Fleming College (Sutherland Campus)
599 Brealey Drive
Peterborough, ON

June 25, 2025

Attention: Marriah Wickert - Manager, Health & Safety

Subject: Limited Indoor Air Quality (IAQ) Assessment
599 Brealey Drive, Peterborough, Ontario

Englobe File No.: 02412900.000

Executive Summary

Limited Indoor Air Quality assessment was conducted on June 20, 2025, following the completion of construction activities.

Airborne Parameter & Location	Results
Carbon Monoxide (CO), Carbon Dioxide (CO_2), Total Volatile Organic Compounds (TVOCs), Particulate Matter (PM), Relative Humidity (RH), and temperature were measured at the following two (2) locations: Washroom B3170 and Washroom B3174.	The Indoor Air Quality (IAQ) parameters were within recommended limits, indicating generally good air conditions in both locations (Washrooms B3170 and B3174).

Introduction

Englobe Corporation was retained by Fleming College (the Client) to conduct a Limited Indoor Air Quality (IAQ) Assessment, of select areas of Fleming College, located at 599 Brealey Drive, Peterborough, Ontario. The air sampling was performed following the completion of construction work within the project-specific work areas. The work areas were observed to be closed at washroom entrances via hard hoarding (i.e., plywood) and secured with locked doors, preventing access to the public.

Air monitoring was conducted by Englobe at the following locations: Washroom B3170 and Washroom B3174.

Representative Photographs are included in Appendix A. Statement of Limitations are included in Appendix B.

Methodology

As part of the Limited Indoor Air Quality assessment, the following tasks were performed:

- Real-time air monitoring for Carbon Monoxide (CO), Carbon Dioxide (CO_2), Relative Humidity (RH), Total Volatile Organic Compounds (TVOCs), and Temperature (T) was performed using a Quest EVM 7 CO-PPB Advanced Particulate Air Quality Monitor, measuring the

concentration of each parameter at 10-15 minute intervals over a one-hour period at each of the two (2) locations.

- Real-time air monitoring for particulate matter (PM) for particle sizes of up to 2.5 and 10 micrometers ($PM_{2.5}$ and PM_{10}, respectively) was performed using a DustTRAK DRX Desktop Aerosol Monitor 8533 measuring it at 5-10 minute intervals over a one-hour period at each of the two (2) locations.

The Quest EVM 7 CO-PPB Advanced Particulate Air Quality Monitor and the DustTRAK DRX Desktop Aerosol Monitor 8533 were calibrated by a third-party supplier (Pine Environmental Services LLC (Pine)) prior to use, in accordance with the manufacturer's methods and industry procedures.

The below sections detail information for the parameters measured:

- **Carbon Monoxide (CO):**
  - Measured in parts per million (ppm).
  - Acceptable levels indoors are typically below 9 ppm for long-term exposure (EPA standard).
- **Carbon Dioxide (CO_2):**
  - Measured in parts per million (ppm).
  - Normal indoor levels range between 400 – 1,000 ppm; levels above 1,000 ppm may indicate inadequate ventilation.
- **Total Volatile Organic Compounds (TVOCs):**
  - Measured in micrograms per metres (µg/m³).
  - Common indoors due to paints, adhesives, and cleaning agents; concentrations should be minimized.
- **Particulate Matter (PM):**
  - Measured in micrograms per cubic meter (µg/m³).
  - PM2.5 levels are critical for assessing dust and small airborne particles.
- **Relative Humidity (RH):**
  - Measured as a percentage.
  - Ideal indoor RH levels are between 30 – 50% to prevent mold growth and discomfort.
- **Temperature:**
  - Measured in °C.
  - Indoor temperatures should generally range from 68–76°F (20–24°C) for comfort and system efficiency.

Air Monitoring Results

Table 1: Summary of IAQ Assessment Results Washroom B3170 - B3						
Time	CO (ppm)	CO_2 (ppm)	TVOC (µg/m³)	Temperature (°C)	RH %	PM 2.5 (µg/m³)
11:46 am	0	539	456	22.6	58.5	0.013
11:58 am	0	468	420	22.9	57.3	0.014
12:10 pm	0	461	410	23.0	56.6	0.019
12:22 pm	0	473	380	23.0	56.6	0.018

Table 1: Summary of IAQ Assessment Results Washroom B3170 - B3						
Time	CO (ppm)	CO_2 (ppm)	TVOC (µg/m³)	Temperature (°C)	RH %	PM 2.5 (µg/m³)
12:34 pm	0	479	375	23.1	56.3	0.014
12:46 pm	0	484	400	23.2	56.2	0.017
12:58 pm	0	492	368	23.3	56.0	0.017

