.5 U		
TETRACHLOROETHENE	0.75	0.72	0.49 J	0.52 U	0.56 U	0.38 J	0.54
TOLUENE	9.3	7.6	9.9	1.5	1.3		
TRANS-1,2-DICHLOROETHENE	0.67 U	0.67 U	0.61 U	0.61 U	0.65 U	0.69 U	0.63 U
TRANS-1,3-DICHLOROPROPENE	0.76 U	0.76 U	0.7 U	0.7 U	0.74 U		
TRICHLOROETHENE	34	31	32	2.8	3	52	50
TRICHLOROFLUOROMETHANE	1.6	1.4	2.7	3.7	4.1		
VINYL CHLORIDE	0.43 U	0.43 U	0.4 U	0.4 U	0.42 U	0.45 U	0.4 U

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Sample ID	BPS1-AR004-SSB	BPS1-AR004-IND	BPS1-AR004-IND2	BPS1-AR004-IND3	BPS1-AR004-IND4	BPS1-AR004-IND5	BPS1-AR005-SSB
Sample date	20090121	20090121	20090121	20090218	20090226	20090324	20090121
Volatile Organics (ug/m^3)							
1,1,1-TRICHLOROETHANE	2100	6.4	2.7	6.2	1.6	1.2	1.7
1,1,2,2-TETRACHLOROETHANE	5.3 U	1.2 U	0.67 U	1.3 U	0.53 U	0.46 U	0.64 U
1,1,2-TRICHLOROETHANE	4.2 U	1 U	0.53 U	1 U	0.42 U	0.36 U	0.51 U
1,1,2-TRICHLOROTRIFLUOROETHANE	4.4 J	1.4 U	0.62 J	0.66 J	0.59 U	0.39 J	0.82
1,1-DICHLOROETHANE	3 J	1.5 U	0.79 U	1.5 U	0.63 U	0.54 U	0.76 U
1,1-DICHLOROETHENE	16	1.4 U	0.78 U	1.5 U	0.61 U	0.53 U	0.74 U
1,2,4-TRICHLOROBENZENE	58 U	14 U	7.3 UJ	14 U	5.8 UJ	5 UJ	6.9 U
1,2,4-TRIMETHYLBENZENE	2.2 J	0.44 J	0.54 J	0.83 J	0.76 U	0.41 J	2.2
1,2-DIBROMOETHANE	6 U	1.4 U	0.75 U	1.4 U	0.6 U	0.51 U	0.72 U
1,2-DICHLOROBENZENE	4.6 U	1.1 U	0.59 U	1.1 U	0.46 U	0.4 U	0.56 U
1,2-DICHLOROETHANE	6.3 U	1.5 U	0.31 J	1.5 UJ	0.63 U	0.24 J	0.2 J
1,2-DICHLOROPROPANE	7.2 U	1.7 U	0.9 U	1.7 U	0.72 U	0.62 U	0.86 U
1,2-DICHLOROTETRAFLUOROETHANE	5.4 U	1.3 U	0.68 U	1.3 U	0.54 U	0.47 U	0.65 U
1,3,5-TRIMETHYLBENZENE	7.6 U	1.8 U	0.16 J	0.27 J	0.76 U	0.1 J	0.62 J
1,3-DICHLOROBENZENE	4.6 U	1.1 U	0.59 U	1.1 U	0.46 U	0.4 U	0.56 U
1,4-DICHLOROBENZENE	4.6 U	1.1 U	0.59 U	0.32 J	0.46 U	0.67	1.1 U
1,4-DIOXANE	5.6 U	1.3 U	0.71 U	1.3 U	0.56 U	0.48 U	1.2
2,2,4-TRIMETHYLPENTANE	7.2 U	1.7 U	0.92 U	1.7 U	0.72 U	0.62 U	0.87 U
2-BUTANONE	4 U	2.2 U	4.4	2.7	1.1	1.7	1.4 U
4-METHYL-2-PENTANONE	6.3 U	0.25 J	0.24 J	1.8	0.63 U	0.31 J	0.44 J
BENZENE	2.8 J	2.1	1.3	1.8 U	0.24 J	0.44 U	0.87
BENZYL CHLORIDE	8 U	1.9 U	1 U	1.9 UJ	0.8 U	0.69 U	0.97 U
BROMODICHLOROMETHANE	5.2 U	1.2 U	0.66 U	1.2 UJ	0.52 U	0.45 U	0.63 U
BROMOFORM	8 U	1.9 U	1 U	1.9 UJ	0.8 U	0.69 U	0.97 U
BROMOMETHANE	6 U	1.4 U	0.76 U	1.4 U	0.32 J	0.27 J	0.73 U
CARBON TETRACHLORIDE	4.9 U	1.1 U	0.44 J	0.69 J	0.49 U	0.3 J	0.59 U
CHLOROBENZENE	7.1 U	1.7 U	0.9 U	1.7 U	0.71 U	0.62 U	0.36 J
CHLORODIBROMOMETHANE	6.6 U	1.6 U	0.83 U	1.6 U	0.66 U	0.57 U	0.8 U
CHLOROETHANE	4.1 U	0.96 U	0.52 U	0.99 U	0.41 U	0.35 U	0.49 U
CHLOROFORM	24	1.8 U	0.96 U	1.8 U	0.76 U	0.65 U	59
CHLOROMETHANE	3.2 U	1.2	1.1	1.7	1.2	1	0.37 J
CIS-1,2-DICHLOROETHENE	6.1 U	1.4 U	0.78 U	1.5 U	0.61 U	0.53 U	0.74 U
CIS-1,3-DICHLOROPROPENE	7 U	1.6 U	0.89 U	1.7 U	0.7 U	0.61 U	0.85 U
CYCLOHEXANE	5.3 U	1.2 U	0.67 U	0.82 J	0.53 U	0.46 U	0.29 J
DICHLORODIFLUOROMETHANE	2.6 J	2.4	2.3	3.4	1.9	1.8	1.9
ETHANOL	3.9 U	110	510 J	840 J	47	180 J	8.9
ETHYLBENZENE	2.8 J	0.38 J	0.52 J	1 J	0.67 U	0.34 J	2.4
HEXACHLOROBUTADIENE	83 U	19 U	10 U	20 U	8.3 U	7.1 U	10 U
HEXANE	5.5 U	0.51 J	0.73	1.3 U	0.55 U	0.47 U	0.57 J
M+P-XYLENES	6.9	1.4 J	0.93	2.3	0.2 J	0.68	6.3
METHYL TERT-BUTYL ETHER	5.6 U	1.3 U	0.71 U	1.3 U	0.56 U	0.48 U	0.67 U
METHYLENE CHLORIDE	27 U	6.3 U	0.4 J	1.2 J	0.37 J	0.89 J	7
O-XYLENE	2.6 J	0.51 J	0.36 J	0.99 J	0.67 U	0.33 J	3
STYRENE	6.6 U	0.32 J	0.26 J	1.3 J	0.66 U	0.82	0.86
TERTIARY-BUTYL ALCOHOL	23 U	5.5 U	1.3 J	1.3 J	0.78 J	0.91 J	2 J
TETRACHLOROETHENE	42	1.2 U	2.2	0.82 J	0.52 U	0.45 U	4.5
TOLUENE	70	4.6	4.9	11	0.76	3.6	110
TRANS-1,2-DICHLOROETHENE	6.1 U	1.4 U	0.78 U	1.5 U	0.61 U	0.53 U	0.74 U
TRANS-1,3-DICHLOROPROPENE	7 U	1.6 U	0.89 U	1.7 U	0.7 U	0.61 U	0.85 U
TRICHLOROETHENE	1400	6.8	2.9	6.1	1.2	1.1	0.35 J
TRICHLOROFLUOROMETHANE	2.9 J	1.6	2.4	2.2	0.99	1.2	2.7
VINYL CHLORIDE	4 U	0.93 U	0.5 U	0.96 U	0.4 U	0.34 U	0.48 U

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Sample ID	BPS1-AR005-IND	BPS1-AR006-SSB	BPS1-AR006-IND	BPS1-AR006-IND2	BPS1-AR006-IND3	BPS1-AR006-IND4	BPS1-AR007-SSB
Sample date	20090121	20090219	20090219	20090219	20090226	20090324	20090220
Volatile Organics (ug/m^3)							
1,1,1-TRICHLOROETHANE	0.72	1600	40	8.8	2.4	7	370
1,1,2,2-TETRACHLOROETHANE	0.59 U	4.4 U	0.61 U	0.47 U	0.51 U	1 U	2 U
1,1,2-TRICHLOROETHANE	0.47 U	3.5 U	0.49 U	0.37 U	0.41 U	0.83 U	1.6 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.81	1200	16	3	1.2	1.1 U	1600
1,1-DICHLOROETHANE	0.69 U	3.2 J	0.72 U	0.55 U	0.6 U	1.2 U	4.9
1,1-DICHLOROETHENE	0.68 U	13	0.33 J	0.54 U	0.59 U	1.2 U	4.5
1,2,4-TRICHLOROBENZENE	6.3 U	47 U	6.6 U	5 U	5.5 UJ	11 UJ	21 U
1,2,4-TRIMETHYLBENZENE	0.73 J	1.8 J	0.92	1.3	0.44 J	0.78 J	9.4
1,2-DIBROMOETHANE	0.66 U	4.9 U	0.69 U	0.52 U	0.57 U	1.2 U	2.2 U
1,2-DICHLOROBENZENE	0.52 U	3.8 U	0.54 U	0.24 J	0.45 U	0.91 U	1.7 U
1,2-DICHLOROETHANE	0.69 U	5.1 UJ	0.72 UJ	0.55 UJ	0.6 U	1.2 U	2.3 UJ
1,2-DICHLOROPROPANE	0.79 U	5.9 U	0.83 U	0.63 U	0.69 U	1.4 U	2.6 U
1,2-DICHLOROTETRAFLUOROETHANE	0.6 U	4.4 U	0.41 J	0.5	0.26 J	1.1 U	2 U
1,3,5-TRIMETHYLBENZENE	0.16 J	6.2 U	0.31 J	0.43 J	0.14 J	0.22 J	2.9
1,3-DICHLOROBENZENE	0.51 U	3.8 U	0.54 U	0.18 J	0.45 U	0.91 U	1.7 U
1,4-DICHLOROBENZENE	0.51 U	2.3 J	14	180	1	240	1.1 J
1,4-DIOXANE	0.62 U	4.6 U	0.64 U	0.46 J	0.54 U	1.1 U	2 U
2,2,4-TRIMETHYLPENTANE	0.89	5.9 U	1.1	0.62 J	0.7 U	1.4 U	4.4
2-BUTANONE	2.2 U	18	6	4.8	2.2	1.8	2.8
4-METHYL-2-PENTANONE	0.7 U	5.2 U	0.75	0.56 U	0.21 J	1.2 U	2.3 U
BENZENE	1.5	4 U	1.5	1.4	0.27 J	0.97 U	8.6
BENZYL CHLORIDE	0.88 U	6.6 UJ	0.93 UJ	0.7 UJ	0.77 U	1.6 U	3 UJ
BROMODICHLOROMETHANE	0.57 U	4.2 UJ	0.6 UJ	0.46 UJ	0.5 U	1 U	1.9 UJ
BROMOFORM	0.88 U	6.6 UJ	0.92 UJ	0.7 UJ	0.77 U	1.6 U	2.9 UJ
BROMOMETHANE	0.66 U	4.9 U	0.7 U	0.53 U	0.58 U	1.2 U	2.2 U
CARBON TETRACHLORIDE	0.54	4 U	0.37 J	0.5	0.47 U	0.59 J	2.1
CHLOROBENZENE	0.79 U	5.8 U	0.82 U	0.63 U	0.68 U	1.4 U	2.6 U
CHLORODIBROMOMETHANE	0.73 U	5.4 U	0.76 U	0.58 U	0.63 U	1.3 U	2.4 U
CHLOROETHANE	0.45 U	3.4 U	0.47 U	0.36 U	0.39 U	0.8 U	1.5 U
CHLOROFORM	0.73 J	68	0.52 J	0.89	0.73 U	1.1 J	4.3
CHLOROMETHANE	1	2.6 U	1.3	1.3	1.2	1.2	0.76 J
CIS-1,2-DICHLOROETHENE	0.68 U	5 U	0.71 U	0.54 U	0.59 U	1.2 U	2.2 U
CIS-1,3-DICHLOROPROPENE	0.78 U	5.8 U	0.81 U	0.62 U	0.68 U	1.4 U	2.6 U
CYCLOHEXANE	0.7	24	1.4	0.52	0.51 U	1 U	7.5
DICHLORODIFLUOROMETHANE	2.4	3 J	3.4	3.7	2.6	3.9	3.2
ETHANOL	99 J	13	51	150 J	27	560 J	11
ETHYLBENZENE	0.82	3.2 J	0.77 U	2.5	0.3 J	0.37 J	12
HEXACHLOROBUTADIENE	9.1 U	68 U	9.5 U	7.2 U	7.9 U	16 U	30 U
HEXANE	1.8	2.4 J	2.6	1.3	0.52 U	1.1 U	9
M+P-XYLENES	2	9	2.1	7.3	0.93	1.2 J	43
METHYL TERT-BUTYL ETHER	0.62 U	4.6 U	0.64 U	0.49 U	0.54 U	1.1 U	2 U
METHYLENE CHLORIDE	40	22 U	0.73 J	0.63 J	0.47 J	5.3 U	1.2 J
O-XYLENE	0.7 J	3 J	0.75 J	2.2	0.35 J	0.51 J	16
STYRENE	0.15 J	0.9 J	0.22 J	0.42 J	0.63 U	0.24 J	2.4 U
TERTIARY-BUTYL ALCOHOL	0.44 J	3.9 J	0.81 J	0.78 J	0.7 J	4.6 U	9.6
TETRACHLOROETHENE	0.58 U	650	56	8.8	2.4	1.6	310
TOLUENE	3.5	36	5.2	8.6	0.7	4.3	91
TRANS-1,2-DICHLOROETHENE	0.68 U	5 U	0.71 U	0.54 U	0.59 U	1.2 U	2.2 U
TRANS-1,3-DICHLOROPROPENE	0.78 U	5.8 U	0.81 U	0.62 U	0.68 U	1.4 U	2.6 U
TRICHLOROETHENE	0.46 U	740	43	6.6	2.1	1.2	170
TRICHLOROFLUOROMETHANE	1.8	5	2.6	3.5	1	6.1	3.4
VINYL CHLORIDE	0.44 U	3.2 U	0.46 U	0.35 U	0.38 U	0.78 U	1.4 U

