



SAFETY ALERT

Campus Incident—Chemical Vapor Release

RISK MANAGEMENT & SAFETY

Date: December, 2014
Category: Chemical Hygiene
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Description

A vapor chemical release occurred in a lab in Fitzpatrick Hall . There were no injuries but the vapors migrated throughout the building. The release occurred when a door to a vacuum oven was opened and the ventilation in the lab was not functioning properly. The oven was opened to monitor the progress of an experiment. ND Fire Department responded and conducted air testing. No detectable air measurements were assessed so the building was not evacuated.

Findings

- The ventilation system in the building is not balanced.
- There was insufficient draw from the lab hoods to capture vapors because 3 other hoods in adjacent labs were open at the same time.
- The experiment's procedure did not specify the length of time required for process.
- The vacuum oven and pump were on the bench top with an exhaust hose from the pump to the hood adjacent to the oven.
- This was the first time the experiment was performed by the graduate student.
- The graduate student was working alone.

Root Causes

- The building's ventilation system is not balanced.
- The fume hoods had insufficient capture velocity.
- The vapors in oven were not exhausting properly due to placement of exhaust hose.
- The experiment's procedure did not specify the amount of time required for the process, the safety hazards involved with the experiment, or the required personal protective equipment.

Recommended Actions

- Balance the building ventilation system (previously identified in a prior 2014 incident report).
- Revise the process for conducting the experiment and develop a procedure addressing the associated hazards and required personal protective equipment. This includes developing a procedure detailing the process for venting and opening of the vacuum oven.
- Establish an action point for when to pull the alarm for evacuation of the building.