

*Indoor Air Quality Investigation
at
Enfield Town Hall Annex Building
47 North Main Street.
Enfield, Connecticut
September 18, 1996*

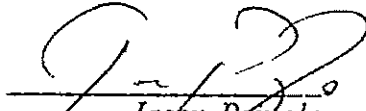

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Summary

In August 1996, EnviroMed Services, Inc. (EMS) was retained by the Town of Enfield to perform an indoor air quality investigation at the Town Hall Annex building located at 47 North Main Street in Enfield, Connecticut. The purpose of the investigation was to determine a potential cause for odors that employees were indicating while working in the building. Doug Rhoads and Jason Pringle of EnviroMed performed the survey on August 8, 1996.

Testing and Analysis

EMS staff first met with Bill Sperraza, who explained that employees throughout the building have been complaining of a rotten egg smell while at work within the building. Based on the walkthrough of the building and the information obtained from Mr. Sperraza, the following sampling scheme was developed to determine whether or not an indoor air quality issue is occurring:

- Test for the presence of carbon monoxide (CO) using a Biosystems PhD Atmospheric Multi-Gas Monitor.
- Test for the presence of methane using a Biosystems PhD Atmospheric Multi-Gas Monitor.
- Test for the presence of hydrogen sulfide using a Biosystems PhD Atmospheric Multi-Gas Monitor.
- Test for the presence of Volatile Organic Compounds using the MSA Photionization Detector.

Testing was conducted on all three floors throughout the building as well as outside.

Results of Sampling

The following results were obtained during the indoor air quality investigation :

- *Carbon Monoxide.* A few areas in the hallway on the first floor were found to have concentrations of 1 part per million. All of the areas were found to have concentrations of 0 ppm.
- *Methane.* Methane was not detected in any of the sample locations.
- *Hydrogen Sulfide.* Hydrogen Sulfide was not detected at any of the sample locations.
- *Volatile Organic Compounds.* The highest concentration found throughout the building was in the men's bathroom in the basement. The levels in this area ranged from 4.1 to 12.2 parts per million(ppm). The women's bathroom in the basement and the southeast exit on the first floor were found to have levels of 1.9 ppm and 0.7 ppm respectively. All other areas were found to have levels of 0 ppm.

Observations

During the investigation the following observations were made:

- All unused sewer lines in the women's bathroom located in the basement were found to capped be off.
- The sewer drains in the women's basement bathroom were found to be dry and therefore could possibly be giving off a sewer gas odor. However, the sewer drains in the basement men's bathroom were found to have moisture in drains.
- The rotten egg smell was found to be strongest near the west wall in the west end stairwell landing between the first and second floors.
- It could not be determined if the drain lines on the roof were clogged or unclogged.

Conclusions and Recommendations

Based on the results obtained during the indoor air quality investigation at the Enfield Town Hall Annex, EnviroMed Services, Inc. makes the following conclusions and recommendations:

- Due to the dryness of the sewer drains in the ladies room, mineral oil should be used to keep the system wetted. All drains should be maintained by keeping them wetted to prevent off-gassing.
- Review the blueprints of the sewer lines and drains to determine if there are any sewer lines or other plumbing that are running behind the west wall of the west stairwell that may be leaking and potentially be the source of the odor in the building.
- If the blueprints are not available, it maybe necessary for part of the west wall in the west stairwell be removed to determine if there is something behind the wall that is the source of the rotten egg smell, such as open sewer drain or vent lines.
- After the blueprints have been reviewed or the decision has been made to open up the wall in the west stairwell, EvnriMed Services should be notified to assure that the proper sampling parameters are met.