Appendix E
Indoor Air Validated Results
Indoor Air Sampling
Bethpage, NY

Sample ID	BPS1-AR007-IND	BPS1-AR007-IND2	BPS1-AR007-IND3	BPS1-AR008-SSB	BPS1-AR008-IND	BPS1-AR008-IND2	BPS1-AR009-SSB
Sample date	20090220	20090220	20090325	20090220	20090220	20090220	20090225
Volatile Organics (ug/m^3)							
1,1,1-TRICHLOROETHANE	1	0.51	0.47	45	0.49 J	2.3 U	140
1,1,2,2-TETRACHLOROETHANE	0.53 U	0.52 U	0.46 U	0.55 U	0.63 U	2.9 U	0.64 U
1,1,2-TRICHLOROETHANE	0.42 U	0.41 U	0.36 U	0.44 U	0.5 U	2.3 U	0.51 U
1,1,2-TRICHLOROTRIFLUOROETHANE	6.2	2.8	2.5	1.2	1	3.2 U	2.4 J
1,1-DICHLOROETHANE	0.63 U	0.62 U	0.54 U	0.65 U	0.74 U	3.4 U	0.76 U
1,1-DICHLOROETHENE	0.61 U	0.6 U	0.53 U	0.64 U	0.72 U	3.3 U	0.74 U
1,2,4-TRICHLOROBENZENE	5.8 U	5.6 U	5 U	6 U	6.8 U	31 U	6.9 U
1,2,4-TRIMETHYLBENZENE	0.67 J	0.47 J	0.14 J	6.7	0.9 U	4.1 U	3
1,2-DIBROMOETHANE	0.6 U	0.58 U	0.51 U	0.62 U	0.7 U	3.2 U	0.72 U
1,2-DICHLOROBENZENE	0.46 U	0.46 U	0.4 U	0.48 U	0.55 U	2.5 U	0.56 U
1,2-DICHLOROETHANE	1.3 J	0.69 J	0.49 J	0.38 J	0.4 J	3.4 U	0.24 J
1,2-DICHLOROPROPANE	0.72 U	0.7 U	0.62 U	0.74 U	0.84 U	3.9 U	0.86 U
1,2-DICHLOROTETRAFLUOROETHANE	0.54 U	0.53 U	0.47 U	0.56 U	0.64 U	2.9 U	0.65 U
1,3,5-TRIMETHYLBENZENE	0.17 J	0.75 U	0.66 U	2.1	0.9 U	4.1 U	0.61 J
1,3-DICHLOROBENZENE	0.46 U	0.46 U	0.4 U	0.48 U	0.55 U	2.5 U	0.56 U
1,4-DICHLOROBENZENE	0.3 J	0.41 J	0.4 U	0.83 U	0.55 U	2.5 U	1.5
1,4-DIOXANE	0.56 U	0.18 J	0.48 U	0.25 J	0.66 U	3 U	0.38 J
2,2,4-TRIMETHYLPENTANE	0.72 U	0.71 U	0.62 U	2.9	0.3 J	3.9 U	1.1
2-BUTANONE	1.1	0.84	0.5	8.5 J	1.5 J	4.3 J	16
4-METHYL-2-PENTANONE	0.63 U	0.62 U	0.55 U	1.1	0.75 U	3.4 U	1.3
BENZENE	1.2	1	0.46	8.4	1.2	2.7 U	3.6
BENZYL CHLORIDE	0.8 UJ	0.79 UJ	0.69 U	0.83 U	0.95 U	4.3 U	0.97 UJ
BROMODICHLOROMETHANE	0.52 UJ	0.51 UJ	0.45 U	0.54 U	0.61 U	2.8 U	0.63 U
BROMOFORM	0.8 UJ	0.78 UJ	0.69 U	0.83 U	0.94 U	4.3 U	0.97 UJ
BROMOMETHANE	0.6 U	0.59 U	0.52 U	0.62 U	0.71 U	3.3 U	0.73 U
CARBON TETRACHLORIDE	0.56	0.57	0.29 J	0.28 J	0.58 U	2.6 U	0.45 J
CHLOROBENZENE	0.71 U	0.7 U	0.62 U	0.11 J	0.84 U	3.9 U	0.86 U
CHLORODIBROMOMETHANE	0.66 U	0.65 U	0.57 U	0.68 U	0.78 U	3.6 U	0.8 U
CHLOROETHANE	0.41 U	0.4 U	0.35 U	0.42 U	0.48 U	2.2 U	0.49 U
CHLOROFORM	0.76 U	0.74 U	0.65 U	19	0.33 J	4.1 U	1.3
CHLOROMETHANE	1.2	1.6	1.1	0.21 J	1.6	2.1	0.26 J
CIS-1,2-DICHLOROETHENE	0.61 U	0.6 U	0.53 U	0.64 U	0.72 U	3.3 U	0.74 U
CIS-1,3-DICHLOROPROPENE	0.7 U	0.69 U	0.61 U	0.73 U	0.83 U	3.8 U	0.85 U
CYCLOHEXANE	0.38 J	0.24 J	0.46 U	2.2	0.63 U	1.1 J	2.7
DICHLORODIFLUOROMETHANE	2.6	2.4	2.3	2.9	3.3	3.8	5.2
ETHANOL	56	190 J	23 J	48	74	1100 J	14
ETHYLBENZENE	0.34 J	0.29 J	0.58 U	11	0.42 J	0.91 J	3.9
HEXACHLOROBUTADIENE	8.3 U	8.1 U	7.1 U	8.6 U	9.8 U	45 U	10 U
HEXANE	0.99	0.72	0.47 U	5.6	0.49 J	1.7 J	2.6
M+P-XYLENES	0.83	0.67	0.2 J	45	0.75 J	2.7 J	12
METHYL TERT-BUTYL ETHER	0.56 U	0.55 U	0.48 U	0.58 U	0.66 U	3 U	0.67 U
METHYLENE CHLORIDE	0.54 J	0.37 J	0.27 J	0.82 J	2.1 J	2.3 J	3.2 U
O-XYLENE	0.34 J	0.27 J	0.092 J	14	0.31 J	0.94 J	3.6
STYRENE	0.24 J	0.18 J	0.12 J	0.68 U	0.78 U	3.6 U	0.9
TERTIARY-BUTYL ALCOHOL	2.3 U	2.3 U	2 U	6.5	2.8 U	13 U	7.7
TETRACHLOROETHENE	3.2	1.6	0.9	3.4	0.34 J	2.6 J	8.8
TOLUENE	2	2.7	1.2	97	4.4	14	130
TRANS-1,2-DICHLOROETHENE	0.61 U	0.6 U	0.53 U	0.64 U	0.72 U	3.3 U	0.74 U
TRANS-1,3-DICHLOROPROPENE	0.7 U	0.69 U	0.61 U	0.73 U	0.83 U	3.8 U	0.85 U
TRICHLOROETHENE	0.75	0.4 U	0.2 J	16	0.49 U	2.2 U	21
TRICHLOROFLUOROMETHANE	1.8	1.6	1.4	20	4.4	3	4.3
VINYL CHLORIDE	0.4 U	0.39 U	0.34 U	0.41 U	0.47 U	2.1 U	0.48 U

Appendix E
Indoor Air Validated Results
Indoor Air Sampling
Bethpage, NY

Sample ID	BPS1-AR009-IND	BPS1-AR009-IND-D	BPS1-AR009-IND2	BPS1-AR010-SSB2	BPS1-AR010-IND	BPS1-AR010-IND2	BPS1-AR010-IND3
Sample date	20090225	20090225	20090225	20090226	20090225	20090225	20090324
Volatile Organics (ug/m^3)							
1,1,1-TRICHLOROETHANE	1.8	1.5	0.61	590	3.9	0.58 J	2.2
1,1,2,2-TETRACHLOROETHANE	0.56 U	0.76 U	0.67 U	2.7 U	0.46 U	0.92 U	0.55 U
1,1,2-TRICHLOROETHANE	0.45 U	0.61 U	0.53 U	2.1 U	0.36 U	0.73 U	0.44 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.89 J	0.66 J	0.73 J	2000	12	2.4	5.5
1,1-DICHLOROETHANE	0.66 U	0.9 U	0.79 U	8.2	0.54 U	1.1 U	0.65 U
1,1-DICHLOROETHENE	0.65 U	0.88 U	0.78 U	7.1	0.53 U	1.1 U	0.64 U
1,2,4-TRICHLOROBENZENE	6.1 U	8.3 UJ	7.3 UJ	29 UJ	5 UJ	9.9 UJ	6 U
1,2,4-TRIMETHYLBENZENE	0.51 J	1.1 U	0.96 U	4.7	0.43 J	0.65 J	0.15 J
1,2-DIBROMOETHANE	0.63 U	0.86 U	0.75 U	3 U	0.51 U	1 U	0.62 U
1,2-DICHLOROBENZENE	0.49 U	0.67 U	0.59 U	2.3 U	0.4 U	0.8 U	0.48 U
1,2-DICHLOROETHANE	0.66 U	0.9 U	0.79 U	3.1 U	0.54 U	1.1 U	0.65 U
1,2-DICHLOROPROPANE	0.76 U	1 U	0.9 U	3.6 U	0.62 U	1.2 U	0.74 U
1,2-DICHLOROTETRAFLUOROETHANE	0.57 U	0.78 U	0.68 U	2.7 U	0.47 U	0.94 U	0.56 U
1,3,5-TRIMETHYLBENZENE	0.15 J	0.15 J	0.16 J	1.6 J	0.13 J	1.3 U	0.79 U
1,3-DICHLOROBENZENE	0.49 U	0.67 U	0.59 U	2.3 U	0.4 U	0.8 U	0.48 U
1,4-DICHLOROBENZENE	0.49 U	0.67 U	0.59 U	2.3 U	0.4 U	0.8 U	0.48 U
1,4-DIOXANE	0.59 U	0.8 U	0.71 U	2.8 U	0.48 U	0.96 U	0.58 U
2,2,4-TRIMETHYLPENTANE	1.2	1.5	5	2.6 J	0.62 U	1.2 U	0.75 U
2-BUTANONE	0.77	1.1	0.92	4.9	15	2.5	4.7
4-METHYL-2-PENTANONE	0.23 J	0.2 J	0.27 J	3.2 U	0.55 U	1.1 U	0.66 U
BENZENE	0.86	0.67 J	0.69	3.3	0.62	0.71 J	0.32 J
BENZYL CHLORIDE	0.85 UJ	1.2 U	1 U	4 U	0.69 U	1.4 U	0.83 U
BROMODICHLOROMETHANE	0.55 U	0.75 U	0.66 U	2.6 U	0.45 U	0.9 U	0.54 U
BROMOFORM	0.85 UJ	1.2 U	1 U	4 U	0.69 U	1.4 U	0.83 U
BROMOMETHANE	0.64 U	0.47 J	0.51 J	1.2 J	0.52 U	1 U	0.62 U
CARBON TETRACHLORIDE	0.54	0.66 J	0.69	1.9 J	0.56	0.84 U	0.32 J
CHLOROBENZENE	0.76 U	1 U	0.9 U	3.6 U	0.62 U	1.2 U	0.74 U
CHLORODIBROMOMETHANE	0.7 U	0.95 U	0.83 U	3.3 U	0.57 U	1.1 U	0.68 U
CHLOROETHANE	0.43 U	0.59 U	0.52 U	2 U	0.35 U	0.71 U	0.42 U
CHLOROFORM	0.8 U	1.1 U	0.96 U	16	0.29 J	1.3 U	0.79 U
CHLOROMETHANE	1.3	1.3	1.3	1.6 U	1.2	1.3	1.1
CIS-1,2-DICHLOROETHENE	0.65 U	0.88 U	0.78 U	3 J	0.53 U	1.1 U	0.64 U
CIS-1,3-DICHLOROPROPENE	0.74 U	1 U	0.89 U	3.5 U	0.61 U	1.2 U	0.73 U
CYCLOHEXANE	0.56 U	0.77 U	0.67 U	12	0.46 U	0.92 U	0.55 U
DICHLORODIFLUOROMETHANE	1.7	2.3	2.1	2.3	2.4	2.2	2
ETHANOL	26 J	140 J	300 J	8.7 U	27	370 J	11 J
ETHYLBENZENE	0.4 J	0.41 J	0.27 J	8.6	0.22 J	0.31 J	0.7 U
HEXACHLOROBUTADIENE	8.7 U	12 U	10 U	41 U	7.1 U	14 U	8.6 U
HEXANE	0.58 U	0.78 U	0.69 U	2.7 U	0.47 U	0.94 U	0.57 U
M+P-XYLENES	0.81	0.88 J	0.81 J	30	0.54 J	0.65 J	0.21 J
METHYL TERT-BUTYL ETHER	0.59 U	0.8 U	0.71 U	2.8 U	0.48 U	0.97 U	0.58 U
METHYLENE CHLORIDE	0.92 J	1 J	0.82 J	13 U	0.48 J	0.59 J	2.8 U
O-XYLENE	0.34 J	0.38 J	0.32 J	11	0.22 J	0.31 J	0.097 J
STYRENE	0.26 J	0.95 U	0.83 U	1 J	0.25 J	0.4 J	0.16 J
TERTIARY-BUTYL ALCOHOL	2.5 U	3.4 U	0.52 J	4 J	2 U	0.66 J	2.4 U
TETRACHLOROETHENE	0.62	0.62 J	0.33 J	670	16	2.1	7.4
TOLUENE	4.2	4.7	3.2	98	6.7	7.5	1.9
TRANS-1,2-DICHLOROETHENE	0.65 U	0.88 U	0.78 U	1.6 J	0.53 U	1.1 U	0.64 U
TRANS-1,3-DICHLOROPROPENE	0.74 U	1 U	0.89 U	3.5 U	0.61 U	1.2 U	0.73 U
TRICHLOROETHENE	0.5	0.41 J	0.34 J	300	2.9	0.72 U	1.5
TRICHLOROFLUOROMETHANE	1.9 J	1.1 J	1.3	2.6	1.9	1.4	1.5
VINYL CHLORIDE	0.42 U	0.57 U	0.5 U	2 U	0.34 U	0.68 U	0.41 U