Table 2: Summary of IAQ Assessment Results Washroom B3174 - B3						
Time	CO (ppm)	CO_2 (ppm)	TVOC (µg/m³)	Temperature (°C)	RH %	PM 2.5 (µg/m³)
11:50 am	0	515	491	22.7	58.1	0.014
12:02 pm	0	515	453	22.8	57.2	0.019
12:14 pm	0	500	429	23.0	56.5	0.018
12:26 pm	0	475	440	23.0	56.6	0.017
12:38 pm	0	495	391	23.0	56.4	0.021
12:50 pm	0	511	382	23.2	56.6	0.017
1:02 pm	0	502	375	23.2	56.2	0.018

Limited Indoor Air Quality Sampling Results:

- **Carbon Monoxide (CO)**
  CO levels remained consistently low across all locations, measured at 0 ppm. These levels are well below the Health Canada recommended limit of 10 ppm for long term 24-hour exposure and 25 ppm for short term 1-hour exposure, indicating at the time of testing no significant concern regarding carbon monoxide exposure.

- **Carbon Dioxide (CO_2)**
  CO_2 levels ranged from 461 ppm to 539 ppm across all tested areas, remaining well below the 1000 ppm threshold that typically indicates insufficient ventilation. According to Health Canada guidelines, indoor CO_2 concentrations below 1000 ppm generally reflect adequate ventilation and acceptable indoor air quality. Levels within this range suggest a low occupancy load during the time of assessment and effective air exchange within the building.

- **Total Volatile Organic Compounds (TVOCs)**
  TVOC concentrations across the tested areas ranged from 375 to 491 µg/m³. Levels below 200 µg/m³ are generally considered safe with no expected health effects, while concentrations between 200 to 500 µg/m³ are typically acceptable for most indoor settings. The measured levels fall within the 375 to 491 µg/m³ range, which is considered acceptable.

- **Particulate Matter 2.5 (PM)**
  PM concentrations remained minimal across all monitored locations, with readings ranging from 0.013 µg/m³ to 0.021 µg/m³. These values indicate very low airborne particulate presence, suggesting effective control of dust and other airborne particles in the assessed areas.

- **Relative Humidity (RH)**
  RH levels varied between 56.0% to 58.5%. For indoor environments, a relative humidity between 30% and 60% is generally recommended to maintain a comfortable and healthy atmosphere. The results indicate that the humidity levels were within the ideal range, contributing to overall indoor comfort and air quality.

- **Temperature**
  Temperature measurements were relatively consistent across all monitored areas, ranging between 22.6°C and 23.3°C. These values fall within the recommended indoor comfort range of 20-24°C, suggesting adequate thermal comfort throughout the assessment period.

Conclusion

At the time of testing, limited indoor air quality (IAQ) parameters were found to be within acceptable limits suggesting acceptable air conditions in Washrooms B3170 and B3174.

Closure

A Statement of Limitations, which forms an integral part of this report, is attached.

We trust that the information contained herein meets your needs. Should you have any questions or comments, please do not hesitate to contact us.

Englobe Corp.

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APPENDIX A
Representative Photographs

