

## ODOR INVESTIGATION 101: PUNGENT “VOMIT-LIKE” ODOR

### FOLLOW YOUR NOSE.... THEN JUST FIX IT

All odor investigations involve an experienced IAQ Professional asking questions and following their nose to find the odor source. Direct reading instrumentation is extremely helpful but not always critical. Identification of specific chemicals within the odor by extensive air sampling is not only costly, but can often result in significant delays due to laboratory sample turnaround times. Conversely, your nose can perceive odors in the parts per billion (PPB) range and typically, well below established governmental standards or where health effects can occur.

**AET Experience:** Vomit-like odors are almost a catch-all phrase used by building occupants to describe strong, disgusting pungent and/or rancid odors. Rarely is the odor related to an individual becoming sick. This odor has been associated with various chemicals (such as butyric acid or carboxylic acid, plastic and vinyl products and even flowers and food products). One frequent cause of this odor is the use of old dirty water containing cleaning solutions on floors, walls and other surfaces which in drying emit this odor.



### Recent Case Study: Emergency response to an odor complaint at a bank branch location

Question .....What does the odor smell like?

*A pungent odor similar to vomit.*

Question .....Where is the odor strongest?

*Inside the bank near the teller line.*

Question .....Is the odor intermittent or constant? When was it first noticed? Has any renovations, repairs or changes occurred within the bank during this time?

*The odor is intermittent, started 2-3 days ago and there have been no changes.*

Question .....What time of day is the odor most prevalent?

*There is no odor until the bank has been open for 1-2 hours. No odor complaints on Monday morning after the bank has been closed for the weekend.*

### THE RIGHT SOLUTION

1. Interior building materials (*ruled out*): The odor is not constant nor is there signs of staining or water damage in the bank branch.
2. HVAC (*ruled out*): No perceived odors were found emanating from the supply diffusers. HVAC operation on a daily basis has a setback (turned on at 6:00 a.m.). There is no odors when the building is first opened.
3. Accumulation of solid materials, trash, lack of cleaning, old stored items, decomposing, etc. (*ruled out by visual inspection*)
4. Drive through document carrier tubes: This vacuum system operates to bring deposits, withdraws, and other items into the bank through tubes via the drive through area. These tubes once inside the bank also extend through a ceiling plenum. A similar pungent “vomit-like” odor was perceived by the inspector during the use of this system. The system was partially disassembled, and the same odor was noted inside the lower blower assembly.

**END RESULT:** The blower assembly was replaced and the carrier tubes cleaned. Reports of odors ceased.

When you need professional industrial hygiene advice email Alan Sutherland, CIH, CHMM at [a.sutherland@aetinc.biz](mailto:a.sutherland@aetinc.biz) or call 610-891-0114. We provide nationwide services; phone consultations are free. Check out the full range of environmental contracting/consulting services on our website [www.aetinc.biz](http://www.aetinc.biz).

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