



28592 Orchard Lake Rd., Ste. 350  
Farmington Hills, Michigan 48334  
Phone: (248) 932-8800  
Fax: (248) 932-8810  
[www.IAQManagement.com](http://www.IAQManagement.com)

---

March 26, 2018

Honey Creek Community School  
1735 S. Wagner Rd.  
Ann Arbor, MI 48103  
Attn: Al Waters

Re: Air Quality Testing

Dear Mr. Waters,

Pursuant to your request, IAQ Management Services performed indoor air quality testing at the structure located at 1735 S. Wagner Rd. in Ann Arbor, Michigan. This testing was performed March 13, 2018. This document is intended for the client and does not confer any rights or remedies to any other 3<sup>rd</sup> party.

Air testing was performed for over 400 polar and non-polar volatile organic compounds with active sampling techniques using TDT (Thermal Desorption Tube).

Enclosed are the results of the testing. Please call this office with any questions. Thank you.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Jon Dattilo". The signature is fluid and cursive, with a large loop at the end.

IAQ MANAGEMENT SERVICES, INC.  
Jon Dattilo – Principle Hygienist  
Indoor Environmental Professional

---

## 1.0 SAMPLE PLAN – LEVEL I<sup>1</sup>

The sample plan is not intended to identify all forms of contamination in the structure, rather only identify airborne concentrations for volatile organic compounds at sampled locations at the time of testing. Results and conclusions should not be construed as any form of implied or written guarantee. This sample plan is not to be construed as a health evaluation. The evaluation criteria for inhabitability of the structure ultimately involves close consultation with a physician.

### 1.1 Agents under Study

- Hydrocarbons
- Volatile Organic Compounds
- Semi Volatile Organic Compounds

### 1.2 Potential Sources

- Indoor sources of gas phase pollutants, including post combustion out-gassing, cleaning products, construction material out-gassing, health & beauty aids, and air fresheners.
- Outdoor sources of gas phase pollutants, including vehicle emissions, industrial emissions, and soil gas.

### 1.3 Anticipated Pathways

Contaminant pathways include no less than the following:

- Heating, Ventilation and Air Conditioning System(s)
- Air currents within the occupied space, doorways, and structural breaches

### 1.4 Anticipated Concentration

Given the absence of significant contaminant sources or odors observed by the technician, concentrations are expected to fall below established NIOSH guidelines.

## 2.0 SAMPLE LOCATIONS, SAMPLE METHOD, & ANALYTICAL SCOPE

### 2.1 Sample Locations

- Room A1
- Room A5
- Outdoors

### 2.2 Sample Method

- **TDT samples** are collected using a pre-calibrated vacuum pump with a solid sorbent tube. Each end of the sorbent tube is broken to provide airflow through the tube and immediately secured into the vinyl hose for sampling. Samples were collected at .2 liters per minute for 200 minutes. After sampling, the caps for the tube are immediately placed onto the ends and the sample is placed into a glass vial that is placed into a plastic bag.

---

<sup>1</sup> Limitation: The Level I sample plan should be considered an Initial Screening and does not involve the use of duplicate samples, as such processes and apply to Level II sample plan.

### 2.3 Analytical Scope

- **TDT sampling:** TDT sampling involves active sampling techniques with the use of Trimatrix sorbent tubes for GC/Mass Spectral analysis. Qualification and quantification of over 400 polar and non-polar volatile compounds is possible with this method. Samples are submitted for total scan (*See Appendix A: NIOSH 2549 AirSurvey List of Compounds*).

### 3.0 ANALYTICAL METHODS

- Gas Chromatography-Mass Spectrometry

### 4.0 ANALYTICAL RESULTS

Air test results are consistent with **acceptable air quality** for the broad spectrum compound range (NIOSH 2549 / Air Survey Analysis List of Compounds) at Room A1 and Room A5.

Airborne concentrations of identified constituents fall within established governmental limits (including DEQ Part 201/213 Acceptable Indoor Air Concentrations [AIAC]), National Institute for Occupational Safety and Health, and Michigan Occupational Safety and Health Administration.

Also, total VOC concentrations measured “ideal” (<200 ng/L) when compared to work done by *L. Molhave, (Volatile Organic Compounds, Indoor Air Quality and Health, Vol. 5, International Indoor Air Quality Conference, Toronto, Canada, 1990)<sup>2</sup>*.

Thank you for allowing IAQ Management Services to serve your environmental needs. Please do not hesitate to contact this office with any questions. Thank you.

Respectfully Submitted,



IAQ MANAGEMENT SERVICES, INC.  
Jon Dattilo Principle Hygienist  
Indoor Environmental Professional

---

<sup>2</sup> These levels should not, in any way, be construed as definitive. Liability for reliance on the data contained in the referenced data is therefore disclaimed.

CONSTITUENT CONCENTRATION (ng/L) FINDING

Comparison to

DEQ, NIOSH, and MIOSHA ACCEPTABLE INDOOR AIR LIMIT

Substance	1 Room A1	2 Room A5	3 Outdoor	DEQ (ug/m <sup>3</sup> )	NIOSH	MIOSHA
Toluene	0.6 ug/m <sup>3</sup> 0.2 (ppb)	1.0 ug/m <sup>3</sup> 0.3 (ppb)	-	600 ug/m <sup>3</sup>	100 ppm	100 ppm
Acetone	5-20 (10) ug/m <sup>3</sup> 4.0 (ppb)	3-12 (6) ug/m <sup>3</sup> 2.4 (ppb)	-	8,800 ug/m <sup>3</sup>	590 ug/m <sup>3</sup>	750 mg/m <sup>3</sup>
Trichlorofluormethane	-	1.7 ug/m <sup>3</sup> 0.3 (ppb)	-	84,000 ug/m <sup>3</sup>	1000 ppm	-
Dichlorodiflouromethane	-	0.6 ug/m <sup>3</sup> 0.1 (ppb)	-	74,000 ug/m <sup>3</sup>	-	1000 ppm

1 mg/m<sup>3</sup> = 1,000 ng/L  
 1.0 ppm = 1,000 (ppb)  
 ug/m<sup>3</sup> = ng/L