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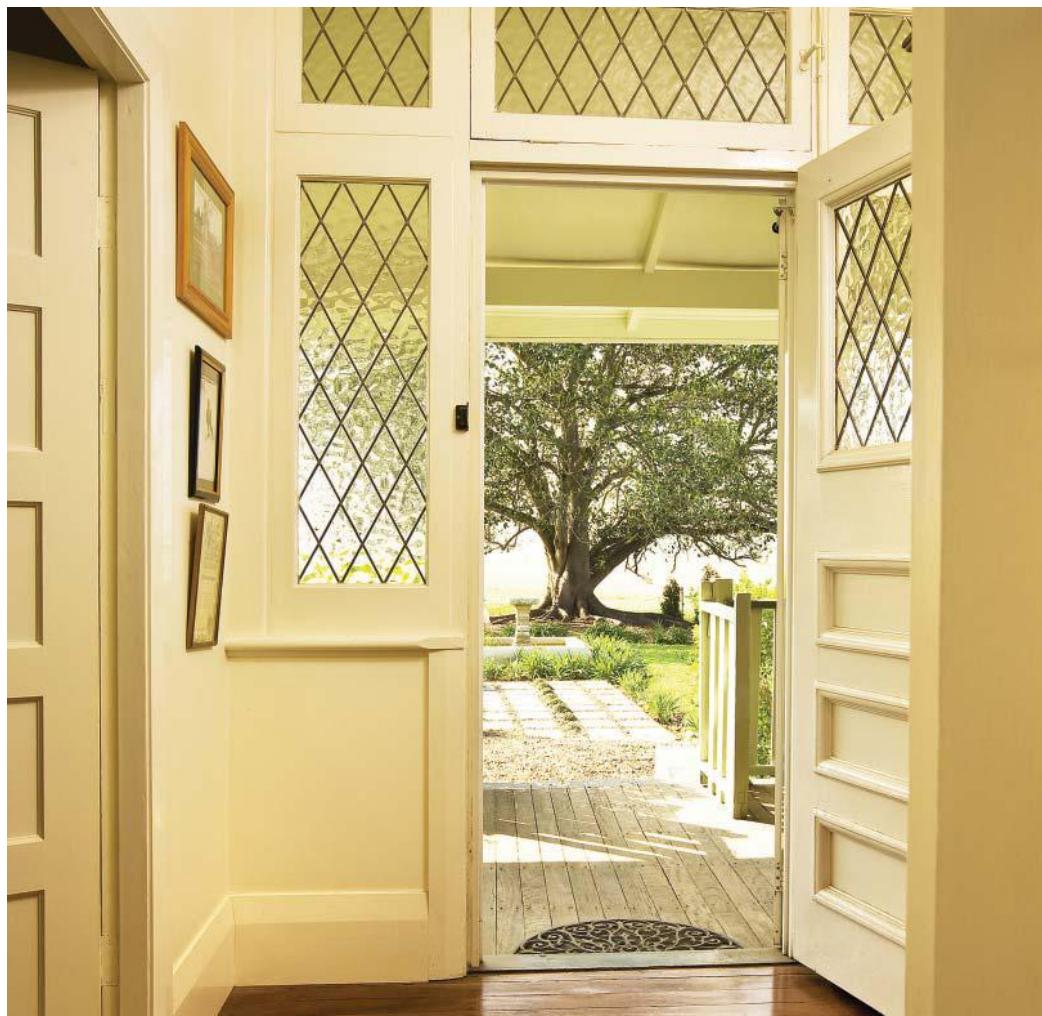
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# **Edmonton Indoor Air Quality Study (2010):**

**Volatile Organic Compounds (VOC) Data  
Summary**



**Canada**



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Volatile Organic Compounds (VOC) Data  
Summary

**Water and Air Quality Bureau  
Healthy Environments and  
Consumer Safety Branch**

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## **ABSTRACT**

A residential indoor air quality study was conducted by Health Canada in 2010, in collaboration with University of Alberta, in Edmonton, Alberta. A range of air parameters typically found in and around residences was measured for seven consecutive 24-hour periods in 50 homes during the winter and summer seasons, with 26 homes participating in both seasons. Among the different pollutants measured, volatile organic compounds (VOCs) were collected using Summa™ canisters. The sample canisters were analyzed for 193 polar and non-polar VOCs.

This report presents a summary of the 24-hour VOC statistics (per season) obtained as part of this study and is intended to provide relevant Canadian information on exposure to VOCs found indoors and outdoors within non-smoking residences. The report does not provide any interpretation or detailed analysis of the data or trends (e.g., comparing seasons, indoor/outdoor concentrations). The results from this report complement data presented in other summaries, also published by Health Canada, reporting VOC statistics from three previous residential indoor air quality studies conducted in Windsor, Ontario (Health Canada, 2010a), in Regina, Saskatchewan (Health Canada, 2010b) and in Halifax, Nova Scotia (Health Canada, 2012) using similar sampling and analysis methods.

## **LIST OF ACRONYMS**

AER	Air exchange rate
CAS	Chemical Abstracts Service
CO <sub>2</sub>	Carbon dioxide
EIAQS	Edmonton Indoor Air Quality Study
GC	Gas chromatography
GC-MS	Gas chromatograph–mass spectrometer
HVAC	Heating, ventilation and air conditioning
ID	Internal diameter
MDL	Method detection limit
N/A	Not applicable
NAPS	National Air Pollution Surveillance
SIM	Selected ion monitoring
TWA	Time-weighted average
US EPA	United States Environmental Protection Agency
VOC	Volatile organic compound

# 1. VOLATILE ORGANIC COMPOUNDS

## 1.1 Definition

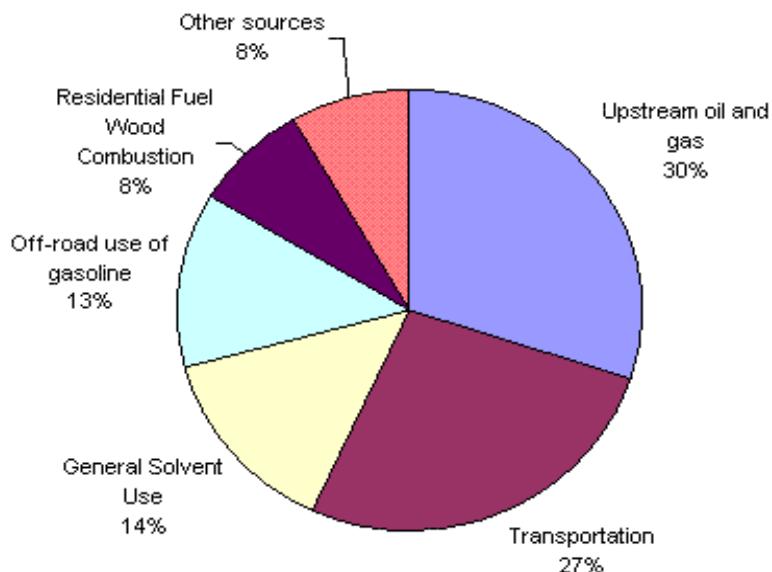
Volatile organic compounds (VOCs) are a diverse group of chemicals characterized by a high vapour pressure, such that they are emitted as a gas from solids or liquids at ordinary room temperatures. VOCs are numerous and ubiquitous. They are found indoors and outdoors, but the concentrations are generally higher in the indoor environment. Some VOCs may have short- or long-term adverse health effects, depending on the concentrations and the duration of exposure.

## 1.2 Sources

VOCs are emitted by both biogenic (natural origin) and anthropogenic sources. Biogenic sources include vegetation, forest fires, and animals. Anthropogenic sources that contribute to ambient VOC levels include combustion and evaporation processes associated with industry sources, the transport sector, and the use of solvents and solvent-containing products.

It is important to note that although biogenic sources constitute the largest source of VOC emissions, the air quality problems that occur in populated and industrialized areas are largely due to the type and amount of VOCs emitted by anthropogenic sources (Environment Canada, 2011a).

In 2010, estimated total VOC emissions in Canada were 1,814 kilotonnes (without open sources, e.g., agricultural animals, forest fires, prescribed burning) (Environment Canada, 2013). Figure 1 shows the contribution of the major sources to the total anthropogenic VOC emissions in Canada in 2010.



**Figure 1.** Estimated total VOC emissions by source in Canada in 2010 (without open sources) (reproduced from Environment Canada, 2013).

In addition, there are many anthropogenic indoor sources that can contribute to indoor VOC levels. These include secondhand smoke, new building materials and products, household cleaning products, personal care products, combustion appliances, as well as vehicle exhaust and chemicals stored in attached garages. Examples of potential VOC sources in buildings are presented in Table 1.

**Table 1.** Potential sources of VOCs in buildings (adapted from Tucker, 2001)

Source category	Examples of source types
Adhesives	Carpet adhesive, flooring adhesive, general adhesive
Cabinetry	Kitchen cabinets, other cabinetry
Caulks and sealants	Caulk, sealant, waterproofing
Cleaning agents	Detergent, disinfectants, miscellaneous cleaning agents, solvent-based cleaners
Floor materials	Carpet, carpet cushion, cork flooring, sheet vinyl, vinyl tile, wood flooring
Furnishings	Drapery, drapery lining, office furniture, residential furniture
Heating, ventilation and air conditioning (HVAC) systems and components	Air-cleaning devices, air-moving equipment, cooling coils, ductwork, heating coils, humidification equipment
Indoor air reactions	Partial oxidation of unsaturated organics to aldehydes, reemission of sorbed compounds from indoor surfaces (reemitting "sinks")
Insulation products	Fibrous insulation, foam insulation
Machines	Air conditioner, office equipment, electronic equipment, in-room air cleaner, in-room humidifier
Miscellaneous materials	Clothing, miscellaneous stored material, coated paper products
Occupants and occupant activities	Animals (pets), cleaning, cooking, human bioeffluents, smoking, use of personal-care products
Outdoor sources	Soil gas, infiltrated outdoor air
Paints and coatings	Oil-based finish, solvent-based paint, stain, varnish, water-based finish, water-based paint, wax
Pesticides	Moth repellent, other pesticides
Space heating and cooking equipment	Electric, gas-fueled (vented and unvented), oil-fueled (vented and unvented), solid-fueled
Wall and ceiling materials	Ceiling tile, gypsum board, plaster, wall paneling, wallpaper / wallcovering
Wood products	Particleboard, plywood, veneer, waferboard / chipboard, insulation board, hardboard, solid natural wood product

### **1.3 Seasonal Variability**

Seasonal variations in concentrations depend on the VOC species, emission sources and rates, environment, temperature, air exchange rates (AERs), and the rate of reaction with other compounds in each microenvironment (e.g., outdoors near traffic, indoors at home, and indoors at work).

## **2. EDMONTON INDOOR AIR QUALITY STUDY**

### **2.1 Study Background and Rationale**

Over the past several years, Health Canada has undertaken studies to assess exposure to air pollutants within homes in various parts of Canada. Prior to this work, the available data on Canadian exposure to indoor pollutants had been limited. Given the significant regional variation in the sources of indoor air pollutants, particularly due to differences in weather as well as heating systems and prevalence of gas stoves, it was not feasible to obtain an entirely representative sample of Canadian dwellings using data from a study conducted in a single region of the country. At the same time, conducting a Canada-wide study was impractical due to the significant resources that would be required. An acceptable compromise was to conduct a number of studies in different regions of the country using stratified sampling to ensure adequate representation of homes having the desired qualities.

The Edmonton Indoor Air Quality Study (EIAQS) was undertaken to provide a better understanding of the influence of housing characteristics and occupant activities on human exposure to indoor contaminants.

### **2.2 Study Location**

The results presented in this report are from the winter and summer sampling done in 2010 in homes in Edmonton, Alberta. This area was chosen for the study as there is little data available regarding indoor air exposure in homes for the Western Provinces.

### **2.3 Intended Use of Report**

This report presents summary statistics generated from the EIAQS VOC results and is not intended to provide a detailed analysis of trends (e.g., comparing seasons, indoor/outdoor concentrations, and chemical species). The results provide relevant Canadian information on exposure to some VOCs that are on the Toxic Substances List - Schedule 1 (Environment Canada, 2011b) of the *Canadian Environmental Protection Act, 1999* (Canada, 1999). They also provide details regarding substances that are on the Domestic Substances List (Environment Canada, 2010) or are presently undergoing a screening level assessment under the Chemicals Management Plan.

Analysis of housing characteristics and occupant activities in relation to indoor VOC concentrations is not included in this report, but will be reported on in later manuscripts submitted to scientific journals.

### **3. STUDY DESIGN**

#### **3.1 Participant Recruitment**

Approval was obtained from Health Canada's and University of Alberta's Research Ethics Boards to conduct this study and all personal information is protected in accordance with the *Access to Information Act* (Canada, 2011a) and the *Privacy Act* (Canada, 2011b).

A single-stage stratified sample design was used for the study whereby the stratification variable was represented by Edmonton neighbourhoods with different average ages of housing stock. Neighbourhood stratification was based on the Edmonton Community Profile 2006 of Canadian Census data, and the City of Edmonton's estimate of residential property assessment. Following this neighbourhood selection procedure, the residential neighbourhoods were allocated into five groups (or strata) and the neighbourhoods to be sampled in each stratum were randomly identified. Sample selection within each neighbourhood stratum was based upon a door-to-door survey conducted by field technicians. The order of the street names approached for the door-to-door recruitment within each neighbourhood was randomly selected. The house number and street names were identified from a 2010 map of Edmonton obtained from the following website: <http://maps.edmonton.ca/>.

To be eligible for inclusion, the resident of each home had to own their home, and be at least 18 years of age, a non-smoker, and ideally available to participate for both sampling phases. Tenants of rental properties were excluded due to possible liability issues and the difficulty in obtaining landlords' permission prior to entering their property. Dwellings where smoking was permitted were excluded in an effort to better identify other sources of exposure. To determine a resident's eligibility, a screening questionnaire was administered by the field technician during door-to-door recruitment. In other studies carried out by Health Canada, the type of cooking system was also considered as a selection criterion to participate. In Edmonton, there were not a sufficient number of homes with a gas stove to consider this criterion for selection into this study. However, information on the type of cooking system was collected during the study.

Homes recruited in winter were also invited to participate in the summer phase. Almost half of the winter participants could not return to summer sampling. Based on communication with these participants, their reasons generally included problems with scheduling around work or vacation and time required to participate in the study. Because some winter participants chose not to return for the summer sampling phase, new participants were recruited using the same door-to-door recruitment procedure as in winter.

In total, 50 homes took part in this study during both the winter and summer of 2010 and 26 homes participated in both seasons. A summary of the homes selected per season is presented in Table 2.

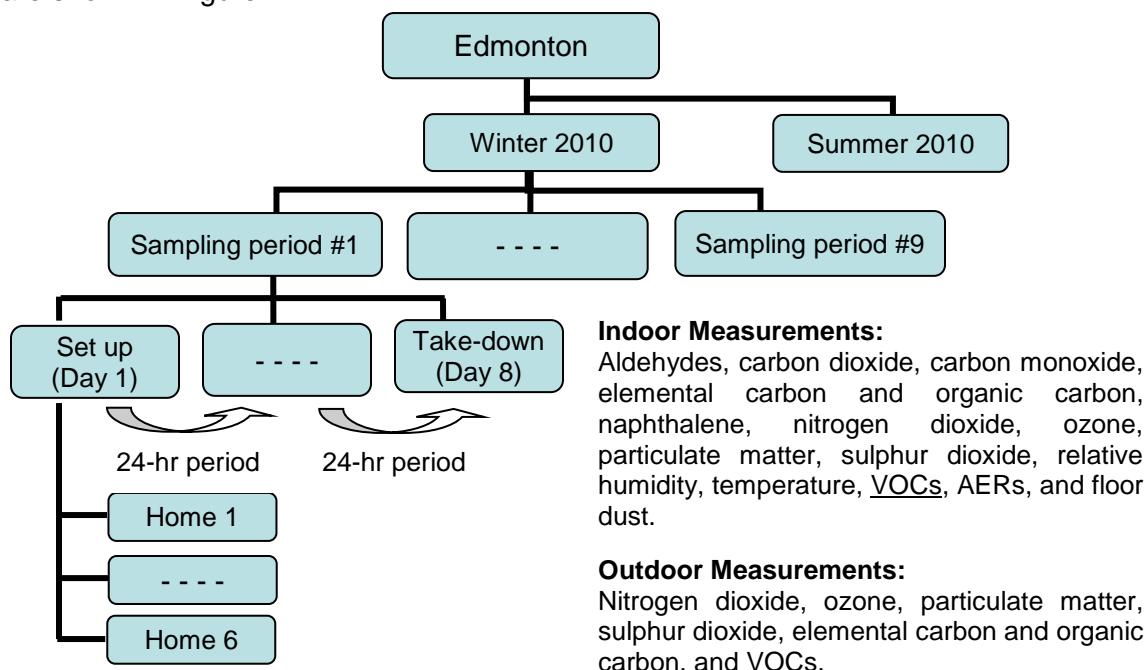
**Table 2.** Homes recruited per season (stratified by age of home)

Stratum	Year of home construction	Winter phase	Summer phase	
		Recruited participants	Returning participants	New participants
1	Prior to 1946	10	6	4
2	Between 1946 and 1960	10	3	7
3	Between 1961 and 1980	10	7	3
4	Between 1981 and 2000	10	5	5
5	After 2004	10	5	5
<b>TOTAL</b>		50	26	24

The recruiters did not have access to a listing of homes built between 2000 and 2004. As a result, no homes built between these years were included in this study.

