Soil Vapor Intrusion Study Report

Commercial Building
25 Grove Street
Franklin, MA

Former Nu-Style Site
87 Grove Street
Franklin, MA

December 2014

U.S. ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND REGIONAL LABORATORY
OFFICE OF ENVIRONMENTAL MEASUREMENT & EVALUATION
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Prepared for: Office of Site Remediation & Restoration, Brownfields Program
U.S. Environmental Protection Agency, New England

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1.0 Introduction

EPA Project Manager, James Byrne requested sub-slab soil gas samples be collected underneath the slab on-grade concrete foundation and indoor air at the commercial building located at 25 Grove Street in Franklin, MA during the heating season to form lines of evidence for completion of a vapor intrusion pathway risk evaluation related to contaminants associated with the Nu-Style Site (See Figure 1). This request was based on the detection of VOCs above the MCP GW-2 standard, particularly TCE in the shallow groundwater monitoring well MW 101S and PCE in the deeper bedrock monitoring well MW 101D. These monitoring wells are located approximately 15 feet north of the building. Based on a visit to the 25 Grove Street building on November 3, 2014, six sub-slab and five indoor air sampling locations were selected to evaluate VOC concentrations underneath and inside the building. Sub-slab sampling ports were installed on December 9, 2014. On December 15, 2014 sub-slab soil gas and 8-hour indoor air samples were collected.

Peter Kahn was the EPA sampling project manager for this study and was responsible for the following tasks: write the Sampling and Analysis Plan (SAP), communicate all aspects of the project to the EPA Project Manager, coordinate EPA laboratory analytical support with OEME laboratory personnel, prepare and collect canister indoor air and soil gas samples, and prepare the final report for these activities. Alysha Lynch assisted Peter Kahn with sampling and documentation. Scott Clifford was responsible for collecting indoor air and soil gas grab samples, and on-site screening analysis of these samples using the EPA Region 1 Mobile Laboratory. Dan Curran operated the EPA Region 1 Laboratory GC/MS which was used to analyze the canister air and soil gas samples. This report will be distributed to James Byrne and all other interested parties.

1.1 Site Background

The Nu-Style site is located at 87 Grove Street, Franklin, MA, and consists of two parcels (Franklin Tax Assessor's Map 276, Lots 22 and 27) totaling approximately 1.2 acres. The site is in a mixed-use (industrial/commercial/residential) area of Franklin, MA known as Unionville.

The site abuts a commercial operation to the north, Grove Street to the east, a commercial operation to the south (25 Grove Street), and Old Forge Hill Road and Mine Brook to the west. Lot 22 consists of a vacant one-and a half story building. Lot 27, which Mine Brook bisects into northern and southern portions, consists of the remains of a former two-story industrial building (on the northern portion), the remnants of a small dam, and a paved parking lot (on the southern portion). See Figure 1.

The former industrial building was demolished in the Fall/Winter of 2012. As part of the demolition, the southern wall of the former industrial building was reused as a retaining wall for much of the building demolition debris. The remainder of the area was filled and brought to grade. The northern portion of Lot 27 is generally flat, and at the same elevation as Grove Street, and is covered with mulch material.

Figure 1

1.2 Historic Site Usage

The former industrial building was constructed in approximately 1900. The textile manufacturer Unionville Woolen Mills initially occupied the building. Following Unionville Woolen Mills' operations, a paint manufacturer (Franklin Paint Company) occupied the Site. The specific operations employed by these owners involved the manufacture or on-site use of hazardous materials, including dyes, paints, and solvents, as well as the use of coal and/or oil for building and process heat.

In the 1950s, Grove Street was constructed along the eastern portion of the Site. At the time, the eastern portion of Lot 27 (upstream of the dam) and portions of Lot 26 were part of the Mine Brook mill pond. Portions of the former industrial building were constructed over the pond. At some point in the 1960s, the submerged portions of Lots 26 and 27 were filled; however, according to previous reports, the origin of the fill could not be determined.

In 1969, Nu-Style Company, Inc. and Image Jewelry initiated manufacture of costume jewelry on the Site. Operations in use at this time included metal plating, degreasing, and other metalworking and finishing operations. Additionally, at least five underground storage tanks (USTs) with a total capacity of approximately 15,000 gallons of petroleum were utilized on-site.

Nu-Style vacated the building in approximately 1989, and abandoned numerous containers of hazardous materials, as well as contaminated process equipment. In 1991, Nu-Style declared bankruptcy, and the property ownership defaulted to the Federal Deposit Insurance Corporation (FDIC).

1.3 Previous Site Investigations at Nu-Style

Environmental investigations conducted in 1991 reported concentrations of chlorinated VOCs in soil and groundwater. The contractor at the time inferred that the contamination resulted from a surface release.

Following an inspection by the Town and the Massachusetts Department of Environmental Protection (MassDEP), abandoned hazardous materials were observed in containers and process equipment. The discovery was referred to EPA in 1992, and EPA conducted a removal assessment shortly thereafter. Based on the results of the removal assessment, EPA removed containers of chromic acid, cyanides, nickel sulfate, chlorinated solvents, and lubricating oil from the site, and remaining petroleum product from the UST.

In 2002 and 2005, the Town foreclosed and took ownership via the tax-title process. In May 2006, Fuss & O'Neil (F&O) conducted a Phase I Environmental Site Assessment (ESA) at the Site. This ESA was updated in February 2007. Recognized Environmental Conditions (RECs) identified at the Site included:

- Materials used and stored at the site associated with jewelry manufacturing included cyanides, metals, chlorinated solvents, and petroleum products; however, additional substances associated with textile manufacturing may also have been used. Files indicated that numerous drums of hazardous waste and petroleum products were located outside of the site buildings;

- At least one UST was present on the western side of the Lot 27 building. In addition, a heating oil tank reportedly existed in an underground bunker on the same side of the building;

- A small tunnel containing slow-moving water, consistent with a millrace, was present beneath the vacant building on Lot 22. Town maps suggested that the tunnel conveyed Mine Brook water from an entry point east of the Site, through Lot 27 and beneath the former industrial building, beneath the vacant Lot 22 building, and discharged to Mine Brook somewhere west of the Site. The tunnel may have been used by the former woolen mill for direct waste disposal to Mine Brook;

- Releases of chlorinated solvents to soil and groundwater were identified on Lot 26, which abutted the site to the south.
- The southern (and eastern) portion of the Site formerly contained a pond that was filled circa 1960. The nature and origin of the fill are not known.

In 2005, the Town Building Commissioner inspected the former industrial building, and condemned it due to the poor structural conditions.

Between 2006 and 2010, a series of environmental assessments on the property were completed on behalf of the Town. As a result of these assessments, releases of chlorinated VOCs and metals to surface soil on the northern portion of the property, and dissolved-phase VOC and lead migrating in both the overburden and bedrock aquifers at the site were identified. Investigations conducted in Mine Brook documented the presence of polycyclic aromatic hydrocarbons (PAHs) at concentrations greater than risk-based threshold values. The Town reported these releases to MassDEP in May 2007, and the site was assigned Release Tracking Number (RTN) 2-16694.

The Town removed the remaining UST from the site in May 2007 and commissioned a building materials study to evaluate the presence of potential lead paint, asbestos, and other hazardous materials in the mill building. The investigation identified LBP, ACM, and mercury-containing and PCB-containing building materials in the former industrial building.

A Phase II Site Assessment Report was issued in September 2010 that summarized the findings, to date. This report did not completely meet expectations under the Massachusetts Contingency Plan (MCP), in that it did not fully investigate the nature and extent of the chlorinated VOC contamination in bedrock groundwater. To facilitate such an investigation, the former industrial building required demolition.

In May 2012, a Release Abatement Measure (RAM) Plan was submitted to MassDEP. The plan outlined the details and regulatory framework for the demolition of the former industrial building, and the excavation and removal of VOC and lead-contaminated soil. The RAM was completed between May 2012 and February 2013.

1.4 Remedial Activities at Nu-Style

The following is a summary of removal and remedial actions undertaken at the Site:

- 1992 – EPA completed a time-critical removal action under the National Contingency Plan (NCP). The removal action removed quantities of chromic acid, cyanide, nickel sulfate, chlorinated solvents, lubricating oil, remaining petroleum product from the UST, and other assorted contaminated materials.

- May 2007 – A 5,000-gallon No. 2 fuel oil UST was removed from a small alcove area in the southwestern portion of the former industrial building. Soil samples collected from the UST grave did not contain concentrations of hazardous materials in excess

of applicable criteria. No contaminated soil was removed from the Site during this UST removal.

- 2012-2013 – A RAM was completed between May 2012 and February 2013 which included the following:

    - Erosion and sediment controls, erection of a scaffold over Mine Brook to serve as a demolition debris shield in accordance with Order of Conditions;

    - Controlled demolition of the former industrial building such that ACM, LBP, PCB containing materials, and mercury containing fixtures were segregated. Note that none of these materials was abated prior to building demolition due to the poor structure integrity. A waiver (No. C-AW-12-181) of pertinent portions of the Massachusetts Contingency Plan (MCP) was granted by MassDEP to allow the demolition without prior abatement.

        - Brick and masonry were segregated and crushed for use as backfill in the former industrial building basement area. The area was brought to current grade using backfill provided by the Town and topped by a mulch layer.

        - The southern wall of the former industrial building was retained, and reinforced by a steel-reinforced cast-in-place wall gravity wall. This wall added mass to assist in retaining the backfill soil and crushed debris.

        - During building demolition, a stone-lined underground tunnel was encountered. The tunnel was approximately 150 feet long, 8-feet wide, and was oriented east-west.

            - Water was observed within the tunnel; however, it was determined that this water was the result of groundwater intrusion and not a surface water body. Samples of this water contained concentrations of lead above applicable MCP Method 1 standards.

            - The solid media below the water within the tunnel were not classified as surface water–related sediment. Samples collected of this material exhibited concentrations of PAHs and metals (chromium and lead), which were not consistent with those detected elsewhere on the Site.

            - The solid media was removed and the tunnel was collapsed and backfilled. Approximately 116 tons of PAH-contaminated

sediment material were transported to ESMI of New Hampshire for treatment via low-temperature thermal desorption.

- VOC and lead-contaminated soil removal and disposal.
  - Three areas excavated: the Northwest Corner Excavation Area (to a depth of 4 feet); the Northeast Corner Excavation Area (to a depth of 6 feet); and the B-4 Excavation Area (to a depth of 7 feet).
  - Approximately 407 tons of contaminated soil were excavated and transported to ESMI of New York for treatment via low-temperature thermal desorption.
  - Damaged and subsequently repaired a previously unknown active sewer pipe servicing an adjacent business.
  - Although most of the soil samples collected from the excavation limits were below MCP Method 1 S-1 soil standards, a soil sample collected from the northern extent of the Northwest Corner Excavation Area contained chlorinated VOCs at concentrations that exceeded Method 1 S-1 soil standards. Further excavation in this area was halted due to the presence of additional subsurface utilities.

1.5 Summary of Targeted Brownfield Assessment Investigations at Nu-Style

Between May 6, 2013 and May 10, 2013, Nobis Engineering, Inc. oversaw the installation of 12 bedrock monitoring wells (shallow and deep) at six locations throughout Lot 27 to characterize the release of chlorinated VOCs to groundwater at the Site. Nobis performed two rounds of groundwater sample collection on May 15, 2013, August 20, 2013, and August 21, 2013. These well couplets were identified as MW-101S and MW-101D through MW-106S and MW-106D.

The following is a summary of groundwater analytical results:

- Samples collected in May 2013 contained chlorinated VOCs including 1, 1-dichloroethane (1, 1-DCA), 1, 1-dichloroethylene (1, 1-DCE), cis-1, 2-dichloroethylene (cis-1, 2-DCE), tetrachloroethene (PCE), 1, 1, 1-trichloroethane (1, 1, 1-TCA), and trichloroethene (TCE), were reported in a majority of the monitoring wells sampled. Other VOCs detected were acetone (suspected laboratory contaminant), sec-butylbenzene, and methyl tert-butyl ether. In August, similar chlorinated VOCs were detected. In addition, 1, 1, 2-trichloroethane (1, 1, 2-TCA) and vinyl chloride (VC) were also detected. Acetone was not detected in any of the samples collected in August.

- Of the detected VOCs, PCE and TCE exceeded the MCP Method 1 GW-2 standards during both sampling events. None of the VOCs detected in May or August exceeded the MCP Method 1 GW-3 standards.

- PCE concentrations from both sampling events were generally significantly higher in the deeper bedrock monitoring wells compared to the more-shallow bedrock wells. The shallow bedrock groundwater PCE results exceeded GW-2 standards in monitoring well MW-104S (94 ug/L in May) and MW-105S (140 ug/L in May and 86 ug/L in August). Both monitoring wells are located in the southwestern portion of the former industrial building. The deep bedrock groundwater PCE results exceeded GW-2 standards in monitoring wells MW-101D, MW-103D, and MW-104D in May and August.

- Although elevated, the maximum concentrations of chlorinated VOCs detected in monitoring well MW-101D are not in excess of 1% of the effective solubility of an assumed dense non-aqueous phase liquid (DNAPL) comprised of TCE, PCE, and 1, 1, 1-TCA. Based on these analytical results, a DNAPL presence in the region near monitoring well MW-101D, along the southern boundary of Lot 27, is not anticipated; however, the groundwater concentrations in most of the monitoring wells increase with increasing depth, suggesting the potential for the possible presence of DNAPL in the deeper bedrock aquifer.

- TCE concentrations exhibited a similar pattern to PCE in that higher concentrations were reported in the deeper bedrock monitoring wells than what was detected in the shallower bedrock groundwater samples. The TCE concentration in the shallow bedrock sample collected from MW-101S was the lone shallow bedrock groundwater sample result that exceeded MCP GW-2. ***MW-101S, located approximately 15 feet north of an occupied commercial building on Lot 26 (25 Grove Street), contained TCE at 390 and 260 micrograms per liter (ug/L) in May and August, respectively, which is an order of magnitude greater than the GW-2 standard.*** Deep bedrock groundwater sample results exceeded MCP GW-2 standards in MW-101D, MW-102D, MW-103D, and MW-104D.

- VOC concentrations of detected VOCs did not exceed criteria in overburden wells MW-1, W-2, MW-3 or MW-17, which were only sampled in August.

- None of the metals results exceeded MCP groundwater standards.

1.6 25 Grove Street

The commercial property located at 25 Grove Street in Franklin, MA is the subject of the vapor intrusion investigation (See Figure 2). The building is constructed on a concrete slab on-grade foundation, built in the 80's and is approximately 10,174 sq. ft. The portion of the building to the north is currently occupied by the Gentle Giant Moving & Storage Company who is using the space for storage and an office. The rest of the building is not currently occupied and was used as office space and storage for a number of years before the tenant vacated the building in October 2014. The building is heated by four oil fired forced hot air furnaces and electric baseboard heaters. There are two oil tanks located inside the building and one outside. The office space portion of the building has central air conditioning. According to the EPA Project Manager, the

only chemicals stored or recently used in the building are Windex, bleach, Simple Green, printer toner, & diesel exhaust fluid (Urea/Water).

Figure 2

2.0 Sampling Objective

EPA Project Manager, James Byrne requested sub-slab soil gas samples be collected underneath slab on-grade concrete foundation and indoor air at the commercial building located at 25 Grove Street in Franklin, MA during the heating season to form lines of evidence for completion of a vapor intrusion pathway risk evaluation related to contaminants associated with the Nu-Style Site. This request was based on the detection of VOCs above the MCP GW-2 standard, particularly TCE in the shallow groundwater monitoring well MW 101S and PCE in the deeper bedrock monitoring well MW 101D. These monitoring wells are located approximately 15 feet north of the building. Based on a visit to the 25 Grove Street building on November 3, 2014, six sub-slab and five indoor air sampling locations were selected to evaluate VOC

concentrations underneath and inside the building. Sub-slab sampling ports were installed on December 9, 2014.

On December 15, 2014, indoor air samples were collected from five locations inside the building over an 8-hour period to reflect a typical worker exposure duration. Soil gas samples were also collected on the same day by Scott Clifford from the 6 sub-slab sampling ports installed on December 9 and then analyzed on-site using the EPA Region 1 Mobile Laboratory. Four of the six sub-slab sampling locations were selected to collect soil gas canister confirmation samples with a flow controller calibrated to a flow rate of approximately 200 ml/min. over a sample duration of approximately 1-hour until the canister reached atmospheric pressure. These samples were analyzed at the EPA Regional Laboratory using a GC/MS.

Indoor air data will be compared to a background outdoor air sample that was collected outside on the building's property at the same time indoor air samples were collected. For quality control purposes, one collocated indoor air canister sample was collected. All canister samples were analyzed for the VOCs listed on Table 1 at the EPA New England Regional Laboratory (NERL), particularly the target compounds trichloroethene (TCE) and tetrachloroethene (PCE) using a GC/MS.

The six semi-permanent sub-slab soil gas sampling probes were installed using stainless steel hardware, sealed with modeling clay and concrete, capped and flush mounted with the floor. The probe inlet is positioned to a depth where the bottom of the concrete slab meets the underlying material. Initially, after purging the probes, sub-slab soil gas samples were collected by drawing 200 micro liters of air using an air tight glass syringe then immediately analyzed on-site using the EPA mobile lab. Canister sub-slab soil gas confirmation samples were then collected using EPA Region I Standard Operating Procedure for Sub-Slab Soil Gas Sampling, April 1, 2011, Revision 2 from four selected probes and then analyzed at EPA NERL.

2.1 Target Compounds

As noted above all canister samples were analyzed for the VOCs listed on Table 1, particularly the target compounds TCE and PCE.

