**Letter from the DPH IAQ Program to Lowell School Superintendent, May 2, 2017**

May 2, 2017

Salah Khelfaoui, Superintendent  
Lowell School District  
155 Merrimack Street  
Lowell, MA 01852

Dear Superintendent Khelfaoui:

The Massachusetts Department of Public Health (MDPH), Bureau of Environmental Health (BEH), Indoor Air Quality (IAQ) Program conducts assessments of conditions within schools and other public buildings. This letter is to inform you that we have received a number of complaint/concerns regarding IAQ conditions at the Lowell High School. In order to address these concerns, the MDPH IAQ program can work with the school department to identify issues and make remediation recommendations. We have conducted a number of assessments in the City of Lowell schools over the past 20 years and now offer the same services to address concerns about Lowell High School.

The IAQ Program has the responsibility to advise government concerning sanitary and other conditions in public institutions (M.G.L. c. 111 sec. 5). Under this authority, the IAQ program conducts assessments of indoor air quality in public buildings throughout Massachusetts, including public schools.

Assessments are typically conducted at the request of local health officials, concerned parents, faculty, school staff members, members of the legislature and others. An initial telephone inquiry is completed to review issues of concern. Local health officials, the school’s superintendent, and/or school administration are contacted and notified of the request and an assessment appointment is scheduled. BEH staff request that any related IAQ reports as well as heating, ventilating, and cooling (HVAC) equipment replacement or balancing reports be made available prior to an assessment. In general, IAQ assessments in schools require one full day to complete the testing protocol. Testing is conducted with the school open and under typical occupancy. The actual duration of an individual assessment is dependent on the size of the building and the scope of the problems discovered in a building.

The day of the assessment, BEH staff meets with available individuals, including local health and school officials, school staff and/or other concerned individuals to gather information regarding exposure and symptoms experienced or believed to be attributed to the building. An inquiry is made regarding the building, including building size, specific program functions (e.g. shop activities, science labs), population of teachers and students, renovation history and HVAC function and maintenance.

During an assessment, the IAQ staff conduct room-by-room air monitoring and visual inspections. Inspections involve an assessment of factors contributing to indoor air quality, including:

* condition/operation of the heating, ventilating and air-conditioning systems;
* presence of/potential sources of microbial growth;
* presence of point sources of indoor air pollution (e.g. office equipment, science materials);
* presence of allergens and/or asthma-inducing materials; and
* conditions of the building envelope.

Proper ventilation is a necessity for maintaining indoor air quality. To determine the status of a ventilation system, both physical and operational factors must be considered. The physical conditions of an HVAC are evaluated through an examination of filtration, location of air intakes, ability of air handling equipment to control fresh and return air as well as an examination of the interior of the unit in contact with moving air. The adequacy of condensation drainage and the location of thermostats are also addressed. The following parameters are typically measured:

* Temperature
* Relative humidity (RH)
* Carbon dioxide (CO2)
* Carbon monoxide (CO)
* Airborne Particles (AP)

As previously discussed, visual inspections are also conducted to ascertain the following:

* Conditions related to water damage and mold growth
* Conditions related to pest infestation
* Presence of respiratory irritants (e.g. dry erase markers, laminators)

Following an assessment, BEH staff meet with school officials to provide immediate comments and recommendations. Written reports are typically issued 6-8 weeks following the assessment.

We would appreciate it if someone from your office could contact our program in order to develop an appropriate course of action for addressing the concerns raised at this school building. The IAQ Program can be reached either by e-mail at [mike.feeney@state.ma.us](mailto:mike.feeney@state.ma.us) and [cory.holmes@state.ma.us](mailto:cory.holmes@state.ma.us), or by telephone at (617) 624-5757.

Thank you for your time and attention in this matter.

Sincerely,

Michael A. Feeney, R.Ph., J.D., C.H.O.  
Director, Indoor Air Quality Program

cc:  Jan Sullivan Acting Director, Bureau of Environmental Health   
Brian J. Martin, Principal, Lowell High School  
Kerran Vigroux, Director, Lowell Health and Human Services  
Shaun Shanahan, Lowell Building Commissioner