### 3.2 Sampling Schedule

The data collection was done during the winter (between January and April) and the summer (between June and September) of 2010 in Edmonton. There were 9 sampling periods per season. Each sampling period took place over 8 days (7 consecutive periods of 24-hours), either from Thursday to Thursday or from Monday to Monday. For each sampling period, a target number of 6 homes was visited daily by 3 teams of 2 technicians each, with each team visiting 2 homes per day. The teams visited each home on the first day to deploy Summa™ canisters indoors and outdoors, and returned to each home on a daily basis to collect the Summa™ canisters and set up new ones. Questionnaires detailing the activities that occurred in each home during the sampling were completed daily by the study participants. A graphical summary of the sampling design as well as a list of all the measurements collected during both sampling phases are shown in Figure 2.



**Figure 2.** Summary of EIAQS sampling design and a list of all the measurements collected indoors and outdoors during the study.

### **3.3 Placement of Samplers**

Two Summa™ canisters were deployed daily at each home for 7 consecutive 24-hour periods in order to capture both indoor and outdoor exposure levels. One canister was placed inside a participant's home, typically within the family or living room where participants spent a substantial amount of their time, and another canister was located in the backyard, several metres away from the home and from combustion sources such as barbecues. Photographs of sampling equipment typically installed inside and outside homes are provided in Appendix A.

## **4. METHODS**

### **4.1 Questionnaires**

In winter, a baseline questionnaire was administered to all home owners to establish house environment characteristics such as house age, number of occupants, type of garage, and types of heating and cooking systems. In the summer, an abridged baseline questionnaire was administered to the 26 returning participants to identify changes that might have occurred since winter sampling, such as renovations, while the extended version of the baseline questionnaire was administered to the 24 new participants. In addition, all participants filled out daily questionnaires detailing activities that could have impacted study results such as the use of personal care and household products.

### **4.2 Additional Air Parameters Sampled**

In addition to obtaining the VOC data presented in this report, measurements were conducted in each home during both sampling periods for the following air quality parameters of interest: carbon dioxide ( $\text{CO}_2$ ), temperature, relative humidity, elemental carbon and organic carbon, nitrogen dioxide, ozone, sulphur dioxide, aldehydes, naphthalene, carbon monoxide and different fractions of particulate matter. AERs were also obtained in the winter and the summer using the perfluorocarbon tracer gas method (Dietz and Cote, 1982). In addition, a dust sample was collected once during the entire study in each participating home in order to analyze different allergens, including two species of dust mites (*Dermatophagoides pteronyssimus* and *Dermatophagoides farinae*), one indicator of mould ( $\beta$  (1 $\rightarrow$ 3) - glucan), the presence of bacteria (endotoxin), and cat and cockroach allergens.

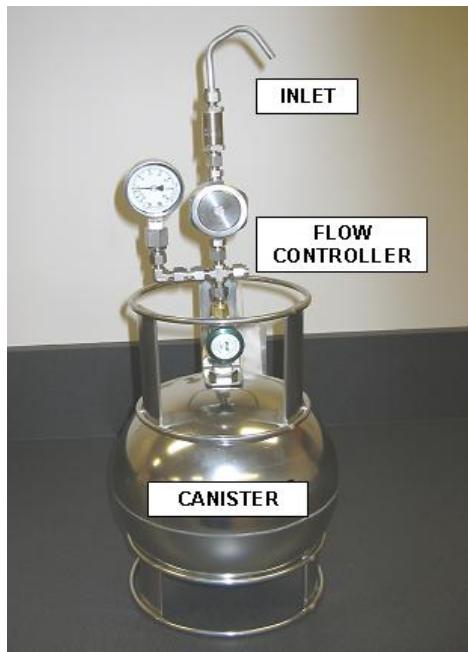
### **4.3 Sampling Equipment**

Air sampling involved collecting a representative sample of air in an environment for analysis of its constituent compounds. Time-integrated sampling, using a flow controller to spread the sample collection over a specific time period, provided a time-weighted average (TWA) sample which accurately reflected the mean conditions of the air in the environment.

Stainless steel evacuated Summa™ canisters (6.0 L) (see Figure 3) were used to passively and non-selectively collect indoor and outdoor air samples over 24-hour periods, in both seasons, for analysis of constituent VOC concentrations. Prior to

sampling and as per US EPA Compendium Method TO-15 (US EPA, 1999), each canister was evacuated to an initial negative pressure of -28 to -30 inches of mercury. Over the 24-hour sampling periods, the vacuum inside the canister was then replaced with air at a constant flow rate by means of flow controllers.

The flow controllers were assembled in Environment Canada's laboratory (more details are provided in the next section) and leak tested. The flow rate of each 24-hour 6.0 L canister was set to 3.5 mL/min. The assembled flow controllers were purged with humidified clean air ("zero air") for at least 3 days. Subsequently, humidified, high-purity laboratory grade air was passed through the flow controllers to evacuated VOC canisters, and then their contents were analyzed by gas chromatography–mass spectrometry (GC–MS). The flow controllers were certified clean when no target VOC concentration was greater than 0.2 ppb, after which they were capped with Swagelok fittings and shipped to the laboratory at University of Alberta for sampling.



**Figure 3.** Summa™ canister system used for VOC sampling.

#### 4.4 Laboratory Analysis

Chemical analysis of the VOC canisters was carried out at Environment Canada's Environmental Technology Centre, Ottawa, Ontario, at the same laboratory that analyzes the VOC canisters from the National Air Pollution Surveillance (NAPS) sites. The suite of 188 polar and non-polar VOCs routinely monitored in NAPS was identical to those that were analyzed in this study, along with 5 other VOCs that were of interest (total n = 193 VOCs).

During the sampling and handling of canisters, there may be losses of VOCs due to several causes: physical adsorption to sampling system components; chemical reactions of VOCs with co-collected ozone or other reactive pollutants; and mechanisms such as aqueous hydrolysis and biological degradation. Over time, the composition of a sampled

gas mixture in a canister will change so that the sample may not be a true representation of the air from which it was taken. This effect was minimized by collecting and analyzing the canisters within 30 days of preparation, in accordance with the recommendations in US EPA Compendium Method TO-15 (US EPA, 1999).

The air samples were analyzed using a cryogenic pre-concentration technique with a high-resolution gas chromatograph (Model 6890 or 7890, Agilent Technologies, Palo Alto, CA) and a mass-selective detector (GC-MS) (Model 5973 or 5975, Agilent Technologies, Palo Alto, CA). VOCs were separated on a 60-meter, 0.32 mm internal diameter (ID) fused silica capillary column with a 1.0 µm film thickness of Agilent J&W Scientific (Palo Alto, CA) DB-1 bonded liquid phase. To achieve the detection limits desired, air samples were concentrated before injection into the GC-MS using an Entech Model 7100A pre-concentrator with autosampler (Entech Instruments Inc., Simi Valley, CA).

As illustrated in Table 3, two analytical systems were used: one system optimized to analyze for non-polar VOCs and the other for polar VOCs. These systems differed only in their method for removing water from a sample and in the gas chromatography (GC) temperature program. The presence of water vapour and CO<sub>2</sub> at levels 4 to 8 orders of magnitude higher than the target VOCs requires that water and CO<sub>2</sub> be removed prior to GC injection in order to avoid chromatography problems and attenuation of response in the mass spectrometer. The Entech 7100A Preconcentrator used a three-stage concentration technique to manage the water and CO<sub>2</sub> without losses of desired analytes. For non-polar VOCs, pre-concentration was by "Microscale Purge and Trap"; for polar VOCs, pre-concentration was by "Cold Trap Dehydration."

**Table 3.** Entech instrument operation mode and GC parameters.

Analytical parameters	Non-polar VOCs	Polar VOCs
<b>GC-MS inlet system</b>	7100 Preconcentrator and 7016 16- Position Autosampler (Entech Instruments Inc.)	7100 Preconcentrator and 7016 16-Position Autosampler (Entech Instruments Inc.)
<b>7100 Mode of Operation</b>	Microscale Purge and Trap	Cold Trap Dehydration
<b>GC-MS</b>	Agilent 6890 GC / 5973 MSD Agilent 7890 GC / 5975 MSD (Palo Alto, CA)	Agilent 6890 GC / 5973 MSD Agilent 7890 GC / 5975 MSD (Palo Alto, CA)
<b>Column</b>	DB-1, 0.32 mm ID, 60 m, 1 µm	DB-1, 0.32 mm ID, 60 m, 1 µm
<b>Temperature</b>	-60°C (3 min) to 164°C at 7°C/min, to 220°C at 14°C/min	-45°C (3 min) to 180°C at 6°C/min, to 250°C at 25°C/min

The GC-MS was operated in the selected ion monitoring (SIM) mode. Identification of target analytes by SIM analysis was based on a combination of the chromatographic retention time and the relative abundance of selected monitored ions. Two or three characteristic ions were monitored for each of 193 hydrocarbons that are either frequently or occasionally found in urban air samples. The mass spectrometer acquires data for target ions only, and ignores all others. This detection technique is highly specific and sensitive.

Instrument calibration standards using stock gas standards were prepared in-house from multi-component liquid mixtures and gas mixture cylinders purchased from Scott Environmental Technology Inc. (Plumsteadville, PA). The accuracy of the calibration standards was verified against two certified reference standards: the method TO-14 calibration mix (39 compounds) from Scott Environmental Technology Inc. (Plumsteadville, PA) and the Certified 62 compounds standard from Linde Spectra Gases Inc. (Alpha, NJ). Quantification was based on daily 6-point linear regression calibration curves obtained from analysis of these external standard mixtures. Precision, as determined from replicate analyses of samples, is within 15% for compounds at concentrations above 0.1 µg/m<sup>3</sup> (US EPA, 1999). The method of cleaning, evacuation, and analysis has been well-discussed by Wang and Austin (2006).

## 5. VOC DATA SUMMARY TABLES

### 5.1 Canisters collected during field work

The total number of 24-hour VOC canisters that were deployed indoors and outdoors was 1390, which included those installed in the winter (n=694) and the summer (n=696) of 2010. About 5.0% of all the canisters (n=69) were determined to be invalid due mainly to miscellaneous technician errors done during the field work, but also for other reasons such as technical problems (end pressure of zero in the canister) and sampling duration time over or under the target duration by more than 25%. Furthermore, another 1.1% of the canisters collected during the winter and summer (n=15) were flagged. The primary reason for flagged canisters was a sampling duration time about 12.5 to 25% over or under the target duration. Technician errors during field work also resulted in a few canisters being flagged. The invalid canisters were excluded from further analysis, whereas the flagged canisters were considered to be reliable and were included in the analysis. As a result, the total number of 24-hour canisters that were considered valid after field work was 1321 for both the winter (n=652) and summer (n=669) seasons.

### 5.2 Treatment of Data

The canisters were analysed by the Environment Canada laboratory using two GC-MS instruments with different method detection limits (MDL) for each VOC. The laboratory reported the respective MDL for each sample, along with a concentration result. In order to standardize the presentation of the results in this report, the maximum MDL for each VOC was chosen per season and reported as the MDL in this report. Overall, the concentrations reported were either: (I) quantifiable and above the MDL; (II) quantifiable but below the MDL; (III) not present in the sample and therefore reported as zero; or (IV) not quantifiable and therefore not reported. Depending on the results, the data were treated as follows:

- I. Concentration result quantifiable and above the MDL: Samples with VOC concentration results higher than their corresponding MDL were interpreted as valid, and the concentration reported by the laboratory was used as stated in the statistical analyses.
- II. Concentration result quantifiable but below the MDL: Samples with VOC concentration results lower than their corresponding MDL were interpreted as below the detection limit. However, the retention time and target

ions/qualifier ions in the GC-MS chromatogram still met the analytical criteria of the laboratory. The results were therefore considered valid and were used as reported in the statistical analyses.

- III. VOC not present in the sample and concentration result therefore reported as zero: In cases where the laboratory did not observe any peaks or target ions/qualifier ions in the GC-MS chromatogram during the analysis, a value of zero was reported as the concentration result. The laboratory considered that the quantitation criteria were not met and the VOC species analysed was therefore not present in the sample. These results were considered valid and were reported as a zero concentration value by the laboratory. In order to calculate the descriptive statistics using log transformation, these concentrations were replaced by a near zero value of 0.0001 µg/m<sup>3</sup>.
- IV. Concentration result not quantifiable and therefore not reported: In cases where the laboratory could not obtain a result for an individual VOC, no concentration result was reported. Reasons for this result included, for example, the contamination of the sample by other compounds, interference by preceding peaks in the GC-MS analysis (i.e., could not separate from the interference compounds); or results not meeting the calibration criteria. These samples were considered invalid and were excluded from further analyses.

The different treatments of data for the concentration results provided by the laboratory are summarized in Table 4.

**Table 4.** Laboratory results and treatment of data

Reported concentration results			Values used in the analyses
I. Quantifiable	≥ MDL	Valid	Reported concentration
II. Quantifiable	< MDL	Valid	Reported concentration
III. Not present	Zero	Valid	Near zero value (0.0001 µg/m <sup>3</sup> )
IV. Not quantifiable	Not reported	Invalid	Not used (excluded)

MDL: method detection limit, which is the maximum MDL of the two MDL values reported by the laboratory for each individual VOC.

### 5.3 VOC Data and Summary Statistics

Summary statistics were produced using SAS EG 4.2. Arithmetic and geometric means were calculated using the means of all the daily measures for each home, resulting in a sample size of 50 valid values per season. Since the extreme values are often of interest to risk assessors and policy makers, the other descriptive statistics reported were calculated using all the measures collected for all homes per season. Therefore, the sample size of all other statistical parameters is equal to the total number of valid samples that were analyzed per VOC species.

VOC data summary tables for the 2010 EIAQS are presented in Appendix B. The data summary tables are organized by VOC species and provide the following information for each species:

- Index number: reference index to aid in navigating in the tables (based on VOC species number from 1 to 193);
- VOC species: name of the VOC species;
- CAS number: Chemical Abstracts Service (CAS) registry number corresponding to the species;
- MDL: Method detection limit, which is the maximum MDL of the two values reported by the laboratory for each individual VOC;
- Season: sampling season (summer and winter); and
- Exposure Category: sampling exposure environment (indoors and outdoors).

For each VOC species, in each sampling season and exposure category, the following statistics are provided:

- Count: number of valid canisters analyzed;
- Minimum: lowest concentration of all the samples collected ( $\mu\text{g}/\text{m}^3$ );
- Maximum: highest concentration of all the samples collected ( $\mu\text{g}/\text{m}^3$ );
- % Samples > MDL: calculated as the number of samples with results above MDL divided by total number of samples analyzed and multiplied by 100;
- % homes > MDL for all samples: calculated as the number of homes where the results of all the samples were above MDL divided by total number of homes sampled and multiplied by 100;
- % homes > MDL for at least one sample: calculated as the number of homes where the results of at least one sample was above MDL divided by total number of homes sampled and multiplied by 100;
- Arithmetic mean ( $\mu\text{g}/\text{m}^3$ ): calculated as the sum of the means for each home divided by the total number of homes sampled;
- Geometric mean ( $\mu\text{g}/\text{m}^3$ ): calculated as a multiplication of the means for each home and then, the  $n^{\text{th}}$  root is applied on this product (where  $n$  is the number of homes sampled); and
- Percentiles: six percentiles are reported ( $5^{\text{th}}$ ,  $25^{\text{th}}$ ,  $50^{\text{th}}$ ,  $75^{\text{th}}$ ,  $90^{\text{th}}$ , and  $95^{\text{th}}$ ), which correspond to the concentrations of different samples according to their position on the distribution of all the results when ordered from the lowest to the highest concentration. For instance, the  $50^{\text{th}}$  percentile is equivalent to the median concentration of all samples, which is the middle value of the distribution, and the  $75^{\text{th}}$  percentile is the concentration greater than 75% of the sample results.

Note that:

- MDL refers to the maximum MDL of the two values reported by the laboratory;
- Estimates that are less than the MDL for the individual VOCs are reported as “<MDL” in the summary tables (see Appendix B);

- Estimates that are below 10 for the individual VOCs are reported to three decimal places in the summary tables, while those that are greater than or equal to 10 are reported to two decimals places (see Appendix B);
- All winter results for 1-heptene and bromotrichloromethane, and indoors (winter and summer) results for isopropyl alcohol are not presented in this report. The laboratory reported that 1-heptene and bromodichloromethane are not stable compounds and they were not able to achieve a good calibration. As for isopropyl alcohol, many air samples were contaminated by this compound due to it being used in the sampling of ultrafine particle matter. This contamination saturated the detector and made the analysis of the samples impossible. The missing data were reported as not applicable (N/A) in the summary tables (see Appendix B).

