

COUNTY COLLEGE OF MORRIS Business and Finance Division Procedures	
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General

Carbon monoxide (CO) detection is required in buildings where there is an actual or potential danger to the occupants per the NJ Uniform Fire Code. When a carbon monoxide detector sounds an alarm, the following procedure is to be performed to verify the source of the alarm, the conditions under which the alarm occurred, and to protect the safety and welfare of the building occupants.

Carbon monoxide is a colorless, odorless, tasteless gas, that is difficult for a human to detect but can be suspected with common symptoms. As a precaution against carbon monoxide exposure hazards, buildings are equipped with carbon monoxide detectors that are tied into existing fire detection systems or are stand-alone detectors. CCM maintains hand-held carbon monoxide detectors in the Public Safety, Plant & Maintenance and Human Resources departments.

Activities and locations where carbon monoxide is routinely generated include:

- Building heating systems, hot water heaters, and emergency generators that burn natural gas or propane, usually in building mechanical spaces or other outdoor locations.
- Indoor or outdoor cooking systems that burn natural gas, propane or charcoal, and food warming devices that burn Sterno fuel canisters.
- Any other device which combines an open flame and fuel source: wood fires, candles, etc.

Carbon monoxide exposure inhibits the body's ability to take in oxygen. The physical signs/symptoms associated with carbon monoxide exposure may include headaches, nausea, dizziness, confusion, fatigue, red/flushed skin and hallucinations, each of which worsen as either carbon monoxide's concentration in air or duration of exposure increases. Where there is exposure to smoke/fire, there is also exposure to carbon monoxide.

Procedure

In the event of an activation of any carbon monoxide detector on campus, the following procedures are to be implemented.

Authority

Vice President for Business & Finance
Director of Public Safety

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Responsibility

Director of Public Safety
Assistant Director of Public Safety
Public Safety Staff
Compliance Officer
Fire Marshals (appointed by area supervisors)
Director of Plant & Maintenance
Associate Director of Plant & Maintenance
Director of Facilities Planning
Plant & Maintenance Staff

Procedure When an Alarm is Sounded from a Carbon Monoxide Detector

- When a carbon monoxide detector sounds an alarm in a space, Public Safety (X5550 or 973.328.5550) is to be notified immediately, and the occupants of the room shall leave the space as a precaution and to protect their hearing as the alarm may be loud. Doors to the space shall be immediately closed (but not locked).
 - When Public Safety receives a CO alarm from either a monitored system through the fire alarm, or a phone call about a stand-alone monitor alarm, a Public Safety Officer will be dispatched immediately to the area with a hand-held CO detector to ensure the room/space was evacuated. If the hand-held CO detector alarms (audible alarm at 35 ppm CO or greater) approaching the area, the Public Safety officer will not proceed, and will request that the building be evacuated. Doors to the space shall be immediately closed (but not locked). If there is a confirmed detection within safe levels (<35 ppm), the Public Safety officer with the hand-held CO detector will check the adjacent spaces and determine the extent of the carbon monoxide spread.
 - If it is localized to only one room or a connected room, **and the levels are detectable but within recognized safe levels (<35 ppm):**
 - The Public Safety officer with a hand-held CO detector will secure the room by closing the doors to the space (but not locking them).
 - They will notify Plant & Maintenance (X5500 or 973.328.5500) of the detection, and ask that HVAC personnel with a hand-held CO detector be dispatched to the location to help determine the source (if safe to do so) and shut down the system as necessary.
 - Public Safety will notify the VP of Business & Finance, or their designee, immediately of the confirmed CO detection.
 - Public Safety will continue to monitor the adjacent spaces at five (5) minute intervals to determine if there is any spread or rise in levels and request evacuation of those spaces or the building if necessary.
 - If the extent of the spread is determined to be three or more separate spaces **or the amount of carbon monoxide is above safe levels (>35 ppm):**
 - The Public Safety officer will request that Public Safety evacuate the building where the detection occurred.

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- This typically means just the building of the detection and not necessarily the whole connected complex (in case of the Academic Complex Buildings as an example).
- If it is determined that there is a reasonable risk to connected buildings, then Public Safety shall be instructed to evacuate the connected building.
 - All interior doors are to be closed, but not locked, to minimize spread of the carbon monoxide.
 - Public Safety will notify the Fire Department and any other emergency response resources necessary.
 - If there are individuals in the spaces that appear to be suffering from exposure, Public Safety will call for appropriate medical personnel to be dispatched.
 - Public Safety will instruct Plant & Maintenance (Plant) to remotely shut down the HVAC air handlers in the building where the alarm occurred and all occupants of the building (including Public Safety, Plant, and others) will be evacuated until the building is cleared by emergency responders.
 - Public Safety will notify the VP of Business & Finance or their designee immediately of the confirmed unsafe detection.
- Any faculty, staff or students feeling dizzy or otherwise compromised, should call out for assistance.
- Persons unable to exit due to fire related conditions or a disability, should call 911 and give their exact location so emergency responders can locate them to provide assistance.
- For a building evacuation, all building occupants proceed out the nearest exit to the assigned staging area.
- Persons with disabilities should review the “Procedures for Persons with a Disability” included in the College’s Emergency Evacuation Procedure 13.01.
- Follow the directions of the Public Safety staff, fire marshals or emergency responders.
- Do not re-enter the building until the all clear signal is given or you are directed to do so by the Public Safety staff, Fire Marshals or emergency responders.
- Any devices or equipment that are determined to be the likely source of the carbon monoxide shall be removed from the building or disconnected using the proper Lockout/Tagout Procedure to ensure the equipment is not used until serviced or repaired.

Procedure When Carbon Monoxide Presence is Suspected but not Detected

If you are in a building or space without carbon monoxide detection or where there is reason to believe that unsafe levels of carbon monoxide are present, immediately follow the “Procedure When an Alarm is Sounded from a Carbon Monoxide Detector” to ensure that a Public Safety Officer responds and checks the area.

Emergency Evacuation Procedure

Building evacuations shall be performed in conformance to the College’s Emergency Evacuation Procedure 13.01.

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Re-entering an Evacuated Building Procedure

Re-entering a building that has been evacuated due to suspected carbon monoxide presence will be performed in conformance to the College's Emergency Evacuation Procedure 13.01.

Emergency Responders will be the only individuals that can approve a building being reoccupied after a building evacuation due to suspected carbon monoxide presence. The Emergency Responders shall notify the Director of Public Safety or their designee to end the evacuation.

Detector Inspection/Test Procedure

Public Safety will inspect and test the carbon monoxide detectors on a monthly basis to ensure that the devices remain in compliance with this procedure. The attached floorplans will be used to confirm that each device remains in the spaces as shown and was not covered, disabled, removed, flashing any trouble indicators, or otherwise tampered with during the previous period. Each device will be tested by pressing the test button as per the manufacturer's recommendation. The Public Safety officer performing the test shall cover the speaker with their finger to muffle the sound of the alarm (as per the manufacturer's instructions) but provide confirmation that the audio alarm is functioning.

Floor plans will be used to indicate that each device was inspected monthly and to mark the location of any device that needs to be checked or replaced. A work order request shall be issued by the Public Safety officer for any issues, at the end of the day of the inspection, with a maximum of seven days for the work order due date.

Records of the inspections, results, and associated work orders will be saved in accordance with College procedures.

Detector Replacement Procedure

All purchased stand-alone carbon monoxide detectors will have a minimum of a 10-year battery life from the manufacturer, but will be replaced at 5-year intervals to ensure protection is effective. The following installation target list indicates replacement dates and initial target dates for a hardwired system if funding is available.

A Plant & Maintenance work order for device replacement shall be created one month in advance of the device replacement date shown in the chart that follows. Public Safety shall submit the work order request for replacement and Plant will have a preventative maintenance work order created for an automatic reminder (redundant notification).

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Hand-held Carbon Monoxide Detectors

Public Safety, Plant and Maintenance and the Compliance Officer will maintain working hand-held carbon monoxide detectors. After one year of service, and annually thereafter, the hand-held detectors will either be calibrated at a certified service location or replaced. Public Safety officers and Plant & Maintenance HVAC mechanics will be trained by their supervisors or designees in the operation of the hand-held carbon monoxide detectors as part of new hire training.

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Building	Initial Detection System Type Installed	Date Initially Installed	1st Device Replacement <small>(If system not replaced w/hardwired system)</small>	2nd Device Replacement <small>(If system not replaced w/hardwired system)</small>	Target Date for Hardwired System Install
Building 675	10 year battery stand-alone system	10/2018	10/2023	10/2028	2019
Academic Complex: Sheffield Hall	10 year battery stand-alone system	04/2019	04/2024	04/2029	2020
Academic Complex: Cohen Hall	10 year battery stand-alone system	05/2019	05/2024	05/2029	2021
Academic Complex: DeMare Hall	10 year battery stand-alone system	05/2019	05/2024	05/2029	2021
Academic Complex: Emeriti Hall	10 year battery stand-alone system	04/2019	04/2024	04/2029	2022
Student Pavilion	No system required or is exempted	N/A	N/A	N/A	N/A
Grounds Garage	No system required or is exempted	N/A	N/A	N/A	N/A
10-Bay Storage Building	No system required or is exempted	N/A	N/A	N/A	N/A
Lower Warehouse	No system required or is exempted	N/A	N/A	N/A	N/A
Dalrymple House	No system required or is exempted	N/A	N/A	N/A	N/A
Health & Physical Education Building	10 year battery stand-alone system	03/2019	03/2024	03/2029	2024
Henderson Hall	10 year battery stand-alone system	11/2018	11/2023	11/2028	2023
Old LHT Building	No system required or is exempted	10/2018	10/2023	10/2028	2019

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Greenhouses	No system required or is exempted	N/A	N/A	N/A	N/A
New LHT Building	No system required or is exempted	N/A	N/A	N/A	N/A
Learning Resource Center & Addition	10 year battery stand-alone system	02/2019	02/2024	02/2029	2025
Music Technology Building	10 year battery stand-alone system	01/2019	01/2024	01/2029	2022
Plant & Maintenance Building	10 year battery stand-alone system	11/2018	11/2023	11/2028	2023
Student Community Center	10 year battery stand-alone system	11/2018	11/2023	11/2028	2026
Advanced Engineering & Manufacturing Center	Hardwired System	2019	N/A	N/A	N/A