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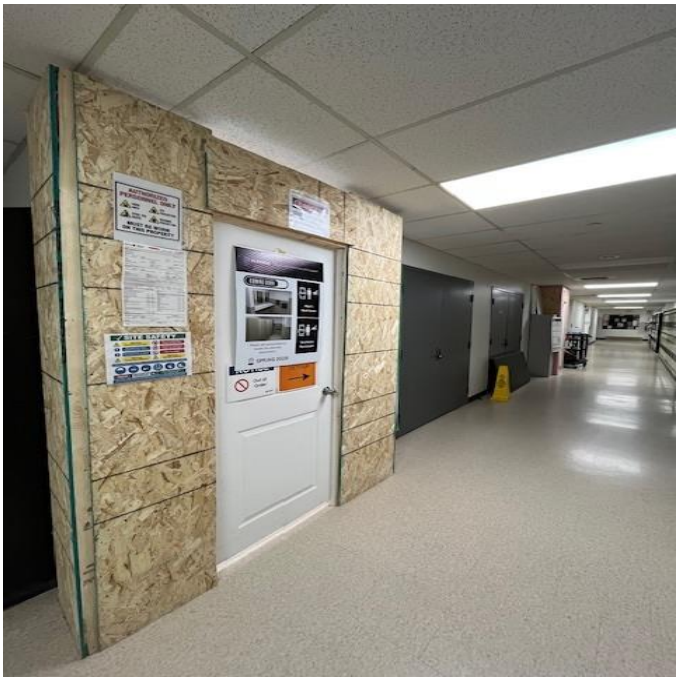
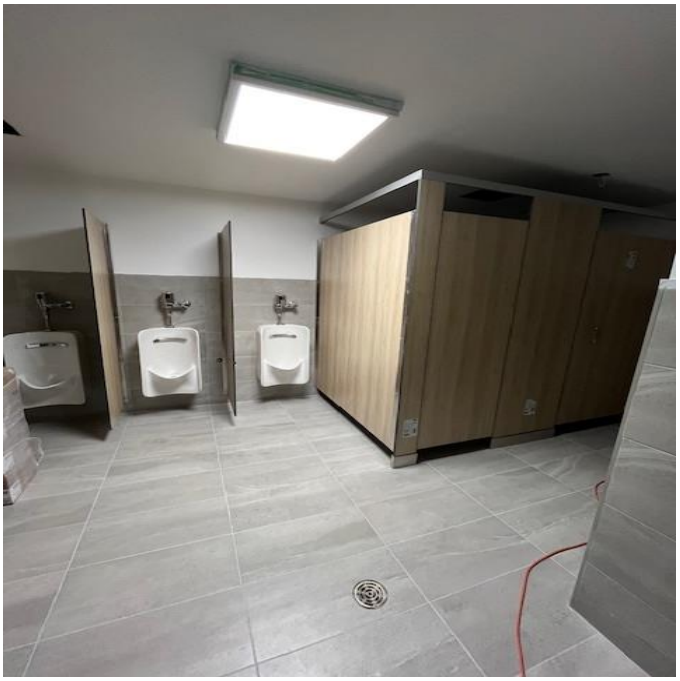


Photograph 1: Representative photograph of entrance to Washroom B3170.



Photograph 2: Representative photograph interior of Washroom B3174 upon completion of renovation activities.

APPENDIX B

Statement of Limitations

STATEMENT OF LIMITATIONS

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The findings, recommendations, suggestions, or opinions expressed in this Report reflect the Company's best professional judgment based on observations and/or information reasonably available at the time the work was performed, as appropriate for the scope, work schedule and budgetary constraints established by the Client. No other warranty or representation, expressed or implied, is included in this Report including, but not limited to, that the Report deals with all issues potentially applicable to the site and/or that the Report deals with any and all of the important features of the site, except as expressly provided in the scope of work.

This Report has been prepared for the specific site, development, building, design or building assessment objectives and/or purposes that were described to the Company by the Client. The applicability and reliability of the content of this Report, subject to the limitations provided herein, are only valid to the extent that there has been no material alteration or variation thereto, and the Company expressly disclaims any obligation to update the Report. However, the Company reserves the right to amend or supplement this Report based on additional information, documentation or evidence made available to it.

The Company makes no representation concerning the legal significance of its findings, nor as to the present or future value of the property, or its fitness for a particular purpose and hereby disclaims any responsibility or liability for consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

Since the passage of time, natural occurrences, and direct or indirect human intervention may affect the views, conclusions and recommendations (if any) provided in this Report, it is intended for immediate use.
This Statement of Limitations forms an integral part of the Report.

The assessment should not be considered a comprehensive audit that covers and eliminates all present, past, and future risks. The information presented in this Report is based on data collected during the completion of the site assessment conducted. The overall site/building conditions were extrapolated based on information collected at specific sampling locations. Professional judgement was exercised in gathering and analyzing data; however, no sampling methodology can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Consequently, the actual site/building conditions between the sampling points may vary. In addition, analysis has been carried out only for the parameters identified, and it should not be inferred that other hazardous materials are not present.

It is recommended practice that the Company be retained during subsequent phases of the project, to confirm that the conditions throughout the site do not deviate materially from those encountered throughout the sampling program.

Any description of the site and its physical setting documented in this Report is presented for informational purposes only, to provide the reader a better understanding of the site and scope of work.

Any results from a third-party laboratory or other subcontractors reported herein have been carried out by others, and the Company cannot warrant their accuracy.

This Report is based on the assumption that the design features relevant to our work will be in accordance with applicable codes, standards, and guidelines of practice and constructed substantially in accordance with the Report. If there are any changes to the site development or building construction features, or there is any additional information that was not otherwise available at the time the work was performed, the Company should be retained to review the implications thereof to the contents of this Report. The design recommendations expressed in this Report are applicable only to the project described therein.

No attempt was made to dismantle, inspect, or test existing equipment other than that which is specifically noted in the report.