2.2 Data Use and Reporting

The results of the study are presented in this final report and will be provided to the EPA project manager and all other interested parties. This report describes the sampling and analytical procedures used for the study and the resulting data. The air sampling and analytical techniques used for this study provide the necessary data to assist data users with evaluating whether sampling results identify a risk to building occupants. The collected data will be compared to the EPA Vapor Intrusion Screening Levels (VISLs), which are based on Regional Screening Levels (RSLs). Screening levels for the target compounds are provided in the following table.

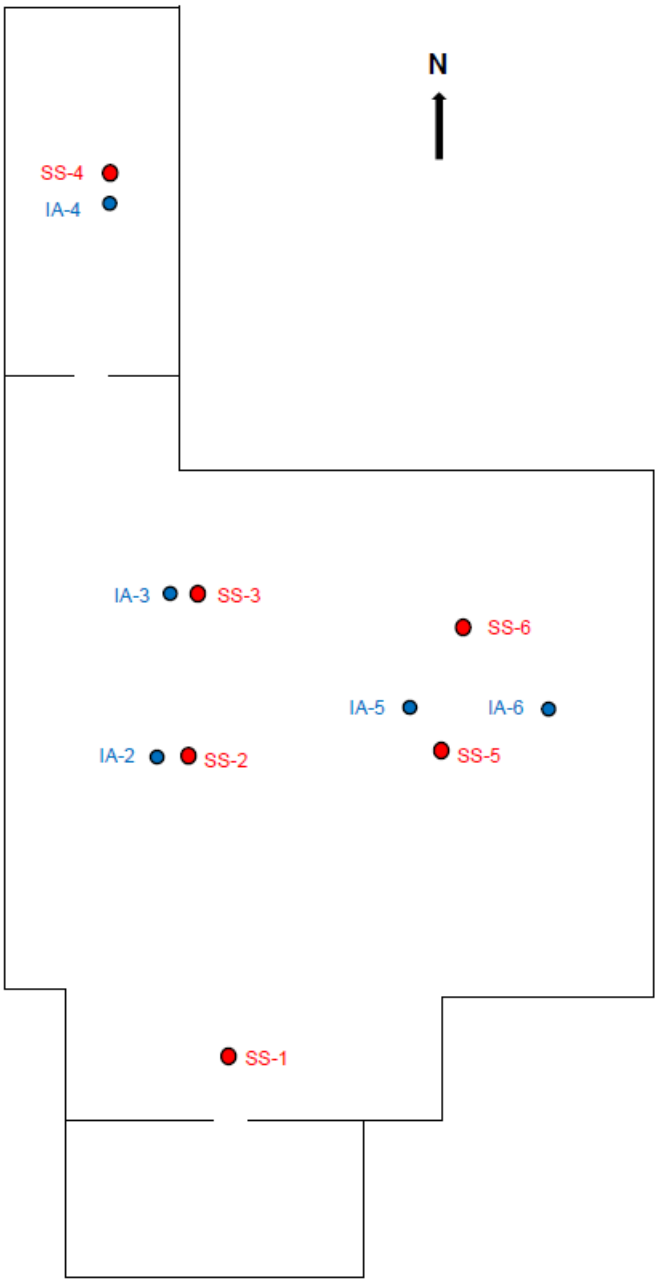
Compound	EPA VISL Commercial Air[1]		EPA Region 1 Reporting Limits[2]
Trichloroethene	Indoor Air Soil Gas	3.0 µg/m^3 30 µg/m^3	0.27 µg/m^3
Tetrachloroethene	Indoor Air Soil Gas	47 µg/m^3 470 µg/m^3	0.20 µg/m^3

1 EPA VISL = EPA Vapor Intrusion Screening Levels based on EPA Regional Screening Levels (May 2014); based on 1x10^{-6} cancer risk or hazard quotient of 0.1; average groundwater temperature 25℃.
2 Reporting limits are shown without dilutions; any sample dilutions will increase these limits.

3.0 Sampling Locations

Sampling locations were selected to represent the concentration of target compounds in the soil gas underneath the building's concrete foundation and the indoor air. A floor plan showing the approximate sub-slab and indoor air sampling locations are provided on Figure 3. Detailed descriptions of the sampling locations and photographs are also provided in this section.

Figure 3
25 Grove Street Franklin, MA
Building Sketch and Sampling Locations



Scale: Approimately 1 inch = 20 feet

- Sub-Slab Sampling Locations (e.g. SS-2)
- Indoor Air Sampling Locations (e.g. IA-2)

An ambient air sample was located outside, on a sign post approximately 20 feet west of Grove Street and 105 feet east of the building.

Sampling Location 1 (south end of building, storage area)

Indoor Air 8-hour Sample

No indoor air sample was collected at this location.

Indoor Air Grab Sample

No indoor air grab sample was collected at this location.

Soil Gas Samples

SS-1: To prepare the sampling probe, on 12/9/14 a 12 inch deep, 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 5 inch long, ¼ inch diameter stainless steel probe and fittings were installed. On 12/15/14 sub-slab soil gas samples were collected below the concrete slab 23 feet 7 inches from the east exterior wall, 18 feet 4 inches from the west exterior wall, 25 feet 5 inches from the south exterior wall, 6 feet 10 inches from the south interior wall, 6 feet 8 inches from the north interior wall and 5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe and then analyzed on-site using the EPA NERL Mobile Lab. An additional 1 liter was purged from the probe and a second/duplicate syringe grab sample was collected and analyzed using the Mobile Lab. Canister #22688 was then collected from 10:52 am to 11:52 am as a grab sample after purging another 1 liter from the probe. The canister was brought back to the EPA New England Regional Laboratory for analysis.

25 Grove Street Franklin, MA
Sampling Location 1 Looking West

25 Grove Street Franklin, MA
Sampling Location 1 Looking West

Sampling Location 2

Indoor Air 8-hour Samples

Canister #6579 was collected on 12/15/14 from 08:24 am to 4:24 pm, 17 feet 5 inches from the west exterior wall, 7 feet from the north interior wall, 11 feet 5 inches from the east interior wall, 9 feet 2 inches from the south interior wall and 2 feet 6 inches above the floor. Canister #6582 was a duplicate sample collocated with Canister #6579.

Indoor Air Grab Sample

No indoor air grab sample was collected at this location.

Soil Gas Samples

SS-2: To prepare the sampling probe, on 12/9/14 a 12 inch deep, 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 5 inch long, ¼ inch diameter stainless steel probe and fittings were installed. On 12/15/14 sub-slab soil gas samples were collected below the concrete slab 20 feet 5 inches from the west exterior wall, 7 feet from the north interior wall, 8 feet 5 inches from the east interior wall, 9 feet 2 inches from the south interior wall and 5 inches below the slab. A syringe grab sample was collected after purging 1.1 liters from the probe and then analyzed on-site using the EPA NERL Mobile Lab. An additional 1 liter was purged from the probe and a second/duplicate syringe grab sample was collected and analyzed using the Mobile Lab.

25 Grove Street Franklin, MA
Sampling Location 2 Looking West

Sampling Location 3

Indoor Air 8-hour Sample

Canister #22684 was collected on 12/15/14 from 08:25 am to 4:25 pm, 18 feet 5 inches from the west exterior wall, 11 feet from the east interior wall, 10 feet 8 inches from the south interior wall, 9 feet 3 inches from the north interior wall and 2 feet 3 inches above the floor.

Indoor Air Grab Sample

Grab 1 was collected on 12/15/14 at the same location where the 8-hour canister sample was collected (Canister #22684).

Soil Gas Samples

SS-3: To prepare the sampling probe, on 12/9/14 a 12 inch deep, 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 5 inch long, ¼ inch diameter stainless steel probe and fittings were installed. On 12/15/14 sub-slab soil gas samples were collected below the concrete slab 21 feet 5 inches from the west exterior wall, 8 feet from the east interior wall, 10 feet 8 inches from the south interior wall, 9 feet 3 inches from the north interior wall and 5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe and then analyzed on-site using the EPA NERL Mobile Lab. An additional 1.5 liters was purged from the probe and a second/duplicate syringe grab sample was collected and analyzed using the Mobile Lab. Canister #12570 was then collected from 1:28 pm to 2:28 pm as a grab sample after purging another 1 liter from the probe. The canister was brought back to the EPA New England Regional Laboratory for analysis.

25 Grove Street Franklin, MA
Sampling Location 3 Looking West

Sampling Location 4 (north end of building occupied by Gentle Giant Moving and Storage Company)

The concrete slab at this location was approximately 2 feet 8 inches below grade and lower than the rest of the buildings foundation. In addition, the concrete floor was much thinner than the rest of the buildings foundation. As a result, the sub-slab sampling probe was installed temporarily using clay to make a tight seal. The probe was removed and the hole filled in with clay and concrete after the sampling event.

Indoor Air 8-hour Sample

Canister #22683 was collected on 12/15/14 from 08:38 am to 4:38 pm, 11 feet 4 inches from the west exterior wall, 6 feet 10 inches from the east exterior wall, 20 feet 10 inches from the north exterior wall, 10 feet from the south interior wall and 2 feet 9 inches above the floor.

Indoor Air Grab Sample

Grab 2 was collected on 12/15/14 at the same location where the 8-hour canister sample was collected (Canister #22683). A duplicate grab sample was also collected.

Soil Gas Samples

SS-4: To prepare the sampling probe, on 12/9/14 a 12 inch deep, 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 2.5 inch long, ¼ inch diameter stainless steel probe and fittings were installed. On 12/15/14 sub-slab soil gas samples were collected below the concrete slab 11 feet 4 inches from the west exterior wall, 6 feet 10 inches from the east exterior wall, 18 feet 10 inches from the

north exterior wall, 12 feet from the south interior wall and 2.5 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe and then analyzed on-site using the EPA NERL Mobile Lab. Canister #22694 was then collected from 12:07 pm to 1:07 pm as a grab sample after purging another 1 liter from the probe. The canister was brought back to the EPA New England Regional Laboratory for analysis.

25 Grove Street Franklin, MA
Sampling Location 4 Looking South

Sampling Location 5

Indoor Air 8-hour Sample (office space)

Canister #6581 was collected on 12/15/14 from 08:24 am to 4:24 pm, 46 feet from the west exterior wall, 25 feet 5 inches from the north exterior wall and 2 feet 8 inches above the floor.

Indoor Air Grab Sample

No indoor air grab sample was collected at this location.

Soil Gas Samples (closet off office space)

SS-5: To prepare the sampling probe, on 12/9/14 a 12 inch deep, 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 5 inch long, ¼ inch diameter stainless steel probe and fittings were installed. On 12/15/14 sub-slab soil gas samples were collected below the concrete slab 32 feet 5 inches from the north exterior wall, 50 feet from the west exterior wall, 23 feet from the east exterior wall and 5 inches below the slab. A syringe grab sample was collected after purging 1.1 liters from the probe and analyzed on-site using the EPA NERL Mobile Lab. Canister #14897 was then collected from 1:22 pm to 2:22 pm as a grab sample after purging another 1 liter from the probe. The canister was brought back to the EPA New England Regional

Laboratory for analysis.

25 Grove Street Franklin, MA
Sampling Location 5

Sampling Location 6 (office space)

Indoor Air 8-hour Sample

Canister #4742 was collected on 12/15/14 from 08:24 am to 4:24 pm, 12 feet from the east exterior wall, 32 feet 8 inches from the south exterior wall, 25 feet from the north exterior wall and 2 feet 9 inches above the floor.

Indoor Air Grab Sample

Grab 3 was collected on 12/15/14 at the same location where the 8-hour canister sample was collected (Canister #4742).

Soil Gas Samples

SS-6: To prepare the sampling probe, on 12/9/14 a 12 inch deep, 3/8 inch diameter hole was drilled through the concrete floor and sub-slab material into which a 4 inch long, ¼ inch diameter stainless steel probe and fittings were installed. On 12/15/14 sub-slab soil gas samples were collected below the concrete slab 21 feet 6 inches from the east exterior wall, 40 feet 8 inches from the south exterior wall, 4 inches from the west interior wall, 17 feet from the north exterior wall and 4 inches below the slab. A syringe grab sample was collected after purging 1 liter from the probe and then analyzed on-site using the EPA NERL Mobile Lab. An additional 1.3 liters was purged from the probe and a second/duplicate syringe grab sample was collected and analyzed using the Mobile Lab.

25 Grove Street Franklin, MA
Sampling Location 6 Looking North

25 Grove Street Franklin, MA
Sampling Location 6 Looking East

The picture below shows a closet off the office space where sampling location 6 was located. The property owner indicated the previous tenant cut away a section of the concrete slab with intentions of installing plumbing for a bathroom. The plywood is currently covering the hole, which is an area where soil gas could migrate into the building.


Below plywood floor the concrete floor has been cut away for future bathroom plumbing, a soil gas point of entry area
12/15/2014

Ambient/Background Air Sample

Canister #12562 was attached to a sign post, 20 feet west of Grove Street, approximately 105 feet east of the building and 4 feet above the ground. The sample was collected on 12/15/14 from 08:18 am to 4:18 pm.

25 Grove Street Franklin, MA
Ambient Air Sample Looking North

Ambient Air Sample Looking West

4.0 Canister VOC Air Sampling and Analytical Methodologies

4.1 Description

EPA Region I Standard Operating Procedure (SOP) for Canister Sampling, ECASOP-Canister Sampling SOP5, September 19, 2011, Revision 5, was used to collect the air samples. The TWA indoor air and ambient air samples were collected using a 6-liter canister with a mechanical flow controller calibrated to 10 ml/min to obtain 8-hour samples. At the end of the sampling period, the final canister pressure should be below atmospheric pressure, indicated on the pressure gauge as a negative value, indicative of a vacuum for the sample duration. For this study, the final canister pressures at the end of the sample period were between -8 and -10 inches of mercury. As a result, the data collected are representative of 8-hour average concentrations.

The 8-hour indoor air and ambient air canister samples and soil gas canisters were brought back to the EPA laboratory, logged in on 12/16/14 and analyzed on 12/17/14 following the EPA Region I Standard Operating Procedure, EIASOP AIRCAN11. This analytical procedure was used to identify and quantify VOCs listed in Table 1. Prior to analyzing the canisters, they were pressurized with nitrogen. Indoor air and soil gas concentrations can be higher than outside ambient air. Therefore, dilutions are made to keep concentrations within the calibration range. As a result, a dilution factor is calculated and applied to the data. When dilutions are made to samples, the compound reporting limits tend to be higher.

4.2 Canister Cleaning and Leak Certification Procedures

4.2.1 Canister Cleaning Procedure

Prior to the sampling event, all the canisters were cleaned by placing them in ovens maintained at 150°C, evacuated to at least 10^{-2} Torr and then pressurized with humidified nitrogen to approximately 30 psig. This process was repeated three times. Detailed descriptions of these procedures are provided in the document entitled, Canister Cleaning Standard Operating Procedures, ECASOP-Canister Cleaning SOP5, March 16, 2009, Revision 5.

4.2.2 Canister Leak Certification Procedure

At the end of the cleaning process described above, the canisters were evacuated to less than 10^{-2} Torr. A Pirani sensor was then used to measure the vacuum in each canister. The canisters were then placed on a shelf for at least 24 hours. At the conclusion of this period, the Pirani sensor was used again to measure the final canister vacuum which was compared to the initial reading to determine if the canisters show signs of leaking. Detailed descriptions of these procedures are provided in the document entitled, Canister Leak Certification Standard Operating Procedures, ECASOP-Canister Leak SOP4, August 19, 2011, Revision 4.

4.2.3 Canister Cleanliness Certification Procedure

After all the canisters were certified leak free, each canister was pressurized with humidified nitrogen and then analyzed for contamination using the same GC/MS used to analyze the samples. Detailed descriptions of these procedures are provided in the document entitled, Pressurized Canisters for Clean Certification Standard Operating Procedures, ECASOP-Canister Pressurizing SOP5, EPA-REG1-OEME/CANISTER-PREP-SOP, September 19, 2011, Revision 5.

Canisters were stored under pressure until December 12, 2014, when they were re-evacuated to less than 1.3 x 10^{-2} Torr. Detailed descriptions of these procedures are provided in the document entitled, Canister Evacuation Standard Operating Procedures, ECASOP-Canister Evacuation SOP4, September 19, 2011, Revision 4.

4.3 Canister Flow Controller Cleaning and Calibration Procedures

4.3.1 Flow Controller Calibration Procedure

Flow controllers to be used with the 6-liter canisters were calibrated at the EPA laboratory to 10 ml/min to obtain 8-hour samples following the procedures provided in the EPA Region I SOP for Canister Sampling, ECASOP-Canister Sampling SOP5, September 19, 2011, Revision 5, part 2, Section 14.1. Each flow controller was connected to a "dummy" evacuated canister and an Aalborg Electronic Mass Flow Meter, Model GFMs-010020, was attached to the flow controller's inlet port. As room air was drawn into the "dummy" canister, the flow controller needle valve was adjusted until the flow rate was maintained at the desired rate.

In the field, each canister pressure was checked prior to and after the sampling event with a dedicated pressure/vacuum gauge. For this study the final canister pressures were between -8 and -10 inches of mercury vacuum. These final pressure readings confirm that the data are representative of 8-hour average concentrations.

4.3.2 Flow Controller Cleaning Procedure

After the flow controllers were calibrated they were cleaned following the procedures provided in the EPA Region I SOP for Flow Controller Cleaning Standard Operating Procedures, ECASOP- Flow Controller Cleaning, SOP.Rev1, September 19, 2011. The flow controllers were placed in ovens maintained at 100°C and purged with humidified nitrogen for approximately one hour.

4.4 Canister Analysis Quality Control/Quality Assurance Results

4.4.1 Laboratory Blank

Humidified nitrogen is introduced into the analytical instrument inlet line prior to and after analyzing the canister samples to serve as laboratory blanks. Laboratory blanks are analyzed to determine the background contamination present in the analytical system during the course of analyzing canisters for a given project. Canister data are qualified as estimated and flagged with a "B", when the observed concentration in the

sample was less than five times the concentration in the laboratory blank. Blank values were not subtracted from the reported sample concentrations.