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## APPENDIX A: Sampling Equipment Typically Installed Inside and Outside Homes



**APPENDIX B: EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/ Median	75th Percentile	90th Percentile	95th Percentile	
1	1,1,1-Trichloroethane	71-55-6	0.071	Summer	Indoor	328	<MDL	2.315	40.9	31.6	50.0	0.221	0.110	<MDL	<MDL	0.248	0.642	1.053	
			0.021		Outdoor	324	<MDL	0.518	0.9	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
		79-34-5	0.056	Winter	Indoor	337	0.032	4.200	100.0	100.0	100.0	0.317	0.125	0.040	0.047	0.067	0.247	0.967	1.700
					Outdoor	332	0.032	0.426	100.0	100.0	100.0	0.051	0.051	0.036	0.044	0.050	0.054	0.062	0.068
2	1,1,2,2-Tetrachloroethane	79-00-5	0.056	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.033		Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
		75-34-3	0.050	Summer	Indoor	328	<MDL	0.065	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
3	1,1,2-Trichloroethane	79-00-5	0.034	Winter	Indoor	337	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.050		Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
		75-34-3	0.042	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
4	1,1-Dichloroethane	75-34-3	0.015	Winter	Indoor	337	<MDL	0.660	1.8	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.042		Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
		75-35-4	0.033	Summer	Indoor	328	<MDL	0.050	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
5	1,1-Dichloroethene	526-73-8	0.018	Winter	Indoor	337	<MDL	0.093	5.6	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.020	
			0.033		Outdoor	332	<MDL	0.110	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
		526-73-8	0.047	Summer	Indoor	328	<MDL	41.90	84.2	54.7	98.0	1.088	0.210	<MDL	0.074	0.176	0.397	1.041	2.223
					Outdoor	324	<MDL	5.250	53.4	6.5	96.0	0.080	0.064	<MDL	<MDL	0.051	0.084	0.129	0.148
6	1,2,3-Trimethylbenzene	120-82-1	0.024	Winter	Indoor	337	<MDL	182.91	94.7	66.7	100.0	2.443	0.508	<MDL	0.260	0.420	0.847	1.620	3.372
			0.094		Outdoor	332	<MDL	0.842	73.8	16.5	98.0	0.092	0.070	<MDL	<MDL	0.044	0.095	0.235	0.420
		120-82-1	0.146	Summer	Indoor	328	<MDL	0.221	5.5	1.9	8.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.111	
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
7	1,2,4-Trichlorobenzene	79-00-5	0.228	Winter	Indoor	337	<MDL	0.228	2.1	2.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.034		Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/ Median	75th Percentile	90th Percentile	95th Percentile	
8	1,2,4-Trimethylbenzene	95-63-6	0.082	Summer	Indoor	328	<MDL	86.00	99.7	96.1	100.0	2.997	0.914	0.197	0.383	0.626	1.494	4.723	12.59	
					Outdoor	324	<MDL	11.74	89.8	44.9	100.0	0.301	0.262	<MDL	0.128	0.201	0.332	0.556	0.647	
			0.039	Winter	Indoor	337	0.153	327.07	100.0	100.0	100.0	5.579	1.762	0.380	0.880	1.427	2.740	6.380	9.807	
					Outdoor	332	<MDL	3.208	89.5	47.1	100.0	0.383	0.284	<MDL	0.085	0.177	0.392	1.012	1.746	
		106-93-4	0.070	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.045	Winter	Indoor	337	<MDL	0.208	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
10	1,2-Dichlorobenzene	95-50-1	0.064	Summer	Indoor	328	<MDL	0.099	1.8	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
		107-06-2	0.041	Winter	Indoor	337	<MDL	25.52	6.5	3.8	10.0	0.084	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.047	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
11	1,2-Dichloroethane	78-87-5	0.043	Summer	Indoor	328	0.044	8.904	100.0	100.0	100.0	0.738	0.274	0.054	0.083	0.184	0.607	2.352	3.483	
					Outdoor	324	<MDL	0.157	96.9	66.7	100.0	0.062	0.061	0.044	0.052	0.059	0.069	0.080	0.088	
		107-06-2	0.021	Winter	Indoor	337	0.067	6.547	100.0	100.0	100.0	0.711	0.326	0.080	0.120	0.240	0.700	1.767	4.167	
					Outdoor	332	0.058	0.186	100.0	100.0	100.0	0.081	0.080	0.064	0.074	0.080	0.086	0.094	0.100	
12	1,2-Dichloropropane	78-87-5	0.041	Summer	Indoor	328	<MDL	0.203	1.8	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
		135-01-3	0.030	Winter	Indoor	337	<MDL	4.487	9.5	3.3	24.0	0.089	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.427	<MDL
					Outdoor	332	<MDL	0.036	1.2	0.0	8.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
13	1,2-Diethylbenzene	135-01-3	0.039	Summer	Indoor	328	<MDL	3.220	20.4	1.4	46.0	0.094	<MDL	<MDL	<MDL	<MDL	<MDL	0.120	0.405	
					Outdoor	324	<MDL	0.508	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
		108-67-8	0.021	Winter	Indoor	337	<MDL	18.32	61.7	7.5	100.0	0.263	0.059	<MDL	<MDL	0.047	0.133	0.232	0.387	<MDL
					Outdoor	332	<MDL	0.044	4.5	0.0	24.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
14	1,3,5-Trimethylbenzene	95-63-6	0.039	Summer	Indoor	328	<MDL	22.97	97.6	88.7	100.0	0.802	0.239	0.051	0.097	0.168	0.373	1.369	3.469	
					Outdoor	324	<MDL	3.163	69.4	16.3	100.0	0.082	0.072	<MDL	<MDL	0.055	0.091	0.151	0.177	<MDL
		108-67-8	0.021	Winter	Indoor	337	0.047	90.27	100.0	100.0	100.0	1.493	0.492	0.107	0.233	0.408	0.753	1.713	3.120	<MDL
					Outdoor	332	<MDL	0.920	78.6	20.5	100.0	0.108	0.082	<MDL	0.024	0.053	0.110	0.298	0.500	<MDL

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/ Median	75th Percentile	90th Percentile	95th Percentile
15	1,3-Butadiene	106-99-0	0.018	Summer	Indoor	328	<MDL	0.699	98.2	85.2	100.0	0.084	0.073	0.023	0.037	0.055	0.091	0.161	0.232
					Outdoor	324	<MDL	0.376	87.4	42.9	100.0	0.055	0.048	<MDL	0.023	0.036	0.062	0.104	0.143
			0.017	Winter	Indoor	337	<MDL	15.19	99.7	96.1	100.0	0.254	0.169	0.027	0.067	0.120	0.273	0.476	0.587
					Outdoor	332	<MDL	0.666	90.1	56.3	100.0	0.108	0.086	<MDL	0.030	0.062	0.126	0.284	0.378
	1,3-Dichlorobenzene	541-73-1	0.065	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.042	Winter	Indoor	337	<MDL	0.048	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
17	1,3-Diethylbenzene	141-93-5	0.037	Summer	Indoor	328	<MDL	6.363	27.4	5.4	56.0	0.161	<MDL	<MDL	<MDL	<MDL	0.042	0.174	0.283
					Outdoor	324	<MDL	1.005	2.2	0.0	14.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.021	Winter	Indoor	337	<MDL	36.82	68.6	27.6	94.0	0.440	0.059	<MDL	<MDL	0.067	0.147	0.288	0.476
					Outdoor	332	<MDL	0.162	20.2	0.0	68.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.046	0.072	
18	1,4-Dichlorobenzene	106-46-7	0.046	Summer	Indoor	328	<MDL	0.805	55.8	29.4	76.0	0.114	0.070	<MDL	<MDL	0.052	0.120	0.293	0.461
					Outdoor	324	<MDL	0.436	9.6	0.0	40.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.060
			0.022	Winter	Indoor	337	<MDL	0.483	95.0	75.4	100.0	0.086	0.064	<MDL	0.036	0.056	0.087	0.176	0.340
					Outdoor	332	<MDL	0.662	41.0	3.3	86.0	0.037	0.026	<MDL	<MDL	<MDL	0.034	0.078	0.114
19	1,4-Dichlorobutane	110-56-5	0.130	Summer	Indoor	328	<MDL	0.797	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.091	Winter	Indoor	337	<MDL	0.560	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
20	1,4-Diethylbenzene	105-05-5	0.079	Summer	Indoor	328	<MDL	25.18	34.5	1.1	80.0	0.613	<MDL	<MDL	<MDL	<MDL	0.146	0.504	0.981
					Outdoor	324	<MDL	4.178	2.8	0.0	16.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.048	Winter	Indoor	337	<MDL	152.93	69.7	15.1	98.0	1.826	0.219	<MDL	<MDL	0.240	0.507	1.107	2.264
					Outdoor	332	<MDL	0.574	31.9	0.0	80.0	0.058	<MDL	<MDL	<MDL	<MDL	0.060	0.166	0.264
21	1-Butanol (Butyl alcohol)	71-36-3	0.057	Summer	Indoor	328	<MDL	22.70	90.6	61.3	100.0	2.716	2.081	<MDL	1.030	1.822	3.291	6.004	8.483
					Outdoor	324	<MDL	12.12	62.7	8.9	96.0	0.206	0.108	<MDL	<MDL	0.126	0.212	0.309	0.485
			0.057	Winter	Indoor	337	<MDL	48.53	99.7	96.1	100.0	2.007	1.464	0.408	0.800	1.468	2.293	3.220	4.160
					Outdoor	332	<MDL	0.436	28.0	0.0	90.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.060	0.102	0.166

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile		
22	1-Butene/2-Methylpropene	106-98-9/115-11-7	0.076	Summer	Indoor	328	0.141	4.939	100.0	100.0	100.0	0.809	0.700	0.279	0.428	0.629	0.959	1.567	2.098		
					Outdoor	324	0.088	1.278	100.0	100.0	100.0	0.323	0.313	0.160	0.224	0.277	0.375	0.512	0.647		
		0.047	Winter		Indoor	337	0.140	7.153	100.0	100.0	100.0	1.443	1.240	0.436	0.773	1.073	1.856	2.716	3.360		
					Outdoor	332	0.082	5.082	100.0	100.0	100.0	0.477	0.425	0.126	0.222	0.320	0.508	1.080	1.640		
	1-Butyne	107-00-6	0.029	Summer	Indoor	328	<MDL	0.090	1.8	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	324	<MDL	0.039	1.9	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
		0.028	Winter		Indoor	337	<MDL	0.233	2.4	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
	1-Decene	872-05-9	0.035	Summer	Indoor	328	<MDL	0.073	0.9	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	324	<MDL	0.100	3.1	0.0	18.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
		0.029	Winter		Indoor	337	<MDL	0.980	2.7	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	332	<MDL	0.196	0.9	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
	1-Heptene	592-76-7	0.053	Summer	Indoor	328	<MDL	0.287	0.9	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	324	<MDL	0.106	1.2	0.0	8.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
		n/a	Winter		Indoor	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
					Outdoor	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
	1-Hexene/2-Methyl-1-Pentene	592-41-6/763-29-1	0.128	Summer	Indoor	328	<MDL	1.662	43.6	8.8	74.0	0.177	<MDL	<MDL	<MDL	<MDL	0.191	0.407	0.707		
					Outdoor	324	<MDL	0.430	5.6	0.0	24.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
		0.071	Winter		Indoor	337	<MDL	1.692	72.7	8.7	100.0	0.182	0.142	<MDL	<MDL	<MDL	0.133	0.260	0.384	0.460	
					Outdoor	332	<MDL	0.472	28.0	0.0	66.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.077	0.156	0.256		
	1-Methylcyclohexene	591-49-1	0.035	Summer	Indoor	328	<MDL	0.211	10.1	5.5	16.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.088		
					Outdoor	324	<MDL	0.041	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
		0.018	Winter		Indoor	337	<MDL	0.300	34.1	9.1	68.0	0.018	<MDL	<MDL	<MDL	<MDL	0.020	0.033	0.040		
					Outdoor	332	<MDL	0.052	12.1	0.0	48.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.018	0.028			
	1-Methylcyclopentene	693-89-0	0.083	Summer	Indoor	328	<MDL	2.152	16.5	8.8	24.0	0.101	<MDL	<MDL	<MDL	<MDL	0.306	0.589			
					Outdoor	324	<MDL	0.278	3.1	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
		0.037	Winter		Indoor	337	<MDL	2.192	53.7	15.9	90.0	0.110	0.057	<MDL	<MDL	<MDL	0.047	0.108	0.220	0.296	
					Outdoor	332	<MDL	0.326	22.0	0.0	66.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.072	0.152			

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile		
29	1-Nonene	124-11-8	0.078	Summer	Indoor	328	<MDL	5.094	13.4	0.0	42.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.095	0.132		
					Outdoor	324	<MDL	0.162	2.8	0.0	18.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
			0.024	Winter	Indoor	337	<MDL	3.080	6.5	0.0	28.0	0.025	<MDL	<MDL	<MDL	<MDL	<MDL	0.136		
					Outdoor	332	<MDL	0.196	14.2	0.0	46.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.034	0.052		
	1-Octene		0.084	Summer	Indoor	328	<MDL	0.630	43.9	4.6	84.0	0.088	<MDL	<MDL	<MDL	<MDL	0.145	0.228	0.279	
					Outdoor	324	<MDL	0.214	5.9	0.0	32.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.088		
			0.016	Winter	Indoor	337	<MDL	0.948	55.2	5.8	84.0	0.090	0.028	<MDL	<MDL	0.067	0.136	0.224	0.313	
					Outdoor	332	<MDL	1.156	68.1	9.9	100.0	0.061	0.043	<MDL	<MDL	0.034	0.077	0.164	0.226	
31	1-Pentene	109-67-1	0.069	Summer	Indoor	328	<MDL	2.867	84.5	33.8	98.0	0.236	0.161	<MDL	0.085	0.136	0.230	0.477	0.945	
					Outdoor	324	<MDL	0.575	48.5	5.5	92.0	0.090	0.079	<MDL	<MDL	<MDL	0.110	0.148	0.224	
			0.054	Winter	Indoor	337	<MDL	2.160	96.1	66.7	100.0	0.248	0.193	0.060	0.093	0.160	0.293	0.432	0.807	
					Outdoor	332	<MDL	0.566	50.0	5.4	94.0	0.085	0.073	<MDL	<MDL	<MDL	0.090	0.188	0.308	
32	1-Undecene	821-95-4	0.065	Summer	Indoor	328	<MDL	0.435	3.1	0.0	14.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	324	<MDL	0.153	1.9	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
			0.031	Winter	Indoor	337	<MDL	0.824	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	332	<MDL	0.802	1.5	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
33	2,2,3-Trimethylbutane	464-06-2	0.010	Summer	Indoor	328	<MDL	0.253	25.6	2.4	68.0	0.020	<MDL	<MDL	<MDL	<MDL	0.017	0.091	0.120	
					Outdoor	324	<MDL	0.117	8.6	0.0	44.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
			0.025	Winter	Indoor	337	<MDL	2.060	45.4	4.6	82.0	0.042	<MDL	<MDL	<MDL	<MDL	0.067	0.100	0.120	
					Outdoor	332	<MDL	0.068	13.9	0.0	48.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.030	0.042		
34	2,2,4-Trimethylpentane	540-84-1	0.026	Summer	Indoor	328	<MDL	301.07	96.3	75.4	100.0	2.079	0.657	0.115	0.271	0.443	0.828	2.245	4.349	
					Outdoor	324	<MDL	2.722	99.7	96.1	100.0	0.448	0.387	0.090	0.170	0.319	0.556	0.952	1.157	
			0.013	Winter	Indoor	337	<MDL	18.77	88.1	45.6	98.0	1.367	0.712	<MDL	0.320	0.632	1.433	3.044	3.913	
					Outdoor	332	<MDL	5.758	99.4	92.3	100.0	0.763	0.562	0.056	0.176	0.376	0.874	2.084	3.196	
35	2,2,5-Trimethylhexane	3522-94-9	0.009	Summer	Indoor	328	<MDL	27.19	68.3	18.3	94.0	0.235	0.033	<MDL	<MDL	0.030	0.071	0.175	0.279	
					Outdoor	324	<MDL	0.474	71.0	17.7	100.0	0.024	0.020	<MDL	<MDL	0.016	0.028	0.047	0.054	
			0.012	Winter	Indoor	337	<MDL	104.98	89.3	51.5	100.0	0.526	0.088	<MDL	0.033	0.072	0.148	0.364	0.492	
					Outdoor	332	<MDL	34.84	73.5	26.6	100.0	0.154	0.040	<MDL	<MDL	0.023	0.051	0.146	0.318	