Appendix E
Indoor Air Validated Results
Indoor Air Sampling
Bethpage, NY

Sample ID	BPS1-AR010-IND3-D	BPS1-AR011-SSB	BPS1-AR011-IND	BPS1-AR011-IND2	BPS1-AR012-SSB	BPS1-AR012-IND	BPS1-AR012-IND2
Sample date	20090324	20090225	20090225	20090225	20090226	20090226	20090226
Volatile Organics (ug/m^3)							
1,1,1-TRICHLOROETHANE	2.2	50	0.44 U	0.89 U	330	2.2	0.81 J
1,1,2,2-TETRACHLOROETHANE	0.54 U	0.85 U	0.55 U	1.1 U	1 U	0.6 U	1.4 U
1,1,2-TRICHLOROETHANE	0.43 U	0.68 U	0.44 U	0.89 U	0.81 U	0.48 U	1.1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	5.6	430	1	0.93 J	30	0.75	0.68 J
1,1-DICHLOROETHANE	0.64 U	1 U	0.65 U	1.3 U	0.58 J	0.71 U	1.6 U
1,1-DICHLOROETHENE	0.63 U	1.1	0.64 U	1.3 U	2.2	0.69 U	1.6 U
1,2,4-TRICHLOROBENZENE	5.9 UJ	9.2 UJ	6 UJ	12 UJ	11 UJ	6.5 UJ	15 UJ
1,2,4-TRIMETHYLBENZENE	0.18 J	1.9	0.61 J	1.6 U	2.4	8.2	2.9
1,2-DIBROMOETHANE	0.61 U	0.95 U	0.62 U	1.2 U	1.1 U	0.67 U	1.5 U
1,2-DICHLOROBENZENE	0.47 U	0.74 U	0.48 U	0.98 U	0.9 U	0.53 U	1.2 U
1,2-DICHLOROETHANE	0.64 U	0.31 J	0.65 U	1.3 U	1.2 U	0.27 J	0.54 J
1,2-DICHLOROPROPANE	0.73 U	1.1 U	0.74 U	1.5 U	1.4 U	0.81 U	1.8 U
1,2-DICHLOROTETRAFLUOROETHANE	0.55 U	0.87 U	0.56 U	1.1 U	1 U	0.61 U	1.4 U
1,3,5-TRIMETHYLBENZENE	0.78 U	0.53 J	0.16 J	1.6 U	0.58 J	2.1	0.71 J
1,3-DICHLOROBENZENE	0.48 U	0.74 U	0.48 U	0.98 U	0.9 U	0.53 U	1.2 U
1,4-DICHLOROBENZENE	0.48 U	0.94 U	0.48 U	0.98 U	0.9 U	0.53 U	1.2 U
1,4-DIOXANE	0.57 U	0.89 U	0.58 U	1.2 U	0.36 J	0.63 U	1.4 U
2,2,4-TRIMETHYLPENTANE	0.74 U	1.2 U	0.75 U	1.5 U	2.2	4.6	2.6
2-BUTANONE	5.4	12	15	7.6	30	250	100
4-METHYL-2-PENTANONE	0.65 U	0.54 J	0.66 U	1.3 U	0.9 J	2.2	0.95 J
BENZENE	0.38 J	2.3	0.78	0.93 J	1.6	2.7	1.7
BENZYL CHLORIDE	0.82 U	1.3 U	0.83 U	1.7 U	1.5 U	0.9 U	2.1 U
BROMODICHLOROMETHANE	0.53 U	0.83 U	0.54 U	1.1 U	1 U	0.59 U	1.3 U
BROMOFORM	0.82 U	1.3 U	0.83 U	1.7 U	1.5 U	0.9 U	2.1 U
BROMOMETHANE	0.24 J	0.5 J	0.48 J	0.62 J	1.2 U	0.68 U	1.6 U
CARBON TETRACHLORIDE	0.4 J	0.55 J	0.56	0.64 J	0.73 J	0.52 J	1.3 U
CHLOROBENZENE	0.73 U	1.1 U	0.74 U	1.5 U	1.4 U	0.8 U	1.8 U
CHLORODIBROMOMETHANE	0.67 U	1 U	0.68 U	1.4 U	1.3 U	0.74 U	1.7 U
CHLOROETHANE	0.42 U	0.65 U	0.42 U	0.86 U	0.79 U	0.46 U	1.1 U
CHLOROFORM	0.77 U	41	0.79 U	1.6 U	6.6	0.45 J	1.2 J
CHLOROMETHANE	1.2	0.51 U	1.2	1.7	0.44 J	1.2	1.7
CIS-1,2-DICHLOROETHENE	0.63 U	0.98 U	0.64 U	1.3 U	1.2 U	0.69 U	1.6 U
CIS-1,3-DICHLOROPROPENE	0.72 U	1.1 U	0.73 U	1.5 U	1.4 U	0.79 U	1.8 U
CYCLOHEXANE	0.54 U	1.2	0.42 J	1.1 U	6.8	1.3	1.4 U
DICHLORODIFLUOROMETHANE	2.4	2.6	2.1	2.6	3.1	1.8	2.7
ETHANOL	12 J	26	330 J	1000 J	42	62	1700 J
ETHYLBENZENE	0.69 U	2.9	0.24 J	1.4 U	3.2	10	3.8
HEXACHLOROBUTADIENE	8.4 U	13 U	8.6 U	17 U	16 U	9.3 U	21 U
HEXANE	0.56 U	1.2	0.79	1.2 U	2.7	5.5	2.3
M+P-XYLENES	0.24 J	8.9	0.76	0.76 J	11	33	11
METHYL TERT-BUTYL ETHER	0.57 U	0.89 U	0.58 U	1.2 U	0.64 J	0.39 J	1.4 U
METHYLENE CHLORIDE	2.7 U	0.75 J	0.39 J	5.7 U	1.8 J	1.9 J	1.4 J
O-XYLENE	0.091 J	2.6	0.29 J	0.42 J	3.2	7.3	2.7
STYRENE	0.67 U	1 U	0.68 U	1.4 U	0.75 J	1.1	0.62 J
TERTIARY-BUTYL ALCOHOL	0.51 J	3.8	0.48 J	0.94 J	4.1 J	2.6 U	6.1 U
TETRACHLOROETHENE	6.6	40	0.29 J	1.1 U	19	0.85	0.83 J
TOLUENE	1.8	190	2.2	2	87	44	20
TRANS-1,2-DICHLOROETHENE	0.63 U	0.98 U	0.64 U	1.3 U	1.2 U	0.69 U	1.6 U
TRANS-1,3-DICHLOROPROPENE	0.72 U	1.1 U	0.73 U	1.5 U	1.4 U	0.79 U	1.8 U
TRICHLOROETHENE	1.2	15	0.43 U	0.88 U	94	0.55	1.1 U
TRICHLOROFLUOROMETHANE	1.7	2.1	1.3	1.2	2.2	1.3	1.2
VINYL CHLORIDE	0.4 U	0.63 U	0.41 U	0.84 U	0.76 U	0.45 U	1 U

Appendix E
Indoor Air Validated Results
Indoor Air Sampling
Bethpage, NY

Sample ID	BPS1-AR012-IND3	BPS1-AR013-SSB	BPS1-AR013-SSB-D	BPS1-AR013-IND	BPS1-AR013-IND2	BPS1-AR013-IND3	BPS1-AR014-SSB
Sample date	20090325	20090226	20090226	20090226	20090226	20090324	20090311
Volatile Organics (ug/m^3)							
1,1,1-TRICHLOROETHANE	1	420	440	2.3	0.9 J	1.2	970
1,1,2,2-TETRACHLOROETHANE	0.5 U	1.3 U	1 U	0.53 U	1.2 U	0.56 U	2.5 U
1,1,2-TRICHLOROETHANE	0.4 U	1 U	0.8 U	0.42 U	0.92 U	0.45 U	2 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.31 J	1.8	1.7	0.55 J	0.58 J	0.3 J	11
1,1-DICHLOROETHANE	0.59 U	0.46 J	0.48 J	0.63 U	1.4 U	0.66 U	3 U
1,1-DICHLOROETHENE	0.58 U	2.6	2.7	0.61 U	1.3 U	0.65 U	1.7 J
1,2,4-TRICHLOROBENZENE	5.4 U	14 UJ	11 UJ	5.8 UJ	12 UJ	6.1 UJ	27 UJ
1,2,4-TRIMETHYLBENZENE	2.9	1.7 J	1.5	0.9	1.1 J	0.59 J	4.1
1,2-DIBROMOETHANE	0.56 U	1.4 U	1.1 U	0.6 U	1.3 U	0.63 U	2.8 U
1,2-DICHLOROBENZENE	0.44 U	1.1 U	0.88 U	0.46 U	1 U	0.49 U	2.2 U
1,2-DICHLOROETHANE	0.59 U	1.5 U	1.2 U	0.63 U	1.4 U	0.66 U	3 U
1,2-DICHLOROPROPANE	0.67 U	1.7 U	1.3 U	0.72 U	1.6 U	0.76 U	3.4 U
1,2-DICHLOROTETRAFLUOROETHANE	0.51 U	1.3 U	1 U	0.54 U	1.2 U	0.57 U	2.6 U
1,3,5-TRIMETHYLBENZENE	0.78	0.57 J	0.53 J	0.24 J	0.33 J	0.13 J	1.2 J
1,3-DICHLOROBENZENE	0.44 U	1.1 U	0.88 U	0.46 U	1 U	0.49 U	2.2 U
1,4-DICHLOROBENZENE	0.44 U	1.1 U	0.88 U	0.46 U	1 U	0.49 U	0.75 J
1,4-DIOXANE	0.53 U	1.3 U	1 U	0.56 U	1.2 U	0.59 U	2.6 U
2,2,4-TRIMETHYLPENTANE	1.6	1.7 U	1.4 U	1.2	1.6 U	0.77 U	3.4 U
2-BUTANONE	22	6.2	5.5	1.1	2	0.7	4.6
4-METHYL-2-PENTANONE	0.7	1.5 U	1.2 U	0.63 U	1.4 U	0.67 U	3 U
BENZENE	0.91	2.2	1.9	2.2	1.4	0.52 U	2.3 U
BENZYL CHLORIDE	0.76 U	1.9 U	1.5 U	0.8 U	1.7 U	0.85 U	3.8 U
BROMODICHLOROMETHANE	0.49 U	1.2 U	0.98 U	0.52 U	1.1 U	0.55 U	2.4 U
BROMOFORM	0.75 U	1.9 U	1.5 U	0.8 U	1.7 U	0.85 U	3.8 U
BROMOMETHANE	0.57 U	1.4 U	1.1 U	0.6 U	1.3 U	0.24 J	2.8 U
CARBON TETRACHLORIDE	0.46 U	1.2 U	0.92 U	0.63	0.59 J	0.52 U	2.3 U
CHLOROBENZENE	0.67 U	1.7 U	1.3 U	0.71 U	1.5 U	0.76 U	3.4 U
CHLORODIBROMOMETHANE	0.62 U	1.6 U	1.2 U	0.66 U	1.4 U	0.7 U	3.1 U
CHLOROETHANE	0.38 U	0.98 U	0.77 U	0.41 U	0.89 U	0.43 U	1.9 U
CHLOROFORM	0.71 U	13	13	0.76 U	1.6 U	0.44 J	1.8 J
CHLOROMETHANE	1.2	0.77 U	0.6 U	1.1	2.1	0.99	1.5 U
CIS-1,2-DICHLOROETHENE	0.58 U	1.5 U	1.2 U	0.61 U	1.3 U	0.65 U	2.9 U
CIS-1,3-DICHLOROPROPENE	0.66 U	1.7 U	1.3 U	0.7 U	1.5 U	0.74 U	3.3 U
CYCLOHEXANE	0.59	8.8	8.9	0.62	1.2 U	0.56 U	20
DICHLORODIFLUOROMETHANE	1.8	2.4	2.3	1.4	2.5	2	2.9
ETHANOL	88 J	16 J	8.1 J	32	550 J	38 J	9.4
ETHYLBENZENE	6.3	3	3	0.85	0.71 J	0.2 J	4.1
HEXACHLOROBUTADIENE	7.8 U	20 U	16 U	8.3 U	18 U	8.7 U	39 U
HEXANE	1.8	1.3 U	1.2	3.5	1.4	1.2	2.6 U
M+P-XYLENES	21	9.7	11	2.2	2	0.56 J	14
METHYL TERT-BUTYL ETHER	0.16 J	1.3 U	1 U	0.56 U	1.2 U	0.59 U	2.6 U
METHYLENE CHLORIDE	1.6 J	6.5 U	5.1 U	0.48 J	5.8 U	2.8 U	13 U
O-XYLENE	5.1	3.1	3.5	0.86	0.88 J	0.2 J	5
STYRENE	0.48 J	0.57 J	0.58 J	0.16 J	0.25 J	0.7 U	1.1 J
TERTIARY-BUTYL ALCOHOL	2.2 U	2.8 J	2.6 J	0.4 J	5.1 U	2.5 U	5.2 J
TETRACHLOROETHENE	0.5 U	11	12	0.56	0.59 J	0.56 U	15
TOLUENE	14	63	66	6.3	6.2	2.5	88
TRANS-1,2-DICHLOROETHENE	0.58 U	1.5 U	1.2 U	0.61 U	1.3 U	0.65 U	2.9 U
TRANS-1,3-DICHLOROPROPENE	0.66 U	1.7 U	1.3 U	0.7 U	1.5 U	0.74 U	3.3 U
TRICHLOROETHENE	0.21 J	230	250	1.5	0.9 U	0.5	290
TRICHLOROFLUOROMETHANE	1.8	2.4	2.4	1.5	1.3	1.6	2.6
VINYL CHLORIDE	0.37 U	0.95 U	0.75 U	0.4 U	0.86 U	0.42 U	1.9 U

Appendix E
Indoor Air Validated Results
Indoor Air Sampling
Bethpage, NY

Sample ID Sample date	BPS1-AR014-IND 20090311	BPS1-AR014-IND2 20090311	BPS1-AR014-IND3 20090325	BPS1-AR015-SSB 20090311	BPS1-AR015-IND 20090311	BPS1-AR015-IND2 20090311	BPS1-AR016-SSB 20090428
Volatile Organics (ug/m^3)							
1,1,1-TRICHLOROETHANE	2.6	1.3	0.41 J	160	0.66	0.49 U	24
1,1,2,2-TETRACHLOROETHANE	0.59 U	0.48 U	0.6 U	0.56 U	0.61 U	0.61 U	0.77 U
1,1,2-TRICHLOROETHANE	0.47 U	0.38 U	0.48 U	0.45 U	0.49 U	0.49 U	0.61 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.73	0.55	0.67 U	260	1.9	0.72	1.2
1,1-DICHLOROETHANE	0.69 U	0.56 U	0.71 U	0.66 U	0.72 U	0.72 U	0.91 U
1,1-DICHLOROETHENE	0.68 U	0.55 U	0.69 U	1.3	0.71 U	0.71 U	0.89 U
1,2,4-TRICHLOROBENZENE	6.3 UJ	5.2 UJ	6.5 U	6.1 UJ	6.6 UJ	6.6 UJ	8.3 U
1,2,4-TRIMETHYLBENZENE	0.75 J	0.35 J	0.86 U	6.5	5.2	5.2	10
1,2-DIBROMOETHANE	0.66 U	0.53 U	0.67 U	0.63 U	0.69 U	0.69 U	0.86 U
1,2-DICHLOROBENZENE	0.51 U	0.42 U	0.53 U	0.49 U	0.54 U	0.54 U	0.67 U
1,2-DICHLOROETHANE	0.29 J	0.82	0.71 U	0.28 J	0.72	2.2	0.91 UJ
1,2-DICHLOROPROPANE	0.79 U	0.64 U	0.81 U	0.76 U	0.83 U	0.83 U	1 U
1,2-DICHLOROTETRAFLUOROETHANE	0.6 U	0.48 U	0.61 U	0.57 U	0.62 U	0.62 U	0.78 U
1,3,5-TRIMETHYLBENZENE	0.32 J	0.68 U	0.86 U	1.5	1.3	1.2	2.4
1,3-DICHLOROBENZENE	0.51 U	0.42 U	0.53 U	0.49 U	0.54 U	0.54 U	0.67 U
1,4-DICHLOROBENZENE	0.51 U	0.17 J	0.53 U	0.72	0.26 J	0.24 J	0.67 U
1,4-DIOXANE	0.62 U	0.5 U	0.63 U	0.76	0.64 U	0.64 U	0.5 J
2,2,4-TRIMETHYLPENTANE	0.8 U	0.65 U	0.82 U	1.4	2.7	3	27
2-BUTANONE	0.71	2.2	0.16 J	19	2.3	2.9	6.4
4-METHYL-2-PENTANONE	0.7 U	0.57 U	0.72 U	1.4	0.73 U	0.6 J	0.71 J
BENZENE	0.59 U	0.58	0.17 J	3.6	3.7	4.1	1.4
BENZYL CHLORIDE	0.88 U	0.72 U	0.9 U	0.85 U	0.93 U	0.93 U	1.2 U
BROMODICHLOROMETHANE	0.57 U	0.46 U	0.59 U	0.55 U	0.6 U	0.6 U	0.75 U
BROMOFORM	0.88 U	0.72 U	0.9 U	0.85 U	0.92 U	0.92 U	1.2 U
BROMOMETHANE	0.66 U	0.54 U	0.68 U	0.64 U	0.7 U	0.7 U	2
CARBON TETRACHLORIDE	0.55	0.71	0.55 U	0.48 J	0.61	0.73	0.7 U
CHLOROBENZENE	0.79 U	0.64 U	0.8 U	0.76 U	0.82 U	0.82 U	2.4
CHLORODIBROMOMETHANE	0.73 U	0.59 U	0.74 U	0.7 U	0.76 U	0.76 U	0.95 U
CHLOROETHANE	0.45 U	0.37 U	0.46 U	0.43 U	0.47 U	0.47 U	0.59 U
CHLOROFORM	0.62 J	0.68 U	0.85 U	18	0.87 U	0.87 U	1.1 U
CHLOROMETHANE	1.1	1.1	1.1	0.34 U	1.3	1.4	0.62
CIS-1,2-DICHLOROETHENE	0.68 U	0.55 U	0.69 U	0.65 U	0.71 U	0.71 U	0.89 U
CIS-1,3-DICHLOROPROPENE	0.78 U	0.63 U	0.79 U	0.74 U	0.81 U	0.81 U	1 U
CYCLOHEXANE	0.59 U	0.48 U	0.6 U	3.7	1.3	1.4	0.92
DICHLORODIFLUOROMETHANE	2.9	2.3	3.2	2.2	2.1	2	2.5 J
ETHANOL	27	100	4 U	95	220 J	710 J	18 J
ETHYLBENZENE	0.49 J	0.17 J	0.76 U	9.9	5.2	5.4	5.1
HEXACHLOROBUTADIENE	9.1 U	7.4 U	9.3 U	8.7 U	9.5 U	9.5 U	12 U
HEXANE	0.6 U	0.49 U	0.62 U	2.3	11	12	2.4
M+P-XYLENES	2.4	0.57 J	0.76 U	26	19	21	15
METHYL TERT-BUTYL ETHER	0.62 U	0.5 U	0.63 U	0.38 J	0.15 J	0.64 U	0.81 U
METHYLENE CHLORIDE	3 U	2.4 U	3 U	0.34 J	0.59 J	0.76 J	0.8 J
O-XYLENE	0.92	0.2 J	0.76 U	11	5.5	6.1	6.2
STYRENE	0.35 J	0.19 J	0.74 U	1.6	0.6 J	0.79	1.9
TERTIARY-BUTYL ALCOHOL	2.6 U	0.75 J	2.6 U	9.8	1.9 J	0.83 J	5.8
TETRACHLOROETHENE	0.46 J	0.36 J	0.59 U	38	0.62	0.3 J	3.8
TOLUENE	2.4	4.1	0.39 J	150	41	49	240
TRANS-1,2-DICHLOROETHENE	0.68 U	0.55 U	0.69 U	0.65 U	0.71 U	0.71 U	0.89 U
TRANS-1,3-DICHLOROPROPENE	0.78 U	0.63 U	0.79 U	0.74 U	0.81 U	0.81 U	1 U
TRICHLOROETHENE	1.9	0.73	0.47 U	25	0.48 U	0.48 U	9.1
TRICHLOROFLUOROMETHANE	4.8	2.3	2.4	2.5	5.9	6.8	3.4
VINYL CHLORIDE	0.44 U	0.36 U	0.45 U	0.42 U	0.46 U	0.46 U	0.57 U

