

INDOOR AIR QUALITY ASSESSMENT MOLD INVESTIGATION

**Essex Superior Court
34 Federal St.
Salem, Massachusetts 01970**



Prepared by:
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Bureau of Environmental Health
Indoor Air Quality Program
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Background/Introduction

At the request of Steven Carroll, Director of Court Facilities, the Massachusetts Department of Public Health (MDPH), Bureau of Environmental Health (BEH) provided assistance and consultation regarding indoor air quality concerns at the Essex Superior Court located at 34 Federal Street, Salem, Massachusetts. Concerns related to water damage and potential mold growth as a result of a pipe burst flooding prompted the request. On January 21, 2009, a visit was made to this building by Michael Feeney, Director of BEH's Indoor Air Quality (IAQ) Program.

Several weeks prior to the assessment, a pipe supplying fresh water to a bathroom sink on the top floor of the building froze and subsequently burst due to extreme cold weather (Picture 1). The adjacent jury room wood floor became wet due to water from the pipe but reportedly dried quickly. Plaster walls as well as office carpeting in rooms and hallways below the pipe burst were damaged. Prior to the BEH assessment, the damaged carpet had been removed and replaced. Remediation efforts to repair water-damaged plaster walls had commenced.

Methods

MDPH staff performed a visual inspection of building materials for water damage and/or microbial growth.

Microbial/Moisture Concerns

In order for building materials to support mold growth, a source of water exposure is necessary. Repeated water damage to porous building materials (e.g., gypsum wallboard, ceiling tiles, and insulation) can result in microbial growth. The US Environmental Protection Agency

(US EPA) and the American Conference of Governmental Industrial Hygienists (ACGIH) recommend that porous materials be dried with fans and heating within 24 to 48 hours of becoming wet (US EPA, 2001; ACGIH, 1989). If not dried within this time frame, mold growth may occur. Once mold has colonized porous materials, they are difficult to clean and should be removed.

As discussed, prior to the BEH assessment, the water-damaged carpet from an office below the restroom had been removed and replaced. At the time of assessment, remediation of water-damaged plaster walls was in process. Plaster does not support mold growth. Due to the age of the building, it is extremely unlikely that insulation exists within the wall cavities; wall cavities are likely hollow and would dry rapidly. All areas examined were free of musty odors and visible mold growth. No porous building materials (i.e. carpeting, gypsum wallboard) or other materials (i.e. books) appeared to have been moistened as a result of this event.

Conclusions/Recommendations

In view of findings at the time of assessment, the following recommendations are made:

1. Continue with repairs to plaster walls..
2. Consult “Mold Remediation in Schools and Commercial Buildings” published by the US Environmental Protection Agency (US EPA, 2001) for more information on mold. This document can be downloaded from the US EPA website at:
http://www.epa.gov/iaq/molds/mold_remediation.html.
3. Refer to resource manuals and other related indoor air quality documents for further building-wide evaluations and advice on maintaining public buildings. These materials are located on the MDPH’s website at <http://mass.gov/dph/iaq>.

References

ACGIH. 1989. Guidelines for the Assessment of Bioaerosols in the Indoor Environment. American Conference of Governmental Industrial Hygienists, Cincinnati, OH.

US EPA. 2001. "Mold Remediation in Schools and Commercial Buildings". Office of Air and Radiation, Indoor Environments Division, Washington, DC. EPA 402-K-01-001. March 2001. Available at: http://www.epa.gov/iaq/molds/mold_remediation.html

Picture 1



Sink With Burst Pipe

Picture 2



Juror Room Floor

Picture 3



Water Damaged Plaster below Restroom in Main Hallway