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/ Median	75th Percentile	90th Percentile	95th Percentile	
36	2,2-Dimethylbutane	75-83-2	0.066	Summer	Indoor	328	<MDL	2.323	39.9	9.2	66.0	0.134	0.070	<MDL	<MDL	<MDL	0.114	0.285	0.541
					Outdoor	324	<MDL	0.430	15.4	1.3	56.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.087	0.123	
			0.058	Winter	Indoor	337	<MDL	12.05	81.6	41.4	98.0	0.261	0.161	<MDL	0.067	0.153	0.272	0.507	0.744
					Outdoor	332	<MDL	0.552	47.9	4.7	80.0	0.089	0.070	<MDL	<MDL	<MDL	0.096	0.198	0.286
	2,2-Dimethylhexane	590-73-8	0.019	Summer	Indoor	328	<MDL	0.223	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	0.036	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.011	Winter	Indoor	337	<MDL	230.21	4.8	0.0	18.0	1.095	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	332	<MDL	0.092	0.9	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
38	2,2-Dimethylpentane	590-35-2	0.023	Summer	Indoor	328	<MDL	1.317	31.7	7.7	68.0	0.072	<MDL	<MDL	<MDL	<MDL	0.034	0.219	0.451
					Outdoor	324	<MDL	0.788	21.6	0.0	74.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.035	0.054	
			0.024	Winter	Indoor	337	<MDL	1.947	73.0	32.9	94.0	0.115	0.059	<MDL	<MDL	0.073	0.153	0.292	0.344
					Outdoor	332	<MDL	0.320	51.5	5.6	90.0	0.044	0.033	<MDL	<MDL	0.026	0.046	0.104	0.178
39	2,2-Dimethylpropane	463-82-1	0.029	Summer	Indoor	328	<MDL	0.716	41.5	4.5	86.0	0.041	0.031	<MDL	<MDL	<MDL	0.047	0.087	0.148
					Outdoor	324	<MDL	0.229	16.4	0.0	56.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.038	0.045	
			0.019	Winter	Indoor	337	<MDL	2.073	95.6	66.7	100.0	0.115	0.078	0.020	0.033	0.053	0.116	0.273	0.352
					Outdoor	332	<MDL	0.642	77.4	32.4	96.0	0.052	0.039	<MDL	0.020	0.031	0.056	0.110	0.158
40	2,3,4-Trimethylpentane	565-75-3	0.016	Summer	Indoor	328	<MDL	52.512	90.2	58.7	100.0	0.844	0.250	<MDL	0.092	0.164	0.316	0.717	1.402
					Outdoor	324	<MDL	1.040	97.8	81.8	100.0	0.094	0.080	0.020	0.037	0.064	0.114	0.183	0.230
			0.012	Winter	Indoor	337	<MDL	164.85	99.7	96.1	100.0	1.156	0.401	0.060	0.160	0.300	0.600	1.136	2.073
					Outdoor	332	<MDL	53.23	96.7	78.6	100.0	0.371	0.171	0.017	0.048	0.109	0.245	0.602	0.940
41	2,3-Dimethylbutane	79-29-8	0.009	Summer	Indoor	328	<MDL	4.131	63.7	9.0	94.0	0.299	0.098	<MDL	<MDL	0.106	0.236	0.834	1.978
					Outdoor	324	<MDL	1.045	82.1	29.9	100.0	0.131	0.106	<MDL	0.041	0.080	0.156	0.288	0.387
			0.012	Winter	Indoor	337	<MDL	20.24	85.5	40.9	100.0	0.574	0.325	<MDL	0.113	0.327	0.660	1.188	2.053
					Outdoor	332	<MDL	1.288	97.3	75.4	100.0	0.235	0.177	0.026	0.070	0.141	0.262	0.596	0.886
42	2,3-Dimethylpentane	565-59-3	0.028	Summer	Indoor	328	0.075	17.69	100.0	100.0	100.0	1.020	0.562	0.127	0.250	0.365	0.848	3.060	5.073
					Outdoor	324	0.041	1.815	100.0	100.0	100.0	0.337	0.298	0.082	0.137	0.243	0.404	0.678	0.844
			0.017	Winter	Indoor	337	<MDL	1711.23	99.7	96.1	100.0	9.806	1.249	0.160	0.507	0.912	1.868	3.207	7.448
					Outdoor	332	<MDL	4.064	99.4	92.3	100.0	0.636	0.487	0.066	0.169	0.351	0.759	1.686	2.348

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile	
43	2,4-Dimethylhexane	589-43-5	0.034	Summer	Indoor	328	<MDL	12.51	86.9	51.5	100.0	0.291	0.122	<MDL	0.046	0.077	0.146	0.674	1.094
					Outdoor	324	<MDL	0.336	53.1	14.0	96.0	0.050	0.044	<MDL	<MDL	0.036	0.064	0.100	0.122
			0.017	Winter	Indoor	337	<MDL	377.17	99.4	92.3	100.0	2.720	0.284	0.033	0.100	0.187	0.396	0.996	1.800
					Outdoor	332	<MDL	7.242	88.3	58.7	100.0	0.123	0.079	<MDL	0.028	0.058	0.112	0.256	0.434
	2,4-Dimethylpentane	108-08-7	0.019	Summer	Indoor	328	<MDL	5.957	99.1	92.3	100.0	0.425	0.238	0.055	0.113	0.169	0.339	1.141	2.306
					Outdoor	324	<MDL	1.427	99.1	92.3	100.0	0.157	0.135	0.034	0.059	0.105	0.184	0.331	0.421
			0.016	Winter	Indoor	337	<MDL	5.560	98.8	92.3	100.0	0.547	0.385	0.067	0.167	0.327	0.687	1.228	1.553
					Outdoor	332	<MDL	1.850	97.6	81.8	100.0	0.266	0.199	0.024	0.071	0.145	0.300	0.658	1.082
45	2,5-Dimethylhexane	592-13-2	0.015	Summer	Indoor	328	<MDL	16.52	96.3	66.7	100.0	0.266	0.114	0.019	0.046	0.073	0.152	0.526	0.846
					Outdoor	324	<MDL	0.301	75.6	22.0	100.0	0.039	0.033	<MDL	0.016	0.028	0.048	0.074	0.092
			0.017	Winter	Indoor	337	<MDL	312.39	99.7	96.1	100.0	2.108	0.225	0.033	0.087	0.147	0.292	0.693	1.180
					Outdoor	332	<MDL	7.946	80.4	39.4	98.0	0.099	0.060	<MDL	0.020	0.043	0.085	0.198	0.316
46	2-Butanol	78-92-2	0.031	Summer	Indoor	328	<MDL	0.911	15.6	0.0	48.0	0.040	<MDL	<MDL	<MDL	<MDL	0.182	0.282	
					Outdoor	324	<MDL	0.439	22.2	0.0	64.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.056	0.074	
			0.031	Winter	Indoor	337	<MDL	0.704	21.4	0.0	64.0	0.037	<MDL	<MDL	<MDL	<MDL	0.147	0.196	
					Outdoor	332	<MDL	0.213	3.9	0.0	24.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
47	2-Butenal (Crotonaldehyde)	4170-30-3	0.031	Summer	Indoor	328	<MDL	2.801	17.4	0.0	52.0	0.188	<MDL	<MDL	<MDL	<MDL	0.911	1.365	
					Outdoor	324	<MDL	2.217	36.4	0.0	82.0	0.116	<MDL	<MDL	<MDL	<MDL	0.178	0.378	0.482
			0.031	Winter	Indoor	337	<MDL	8.268	11.6	0.0	30.0	0.175	<MDL	<MDL	<MDL	<MDL	0.553	1.013	
					Outdoor	332	<MDL	0.829	4.2	0.0	18.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
48	2-Ethyl-1-Butene	760-21-4	0.040	Summer	Indoor	328	<MDL	0.391	1.5	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	0.251	1.5	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.026	Winter	Indoor	337	<MDL	0.416	10.7	1.5	32.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.048	0.136	
					Outdoor	332	<MDL	0.266	19.6	0.0	50.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.058	0.100	
49	2-Ethyltoluene	611-14-3	0.038	Summer	Indoor	328	<MDL	19.83	96.7	86.8	98.0	0.643	0.193	0.045	0.085	0.135	0.288	0.959	2.321
					Outdoor	324	<MDL	2.628	65.4	12.4	100.0	0.070	0.062	<MDL	<MDL	0.049	0.076	0.120	0.145
			0.021	Winter	Indoor	337	<MDL	67.54	99.7	96.1	100.0	1.104	0.365	0.080	0.184	0.300	0.567	1.292	2.020
					Outdoor	332	<MDL	0.782	82.5	38.9	100.0	0.094	0.073	<MDL	0.024	0.049	0.102	0.268	0.404

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Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/ Median	75th Percentile	90th Percentile	95th Percentile
50	2-Methyl-1-Butene	563-46-2	0.024	Summer	Indoor	328	<MDL	7.097	5.5	0.0	14.0	0.186	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.165
					Outdoor	324	<MDL	0.880	91.7	51.5	100.0	0.108	0.085	<MDL	0.035	0.068	0.124	0.206	0.300
			0.017	Winter	Indoor	337	<MDL	5.320	7.7	0.0	28.0	0.078	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.100
					Outdoor	332	<MDL	1.066	92.2	58.7	100.0	0.119	0.091	<MDL	0.034	0.060	0.131	0.266	0.510
	2-Methyl-2-Butene	513-35-9	0.022	Summer	Indoor	328	<MDL	11.52	56.4	8.7	100.0	0.538	0.120	<MDL	<MDL	0.059	0.233	1.451	3.711
					Outdoor	324	<MDL	1.374	93.5	63.9	100.0	0.134	0.096	<MDL	0.037	0.070	0.141	0.268	0.408
			0.017	Winter	Indoor	337	<MDL	9.468	69.7	12.5	98.0	0.507	0.198	<MDL	<MDL	0.133	0.508	1.100	1.960
					Outdoor	332	<MDL	1.422	89.5	49.3	100.0	0.151	0.105	<MDL	0.033	0.066	0.158	0.356	0.746
52	2-Methylbutanal(Isovaleraldehyde)	96-17-3	0.053	Summer	Indoor	328	<MDL	4.131	99.1	88.7	100.0	0.864	0.778	0.308	0.483	0.741	1.101	1.639	1.969
					Outdoor	324	0.078	3.095	100.0	100.0	100.0	0.226	0.211	0.104	0.146	0.184	0.230	0.323	0.404
			0.053	Winter	Indoor	337	<MDL	7.788	98.8	85.2	100.0	0.838	0.729	0.292	0.460	0.647	0.960	1.492	1.893
					Outdoor	332	<MDL	1.384	89.5	33.3	100.0	0.107	0.101	<MDL	0.066	0.086	0.122	0.174	0.200
53	2-Methylbutane	78-78-4	0.049	Summer	Indoor	328	<MDL	88.63	97.9	75.4	100.0	11.46	7.975	1.307	3.222	6.718	13.12	28.16	39.22
					Outdoor	324	0.294	22.47	100.0	100.0	100.0	2.745	2.410	0.630	1.147	1.938	3.207	5.520	7.523
			0.049	Winter	Indoor	337	<MDL	123.09	97.6	75.4	100.0	14.41	11.27	2.307	5.876	10.45	18.05	31.44	40.28
					Outdoor	332	0.202	21.92	100.0	100.0	100.0	4.002	3.097	0.549	1.395	2.339	4.826	10.05	13.68
54	2-Methylfuran	534-22-5	0.031	Summer	Indoor	328	<MDL	9.963	93.3	49.3	100.0	1.367	1.039	<MDL	0.536	0.951	1.782	2.795	3.753
					Outdoor	324	<MDL	3.606	67.0	11.5	94.0	0.182	0.101	<MDL	<MDL	0.114	0.202	0.394	0.580
			0.031	Winter	Indoor	337	<MDL	10.92	98.5	92.3	100.0	1.211	0.895	0.280	0.500	0.760	1.300	2.216	4.513
					Outdoor	332	<MDL	1.748	63.3	6.4	100.0	0.103	0.080	<MDL	<MDL	0.059	0.119	0.288	0.404
55	2-Methylheptane	592-27-8	0.040	Summer	Indoor	328	<MDL	28.97	78.4	33.8	98.0	0.612	0.129	<MDL	0.054	0.122	0.254	1.364	1.996
					Outdoor	324	<MDL	1.195	86.1	40.9	100.0	0.095	0.088	<MDL	0.051	0.072	0.112	0.170	0.194
			0.015	Winter	Indoor	337	<MDL	42.50	96.7	78.6	100.0	0.891	0.369	0.053	0.167	0.273	0.636	1.128	2.620
					Outdoor	332	<MDL	0.918	97.3	75.4	100.0	0.172	0.134	0.021	0.058	0.112	0.204	0.456	0.622
56	2-Methylhexane	591-76-4	0.011	Summer	Indoor	328	0.070	13.57	100.0	100.0	100.0	1.250	0.628	0.145	0.264	0.429	0.987	3.936	5.318
					Outdoor	324	<MDL	3.254	99.1	88.7	100.0	0.302	0.270	0.071	0.130	0.209	0.331	0.556	0.694
			0.011	Winter	Indoor	337	0.113	1943.480	100.0	100.0	100.0	16.15	1.537	0.213	0.627	1.148	2.408	4.612	7.510
					Outdoor	332	0.020	3.008	100.0	100.0	100.0	0.495	0.382	0.062	0.151	0.308	0.558	1.316	1.774

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile
57	2-Methylpentane	107-83-5	0.067	Summer	Indoor	328	<MDL	29.35	98.2	78.6	100.0	2.181	1.175	0.281	0.519	0.822	1.772	5.962	8.924
					Outdoor	324	<MDL	7.529	99.7	96.1	100.0	0.712	0.608	0.161	0.256	0.462	0.769	1.384	2.138
			0.065	Winter	Indoor	337	<MDL	99.95	97.3	75.4	100.0	3.095	1.886	0.280	0.728	1.840	3.387	6.653	10.45
					Outdoor	332	<MDL	5.528	98.2	85.2	100.0	1.055	0.798	0.130	0.337	0.649	1.292	2.810	3.522
	2-Methyl-Propanal	78-84-2	0.055	Summer	Indoor	328	<MDL	21.86	99.4	92.3	100.0	2.963	2.633	0.737	1.582	2.266	3.535	5.542	7.227
					Outdoor	324	0.140	8.018	100.0	100.0	100.0	0.910	0.847	0.298	0.493	0.722	1.035	1.566	2.006
			0.055	Winter	Indoor	337	<MDL	16.12	99.4	92.3	100.0	1.615	1.349	0.293	0.720	1.167	1.960	3.100	3.760
					Outdoor	332	<MDL	3.793	93.1	49.3	100.0	0.234	0.206	<MDL	0.098	0.152	0.263	0.484	0.570
59	2-Pentanone	107-87-9	0.020	Summer	Indoor	328	<MDL	6.257	57.3	13.6	84.0	0.626	0.144	<MDL	<MDL	0.475	0.917	1.549	1.982
					Outdoor	324	<MDL	10.39	51.2	4.4	92.0	0.274	0.121	<MDL	<MDL	0.138	0.374	0.580	0.764
			0.020	Winter	Indoor	337	<MDL	3.920	21.4	2.7	50.0	0.231	<MDL	<MDL	<MDL	<MDL	1.007	1.340	
					Outdoor	332	<MDL	1.542	10.2	0.0	34.0	0.030	<MDL	<MDL	<MDL	<MDL	0.073	0.219	
60	3,6-Dimethyloctane	15869-94-0	0.010	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.012	Winter	Indoor	337	<MDL	0.192	1.2	0.0	8.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	0.088	1.8	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
61	3-Ethyltoluene	620-14-4	0.044	Summer	Indoor	328	0.048	33.30	100.0	100.0	100.0	1.334	0.468	0.105	0.191	0.331	0.760	2.535	6.119
					Outdoor	324	<MDL	5.016	94.1	61.3	100.0	0.180	0.161	<MDL	0.082	0.129	0.206	0.331	0.390
			0.020	Winter	Indoor	337	0.087	106.17	100.0	100.0	100.0	2.163	0.869	0.187	0.420	0.733	1.356	3.107	4.484
					Outdoor	332	<MDL	2.058	93.7	63.9	100.0	0.253	0.193	<MDL	0.060	0.125	0.265	0.722	1.140
62	3-Methyl-1-Butene	563-45-1	0.012	Summer	Indoor	328	<MDL	1.261	68.9	9.9	100.0	0.064	0.039	<MDL	<MDL	0.030	0.068	0.152	0.328
					Outdoor	324	<MDL	0.196	85.2	31.6	100.0	0.034	0.030	<MDL	0.014	0.023	0.041	0.071	0.089
			0.016	Winter	Indoor	337	<MDL	16.44	64.4	8.7	100.0	0.119	0.048	<MDL	<MDL	0.040	0.093	0.160	0.287
					Outdoor	332	<MDL	0.262	69.6	20.5	100.0	0.039	0.032	<MDL	<MDL	0.022	0.044	0.090	0.150
63	3-Methyl-1-Pentene	760-20-3	0.025	Summer	Indoor	328	<MDL	0.233	6.4	0.0	20.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.049
					Outdoor	324	<MDL	0.055	1.2	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.022	Winter	Indoor	337	<MDL	0.228	8.3	0.0	30.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.033
					Outdoor	332	<MDL	0.076	4.2	0.0	18.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL

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Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/ Median	75th Percentile	90th Percentile	95th Percentile
64	3-Methylheptane	589-81-1	0.013	Summer	Indoor	328	<MDL	27.11	83.8	42.0	96.0	0.473	0.096	<MDL	0.047	0.089	0.194	1.108	1.871
					Outdoor	324	<MDL	0.803	97.8	81.8	100.0	0.070	0.062	0.016	0.029	0.050	0.083	0.138	0.170
			0.012	Winter	Indoor	337	<MDL	25.05	99.7	96.1	100.0	0.656	0.300	0.053	0.120	0.227	0.520	0.960	1.800
					Outdoor	332	<MDL	0.850	96.4	75.4	100.0	0.145	0.109	0.014	0.044	0.088	0.161	0.384	0.548
	3-Methylhexane	589-34-4	0.014	Summer	Indoor	328	<MDL	20.85	98.8	85.2	100.0	1.540	0.792	0.186	0.336	0.563	1.203	4.629	5.854
					Outdoor	324	<MDL	3.370	95.7	61.3	100.0	0.343	0.306	0.054	0.149	0.248	0.388	0.665	0.763
			0.012	Winter	Indoor	337	<MDL	2416.07	99.1	92.3	100.0	22.76	1.939	0.247	0.753	1.424	2.940	5.847	12.31
					Outdoor	332	<MDL	3.562	96.7	69.5	100.0	0.583	0.439	0.058	0.170	0.349	0.669	1.528	2.208
66	3-Methylpentane	96-14-0	0.053	Summer	Indoor	328	0.114	17.04	100.0	100.0	100.0	1.370	0.746	0.188	0.330	0.528	1.072	4.081	5.653
					Outdoor	324	0.058	7.885	100.0	100.0	100.0	0.510	0.443	0.127	0.202	0.350	0.549	0.935	1.326
			0.048	Winter	Indoor	337	0.080	48.41	100.0	100.0	100.0	1.878	1.218	0.207	0.507	1.148	2.173	4.027	6.100
					Outdoor	332	<MDL	3.956	98.2	88.7	100.0	0.720	0.557	0.103	0.253	0.454	0.845	1.870	2.300
67	4-Ethyltoluene	622-96-8	0.027	Summer	Indoor	328	<MDL	15.70	98.5	92.3	100.0	0.655	0.236	0.052	0.099	0.165	0.417	1.203	2.948
					Outdoor	324	<MDL	2.424	88.9	38.9	100.0	0.090	0.080	<MDL	0.040	0.064	0.104	0.167	0.195
			0.012	Winter	Indoor	337	<MDL	55.65	99.7	96.1	100.0	1.107	0.440	0.087	0.216	0.380	0.693	1.652	2.156
					Outdoor	332	<MDL	1.022	92.8	58.7	100.0	0.122	0.093	<MDL	0.030	0.061	0.126	0.326	0.534
68	4-Methyl-1-Pentene	691-37-2	0.029	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.022	Winter	Indoor	337	<MDL	0.184	1.8	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
69	4-Methylheptane	589-53-7	0.008	Summer	Indoor	328	<MDL	11.15	83.2	32.4	96.0	0.230	0.063	<MDL	0.029	0.055	0.136	0.529	0.743
					Outdoor	324	<MDL	0.357	85.5	29.9	100.0	0.028	0.025	<MDL	0.012	0.021	0.035	0.058	0.067
			0.016	Winter	Indoor	337	<MDL	17.81	97.0	66.7	100.0	0.339	0.157	0.033	0.073	0.128	0.253	0.428	0.948
					Outdoor	332	<MDL	0.366	78.0	38.0	96.0	0.060	0.044	<MDL	0.018	0.038	0.068	0.160	0.230
70	Acetaldehyde	75-07-0	0.049	Summer	Indoor	328	4.495	113.47	100.0	100.0	100.0	22.16	19.71	6.275	11.89	17.70	29.59	40.72	54.36
					Outdoor	324	1.901	55.740	100.0	100.0	100.0	8.464	7.998	3.232	5.217	7.148	10.171	13.965	17.555
			0.049	Winter	Indoor	337	2.967	188.07	100.0	100.0	100.0	24.81	23.02	9.28	13.81	18.79	28.73	43.91	50.55
					Outdoor	332	0.904	21.65	100.0	100.0	100.0	4.073	3.869	1.500	2.271	3.337	4.879	7.698	9.270

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71	Acetone	67-64-1	0.064	Summer	Indoor	328	9.484	1893.23	100.0	100.0	100.0	124.86	98.14	16.74	37.51	69.19	145.46	260.23	444.76
					Outdoor	324	4.266	162.36	100.0	100.0	100.0	10.438	10.03	5.570	7.605	9.258	11.34	14.35	16.25
			0.064	Winter	Indoor	337	5.693	1474.25	100.0	100.0	100.0	140.04	116.00	26.08	46.39	75.41	128.85	321.99	466.03
					Outdoor	332	1.450	99.67	100.0	100.0	100.0	4.433	4.092	1.914	2.796	3.642	4.925	6.490	8.670
	Acetonitrile	75-05-08	0.047	Summer	Indoor	306	<MDL	3.840	98.4	85.2	100.0	0.471	0.417	0.185	0.259	0.344	0.536	0.985	1.361
					Outdoor	324	<MDL	2.667	99.7	96.1	100.0	0.482	0.413	0.195	0.278	0.358	0.468	0.935	1.208
			0.047	Winter	Indoor	303	<MDL	4.867	96.7	75.4	100.0	0.326	0.272	0.113	0.193	0.240	0.327	0.473	0.652
					Outdoor	332	<MDL	0.794	99.4	96.1	100.0	0.214	0.206	0.092	0.133	0.186	0.253	0.354	0.486
73	Acetylene	74-86-2	0.017	Summer	Indoor	63	0.131	4.176	100.0	100.0	100.0	0.794	0.608	0.173	0.326	0.472	0.835	1.303	2.925
					Outdoor	188	0.114	1.852	100.0	100.0	100.0	0.482	0.425	0.161	0.266	0.365	0.535	0.820	1.350
			0.017	Winter	Indoor	162	0.283	1045.18	100.0	100.0	100.0	8.681	2.651	0.660	1.212	1.780	3.296	5.626	28.73
					Outdoor	327	0.301	11.04	100.0	100.0	100.0	1.399	1.227	0.413	0.634	1.010	1.546	3.232	4.095
74	Acrolein (2-Propenal)	107-02-8	0.109	Summer	Indoor	328	<MDL	26.37	99.7	96.1	100.0	9.470	8.690	3.388	5.596	8.132	11.91	17.83	20.95
					Outdoor	324	0.521	30.73	100.0	100.0	100.0	2.905	2.685	1.025	1.623	2.194	3.415	5.007	7.357
			0.109	Winter	Indoor	337	<MDL	39.09	98.5	85.2	100.0	7.480	6.859	3.047	4.667	6.248	8.700	12.22	15.57
					Outdoor	332	0.184	4.950	100.0	100.0	100.0	1.154	1.116	0.420	0.659	0.962	1.457	2.070	2.452
75	Acrylonitrile (2-Propennitrile)	107-13-1	0.060	Summer	Indoor	328	<MDL	5.397	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	0.291	4.0	0.0	26.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.060	Winter	Indoor	337	<MDL	0.267	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	0.174	0.9	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
76	a-Pinene	80-56-8	0.067	Summer	Indoor	328	0.224	93.88	100.0	100.0	100.0	9.304	4.470	0.635	1.467	3.533	12.30	27.63	37.22
					Outdoor	324	<MDL	8.325	88.0	40.9	100.0	0.280	0.224	<MDL	0.100	0.183	0.322	0.522	0.745
			0.059	Winter	Indoor	337	<MDL	72.12	99.4	92.3	100.0	8.257	4.745	0.880	1.933	4.616	10.25	16.08	25.91
					Outdoor	332	<MDL	2.818	47.9	1.0	98.0	0.135	0.103	<MDL	<MDL	<MDL	0.145	0.350	0.554
77	Benzaldehyde	100-52-7	0.044	Summer	Indoor	328	0.321	13.99	100.0	100.0	100.0	3.643	2.923	0.987	1.688	2.640	4.373	8.753	10.56
					Outdoor	324	0.080	7.484	100.0	100.0	100.0	0.483	0.460	0.162	0.319	0.406	0.528	0.723	0.899
			0.044	Winter	Indoor	337	<MDL	36.74	99.7	96.1	100.0	2.091	1.813	0.684	1.140	1.860	2.604	3.592	4.120
					Outdoor	332	<MDL	1.662	90.7	44.9	100.0	0.165	0.149	<MDL	0.070	0.130	0.204	0.292	0.356

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78	Benzene	71-43-2	0.046	Summer	Indoor	328	0.155	7.189	100.0	100.0	100.0	1.037	0.785	0.272	0.409	0.630	1.061	2.516	4.120
					Outdoor	324	0.102	2.840	100.0	100.0	100.0	0.562	0.479	0.162	0.239	0.386	0.665	1.116	1.699
			0.023	Winter	Indoor	337	0.408	9.660	100.0	100.0	100.0	1.682	1.432	0.507	0.827	1.200	2.152	3.047	4.032
					Outdoor	332	0.272	3.900	100.0	100.0	100.0	0.949	0.872	0.352	0.521	0.745	1.055	2.116	2.704
	Benzyl Chloride	100-44-7	0.050	Summer	Indoor	328	<MDL	0.067	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.033	Winter	Indoor	337	<MDL	<MDL	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
80	b-Pinene	127-91-3	0.084	Summer	Indoor	328	<MDL	20.91	93.3	58.7	100.0	2.214	1.280	<MDL	0.432	1.170	2.991	5.479	6.471
					Outdoor	324	<MDL	1.166	45.1	3.3	86.0	0.100	<MDL	<MDL	<MDL	<MDL	0.139	0.216	0.264
			0.062	Winter	Indoor	337	<MDL	22.61	91.1	40.9	100.0	2.633	1.533	<MDL	0.567	1.484	3.264	6.420	7.852
					Outdoor	332	<MDL	2.108	5.7	0.0	32.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.074
81	Bromodichloromethane	75-27-4	0.217	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.054	Winter	Indoor	337	<MDL	0.080	2.7	0.0	8.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
82	Bromoform	75-25-2	0.095	Summer	Indoor	328	<MDL	0.184	0.6	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.057	Winter	Indoor	337	<MDL	0.280	4.2	1.9	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	0.112	2.1	2.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
83	Bromomethane	74-83-9	0.111	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	0.201	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.043	Winter	Indoor	337	<MDL	0.127	92.9	66.7	100.0	0.053	0.052	<MDL	0.047	0.053	0.056	0.060	0.067
					Outdoor	332	<MDL	0.076	83.1	47.1	100.0	0.049	0.049	<MDL	0.044	0.050	0.052	0.058	0.062
84	Bromotrichloromethane	75-62-7	0.092	Summer	Indoor	318	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			n/a	Winter	Indoor	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
					Outdoor	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile
85	Butane	106-97-8	0.092	Summer	Indoor	328	1.068	175.82	100.0	100.0	100.0	13.63	8.648	1.842	3.421	6.316	12.59	34.38	51.55
					Outdoor	324	0.568	19.64	100.0	100.0	100.0	3.728	3.340	0.956	1.632	2.683	4.393	7.519	8.811
			0.092	Winter	Indoor	337	0.156	357.55	100.0	100.0	100.0	27.06	17.54	3.180	7.260	12.41	28.06	57.37	105.78
					Outdoor	332	0.544	110.46	100.0	100.0	100.0	8.655	6.578	1.022	2.857	5.290	10.70	23.61	27.27
	Butylacetate	123-86-4	0.029	Summer	Indoor	328	0.053	99.46	100.0	100.0	100.0	9.306	5.365	0.637	2.185	4.854	9.997	21.17	34.36
					Outdoor	324	<MDL	7.472	96.9	72.4	100.0	0.326	0.237	0.038	0.096	0.187	0.341	0.663	0.837
			0.029	Winter	Indoor	337	<MDL	102.47	97.6	78.6	100.0	3.357	1.630	0.140	0.553	1.293	3.067	7.793	11.42
					Outdoor	332	<MDL	17.69	52.4	6.5	96.0	0.409	0.112	<MDL	<MDL	0.034	0.211	0.902	1.868
87	Butylaldehyde (Butanal)	123-72-8	0.038	Summer	Indoor	328	<MDL	10.16	99.1	88.7	100.0	2.827	2.562	1.024	1.628	2.317	3.690	5.281	6.773
					Outdoor	324	<MDL	10.43	98.2	81.8	100.0	1.041	0.970	0.403	0.611	0.830	1.186	1.802	2.251
			0.038	Winter	Indoor	337	<MDL	7.847	98.2	92.3	100.0	1.922	1.800	0.773	1.193	1.640	2.347	3.267	3.867
					Outdoor	332	<MDL	3.304	93.7	56.3	100.0	0.377	0.336	<MDL	0.194	0.277	0.417	0.699	1.108
88	c-1,2-Dichloroethene	156-59-2	0.045	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.022	Winter	Indoor	337	<MDL	2.860	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
89	c-1,2-Dimethylcyclohexane	2207-01-04	0.026	Summer	Indoor	328	<MDL	10.44	8.5	0.0	26.0	0.065	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.084
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.017	Winter	Indoor	337	<MDL	3.027	28.2	7.0	52.0	0.080	<MDL	<MDL	<MDL	<MDL	0.044	0.156	0.392
					Outdoor	332	<MDL	0.092	14.8	0.0	40.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.030	0.056
90	c-1,3-Dichloropropene	542-75-6	0.017	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.011	Winter	Indoor	337	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
91	c-1,3-Dimethylcyclohexane	638-04-0	0.032	Summer	Indoor	328	<MDL	35.98	77.7	29.9	100.0	0.493	0.092	<MDL	0.033	0.063	0.140	0.725	1.767
					Outdoor	324	<MDL	0.616	42.9	4.3	94.0	0.037	0.034	<MDL	<MDL	<MDL	0.042	0.068	0.081
			0.012	Winter	Indoor	337	<MDL	22.23	99.7	96.1	100.0	0.594	0.210	0.040	0.100	0.167	0.324	0.672	1.576
					Outdoor	332	<MDL	0.456	92.2	63.9	100.0	0.083	0.061	<MDL	0.026	0.054	0.095	0.220	0.296

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile		
92	c-1,4/t-1,3-Dimethylcyclohexane	624-29-03/591-21-9	0.012	Summer	Indoor	328	<MDL	15.65	69.2	16.7	96.0	0.194	0.028	<MDL	<MDL	0.025	0.060	0.380	0.512	
					Outdoor	324	<MDL	0.191	32.1	0.0	82.0	<MDL	<MDL	<MDL	<MDL	0.015	0.025	0.034		
		0.017		Winter	Indoor	337	<MDL	6.340	88.1	40.9	100.0	0.200	0.077	<MDL	0.033	0.067	0.127	0.268	0.644	
					Outdoor	332	<MDL	0.190	51.8	2.2	86.0	0.029	0.021	<MDL	<MDL	0.018	0.032	0.080	0.112	
	c-2-Butene	590-18-1	0.023	Summer	Indoor	328	<MDL	4.973	89.6	44.9	100.0	0.197	0.076	<MDL	0.032	0.051	0.103	0.289	0.651	
					Outdoor	324	<MDL	0.384	68.2	19.1	100.0	0.053	0.044	<MDL	<MDL	0.035	0.062	0.111	0.147	
		0.018		Winter	Indoor	337	<MDL	3.040	98.2	85.2	100.0	0.240	0.135	0.020	0.047	0.096	0.224	0.473	0.908	
					Outdoor	332	<MDL	0.946	81.6	33.3	100.0	0.086	0.066	<MDL	0.022	0.042	0.101	0.212	0.350	
	c-2-Heptene	6443-92-1	0.042	Summer	Indoor	328	<MDL	0.087	0.9	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	324	<MDL	1.302	3.1	0.0	14.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
		0.017		Winter	Indoor	337	<MDL	0.568	4.5	0.0	20.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	332	<MDL	0.094	1.5	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
	c-2-Hexene	7688-21-3	0.038	Summer	Indoor	328	<MDL	0.615	15.6	6.8	26.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.119	0.272		
					Outdoor	324	<MDL	0.143	4.3	1.7	18.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
		0.019		Winter	Indoor	337	<MDL	0.672	43.0	8.4	80.0	0.035	<MDL	<MDL	<MDL	<MDL	0.040	0.088	0.120	
					Outdoor	332	<MDL	0.130	20.2	0.0	64.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.034	0.066		
	c-2-Pentene	627-20-3	0.028	Summer	Indoor	328	<MDL	4.132	33.8	4.8	76.0	0.199	<MDL	<MDL	<MDL	<MDL	0.091	0.591	1.326	
					Outdoor	324	<MDL	0.637	59.3	16.5	98.0	0.063	0.045	<MDL	<MDL	<MDL	0.036	0.069	0.126	0.194
		0.022		Winter	Indoor	337	<MDL	3.216	43.0	8.1	86.0	0.167	0.028	<MDL	<MDL	<MDL	0.168	0.420	0.693	
					Outdoor	332	<MDL	0.600	59.0	10.2	94.0	0.062	0.044	<MDL	<MDL	<MDL	0.028	0.069	0.142	0.286
	c-3-Heptene	7642-10-6	0.047	Summer	Indoor	328	<MDL	0.426	3.7	0.0	18.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	324	<MDL	0.119	1.9	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
		0.047		Winter	Indoor	337	<MDL	0.200	2.4	0.0	16.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	332	<MDL	0.218	1.5	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
	c-3-Methyl-2-Pentene	922-62-3	0.034	Summer	Indoor	328	<MDL	1.983	6.4	1.8	16.0	0.063	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.624	
					Outdoor	324	<MDL	0.304	17.0	1.4	48.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.052	0.074		
		0.017		Winter	Indoor	337	<MDL	1.944	7.4	1.7	20.0	0.058	<MDL	<MDL	<MDL	<MDL	<MDL	0.453		
					Outdoor	332	<MDL	0.350	30.7	0.0	80.0	0.025	<MDL	<MDL	<MDL	<MDL	0.024	0.080	0.168	