The laboratory blank results are presented in the Laboratory Analytical Report, provided in Appendix B. Two laboratory blanks were analyzed with the indoor air, ambient air and soil gas canister samples. No compounds were detected above the reporting limits, therefore the data were not qualified as estimated.

4.4.2 Data Reproducibility/Precision Results

One canister (Canister 22688) was analyzed a second time for assessing analytical precision, Sample ID: AB53808. More specifically, a second sample aliquot of the same volume was withdrawn from the canister and analyzed in a similar manner. A table at the end of the Laboratory Analytical Report provided in Appendix B shows the results of the laboratory duplicate. The relative percent differences (RPD) were calculated and all are less than QC limits/acceptance criterion. Therefore, the values reported are deemed acceptable and do not need to be qualified as estimated.

An 8-hour duplicate canister sample, canister #6582, was collected at sampling location 2. Table 2 shows a comparison of compounds detected above their reporting limits in both samples along with calculated RPD. The sampling precision data were evaluated by comparing data pairs with both values greater than ten times the reporting limit and then determined if the calculated RPD was within the 25% acceptance criteria. Based on these criteria, the acceptance criteria was satisfied for all compounds.

4.4.3 Data Accuracy Results

A laboratory fortified blank (LFB) canister sample containing selected VOCs at known concentrations was analyzed with the canister samples to determine analytical accuracy. The results of the observed concentrations were compared to the QC Limits (70 – 130%) and are reported in a table at the end of the Laboratory Analytical Report provided in Appendix B. All the LFB percent recovery results were within the QC limits.

4.4.4 Canister Surrogate Spike Results

Prior to analyzing each canister sample, surrogate compounds, 1, 2-dichloroethane d4, bromofluorobenzene and toluene d8 were added to the analytical system. The percent recovery data for the surrogate compounds are reported with each sample data sheet in Appendix B. The results show the recoveries for the three surrogate compounds were all determined to be acceptable.

4.4.5 Chain of Custody

Chain of custody documentation was completed by Peter Kahn. All canister samples were logged into the laboratory on December 16, 2014, transferring the sample custody to laboratory personnel. A completed chain of custody form is included with the Laboratory Analytical Report provided in Appendix B.

4.4.6 Data Validation and Usability

The analytical report provided by the EPA Regional Laboratory was further validated by Peter Kahn. The data reported by the laboratory were compared to the data quality performance criteria specified in Sections 4.4.1, 4.4.2, 4.4.3 and 4.4.4 to evaluate data usability. All data collected for this project are presented in this report and qualified as needed, no data were rejected. The data presented in this report are of acceptable quality to represent the levels of volatile organic compounds present at the indoor air, ambient air, and soil gas sampling locations. These levels may vary given differing site activities, environmental conditions and the time of year. Therefore, the data only represent the conditions prevailing at the time of sampling.

5.0 Air Grab Sampling and Analysis Methodology for VOCs

5.1 Air Grab Sampling Procedures

Air grab samples were collected by drawing 200 micro liters of air at the selected sampling locations using an air tight glass syringe. The sample was immediately analyzed on-site using the EPA mobile lab.

5.2 Air Grab Field Analytical Procedures

Air grab samples were analyzed using Region 1's standard air screening method, Air Sample Analysis for Volatile Organic Compounds, EIASOP-FLDGRAB4. Air samples were collected in a 250 micro liter steel barreled glass syringe and analyzed onsite using a Shimadzu 2010 plus gas chromatograph (GC) equipped with a 30 meter, 0.53 mm DBPS 624 column, electron capture detector (ECD) and photo ionization detector (PID).

Concentrations of VOCs were calculated using the external standard technique. To tentatively identify compounds in a sample, professional judgment was used to compare the retention times of sample chromatogram peaks to the peak retention times of a standard mixture of VOCs. When a compound was tentatively identified, quantitation was performed by a peak height comparison. Compounds reported using this method should be treated as tentatively identified and concentrations are approximate. The compounds reported by the Mobile Lab and their corresponding reporting limits are provided below.

Compound	Reporting Limit (ppb/v)	Reporting Limit (µg/m^3)
Tetrachloroethene	0.5	2.0
Trichloroethene	0.7	2.7

5.3 Quality Control Procedures

The following quality control procedures were used for the on-site air grab sample analysis.

- Syringe blank injections were made after every 10 samples and as needed to assess carryover from high concentration samples. Blank values were subtracted from sample values when calculating compound concentrations.

- A one level calibration standard was analyzed repeatedly and throughout the duration of sample analyses to maintain a consistent standard chromatogram.
- Duplicate/replicate analyses were performed to determine field precision. All of the relative percent differences (RPDs) were within the ± 20% acceptance criteria.

6.0 Soil Gas Sampling and Analysis Methodology for VOCs

6.1 Soil Gas Sampling Procedures

The installation of sub-slab soil gas sampling probes was performed using the EPA Region I Standard Operating Procedure for Sub-Slab Soil Gas Sampling, April 12, 2011, Revision 2. After the sampling probe was in place, a battery operated, portable vacuum pump, calibrated to approximately 1 liter per minute, was attached at the end of a "T" fitting to purge 1 liter from the sampling probe before collecting each sample. The pump continuously withdrew soil gas as a sample was collected. This was accomplished by inserting the needle of a glass syringe through the septa of the "T" fitting and extracting a sample from the soil gas path. Samples were then analyzed on site using the Air Grab Field Analytical Procedures described in Section 5.2.

At selected soil gas sampling locations, the sampling probe remained in the same position and a new “T” fitting, made of a stainless steel flexible line and an in-line valve, was connected for collecting a canister grab sample. The vacuum pump was attached to one end of the “T” fitting and the canister with flow controller was connected to the other end of the “T” fitting. The canister valve remained closed as the pump purged 1 liter from the probe. Immediately after the in-line valve on the pump end of the “T” fitting was closed, the canister valve was opened to collect a grab sample. Using a flow controller on the canister calibrated to flow rate of approximately 200 ml/min. and collecting a sample for approximately 1-hour, the canister reached atmospheric pressure. All of the soil gas canister grab samples were brought back to the OEME Laboratory for analysis following the procedure described in Section 4.1.

6.2 Soil Gas Analytical Procedures

The soil gas grab samples were analyzed using Region 1’s standard air screening method, Air Sample Analysis for Volatile Organic Compounds, EIASOP-FLDGRAB4. Air samples were collected in a 250 micro liter steel barreled glass syringe and analyzed on-site using a Shimadzu 2010 plus gas chromatograph (GC) equipped with a 30 meter, 0.53 mm DBPS 624 column, electron capture detector (ECD) and photo ionization detector (PID).

Concentrations of VOCs were calculated using the external standard technique. To tentatively identify compounds in a sample, professional judgment was used to compare the retention times of sample chromatogram peaks to the peak retention times of a standard mixture of VOCs. When a compound was tentatively identified, quantitation was performed by a peak height comparison. Compounds reported using this method should be treated as tentatively identified and concentrations are approximate. This method tentatively identified and quantified the compounds shown in the table above with the corresponding reporting limits.

6.3 Quality Control Procedures

The following quality control procedures were used for the on-site air grab sample analysis.

- Syringe blank injections were made after every 10 samples and as needed to assess carryover from high concentration samples. Blank values were subtracted from sample values when calculating compound concentrations.
- A one level calibration standard was analyzed repeatedly and throughout the duration of sample analyses to maintain a consistent standard chromatogram.
- Duplicate/replicate analyses were performed to determine field precision. All of the relative percent differences (RPDs) were within the ± 20% acceptance criteria.

7.0 Meteorological Measurement

In general, sampling during winter months is a good strategy to maximize the probability of encountering "worse case" conditions. A key factor in this regard is the movement of gases in and out of the building basement or slab on-grade, to and from the surrounding subsurface environment. Meteorological conditions and observations during and prior to the sampling event provide some insight in this regard. With respect to encountering worse-case conditions, a change in barometric pressure can promote a modest "barometric pumping" action, where higher pressure gases in the subsurface migrate to lower pressure overlying areas (including buildings). Also, moderate rainfall in the preceding days of a sampling event, moderate to high wind speeds around a building and hot forced air heating systems or air conditioners cycling on and off within a building during the sampling event could promote movement of subsurface vapors in and out of the building.

Meteorological data were obtained from the Norwood Memorial Airport in Norwood, MA using the following NOAA web Site, http://cdo.ncdc.noaa.gov/qclcd. The airport is approximately 13 miles northeast of the area under investigation. Three tables are provided in Appendix A showing the daily weather conditions for December 13, 14, and 15, 2014. The data shown include: hourly temperature, dew point, relative humidity, wind direction, wind speed, atmospheric pressure and precipitation amounts. Fifty five hours prior to collecting the indoor air samples that began on December 15 at 08:34 am, no measureable precipitation was recorded and none was recored during the sampling period. As a result, the soil pore spaces were most likely not saturated with moisture during the sampling event. Therefore, soil gases had a chance to accumulate in the soil pore spaces. There was no snow cover on the ground at the time of the sampling event. The barometric pressure steadily increased beginning at 3:53 pm on 12/14/15 leading up to and through the sampling period ending 4:38 pm on 12/15/14. The change in barometric pressure over this period of time may have caused soil gases to begin moving out of the soil pore spaces and potentially into the building, if a pathway existed. The wind speeds recorded during the sampling event were between 0 and 8 mph, with an average of 4 mph, which if occurred in the area of the site may not have been high enough to promote the movement of subsurface vapors into the building. The table below shows the average 24-hour meteorological conditions for December 13, 14, and 15, 2014.

Time	Temp. (F)	Dew Point Temp. (F)	Relative Humidity (%)	Wind Speed (mph)	Wind Direction	Barometric Pressure (inches Hg)
12/13/14	35	26	68	8	WNW	29.77
12/14/14	35	27	75	4	WNW	29.78
12/15/14	33	27	80	2	WNW	29.99

8.0 Indoor Air, Soil Gas and Air Grab Sampling Results and Discussions

December 15, 2014, indoor air samples were collected over an 8-hour period from five locations inside the commercial building located at 25 Grove Street in Franklin, MA. An outdoor ambient air sample was collected on the property over an 8-hour period for comparative purposes to the indoor air samples. Soil gas grab samples were collected on December 15, 2014 from 6 sub-slab sampling ports that were installed on December 9, 2014.

The collected indoor air and soil gas data will be compared to the EPA Vapor Intrusion Screening Levels (VISLs), which are based on Regional Screening Levels (RSLs) for the target compounds TCE and PCE. All canister samples were analyzed for the VOCs listed on Table 1. The data presented in this report are of acceptable quality to represent the levels of VOCs present at the sampling locations under the specific conditions prevailing during sampling. These levels may vary given differing site activities, time of year, characteristics of the site and groundwater plume, meteorological conditions and building operations.

The building is constructed on a concrete slab on-grade foundation, built in the 80's and is approximately 10,174 sq. ft. During sampling the portion of the building to the north was occupied by the Gentle Giant Moving & Storage Company who is using the space for storage and an office. The rest of the building was not occupied and was used as office space and storage for a number of years before the tenant vacated the building in October 2014. The building is heated by four oil fired forced hot air furnaces and electric baseboard heaters. There are two oil tanks located inside the building and one outside. The office space portion of the building has central air conditioning. According to the EPA Project Manager, the only chemicals stored or recently used in the building are Windex, bleach, Simple Green, printer toner, & diesel exhaust fluid (Urea/Water). A visual inspection of the building during the sampling event did not reveal the storage of chemicals that would interfere with the sampling results. All windows and doors were closed for at least a 24 hour period prior to sampling and during the sampling period to maximize indoor air concentrations. The heat was kept on prior to and during the sampling event.

Approximately half way through the sampling event EPA noticed a petroleum/tar odor inside the building. After investigation, EPA observed the property owner heating up tar outside and to the west of the building, which he was going to apply to the roof to fix a water leak. As soon as the odor was detected EPA collected a syringe air grab sample in the area where indoor air sampling location #3 (canister 22684) was located. This activity immediately stopped and the odor dissipated shortly thereafter.

The canister sampling analytical report is provided in Appendix B. The mobile lab reports is provided in Appendix C. Table 3 shows a summary of the indoor air, ambient air and soil gas canister data for all target and non-target compounds detected above their reporting limits, and Table 4 shows a summary of the indoor air, ambient air and soil gas data for TCE and PCE. Figure 4 shows the sampling locations and corresponding TCE and PCE indoor air and soil gas sampling results.

8.1 Trichloroethene Sampling Results and Discussions

The TCE indoor air data were compared to the EPA Vapor Intrusion Screening Level (VISL), which is based on Regional Screening Level (RSL) for commercial properties, 3.0 µg/m^3. TCE sub-slab soil gas data were compared to the VISL, 30 µg/m^3.

TCE was detected at all five indoor air sampling locations between 0.52 and 2.7 µg/m^3, which are below the indoor air screening level 3.0 µg/m^3. TCE was not detected above the reporting limit 0.49 µg/m^3 in the ambient air, therefore it did not contribute to the indoor air concentrations. At the north end of the building where the Gentle Giant Moving & Storage Company has their office and storage space, the TCE concentration was the highest at 2.7 µg/m^3. Lower concentrations, between 0.52 and 0.96 µg/m^3, were detected in the part of the building where additional office space is located. The open areas/rooms to the west of the office space where sampling locations #2 and #3 where placed had the same concentrations, 1.2 µg/m^3.

TCE was also detected at all six sub-slab sampling locations. Both syringe grab samples and confirmation canister grab sub-slab samples were collected at locations #1, #3, #4, and #5. As shown on Table 4 the data comparison between these samples was not as good as expected. For the purpose of comparing the data to the TCE sub-slab soil gas VISL, 30 µg/m^3, the highest value was selected. Sub-slab soil gas was detected between 3.8 and 360 µg/m^3 with sampling locations #1, #2, #4, and #5 being above the soil gas screening level. The highest sub-slab soil gas TCE concentration was detected at the north end of the building where the Gentle Giant Moving & Storage Company has their office and storage space. This was also the area where the highest indoor air concentration was detected. This portion of the building is the closest to the Nu-Style Site and the groundwater monitoring wells were TCE and PCE were detected.

TCE indoor air, ambient air, and sub-slab soil gas sampling results are summarized in the tables below. The highest value detected at each location are shown. Note that in the table, ND = not detected with the reporting limit in parentheses.

TCE Concentrations (Indoor Air)

Sample Location	(µg/m^3)
Indoor Air 2	1.0
Indoor Air 2 Duplicate	1.2
Indoor Air 3	1.2
Indoor Air 4	2.7
Indoor Air 5	0.96
Indoor Air 6	0.52
Outside Ambient Air	ND (0.49)

EPA RSL Commercial Indoor Air for TCE is 3.0 µg/m^3

TCE Concentrations (Sub-Slab Soil Gas)

Sample Location	(µg/m^3)
SS-1	183
SS-2	183
SS-3	3.8
SS-4	360
SS-5	51
SS-6	4.3

EPA RSL Commercial Sub-Slab Soil Gas for TCE is 30 µg/m^3

8.2 Tetrachloroethene/PCE Sampling Results and Discussions

The PCE indoor air data were compared to the EPA Vapor Intrusion Screening Level (VISL), which is based on Regional Screening Level (RSL) for commercial properties, 47 µg/m^3. PCE sub-slab soil gas data were compared to the VISL, 470 µg/m^3.

PCE was not detected above the reporting limits at the five indoor air sampling locations and therefore are below the indoor air screening level, 47 µg/m^3. PCE was also not detected above the reporting limit in the ambient air, therefore it did not contribute to the indoor air concentrations.

PCE was also detected at four of the six sub-slab sampling locations, #1, #3, #4, and #5. Both syringe grab samples and confirmation canister grab sub-slab samples were collected at locations #1, #3, #4, and #5. As shown on Table 4 the data comparison between these samples was not as good as expected. For the purpose of comparing the data to the PCE sub-slab soil gas VISL, 470 µg/m^3, the highest value was selected. Sub-slab soil gas was detected between 1.7 and 122 µg/m^3, which are well below the soil gas screening level. The highest sub-slab soil gas PCE concentration was detected at the north end of the building where the Gentle Giant Moving & Storage Company has their office and storage space. This was also the area where the highest TCE indoor air and soil gas concentrations were detected. This portion of the building is the closest to the Nu-Style Site and the groundwater monitoring wells were TCE and PCE were

detected.

PCE indoor air, ambient air, and sub-slab soil gas sampling results are summarized in the tables below. The highest value detected at each location are shown. Note that in the table, ND = not detected with the reporting limit in parentheses.

