



CASE STUDY: NATURAL GAS LEAKS

Project Description: Odor Investigation
Commercial Building

Scope of Services: AET was contracted to evaluate a reported foul trash-like odor in a small commercial building. The odor was most prevalent in the morning hours.

AET's Investigative Approach/Sampling/Tools:

1. **Odor Threshold:** AET's IAQ investigator perceived the odor more as a rotten egg smell and suspected a natural gas leak. Natural gas is a colorless and almost odorless gas but since 1937, methyl mercaptan has been added to provide a warning property in the event of a leak. Methyl mercaptan has a very low odor threshold of less than 0.01 ppm.
2. **NGX-5 GasTrac Testing:** This direct reading instrument with an audible sensor alarm was used to evaluate natural gas piping distribution system throughout the commercial building. A small leak was found on the natural gas meter as well as one on the bypass switch on the hot water heater. Natural gas levels were below the lower explosion limit (LEL).

AET's Experience: Due to the explosive nature of natural gas and the ease of detection, AET considers the evaluation of natural gas sources and the distribution system (piping) a necessity on every IAQ investigation. Despite its good odor warning property, natural gas buildup and resulting explosions in schools, homes, and other commercial buildings kills hundreds of people every year.

CONCLUSION: Repairs were performed by specialty trained licensed contractors.

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