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/ Median	75th Percentile	90th Percentile	95th Percentile
99	c-4-Methyl-2-Pentene	691-38-3	0.044	Summer	Indoor	328	<MDL	0.609	15.6	3.2	30.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.116	0.223	
					Outdoor	324	<MDL	0.160	6.2	1.6	24.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.047	
			0.018	Winter	Indoor	337	<MDL	1.648	47.5	8.0	90.0	0.049	0.018	<MDL	<MDL	<MDL	0.060	0.113	0.160
					Outdoor	332	<MDL	0.136	48.5	0.0	100.0	0.026	0.021	<MDL	<MDL	<MDL	0.042	0.070	0.094
	Camphene	79-92-5	0.096	Summer	Indoor	328	<MDL	7.704	95.1	61.3	100.0	0.597	0.420	0.099	0.186	0.358	0.838	1.309	1.647
					Outdoor	324	<MDL	0.776	26.2	0.0	74.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.098	0.130	0.159
			0.076	Winter	Indoor	337	<MDL	3.920	99.1	88.7	100.0	0.695	0.527	0.147	0.268	0.492	0.867	1.293	1.907
					Outdoor	332	<MDL	0.478	15.7	0.0	64.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.100	0.146	
101	Carbon Disulfide	75-15-0	0.042	Summer	Indoor	328	0.147	2.375	100.0	100.0	100.0	0.318	0.303	0.187	0.228	0.284	0.363	0.467	0.553
					Outdoor	324	0.080	5.802	100.0	100.0	100.0	0.180	0.160	0.094	0.119	0.141	0.164	0.207	0.253
			0.042	Winter	Indoor	337	0.080	4.308	100.0	100.0	100.0	0.397	0.352	0.160	0.233	0.293	0.427	0.684	0.840
					Outdoor	332	0.060	1.607	100.0	100.0	100.0	0.157	0.148	0.081	0.104	0.122	0.152	0.228	0.338
102	Carbon tetrachloride	56-23-5	0.070	Summer	Indoor	328	0.408	1.355	100.0	100.0	100.0	0.550	0.543	0.451	0.489	0.523	0.565	0.648	0.793
					Outdoor	324	0.318	0.604	100.0	100.0	100.0	0.470	0.468	0.368	0.412	0.473	0.523	0.563	0.577
			0.012	Winter	Indoor	337	0.240	1.673	100.0	100.0	100.0	0.521	0.512	0.376	0.452	0.512	0.547	0.607	0.707
					Outdoor	332	0.242	0.706	100.0	100.0	100.0	0.469	0.466	0.362	0.424	0.452	0.519	0.574	0.592
103	Chlorobenzene	108-90-7	0.050	Summer	Indoor	328	<MDL	0.098	1.5	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.024	Winter	Indoor	337	<MDL	0.916	0.9	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	0.072	0.9	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
104	Chloroethane	75-00-3	0.062	Summer	Indoor	328	<MDL	0.105	2.4	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	0.071	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.028	Winter	Indoor	337	<MDL	0.493	24.9	5.6	52.0	0.029	<MDL	<MDL	<MDL	<MDL	<MDL	0.044	0.053
					Outdoor	332	<MDL	0.258	3.3	0.0	14.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
105	Chloroform	67-66-3	0.068	Summer	Indoor	328	0.083	8.045	100.0	100.0	100.0	1.348	0.965	0.166	0.435	0.915	1.853	3.112	4.214
					Outdoor	324	<MDL	0.919	87.7	42.9	100.0	0.094	0.093	<MDL	0.074	0.084	0.101	0.126	0.144
			0.020	Winter	Indoor	337	0.044	14.29	100.0	100.0	100.0	1.158	0.735	0.180	0.407	0.647	1.007	2.200	3.627
					Outdoor	332	0.054	0.294	100.0	100.0	100.0	0.084	0.083	0.060	0.070	0.078	0.088	0.110	0.138

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Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile	
106	Chloromethane	74-87-3	0.048	Summer	Indoor	328	1.020	2.627	100.0	100.0	100.0	1.317	1.308	1.099	1.177	1.272	1.402	1.543	1.702	
					Outdoor	324	0.946	1.509	100.0	100.0	100.0	1.208	1.207	1.084	1.149	1.197	1.268	1.325	1.356	
			0.025	Winter	Indoor	337	1.113	8.624	100.0	100.0	100.0	1.476	1.447	1.188	1.287	1.373	1.516	1.692	1.912	
					Outdoor	332	0.996	1.380	100.0	100.0	100.0	1.202	1.201	1.090	1.154	1.210	1.250	1.286	1.308	
		110-82-7	0.028	Summer	Indoor	328	<MDL	5.006	99.7	96.1	100.0	0.437	0.288	0.077	0.137	0.235	0.475	1.001	1.437	
					Outdoor	324	<MDL	1.410	97.8	78.6	100.0	0.110	0.101	0.035	0.057	0.084	0.123	0.184	0.238	
			0.025	Winter	Indoor	337	<MDL	11.65	99.4	96.1	100.0	0.675	0.549	0.133	0.324	0.527	0.860	1.224	1.448	
					Outdoor	332	<MDL	1.302	97.3	81.8	100.0	0.267	0.199	0.042	0.098	0.165	0.345	0.654	0.880	
108	Cyclohexanone	108-94-1	0.042	Summer	Indoor	328	<MDL	3.285	97.3	90.4	98.0	0.666	0.391	0.068	0.194	0.402	0.945	1.714	2.133	
					Outdoor	324	<MDL	0.888	42.9	5.5	92.0	0.048	<MDL	<MDL	<MDL	<MDL	0.060	0.082	0.105	
		108-94-1	0.042	Winter	Indoor	337	<MDL	33.80	93.2	57.1	98.0	0.670	0.254	<MDL	<MDL	<MDL	<MDL	0.567	1.260	1.796
					Outdoor	332	<MDL	0.422	5.1	0.0	24.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.042		
109	Cyclohexene	110-83-8	0.036	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
		110-83-8	0.025	Winter	Indoor	337	<MDL	1.188	3.3	0.0	16.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	332	<MDL	0.112	0.9	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
110	Cyclopentane	287-92-3	0.013	Summer	Indoor	328	<MDL	5.417	97.9	75.4	100.0	0.626	0.325	0.073	0.132	0.207	0.729	1.951	2.843	
					Outdoor	324	0.016	0.927	100.0	100.0	100.0	0.135	0.123	0.040	0.065	0.101	0.165	0.253	0.331	
		287-92-3	0.010	Winter	Indoor	337	<MDL	7.287	99.7	96.1	100.0	0.773	0.494	0.107	0.220	0.427	0.887	1.953	2.380	
					Outdoor	332	<MDL	1.292	99.7	96.1	100.0	0.236	0.176	0.032	0.076	0.132	0.282	0.656	0.906	
111	Cyclopentanone	120-92-3	0.020	Summer	Indoor	328	<MDL	0.391	2.1	0.0	14.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	0.199	9.3	0.0	44.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.066	
		120-92-3	0.020	Winter	Indoor	337	<MDL	0.287	3.6	0.0	16.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	332	<MDL	0.061	1.2	0.0	8.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
112	Cyclopentene	142-29-0	0.045	Summer	Indoor	328	<MDL	1.361	24.1	8.7	50.0	0.076	<MDL	<MDL	<MDL	<MDL	<MDL	0.213	0.379	
					Outdoor	324	<MDL	0.187	7.7	1.6	26.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.061	
		142-29-0	0.032	Winter	Indoor	337	<MDL	1.316	55.8	18.3	94.0	0.084	0.048	<MDL	<MDL	<MDL	0.036	0.093	0.160	0.252
					Outdoor	332	<MDL	0.236	20.8	0.0	62.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.058	0.116	

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/ Median	75th Percentile	90th Percentile	95th Percentile	
113	Decane	124-18-5	0.015	Summer	Indoor	328	<MDL	223.71	98.5	92.3	100.0	7.511	0.999	0.105	0.334	0.647	1.482	13.51	43.06	
					Outdoor	324	<MDL	37.81	99.7	96.1	100.0	0.254	0.134	0.030	0.058	0.096	0.178	0.268	0.331	
			0.017	Winter	Indoor	337	<MDL	830.70	99.4	92.3	100.0	12.61	2.053	0.333	0.740	1.447	3.753	10.75	24.28	
					Outdoor	332	<MDL	1.524	97.3	75.4	100.0	0.250	0.199	0.026	0.068	0.122	0.262	0.788	1.040	
	Dibromochloromethane	124-48-1	0.055	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.039	Winter	Indoor	337	<MDL	0.272	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
115	Dibromomethane	74-95-3	0.092	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.048	Winter	Indoor	337	<MDL	0.093	68.8	41.3	78.0	0.059	0.057	<MDL	<MDL	<MDL	0.067	0.073	0.073	0.073
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
116	Dichloromethane	75-09-02	0.053	Summer	Indoor	328	0.247	7.130	100.0	100.0	100.0	0.799	0.627	0.270	0.349	0.464	0.925	1.704	2.324	
					Outdoor	324	0.150	1.909	100.0	100.0	100.0	0.361	0.346	0.211	0.249	0.306	0.377	0.492	0.675	
			0.012	Winter	Indoor	337	0.272	59.46	100.0	100.0	100.0	2.006	0.940	0.320	0.427	0.607	1.428	3.824	7.620	
					Outdoor	332	0.198	87.30	100.0	100.0	100.0	0.775	0.496	0.230	0.273	0.355	0.528	0.978	1.570	
117	Dodecane	112-40-3	0.025	Summer	Indoor	328	0.057	40.18	100.0	100.0	100.0	1.744	0.687	0.129	0.315	0.602	1.039	3.231	8.233	
					Outdoor	324	<MDL	3.211	98.8	85.2	100.0	0.121	0.106	0.033	0.056	0.081	0.125	0.189	0.262	
			0.025	Winter	Indoor	337	<MDL	195.67	99.7	96.1	100.0	4.507	1.679	0.560	0.940	1.467	2.333	3.432	4.713	
					Outdoor	332	<MDL	10.75	84.6	31.6	100.0	0.148	0.096	<MDL	0.034	0.066	0.123	0.244	0.396	
118	Ethane	74-84-0	0.025	Summer	Indoor	328	1.926	531.54	100.0	100.0	100.0	23.06	10.92	2.896	4.515	8.326	19.27	47.34	99.29	
					Outdoor	324	1.234	11.63	100.0	100.0	100.0	3.584	3.488	1.799	2.540	3.251	4.229	5.636	6.682	
			0.025	Winter	Indoor	331	1.215	1465.88	100.0	100.0	100.0	78.52	38.67	8.654	17.68	33.76	59.13	112.01	271.74	
					Outdoor	332	2.819	305.83	100.0	100.0	100.0	12.70	10.56	3.284	5.797	8.364	15.15	24.39	36.49	
119	Ethanol	64-17-5	0.057	Summer	Indoor	327	3.958	4513.29	100.0	100.0	100.0	560.42	349.12	39.52	135.08	288.39	699.13	1252.55	2076.46	
					Outdoor	324	1.162	217.13	100.0	100.0	100.0	6.972	6.163	2.164	3.533	5.011	7.266	10.02	12.71	
			0.057	Winter	Indoor	337	<MDL	22755.95	99.7	96.1	100.0	1047.68	764.26	145.00	389.57	678.61	1292.23	2153.91	3045.07	
					Outdoor	332	<MDL	647.47	99.7	96.1	100.0	7.477	5.409	1.186	2.374	4.035	6.970	12.54	18.16	

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile
120	Ethylacetate	141-78-6	0.029	Summer	Indoor	328	0.065	1863.83	100.0	100.0	100.0	22.01	8.625	0.628	2.411	6.717	16.78	40.02	69.17
					Outdoor	324	<MDL	207.71	97.8	78.6	100.0	1.287	0.244	0.049	0.087	0.129	0.185	0.304	0.511
			0.029	Winter	Indoor	337	<MDL	107.95	99.7	96.1	100.0	8.177	5.714	1.053	2.467	5.387	10.45	18.85	22.83
					Outdoor	332	<MDL	19.00	91.3	44.9	100.0	0.281	0.163	<MDL	0.052	0.088	0.186	0.462	0.752
	Ethylbenzene	100-41-4	0.035	Summer	Indoor	328	0.102	25.76	100.0	100.0	100.0	1.986	1.153	0.287	0.499	0.889	2.018	5.003	7.867
					Outdoor	324	0.038	14.99	100.0	100.0	100.0	0.407	0.320	0.080	0.146	0.252	0.393	0.598	0.724
			0.015	Winter	Indoor	337	0.180	551.92	100.0	100.0	100.0	10.45	2.096	0.428	0.840	1.493	2.900	7.724	17.42
					Outdoor	332	<MDL	146.51	99.1	88.7	100.0	1.139	0.432	0.050	0.128	0.263	0.470	1.368	1.998
122	Ethylbromide	74-96-4	0.065	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.035	Winter	Indoor	337	<MDL	0.067	0.6	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
123	Ethylene	74-85-1	0.015	Summer	Indoor	327	0.213	111.16	100.0	100.0	100.0	3.333	2.151	0.657	1.012	1.541	2.601	5.342	10.01
					Outdoor	324	0.252	75.58	100.0	100.0	100.0	2.500	1.414	0.406	0.628	0.961	1.580	3.105	5.703
			0.015	Winter	Indoor	331	0.053	194.11	100.0	100.0	100.0	8.698	4.744	0.931	2.008	3.468	7.515	12.57	26.72
					Outdoor	332	0.120	175.13	100.0	100.0	100.0	4.727	2.463	0.372	0.830	1.541	3.080	9.497	16.22
124	Ethylene oxide	75-21-8	0.091	Summer	Indoor	328	<MDL	2.055	5.2	0.0	22.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.214
					Outdoor	324	<MDL	1.421	27.2	0.0	70.0	0.093	<MDL	<MDL	<MDL	<MDL	<MDL	0.144	0.361
			0.091	Winter	Indoor	337	<MDL	0.527	1.5	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	0.428	9.6	0.0	32.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.196
125	Freon 11 (Trichlorofluoromethane)	75-69-4	0.040	Summer	Indoor	328	1.297	8.092	100.0	100.0	100.0	1.949	1.797	1.375	1.454	1.562	1.810	3.004	4.639
					Outdoor	324	1.240	2.690	100.0	100.0	100.0	1.565	1.561	1.345	1.459	1.543	1.688	1.748	1.778
			0.016	Winter	Indoor	337	0.160	60.27	100.0	100.0	100.0	2.202	1.922	1.347	1.448	1.673	2.133	3.007	4.276
					Outdoor	332	1.114	3.102	100.0	100.0	100.0	1.539	1.533	1.282	1.433	1.518	1.624	1.686	1.948
126	Freon 113 (1,1,2-Trichlorotrifluoroethane)	76-13-1	0.097	Summer	Indoor	328	0.463	1.047	100.0	100.0	100.0	0.565	0.563	0.488	0.521	0.547	0.595	0.653	0.693
					Outdoor	324	0.431	0.799	100.0	100.0	100.0	0.596	0.593	0.483	0.531	0.602	0.647	0.706	0.722
			0.015	Winter	Indoor	337	0.312	0.652	100.0	100.0	100.0	0.556	0.555	0.488	0.527	0.564	0.587	0.607	0.620
					Outdoor	332	0.426	0.988	100.0	100.0	100.0	0.572	0.569	0.474	0.522	0.559	0.605	0.632	0.650

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127	Freon 114 (1,2-Dichlorotetrafluoroethane)	76-14-2	0.137	Summer	Indoor	328	<MDL	0.204	0.9	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	0.158	3.1	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.042	Winter	Indoor	337	<MDL	0.124	99.7	96.1	100.0	0.107	0.107	0.100	0.104	0.107	0.112	0.113	0.116
					Outdoor	332	0.088	0.170	100.0	100.0	100.0	0.114	0.113	0.100	0.106	0.114	0.118	0.123	0.128
	Freon 12 (Dichlorodifluoromethane)	75-71-8	0.113	Summer	Indoor	328	2.247	229.76	100.0	100.0	100.0	4.811	2.901	2.308	2.398	2.506	2.647	3.137	5.618
					Outdoor	324	2.154	4.330	100.0	100.0	100.0	2.668	2.663	2.325	2.540	2.667	2.801	2.920	2.991
			0.038	Winter	Indoor	337	0.116	23.29	100.0	100.0	100.0	3.053	2.741	2.308	2.407	2.507	2.627	2.960	4.293
					Outdoor	332	1.980	3.324	100.0	100.0	100.0	2.515	2.511	2.226	2.371	2.503	2.627	2.718	2.800
129	Freon 22 (Chlorodifluoromethane)	75-45-6	0.072	Summer	Indoor	328	0.576	40.09	100.0	100.0	100.0	1.322	1.040	0.641	0.686	0.760	0.940	1.865	3.055
					Outdoor	324	0.601	16.93	100.0	100.0	100.0	0.906	0.859	0.666	0.726	0.760	0.821	0.928	1.066
			0.044	Winter	Indoor	337	0.593	10.69	100.0	100.0	100.0	1.312	1.070	0.627	0.673	0.780	1.360	2.420	3.973
					Outdoor	332	0.555	84.07	100.0	100.0	100.0	1.169	0.874	0.624	0.666	0.700	0.774	0.978	1.266
130	Heptane	142-82-5	0.089	Summer	Indoor	328	<MDL	43.464	99.4	92.3	100.0	1.847	0.803	0.185	0.349	0.646	1.194	4.028	7.028
					Outdoor	324	<MDL	1.830	87.7	33.3	100.0	0.251	0.231	<MDL	0.117	0.195	0.295	0.482	0.577
			0.044	Winter	Indoor	337	<MDL	2710.85	99.7	96.1	100.0	26.70	2.206	0.307	0.920	1.553	2.847	7.453	18.01
					Outdoor	332	<MDL	3.390	97.9	85.2	100.0	0.574	0.416	0.058	0.167	0.342	0.692	1.560	2.246
131	Hexachlorobutadiene	87-68-3	0.149	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.039	Winter	Indoor	337	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
132	Hexanal	66-25-1	0.038	Summer	Indoor	328	<MDL	324.61	99.7	96.1	100.0	43.89	29.96	4.964	14.85	27.49	52.63	102.02	134.37
					Outdoor	324	<MDL	67.52	98.2	78.6	100.0	3.037	2.658	0.715	1.534	2.294	3.512	5.411	8.211
			0.038	Winter	Indoor	337	<MDL	142.34	98.2	81.8	100.0	17.93	13.64	1.044	5.760	12.22	23.51	39.77	52.00
					Outdoor	332	<MDL	66.05	64.2	7.7	96.0	1.584	0.519	<MDL	<MDL	0.319	1.259	4.338	8.264
133	Hexane	110-54-3	0.073	Summer	Indoor	328	0.158	20.44	100.0	100.0	100.0	1.751	1.024	0.279	0.480	0.734	1.492	4.881	7.697
					Outdoor	324	0.073	17.17	100.0	100.0	100.0	0.612	0.523	0.155	0.246	0.417	0.620	1.032	1.464
			0.056	Winter	Indoor	337	0.147	22.33	100.0	100.0	100.0	2.334	1.736	0.373	0.852	1.732	2.856	5.847	6.904
					Outdoor	332	<MDL	6.924	99.1	88.7	100.0	1.095	0.792	0.130	0.356	0.616	1.367	3.010	3.572

