Members are urged to review the following references:
- "CO Detector Activation--The New Nuisance Alarm?," by Lieutenant James T. O'Connor, in the 1st/2007 issue of *WNYF*.
- "The Hazards of Carbon Monoxide," by Lieutenant Richard Curiel, in the 3rd/2009 issue of *WNYF*.
- "Carbon Monoxide Investigations--They May Not Be Routine Calls," by Lieutenant Christopher Flatley, in the 3rd/2009 issue of *WNYF*.
- *Firefighting Procedures*, Haz-Mat 4, Carbon Monoxide.
- *EMS CME*, July 2009, Article 1, Molecular Killers.

the building as units ventilated and continued to monitor. At this time, Haz-Mat 1, Squad 18 (Haz-Mat Tech Unit) and the Haz-Mat Battalion, along with a Verizon representative, were requested to respond. Throughout the operation, carbon monoxide levels elevated to 1100 ppm and the temperature of the batteries reached 186 degrees Fahrenheit, approaching the lower explosive limit.

The electricians and battery mechanics could not operate until ventilation procedures were implemented and atmospheric conditions were safe. It took several hours for levels on the first floor to drop in order for electricians to physically disconnect cables from the first-floor rectifiers that were connected to the battery room below.

A simple direct current (DC) disconnect at the location of the batteries could have prevented increased carbon monoxide levels, discharge of hydrogen gas and a possible explosion and release of sulfuric acid from the overheated batteries that continued to cook until the cables were disconnected. Also, the electricians had to operate with live electric. FDNY units operated for more than seven hours at this incident.

With the increased use of battery racks throughout New York City, some measures to consider in regard to battery rooms include:
- Remote DC disconnect for batteries.
- Hydrogen detection device that is connected to a Class 3 system.
- Carbon monoxide detection connected to a Class 3 system.
- Heat detection connected to a Class 3 system.
- Sprinkler protection.
- Ventilation system.

Many buildings throughout the City have uninterrupted power supply (UPS) systems for their computer networks. These UPS systems are battery-powered systems, designed to prevent a surge or dip in power when a building loses utility company power and before the back-up generator comes on-line and picks up the load. The location of UPS systems should be noted on CIDS.

Conclusion

These are just a few of the many lessons learned from a variety of incidents throughout the City. Members with skill sets from a previous life or from certifications held outside the job often are important resources in early identification of potential hazards, especially when the cause of the CO is not obvious. Carbon monoxide has been called the *silent killer*. By sharing the lessons learned, we don't need to be silent about what we have learned.

Officers involved in these unusual occurrences are encouraged to gather as much information as possible and use mechanisms, such as the *Pass It On Program* (ABC 1-97), to share that information with all members of the Department. The author thanks all those who contributed their stories to improve the response of the FDNY to these potentially lethal events.

About the Author...

Lieutenant Christopher Flatley is a 21-year veteran of the FDNY. He is assigned to Tower Ladder 21. Previously, he was assigned to Ladder 2. He is a nationally certified Fire Instructor I and has written articles for several other fire service publications, including Fire Engineering. *He writes frequently for* WNYF.

Taking Up

April -June, 2010

Deputy Chief

Patrick J. Savage	Division 3

Battalion Chiefs

Michael P. Borst	Battalion 51
Jack Taddeo	Battalion 8

Captains

Thomas R. Kelly	Ladder 33
Daniel J. McGovern	Ladder 144
Joseph Petrucci	Engine 263
Robert D. Sohmer	Ladder 85
Thomas J. Thompson	Engine 306

Lieutenants

Norman J. Anderson	Engine 240
Stephen J. Carbone	Engine 307
Brian K. Fitzpatrick	Battalion 23
Kevin A. Griffith	Ladder 106
Mark S. Kurtz	Engine 297
Patrick G. Martin	Engine 305
Brian A. McConville	Battalion 46
Stephen E. McNally	Battalion 18
Anthony W. Mikolich	Ladder 155
Patrick D. Murphy	Ladder 135
Anthony T. Nicosia	Ladder 82
Steven J. Nuzzo	Battalion 17
Paul D. Rhodes	Ladder 118
Giancarlo Sini	Engine 163
Stephen J. Wall, Jr.	Engine 42

Firefighters

Joseph P. Abramski	Ladder 155
Frank E. Barton	Battalion 23
James M. Brzezinski	Ladder 40
Michael A. Callahan	Ladder 26
Joseph D. Cicha	Ladder 104
Anthony S. Cittadini	Ladder 85
Kenneth M. Collins	Engine 216
James G. Corley	Ladder 14
Brian T. Daly	Ladder 173
James Donnelly	Ladder 8
Robert B. Fitzgibbon	Engine 47
Garry G. Giannandrea	Battalion 52
Daniel P. Gilmore	Engine 299
Brian S. Glenn	Ladder 151
John M. Gorman	Ladder 166
Alexander Gryner	Rescue 3
Robert H. Halliday	Ladder 162
Hugo S. Herold	Battalion 13
Stephen G. Humenesky	Engine 301
Edward Immel	Engine 303
Stephen R. Incarnato	Engine 268
Kevin J. Kelly	Ladder 138
Robert W. Kelly	Ladder 110
Michael P. Kennedy	Ladder 43
Sean P. Kern	Ladder 151
Mark P. Koetzner	Ladder 143
Thomas E. Lapp	Engine 74
John C. Maloney	Engine 250
John G. McAuliff	Ladder 152
Scott D. McClennan	Engine 62
Richard T. McMahon, Jr.	Ladder 146
Thomas Meyers	Engine 163
Robert E. Montgomery	Engine 295
Joseph M. Murphy	Engine 246
Dominic V. Nolan	Engine 71
Kevin R. Nolan	Engine 247
Gregory A. Patsos	Squad 252
Richard R. Pearsall	Engine 233
Kirk T. Pritchard	Ladder 1
Chris Robinson	Engine 286
Michael T. Satriana	Engine 246
Paul M. Scalard	Engine 81
Neil C. Schoer	Engine 164
Jason A. Silver	Engine 307
Harry F. Stefandel	Engine 221
James T. Sullivan	Ladder 142
Charles C. Thompson	Ladder 167
Damean A. Timm	Ladder 48
Robert J. Tomasulo	Engine 239
Dominick A. Tralli	H-M Battalion
Joseph F. Walsh, Jr.	Engine 290
Drew S. Williams	Engine 274
Michael Wolyniec	Ladder 150
Douglas J. Yenzer	Engine 286