

CLOSE ENCOUNTERS OF THE LAB KIND

THE SANTAYANA REPORT

George Santayana was a Spanish-American philosopher, essayist, poet, and novelist. In 1905, he penned the famous aphorism “those who cannot remember the past are condemned to repeat it.” More than a century later, the saying reverberates with professionals the world over. The following is a summary of a recent incident at Columbia University. The information presented is intended to provide awareness and help readers plan against the occurrence of a similar situation in their laboratory or work area.

Too Hot to Handle, Too Cold to Hold

Environmental rooms, known more colloquially as warm and cold rooms, are designed for storing or handling laboratory materials in a constant-temperature environment. On the surface the majority of these are just big walk-in refrigerators, but have you ever considered how environmental rooms maintain their constant temperature? Or wondered about the potential hazards that could be lurking inside?

Environmental rooms regulate their temperature by heating or cooling recirculated air. By conditioning recirculated air, less energy is used than to condition the fresh air that is supplied to traditional laboratory spaces. Sounds good, right? While recirculating the air has the aforementioned benefits, and offers cost and energy savings to the University, there is another, hidden cost to consider, and that can be your safety. Recirculating the air within the room means that fresh air is only entrained into the room when the door is opened and closed. If a hazardous material were to be released into the room, the atmosphere could quickly become explosive, toxic, or oxygen deficient! Unfortunately, this type of incident occurred at the University recently.

A container of dimethyl formamide was inadvertently released inside of a cold room, resulting in a very hazardous situation. In addition to being flammable, dimethyl formamide, or DMF, is a reproductive and liver toxin. Nobody was injured during this particular event, but the potential for this type of incident to cause serious harm is real. So what can you do to ensure that environmental rooms are safe for you and your colleagues?

Lessons Learned

- Keep food and beverages in the pantry, and not in the cold room.
- Safely store hazardous materials in main laboratories rather than environmental rooms.
- For more detailed information about keeping your environmental room safe, please visit the EH&S website at <http://ehs.columbia.edu> and search for “environmental room safety”.
- Interested in the safety conditions of the other environmental rooms at the University? Look for the Fall 2015 edition of the [SafetyMatters](#) newsletter coming in September 2015.

For further information, or to view previous Santayana Reports, please visit our [lessons learned website](#).
For any other safety related matter, please contact the [EH&S office](#).