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134	Hexylbenzene	1077-16-3	0.085	Summer	Indoor	328	<MDL	0.394	5.5	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.087
					Outdoor	324	<MDL	0.099	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.054	Winter	Indoor	336	<MDL	1.453	31.3	5.3	60.0	0.062	<MDL	<MDL	<MDL	<MDL	0.060	0.093	0.120
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
	Indan (2,3-Dihydroindene)	496-11-7	0.040	Summer	Indoor	328	<MDL	5.673	90.6	59.7	98.0	0.286	0.137	<MDL	0.065	0.115	0.212	0.610	1.030
					Outdoor	324	<MDL	0.990	21.9	1.1	78.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.060	0.072
			0.026	Winter	Indoor	337	0.040	21.23	100.0	100.0	100.0	0.484	0.226	0.060	0.120	0.184	0.327	0.684	1.140
					Outdoor	332	<MDL	0.366	45.5	1.1	90.0	0.044	0.033	<MDL	<MDL	<MDL	0.043	0.116	0.190
136	Isobutane (2-Methylpropane)	75-28-5	0.039	Summer	Indoor	328	0.561	1917.05	100.0	100.0	100.0	56.98	12.99	1.111	2.580	5.868	20.99	108.07	219.84
					Outdoor	324	0.223	11.69	100.0	100.0	100.0	1.488	1.361	0.384	0.684	1.163	1.870	2.836	3.439
			0.039	Winter	Indoor	337	0.108	1171.38	100.0	100.0	100.0	58.67	29.07	2.687	6.400	15.21	47.51	157.76	228.61
					Outdoor	332	0.262	91.17	100.0	100.0	100.0	4.601	3.391	0.586	1.438	2.577	6.001	11.47	15.65
137	Isobutylacetate	110-19-0	0.029	Summer	Indoor	328	<MDL	34.12	47.6	8.6	76.0	2.532	0.151	<MDL	<MDL	<MDL	2.756	8.407	12.88
					Outdoor	324	<MDL	1.536	1.2	0.0	8.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.029	Winter	Indoor	337	<MDL	20.63	24.3	2.7	50.0	0.545	<MDL	<MDL	<MDL	<MDL	1.752	2.893	
					Outdoor	332	<MDL	0.051	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
138	Isobutylalcohol	78-83-1	0.036	Summer	Indoor	328	<MDL	19.89	75.0	29.0	96.0	1.504	0.573	<MDL	0.040	0.736	1.691	3.080	6.169
					Outdoor	324	<MDL	1.504	9.9	0.0	42.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.058
			0.036	Winter	Indoor	337	<MDL	21.08	73.0	16.7	96.0	0.943	0.399	<MDL	<MDL	0.504	1.247	2.180	2.900
					Outdoor	332	<MDL	0.354	1.2	0.0	8.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
139	iso-Butylbenzene	538-93-2	0.034	Summer	Indoor	328	<MDL	3.556	39.9	14.5	58.0	0.142	0.035	<MDL	<MDL	<MDL	0.088	0.206	0.638
					Outdoor	324	<MDL	0.553	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.018	Winter	Indoor	337	<MDL	15.22	74.8	30.7	96.0	0.228	0.054	<MDL	<MDL	0.047	0.113	0.228	0.427
					Outdoor	332	<MDL	0.044	10.5	0.0	42.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.018	0.024	
140	Isoprene (2-Methyl-1,3-Butadiene)	78-79-5	0.042	Summer	Indoor	328	0.595	15.77	100.0	100.0	100.0	3.728	3.253	1.169	1.896	3.033	4.851	7.151	8.813
					Outdoor	324	0.073	4.164	100.0	100.0	100.0	0.923	0.801	0.215	0.425	0.733	1.323	1.863	2.262
			0.025	Winter	Indoor	337	<MDL	23.65	99.7	96.1	100.0	4.567	4.049	1.473	2.620	3.847	5.486	8.340	10.37
					Outdoor	332	<MDL	2.98	77.1	16.3	100.0	0.085	0.069	<MDL	0.026	0.046	0.096	0.184	0.292

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile
141	Isopropyl Alcohol	67-63-0	0.102	Summer	Indoor	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
					Outdoor	322	<MDL	129.85	95.7	72.4	100.0	4.938	4.111	0.328	1.254	1.973	3.942	11.94	18.60
			0.102	Winter	Indoor	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
					Outdoor	332	<MDL	4436.65	91.3	42.9	100.0	14.909	2.107	<MDL	0.369	0.816	2.019	6.362	9.410
	Isopropylacetate	108-21-4	0.034	Summer	Indoor	328	<MDL	1.433	4.3	0.0	14.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	0.058	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.034	Winter	Indoor	337	<MDL	3.407	3.9	0.0	18.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
143	iso-Propylbenzene	98-82-8	0.036	Summer	Indoor	328	<MDL	5.015	65.6	27.0	88.0	0.164	0.061	<MDL	<MDL	0.050	0.087	0.216	0.462
					Outdoor	324	<MDL	0.572	10.2	0.0	44.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.036	0.050
			0.026	Winter	Indoor	337	<MDL	12.47	98.2	81.8	100.0	0.249	0.111	0.027	0.060	0.087	0.156	0.328	0.487
					Outdoor	332	<MDL	0.854	22.9	0.0	70.0	0.027	<MDL	<MDL	<MDL	<MDL	<MDL	0.068	0.090
144	Limonene	138-86-3	0.172	Summer	Indoor	328	<MDL	477.98	99.7	96.1	100.0	27.50	12.73	1.163	5.122	12.54	25.08	63.43	126.84
					Outdoor	324	<MDL	8.535	33.0	3.4	82.0	0.209	<MDL	<MDL	<MDL	<MDL	0.213	0.450	0.606
			0.089	Winter	Indoor	337	<MDL	364.64	99.7	96.1	100.0	46.09	30.71	2.840	12.62	30.67	57.51	108.97	172.72
					Outdoor	332	<MDL	111.60	28.3	0.0	86.0	0.450	0.093	<MDL	<MDL	<MDL	0.110	0.374	0.680
145	m,p-Xylene	1330-20-7	0.079	Summer	Indoor	328	0.295	78.70	100.0	100.0	100.0	6.575	3.446	0.750	1.434	2.426	6.655	17.29	29.66
					Outdoor	324	0.122	54.78	100.0	100.0	100.0	1.414	1.092	0.246	0.470	0.839	1.289	2.178	2.673
			0.032	Winter	Indoor	337	<MDL	1355.60	99.7	96.1	100.0	33.00	6.854	1.107	2.547	4.560	9.693	30.06	65.22
					Outdoor	332	<MDL	362.11	98.8	85.2	100.0	3.582	1.490	0.118	0.379	0.849	1.726	4.980	7.084
146	MAC (2-Methyl-2-propenal)	78-85-3	0.036	Summer	Indoor	328	<MDL	3.653	99.7	96.1	100.0	0.928	0.847	0.355	0.544	0.804	1.099	1.729	1.989
					Outdoor	324	0.037	2.288	100.0	100.0	100.0	0.375	0.335	0.109	0.194	0.323	0.461	0.735	0.856
			0.036	Winter	Indoor	337	0.100	2.593	100.0	100.0	100.0	0.509	0.471	0.220	0.340	0.440	0.596	0.813	1.033
					Outdoor	332	<MDL	0.649	66.0	7.5	100.0	0.057	0.053	<MDL	<MDL	0.044	0.072	0.106	0.133
147	MEK	78-93-3	0.057	Summer	Indoor	328	1.001	46.41	100.0	100.0	100.0	5.210	3.707	1.269	2.068	3.245	4.824	8.849	15.38
					Outdoor	324	0.224	14.51	100.0	100.0	100.0	1.219	1.156	0.485	0.732	1.022	1.339	1.874	2.644
			0.057	Winter	Indoor	337	0.707	550.80	100.0	100.0	100.0	13.31	5.506	1.667	2.533	4.140	7.947	26.88	47.27
					Outdoor	332	0.174	7.082	100.0	100.0	100.0	0.871	0.792	0.300	0.445	0.635	0.959	1.772	2.210

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Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/ Median	75th Percentile	90th Percentile	95th Percentile
148	Methanol	67-56-1	0.051	Summer	Indoor	328	13.38	491.71	100.0	100.0	100.0	113.54	93.99	27.90	53.12	93.89	158.26	225.63	262.61
					Outdoor	324	2.328	403.20	100.0	100.0	100.0	21.40	18.48	7.70	12.37	15.49	19.85	25.39	34.51
			0.051	Winter	Indoor	337	12.17	2550.32	100.0	100.0	100.0	196.74	150.46	55.71	92.55	134.49	228.67	311.22	432.60
					Outdoor	332	1.730	231.11	100.0	100.0	100.0	22.91	17.39	3.453	6.822	14.20	25.28	45.52	85.23
	Methyl Acetate	79-20-9	0.031	Summer	Indoor	328	<MDL	34.32	92.7	63.9	100.0	2.312	1.489	<MDL	0.841	1.444	2.794	4.747	7.364
					Outdoor	324	<MDL	6.324	98.2	81.8	100.0	0.252	0.223	0.078	0.137	0.183	0.246	0.405	0.570
			0.031	Winter	Indoor	337	<MDL	19.54	84.3	33.3	100.0	1.642	1.048	<MDL	0.520	1.120	1.860	3.504	6.813
					Outdoor	332	<MDL	1.030	93.7	53.9	100.0	0.135	0.125	<MDL	0.066	0.108	0.161	0.254	0.364
150	Methylcyclohexane	108-87-2	0.015	Summer	Indoor	328	0.054	54.49	100.0	100.0	100.0	1.525	0.400	0.098	0.151	0.278	0.681	2.348	3.677
					Outdoor	324	0.027	1.238	100.0	100.0	100.0	0.156	0.145	0.049	0.074	0.122	0.178	0.279	0.351
			0.015	Winter	Indoor	337	0.053	869.16	100.0	100.0	100.0	6.699	1.065	0.173	0.487	0.873	1.512	2.947	5.493
					Outdoor	332	0.016	2.286	100.0	100.0	100.0	0.403	0.288	0.050	0.119	0.253	0.486	1.096	1.344
151	Methylcyclopentane	96-37-7	0.015	Summer	Indoor	328	0.095	12.15	100.0	100.0	100.0	1.037	0.591	0.149	0.280	0.420	0.848	2.423	5.182
					Outdoor	324	0.044	6.586	100.0	100.0	100.0	0.387	0.333	0.090	0.148	0.255	0.415	0.700	1.013
			0.016	Winter	Indoor	337	0.067	8.840	100.0	100.0	100.0	1.437	0.983	0.220	0.420	0.847	1.767	3.173	5.460
					Outdoor	332	0.020	3.132	100.0	100.0	100.0	0.599	0.458	0.076	0.200	0.369	0.695	1.550	2.090
152	Methyl-t-Butyl Ether ( MTBE )	1634-04-4	0.136	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.082	Winter	Indoor	337	<MDL	2.260	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
153	MIBK	108-10-1	0.032	Summer	Indoor	328	<MDL	10.92	99.7	96.1	100.0	0.605	0.336	0.091	0.145	0.266	0.650	1.093	1.406
					Outdoor	324	<MDL	0.628	89.5	47.1	100.0	0.073	0.066	<MDL	0.040	0.057	0.080	0.126	0.163
			0.032	Winter	Indoor	337	<MDL	127.30	99.4	92.3	100.0	0.941	0.278	0.067	0.128	0.220	0.427	0.613	0.920
					Outdoor	332	<MDL	0.372	29.8	1.1	86.0	0.035	<MDL	<MDL	<MDL	<MDL	0.038	0.080	0.114
154	MVK	78-94-4	0.025	Summer	Indoor	328	<MDL	9.810	69.8	15.3	96.0	1.764	1.092	<MDL	<MDL	1.719	2.608	3.742	4.601
					Outdoor	324	<MDL	5.344	28.1	0.0	62.0	0.385	<MDL	<MDL	<MDL	<MDL	0.544	1.639	2.041
			0.025	Winter	Indoor	337	<MDL	4.096	38.9	4.7	78.0	0.507	0.075	<MDL	<MDL	<MDL	0.893	1.660	2.240
					Outdoor	332	<MDL	0.748	2.1	0.0	14.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	

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Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile	
155	Naphthalene	91-20-3	0.082	Summer	Indoor	328	<MDL	10.65	98.8	92.3	100.0	0.505	0.293	0.109	0.171	0.256	0.390	0.713	1.662
					Outdoor	324	<MDL	1.118	29.0	0.0	84.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.088	0.134	0.173
			0.082	Winter	Indoor	337	<MDL	57.25	99.7	96.1	100.0	1.349	0.571	0.180	0.320	0.487	0.793	1.344	2.933
					Outdoor	332	<MDL	0.548	21.1	0.0	62.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.150	0.216	
	n-Butylbenzene	104-51-8	0.038	Summer	Indoor	328	<MDL	11.82	31.7	2.5	62.0	0.298	<MDL	<MDL	<MDL	0.069	0.253	0.480	
					Outdoor	324	<MDL	2.216	1.2	0.0	8.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.023	Winter	Indoor	337	<MDL	65.75	80.1	29.9	100.0	0.774	0.103	<MDL	0.040	0.093	0.180	0.493	0.976
					Outdoor	332	<MDL	0.158	20.5	0.0	70.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.052	0.074	
157	Nonane	111-84-2	0.027	Summer	Indoor	328	<MDL	168.32	99.7	96.1	100.0	3.914	0.449	0.070	0.159	0.267	0.644	5.061	14.17
					Outdoor	324	<MDL	9.878	90.4	42.9	100.0	0.107	0.076	<MDL	0.035	0.058	0.099	0.142	0.192
			0.012	Winter	Indoor	337	0.067	327.38	100.0	100.0	100.0	4.673	0.831	0.147	0.324	0.573	1.308	3.672	10.35
					Outdoor	332	<MDL	0.942	98.2	88.7	100.0	0.157	0.119	0.018	0.046	0.088	0.158	0.452	0.618
158	n-Propylbenzene	103-65-1	0.039	Summer	Indoor	328	<MDL	15.36	95.4	80.0	98.0	0.518	0.170	0.041	0.075	0.120	0.273	0.725	1.933
					Outdoor	324	<MDL	2.194	56.5	7.6	98.0	0.062	0.055	<MDL	<MDL	0.045	0.068	0.104	0.120
			0.030	Winter	Indoor	337	<MDL	43.96	99.4	96.1	100.0	0.791	0.294	0.067	0.147	0.247	0.452	1.067	1.572
					Outdoor	332	<MDL	1.224	71.1	19.3	98.0	0.080	0.064	<MDL	<MDL	0.043	0.078	0.224	0.322
159	Octane	111-65-9	0.036	Summer	Indoor	328	0.041	76.19	100.0	100.0	100.0	1.400	0.379	0.084	0.173	0.283	0.555	1.701	2.876
					Outdoor	324	<MDL	2.182	93.2	56.3	100.0	0.095	0.087	<MDL	0.050	0.072	0.108	0.160	0.183
			0.021	Winter	Indoor	337	<MDL	74.17	99.7	96.1	100.0	1.562	0.666	0.160	0.353	0.540	0.920	1.688	3.720
					Outdoor	332	<MDL	1.052	98.2	81.8	100.0	0.207	0.161	0.032	0.067	0.132	0.245	0.568	0.728
160	o-Xylene	95-47-6	0.039	Summer	Indoor	328	0.112	27.97	100.0	100.0	100.0	2.094	1.077	0.261	0.482	0.767	1.864	4.531	10.87
					Outdoor	324	0.044	15.83	100.0	100.0	100.0	0.447	0.359	0.090	0.171	0.276	0.423	0.717	0.838
			0.017	Winter	Indoor	337	0.200	211.11	100.0	100.0	100.0	5.568	2.055	0.420	0.820	1.493	2.793	10.11	17.91
					Outdoor	332	<MDL	134.10	98.2	81.8	100.0	1.151	0.495	0.046	0.140	0.296	0.590	1.640	2.390
161	p-Cymene (1-Methyl-4-Isopropylbenzene)	99-87-6	0.041	Summer	Indoor	328	<MDL	14.55	100.0	100.0	100.0	1.220	0.685	0.103	0.259	0.602	1.678	3.014	4.273
					Outdoor	324	<MDL	3.372	100.0	100.0	100.0	0.065	0.048	<MDL	<MDL	<MDL	0.055	0.098	0.224
			0.015	Winter	Indoor	337	<MDL	39.85	100.0	100.0	100.0	2.173	1.419	0.260	0.693	1.372	2.353	4.333	5.588
					Outdoor	332	<MDL	1.800	98.2	81.8	100.0	0.035	0.028	<MDL	<MDL	0.018	0.034	0.076	0.112