Appendix E
Outdoor Air Validated Results
Indoor Air Sampling
Bethpage, NY

Sample ID	**BPS1-AR001-ODA**	**BPS1-AR003-ODA**	**BPS1-AR004-ODA**	**BPS1-AR005-ODA**	**BPS1-AR006-ODA**	**BPS1-AR007-ODA**	**BPS1-AR008-ODA**	**BPS1-AR009-ODA**
Sample date	20090120	20090122	20090121	20090121	20090219	20090220	20090220	20090225
Volatile Organics (ug/m^3)								
1,1,1-TRICHLOROETHANE	0.46 U	0.36 U	0.42 U	0.36 U	0.43 U	0.39 U	0.42 U	0.49 U
1,1,2,2-TETRACHLOROETHANE	0.58 U	0.46 U	0.53 U	0.46 U	0.54 U	0.49 U	0.53 U	0.61 U
1,1,2-TRICHLOROETHANE	0.46 U	0.36 U	0.42 U	0.36 U	0.43 U	0.39 U	0.42 U	0.49 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.77	0.76	0.66	0.62	0.59 J	0.95	0.99	0.62 J
1,1-DICHLOROETHANE	0.68 U	0.54 U	0.63 U	0.54 U	0.64 U	0.58 U	0.63 U	0.72 U
1,1-DICHLOROETHENE	0.67 U	0.53 U	0.61 U	0.53 U	0.63 U	0.57 U	0.61 U	0.71 U
1,2,4-TRICHLOROBENZENE	6.2 U	5 UJ	5.8 U	5 U	5.9 U	5.3 U	5.8 U	6.6 UJ
1,2,4-TRIMETHYLBENZENE	0.3 J	0.46 J	0.23 J	0.17 J	0.17 J	0.71 U	0.76 U	0.88 U
1,2-DIBROMOETHANE	0.64 U	0.51 U	0.6 U	0.51 U	0.61 U	0.55 U	0.6 U	0.69 U
1,2-DICHLOROBENZENE	0.5 U	0.4 U	0.46 U	0.4 U	0.47 U	0.43 U	0.46 U	0.54 U
1,2-DICHLOROETHANE	0.68 U	0.54 U	0.63 U	0.54 U	0.64 UJ	0.58 U	0.63 U	0.72 U
1,2-DICHLOROPROPANE	0.78 U	0.62 U	0.72 U	0.62 U	0.73 U	0.66 U	0.72 U	0.83 U
1,2-DICHLOROTETRAFLUOROETHANE	0.59 U	0.47 U	0.54 U	0.47 U	0.55 U	0.5 U	0.54 U	0.62 U
1,3,5-TRIMETHYLBENZENE	0.82 U	0.11 J	0.76 U	0.66 U	0.78 U	0.71 U	0.76 U	0.88 U
1,3-DICHLOROBENZENE	0.5 U	0.4 U	0.46 U	0.4 U	0.48 U	0.43 U	0.46 U	0.54 U
1,4-DICHLOROBENZENE	0.5 U	0.4 U	0.46 U	0.4 U	0.33 J	0.43 U	0.46 U	0.54 U
1,4-DIOXANE	0.6 U	0.48 U	0.56 U	0.48 U	0.57 U	0.52 U	0.56 U	0.64 U
2,2,4-TRIMETHYLPENTANE	0.55 J	0.58 J	0.72 U	0.62 U	0.74 U	0.67 U	0.72 U	0.84 U
2-BUTANONE	0.95 U	1	1.3 U	2.9	1.1	0.99 J	1.4 J	0.36 J
4-METHYL-2-PENTANONE	0.12 J	0.14 J	0.091 J	0.23 J	0.65 U	0.59 U	0.63 U	0.73 U
BENZENE	1.2	1.2	1.2	1.2	0.73 U	0.85 U	0.66 U	0.73
BENZYL CHLORIDE	0.87 U	0.69 U	0.8 U	0.69 U	0.82 UJ	0.74 U	0.8 U	0.93 U
BROMODICHLOROMETHANE	0.56 U	0.45 U	0.52 U	0.45 U	0.53 UJ	0.48 U	0.52 U	0.6 U
BROMOFORM	0.87 U	0.69 U	0.8 U	0.69 U	0.82 UJ	0.74 U	0.8 U	0.92 U
BROMOMETHANE	0.65 U	0.52 U	0.6 U	0.52 U	0.61 U	0.56 U	0.6 U	0.7 U
CARBON TETRACHLORIDE	0.66	0.49	0.56	0.49	0.52	0.58	0.59	0.53 J
CHLOROBENZENE	0.77 U	0.62 U	0.71 U	0.62 U	0.73 U	0.66 U	0.71 U	0.82 U
CHLORODIBROMOMETHANE	0.72 U	0.57 U	0.66 U	0.57 U	0.67 U	0.61 U	0.66 U	0.76 U
CHLOROETHANE	0.44 U	0.35 U	0.41 U	0.35 U	0.42 U	0.38 U	0.41 U	0.47 U
CHLOROFORM	0.82 U	0.65 U	0.76 U	0.65 U	0.77 U	0.7 U	0.76 U	0.87 U
CHLOROMETHANE	1.2	1.2	0.98	1.2	1.2	1.4	1.2	1.4
CIS-1,2-DICHLOROETHENE	0.67 U	0.53 U	0.61 U	0.53 U	0.63 U	0.57 U	0.61 U	0.71 U
CIS-1,3-DICHLOROPROPENE	0.76 U	0.61 U	0.7 U	0.61 U	0.72 U	0.65 U	0.7 U	0.81 U
CYCLOHEXANE	0.58 U	0.46 U	0.53 U	0.46 U	0.41 J	0.5 U	0.53 U	0.62 U
DICHLORODIFLUOROMETHANE	2.6	2.7	2.3	2.3	2.7	3.2	3.4	2.3
ETHANOL	6.1	12	5.4	4.4	3.8	3.7	3.5	2.3 U
ETHYLBENZENE	0.28 J	0.42 J	0.2 J	0.19 J	0.69 U	0.18 J	0.67 U	0.78 U
HEXACHLOROBUTADIENE	9 U	7.1 U	8.3 U	7.1 U	8.4 U	7.7 U	8.3 U	9.5 U
HEXANE	0.76	0.89	0.49 J	0.4 J	0.43 J	0.18 J	0.24 J	0.79
M+P-XYLENES	0.74	1	0.38 J	0.48 J	0.4 J	0.25 J	0.22 J	0.34 J
METHYL TERT-BUTYL ETHER	0.6 U	0.48 U	0.56 U	0.48 U	0.57 U	0.52 U	0.56 U	0.64 U
METHYLENE CHLORIDE	0.44 J	0.48 J	0.3 J	0.3 J	0.51 J	0.6 J	0.63 J	0.36 J
O-XYLENE	0.3 J	0.41 J	0.2 J	0.23 J	0.19 J	0.62 U	0.12 J	0.14 J
STYRENE	0.72 U	0.11 J	0.66 U	0.57 U	0.67 U	0.61 U	0.66 U	0.76 U
TERTIARY-BUTYL ALCOHOL	2.5 U	2 U	2.3 U	0.57 J	2.4 U	2.2 U	2.3 U	2.7 U
TETRACHLOROETHENE	0.57 U	0.45 U	0.52 U	0.45 U	0.54 U	0.49 U	0.27 J	0.61 U
TOLUENE	1.9	2.8	1.1	1.2	1.2	1.1	0.99	1.1
TRANS-1,2-DICHLOROETHENE	0.67 U	0.53 U	0.61 U	0.53 U	0.63 U	0.57 U	0.61 U	0.71 U
TRANS-1,3-DICHLOROPROPENE	0.76 U	0.61 U	0.7 U	0.61 U	0.72 U	0.65 U	0.7 U	0.81 U
TRICHLOROETHENE	0.45 U	0.36 U	0.42 U	0.36 U	0.42 U	0.39 U	0.42 U	0.48 U
TRICHLOROFLUOROMETHANE	1.5	1.8	1.2	1.3	1.8	2.3	2.4	1.2
VINYL CHLORIDE	0.43 U	0.34 U	0.4 U	0.34 U	0.4 U	0.37 U	0.4 U	0.46 U

Appendix E
Outdoor Air Validated Results
Indoor Air Sampling
Bethpage, NY

Sample ID	BPS1-AR011-ODA	BPS1-AR012-ODA	BPS1-AR014-ODA	BPS1-AR016-ODA	BPS1-AR018-ODA	BPS1-AR018-ODA-2
Sample date	20090225	20090226	20090311	20090428	20090429	20090521
Volatile Organics (ug/m^3)						
1,1,1-TRICHLOROETHANE	0.4 U	0.24 J	0.4 U	0.43 U	0.64 U	0.56 U
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.55 U	0.5 U	0.54 U	0.81 U	
1,1,2-TRICHLOROETHANE	0.4 U	0.44 U	0.4 U	0.43 U	0.64 U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.67	0.72	0.8	0.71	0.8 J	
1,1-DICHLOROETHANE	0.59 U	0.65 U	0.59 U	0.64 U	0.96 U	0.83 U
1,1-DICHLOROETHENE	0.58 U	0.64 U	0.58 U	0.63 U	0.94 U	0.82 U
1,2,4-TRICHLOROBENZENE	5.4 UJ	6 UJ	5.4 UJ	5.9 U	8.8 UJ	
1,2,4-TRIMETHYLBENZENE	0.16 J	0.44 J	0.16 J	0.7 J	0.46 J	
1,2-DIBROMOETHANE	0.56 U	0.62 U	0.56 U	0.61 U	0.91 U	
1,2-DICHLOROBENZENE	0.44 U	0.48 U	0.44 U	0.47 U	0.71 U	
1,2-DICHLOROETHANE	0.59 U	0.65 U	0.59 U	0.64 UJ	0.3 J	0.83 U
1,2-DICHLOROPROPANE	0.67 U	0.74 U	0.67 U	0.73 U	1.1 U	
1,2-DICHLOROTETRAFLUOROETHANE	0.51 U	0.56 U	0.51 U	0.55 U	0.82 U	
1,3,5-TRIMETHYLBENZENE	0.72 U	0.11 J	0.72 U	0.24 J	1.2 U	
1,3-DICHLOROBENZENE	0.44 U	0.48 U	0.44 U	0.48 U	0.71 U	
1,4-DICHLOROBENZENE	0.44 U	0.48 U	0.44 U	0.48 U	0.71 U	
1,4-DIOXANE	0.53 U	0.58 U	0.53 U	0.57 U	0.85 U	
2,2,4-TRIMETHYLPENTANE	0.68 U	0.75 U	0.68 U	0.71 J	1.1 U	
2-BUTANONE	0.76	1.2	2.4	0.94	2.2 J	
4-METHYL-2-PENTANONE	0.6 U	0.66 U	0.24 J	0.15 J	0.44 J	
BENZENE	0.65	1	0.47 U	0.64 U	0.75 U	
BENZYL CHLORIDE	0.76 U	0.83 U	0.76 U	0.82 U	1.2 U	
BROMODICHLOROMETHANE	0.49 U	0.54 U	0.49 U	0.53 U	0.79 U	
BROMOFORM	0.75 U	0.83 U	0.75 U	0.82 U	1.2 U	
BROMOMETHANE	0.57 U	0.62 U	0.57 U	0.61 U	0.92 U	
CARBON TETRACHLORIDE	0.48	0.63	0.61	0.57	0.74 U	
CHLOROBENZENE	0.67 U	0.74 U	0.67 U	0.73 U	1.1 U	
CHLORODIBROMOMETHANE	0.62 U	0.68 U	0.62 U	0.67 U	1 U	
CHLOROETHANE	0.38 U	0.42 U	0.38 U	0.42 U	0.62 U	
CHLOROFORM	0.71 U	0.79 U	0.71 U	0.77 U	1.2 U	
CHLOROMETHANE	1	1.2	1.3	1.4	1.2	
CIS-1,2-DICHLOROETHENE	0.58 U	0.64 U	0.58 U	0.63 U	24	0.82 U
CIS-1,3-DICHLOROPROPENE	0.66 U	0.73 U	0.66 U	0.72 U	1.1 U	
CYCLOHEXANE	0.5 U	0.55 U	0.5 U	0.54 U	0.81 U	
DICHLORODIFLUOROMETHANE	2.2	1.9	2.4	2.8 J	2.3	
ETHANOL	4.9	7.7	2	10 J	6.5 J	
ETHYLBENZENE	0.16 J	0.36 J	0.63 U	0.39 J	0.33 J	
HEXACHLOROBUTADIENE	7.8 U	8.6 U	7.8 U	8.4 U	12 U	
HEXANE	0.51 U	0.66	0.51 U	0.68	0.83 U	
M+P-XYLENES	0.39 J	1	0.25 J	1.1	0.97 J	
METHYL TERT-BUTYL ETHER	0.53 U	0.58 U	0.53 U	0.57 U	0.85 U	
METHYLENE CHLORIDE	0.36 J	0.4 J	0.27 J	0.48 J	4.1 U	
O-XYLENE	0.18 J	0.4 J	0.13 J	0.53 J	0.36 J	
STYRENE	0.62 U	0.12 J	0.62 U	0.11 J	0.32 J	
TERTIARY-BUTYL ALCOHOL	2.2 U	2.4 U	0.46 J	2.4 U	3.6 U	
TETRACHLOROETHENE	0.28 J	0.42 J	0.5 U	1.2	3.8	0.4 J
TOLUENE	1	2.7	0.63	2.6	4	
TRANS-1,2-DICHLOROETHENE	0.58 U	0.64 U	0.58 U	0.63 U	0.37 J	0.82 U
TRANS-1,3-DICHLOROPROPENE	0.66 U	0.73 U	0.66 U	0.72 U	1.1 U	
TRICHLOROETHENE	0.39 U	0.43 U	0.39 U	0.4 J	27	0.55 U
TRICHLOROFLUOROMETHANE	1	1.4	1.7	1.7	1.5	
VINYL CHLORIDE	0.37 U	0.41 U	0.37 U	0.4 U	0.51 J	0.53 U