PCE Concentrations (Indoor Air)

Sample Location	(µg/m^3)
Indoor Air 2	ND (0.75)
Indoor Air 2 Duplicate	ND (0.65)
Indoor Air 3	ND (0.68)
Indoor Air 4	ND (0.64)
Indoor Air 5	ND (0.68)
Indoor Air 6	ND (0.64)
Outside Ambient Air	ND (0.62)

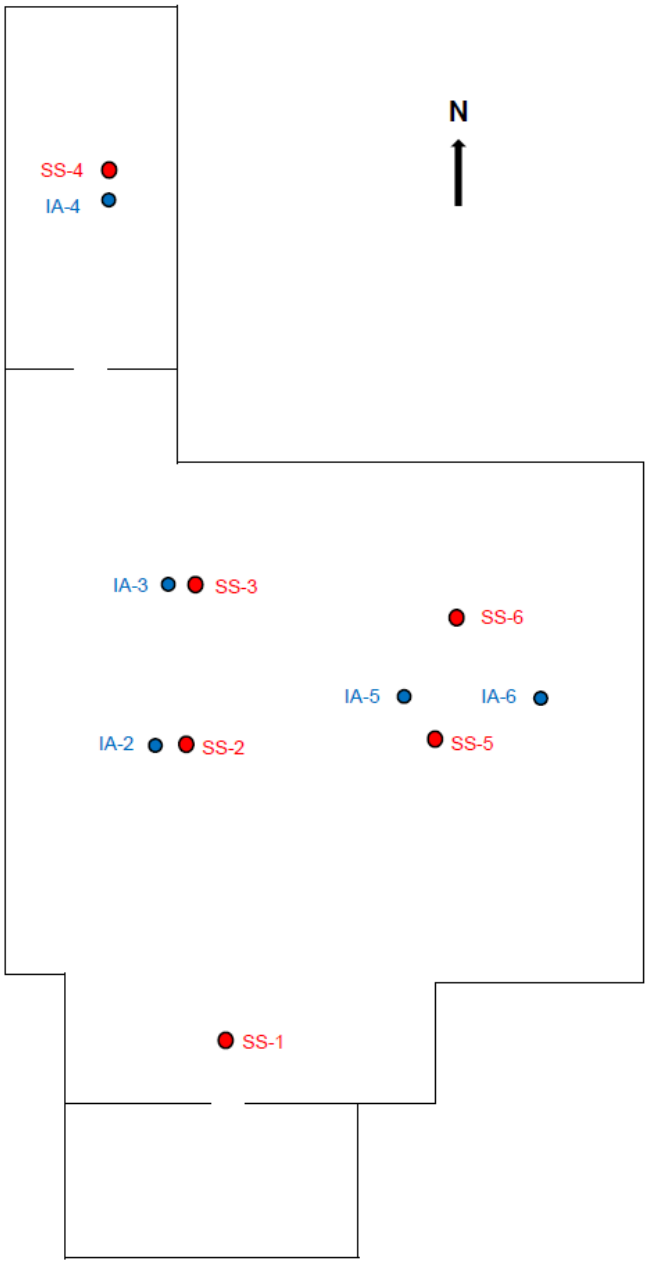
EPA RSL Commercial Indoor Air for PCE is 47 µg/m^3

PCE Concentrations (Sub-Slab Soil Gas)

Sample Location	(µg/m^3)
SS-1	4.7
SS-2	ND (3.4)
SS-3	5.4
SS-4	122
SS-5	1.7
SS-6	ND (3.4)

EPA RSL Commercial Sub-Slab Soil Gas for PCE is 470 µg/m^3

Figure 4
25 Grove Street Franklin, MA Sampling Locations and Data



Sample Location Indoor Air	TCE (µg/m³)
Indoor Air 2	1.0
Indoor Air 2 Duplicate	1.2
Indoor Air 3	1.2
Indoor Air 4	2.7
Indoor Air 5	0.96
Indoor Air 6	0.52
Outside Ambient Air	ND (0.49)

Sample Location Soil Gas	TCE (µg/m³)
SS-1	183
SS-2	183
SS-3	3.8
SS-4	360
SS-5	51
SS-6	4.3

Sample Location Indoor Air	PCE (µg/m³)
Indoor Air 2	ND (0.75)
Indoor Air 2 Duplicate	ND (0.65)
Indoor Air 3	ND (0.68)
Indoor Air 4	ND (0.64)
Indoor Air 5	ND (0.68)
Indoor Air 6	ND (0.64)
Outside Ambient Air	ND (0.62)

Sample Location Soil Gas	PCE (µg/m³)
SS-1	4.7
SS-2	ND (3.4)
SS-3	5.4
SS-4	122
SS-5	1.7
SS-6	ND (3.4)

Scale: Approimately 1 inch = 20 feet

- Sub-Slab Sampling Locations (e.g. SS-2)
- Indoor Air Sampling Locations (e.g. IA-2)

8.3 Non Target Compounds Sampling Results and Discussions

In addition to the target compounds detected in the indoor air and soil gas samples, several non-target compounds were also detected. Table 3 shows a summary of the indoor air and soil gas canister data for all compounds (target and non-target) detected above their reporting limits. A description of the product use for these compounds is presented in Appendix D.

In general, there have been studies showing levels of indoor pollutants can be 25% – 62% higher than outdoor air pollutant levels. Outdoor air continually infiltrates a typical building bringing with it pollutants that will accumulate, resulting in measurable levels that maybe higher inside than out. Comparing the indoor air and soil gas sampling results, it appears the non-target indoor air concentrations are higher than soil gas. Comparing the indoor air and ambient air results, it appears the following compounds had similar or slightly lower concentrations in ambient air than indoor air: benzene, cyclohexane, dichlorodifluoromethane, hexane, methyl ethyl ketone, methylchloride, toluene, trichlorofluoromethane, and m/p-xylenes. As a result, compounds detected inside the building are most likely associated with sources inside building or outside in the ambient air and not from contaminated soils or groundwater beneath or adjacent to the building.

TABLES

TABLE 1 - EPA METHOD TO15 TARGET VOC LIST

EPA New England TO-15 VOC Reported Compounds	CAS No.
1, 1, 1-Trichloroethane	71-55-6
1, 1, 2, 2-Tetrachloroethane	79-34-5
1, 1, 2-Trichloroethane	79-00-5
1, 1-Dichloroethane	75-34-3
1, 1-Dichloroethylene	75-35-4
1, 2, 4-Trichlorobenzene	120-82-1
1, 2, 4-Trimethylbenzene	95-63-6
1, 2-Dibromoethane	106-93-4
1, 2-Dichlorobenzene	95-50-1
1, 2-Dichloroethane	107-06-2
1, 2-Dichloropropane	78-87-5
1, 3, 5-Trimethylbenzene	108-67-8
1, 3-Butadiene	106-99-0
1, 3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1
1, 4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7
2-Hexanone	591-78-6
4-Ethyl Toluene	622-96-8
Acrylonitrile	107-13-1
Allyl Chloride	107-05-1
Benzene	71-43-2
Benzylchloride	100-44-7
Bromodichloromethane	75-27-4
Bromoform	75-25-2
Carbon Tetrachloride	56-23-5
Chlorobenzene	108-90-7
Chloroethane (Ethyl chloride)	75-00-3
Chloroform	67-66-3
Cyclohexane	110-82-7
Dibromochloromethane	124-48-1
Dichlorodifluoromethane (F12)	1320-37-2
Dichlorotetrafluoroethane	1320-37-2
Ethylbenzene	100-41-4
Heptane	142-82-5
Hexachloro-1, 3-butadiene (Hexachlorobutadiene)	87-68-3
Hexane (n-Hexane)	110-54-3
Methyl Ethyl Ketone (2-butanone)	78-93-3
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1
Methyl-t-butyl ether	1634-04-4
Methylbromide (Bromomethane)	74-83-9
Methylchloride (Chloromethane)	74-87-3
Methylene Chloride	75-09-2
Styrene	100-42-5
Tetrachloroethene	127-18-4
Tetrahydrofuran	109-99-9
Toluene	108-88-3
Trichloroethene	79-01-6
Trichlorofluoromethane	75-69-4
Trichlorotrifluoroethane	76-13-1
Vinyl Bromide	593-60-2
Vinyl chloride	75-01-4
cis-1, 2-Dichloroethene	156-59-2
cis-1,3-Dichloropropene	10061-01-5
1, 3-Dichloropropene	542-75-6
m, p-Xylene (Xylene, mixture)	1330-20-7
m-Xylene	108-38-3
p-Xylene	106-42-3
o-Xylene	95-47-6
trans-1, 2-Dichloroethene	156-60-5
trans-1, 3-Dichloropropene	10061-02-6

TABLE 2
DUPLICATE SAMPLING RESULTS
25 GROVE STREET
FRANKLIN, MA

COMPOUND	INDOOR AIR SAMPLING LOCATION 2		
	CANISTER #6579 15-Dec-14 8-HOUR AVG. ($\mu g/m^3$)	DUPLICATE CANISTER #6582 15-Dec-14 8-HOUR AVG. ($\mu g/m^3$)	RPD (%)
Trichloroethene	**1.0**	**1.2**	**18**
Tetrachloroethene	**ND (0.75)**	**ND (0.65)**	**NA**
1,2,4-Trimethylbenzene	1.0	0.75	29
4-Ethyltoluene	0.98	0.83	17
Benzene	1.2	1.4	15
Cyclohexane	0.90	1.0	11
Dichlorodifluoromethane	2.6	2.8	7
Ethylbenzene	0.70	0.78	11
Hexane	39	27	36
Methyl Ethyl Ketone	0.51	0.40	24
Methyl Isobutyl Ketone	ND (0.45)	0.42	NA
Methylchloride	0.90	0.95	5
Methylene Chloride	0.46	0.47	2
Toluene	4.3	5.3	21
Trichlorofluoromethane	1.4	1.5	7
m/p-Xylenes	2.2	2.5	13
o-Xylene	0.82	0.89	8

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
NA = not applicable, concentrations for these compounds were either less than 10 times the reporting limit or not detected above the reporting limits to calcualte an RPD
Compounds in bold type are target compounds for project.

TABLE 3
INDOOR AIR, AMBIENT AIR AND SOIL GAS CANISTER SAMPLING RESULTS SUMMARY
25 GROVE STREET
NU-STYLE SITE
FRANKLIN, MA

COMPOUND	INDOOR AIR LOCATION 2 CANISTER #6579 15-Dec-14 8-HOUR AVG. (µg/m³)	INDOOR AIR LOCATION 2 DUPLICATE CANISTER #6582 15-Dec-14 8-HOUR AVG. (µg/m³)	INDOOR AIR LOCATION 3 CANISTER #22684 15-Dec-14 8-HOUR AVG. (µg/m³)	INDOOR AIR LOCATION 4 CANISTER #22683 15-Dec-14 8-HOUR AVG. (µg/m³)	INDOOR AIR LOCATION 5 CANISTER #6581 15-Dec-14 8-HOUR AVG. (µg/m³)	INDOOR AIR LOCATION 6 CANISTER #4742 15-Dec-14 8-HOUR AVG. (µg/m³)	SUB-SLAB SOIL GAS SS-1 CANISTER #22688 15-Dec-14 GRAB SAMPLE (µg/m³)	SUB-SLAB SOIL GAS SS-3 CANISTER #12570 15-Dec-14 GRAB SAMPLE (µg/m³)	SUB-SLAB SOIL GAS SS-4 CANISTER #22694 15-Dec-14 GRAB SAMPLE (µg/m³)	SUB-SLAB SOIL GAS SS-5 CANISTER #14897 15-Dec-14 GRAB SAMPLE (µg/m³)	AMBIENT AIR OUTSIDE CANISTER #12562 15-Dec-14 8-HOUR AVG. (µg/m³)
Trichloroethene	**1.0**	**1.2**	**1.2**	**2.7**	**0.96**	**0.52**	**85**	**1.2**	**170**	**24**	**ND (0.49)**
Tetrachloroethene	**ND (0.75)**	**ND (0.65)**	**ND (0.68)**	**ND (0.64)**	**ND (0.68)**	**ND (0.64)**	**ND (1.1)**	**1.8**	**48**	**1.7**	**ND (0.62)**
1,1,1-Trichloroethane	ND (0.60)	ND (0.52)	ND (0.55)	ND (0.51)	ND (0.55)	ND (0.52)	ND (0.87)	3.4	ND (0.49)	ND (0.87)	ND (0.50)
1,1-Dichloroethene	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.37)	ND (0.40)	ND (0.38)	ND (0.63)	0.58	ND (3.6)	ND (0.63)	ND (0.36)
1,2,4-Trimethylbenzene	1.0	0.75	1.2	2.3	0.99	0.74	ND (0.79)	0.92	ND (4.4)	ND (0.79)	ND (0.45)
1,3,5-Trimethylbenzene	ND (0.54)	ND (0.47)	ND (0.49)	0.74	ND (0.49)	ND (0.47)	ND (0.79)	ND (0.37)	ND (4.4)	ND (0.79)	ND (0.45)
4-Ethyltoluene	0.98	0.83	1.2	2.2	0.96	0.81	ND (0.79)	0.62	ND (4.4)	ND (0.79)	ND (0.45)
Benzene	1.2	1.4	1.4	1.7	1.3	1.5	0.61	0.79	ND (2.9)	0.56	0.91
Cyclohexane	0.90	1.0	1.2	2.4	1.0	1.3	ND (0.55)	0.52	ND (3.1)	ND (0.55)	0.34
Dichlorodifluoromethane	2.6	2.8	2.7	2.7	2.7	2.8	2.4	2.6	ND (4.4)	1.6	2.4
Ethylbenzene	0.70	0.78	0.94	1.5	0.81	0.95	ND (0.69)	0.39	ND (3.9)	ND (0.69)	ND (0.40)
Hexane	39	27	26	39	39	39	0.95	2.2	ND (3.2)	0.95	25
Methyl Ethyl Ketone	0.51	0.40	0.64	0.65	0.52	0.50	ND (0.47)	0.73	ND (2.6)	0.51	0.47
Methyl Isobutyl Ketone	ND (0.45)	0.42	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.66)	ND (0.31)	ND (3.7)	ND (0.66)	ND (0.38)
Methylchloride	0.90	0.95	0.95	0.93	0.95	0.95	0.68	0.68	ND (1.9)	0.62	0.95
Methylene Chloride	0.46	0.47	0.49	0.51	0.49	0.46	ND (0.56)	0.32	ND (3.1)	ND (0.56)	ND (0.32)
Toluene	4.3	5.3	5.7	8.1	4.9	5.5	1.3	4.0	ND (3.4)	1.8	2.6
Trichlorofluoromethane	1.4	1.5	1.5	1.7	1.5	1.4	1.1	1.5	ND (5.1)	1.3	1.3
m/p-Xylenes	2.2	2.5	3.0	4.6	2.6	3.1	ND (1.4)	1.2	ND (7.8)	ND (1.4)	1.1
o-Xylene	0.82	0.89	1.1	1.7	0.92	1.1	ND (0.69)	0.58	ND (3.9)	ND (0.69)	ND (0.40)

NOTES: ND = Not detected above reporting limits; reporting limit in parentheses
Compounds in bold type are target compounds for project.

Table 4
December 15, 2014
25 Grove Street
Nu-Style Site
Franklin, MA
Soil Gas Grab, Indoor Air Grab and Indoor Air 8-Hour Sampling Data

Sample Location	TCE ($\mu g/m^3$)	PCE ($\mu g/m^3$)
Location 1		
SS-1: Sub-slab soil gas syringe grab sample	183	ND (3.4)
SS-1: Sub-slab soil gas syringe grab sample, duplicate	177	4.7
SS-1: canister sub-slab grab sample (canister #22688)	85	ND (1.1)
Location 2		
Indoor air 8-hour canister sample (canister #6579)	1.0	ND (0.75)
Indoor air 8-hour canister sample,duplicate (canister #6582)	1.2	ND (0.65)
SS-2: Sub-slab soil gas syringe grab sample	161	ND (3.4)
SS-2: Sub-slab soil gas syringe grab sample, duplicate	183	ND (3.4)
Location 3		
Grab-1: indoor air syringe grab sample at canister sample	ND (3.8)	ND (3.4)
Indoor air 8-hour canister sample (canister #22684)	1.2	ND (0.68)
SS-3: Sub-slab soil gas syringe grab sample	3.8	5.4
SS-3: Sub-slab soil gas syringe grab sample, duplicate	ND (3.8)	5.4
SS-3: canister sub-slab grab sample (canister #12570)	1.2	1.8
Location 4		
Grab-2: indoor air syringe grab sample at canister sample	ND (3.8)	ND (3.4)
Grab-2: indoor air syringe grab sample at canister sample, duplicate	ND (3.8)	ND (3.4)
Indoor air 8-hour canister sample (canister #22683)	2.7	ND (0.64)
SS-4: Sub-slab soil gas syringe grab sample	360	122
SS-4: canister sub-slab grab sample (canister #22694)	170	48
Location 5		
Indoor air 8-hour canister sample (canister #6581)	0.96	ND (0.68)
SS-5: Sub-slab soil gas syringe grab sample	51	ND (3.4)
SS-5: canister sub-slab grab sample (canister #14897)	24	1.7
Location 6		
Grab-3: indoor air syringe grab sample at canister sample	ND (3.8)	ND (3.4)
Indoor air 8-hour canister sample (canister #4742)	0.52	ND (0.64)
SS-6: Sub-slab soil gas syringe grab sample	ND (3.8)	ND (3.4)
SS-6: Sub-slab soil gas syringe grab sample, duplicate	4.3	ND (3.4)
Outside/Ambient Air		
Ambient air 8-hour canister sample (canister #12562)	ND (0.49)	ND (0.62)

NOTES:
ND = Not detected above reporting limits; reporting limit in parentheses
TCE = Trichloroethene, PCE = Tetrachloroethene

APPENDIX A

METEOROLOGICAL DATA

NORWOOD MEMORIAL AIRPORT
NORWOOD, MA
Pre-Sampling Period December 13, 2014 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
12/13/2014	0:53	33	31	27	79	5	300		29.81	
	1:53	33	30	26	75	7	270		29.81	
	2:53	33	30	25	72	8	290		29.80	
	3:53	32	29	25	75	7	280		29.80	
	4:53	31	29	25	78	6	280		29.79	
	5:53	31	29	25	78	6	300		29.79	
	6:53	31	29	24	75	6	300		29.79	
	7:53	32	29	25	75	7	300		29.81	
	8:53	33	30	25	72	8	300		29.81	
	9:53	35	31	25	67	9	310		29.81	
	10:53	38	33	26	62	10	310		29.79	
	11:53	40	35	26	57	10	320		29.76	Trace
	12:53	41	35	26	55	14	300	18	29.74	
	13:53	41	35	26	55	15	280		29.73	
	14:53	41	35	26	55	9	300		29.73	
	15:53	40	35	26	57	8	310		29.74	
	16:53	39	34	26	60	9	290		29.73	
	17:53	39	34	26	60	8	310		29.74	
	18:53	37	33	26	65	7	310		29.74	
	19:53	36	32	26	67	10	310		29.74	
	20:53	34	31	25	70	6	300		29.74	
	21:53	33	30	25	72	5	310		29.75	
	22:53	31	29	25	78	0	Calm		29.75	
	23:53	30	28	25	82	0	Calm		29.74	
Average		**35**	**32**	**26**	**68**	**8**	**299**	**18**	**29.77**	
Total										**Trace**

NORWOOD MEMORIAL AIRPORT
NORWOOD, MA
Pre-Sampling Period December 14, 2014 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
12/14/2014	0:53	32	30	26	79	0	Calm		29.74	
	1:53	31	29	25	78	3	250		29.74	
	2:53	30	29	26	85	0	Calm		29.75	
	3:53	29	28	26	89	0	Calm		29.74	
	4:53	29	28	26	89	0	Calm		29.74	
	5:53	30	29	28	92	0	Calm		29.76	
	6:53	31	29	25	78	0	Calm		29.77	
	7:53	30	28	25	82	5	300		29.78	
	8:53	34	31	26	73	5	310		29.78	
	9:53	36	32	26	67	10	310		29.79	
	10:53	39	34	27	62	10	300		29.78	
	11:53	42	36	27	55	6	330		29.75	
	12:53	44	38	28	53	8	320		29.75	
	13:53	44	38	28	53	9	300		29.75	
	14:53	46	39	28	50	7	320		29.75	
	15:53	43	37	28	56	6	300		29.77	
	16:53	40	35	28	62	3	320		29.79	
	17:53	37	34	29	73	6	280		29.80	
	18:53	36	33	28	73	5	290		29.83	
	19:53	34	32	28	79	3	320		29.84	
	20:53	31	30	29	92	0	Calm		29.85	
	21:53	30	29	28	92	0	Calm		29.86	
	22:53	30	29	28	92	0	Calm		29.86	
	23:53	29	28	27	92	0	Calm		29.86	
Average		**35**	**32**	**27**	**75**	**4**	**304**		**29.78**	
Total										**0.00**

NORWOOD MEMORIAL AIRPORT
NORWOOD, MA
Sampling Period December 15, 2104 Meteorological Data

Date	Time (LST)	Dry Bulb Temp (F)	Wet Bulb Temp (F)	Dew Point Temp (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (degrees)	Wind Gusts (MPH)	Atmospheric Pressure (in. hg)	Precipitation Total (in)
12/15/2014	0:53	29	28	27	92	0	Calm		29.86	
	1:53	29	28	27	92	0	Calm		29.88	
	2:53	28	27	26	92	0	Calm		29.88	
	3:53	27	26	25	92	0	Calm		29.90	
	4:53	27	26	25	92	0	Calm		29.90	
	5:53	25	25	24	96	0	Calm		29.93	
	6:53	26	25	24	92	0	Calm		29.94	
	7:53	28	27	25	89	0	Calm		29.96	
	8:53	35	33	29	79	5	320		29.98	
	9:53	38	34	28	67	8	350		29.99	
	10:53	39	34	27	62	6	Variable		29.98	
	11:53	40	35	27	60	7	Variable		29.98	
	12:53	42	36	27	55	5	350		29.98	
	13:53	43	37	27	53	0	Calm		29.98	
	14:53	44	37	27	51	0	Calm		30.00	
	15:53	41	36	28	60	6	90		30.00	
	16:53	36	34	30	79	0	Calm		30.03	
	17:53	32	Missing	28	Missing	0	Calm		Missing	
	18:53	31	30	27	85	0	Calm		30.07	
	19:53	30	29	27	89	0	Calm		30.09	
	20:53	29	28	27	92	0	Calm		30.08	
	21:53	29	28	27	92	0	Calm		30.08	
	22:53	28	27	26	92	0	Calm		30.10	
	23:53	29	28	27	92	0	Calm		30.10	
Average		**33**	**30**	**27**	**80**	**2**	**278**	**0**	**29.99**	
Total										**0.00**

APPENDIX B

LABORATORY ANALYTICAL REPORT

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

January 12, 2015

Peter Kahn - ECA / OEME
US EPA New England R1

Project Number: 14120021
Project: Nu-Style Inc.- Franklin, MA
Analysis: Air Toxics by GC/MS
EPA Chemist: Dan Curran

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-AIRCAN11.

Samples were analyzed by GC/MS using an ion trap mass spectrometer. Samples were introduced to the GC via an Entech preconcentrator using cryofocusing. Analysis SOP is based on Compendium Method TO-15, update January 1999.

Conversion of ppbv to ug/m3 = ppbv*(mw/24.45) 24.45 is based on T=25c and P = 760 mm Hg

Date Samples Received by the Laboratory: 12/16/2014

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Digitally signed by Boudreau, Dan
DN: cn=Boudreau, Dan,
email=Boudreau.Dan@epa.gov
Date: 2015.01.12 10:59:36 -05'00'

14120021$AIRTX

Qualifiers:

RL = Reporting limit
ND = Not Detected above Reporting limit
NA = Not Applicable due to high sample dilutions or sample interferences
NC = Not calculated since analyte concentration is ND.
J = Estimated value
J1 = Estimated value due to MS recovery outside accceptance criteria
J2 = Estimated value due to LFB result outside acceptance criteria
J3 = Estimated value due to RPD result outside acceptance criteria
J4 = Estimated value due to LCS result outside acceptance criteria
E = Estimated value exceeds the calibration range
L = Estimated value is below the calibration range
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	12562	Lab Sample ID:	AB53801
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.85
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.092	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.092	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.092	
75-34-3	1,1-Dichloroethane	ND	ND	0.092	
75-35-4	1,1-Dichloroethylene	ND	ND	0.092	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.092	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.092	
106-93-4	1,2-Dibromoethane	ND	ND	0.092	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.092	
107-06-2	1,2-Dichloroethane	ND	ND	0.092	
78-87-5	1,2-Dichloropropane	ND	ND	0.092	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.092	
106-99-0	1,3-Butadiene	ND	ND	0.18	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.092	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.092	
591-78-6	2-Hexanone	ND	ND	0.092	
622-96-8	4-Ethyltoluene	ND	ND	0.092	
107-13-1	Acrylonitrile	ND	ND	0.092	
107-05-1	Allyl Chloride	ND	ND	0.092	
71-43-2	Benzene	**0.29**	**0.91**	0.092	
100-44-7	Benzylchloride	ND	ND	0.092	
75-27-4	Bromodichloromethane	ND	ND	0.092	
75-25-2	Bromoform	ND	ND	0.092	
56-23-5	Carbon Tetrachloride	ND	ND	0.092	
108-90-7	Chlorobenzene	ND	ND	0.092	
75-00-3	Chloroethane	ND	ND	0.092	
67-66-3	Chloroform	ND	ND	0.092	
110-82-7	Cyclohexane	**0.098**	**0.34**	0.092	
124-48-1	Dibromochloromethane	ND	ND	0.092	
75-71-8	Dichlorodifluoromethane	**0.49**	**2.4**	0.092	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.092	
100-41-4	Ethylbenzene	ND	ND	0.092	
142-82-5	Heptane	ND	ND	0.092	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.092	
110-54-3	Hexane	**7.1**	**25**	0.092	
78-93-3	Methyl Ethyl Ketone	**0.16**	**0.47**	0.092	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.092	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.092	
74-83-9	Methylbromide	ND	ND	0.092	
74-87-3	Methylchloride	**0.46**	**0.95**	0.092	
75-09-2	Methylene Chloride	ND	ND	0.092	
100-42-5	Styrene	ND	ND	0.092	

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	12562	Lab Sample ID:	AB53801
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.85
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	ND	ND	0.092	
109-99-9	Tetrahydrofuran	ND	ND	0.092	
108-88-3	Toluene	**0.70**	**2.6**	0.092	
79-01-6	Trichloroethylene	ND	ND	0.092	
75-69-4	Trichlorofluoromethane	**0.23**	**1.3**	0.092	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.092	
593-60-2	Vinyl Bromide	ND	ND	0.092	
75-01-4	Vinylchloride	ND	ND	0.092	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.092	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.092	
1330-20-7	m/p-Xylenes	**0.24**	**1.1**	0.18	
95-47-6	o-Xylene	ND	ND	0.092	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.092	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.092	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	118	82 - 135
Bromofluorobenzene	98	76 - 115
Toluene,d8	95	64 - 125

Comments:

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	4742	Lab Sample ID:	AB53802
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.89
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.095	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.095	
75-34-3	1,1-Dichloroethane	ND	ND	0.095	
75-35-4	1,1-Dichloroethylene	ND	ND	0.095	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.095	
95-63-6	1,2,4-Trimethylbenzene	**0.15**	**0.74**	0.095	
106-93-4	1,2-Dibromoethane	ND	ND	0.095	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.095	
107-06-2	1,2-Dichloroethane	ND	ND	0.095	
78-87-5	1,2-Dichloropropane	ND	ND	0.095	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.095	
106-99-0	1,3-Butadiene	ND	ND	0.19	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.095	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.095	
591-78-6	2-Hexanone	ND	ND	0.095	
622-96-8	4-Ethyltoluene	**0.16**	**0.81**	0.095	
107-13-1	Acrylonitrile	ND	ND	0.095	
107-05-1	Allyl Chloride	ND	ND	0.095	
71-43-2	Benzene	**0.47**	**1.5**	0.095	
100-44-7	Benzylchloride	ND	ND	0.095	
75-27-4	Bromodichloromethane	ND	ND	0.095	
75-25-2	Bromoform	ND	ND	0.095	
56-23-5	Carbon Tetrachloride	ND	ND	0.095	
108-90-7	Chlorobenzene	ND	ND	0.095	
75-00-3	Chloroethane	ND	ND	0.095	
67-66-3	Chloroform	ND	ND	0.095	
110-82-7	Cyclohexane	**0.37**	**1.3**	0.095	
124-48-1	Dibromochloromethane	ND	ND	0.095	
75-71-8	Dichlorodifluoromethane	**0.57**	**2.8**	0.095	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.095	
100-41-4	Ethylbenzene	**0.22**	**0.95**	0.095	
142-82-5	Heptane	ND	ND	0.095	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.095	
110-54-3	Hexane	**11**	**39**	0.48	
78-93-3	Methyl Ethyl Ketone	**0.17**	**0.50**	0.095	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.095	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.095	
74-83-9	Methylbromide	ND	ND	0.095	
74-87-3	Methylchloride	**0.46**	**0.95**	0.095	
75-09-2	Methylene Chloride	**0.13**	**0.46**	0.095	
100-42-5	Styrene	ND	ND	0.095	

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	4742	Lab Sample ID:	AB53802
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.89
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	ND	ND	0.095	
109-99-9	Tetrahydrofuran	ND	ND	0.095	
108-88-3	Toluene	**1.5**	**5.5**	0.095	
79-01-6	Trichloroethylene	**0.096**	**0.52**	0.095	
75-69-4	Trichlorofluoromethane	**0.25**	**1.4**	0.095	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.095	
593-60-2	Vinyl Bromide	ND	ND	0.095	
75-01-4	Vinylchloride	ND	ND	0.095	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.095	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.095	
1330-20-7	m/p-Xylenes	**0.72**	**3.1**	0.19	
95-47-6	o-Xylene	**0.24**	**1.1**	0.095	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.095	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.095	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	117	82 - 135
Bromofluorobenzene	94	76 - 115
Toluene,d8	92	64 - 125

Comments: Hexane result is from a 9.45 fold dilution analyzed 12/18/14.

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	6581	Lab Sample ID:	AB53803
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.04
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.10	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.10	
75-34-3	1,1-Dichloroethane	ND	ND	0.10	
75-35-4	1,1-Dichloroethylene	ND	ND	0.10	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	**0.20**	**0.99**	0.10	
106-93-4	1,2-Dibromoethane	ND	ND	0.10	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.10	
107-06-2	1,2-Dichloroethane	ND	ND	0.10	
78-87-5	1,2-Dichloropropane	ND	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.10	
106-99-0	1,3-Butadiene	ND	ND	0.20	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.10	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.10	
591-78-6	2-Hexanone	ND	ND	0.10	
622-96-8	4-Ethyltoluene	**0.20**	**0.96**	0.10	
107-13-1	Acrylonitrile	ND	ND	0.10	
107-05-1	Allyl Chloride	ND	ND	0.10	
71-43-2	Benzene	**0.42**	**1.3**	0.10	
100-44-7	Benzylchloride	ND	ND	0.10	
75-27-4	Bromodichloromethane	ND	ND	0.10	
75-25-2	Bromoform	ND	ND	0.10	
56-23-5	Carbon Tetrachloride	ND	ND	0.10	
108-90-7	Chlorobenzene	ND	ND	0.10	
75-00-3	Chloroethane	ND	ND	0.10	
67-66-3	Chloroform	ND	ND	0.10	
110-82-7	Cyclohexane	**0.30**	**1.0**	0.10	
124-48-1	Dibromochloromethane	ND	ND	0.10	
75-71-8	Dichlorodifluoromethane	**0.54**	**2.7**	0.10	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.10	
100-41-4	Ethylbenzene	**0.19**	**0.81**	0.10	
142-82-5	Heptane	ND	ND	0.10	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.10	
110-54-3	Hexane	**11**	**39**	0.50	
78-93-3	Methyl Ethyl Ketone	**0.18**	**0.52**	0.10	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.10	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.10	
74-83-9	Methylbromide	ND	ND	0.10	
74-87-3	Methylchloride	**0.46**	**0.95**	0.10	
75-09-2	Methylene Chloride	**0.14**	**0.49**	0.10	
100-42-5	Styrene	ND	ND	0.10	

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	6581	Lab Sample ID:	AB53803
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.04
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	ND	ND	0.10	
109-99-9	Tetrahydrofuran	ND	ND	0.10	
108-88-3	Toluene	**1.3**	**4.9**	0.10	
79-01-6	Trichloroethylene	**0.18**	**0.96**	0.10	
75-69-4	Trichlorofluoromethane	**0.26**	**1.5**	0.10	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.10	
593-60-2	Vinyl Bromide	ND	ND	0.10	
75-01-4	Vinylchloride	ND	ND	0.10	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.10	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.10	
1330-20-7	m/p-Xylenes	**0.60**	**2.6**	0.20	
95-47-6	o-Xylene	**0.21**	**0.92**	0.10	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.10	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.10	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	119	82 - 135
Bromofluorobenzene	94	76 - 115
Toluene,d8	94	64 - 125

Comments: Hexane result is from a 10.2 fold dilution analyzed 12/18/14.

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	22683	Lab Sample ID:	AB53804
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.87
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.094	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.094	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.094	
75-34-3	1,1-Dichloroethane	ND	ND	0.094	
75-35-4	1,1-Dichloroethylene	ND	ND	0.094	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.094	
95-63-6	1,2,4-Trimethylbenzene	**0.46**	**2.3**	0.094	
106-93-4	1,2-Dibromoethane	ND	ND	0.094	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.094	
107-06-2	1,2-Dichloroethane	ND	ND	0.094	
78-87-5	1,2-Dichloropropane	ND	ND	0.094	
108-67-8	1,3,5-Trimethylbenzene	**0.15**	**0.74**	0.094	
106-99-0	1,3-Butadiene	ND	ND	0.19	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.094	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.094	
591-78-6	2-Hexanone	ND	ND	0.094	
622-96-8	4-Ethyltoluene	**0.44**	**2.2**	0.094	
107-13-1	Acrylonitrile	ND	ND	0.094	
107-05-1	Allyl Chloride	ND	ND	0.094	
71-43-2	Benzene	**0.53**	**1.7**	0.094	
100-44-7	Benzylchloride	ND	ND	0.094	
75-27-4	Bromodichloromethane	ND	ND	0.094	
75-25-2	Bromoform	ND	ND	0.094	
56-23-5	Carbon Tetrachloride	ND	ND	0.094	
108-90-7	Chlorobenzene	ND	ND	0.094	
75-00-3	Chloroethane	ND	ND	0.094	
67-66-3	Chloroform	ND	ND	0.094	
110-82-7	Cyclohexane	**0.71**	**2.4**	0.094	
124-48-1	Dibromochloromethane	ND	ND	0.094	
75-71-8	Dichlorodifluoromethane	**0.56**	**2.7**	0.094	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.094	
100-41-4	Ethylbenzene	**0.35**	**1.5**	0.094	
142-82-5	Heptane	ND	ND	0.094	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.094	
110-54-3	Hexane	**11**	**39**	0.47	
78-93-3	Methyl Ethyl Ketone	**0.22**	**0.65**	0.094	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.094	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.094	
74-83-9	Methylbromide	ND	ND	0.094	
74-87-3	Methylchloride	**0.45**	**0.93**	0.094	
75-09-2	Methylene Chloride	**0.15**	**0.51**	0.094	
100-42-5	Styrene	ND	ND	0.094	

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	22683	Lab Sample ID:	AB53804
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.87
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	ND	ND	0.094	
109-99-9	Tetrahydrofuran	ND	ND	0.094	
108-88-3	Toluene	**2.1**	**8.1**	0.094	
79-01-6	Trichloroethylene	**0.51**	**2.7**	0.094	
75-69-4	Trichlorofluoromethane	**0.30**	**1.7**	0.094	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.094	
593-60-2	Vinyl Bromide	ND	ND	0.094	
75-01-4	Vinylchloride	ND	ND	0.094	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.094	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.094	
1330-20-7	m/p-Xylenes	**1.1**	**4.6**	0.19	
95-47-6	o-Xylene	**0.40**	**1.7**	0.094	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.094	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.094	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	117	82 - 135
Bromofluorobenzene	96	76 - 115
Toluene,d8	94	64 - 125

Comments: Hexane result is from a 9.35 fold dilution analyzed 12/18/14.

