



UNIVERSITY OF  
NOTRE DAME

## SAFETY ALERT

**Incident Type:** Carbon Monoxide Release, Unreported.

**Date and Time:** Date is estimated to be between December 15, 2013 and January 15, 2014; Time was approximately 11:30 PM

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### Incident Description

A postdoc was conducting an experiment under the guidance of a Principal Investigator. The experiment was being conducted in a laboratory not in the researcher's department.

The Post Doc was replacing a gas cylinder that contained carbon monoxide (CO) and argon. After disconnecting the cylinder and tightening the cap the postdoc placed the cylinder on a transport cart. At this time he heard a sound similar to a gas leak. The Post Doc thought it was CO escaping so he immediately left the laboratory and performed a sweep of the area. One person was found working on the same floor. They both exited the building but returned shortly thereafter to investigate the leak. The Post Doc tightened the valve which stopped the leak. Believing the area to be safe, both individuals returned to work.

The Post Doc did not feel the situation to be serious enough to warrant a call to Notre Dame Security or Fire Department, nor to his Principal Investigator (PI.)

### Incident Findings:

- The experiment was conducted in a shared laboratory.
- A Post Doc was working alone at night at the time of the event.
- The Post Doc was not aware of specific protocol to report such an event.
- The portable CO alarm that the lab had was not in the area at the time.
- The Post Doc believed there to be fixed CO monitors in the building even though there were none.
- No one was made aware of the event until a Safety Committee meeting.

**Root Causes:**

The release was caused by the cylinder valve not being closed completely during cylinder change out and the postdoc did not report the incident.

The management system causes include:

- Training – The postdoc was unaware that the incident should have been reported immediately to emergency personnel and his PI.
- Procedural – The portable CO monitor was not in the lab at the time of the incident.
- Communication – The postdoc was not aware that there were no fixed CO monitors in the building.

**Recommended Actions for the PI and Department:**

1. Communicate the necessity of reporting all incidents that could result in the release of hazardous material to emergency response personnel.
2. Require use of CO monitors in labs where the potential exist for release of carbon monoxide.
3. Communicate to lab personnel that no air monitors exist and the only alarms are for building evacuation or shelter-in-place for weather emergencies.
4. The unit/department shall develop a specific policy regarding working alone in a lab and communicate to all personnel.

**Recommended Actions for All Laboratory Researchers and Managers**

1. Communicate this safety alert to personnel working in your laboratory.
2. Communicate to laboratory personnel the emergency response procedures for your department and any specific procedures for your laboratory.
3. Communicate the working alone process for the department and your laboratory.