APPENDIX F

NYSDOH DECISION MATRICES

Soil Vapor/Indoor Air Matrix 1

October 2006

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)			
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 0.25	0.25 to < 1	1 to < 5.0	5.0 and above
< 5	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposures	3. Take reasonable and practical actions to identify source(s) and reduce exposures	4. Take reasonable and practical actions to identify source(s) and reduce exposures
5 to < 50	5. No further action	6. MONITOR	7. MONITOR	8. MITIGATE
50 to < 250	9. MONITOR	10. MONITOR / MITIGATE	11. MITIGATE	12. MITIGATE
250 and above	13. MITIGATE	14. MITIGATE	15. MITIGATE	16. MITIGATE

No further action:
Given that the compound was not detected in the indoor air sample and that the concentration detected in the sub-slab vapor sample is not expected to significantly affect indoor air quality, no additional actions are needed to address human exposures.

Take reasonable and practical actions to identify source(s) and reduce exposures:
The concentration detected in the indoor air sample is likely due to indoor and/or outdoor sources rather than soil vapor intrusion given the concentration detected in the sub-slab vapor sample. Therefore, steps should be taken to identify potential source(s) and to reduce exposures accordingly (e.g., by keeping containers tightly capped or by storing volatile organic compound-containing products in places where people do not spend much time, such as a garage or outdoor shed). Resampling may be recommended to demonstrate the effectiveness of actions taken to reduce exposures.

MONITOR:
Monitoring, including sub-slab vapor, basement air, lowest occupied living space air, and outdoor air sampling, is needed to determine whether concentrations in the indoor air or sub-slab vapor have changed. Monitoring may also be needed to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined on a site-specific and building-specific basis, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

MITIGATE:
Mitigation is needed to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system, and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

MONITOR / MITIGATE:
Monitoring or mitigation may be recommended after considering the magnitude of sub-slab vapor and indoor air concentrations along with building- and site-specific conditions.

See additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX 1

This matrix summarizes the minimum actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate building-specific conditions (e.g., dirt floor in basement, crawl spaces, etc.) and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, resampling may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Additionally, actions more protective of public health than those specified within the matrix may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action is usually undertaken for reasons other than public health (e.g., seeking community acceptance, reducing excessive costs, etc.).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of vapor contamination, nor does it preclude remediating contaminated soil vapors or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.25 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples, a minimum reporting limit of 5 micrograms per cubic meter is recommended for buildings with full slab foundations, and 1 microgram per cubic meter for buildings with less than a full slab foundation.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion to occur is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions may be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including the identified source of the volatile chemicals, the environmental remediation program, and site-specific and building-specific conditions. For example, to the extent that all site data and site conditions demonstrate that soil vapor intrusion is not occurring and that the potential for soil vapor intrusion to occur is not likely, the soil vapor intrusion investigation would be considered complete. In general, if indoor exposures represent a concern due to indoor sources, then the State will provide guidance to the property owner and/or tenant on ways to reduce their exposure. If indoor exposures represent a concern due to outdoor sources, then the NYSDEC will decide who is responsible for further investigation and any necessary remediation. Depending upon the outdoor source, this responsibility may or may not fall upon the party conducting the soil vapor intrusion investigation.

Soil Vapor/Indoor Air Matrix 2

October 2006

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)			
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 3	3 to < 30	30 to < 100	100 and above
< 100	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposures	3. Take reasonable and practical actions to identify source(s) and reduce exposures	4. Take reasonable and practical actions to identify source(s) and reduce exposures
100 to < 1,000	5. MONITOR	6. MONITOR / MITIGATE	7. MITIGATE	8. MITIGATE
1,000 and above	9. MITIGATE	10. MITIGATE	11. MITIGATE	12. MITIGATE

No further action:
Given that the compound was not detected in the indoor air sample and that the concentration detected in the sub-slab vapor sample is not expected to significantly affect indoor air quality, no additional actions are needed to address human exposures.

Take reasonable and practical actions to identify source(s) and reduce exposures:
The concentration detected in the indoor air sample is likely due to indoor and/or outdoor sources rather than soil vapor intrusion given the concentration detected in the sub-slab vapor sample. Therefore, steps should be taken to identify potential source(s) and to reduce exposures accordingly (e.g., by keeping containers tightly capped or by storing volatile organic compound-containing products in places where people do not spend much time, such as a garage or outdoor shed). Resampling may be recommended to demonstrate the effectiveness of actions taken to reduce exposures.

MONITOR:
Monitoring, including sub-slab vapor, basement air, lowest occupied living space air, and outdoor air sampling, is needed to determine whether concentrations in the indoor air or sub-slab vapor have changed. Monitoring may also be needed to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined on a site-specific and building-specific basis, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

MITIGATE:
Mitigation is needed to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system, and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

MONITOR / MITIGATE:
Monitoring or mitigation may be recommended after considering the magnitude of sub-slab vapor and indoor air concentrations along with building- and site-specific conditions.

See additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX 2

This matrix summarizes the minimum actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate building-specific conditions (e.g., dirt floor in basement, crawl spaces, etc.) and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, resampling may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Additionally, actions more protective of public health than those specified within the matrix may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action is usually undertaken for reasons other than public health (e.g., seeking community acceptance, reducing excessive costs, etc.).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of vapor contamination, nor does it preclude remediating contaminated soil vapors or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 3 micrograms per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples, a minimum reporting limit of 5 micrograms per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion to occur is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions may be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including the identified source of the volatile chemicals, the environmental remediation program, and site-specific and building-specific conditions. For example, to the extent that all site data and site conditions demonstrate that soil vapor intrusion is not occurring and that the potential for soil vapor intrusion to occur is not likely, the soil vapor intrusion investigation would be considered complete. In general, if indoor exposures represent a concern due to indoor sources, then the State will provide guidance to the property owner and/or tenant on ways to reduce their exposure. If indoor exposures represent a concern due to outdoor sources, then the NYSDEC will decide who is responsible for further investigation and any necessary remediation. Depending upon the outdoor source, this responsibility may or may not fall upon the party conducting the soil vapor intrusion investigation.

APPENDIX G

VALIDATION SUMMARIES

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **R. SOK** **DATE:** **FEBRUARY 20, 2009**

FROM: **JOSEPH KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NWIRP BETHPAGE CTO 147
SDG 0901435

SAMPLES: 13/Air/VOC

BPS1-AR001-IND
BPS1-AR002-IND
BPS1-AR004-IND2
BPS1-AR005-IND
BPS1-DUP-01
BPS1-AR001-ODA
BPS1-AR002-SSB
BPS1-AR004-ODA
BPS1-AR005-ODA
BPS1-AR001-SSB
BPS1-AR004-IND
BPS1-AR004-SSB
BPS1-AR005-SSB

Overview

The sample set for NWIRP Bethpage, SDG 0901435 consists of thirteen (13) air environmental samples. The thirteen (13) air samples were analyzed for volatile organic compounds (VOC). There was one field duplicate associated with this data set BPS1-AR001-SSB / BPS1-DUP-01.

The samples were collected by Tetra Tech on January 20 and 21, 2009 and analyzed by Air Toxics LTD. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- * Data completeness
- * Hold times
- * GCMS System Tuning and Performance
- * Initial/continuing calibrations
- Laboratory Control Sample Recoveries
- Laboratory method and field blank results
- * Surrogate Spike Recoveries
- * Internal Standard Recoveries
- Field Duplicate Results
- * Compound Identification
- * Compound Quantitation
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile

The following compounds were detected in the associated method blanks at the maximum concentrations as indicated below:

Compound	Maximum Concentration(ppbv)	Action Level (ppbv)
1,1,2,2-Tetrachloroethane (1)	0.010	0.050
1,3-Dichlorobenzene (1)	0.014	0.070
1,4-Dichlorobenzene (1)	0.024	0.120
1,2-Dichlorobenzene (1)	0.016	0.080
Bromomethane (1)	0.042	0.210
2-Butanone (1)	0.044	0.440
Ethanol (1)	0.27	1.35
1,2,4-Trichlorobenzene (1)	0.10	0.50
1,1,2,2-Tetrachloroethane (2)	0.012	0.060
1,3-Dichlorobenzene (2)	0.019	0.095
1,4-Dichlorobenzene (2)	0.021	0.105
1,2-Dichlorobenzene (2)	0.022	0.110
Benzene (2)	0.028	0.140
Bromomethane (2)	0.048	0.240
Benzyl chloride (2)	0.031	0.155
Ethanol (2)	0.40	2.00
1,2,4-Trichlorobenzene (2)	0.092	0.460

(1) Maximum concentration detected in the method blank #0901435-14A affecting SDG samples BPS1-AR001-IND, BPS1-AR001-ODA, BPS1-AR001-SSB, BPS1-AR005-IND, BPS1-AR005-SSB, BPS1-DUP-01, BPS1-AR004-ODA, BPS1-AR005-ODA, BPS1-AR004-SSB, and BPS1-AR004-IND.

(2) Maximum concentration detected in the method blank #0901435-14B affecting SDG samples BPS1-AR002-IND and BPS1-AR004-IND2.

Blank Actions

- Value < Reporting Limit (RL); value followed by a U.
- Value > RL and < Action level; report value followed by a U.

An action level of 10X the maximum contaminant concentration for the common laboratory contaminant 2-butanone and 5X for the other volatile compounds was established to evaluate laboratory contamination for the aforementioned compounds. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level for were qualified as non-detected (U) as a result of laboratory blank contamination.

The RPD was greater than the 30% quality control limit for 1,1-dichloroethene and cyclohexane for field duplicate pair BPS1-AR001-SSB / BPS1-DUP-01. The positive and non-detected sample results for 1,1-dichloroethene and cyclohexane were qualified estimated, (J) and (UJ), respectively.

The Laboratory Control Sample (LCS) % recovery was slightly less than the quality control limit (68% vs. limit of 70%) for 1,2,4-trichlorobenzene on instrument MSDS on 01/27/09. The non-detected results for the associated samples BPS1-AR004-IND2 and BPS1-AR002-IND were qualified estimated, (UJ).

Additional Comments

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Per the narrative, sample BPS1-DUP-01 on the COC did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

Samples BPS1-DUP-01 and BPS1-AR005-ODA arrived at ambient pressure yet flow controllers were used for sample collection.

Sample BPS1-AR004-IND was received with a significant vacuum remaining in the canister. The residual canister vacuum resulted in elevated reporting limits.

Samples BPS1-AR001-IND, BPS1-AR004-IND2, and BPS1-AR005-IND had ethanol concentrations that exceeded the calibration curve of the instrument. No additional analyses were run to obtain within the calibration curve results. The results for ethanol for these samples were qualified estimated, (J).

The result for trichloroethene was incorrectly reported by the laboratory for sample BPS1-AR002-SSB as 2800 ppbv. The calculated result of 2857 ppbv was corrected to round up to 2900 ppbv. The updated result was entered into the database.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Several compounds were detected in the method blanks resulting in sample data qualification. Field duplicate RPD QC limit exceedances for 1,1-dichloroethene and cyclohexane resulted in data qualification for the compounds for the sample duplicate pair BPS1-AR001-SSB / BPS1-DUP-01. A below the QC limit % recovery for 1,2,4-trichlorobenzene in the LCS resulted in data qualification for the non-detected 1,2,4-trichlorobenzene results for samples BPS1-AR004-IND2 and BPS1-AR002-IND. Ethanol concentrations exceeded the calibration curve limit for samples BPS1-AR001-IND, BPS1-AR004-IND2, and BPS1-AR005-IND.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "Volatile Organic Analysis of Ambient Air In Canister By Method TO-15" EPA Region II SOP #HW-31 Revision #4 October 2006, and the NFESC guidelines "Navy IRCDQM" (September 1999).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Tetra Tech NUS

INTERNAL CORRESPONDENCE

TO: R. SOK
DATE: FEBRUARY 20, 2009

FROM: JOSEPH KALINYAK
COPIES: DV FILE

SUBJECT: ORGANIC DATA VALIDATION – VOC
NWIRP BETHPAGE CTO 147
SDG 0901444

SAMPLES: 4/Air/VOC

BPS1-AR003-IND BPS1-AR003-ODA BPS1-AR003-SSB
BPS1-DUP-02

Overview

The sample set for NWIRP Bethpage, SDG 0901444 consists of four (4) air environmental samples. The four (4) air samples were analyzed for volatile organic compounds (VOC). There was one field duplicate associated with this data set BPS1-AR003-IND / BPS1-DUP-02.