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	22684	Lab Sample ID:	AB53805
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.07
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.10	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.10	
75-34-3	1,1-Dichloroethane	ND	ND	0.10	
75-35-4	1,1-Dichloroethylene	ND	ND	0.10	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	**0.25**	**1.2**	0.10	
106-93-4	1,2-Dibromoethane	ND	ND	0.10	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.10	
107-06-2	1,2-Dichloroethane	ND	ND	0.10	
78-87-5	1,2-Dichloropropane	ND	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.10	
106-99-0	1,3-Butadiene	ND	ND	0.20	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.10	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.10	
591-78-6	2-Hexanone	ND	ND	0.10	
622-96-8	4-Ethyltoluene	**0.25**	**1.2**	0.10	
107-13-1	Acrylonitrile	ND	ND	0.10	
107-05-1	Allyl Chloride	ND	ND	0.10	
71-43-2	Benzene	**0.44**	**1.4**	0.10	
100-44-7	Benzylchloride	ND	ND	0.10	
75-27-4	Bromodichloromethane	ND	ND	0.10	
75-25-2	Bromoform	ND	ND	0.10	
56-23-5	Carbon Tetrachloride	ND	ND	0.10	
108-90-7	Chlorobenzene	ND	ND	0.10	
75-00-3	Chloroethane	ND	ND	0.10	
67-66-3	Chloroform	ND	ND	0.10	
110-82-7	Cyclohexane	**0.36**	**1.2**	0.10	
124-48-1	Dibromochloromethane	ND	ND	0.10	
75-71-8	Dichlorodifluoromethane	**0.56**	**2.7**	0.10	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.10	
100-41-4	Ethylbenzene	**0.22**	**0.94**	0.10	
142-82-5	Heptane	ND	ND	0.10	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.10	
110-54-3	Hexane	**7.5**	**26**	0.10	
78-93-3	Methyl Ethyl Ketone	**0.22**	**0.64**	0.10	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.10	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.10	
74-83-9	Methylbromide	ND	ND	0.10	
74-87-3	Methylchloride	**0.46**	**0.95**	0.10	
75-09-2	Methylene Chloride	**0.14**	**0.49**	0.10	
100-42-5	Styrene	ND	ND	0.10	

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	22684	Lab Sample ID:	AB53805
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.07
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	ND	ND	0.10	
109-99-9	Tetrahydrofuran	ND	ND	0.10	
108-88-3	Toluene	**1.5**	**5.7**	0.10	
79-01-6	Trichloroethylene	**0.23**	**1.2**	0.10	
75-69-4	Trichlorofluoromethane	**0.27**	**1.5**	0.10	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.10	
593-60-2	Vinyl Bromide	ND	ND	0.10	
75-01-4	Vinylchloride	ND	ND	0.10	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.10	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.10	
1330-20-7	m/p-Xylenes	**0.70**	**3.0**	0.20	
95-47-6	o-Xylene	**0.26**	**1.1**	0.10	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.10	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.10	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	111	82 - 135
Bromofluorobenzene	96	76 - 115
Toluene,d8	96	64 - 125

Comments:

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	6579	Lab Sample ID:	AB53806
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.21
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.11	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.11	
75-34-3	1,1-Dichloroethane	ND	ND	0.11	
75-35-4	1,1-Dichloroethylene	ND	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	**0.21**	**1.0**	0.11	
106-93-4	1,2-Dibromoethane	ND	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.11	
107-06-2	1,2-Dichloroethane	ND	ND	0.11	
78-87-5	1,2-Dichloropropane	ND	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.11	
106-99-0	1,3-Butadiene	ND	ND	0.22	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.11	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.11	
591-78-6	2-Hexanone	ND	ND	0.11	
622-96-8	4-Ethyltoluene	**0.20**	**0.98**	0.11	
107-13-1	Acrylonitrile	ND	ND	0.11	
107-05-1	Allyl Chloride	ND	ND	0.11	
71-43-2	Benzene	**0.36**	**1.2**	0.11	
100-44-7	Benzylchloride	ND	ND	0.11	
75-27-4	Bromodichloromethane	ND	ND	0.11	
75-25-2	Bromoform	ND	ND	0.11	
56-23-5	Carbon Tetrachloride	ND	ND	0.11	
108-90-7	Chlorobenzene	ND	ND	0.11	
75-00-3	Chloroethane	ND	ND	0.11	
67-66-3	Chloroform	ND	ND	0.11	
110-82-7	Cyclohexane	**0.26**	**0.90**	0.11	
124-48-1	Dibromochloromethane	ND	ND	0.11	
75-71-8	Dichlorodifluoromethane	**0.52**	**2.6**	0.11	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.11	
100-41-4	Ethylbenzene	**0.16**	**0.70**	0.11	
142-82-5	Heptane	ND	ND	0.11	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.11	
110-54-3	Hexane	**11**	**39**	0.55	
78-93-3	Methyl Ethyl Ketone	**0.17**	**0.51**	0.11	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.11	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.11	
74-83-9	Methylbromide	ND	ND	0.11	
74-87-3	Methylchloride	**0.44**	**0.90**	0.11	
75-09-2	Methylene Chloride	**0.13**	**0.46**	0.11	
100-42-5	Styrene	ND	ND	0.11	

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	6579	Lab Sample ID:	AB53806
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	2.21
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	ND	ND	0.11	
109-99-9	Tetrahydrofuran	ND	ND	0.11	
108-88-3	Toluene	**1.1**	**4.3**	0.11	
79-01-6	Trichloroethylene	**0.19**	**1.0**	0.11	
75-69-4	Trichlorofluoromethane	**0.25**	**1.4**	0.11	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.11	
593-60-2	Vinyl Bromide	ND	ND	0.11	
75-01-4	Vinylchloride	ND	ND	0.11	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.11	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.11	
1330-20-7	m/p-Xylenes	**0.51**	**2.2**	0.22	
95-47-6	o-Xylene	**0.19**	**0.82**	0.11	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.11	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.11	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	120	82 - 135
Bromofluorobenzene	92	76 - 115
Toluene,d8	97	64 - 125

Comments: Hexane result is from a 11.05 fold dilution analyzed 12/18/14.

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Air
Date of Preparation:	12/18/2014	Amount Prepared:	500 mL
Date of Analysis:	12/18/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.05	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.05	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.05	
75-34-3	1,1-Dichloroethane	ND	ND	0.05	
75-35-4	1,1-Dichloroethylene	ND	ND	0.05	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.05	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.05	
106-93-4	1,2-Dibromoethane	ND	ND	0.05	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.05	
107-06-2	1,2-Dichloroethane	ND	ND	0.05	
78-87-5	1,2-Dichloropropane	ND	ND	0.05	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.05	
106-99-0	1,3-Butadiene	ND	ND	0.10	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.05	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.05	
591-78-6	2-Hexanone	ND	ND	0.05	
622-96-8	4-Ethyltoluene	ND	ND	0.05	
107-13-1	Acrylonitrile	ND	ND	0.05	
107-05-1	Allyl Chloride	ND	ND	0.05	
71-43-2	Benzene	ND	ND	0.05	
100-44-7	Benzylchloride	ND	ND	0.05	
75-27-4	Bromodichloromethane	ND	ND	0.05	
75-25-2	Bromoform	ND	ND	0.05	
56-23-5	Carbon Tetrachloride	ND	ND	0.05	
108-90-7	Chlorobenzene	ND	ND	0.05	
75-00-3	Chloroethane	ND	ND	0.05	
67-66-3	Chloroform	ND	ND	0.05	
110-82-7	Cyclohexane	ND	ND	0.05	
124-48-1	Dibromochloromethane	ND	ND	0.05	
75-71-8	Dichlorodifluoromethane	ND	ND	0.05	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.05	
100-41-4	Ethylbenzene	ND	ND	0.05	
142-82-5	Heptane	ND	ND	0.05	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.05	
110-54-3	Hexane	ND	ND	0.05	
78-93-3	Methyl Ethyl Ketone	ND	ND	0.05	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.05	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.05	
74-83-9	Methylbromide	ND	ND	0.05	
74-87-3	Methylchloride	ND	ND	0.05	
75-09-2	Methylene Chloride	ND	ND	0.05	
100-42-5	Styrene	ND	ND	0.05	

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Air
Date of Preparation:	12/18/2014	Amount Prepared:	500 mL
Date of Analysis:	12/18/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	ND	ND	0.05	
109-99-9	Tetrahydrofuran	ND	ND	0.05	
108-88-3	Toluene	ND	ND	0.05	
79-01-6	Trichloroethylene	ND	ND	0.05	
75-69-4	Trichlorofluoromethane	ND	ND	0.05	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.05	
593-60-2	Vinyl Bromide	ND	ND	0.05	
75-01-4	Vinylchloride	ND	ND	0.05	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.05	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.05	
1330-20-7	m/p-Xylenes	ND	ND	0.10	
95-47-6	o-Xylene	ND	ND	0.05	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.05	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.05	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	115	82 - 135
Bromofluorobenzene	91	76 - 115
Toluene,d8	109	64 - 125

Comments: Blank associated with AB53802, AB53803, AB53804 and AB53806 dilutions.

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	6582	Lab Sample ID:	AB53807
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.92
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.096	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.096	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.096	
75-34-3	1,1-Dichloroethane	ND	ND	0.096	
75-35-4	1,1-Dichloroethylene	ND	ND	0.096	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.096	
95-63-6	1,2,4-Trimethylbenzene	**0.15**	**0.75**	0.096	
106-93-4	1,2-Dibromoethane	ND	ND	0.096	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.096	
107-06-2	1,2-Dichloroethane	ND	ND	0.096	
78-87-5	1,2-Dichloropropane	ND	ND	0.096	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.096	
106-99-0	1,3-Butadiene	ND	ND	0.19	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.096	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.096	
591-78-6	2-Hexanone	ND	ND	0.096	
622-96-8	4-Ethyltoluene	**0.17**	**0.83**	0.096	
107-13-1	Acrylonitrile	ND	ND	0.096	
107-05-1	Allyl Chloride	ND	ND	0.096	
71-43-2	Benzene	**0.45**	**1.4**	0.096	
100-44-7	Benzylchloride	ND	ND	0.096	
75-27-4	Bromodichloromethane	ND	ND	0.096	
75-25-2	Bromoform	ND	ND	0.096	
56-23-5	Carbon Tetrachloride	ND	ND	0.096	
108-90-7	Chlorobenzene	ND	ND	0.096	
75-00-3	Chloroethane	ND	ND	0.096	
67-66-3	Chloroform	ND	ND	0.096	
110-82-7	Cyclohexane	**0.30**	**1.0**	0.096	
124-48-1	Dibromochloromethane	ND	ND	0.096	
75-71-8	Dichlorodifluoromethane	**0.56**	**2.8**	0.096	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.096	
100-41-4	Ethylbenzene	**0.18**	**0.78**	0.096	
142-82-5	Heptane	ND	ND	0.096	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.096	
110-54-3	Hexane	**7.7**	**27**	0.096	
78-93-3	Methyl Ethyl Ketone	**0.14**	**0.40**	0.096	
108-10-1	Methyl Isobutyl Ketone	**0.10**	**0.42**	0.096	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.096	
74-83-9	Methylbromide	ND	ND	0.096	
74-87-3	Methylchloride	**0.46**	**0.95**	0.096	
75-09-2	Methylene Chloride	**0.14**	**0.47**	0.096	
100-42-5	Styrene	ND	ND	0.096	

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	6582	Lab Sample ID:	AB53807
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.92
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	ND	ND	0.096	
109-99-9	Tetrahydrofuran	ND	ND	0.096	
108-88-3	Toluene	**1.4**	**5.3**	0.096	
79-01-6	Trichloroethylene	**0.22**	**1.2**	0.096	
75-69-4	Trichlorofluoromethane	**0.26**	**1.5**	0.096	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.096	
593-60-2	Vinyl Bromide	ND	ND	0.096	
75-01-4	Vinylchloride	ND	ND	0.096	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.096	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.096	
1330-20-7	m/p-Xylenes	**0.57**	**2.5**	0.19	
95-47-6	o-Xylene	**0.21**	**0.89**	0.096	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.096	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.096	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	113	82 - 135
Bromofluorobenzene	96	76 - 115
Toluene,d8	104	64 - 125

Comments:

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	22688	Lab Sample ID:	AB53808
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	250 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	3.24
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.16	
75-34-3	1,1-Dichloroethane	ND	ND	0.16	
75-35-4	1,1-Dichloroethylene	ND	ND	0.16	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.16	
106-93-4	1,2-Dibromoethane	ND	ND	0.16	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.16	
107-06-2	1,2-Dichloroethane	ND	ND	0.16	
78-87-5	1,2-Dichloropropane	ND	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.16	
106-99-0	1,3-Butadiene	ND	ND	0.32	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.16	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.16	
591-78-6	2-Hexanone	ND	ND	0.16	
622-96-8	4-Ethyltoluene	ND	ND	0.16	
107-13-1	Acrylonitrile	ND	ND	0.16	
107-05-1	Allyl Chloride	ND	ND	0.16	
71-43-2	Benzene	**0.19**	**0.61**	0.16	
100-44-7	Benzylchloride	ND	ND	0.16	
75-27-4	Bromodichloromethane	ND	ND	0.16	
75-25-2	Bromoform	ND	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	ND	0.16	
108-90-7	Chlorobenzene	ND	ND	0.16	
75-00-3	Chloroethane	ND	ND	0.16	
67-66-3	Chloroform	ND	ND	0.16	
110-82-7	Cyclohexane	ND	ND	0.16	
124-48-1	Dibromochloromethane	ND	ND	0.16	
75-71-8	Dichlorodifluoromethane	**0.48**	**2.4**	0.16	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.16	
100-41-4	Ethylbenzene	ND	ND	0.16	
142-82-5	Heptane	ND	ND	0.16	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.16	
110-54-3	Hexane	**0.27**	**0.95**	0.16	
78-93-3	Methyl Ethyl Ketone	ND	ND	0.16	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.16	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.16	
74-83-9	Methylbromide	ND	ND	0.16	
74-87-3	Methylchloride	**0.33**	**0.68**	0.16	
75-09-2	Methylene Chloride	ND	ND	0.16	
100-42-5	Styrene	ND	ND	0.16	

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	22688	Lab Sample ID:	AB53808
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	250 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	3.24
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	ND	ND	0.16	
109-99-9	Tetrahydrofuran	ND	ND	0.16	
108-88-3	Toluene	**0.35**	**1.3**	0.16	
79-01-6	Trichloroethylene	**16**	**85**	0.16	
75-69-4	Trichlorofluoromethane	**0.19**	**1.1**	0.16	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.16	
593-60-2	Vinyl Bromide	ND	ND	0.16	
75-01-4	Vinylchloride	ND	ND	0.16	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.16	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.16	
1330-20-7	m/p-Xylenes	ND	ND	0.32	
95-47-6	o-Xylene	ND	ND	0.16	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.16	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.16	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	110	82 - 135
Bromofluorobenzene	91	76 - 115
Toluene,d8	104	64 - 125

Comments:

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.05	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.05	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.05	
75-34-3	1,1-Dichloroethane	ND	ND	0.05	
75-35-4	1,1-Dichloroethylene	ND	ND	0.05	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.05	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.05	
106-93-4	1,2-Dibromoethane	ND	ND	0.05	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.05	
107-06-2	1,2-Dichloroethane	ND	ND	0.05	
78-87-5	1,2-Dichloropropane	ND	ND	0.05	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.05	
106-99-0	1,3-Butadiene	ND	ND	0.10	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.05	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.05	
591-78-6	2-Hexanone	ND	ND	0.05	
622-96-8	4-Ethyltoluene	ND	ND	0.05	
107-13-1	Acrylonitrile	ND	ND	0.05	
107-05-1	Allyl Chloride	ND	ND	0.05	
71-43-2	Benzene	ND	ND	0.05	
100-44-7	Benzylchloride	ND	ND	0.05	
75-27-4	Bromodichloromethane	ND	ND	0.05	
75-25-2	Bromoform	ND	ND	0.05	
56-23-5	Carbon Tetrachloride	ND	ND	0.05	
108-90-7	Chlorobenzene	ND	ND	0.05	
75-00-3	Chloroethane	ND	ND	0.05	
67-66-3	Chloroform	ND	ND	0.05	
110-82-7	Cyclohexane	ND	ND	0.05	
124-48-1	Dibromochloromethane	ND	ND	0.05	
75-71-8	Dichlorodifluoromethane	ND	ND	0.05	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.05	
100-41-4	Ethylbenzene	ND	ND	0.05	
142-82-5	Heptane	ND	ND	0.05	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.05	
110-54-3	Hexane	ND	ND	0.05	
78-93-3	Methyl Ethyl Ketone	ND	ND	0.05	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.05	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.05	
74-83-9	Methylbromide	ND	ND	0.05	
74-87-3	Methylchloride	ND	ND	0.05	
75-09-2	Methylene Chloride	ND	ND	0.05	
100-42-5	Styrene	ND	ND	0.05	

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	ND	ND	0.05	
109-99-9	Tetrahydrofuran	ND	ND	0.05	
108-88-3	Toluene	ND	ND	0.05	
79-01-6	Trichloroethylene	ND	ND	0.05	
75-69-4	Trichlorofluoromethane	ND	ND	0.05	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.05	
593-60-2	Vinyl Bromide	ND	ND	0.05	
75-01-4	Vinylchloride	ND	ND	0.05	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.05	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.05	
1330-20-7	m/p-Xylenes	ND	ND	0.10	
95-47-6	o-Xylene	ND	ND	0.05	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.05	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.05	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	116	82 - 135
Bromofluorobenzene	95	76 - 115
Toluene,d8	104	64 - 125

Comments:

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	12570	Lab Sample ID:	AB53809
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.53
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	**0.63**	**3.4**	0.076	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.076	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.076	
75-34-3	1,1-Dichloroethane	ND	ND	0.076	
75-35-4	1,1-Dichloroethylene	**0.15**	**0.58**	0.076	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.076	
95-63-6	1,2,4-Trimethylbenzene	**0.19**	**0.92**	0.076	
106-93-4	1,2-Dibromoethane	ND	ND	0.076	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.076	
107-06-2	1,2-Dichloroethane	ND	ND	0.076	
78-87-5	1,2-Dichloropropane	ND	ND	0.076	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.076	
106-99-0	1,3-Butadiene	ND	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.076	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.076	
591-78-6	2-Hexanone	ND	ND	0.076	
622-96-8	4-Ethyltoluene	**0.13**	**0.62**	0.076	
107-13-1	Acrylonitrile	ND	ND	0.076	
107-05-1	Allyl Chloride	ND	ND	0.076	
71-43-2	Benzene	**0.25**	**0.79**	0.076	
100-44-7	Benzylchloride	ND	ND	0.076	
75-27-4	Bromodichloromethane	ND	ND	0.076	
75-25-2	Bromoform	ND	ND	0.076	
56-23-5	Carbon Tetrachloride	ND	ND	0.076	
108-90-7	Chlorobenzene	ND	ND	0.076	
75-00-3	Chloroethane	ND	ND	0.076	
67-66-3	Chloroform	ND	ND	0.076	
110-82-7	Cyclohexane	**0.15**	**0.52**	0.076	
124-48-1	Dibromochloromethane	ND	ND	0.076	
75-71-8	Dichlorodifluoromethane	**0.52**	**2.6**	0.076	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.076	
100-41-4	Ethylbenzene	**0.089**	**0.39**	0.076	
142-82-5	Heptane	ND	ND	0.076	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.076	
110-54-3	Hexane	**0.61**	**2.2**	0.076	
78-93-3	Methyl Ethyl Ketone	**0.25**	**0.73**	0.076	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.076	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.076	
74-83-9	Methylbromide	ND	ND	0.076	
74-87-3	Methylchloride	**0.33**	**0.68**	0.076	
75-09-2	Methylene Chloride	**0.093**	**0.32**	0.076	
100-42-5	Styrene	ND	ND	0.076	

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	12570	Lab Sample ID:	AB53809
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	500 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	1.53
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	**0.27**	**1.8**	0.076	
109-99-9	Tetrahydrofuran	ND	ND	0.076	
108-88-3	Toluene	**1.1**	**4.0**	0.076	
79-01-6	Trichloroethylene	**0.21**	**1.2**	0.076	
75-69-4	Trichlorofluoromethane	**0.26**	**1.5**	0.076	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.076	
593-60-2	Vinyl Bromide	ND	ND	0.076	
75-01-4	Vinylchloride	ND	ND	0.076	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.076	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.076	
1330-20-7	m/p-Xylenes	**0.28**	**1.2**	0.15	
95-47-6	o-Xylene	**0.13**	**0.58**	0.076	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.076	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.076	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	110	82 - 135
Bromofluorobenzene	95	76 - 115
Toluene,d8	99	64 - 125

Comments:

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	22694	Lab Sample ID:	AB53810
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	50 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	18
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.90	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.90	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.90	
75-34-3	1,1-Dichloroethane	ND	ND	0.90	
75-35-4	1,1-Dichloroethylene	ND	ND	0.90	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.90	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.90	
106-93-4	1,2-Dibromoethane	ND	ND	0.90	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.90	
107-06-2	1,2-Dichloroethane	ND	ND	0.90	
78-87-5	1,2-Dichloropropane	ND	ND	0.90	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.90	
106-99-0	1,3-Butadiene	ND	ND	1.8	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.90	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.90	
591-78-6	2-Hexanone	ND	ND	0.90	
622-96-8	4-Ethyltoluene	ND	ND	0.90	
107-13-1	Acrylonitrile	ND	ND	0.90	
107-05-1	Allyl Chloride	ND	ND	0.90	
71-43-2	Benzene	ND	ND	0.90	
100-44-7	Benzylchloride	ND	ND	0.90	
75-27-4	Bromodichloromethane	ND	ND	0.90	
75-25-2	Bromoform	ND	ND	0.90	
56-23-5	Carbon Tetrachloride	ND	ND	0.90	
108-90-7	Chlorobenzene	ND	ND	0.90	
75-00-3	Chloroethane	ND	ND	0.90	
67-66-3	Chloroform	ND	ND	0.90	
110-82-7	Cyclohexane	ND	ND	0.90	
124-48-1	Dibromochloromethane	ND	ND	0.90	
75-71-8	Dichlorodifluoromethane	ND	ND	0.90	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.90	
100-41-4	Ethylbenzene	ND	ND	0.90	
142-82-5	Heptane	ND	ND	0.90	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.90	
110-54-3	Hexane	ND	ND	0.90	
78-93-3	Methyl Ethyl Ketone	ND	ND	0.90	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.90	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.90	
74-83-9	Methylbromide	ND	ND	0.90	
74-87-3	Methylchloride	ND	ND	0.90	
75-09-2	Methylene Chloride	ND	ND	0.90	
100-42-5	Styrene	ND	ND	0.90	

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	22694	Lab Sample ID:	AB53810
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	50 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	18
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	**7.1**	**48**	0.90	
109-99-9	Tetrahydrofuran	ND	ND	0.90	
108-88-3	Toluene	ND	ND	0.90	
79-01-6	Trichloroethylene	**32**	**170**	0.90	
75-69-4	Trichlorofluoromethane	ND	ND	0.90	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.90	
593-60-2	Vinyl Bromide	ND	ND	0.90	
75-01-4	Vinylchloride	ND	ND	0.90	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.90	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.90	
1330-20-7	m/p-Xylenes	ND	ND	1.8	
95-47-6	o-Xylene	ND	ND	0.90	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.90	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.90	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	109	82 - 135
Bromofluorobenzene	90	76 - 115
Toluene,d8	103	64 - 125

Comments:

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	14897	Lab Sample ID:	AB53811
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	250 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	3.26
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
71-55-6	1,1,1-Trichloroethane	ND	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	ND	0.16	
75-34-3	1,1-Dichloroethane	ND	ND	0.16	
75-35-4	1,1-Dichloroethylene	ND	ND	0.16	
120-82-1	1,2,4-Trichlorobenzene	ND	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	ND	0.16	
106-93-4	1,2-Dibromoethane	ND	ND	0.16	
95-50-1	1,2-Dichlorobenzene	ND	ND	0.16	
107-06-2	1,2-Dichloroethane	ND	ND	0.16	
78-87-5	1,2-Dichloropropane	ND	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	ND	0.16	
106-99-0	1,3-Butadiene	ND	ND	0.32	
541-73-1	1,3-Dichlorobenzene	ND	ND	0.16	
106-46-7	1,4-Dichlorobenzene	ND	ND	0.16	
591-78-6	2-Hexanone	ND	ND	0.16	
622-96-8	4-Ethyltoluene	ND	ND	0.16	
107-13-1	Acrylonitrile	ND	ND	0.16	
107-05-1	Allyl Chloride	ND	ND	0.16	
71-43-2	Benzene	**0.18**	**0.56**	0.16	
100-44-7	Benzylchloride	ND	ND	0.16	
75-27-4	Bromodichloromethane	ND	ND	0.16	
75-25-2	Bromoform	ND	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	ND	0.16	
108-90-7	Chlorobenzene	ND	ND	0.16	
75-00-3	Chloroethane	ND	ND	0.16	
67-66-3	Chloroform	ND	ND	0.16	
110-82-7	Cyclohexane	ND	ND	0.16	
124-48-1	Dibromochloromethane	ND	ND	0.16	
75-71-8	Dichlorodifluoromethane	**0.33**	**1.6**	0.16	
1320-37-2	Dichlorotetrafluoroethane	ND	ND	0.16	
100-41-4	Ethylbenzene	ND	ND	0.16	
142-82-5	Heptane	ND	ND	0.16	
87-68-3	Hexachloro-1,3-butadiene	ND	ND	0.16	
110-54-3	Hexane	**0.27**	**0.95**	0.16	
78-93-3	Methyl Ethyl Ketone	**0.17**	**0.51**	0.16	
108-10-1	Methyl Isobutyl Ketone	ND	ND	0.16	
1634-04-4	Methyl-t-Butyl Ether	ND	ND	0.16	
74-83-9	Methylbromide	ND	ND	0.16	
74-87-3	Methylchloride	**0.30**	**0.62**	0.16	
75-09-2	Methylene Chloride	ND	ND	0.16	
100-42-5	Styrene	ND	ND	0.16	

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Air Toxics by GC/MS

Client Sample ID:	14897	Lab Sample ID:	AB53811
Date of Collection:	12/15/2014	Matrix:	Air
Date of Preparation:	12/17/2014	Amount Prepared:	250 mL
Date of Analysis:	12/17/2014	Percent Solids:	N/A
Dry Weight Prepared:	N/A	Extract Dilution:	3.26
Wet Weight Prepared:	N/A	pH:	N/A

CAS Number	Compound	Concentration ppbv	Concentration ug/m3	RL ppbv	Qualifier
127-18-4	Tetrachloroethylene	**0.25**	**1.7**	0.16	
109-99-9	Tetrahydrofuran	ND	ND	0.16	
108-88-3	Toluene	**0.48**	**1.8**	0.16	
79-01-6	Trichloroethylene	**4.5**	**24**	0.16	
75-69-4	Trichlorofluoromethane	**0.24**	**1.3**	0.16	
76-13-1	Trichlorotrifluoroethane	ND	ND	0.16	
593-60-2	Vinyl Bromide	ND	ND	0.16	
75-01-4	Vinylchloride	ND	ND	0.16	
156-59-2	c-1,2-Dichloroethylene	ND	ND	0.16	
10061-01-5	c-1,3-Dichloropropylene	ND	ND	0.16	
1330-20-7	m/p-Xylenes	ND	ND	0.32	
95-47-6	o-Xylene	ND	ND	0.16	
156-60-5	t-1,2-Dichloroethylene	ND	ND	0.16	
10061-02-6	t-1,3-Dichloropropylene	ND	ND	0.16	

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane,d4	111	82 - 135
Bromofluorobenzene	92	76 - 115
Toluene,d8	98	64 - 125

Comments:

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Laboratory Duplicate Results

Sample ID: AB53808

PARAMETER	SAMPLE RESULT ppbv	SAMPLE DUPLICATE RESULT ppbv	PRECISION RPD %	QC LIMITS
1,1,1-Trichloroethane	ND	ND	ND	50
1,1,2,2-Tetrachloroethane	ND	ND	ND	50
1,1,2-Trichloroethane	ND	ND	ND	50
1,1-Dichloroethane	ND	ND	ND	50
1,1-Dichloroethylene	ND	ND	ND	50
1,2,4-Trichlorobenzene	ND	ND	ND	50
1,2,4-Trimethylbenzene	ND	ND	ND	50
1,2-Dibromoethane	ND	ND	ND	50
1,2-Dichlorobenzene	ND	ND	ND	50
1,2-Dichloroethane	ND	ND	ND	50
1,2-Dichloropropane	ND	ND	ND	50
1,3,5-Trimethylbenzene	ND	ND	ND	50
1,3-Butadiene	ND	ND	ND	50
1,3-Dichlorobenzene	ND	ND	ND	50
1,4-Dichlorobenzene	ND	ND	ND	50
2-Hexanone	ND	ND	ND	50
4-Ethyltoluene	ND	ND	ND	50
Acrylonitrile	ND	ND	ND	50
Allyl Chloride	ND	ND	ND	50
Benzene	0.192	0.234	19.7	50
Benzylchloride	ND	ND	ND	50
Bromodichloromethane	ND	ND	ND	50
Bromoform	ND	ND	ND	50
Carbon Tetrachloride	ND	ND	ND	50
Chlorobenzene	ND	ND	ND	50
Chloroethane	ND	ND	ND	50
Chloroform	ND	ND	ND	50
Cyclohexane	ND	ND	ND	50
Dibromochloromethane	ND	ND	ND	50
Dichlorodifluoromethane	0.482	0.480	0.416	50
Dichlorotetrafluoroethane	ND	ND	ND	50
Ethylbenzene	ND	ND	ND	50
Heptane	ND	ND	ND	50
Hexachloro-1,3-butadiene	ND	ND	ND	50
Hexane	0.269	0.257	4.56	50
Methyl Ethyl Ketone	ND	ND	ND	50
Methyl Isobutyl Ketone	ND	ND	ND	50
Methyl-t-Butyl Ether	ND	ND	ND	50
Methylbromide	ND	ND	ND	50
Methylchloride	0.329	0.317	3.72	50
Methylene Chloride	ND	ND	ND	50
Styrene	ND	ND	ND	50
Tetrachloroethylene	ND	ND	ND	50
Tetrahydrofuran	ND	ND	ND	50
Toluene	0.352	0.353	0.284	50

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Laboratory Duplicate Results

Sample ID: AB53808

PARAMETER	SAMPLE RESULT ppbv	SAMPLE DUPLICATE RESULT ppbv	PRECISION RPD %	QC LIMITS
Trichloroethylene	15.800	16.200	2.50	50
Trichlorofluoromethane	0.188	0.189	0.530	50
Trichlorotrifluoroethane	ND	ND	ND	50
Vinyl Bromide	ND	ND	ND	50
Vinylchloride	ND	ND	ND	50
c-1,2-Dichloroethylene	ND	ND	ND	50
c-1,3-Dichloropropylene	ND	ND	ND	50
m/p-Xylenes	ND	ND	ND	50
o-Xylene	ND	ND	ND	50
t-1,2-Dichloroethylene	ND	ND	ND	50
t-1,3-Dichloropropylene	ND	ND	ND	50

Comments:

14120021$AIRTX

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ppb/V	LFB RESULT ppb/V	LFB RECOVERY %	QC LIMITS %
1,1,1-Trichloroethane	1.72	2.14	124	70 - 130
1,1,2,2-Tetrachloroethane	1.72	1.65	96	70 - 130
1,1,2-Trichloroethane	1.72	1.71	99	70 - 130
1,1-Dichloroethane	1.72	2.10	122	70 - 130
1,1-Dichloroethylene	1.72	2.06	120	70 - 130
1,2,4-Trichlorobenzene	1.72	1.49	87	70 - 130
1,2,4-Trimethylbenzene	1.72	1.67	97	70 - 130
1,2-Dibromoethane	1.72	1.81	105	70 - 130
1,2-Dichlorobenzene	1.72	1.60	93	70 - 130
1,2-Dichloroethane	1.72	1.82	106	70 - 130
1,2-Dichloropropane	1.72	1.90	110	70 - 130
1,3,5-Trimethylbenzene	1.72	1.62	94	70 - 130
1,3-Butadiene	3.63	4.28	118	70 - 130
1,3-Dichlorobenzene	1.72	1.64	95	70 - 130
1,4-Dichlorobenzene	1.72	1.68	98	70 - 130
2-Hexanone	1.91	1.14	60	70 - 130
4-Ethyltoluene	1.72	1.74	101	70 - 130
Acrylonitrile	1.72	2.04	119	70 - 130
Allyl Chloride	1.91	2.16	113	70 - 130
Benzene	1.72	1.82	106	70 - 130
Benzylchloride	1.91	1.56	82	70 - 130
Bromodichloromethane	1.91	1.97	103	70 - 130
Bromoform	1.91	1.98	104	70 - 130
Carbon Tetrachloride	1.72	2.08	121	70 - 130
Chlorobenzene	1.72	1.80	105	70 - 130
Chloroethane	1.72	2.10	122	70 - 130
Chloroform	1.72	2.13	124	70 - 130
Cyclohexane	1.91	2.01	105	70 - 130
Dibromochloromethane	1.91	2.22	116	70 - 130
Dichlorodifluoromethane	1.72	2.24	130	70 - 130
Dichlorotetrafluoroethane	1.72	2.17	126	70 - 130
Ethylbenzene	1.72	1.78	103	70 - 130
Heptane	1.91	1.78	93	70 - 130
Hexachloro-1,3-butadiene	1.72	1.34	78	70 - 130
Hexane	1.91	1.98	104	70 - 130
Methyl Ethyl Ketone	1.91	1.73	91	70 - 130
Methyl Isobutyl Ketone	1.72	1.41	82	70 - 130
Methyl-t-Butyl Ether	1.91	2.06	108	70 - 130
Methylbromide	1.72	1.74	101	70 - 130
Methylchloride	1.72	1.78	103	70 - 130
Methylene Chloride	1.72	1.95	113	70 - 130
Styrene	1.72	1.78	103	70 - 130
Tetrachloroethylene	1.72	1.81	105	70 - 130
Tetrahydrofuran	1.91	1.91	100	70 - 130
Toluene	1.72	1.80	105	70 - 130
Trichloroethylene	1.72	1.96	114	70 - 130
Trichlorofluoromethane	1.72	2.05	119	70 - 130
Trichlorotrifluoroethane	1.72	2.12	123	70 - 130
Vinyl Bromide	1.91	2.25	118	70 - 130
Vinylchloride	1.72	2.12	123	70 - 130
c-1,2-Dichloroethylene	1.72	2.05	119	70 - 130
c-1,3-Dichloropropylene	1.72	1.73	101	70 - 130

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US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT SPIKED ppb/V	LFB RESULT ppb/V	LFB RECOVERY %	QC LIMITS %
m/p-Xylenes	3.4	3.49	103	70 - 130
o-Xylene	1.72	1.71	99	70 - 130
t-1,2-Dichloroethylene	1.91	2.12	111	70 - 130
t-1,3-Dichloropropylene	1.72	1.65	96	70 - 130

Comments:

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ENVIRONMENTAL PROTECTION AGENCY
REGION 1

CHAIN OF CUSTODY RECORD

PROJ. NO.: 14120021 | PROJECT NAME: Nu-Style Site 25 Grove Street

SAMPLERS: (Signature) [signature]

Canister Number

REMARKS: TO-15 GC/MS Analysis

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS							REMARKS
	12/15/14				Ambient Air		1	2	5	6	2		Outside/Background 8-hour
					Indoor Air 6		4	7	4	2			Indoor Air 8-hour
					Indoor Air 5		6	5	8	1			Indoor Air 8-hour
					Indoor Air 4		2	2	6	8	3		Indoor Air 8-hour
					Indoor Air 3		2	2	6	8	4		Indoor Air 8-hour
					Indoor Air 2		6	5	7	9			Indoor Air 8-hour
					Indoor Air 2 Duplicate		6	5	8	2			Indoor Air 8-hour
					Sub-Slab SS-1		2	2	6	8	8		Soil Gas Grab
					Sub-Slab SS-3		1	2	5	7	0		Soil Gas Grab
					Sub-Slab SS-4		2	2	6	9	4		Soil Gas Grab
	↓				Sub-Slab SS-5		1	4	8	9	7		Soil Gas Grab

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	12/16/14 07:35				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
		[signature] ESAT	12/16/14 07:35	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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APPENDIX C

MOBILE LABORATORY ANALYTICAL REPORT

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

January 12, 2015

Peter Kahn - ECA / OEME
US EPA New England R1

Project Number: 14120028
Project: Nu-Style Inc.- Franklin, MA
Analysis: Volatile Organic Analysis of Air
Analyst: Scott Clifford

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-FLDGRAB4.