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162	Pentanal	110-62-3	0.018	Summer	Indoor	328	<MDL	35.29	19.5	0.0	50.0	2.370	<MDL	<MDL	<MDL	<MDL	<MDL	9.361	16.24	
					Outdoor	324	<MDL	14.79	4.9	0.0	28.0	0.147	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.018	Winter	Indoor	337	<MDL	15.29	13.4	1.5	40.0	0.906	<MDL	<MDL	<MDL	<MDL	<MDL	3.853	5.773	
					Outdoor	332	<MDL	8.720	5.1	0.0	24.0	0.081	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.201	
	Pentane	109-66-0	0.042	Summer	Indoor	305	<MDL	890.75	49.2	10.6	88.0	5.020	0.596	<MDL	<MDL	<MDL	3.387	5.971	13.52	
					Outdoor	324	<MDL	10.63	99.7	96.1	100.0	1.461	1.358	0.492	0.785	1.152	1.728	2.387	3.465	
			0.024	Winter	Indoor	161	<MDL	30.71	97.5	84.0	100.0	7.260	5.631	0.887	2.800	5.028	9.760	17.12	19.02	
					Outdoor	332	<MDL	14.77	99.7	96.1	100.0	2.637	2.071	0.392	1.013	1.576	3.459	6.362	8.518	
164	Propane	74-98-6	0.052	Summer	Indoor	328	1.372	1208.80	100.0	100.0	100.0	32.47	11.05	2.222	3.761	6.490	14.21	49.05	99.82	
					Outdoor	324	0.784	139.32	100.0	100.0	100.0	4.234	3.230	1.091	1.883	2.764	3.962	5.464	6.407	
			0.058	Winter	Indoor	337	1.596	382.63	100.0	100.0	100.0	46.18	28.72	4.253	10.70	19.59	44.25	114.16	220.25	
					Outdoor	332	1.074	92.45	100.0	100.0	100.0	11.13	8.822	1.490	3.980	7.323	12.42	24.57	34.68	
165	Propene	115-07-1	0.037	Summer	Indoor	328	0.197	30.68	100.0	100.0	100.0	1.090	0.804	0.267	0.404	0.605	0.923	1.617	3.460	
					Outdoor	324	0.087	2.760	100.0	100.0	100.0	0.478	0.413	0.150	0.213	0.308	0.503	0.886	1.544	
			0.025	Winter	Indoor	337	0.207	18.24	100.0	100.0	100.0	1.892	1.435	0.347	0.647	1.133	2.333	3.760	5.060	
					Outdoor	332	0.057	4.502	100.0	100.0	100.0	0.763	0.615	0.114	0.239	0.444	0.863	1.984	2.802	
166	Propionaldehyde	123-38-6	0.068	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	2.945	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.068	Winter	Indoor	334	<MDL	11.09	1.8	0.0	10.0	0.107	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
					Outdoor	332	<MDL	3.334	5.1	0.0	26.0	0.093	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.754
167	Propyl alcohol (1-Propanol)	71-23-8	0.031	Summer	Indoor	328	<MDL	19.20	97.9	75.4	100.0	1.559	1.206	0.254	0.574	0.985	1.672	3.071	5.151	
					Outdoor	324	<MDL	9.195	68.5	26.7	90.0	0.167	0.063	<MDL	<MDL	0.094	0.147	0.221	0.353	
			0.031	Winter	Indoor	337	<MDL	11.71	97.0	72.4	100.0	1.881	1.580	0.453	0.913	1.347	2.500	3.680	4.793	
					Outdoor	332	<MDL	0.595	83.1	33.3	100.0	0.083	0.072	<MDL	0.038	0.062	0.105	0.176	0.226	
168	Propyne	74-99-7	0.024	Summer	Indoor	328	<MDL	1.195	96.0	61.3	100.0	0.105	0.087	0.025	0.045	0.067	0.111	0.189	0.303	
					Outdoor	324	<MDL	0.594	85.8	40.9	100.0	0.073	0.059	<MDL	0.030	0.048	0.076	0.137	0.248	
			0.023	Winter	Indoor	337	<MDL	8.120	93.2	66.7	100.0	0.222	0.146	<MDL	0.067	0.124	0.236	0.407	0.540	
					Outdoor	332	<MDL	0.588	88.0	51.5	100.0	0.102	0.083	<MDL	0.036	0.065	0.117	0.276	0.344	

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/ Median	75th Percentile	90th Percentile	95th Percentile	
169	sec-Butylbenzene	135-98-8	0.033	Summer	Indoor	328	<MDL	8.178	27.7	10.6	46.0	0.197	<MDL	<MDL	<MDL	<MDL	0.035	0.118	0.246
					Outdoor	324	<MDL	1.248	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
			0.023	Winter	Indoor	337	<MDL	34.55	64.4	27.8	84.0	0.387	0.039	<MDL	<MDL	0.033	0.087	0.213	0.432
					Outdoor	332	<MDL	0.062	10.2	0.0	40.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.024	0.036	
	Styrene	100-42-5	0.047	Summer	Indoor	328	<MDL	9.383	99.4	92.3	100.0	0.708	0.485	0.088	0.234	0.431	0.850	1.443	2.067
					Outdoor	324	<MDL	3.616	38.6	2.2	84.0	0.123	0.067	<MDL	<MDL	<MDL	0.070	0.161	0.360
			0.020	Winter	Indoor	337	<MDL	770.39	99.7	96.1	100.0	3.440	0.656	0.180	0.360	0.553	0.916	2.000	3.044
					Outdoor	332	<MDL	4.544	60.5	3.2	96.0	0.122	0.066	<MDL	<MDL	0.030	0.088	0.278	0.506
171	t-1,2-Dichloroethene	156-60-5	0.042	Summer	Indoor	328	<MDL	0.135	7.3	1.6	28.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.055	
					Outdoor	324	<MDL	0.114	5.9	0.0	34.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.046
			0.021	Winter	Indoor	337	<MDL	0.484	16.6	1.4	50.0	0.021	<MDL	<MDL	<MDL	<MDL	<MDL	0.040	0.120
					Outdoor	332	<MDL	0.292	16.0	0.0	58.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.026	0.056	
172	t-1,2-Dimethylcyclohexane	6876-23-9	0.012	Summer	Indoor	328	<MDL	16.91	13.4	0.0	30.0	0.266	<MDL	<MDL	<MDL	<MDL	<MDL	0.201	0.615
					Outdoor	324	<MDL	0.092	3.4	0.0	18.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.007	Winter	Indoor	337	<MDL	28.06	66.2	21.0	96.0	0.515	0.104	<MDL	<MDL	0.136	0.267	0.733	1.404
					Outdoor	332	<MDL	0.324	52.4	5.8	82.0	0.045	0.014	<MDL	<MDL	0.018	0.062	0.150	0.206
173	t-1,3-Dichloropropene	10061-02-6	0.024	Summer	Indoor	328	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
			0.015	Winter	Indoor	337	<MDL	0.016	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
174	t-1,4-Dimethylcyclohexane	2207-04-7	0.011	Summer	Indoor	328	<MDL	14.93	89.6	47.1	100.0	0.226	0.045	<MDL	0.017	0.031	0.064	0.389	0.937
					Outdoor	324	<MDL	0.291	59.3	12.4	100.0	0.017	0.016	<MDL	<MDL	0.013	0.019	0.030	0.038
			0.017	Winter	Indoor	337	<MDL	11.29	97.3	85.2	100.0	0.264	0.098	0.020	0.047	0.080	0.156	0.288	0.580
					Outdoor	332	<MDL	0.214	61.5	17.7	86.0	0.039	0.029	<MDL	<MDL	0.026	0.044	0.106	0.136
175	t-2-Butene	624-64-6	0.030	Summer	Indoor	328	<MDL	5.307	81.7	32.4	96.0	0.222	0.082	<MDL	0.034	0.055	0.112	0.314	0.672
					Outdoor	324	<MDL	0.378	56.5	11.4	96.0	0.052	0.043	<MDL	<MDL	0.034	0.061	0.114	0.142
			0.024	Winter	Indoor	337	<MDL	4.300	96.1	75.4	100.0	0.282	0.153	0.027	0.053	0.112	0.247	0.480	1.104
					Outdoor	332	<MDL	1.128	76.5	30.3	98.0	0.094	0.072	<MDL	<MDL	0.024	0.046	0.113	0.230

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile			
176	t-2-Heptene	14686-13-6	0.010	Summer	Indoor	328	<MDL	0.193	4.0	0.0	14.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
					Outdoor	324	<MDL	0.048	0.9	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
	0.016			Winter	Indoor	337	<MDL	0.168	1.8	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
					Outdoor	332	<MDL	0.056	2.4	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
177	t-2-Hexene	4050-45-7	0.031	Summer	Indoor	328	<MDL	1.206	20.4	6.0	42.0	0.066	<MDL	<MDL	<MDL	<MDL	0.241	0.533			
					Outdoor	324	<MDL	0.255	18.2	2.7	50.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.044	0.067			
	0.024			Winter	Indoor	337	<MDL	1.200	42.1	7.0	84.0	0.061	<MDL	<MDL	<MDL	<MDL	0.072	0.167	0.200		
					Outdoor	332	<MDL	0.218	25.3	1.2	68.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.026	0.060	0.118		
178	t-2-Octene	13389-42-9	0.016	Summer	Indoor	328	<MDL	3.519	4.9	0.0	22.0	0.061	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
					Outdoor	324	<MDL	0.254	3.4	0.0	18.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
	0.022			Winter	Indoor	337	<MDL	4.560	12.8	0.0	38.0	0.071	<MDL	<MDL	<MDL	<MDL	<MDL	0.244	0.500		
					Outdoor	332	<MDL	0.204	16.6	0.0	68.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.070	0.110			
179	t-2-Pentene	646-04-8	0.019	Summer	Indoor	328	<MDL	7.859	44.8	8.0	90.0	0.387	0.048	<MDL	<MDL	<MDL	0.182	0.989	2.452		
					Outdoor	324	<MDL	1.111	93.5	63.9	100.0	0.115	0.085	<MDL	0.033	0.064	0.124	0.231	0.346		
	0.017			Winter	Indoor	337	<MDL	5.964	61.7	7.6	98.0	0.325	0.109	<MDL	<MDL	0.080	0.305	0.760	1.307		
					Outdoor	332	<MDL	1.060	88.9	51.5	100.0	0.111	0.080	<MDL	0.026	0.048	0.124	0.252	0.510		
180	t-3-Heptene	14686-14-7	0.025	Summer	Indoor	328	<MDL	0.251	2.1	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
					Outdoor	324	<MDL	0.063	0.9	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
	0.008			Winter	Indoor	337	<MDL	1.224	0.9	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
					Outdoor	332	<MDL	0.068	1.5	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
181	t-3-Methyl-2-Pentene	616-12-6	0.030	Summer	Indoor	328	<MDL	0.609	11.6	1.8	16.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.091	0.221			
					Outdoor	324	<MDL	0.072	2.8	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
	0.009			Winter	Indoor	337	<MDL	0.688	11.3	1.6	30.0	0.020	<MDL	<MDL	<MDL	<MDL	<MDL	0.047	0.133		
					Outdoor	332	<MDL	0.582	9.9	0.0	42.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.022			
182	t-4-Methyl-2-Pentene	674-76-0	0.034	Summer	Indoor	328	<MDL	0.238	4.9	0.0	22.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
					Outdoor	324	<MDL	0.324	3.1	0.0	20.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
			0.029	Winter	Indoor	337	<MDL	0.380	41.0	8.4	80.0	0.041	<MDL	<MDL	<MDL	<MDL	0.053	0.107	0.140		
					Outdoor	332	<MDL	0.098	24.4	0.0	72.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.050	0.072			

**APPENDIX B: 2010 EIAQS VOC Data Summary Tables for 24-h samples**

Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile			
183	tert-Butylbenzene	98-06-06	0.043	Summer	Indoor	328	<MDL	3.117	42.4	8.8	74.0	0.102	<MDL	<MDL	<MDL	0.083	0.217	0.380			
					Outdoor	324	<MDL	1.830	50.3	10.0	76.0	0.079	<MDL	<MDL	<MDL	0.043	0.106	0.198	0.249		
	0.033			Winter	Indoor	337	<MDL	1.804	28.5	5.7	48.0	0.073	<MDL	<MDL	<MDL	0.048	0.224	0.460			
					Outdoor	332	<MDL	0.046	1.2	0.0	8.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
184	Tetrachloroethene	127-18-4	0.077	Summer	Indoor	328	<MDL	721.38	93.6	69.5	100.0	4.502	0.446	<MDL	0.145	0.253	0.679	2.981	7.027		
					Outdoor	324	<MDL	17.34	56.2	7.6	98.0	0.176	0.116	<MDL	<MDL	0.090	0.156	0.226	0.275		
	0.030			Winter	Indoor	337	<MDL	30.79	99.7	96.1	100.0	1.343	0.618	0.093	0.192	0.420	1.276	4.160	5.547		
					Outdoor	332	<MDL	1.570	99.7	96.1	100.0	0.239	0.195	0.038	0.068	0.118	0.244	0.666	1.016		
185	Toluene	108-88-3	0.066	Summer	Indoor	328	0.497	82.25	100.0	100.0	100.0	9.723	7.015	1.913	3.326	6.140	11.47	20.29	30.04		
					Outdoor	324	0.140	14.31	100.0	100.0	100.0	1.927	1.795	0.468	0.837	1.368	2.238	3.775	4.826		
	0.033			Winter	Indoor	337	0.388	383.29	100.0	100.0	100.0	18.05	8.417	2.047	4.440	7.587	11.06	21.45	45.89		
					Outdoor	332	0.066	63.68	100.0	100.0	100.0	2.450	1.981	0.280	0.647	1.294	2.445	5.926	8.394		
186	Trichloroethene	79-01-06	0.121	Summer	Indoor	328	<MDL	1.654	15.6	6.2	38.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.176	0.298			
					Outdoor	324	<MDL	0.845	4.9	0.0	20.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
	0.036			Winter	Indoor	337	<MDL	3.593	95.6	78.6	100.0	0.225	0.154	0.040	0.096	0.136	0.200	0.320	0.520		
					Outdoor	332	<MDL	0.992	38.9	2.4	70.0	0.064	0.042	<MDL	<MDL	<MDL	0.061	0.160	0.302		
187	Undecane	1120-21-4	0.023	Summer	Indoor	328	0.049	177.55	100.0	100.0	100.0	6.730	1.074	0.150	0.411	0.711	1.450	7.127	33.35		
					Outdoor	324	<MDL	26.16	99.1	88.7	100.0	0.234	0.138	0.032	0.060	0.100	0.170	0.282	0.359		
	0.021			Winter	Indoor	337	0.072	1100.03	100.0	100.0	100.0	15.36	2.162	0.452	0.892	1.480	3.793	9.720	15.86		
					Outdoor	332	<MDL	1.356	92.2	53.9	100.0	0.172	0.131	<MDL	0.046	0.088	0.194	0.476	0.740		
188	Vinylchloride (Chloroethene)	75-01-04	0.018	Summer	Indoor	328	<MDL	0.055	5.5	1.9	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	0.021			
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
	0.015			Winter	Indoor	337	<MDL	0.964	3.0	0.0	10.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
189	Propylene Oxide	75-56-9	0.086	Summer	Indoor	328	<MDL	0.261	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
					Outdoor	324	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
	0.086			Winter	Indoor	337	<MDL	1.127	0.6	0.0	4.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			

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Index #	VOC Species [all concentrations in $\mu\text{g}/\text{m}^3$ ]	CAS #	MDL	Season	Exposure Category	Count	Min	Max	% Samples > MDL	% homes > MDL for all samples	% homes > MDL for at least 1 sample	Arithmetic Mean	Geometric Mean	5th Percentile	25th Percentile	50th Percentile/Median	75th Percentile	90th Percentile	95th Percentile	
190	2-Heptanone	110-43-0	0.071	Summer	Indoor	328	<MDL	2.552	94.2	66.7	100.0	0.438	0.329	<MDL	0.170	0.304	0.570	0.993	1.249	
					Outdoor	324	<MDL	0.809	41.1	1.1	88.0	0.076	0.071	<MDL	<MDL	<MDL	0.098	0.130	0.152	
			0.071	Winter	Indoor	337	<MDL	1.993	73.0	36.6	94.0	0.185	0.127	<MDL	<MDL	<MDL	0.136	0.240	0.400	0.493
					Outdoor	332	<MDL	1.054	2.1	0.0	14.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	
	2-Hexanone	591-78-6	0.037	Summer	Indoor	328	<MDL	1.557	54.0	10.7	86.0	0.121	0.040	<MDL	<MDL	0.082	0.181	0.307	0.395	
					Outdoor	324	<MDL	3.830	88.9	42.9	100.0	0.104	0.087	<MDL	0.052	0.070	0.104	0.167	0.220	
			0.037	Winter	Indoor	337	<MDL	0.592	17.8	0.0	54.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.147	0.213		
					Outdoor	332	<MDL	0.548	10.5	0.0	44.0	<MDL	<MDL	<MDL	<MDL	<MDL	0.038	0.057		
192	3-Methyl-1-Butanol	123-51-3	0.103	Summer	Indoor	328	<MDL	7.375	64.3	19.2	86.0	0.625	0.159	<MDL	<MDL	0.384	0.830	1.677	2.555	
					Outdoor	324	<MDL	0.976	1.2	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
			0.103	Winter	Indoor	337	<MDL	11.79	54.0	11.0	82.0	0.608	<MDL	<MDL	<MDL	0.280	0.887	1.660	1.952	
					Outdoor	332	<MDL	3.752	0.9	0.0	6.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
193	3-Methylfuran	930-27-8	0.102	Summer	Indoor	328	<MDL	0.215	4.0	0.0	18.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	324	<MDL	0.487	0.3	0.0	2.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
			0.102	Winter	Indoor	337	<MDL	0.233	3.0	0.0	12.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		
					Outdoor	332	<MDL	<MDL	0.0	0.0	0.0	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL		