



MONTGOMERY COUNTY FIRE AND RESCUE SERVICE

Isiah Leggett
County Executive

Scott E. Goldstein
Fire Chief

July 4, 2016

To: MCFRS Personnel

From: Assistant Chief John J. Gallo 

Subject: Established Atmospheric Conditions & Meter Readings – FCGO 16-07

MCFRS personnel are exposed to a range of chemical contaminants both inhaled and transdermal while engaged in emergency operations. These exposures are linked to certain types of cancers. Personnel also experience heat stress which lead to elevated core body temperatures. Core body temperature elevation is linked to adverse blood chemistry changes. The focus of Fire Chief's General Order 16-07 is an attempt to strike a balance between these two risks. When a heat index is greater than 80 degrees, we will engineer an air quality solution, monitor the atmosphere, and allow the downgrade of respiratory and personal protective gear during overhaul. When the heat index is below 80 degrees, there is no benefit gained in reducing protection levels.

Below are decision points for the Incident Commander to consider before allowing personnel to downgrade their level of respiratory and personal protective equipment in accordance with the Fire Chief's General Order 16-07.

Atmospheric Conditions:

1. The heat index is **80 degrees or greater** (using the 20850 zip code).
2. The heat Index is a combination of the air temperature and the relatively humidity.
3. MCFRS follows the IAFF recommendation to add 10 degrees to the air temperature to account for heat retention of turn-out gear.
4. The OSHA Heat Index Smartphone App is the primary source for heat index determination.
5. In the absence of the OSHA Heat Index Smartphone App, the heat index will be calculated using the air temperature and relative humidity provided by ECC, referencing the National Oceanographic and Atmospheric Agency heat index chart.
[http://www.srh.noaa.gov/epz/?n=wxcalc_heatindex]
6. There is no visible smoke.
7. Existence and continued use of forced air ventilation with a non CO generating fan prior to any meter readings.

Health & Wellness Section

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Meter Use:

1. The meter user's sole responsibility is to monitor the scene atmosphere and may not serve in any other capacity.
2. Meters must be used in accordance with established equipment operating protocols.
3. Meters cannot be used when there is visible smoke.
4. Metering must be continuous with the frequency of checks not to exceed 15-minutes for each compartment.

Minimum Sensor Compliment:

1. O2 sensor with alarm set at 20.7%
2. CO sensor with alarm set at 25 PPM
3. HCN sensor with alarm set at 5 PPM
4. PID 10.6 EV bulb with alarm set at 10 PPM

Continued Mandatory SCBA Requirements:

1. If the meter user witnesses any of the following they must immediately recommend the returned use of SCBA:
 - a. The activation of any alarm on the meter.
 - b. Tearing, even in the absence of meter readings.
 - c. Any person complaining of shortness of breath or other respiratory complaints.
 - d. Any person complaining of eye or skin irritation.
 - e. Any time the presence of any substance or container larger than is typical for household use of known or suspected to contain any hazardous material or substance. e.g., pesticides, pool chemicals, etc...

Additional Considerations:

1. It is possible for personnel to require respiratory protection because of sensor readings while it is still safe enough for personnel to trade out their turnout coat in exchange for a long sleeved shirt.
2. If there are insufficient resources, either meters or personnel, to implement this process, personnel must not be allowed to downgrade their respiratory protection.

This document is meant to be used in conjunction with MCFRS Policy 26-06AMII (Respiratory Protection), FCGO 16-07 (Respiratory Protection/Cancer Risk Reduction) and the Fire Overhaul Risk Management self-study program produced by Assistant Chief Charles Bailey. Additional training materials are provided in Quicklinks under the Human Resources Division tab within the Safety drop down selection.

Additional questions can be addressed to the Health & Wellness Chief.

cc: File



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