The samples were collected by Tetra Tech on January 22, 2009 and analyzed by Air Toxics LTD. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- * Data completeness
- * Hold times
- * GCMS System Tuning and Performance
- * Initial/continuing calibrations
- Laboratory method and field blank results
- Laboratory Control Sample Recoveries
- * Surrogate Spike Recoveries
- * Internal Standard Recoveries
- * Field Duplicate Results
- * Compound Identification
- * Compound Quantitation
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile

The following compounds were detected in the associated method blanks at the maximum concentrations as indicated below:

Compound	Maximum Concentration(ppbv)	Action Level (ppbv)
1,1,2,2-Tetrachloroethane (1)	0.012	0.060
1,3-Dichlorobenzene (1)	0.019	0.095
1,4-Dichlorobenzene (1)	0.021	0.105

1,2-Dichlorobenzene (1)	0.022	0.110
Benzene (1)	0.028	0.140
Bromomethane (1)	0.048	0.240
Benzyl chloride (1)	0.031	0.155
Ethanol (1)	0.40	2.00
1,2,4-Trichlorobenzene (1)	0.092	0.460
Methylene chloride (2)	0.18	1.80
Benzene (2)	0.062	0.310
1,3-Dichlorobenzene (2)	0.14	0.70
1,4-Dichlorobenzene (2)	0.19	0.95
1,2-Dichlorobenzene (2)	0.18	0.90
1,2-Dibromoethane (2)	0.086	0.430
Cis-1,3-Dichloropropene (2)	0.074	0.370
1,4-Dioxane (2)	0.24	1.20
1,1,2,2-Tetrachloroethane (2)	0.14	0.70
1,2,4-Trichlorobenzene (2)	0.61	3.05

(1) Maximum concentration detected in the method blank #0901444-05A affecting SDG samples BPS1-AR003-IND, BPS1-AR003-ODA, and BPS1-DUP-02.

(2) Maximum concentration detected in the method blank #0901444-05B affecting SDG sample BPS1-AR003-SSB.

Blank Actions
- Value < Reporting Limit (RL); value followed by a U.
- Value > RL and < Action level; report value followed by a U.

An action level of 10X the maximum contaminant concentration for the common laboratory contaminant methylene chloride and 5X for the other volatile compounds was established to evaluate laboratory contamination for the aforementioned compounds. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level for were qualified as non-detected (U) as a result of laboratory blank contamination.

The initial calibration %RSD was greater than the 30% quality control limit for methyl tertbutyl ether (MTBE) for instrument MSDT on 01/15/09. The non-detected result for MTBE for the sample BPS1-AR003-SSB was qualified estimated, (UJ).

The Laboratory Control Sample (LCS) % recovery was slightly less than the quality control limit (68% vs. limit of 70%) for 1,2,4-trichlorobenzene on instrument MSDS on 01/27/09. The non-detected results for the associated samples BPS1-AR003-IND, BPS1-AR003-ODA, and BPS1-DUP-02 were qualified estimated, (UJ).

Additional Comments

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Several compounds were detected in the method blanks resulting in the qualification of data. An initial calibration %RSD QC limit exceedance for MTBE resulted in data qualification for the MTBE non-detected result for sample BPS1-AR003-SSB. A below the QC limit % recovery for 1,2,4-trichlorobenzene in the LCS resulted in data qualification for the non-detected 1,2,4-trichlorobenzene results for samples BPS1-AR003-IND, BPS1-AR003-ODA, and BPS1-DUP-02.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "Volatile Organic Analysis of Ambient Air In Canister By Method TO-15" EPA Region II SOP #HW-31 Revision #4 October 2006, and the NFESC guidelines "Navy IRCDQM" (September 1999).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Tetra Tech NUS

INTERNAL CORRESPONDENCE

TO: **D. BRAYACK**
DATE: **MARCH 20, 2009**
FROM: **JOSEPH KALINYAK**
COPIES: **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NWIRP BETHPAGE CTO WE06
SDG 0902451

SAMPLES: 15/ Air / VOC

BPS1-AR002-IND2
BPS1-AR003-IND2
BPS1-AR004-IND3
BPS1-AR006-IND
BPS1-AR006-IND2
BPS1-AR006-ODA
BPS1-AR006-SSB
BPS1-AR007-IND
BPS1-AR007-IND2
BPS1-AR007-ODA
BPS1-AR007-SSB
BPS1-AR008-IND
BPS1-AR008-IND2
BPS1-AR008-ODA
BPS1-AR008-SSB

Overview

The sample set for NWIRP Bethpage, SDG 0902451 consists of fifteen (15) air environmental samples.. The air samples were analyzed for volatile organic compounds (VOC). There were no field duplicate pairs associated with this data.

The samples were collected by Tetra Tech on February 18, 19, and 20, 2009 and analyzed by Air Toxics LTD. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Hold times
* • GCMS System Tuning and Performance
• Initial/continuing calibrations
• Laboratory Control Sample Recoveries
• Laboratory Method/Field Blank Results
* • Surrogate Spike Recoveries
* • Internal Standard Recoveries
* • Compound Identification
* • Compound Quantitation
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile

The following compounds were detected in the associated method blanks at the maximum concentrations as indicated below:

Compound	Maximum Conc. (ppbv)	Action Level (ppbv)
1,1,2,2-Tetrachloroethane (1)	0.024	0.120
1,3-Dichlorobenzene (1)	0.024	0.120
1,4-Dichlorobenzene (1)	0.036	0.180
1,2-Dichlorobenzene (1)	0.028	0.140
Benzene (1)	0.039	0.195
Styrene (1)	0.019	0.095
1,3,5-Trimethylbenzene (1)	0.016	0.080
1,2,4-Trimethylbenzene (1)	0.013	0.065
Alpha-Chlorotoluene (1)	0.043	0.215
Tert-Butyl alcohol (1)	0.093	0.465
Hexachlorobutadiene (1)	0.10	0.50
1,2,4-Trichlorobenzene (1)	0.18	0.90
Benzene (2)	0.032	0.160
Bromomethane (2)	0.051	0.255

(1) Maximum concentration detected in the method blank #0902451-16A affecting SDG samples BPS1-AR007-ODA, BPS1-AR008-IND, BPS1-AR008-IND2, BPS1-AR008-ODA, and BPS1-AR008-SSB.

(2) Maximum concentration detected in the method blank #0902451-16B affecting SDG samples BPS1-AR002-IND2, BPS1-AR003-IND2, BPS1-AR004-IND3, BPS1-AR006-IND, BPS1-AR006-IND2, BPS1-AR006-ODA, BPS1-AR006-SSB, BPS1-AR007-IND, BPS1-AR007-IND2, and BPS1-AR007-SSB.

An action level of 5X the maximum contaminant concentration for volatile compounds was established to evaluate laboratory contamination for the aforementioned compounds. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level for were qualified as non-detected, (U), as a result of laboratory blank contamination.

The initial calibration % RSD was greater than the 30% (and less than 90%) quality control limit for bromomethane for instrument MSDZ on 02/0209 affecting samples BPS1-AR007-ODA, BPS1-AR008-IND, BPS1-AR008-IND2, BPS1-AR008-ODA, and BPS1-AR008-SSB. The non-detected results for bromomethane were not qualified.

The continuing calibration verification %D was greater than the 30% quality control limit for bromodichloromethane, bromoform 1,2-dichloroethane, and alpha-chlorotoluene (benzyl chloride) for instrument MSDS on 02/23/09 @ 09:29 affecting samples, BPS1-AR002-IND2, BPS1-AR003-IND2, BPS1-AR004-IND3, BPS1-AR006-IND, BPS1-AR006-IND2, BPS1-AR006-ODA, BPS1-AR006-SSB, BPS1-AR007-IND, BPS1-AR007-IND2, and BPS1-AR007-SSB. Positive and non-detected sample results for the aforementioned compounds were qualified estimated, (J) and (UJ), respectively.

The continuing calibration verification %D was greater than the 30% quality control limit for 2-butanone for instrument MSDZ on 02/23/09 @ 08:47 affecting samples, BPS1-AR007-ODA, BPS1-AR008-IND, BPS1-AR008-IND2, BPS1-AR008-ODA, and BPS1-AR008-SSB. Positive sample results for 2-butanone were qualified estimated, (J).

The laboratory control sample (LCS) % recoveries for 1,2-dichloroethane and alpha-chlorotoluene (benzyl chloride) were greater than the quality control limit affecting samples BPS1-AR002-IND2, BPS1-AR003-IND2, BPS1-AR004-IND3, BPS1-AR006-IND, BPS1-AR006-IND2, BPS1-AR006-ODA, BPS1-AR006-SSB, BPS1-AR007-IND, BPS1-AR007-IND2, and BPS1-AR007-SSB. The non-detected results for the associated samples were not qualified. The positive results for the associated samples were qualified estimated, (J).

The laboratory control sample (LCS) % recovery for trans-1,3-dichloropropene was greater than the quality control limit affecting samples BPS1-AR007-ODA, BPS1-AR008-IND, BPS1-AR008-IND2, BPS1-AR008-ODA, and BPS1-AR008-SSB. All associated sample results for trans-1,3-dichloropropene were non-detected which were not qualified.

Additional Comments

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Samples BPS1-AR002-IND2, BPS1-AR003-IND2, BPS1-AR004-IND3, BPS1-AR006-IND2, BPS1-AR007-IND2, and BPS1-AR008-IND2 had ethanol concentrations that exceeded the calibration curve of the instrument. No additional analyses were run to obtain within the calibration curve results. The results for ethanol for these samples were qualified estimated, (J).

A laboratory duplicate was performed on sample BPS1-AR007-SSB with satisfactory RPDs for all analytes.

The laboratory reported the VOC air results as concentrations in units of both 'ppbv' and 'ug/m3'. The qualified analytical result concentrations are reported as 'ppbv' only.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Several analytes were detected in the method blanks resulting in sample data qualification. Continuing calibration %D QC limit exceedances resulted in data qualification for a number of samples. LCS recoveries for 1,2-trichloroethane, benzyl chloride, and trans-1,3-dichloropropene resulted in data qualification. Ethanol concentrations exceeded the calibration curve limit for samples BPS1-AR007-ODA, BPS1-AR008-IND, BPS1-AR008-IND2, BPS1-AR008-ODA, and BPS1-AR008-SSB resulting in data qualification for aforementioned sample ethanol results.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "Volatile Organic Analysis of Ambient Air In Canister By Method TO-15" EPA Region II SOP #HW-31 Revision #4 October 2006, and the NFESC guidelines "Navy IRCDQM" (September 1999).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: D. BRAYACK **DATE:** MARCH 20, 2009

FROM: JOSEPH KALINYAK **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION – VOC
NWIRP BETHPAGE CTO WE06
SDGs 0902619A / 0902619B

SAMPLES: 21/ Air / VOC

SDG 0902619A

BPS1-AR001-IND2
BPS1-AR002-IND3
BPS1-AR009-IND
BPS1-AR009-IND2
BPS1-AR009-ODA
BPS1-AR009-SSB
BPS1-AR011-IND
BPS1-AR011-IND2
BPS1-AR011-SSB
BPS1-DUP-IND

SDG 0902619B

BPS1-AR006-IND3
BPS1-AR010-IND
BPS1-AR011-ODA
BPS1-AR012-IND
BPS1-AR012-IND2
BPS1-AR012-ODA
BPS1-AR012-SSB
BPS1-AR013-IND
BPS1-AR013-IND2
BPS1-AR013-SSB
BPS1-DUP-SSB

Overview

The sample set for NWIRP Bethpage, SDG 0902619A/B consists of twenty-one (21) air environmental samples. The air samples were analyzed for volatile organic compounds (VOC). There were two field duplicate pairs associated with this sample data group (SDG); BPS1-DUP-IND / BPS1-AR009-IND, and BPS1-DUP-SSB / BPS1-AR012-SSB.

The samples were collected by Tetra Tech on February 24, 25, and 26, 2009 and analyzed by Air Toxics LTD. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- * Data completeness
- * Hold times
- * GCMS System Tuning and Performance
- Initial/continuing calibrations
- Laboratory Control Sample Recoveries
- Laboratory Method/Field Blank Results
- * Surrogate Spike Recoveries
- * Internal Standard Recoveries
- Field Duplicate Analysis
- * Lab Duplicate Analysis
- * Compound Identification
- * Compound Quantitation
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile

The following compounds were detected in the associated method blanks at the maximum concentrations as indicated below:

Compound	Maximum Conc. (ppbv)	Action Level (ppbv)
1,1,2,2-Tetrachloroethane (1)	0.012	0.060
1,3-Dichlorobenzene (1)	0.017	0.085
1,4-Dichlorobenzene (1)	0.014	0.070
1,2-Dichlorobenzene (1)	0.028	0.140
Bromomethane (1)	0.047	0.235
Alpha-Chlorotoluene (1)	0.046	0.230
Ethanol (1)	0.26	1.30
1,2,4-Trichlorobenzene (1)	0.11	0.55
1,1,2,2-Tetrachloroethane (2)	0.014	0.070
1,3-Dichlorobenzene (2)	0.021	0.105
1,4-Dichlorobenzene (2)	0.027	0.135
1,2-Dichlorobenzene (2)	0.028	0.140
Styrene (2)	0.016	0.080
1,2,4-Trimethylbenzene (2)	0.014	0.070
Alpha-Chlorotoluene (2)	0.028	0.140
Ethanol (2)	0.25	1.25

(1) Maximum concentration detected in the method blank #0902619-11A affecting samples BPS1-AR001-IND2, BPS1-AR002-IND3, BPS1-AR009-IND, and BPS1-AR009-SSB, and method blank 0902619-22A affecting samples BPS1-AR006-IND3, BPS1-AR010-IND, BPS1-AR011-ODA, BPS1-AR012-IND, BPS1-AR012-IND2, BPS1-AR012-ODA, BPS1-AR012-SSB, BPS1-AR013-IND, BPS1-AR013-IND2, BPS1-AR013-SSB, and BPS1-DUP-SSB.

(2) Maximum concentration detected in the method blank #0902619-11B affecting SDG samples BPS1-AR009-IND2, BPS1-AR009-ODA, BPS1-DUP-IND, BPS1-AR011-SSB, BPS1-AR011-IND, and BPS1-AR011-IND2.

An action level of 5X the maximum contaminant concentration for volatile compounds was established to evaluate laboratory contamination for the aforementioned compounds. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level were qualified as non-detected, (U), as a result of laboratory blank contamination.

The continuing calibration %Ds were greater than the 30% (and <90%) quality control limit for bromoform and benzyl chloride (alpha chlorotoluene) for instrument MSDS on 02/28/09 @ 08:55. The affected samples were BPS1-AR001-IND2, BPS1-AR002-IND3, BPS1-AR009-IND, and BPS1-AR009-SSB. The non-detected associated sample results for bromomethane and benzyl chloride were qualified estimated, (UJ).

The initial calibration %RSD was greater than the 30% (and <90%) quality control limit for bromoform and 1,2,4-trichlorobenzene for instrument MSDS on 03/01/09. The affected samples with SDG 090619A were BPS1-AR009-IND2, BPS1-AR009-ODA, BPS1-DUP-IND, BPS1-AR011-SSB, BPS1-AR011-IND, and BPS1-AR011-IND2. The affected samples with SDG 090619B were BPS1-AR006-IND3, BPS1-AR010-IND, BPS1-AR011-ODA, BPS1-AR012-IND, BPS1-AR012-IND2, BPS1-AR012-ODA, BPS1-AR012-SSB, BPS1-AR013-IND, BPS1-AR013-IND2, BPS1-AR013-SSB, and BPS1-DUP-SSB. All associated samples had non-detected results for bromoform and 1,2,4-trichlorobenzene which were not qualified.

The laboratory control sample (LCS) % recoveries for bromoform, 1,1,2-trichlorotrifluoroethane (Freon 113), and benzyl chloride (alpha-chlorotoluene) were greater than the quality control limit for instrument MSDS on 02/28/09 @ 09:45. The affected samples were BPS1-AR001-IND2, BPS1-AR002-IND3, BPS1-AR009-IND, and BPS1-AR009-SSB. The non-detected results for the associated samples BPS1-AR001-IND2, BPS1-AR002-IND3, BPS1-AR009-IND, and BPS1-AR009-SSB for bromoform and benzyl chloride were not qualified. The positive results for the associated samples for 1,1,2-trichlorotrifluorethane were qualified estimated, (J).

The laboratory control sample (LCS) % recovery for 1,2,4-trichlorobenzene was less than the quality control limit and >50% on instrument MSDS on 03/02/09 @ 11:14. The affected samples with SDG 090619A were BPS1-AR009-IND2, BPS1-AR009-ODA, BPS1-DUP-IND, BPS1-AR011-SSB, BPS1-AR011-IND, and BPS1-AR011-IND2. The affected samples with SDG 090619B were BPS1-AR006-IND3, BPS1-AR010-IND, BPS1-AR011-ODA, BPS1-AR012-IND, BPS1-AR012-IND2, BPS1-AR012-ODA, BPS1-AR012-SSB, BPS1-AR013-IND, BPS1-AR013-IND2, BPS1-AR013-SSB, and BPS1-DUP-SSB. All associated samples had non-detected sample results for 1,2,4-trichlorobenzene which were qualified estimated, (UJ).

The field duplicate pair for SDG 0902619A, BPS1-DUP-IND / BPS1-AR009-IND, had RPDs for ethanol and trichlorofluoromethane that were greater than the 50% quality control limit. The field duplicate pair BPS1-DUP-IND / BPS1-AR009-IND positive results for ethanol and trichlorofluoromethane were qualified estimated, (J).

The field duplicate pair for SDG 0902619B, BPS1-DUP-SSB / BPS1-AR013-SSB, had an RPD for ethanol that was greater than the 50% quality control limit. The field duplicate pair BPS1-DUP-SSB / BPS1-AR013-SSB positive results for ethanol were qualified estimated, (J).

<u>Additional Comments</u>

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Samples BPS1-AR001-IND2, BPS1-AR009-IND2, BPS1-AR011-IND, and BPS1-AR011-IND2 with SDG 090619A and samples BPS1-AR012-IND2 and BPS1-AR013-IND2 with SDG 090619B had ethanol concentrations that exceeded the calibration curve of the instrument. No additional analyses were run to obtain within the calibration curve results. The results for ethanol for these samples were qualified estimated, (J).

Laboratory duplicates were performed on samples BPS1-AR011-IND2 and BPS1-AR012-IND2 with satisfactory RPDs (<50%) for all analytes.

Samples BPS1-AR001-IND2 and BPS1-AR010-IND2 arrived at the laboratory at ambient pressure.

Sample BPS1-DUP-IND sample canister was mislabeled on the chain of custody (COC) form as Can# 14878 when it should have been Can#14885 per the laboratory narrative. Sample BPS1-AR010-IND had a similar issue with a mislabeled COC versus canister label. The laboratory used the as found canister labels to process and report the samples.

Sample BPS1-AR011-SSB had a significant difference (greater than 5.0" Hg) between the measured canister receipt vacuum and the vacuum reported on the COC. The vacuum measured in the laboratory was used to calculate sample results.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Several analytes were detected in the method blanks resulting in sample data qualification. Continuing calibration %D QC limit exceedances for bromoform and benzyl chloride resulted in data qualification for samples BPS1-AR001-IND2, BPS1-AR002-IND3, BPS1-AR009-IND, and BPS1-AR009-SSB. A LCS high % recovery for 1,1,2-trichlorofluorethane resulted in data qualification for positive sample results for samples BPS1-AR001-IND2, BPS1-AR002-IND3, BPS1-AR009-IND, and BPS1-AR009-SSB. A low LCS % recovery for 1,2,4-trichlorobenzene resulted in data qualification for non-detected sample results for a number of samples.

Other Factors Affecting Data Quality: Laboratory duplicates were performed on samples BPS1-AR011-IND2 and BPS1-AR012-IND2 with satisfactory RPDs. Ethanol concentrations exceeded the calibration curve limit for samples BPS1-AR001-IND2, BPS1-AR009-IND2, BPS1-AR011-IND, and BPS1-AR011-IND2 with SDG 090619A and samples BPS1-AR012-IND2 and BPS1-AR013-IND2 with SDG 090619B resulting in data qualification for the aforementioned sample ethanol results. Field duplicate pair BPS1-DUP-IND / BPS1-AR009-IND had RPDs for ethanol and trichlorofluoromethane that were greater than the QC limit. Field duplicate pair BPS1-DUP-SSB / BPS1-AR013-SSB had RPDs that were greater than the QC limit for 1,2,3-trichlorotrifluoroethane, 2-butanone, chloroform, ethanol, hexane, and trichloroethene.

The data for these analyses were reviewed with reference to the "Volatile Organic Analysis of Ambient Air In Canister By Method TO-15" EPA Region II SOP #HW-31 Revision #4 October 2006, and the NFESC guidelines "Navy IRCDQM" (September 1999).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Tetra Tech NUS

INTERNAL CORRESPONDENCE

TO:	**D. BRAYACK**	**DATE:**	**MARCH 17, 2009**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NWIRP BETHPAGE CTO WE06
SDG 0902647

SAMPLES: 5/ Air / VOC

BPSI-AR003-IND3 BPSI-AR004-IND4 BPSI-AR010-IND2
BPSI-AR010-SSB2 BPSI-DUP-IND

Overview

The sample set for NWIRP Bethpage, SDG 0902647 consists of five (5) air environmental samples. The air samples were analyzed for volatile organic compounds (VOC). There was one field duplicate pair associated with this data, BPS1-DUP-IND / BPSI-AR003-IND3.

The samples were collected by Tetra Tech on February 25 and 26, 2009 and analyzed by Air Toxics LTD. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

*	•	Data completeness
*	•	Hold times
*	•	GCMS System Tuning and Performance
	•	Initial/continuing calibrations
	•	Laboratory Control Sample Recoveries
	•	Laboratory Method/Field Blank Results
*	•	Surrogate Spike Recoveries
*	•	Internal Standard Recoveries
	•	Field Duplicate Precision
*	•	Laboratory Duplicate Precision
*	•	Compound Identification
*	•	Compound Quantitation
*	•	Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile

The following compounds were detected in the associated method blanks at the maximum concentrations as indicated below:

Compound	Maximum Conc. (ppbv)	Action Level (ppbv)
1,1,2,2-Tetrachloroethane (1)	0.014	0.070
1,3-Dichlorobenzene (1)	0.021	0.105

1,4-Dichlorobenzene (1)	0.027	0.135
1,2-Dichlorobenzene (1)	0.028	0.140
Styrene (1)	0.016	0.080
1,2,4-Trimethylbenzene (1)	0.014	0.070
Alpha-Chlorotoluene (1)	0.028	0.140
Ethanol (1)	0.25	1.25
1,1,2,2-Tetrachloroethane (2)	0.0093	0.0465
1,3-Dichlorobenzene (2)	0.016	0.080
1,4-Dichlorobenzene (2)	0.019	0.095
1,2-Dichlorobenzene (2)	0.015	0.075
Alpha-Chlorotoluene (2)	0.035	0.175
Ethanol (2)	0.42	2.10

(1) Maximum concentration detected in the method blank #0902647-07A affecting SDG samples BPS1-AR003-IND3, BPS1-AR004-IND4, and BPS1-DUP-IND.

(2) Maximum concentration detected in the method blank #0902647-07B affecting SDG samples BPS1-AR010-IND2 and BPS1-AR010-SSB2.

An action level of 5X the maximum contaminant concentration for volatile compounds was established to evaluate laboratory contamination for the aforementioned compounds. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level for were qualified as non-detected, (U), as a result of laboratory blank contamination.

The initial calibration % RSD was greater than the 30% (and less than 90%) quality control limit for bromoform and 1,2,4-trichlororbenzene for instrument MSDS on 03/01/09. All SDG samples were affected. The non-detected results for bromoform and 1,2,4-trichlorobenzene were not qualified.

The continuing calibration verification %D was greater than the 30% quality control limit for 1,2,4-trichlorobenzene for instrument MSDS on 03/03/09 @ 10:52 affecting samples, BPS1-AR010-IND2 and BPS1-AR010-SSB2. The non-detected sample results for 1,2,4-trichlorobenzene were qualified estimated, (UJ).

The laboratory control sample (LCS) % recoveries for 1,2,4-trichlorobenzene were less than the quality control limit on 03/02/09 @ 11:14 and on 03/03/09 @ 11:50 affecting all SDG samples. The non-detected results for the associated samples were qualified estimated, (UJ).

The field duplicate pair BPS1-DUP-IND / BPSI-AR003-IND3 % RPD for 1,2,4-trimethylbenzene was greater than the 50% quality control limit. The positive 1,2,4-trimethylbenzene results for the duplicate pair were qualified estimated, (J).

Additional Comments

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Sample BPSI-AR010-IND2 ethanol concentration exceeded the calibration curve of the instrument. No additional analyses were run to obtain results within the calibration curve. The result for ethanol for sample BPSI-AR010-IND2 was qualified estimated, (J).

A laboratory duplicate was performed on sample BPS1-AR010-SSB2 with satisfactory RPDs for all analytes with the exception of ethanol. The %RPD for ethanol was greater than the 50% quality control limit. No action was taken for the laboratory duplicate QC issue as the positive ethanol result for sample BPS1-AR010-SSB2 was qualified non-detected, (U), due to blank contamination.

Sample BPS1-AR010-IND2 arrived at the laboratory at ambient pressure.

The laboratory reported the VOC air results as concentrations in units of both 'ppbv' and 'ug/m3'. The qualified analytical result concentrations are reported as 'ppbv' only.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Several analytes were detected in the method blanks resulting in sample data qualification. A continuing calibration %D QC limit exceedance for 1,2,4-trichlorobenzene resulted in data qualification for samples BPS1-AR010-IND2 and BPS1-AR010-SSB2. The ethanol concentration for sample BPSI-AR010-IND2 exceeded the calibration curve limit resulting in data qualification for sample ethanol results.

Other Factors Affecting Data Quality: A laboratory duplicate was performed on sample BPS1-AR010-SSB2. The %RPD for the field duplicate pair BPS1-DUP-IND / BPSI-AR003-IND3 for 1,2,4-trimethylbenzene was greater than the QC limit resulting in data qualification.

The data for these analyses were reviewed with reference to the "Volatile Organic Analysis of Ambient Air In Canister By Method TO-15" EPA Region II SOP #HW-31 Revision #4 October 2006, and the NFESC guidelines "Navy IRCDQM" (September 1999).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

Solomon for

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Tetra Tech NUS

INTERNAL CORRESPONDENCE

TO: **D. BRAYACK**

DATE: **APRIL 3, 2009**

FROM: **JOSEPH KALINYAK**

COPIES: **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NWIRP BETHPAGE CTO WE06
SDG 0903349

SAMPLES: 10/ Air / VOC

BPS1-AR003-IND4
BPS1-AR003-IND5
BPS1-AR014-IND
BPS1-AR014-IND2
BPS1-AR014-ODA
BPS1-AR014-SSB
BPS1-AR015-IND
BPS1-AR015-IND2
BPS1-AR015-SSB
BPS1-DUP-IND3

Overview

The sample set for NWIRP Bethpage, SDG 0903349 consists of ten (10) air environmental samples. The air samples were analyzed for volatile organic compounds (VOC). There was one field duplicate pair associated with this sample data group (SDG); BPS1-DUP-IND3 / BPS1-AR003-IND5.

The samples were collected by Tetra Tech on March 11 and 12, 2009 and analyzed by Air Toxics LTD. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

*	•	Data completeness
*	•	Hold times
*	•	GCMS System Tuning and Performance
	•	Initial/continuing calibrations
	•	Laboratory Control Sample Recoveries
	•	Laboratory Method/Field Blank Results
*	•	Surrogate Spike Recoveries
*	•	Internal Standard Recoveries
*	•	Field Duplicate Analysis
*	•	Lab Duplicate Analysis
*	•	Compound Identification
*	•	Compound Quantitation
*	•	Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile

The following compounds were detected in the associated method blank #0903349-11A at the maximum concentration as indicated below:

Compound	Maximum Conc. (ppbv)	Action Level (ppbv)
1,3-Dichlorobenzene	0.012	0.060
Benzene	0.022	0.110
Bromomethane	0.034	1.170

An action level of 5X the maximum contaminant concentration for volatile compounds was established to evaluate laboratory contamination for the aforementioned compounds. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level were qualified as non-detected, (U), as a result of laboratory blank contamination.

The initial calibration %RSD was greater than the 30% (and <90%) quality control limit for bromoform and 1,2,4-trichlorobenzene for instrument MSDS on 03/11/09. All the samples were affected and all associated samples had non-detected results for bromoform and 1,2,4-trichlorobenzene which were not qualified.

The laboratory control sample (LCS) % recovery for 1,2,4-trichlorobenzene was less than the quality control limit and >50% on instrument MSDS on 03/16/09 @ 11:12. All samples were affected and all associated samples had non-detected sample results for 1,2,4-trichlorobenzene which were qualified estimated, (UJ).

Additional Comments

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Samples BPS1-AR003-IND5, BPS1-AR015-IND, BPS1-AR015-IND2, and BPS1-DUP-IND3 had ethanol concentrations that exceeded the calibration curve of the instrument. No additional analyses were run to obtain within the calibration curve results. The results for ethanol for these samples were qualified estimated, (J).

Laboratory duplicate analysis was performed on sample BPS1-AR014-ODA with satisfactory RPDs (<50%) for all analytes.

Per the laboratory narrative, tert-butyl alcohol in sample BPS1-AR015-SSB had a retention time shift due to a matrix interference and the spectra was confirmed by a check against the NIST library.

The laboratory reported the VOC air result concentrations in units of both ppbv and ug/m3 on the sample forms. The results in the database and the qualified analytical result concentrations are reported as 'ppbv' only.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Several analytes were detected in the method blanks resulting in sample data qualification. Low LCS % recovery for 1,2,4-trichlorobenzene resulted in data qualification for non-detected sample results for all samples.

Other Factors Affecting Data Quality: Ethanol concentrations exceeded the calibration curve limit for samples AR003-IND5, BPS1-AR015-IND, BPS1-AR015-IND2, and BPS1-DUP-IND3 resulting in data qualification for the aforementioned sample ethanol results.

The data for these analyses were reviewed with reference to the "Volatile Organic Analysis of Ambient Air In Canister By Method TO-15" EPA Region II SOP #HW-31 Revision #4 October 2006, and the NFESC guidelines "Navy IRCDQM" (September 1999).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Tetra Tech NUS

INTERNAL CORRESPONDENCE

TO: **D. BRAYACK** **DATE:** **MAY 15, 2009**

FROM: **JOSEPH KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NWIRP BETHPAGE CTO WE06
SDG 0903659

SAMPLES: 10 / Air / VOC

BPS1-AR002-IND4
BPS1-AR002-IND5
BPS1-AR004-IND5
BPS1-AR006-IND4
BPS1-AR007-IND3
BPS1-AR010-IND3
BPS1-AR012-IND3
BPS1-AR013-IND3
BPS1-AR015-IND3
BPS1-DUP-IND4

Overview

The sample set for NWIRP Bethpage, SDG 0903659 consists of ten (10) air environmental samples. The air samples were analyzed for volatile organic compounds (VOC). There was one field duplicate pair associated with this sample data group (SDG); BPS1-DUP-IND4 / BPS1-AR010-IND3.