Air samples were analyzed using Region I's standard air screening method.. Air samples were collected in a 250 uL steel barreled glass syringe, and were analyzed using a Shimadzu gas chromatograph equipped with a 30 meter, 0.53 mm i.d DBPS-624 column with electron capture and photoionizaton detectors. Concentrations of volatile organics were calculated using the external standard technique. Results are reported in parts per billion by volume.

Analytes reported by this field method should be treated as tentatively identified compounds and concentrations are approximate.

Date Samples Received by the Laboratory: 12/23/14

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Results for soil samples are reported on a dry weight basis.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Digitally signed by Boudreau, Dan
DN: cn=Boudreau, Dan,
email=Boudreau.Dan@epa.gov
Date: 2015.01.12 11:29:30 -05'00'

14120028$FVOAA

Qualifiers:

RL = Reporting limit
ND = Not Detected above Reporting limit
NA = Not Applicable due to high sample dilutions or sample interferences
NC = Not calculated since analyte concentration is ND.
J = Estimated value
J1 = Estimated value due to MS recovery outside accceptance criteria
J2 = Estimated value due to LFB result outside acceptance criteria
J3 = Estimated value due to RPD result outside acceptance criteria
J4 = Estimated value due to LCS result outside acceptance criteria
E = Estimated value exceeds the calibration range
L = Estimated value is below the calibration range
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Style Inc.- Franklin, MA

Volatile Organic Analysis of Air

Lab Sample ID	Client Sample ID	Tetrachloroethylene ppbv	Trichloroethylene ppbv
AB53956	SS-1	ND (0.5)	34
AB53957	SS-1 Dup	0.7	33
AB53958	SS-2	ND (0.5)	30
AB53959	SS-2 Dup	ND (0.5)	34
AB53960	Grab 1	ND (0.5)	ND (0.7)
AB53961	SS-3	0.8	0.7
AB53962	SS-3 Dup	0.8	ND (0.7)
AB53963	SS-4	18	67
AB53964	Grab 2	ND (0.5)	ND (0.7)
AB53965	Grab 2 Dup	ND (0.5)	ND (0.7)
AB53966	SS-5	ND (0.5)	9.4
AB53967	Grab 3	ND (0.5)	ND (0.7)
AB53968	SS-6	ND (0.5)	ND (0.7)
AB53969	SS-6 Dup	ND (0.5)	0.8

APPENDIX D

COMPOUND PRODUCT USE DESCRIPTION

COMPOUND	PRODUCT USE
1, 1,1-trichloroethane	no 1,1,1-trichloroethane is supposed to be manufactured for domestic use in the US after January 1, 2002; it had many industrial and household uses, including use as a solvent to dissolve other substances, such as glues and paints, to remove oil or grease from manufactured metal parts and as an ingredient of household products such as spot cleaners, glues, and aerosol sprays
1,1,2,2-tetrachloroethane	in the past was used in large amounts to produce other chemicals, as an industrial solvent to clean and degrease metals and as an ingredient in paints and pesticides; commercial production for these uses has stopped in the US, presently used only as a chemical intermediate in the production of other chemicals
1,1,2-trichloroethane	used as a solvent and as an intermediate in the production of the chemical 1,1-dichloroethane; is sometimes present as an impurity in other chemicals and it may be formed when another chemical breaks down in the environment under conditions where there is no air
1,1-dichloroethane	in the past was used as a surgical anesthetic, but it is no longer used this way; today it is used primarily to make other chemicals, to dissolve substances such as paint, varnish, and finish removers, and to remove grease
1,1-dichloroethylene	used to make certain plastics, such as flexible films like food wrap and in packaging materials; used to make flame retardant coatings for fiber and carpet backings and in piping, coating for steel pipes and in adhesive applications
1,2,4-trichlorobenzene	used as a solvent to make dyes, pesticides and other chemicals, added to dielectric fluids, transformer oils, cleaners, and lubricants; a gasoline additive; occurs naturally in coal tar and petroleum
1, 2, 4-trimethylbenzene	used as an industrial solvent, paint thinner and in the manufacture of dyes, perfumes, resins, chemical intermediates and pharmaceuticals; enters the environment primarily from gasoline evaporation and as an emission from gasoline-powered vehicles, municipal waste-treatment plants, and coal-fired power stations; emitted from many building materials including: vinyl & rubber molding, particle board, linoleum tile, tar paper, telephone cable, latex paint, foam & duct insulation, urethane sealant, adhesives, latex caulk, and carpet
1,2-dibromoethane	manufactured chemical and also occurs naturally in small amounts in the ocean where it is formed, probably by algae and kelp; used as a pesticide in soil and on citrus, vegetable and grain crops, most of these uses have been stopped by the EPA since 1984; was used as an additive in leaded gasoline, however since leaded gasoline is now banned, it is no longer used for this purpose; uses today include treatment of logs for termites and beetles, control of moths in beehives, as a solvent, as a preparation for dyes and waxes and in waterproofing preparations
1,2-dichlorobenzene	used as a fumigant, solvent, chemical intermediate and to make insecticides
1,2-dichloroethane	manufactured chemical that is not found naturally in the environment; most common use is in the production of vinyl chloride which is used to make a variety of plastic and vinyl products including PVC pipes, furniture and automobile upholstery, wall coverings, house wares and automobile parts; used as a solvent, fumigant, degreaser, paint thinner; added to leaded gasoline to remove lead

COMPOUND	PRODUCT USE
1,2-dichloropropane	does not occur naturally in the environment; production in the US has declined over the past 20 years; was used in the past as a soil fumigant, chemical intermediate and industrial solvent and was found in paint strippers, varnishes and furniture finish removers; most of these uses were discontinued; today used as a chemical intermediate to make perchloroethylene and several other related chlorinated chemical
1, 3, 5-trimethylbenzene	used as an industrial solvent, paint thinner and in the manufacture of dyes, perfumes, resins, chemical intermediates and pharmaceuticals; enters the environment primarily from gasoline evaporation and as an emission from gasoline-powered vehicles, municipal waste-treatment plants, and coal-fired power stations; emitted from many building materials including: vinyl & rubber molding, particle board, linoleum tile, tar paper, telephone cable, latex paint, foam & duct insulation, urethane sealant, adhesives, latex caulk and carpet
1, 3-butadiene	made from the processing of petroleum; about 75% manufactured is used to make synthetic rubber, which is widely used for tires on cars and trucks; used to make plastics including acrylics; small amounts are found in gasoline, automobile exhaust, cigarette smoke and wood fires
1,3-dichlorobenzene	used to make herbicides, insecticides, medicine and dyes
1,4-dichlorobenzene	used as a fumigant to control mildew and mold; used to make insecticides
2-hexanone	used in the past in paint and paint thinner, to make other chemical substances and to dissolve oils and waxes; no longer made or used in the US because it has harmful health effects; formed as a waste product resulting from industrial activities such as making wood pulp and producing gas from coal and in oil shale operations
4-ethyltoluene	man-made chemical used principally as an additive to petroleum; used as a solvent in a variety of industrial, agricultural and domestic products; major release route to the atmosphere is from evaporation of petroleum during production, transport and refueling and from car exhausts; released when used as a solvent
acrylonitrile	used to make other chemicals such as plastics, synthetic rubber and acrylic fibers; a mixture of acrylonitrile and carbon tetrachloride was used as a pesticide in the past; all uses in pesticide have stopped
ally chloride	used to make epichlorohydrin and glycerin; used in the synthesis of allyl compounds such as allyl alcohol, allyl amines, allyl esters and polyesters; derivatives are found in varnish, plastics, adhesives, perfumes, insecticides and pharmaceuticals
benzene	widely used in the US; some industries use it to make other chemicals which are used to make plastics, resins, nylon and synthetic fibers; used to make some types of rubbers, lubricants, dyes, detergents, drugs and pesticides; natural sources include volcanoes and forest fires; a natural part of crude oil and gasoline; found in industrial emissions, waste and storage operations, motor vehicle exhaust, evaporation from gasoline service stations and tobacco smoke
benzylchloride	used as a chemical intermediate in the manufacture of certain dyes, lubricants, gasoline and pharmaceutical products and as a photographic developer; emissions from floor tile plasticized by butyl benzyl phthalate have been reported; has been detected in emissions from the burning of polyvinyl chloride, neoprene and rigid urethane foam compounds

COMPOUND	PRODUCT USE
bromodichloromethane	small amounts are formed naturally by algae in the oceans; only small quantities are produced in the US; small quantities that are produced are used in laboratories or to make other chemicals; most is formed as a by-product when chlorine is added to drinking water to kill bacteria
bromoform	small amounts are formed naturally by plants in the ocean; formed as byproducts when chlorine is added to drinking water to kill bacteria; were used in the past as solvents and flame retardants, or to make other chemicals; small quantities are produced in the US and used mainly as laboratory reagents
carbon tetrachloride	manufactured chemical that does not occur naturally; was used in the production of refrigeration fluid and propellants for aerosol cans, as a pesticide, as a cleaning fluid and degreasing agent, in fire extinguishers and in spot removers; these uses are now banned and it is only used in some industrial applications
chlorobenzene	does not occur naturally in the environment; production in the US has declined by more than 60% from its peak in 1960; was used in the past to make other chemicals, such as phenol and DDT; now chlorobenzene is used as a solvent for some pesticide formulations, to degrease automobile parts, and as a chemical intermediate to make several other chemicals
chloroethane	In the past was used in leaded gasoline; used in the production of cellulose, dyes, medicinal drugs, and other commercial products and as a solvent and refrigerant; used to numb the skin before medical procedures such as ear piercing and skin biopsies and as a treatment in sports injuries
chloroform	used to make other chemicals and can also be formed in small amounts when chlorine is added to water
cyclohexane	occurs naturally in petroleum crude oil, in volcanic gases, and in cigarette smoke; used to make nylon, benzene, cyclohexanone, nitrocyclohexane, adhesives and perfumes; added to lacquers and resins, paint and varnish removers and fungicides; used as a fuel for camp stoves
dibromochloromethane	small amounts are formed naturally by plants in the ocean; formed as byproducts when chlorine is added to drinking water to kill bacteria; were used in the past as solvents and flame retardants or to make other chemicals; small quantities are produced in the US and used mainly as laboratory reagents
dichlorodifluoromethane	used as a refrigerant in air conditioning systems, as a blowing or foaming agent for aerosols, in fire extinguishers; banned in the US along with many other countries in 1994
dichlorotetrafluoromethane	used as a refrigerant in air conditioning systems, as a blowing or foaming agent for aerosols, in fire extinguishers
dichlorotetrafluoroethane	primary use has been as a refrigerant; found in consumer products, such as hair mousse and hairspray aerosol
ethylbenzene	found in natural products such as coal tar and petroleum; found in manufactured products such as inks, insecticides and paints; used primarily to make styrene; used as a solvent and in fuels; releases into the air occur from burning oil, gas and coal

COMPOUND	PRODUCT USE
heptane	produced and used as a solvent in organic synthesis and as a standard for octane-rating determinations; found in gasoline and petroleum-based products
hexachloro-1,3-butadiene	not found naturally in the environment, formed when other chemicals are made; mainly used to make rubber compounds; used as a solvent and to make lubricants, used in gyroscopes, as a heat transfer liquid and as a hydraulic fluid
hexane	made from crude oil; pure *n*-Hexane is used in laboratories; mixed with similar chemicals called solvents and used to extract vegetable oils from crops such as soybeans; these solvents are also used as cleaning agents in the printing, textile, furniture, and shoemaking industries; used in certain kinds of special glues used in the roofing, shoe and leather industries; contained in several consumer products, such as gasoline, quick-drying glues and rubber cement, used in various hobbies
methyl ethyl ketone	manufactured chemical but it is also present in the environment from natural sources; produced in large quantities, nearly half of its use is in paints and other coatings; used in glues and as a cleaning agent; made by some trees and found in some fruits and vegetables in small amounts; also released to the air from car and truck exhausts
methyl isobutyl ketone	occurs naturally in certain foods and beverages; added to protective surface coatings, adhesives, printing ink, and special lubricating oils; used to make pesticides and to separate and purify several other organic; used to make textiles and leather; exposure can occur when people use certain paints, varnishes, or glues
methyl-t-butyl ether	was used since the 1980s as an additive for unleaded gasoline to achieve more efficient burning, today it is not being used and has been replaced by ethanol
methylbromide	manufactured chemical; also occurs naturally in small amounts in the ocean where it is formed, probably by algae and kelp; used to kill a variety of pests including rats, insects and fungi; used to make other chemicals or as a solvent to get oil out of nuts, seeds, and wool
methylchloride	used as a methylating agent, laboratory reagent, refrigerant, aerosol propellant, pesticide, fumigant, fire-extinguishing agent, anesthetic, degreaser, blowing agent for plastic foam and chemical intermediate; present at very low concentrations throughout the atmosphere
methylene chloride	does not occur naturally in the environment; used as an industrial solvent and as a paint stripper; found in some aerosol and pesticide products; used in the manufacture of photographic film
styrene	found in insulation, fiberglass, plastic pipes, automobile parts, shoes, drinking cups and other food containers, carpet backing, tobacco smoke, automobile exhaust and off gases from photocopy machines; used to make plastics and rubber; occurs naturally in a variety of foods such as fruits, vegetables, nuts, beverages and meats
tetrachloroethene	used in dry cleaning and metal degreasing; used to make other chemicals and is used in some consumer products
tetrahydrofuran	used as a solvent for PVC, natural and synthetic resins; used as a monomer and chemical intermediate; used in varnishes

COMPOUND	PRODUCT USE
toluene	occurs naturally in crude oil and in the tolu tree; produced in the process of making gasoline and other fuels from crude oil and making coke from coal; used in making paints, paint thinners, fingernail polish, lacquers, adhesives and rubber and in some printing and leather tanning processes; found in automobile exhaust and tobacco smoke
trichloroethene	used mainly as a solvent to remove grease from metal parts, is an ingredient in adhesives, paint removers, typewriter correction fluids and spot removers
trichlorofluoromethane	was used in consumer products including hair sprays, deodorants and cosmetics, in products to control home and garden insects and pests, in cleaners, spray paints and floor and furniture polish; in industry it was used as a refrigerant, to make foam and as an active part of liquid-type fire extinguishers; it is no longer made in the US
trichlorotrifluoroethane	does not occur naturally; EPA restricted production and after 1995 was significantly lower; used to clean metal surfaces, as a coolant in commercial and industrial air conditioners, as an ingredient in aerosols sprays, by foam makers as a blowing agent, to make high temperature lubricants and fluorocarbon resins and as a dry cleaning solvent
vinyl bromide	used primarily in the production of polymers and copolymers; used in polymers as a flame retardant and in the production of monoacrylic fibers for carpet-backing material; combined with acrylonitrile as a co-monomer, used to produce fabrics and fabric blends used in sleepwear (mostly children's) and home furnishings; when copolymerized with vinyl acetate and maleic anhydride, used to produce granular products; copolymers of vinyl chloride and vinyl bromide are used to prepare films, for impregnating or laminating fibers, and as rubber substitutes; used in leather and fabricated metal products
vinyl chloride	manufactured substance that does not occur naturally; formed when other substances such as trichloroethane, trichloroethylene, and tetrachloroethylene are broken down; used to make PVC, which is used to make a variety of plastic products, including pipes, wire and cable coatings and packaging materials.
cis-1,2-dichloroethene	used to produce solvents and in chemical mixtures
cis-1,3-dichloropropene	used mainly in farming as a pesticide
m/p/o-xylenes	occurs naturally in petroleum and coal tar; chemical industries produce xylene from petroleum; used as a solvent and in the printing, rubber, and leather industries; used as a cleaning agent, a thinner for paint and in paints and varnishes; found in small amounts in airplane fuel and gasoline and cigarette smoke
trans-1,2-dichloroethene	used to produce solvents and in chemical mixtures
trans-1,3-dichloropropene	used mainly in farming as a pesticide

Information Sources: http://www.atsdr.cdc.gov
http://www.epa.gov/chemicalfact/
http://www.epa.gov/ttn/atw/
http://web.doh.state.nj.us