

# BRISCOE

Protective Systems Inc.

SINCE 1978

New York State  
Fire Alarm And  
Security Systems  
License # 12000032751

Nassau County  
Fire Marshal  
No. FM-1053469

NYC Fire Dept. Accepted  
Full Service Fire Extinguisher,  
Smoke Detector & Fire Alarm  
Maintenance Company

## Introductory Letter

During the past several months, I have been attending and speaking at many of the public hearings on carbon monoxide legislation throughout Long Island.

I listened to John Largan, the partner of Steve Nelson, who passed away from CO poisoning at Legal Sea Foods in February, speak so passionately about the suffering Steve went through in the weeks before he finally succumbed. Even the doctors failed to diagnose his condition.

I read about the AMT (Advanced Medical Technician) who recently went into a Dunkin Donuts in Carle Place and happened to have a portable CO meter on his person that alerted him of 35 PPM of CO while he was waiting on line for coffee. He evacuated the premises and the responding fire department found a clogged exhaust vent.

*Both of these situations, in my opinion, started as chronic CO poisoning.* Chronic CO poisoning usually involves lower levels of the gas in the air and lower blood CO (COHb) concentrations. Exposure usually continues for many days. The boundary limit between acute and chronic exposure is indistinct (acute: one exposure lasting less than 24 hours; chronic: exposures lasting 24 hours or more).

I wrote the attached advisory because I wanted to make you aware the UL-listed carbon monoxide detectors or alarms *do not sound* an alarm for conditions under 30 PPM.

For conditions over 30 PPM to 70 PPM, *an alarm is not required* to be sounded for these devices until AFTER 30 DAYS. See the attached response times.

That means that if the 35 PPM condition in Dunkin Donuts remained at that level and if there were UL-listed detectors or alarms installed, with or without a digital display, they would NOT HAVE ALARMED until AFTER 30 days.

I am recommending the use of additional carbon monoxide monitors that produce alerts below the UL requirements to supplement, not take the place of, the required alarms and detectors. Please see the attached advisory.

If you or your staff have any questions, please contact Denise Rueda at 631-619-9416 or email [deniser@briscoeprotective.com](mailto:deniser@briscoeprotective.com).

Regards,

**Robert P. Williams**

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NYC Office: 116 WEST 23rd STREET • SUITE 500 • NEW YORK, NY 10011 • TEL (212) 643-8833 • FAX (877) 847-1285  
LONG ISLAND OFFICE: BRISCOE PLAZA • 99 MARK TREE ROAD • CENTEREACH, NY 11720 • TEL (631) 864-8666 • FAX (631) 864-8444  
[info@BRISCOEPROTECTIVE](mailto:info@BRISCOEPROTECTIVE) • [WWW.BRISCOEPROTECTIVE.COM](http://WWW.BRISCOEPROTECTIVE.COM)

## CARBON MONOXIDE THRESHOLD ADVISORY

### Limitations of Low-Level Carbon Monoxide Detection by CO Detectors and Alarms

*Before using or specifying either carbon monoxide detectors or alarms, in a commercial situation, everyone should be aware of the warnings that are included with many manufacturers' instructions:*

1. The device is not designed to comply with the Occupational Safety and Health Administration (OSHA) commercial or industrial standards.
2. Individuals who are elderly or very young or those with medical problems may require devices which provide audible and visual signals for carbon monoxide concentrations under 30 PPM. Prolonged exposure to even the smallest amount of CO can result in chronic illness.

**These are the alarm response times in parts per million (PPM) of CO for UL-listed CO detectors and alarms:**

Parts Per Million	Detector response time, min.
30 ±3 PPM	No alarm within 30 days
70 ±5 PPM	60-240
150 ±5 PPM	10-50
400 ±10 PPM	4-15

NOTE: *There is no alarm response or automatic digital display for CO concentrations less than 30 PPM in UL-listed alarms or detectors.*

**These are the exposure limits for some governmental agencies:**

- EPA (9 PPM over 8 hours)
- NIOSH/Part of the CDC (35 PPM over 8 hours)
- OSHA (50 PPM over 8 hours)

These residential and commercial exposure standards differ greatly from the UL guidelines.

If a person wants to get an alert before the UL thresholds to protect against low-level (30 PPM and below) CO exposure limits, they should purchase a *low-level carbon monoxide monitor* that provides an alert at lower limits than UL-listed CO devices do.

These *low-level monitors* are battery-operated and cannot be connected to an existing alarm system, but they give a low-level warning within minutes of a 10-30 PPM CO exposure event. With the UL-listed CO devices, you have to wait until AFTER 30 days of 30 PPM to get an alarm condition.

NOTE: These CO monitors are NOT a substitute for CO detectors or alarms and are only an early warning device.

**If you have any questions, concerns, or comments, please call:  
JR McCotter, Briscoe Protective Systems Inc., Chief of Technical Services  
(631) 864-8666 Ext. 217**