The samples were collected by Tetra Tech on March 24 and 25, 2009 and analyzed by Air Toxics LTD. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Hold times
* • GCMS System Tuning and Performance
• Initial/continuing calibrations
• Laboratory Control Sample Recoveries
• Laboratory Method/Field Blank Results
* • Surrogate Spike Recoveries
* • Internal Standard Recoveries
* • Field Duplicate Analysis
* • Lab Duplicate Analysis
* • Compound Identification
* • Compound Quantitation
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile

The following compounds were detected in the associated method blanks at the maximum concentrations as indicated below:

Compound	Maximum Conc. (µg/m3)	Action Level (µg/m3)
1,3-Dichlorobenzene (1)	0.30	1.500
1,2-Dichlorobenzene (1)	0.30	1.500
Benzene (1)	0.32	1.600
Alpha-Chlorotoluene (1)	0.52	2.600
1,2,4-Trichlorobenzene (1)	3.7	18.5
1,3-Dichlorobenzene (2)	0.30	1.50
Bromomethane (2)	0.39	1.95
1,2,4-Trichlorobenzene (2)	0.49	2.45
Ethanol (2)	0.94	4.70
1,1,2,2-Tetrachloroethane (3)	0.34	1.70
1,3-Dichlorobenzene (3)	0.30	1.50
1,4-Dichlorobenzene (3)	0.30	1.50
1,2-Dichlorobenzene (3)	0.30	1.50
1,2,4-Trichlorobenzene (3)	3.7	18.5
Alpha-Chlorotoluene (3)	0.52	2.60
Ethanol (3)	0.94	4.70

(1) Maximum concentration detected in the method blank #0903659-11A affecting samples BPS1-AR002-IND4, BPS1-AR002-IND5, BPS1-AR013-IND3, BPS1-AR006-IND4, and BPS1-AR004-IND5.

(2) Maximum concentration detected in the method blank #0903659-11B affecting SDG samples BPS1-AR010-IND3, BPS1-AR007-IND3, BPS1-AR015-IND3, and BPS1-AR012-IND3.

(3) Maximum concentration detected in the method blank #0903659-11C affecting SDG samples BPS1-DUP-IND4.

An action level of 5X the maximum contaminant concentration for volatile compounds was established to evaluate laboratory contamination for the aforementioned compounds. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level were qualified as non-detected, (U), as a result of laboratory blank contamination. Positive results less than the reporting limit which were qualified for blank contamination were raised to the reporting limit.

The initial calibration %RSD was greater than the 30% (and <90%) quality control limit for ethanol and 1,2,4-trichlorobenzene for instrument MSDS on 03/24/09. All SDG samples were affected and all samples had positive results for ethanol which were qualified estimated, (J). No validation actions were required for 1,2,4-trichlorobenzene as all sample results were non-detected.

The continuing calibration %D was greater than the 30% (and <90%) quality control limit for ethanol for instrument MSDS on 03/29/09 @ 08:50. The affected sample was BPS1-DUP-IND4 and the positive associated sample result for ethanol was qualified estimated, (J).

The laboratory control sample (LCS) % recovery for 1,2,4-trichlorobenzene was less than the quality control limit and >50% on instrument MSDS on 03/27/09 @ 10:06 and also on 03/29/09 @ 09:31. The affected samples were BPS1-AR002-IND4, BPS1-AR002-IND5, BPS1-AR013-IND3, BPS1-AR006-IND4, BPS1-AR004-IND5, and BPS1-DUP-IND4. All aforementioned associated samples had non-detected sample results for 1,2,4-trichlorobenzene which were qualified estimated, (UJ).

Samples BPS1-AR002-IND4, BPS1-AR004-IND5, and BPS1-AR006-IND4 had ethanol concentrations that exceeded the calibration curve of the instrument. No additional analyses were run to obtain within the calibration curve results. The results for ethanol for these samples were qualified estimated, (J).

Additional Comments

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Sample BPS1-AR015-IND3 was mislabeled as BPS1-AR014-IND3 throughout the report sent by the laboratory. The laboratory was contacted on this typographical issue and they are to re-issue a corrected report.

A laboratory duplicate analysis was performed on sample BPS1-DUP-IND4 with satisfactory RPDs (<50%) for all analytes.

Samples BPS1-AR004-IND5 and BPS1-AR007-IND3 arrived at the laboratory at ambient pressure.

The Chain of Custody (COC) information for sample BPS1-AR002-IND5 and BPS1-AR004-IND5 did not match the information on the canister with regard to canister identification. The laboratory used the as found canister labels to process and report the samples.

The laboratory reported the VOC air result concentrations in units of both ppbv and µg/m3 on the sample forms. The results in the database and the qualified analytical result concentrations are reported as µg/m3 only.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Several analytes were detected in the method blanks resulting in sample data qualification. A continuing calibration %D QC limit exceedance for ethanol resulted in data qualification for some samples. A low LCS % recovery for 1,2,4-trichlorobenzene resulted in data qualification for non-detected sample results for a number of samples.

Other Factors Affecting Data Quality: A laboratory duplicate analysis was performed on samples BPS1-DUP-IND4 with satisfactory RPDs. Ethanol concentrations exceeded the calibration curve limit for samples - AR002-IND4, BPS1-AR004-IND5, and BPS1-AR006-IND4 resulting in data qualification for the aforementioned sample ethanol results.

The data for these analyses were reviewed with reference to the "Volatile Organic Analysis of Ambient Air In Canister By Method TO-15" EPA Region II SOP #HW-31 Revision #4 October 2006, and the NFESC guidelines "Navy IRCDQM" (September 1999).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**JUNE 8, 2009**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NWIRP BETHPAGE CTO WE06
SDG 0904658R1

SAMPLES: 10 / Air / VOC

BPS1-AR016-INDB
BPS1-AR016-SSB
BPS1-AR017-SSB
BPS1-AR018-SSB
BPS1-AR016-INDL
BPS1-AR017-INDB
BPS1-AR018-INDB
BPS1-AR016-ODA
BPS1-AR017-INDL
BPS1-AR018-ODA

Overview

The sample set for NWIRP Bethpage, SDG 0904658R1 consists of ten (10) air environmental samples. The air samples were analyzed for volatile organic compounds (VOC). There were no field duplicate pairs associated with this sample data group (SDG).

The samples were collected by Tetra Tech on April 28 and 29, 2009 and analyzed by Air Toxics LTD. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- * Data completeness
- * Hold times
- * GCMS System Tuning and Performance
- Initial/continuing calibrations
- Laboratory Control Sample Recoveries
- Laboratory Method Blank Results
- * Surrogate Spike Recoveries
- * Internal Standard Recoveries
- * Laboratory Duplicate Analysis
- * Compound Identification
- * Compound Quantitation
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile

The following compounds were detected in the associated method blanks at the maximum concentrations as indicated below:

Compound	Maximum Conc. (µg/m3)	Action Level (µg/m3)
1,3-Dichlorobenzene (1)	0.088	0.44

1,4-Dichlorobenzene (1)	0.10	0.50
1,2-Dichlorobenzene (1)	0.091	0.455
Benzene (1)	0.11	0.55
Bromomethane (1)	0.16	0.80
Alpha-Chlorotoluene (1)	0.12	0.60
Ethanol (1)	0.67	3.35

1,1,2,2-Tetrachloroethane (2)	0.057	0.285
1,3-Dichlorobenzene (2)	0.095	0.475
1,4-Dichlorobenzene (2)	0.085	0.425
1,2-Dichlorobenzene (2)	0.14	0.70
Benzene (2)	0.072	0.360
Bromomethane (2)	0.26	1.30
1,2,4-Trichlorobenzene (2)	0.059	0.295
Methylene Chloride (2)	0.21	1.05
Ethanol (2)	0.49	2.45

(1) Maximum concentration detected in the method blank #0904658R1-11A affecting samples BPS1-AR016-INDB, BPS1-AR016-INDL, BPS1-AR016-ODA, BPS1-AR016-SSB, BPS1-AR017-INDB, BPS1-AR017-INDL, BPS1-AR017-SSB, and BPS1-AR018-INDB.

(2) Maximum concentration detected in the method blank #0904658-11B affecting SDG samples BPS1-AR018-SSB and BPS1-AR018-ODA.

An action level of 5X the maximum contaminant concentration for volatile compounds was established to evaluate laboratory contamination for the aforementioned compounds. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level were qualified as non-detected, (U), as a result of laboratory blank contamination. Positive results less than the reporting limit which were qualified for blank contamination were raised to the reporting limit.

The initial calibration RSD was greater than the 30% (and <90%) quality control limit for ethanol and 1,2,4-trichlorobenzene for instrument MSDS on 04/07/09. All SDG samples were affected and all samples had positive ethanol results which were qualified estimated, (J). No validation actions were required for 1,2,4-trichlorobenzene as all sample results were non-detected.

The continuing calibration %D was greater than the 30% (and <90%) quality control limit for 1,2-dichloroethane and dichlorodifluoromethane (Freon 12) for instrument MSDS on 05/01/09 @ 08:07. The affected samples were BPS1-AR016-INDB, BPS1-AR016-INDL, BPS1-AR016-ODA, BPS1-AR016-SSB, BPS1-AR017-INDB, BPS1-AR017-INDL, BPS1-AR017-SSB, and BPS1-AR018-INDB. The positive and non-detected results for 1,2-dichloroethane and dichlorodifluoromethane were qualified estimated, (J) and (UJ), respectively.

The continuing calibration %D was greater than the 30% (and <90%) quality control limit for 2-butanone for instrument MSDS on 05/04/09 @ 05:54. The affected samples were BPS1-AR018-SSB and BPS1-AR018-ODA and the positive associated sample results were qualified estimated, (J).

The laboratory control sample (LCS) % recovery for 1,2-dichloroethane was greater than the quality control limit and >50% on instrument MSDS on 05/01/09 @ 08:51. The affected samples were BPS1-AR016-INDB, BPS1-AR016-INDL, BPS1-AR016-ODA, BPS1-AR016-SSB, BPS1-AR017-INDB, BPS1-AR017-INDL, BPS1-AR017-SSB, and BPS1-AR018-INDB. The non-detected associated 1,2-dichloroethane sample results were not qualified due to LCS % recovery and the positive results were qualified estimated, (J).

The laboratory control sample (LCS) % recovery for 1,2,4-trichlorobenzene was less than the quality control limit and >50% on instrument MSDS on 05/04/09 @ 06:26. The affected samples were BPS1-AR018-SSB and BPS1-AR018-ODA and the non-detected sample results were qualified estimated, (UJ).

Samples BPS1-AR016-INDL, BPS1-AR017-INDL, and BPS1-AR018-SSB had ethanol concentrations that exceeded the calibration curve of the instrument. No additional analyses were run to obtain within the calibration curve results. The results for ethanol for these samples were qualified estimated, (J).

Additional Comments

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

A laboratory duplicate analysis was performed on sample BPS1-AR017-SSB with satisfactory RPDs (<50%) for all analytes.

The laboratory reported the VOC air result concentrations in units of both ppbv and µg/m3 on the sample forms. The results in the database and the qualified analytical result concentrations are reported as µg/m3 only.

EXECUTIVE SUMMARY

Laboratory Performance Issues: The initial calibration had RSDs greater than the QC limit for ethanol and 1,2,4-trichlorobenzene resulting in data qualification of positive ethanol sample results. Several analytes were detected in the method blanks resulting in sample data qualification. Continuing calibration %D QC limit exceedances for 1,2-dichloroethane, dichlorodifluoromethane (Freon 12), and 2-butanone resulted in data qualification for some samples. A high LCS % recovery for 1,2-dichloroethene resulted in data qualification for some positive sample results.. A low LCS % recovery for 1,2,4-trichlorobenzene resulted in data qualification for non-detected sample results for samples BPS1-AR018-SSB and BPS1-AR018-ODA.

Other Factors Affecting Data Quality: A laboratory duplicate analysis was performed on samples BPS1-AR017-SSB with satisfactory RPDs. Ethanol concentrations exceeded the calibration curve limit for samples BPS1-AR016-INDL, BPS1-AR017-INDL, and BPS1-AR018-SSB resulting in data qualification for the aforementioned sample ethanol results.

The data for these analyses were reviewed with reference to the "Volatile Organic Analysis of Ambient Air In Canister By Method TO-15" EPA Region II SOP #HW-31 Revision #4 October 2006, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

Edward Sedlmyer /for
TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **D. BRAYACK** **DATE:** **JUNE 8, 2009**

FROM: **JOSEPH KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NWIRP BETHPAGE CTO WE06
SDG 0905069

SAMPLES: 2 / Air / VOC

BPS1-AR003-INDB BPS1-DUP

Overview

The sample set for NWIRP Bethpage SDG 0905069 consists of two (2) air environmental samples. The air samples were analyzed for volatile organic compounds (VOC). There was one field duplicate pair associated with this sample delivery group (SDG); BPS1-AR003-INDB / BPS1-DUP.

The samples were collected by Tetra Tech on April 30, 2009 and analyzed by Air Toxics LTD. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols. The data contained in this SDG was validated with regard to the following parameters:

* • Data completeness
* • Hold times
* • GCMS System Tuning and Performance
* • Initial/continuing calibrations
* • Laboratory Control Sample Recoveries
* • Laboratory Method Blank Results
* • Surrogate Spike Recoveries
* • Internal Standard Recoveries
* • Field Duplicate Precision
* • Compound Identification
* • Compound Quantitation
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile

There were no data qualification issues.

Sample BPS1-AR003-INDB was diluted 1.75X for the analysis. Sample BPS1-DUP was diluted 1.58X for the analysis.

Additional Comments

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The laboratory reported the VOC air result concentrations in units of both ppbv and µg/m3 on the sample forms. The results in the database and the qualified analytical result concentrations are reported as µg/m3 only.

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "Volatile Organic Analysis of Ambient Air In Canister By Method TO-15" EPA Region II SOP #HW-31 Revision #4 October 2006, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

Edward Sedlmyer / for
TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **D. BRAYAK** **DATE:** **JUNE 8, 2009**

FROM: **ANN COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION**
NWIRP BETHPAGE CTO WE06
SDG 0905536

SAMPLES: 3/ Air/ VOC

BPS1-AR018-INDB-2 BPS1-AR018-INDL BPS1-AR018-ODA-2

Overview

The sample set for NWIRP Bethpage SDG 0905536 consists of three (3) air environmental samples. The air samples were analyzed for volatile organic compounds (VOC). There were no field duplicate pairs associated with this sample data group (SDG).

The samples were collected on May 21, 2009 and analyzed by Air Toxics LTD. All analyses were conducted in accordance to USEPA Volatile Organic Analysis of Ambient Air in Canister by Method TO-15. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
* • Initial and Continuing Calibration
* • Laboratory Blank Analyses
* • Surrogate Recoveries
* • Blank Spike Results
* • Internal Standard Recoveries
* • Compound Quantitation
* • Compound Identification
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

Volatile (VOC) No analytical discrepancies were found.

Additional Comments

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and USEPA Region II Volatile Organic Analysis of Ambient Air in Canister by Method TO-15, SOP # HW-31 (October 2006) and the Department of Defense (DOD) document "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Ann Cognetti
TetraTech NUS
Ann Cognetti
Chemist/Data Validator

Edward [illegible] /for
TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
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