President’s Message…

Our January meeting was well attended and we had a great presentation from Anthony Gee, Chief Technology Officer, Fireaway Inc. on a review of Aerosol Fire Suppression systems as well as products and NFPA 2010 condensed aerosol fire extinguishing system technology. The Chapter Seminar Committee met and began putting together a great program for our May 18th Technical Symposium at the Hanover Manor. As in past years the day will also include a trade show with vendors displaying the latest in technology and equipment for our detection and suppression projects and clients. It will be an all day event so mark your calendars. For our upcoming February meeting (Feb 6th) we have Bob Benedetti of NFPA who will discuss Flammable and Combustible Liquid Storage with respect to both NFPA 13 & NFPA 30 Standards. As a reminder our annual supported Golf Outing will be held at the New York Country Club, June 12th. The golf outing supports the newly formed Foundation Scholarship program which benefits our area FPE students. We had a great start in 2017. Let’s keep it going. See you all in February.

Rich Reitberger
Chapter President
8th Annual Symposium

Thursday May 18, 2017

Come join us for a full day of Speakers, Vendor Trade Show and Door Prizes

Registration for vendors, sponsorship opportunities and individual participants will be announced shortly.

This year’s event will be held:

16 Eagle Rock Ave
East Hanover, NJ 07936
CSB Releases New Safety Video Detailing Investigation into 2013 Fatal Fire and Explosion at the Williams Olefins Plant in Geismar, LA

January 26, 2017, Washington, DC – The U.S. Chemical Safety Board (CSB) released a safety video of its investigation of the June 13, 2013 explosion and fire at the Williams Olefins Plant in Geismar, Louisiana, which killed two workers and injured an additional 167. The deadly explosion and fire occurred when a heat exchanger containing flammable liquid propane violently ruptured.

The CSB’s newly released 12-minute safety video entitled, “Blocked In,” includes a 3D animation of the explosion and fire as well as interviews with CSB investigator Lauren Grim and Chairperson Vanessa Allen Sutherland. The video is based on the CSB’s case study on the Williams incident and can be viewed on the CSB’s website and YouTube. The link is http://www.csb.gov/williams-olefins-plant-explosion-and-fire/.

Chairperson Sutherland said, “Our investigation on the explosion at Williams describes an ineffective process safety management program at the plant at the time of the incident. We urge other companies to incorporate our recommendations at their facilities and to assess the state of their cultures to promote safety at all organizational levels to prevent a similar accident.”

The CSB’s investigation found many process safety management program deficiencies at Williams, which set the stage for the incident. In particular, the CSB found that the heat exchanger that failed was completely isolated from its pressure relief valve.

In the video, Investigator Lauren Grim said, “When evaluating overpressure protection requirements for heat exchangers, engineers must think about how to manage potential scenarios, including unintentional hazards. In this case, simply having a pressure relief valve available could have prevented the explosion.”

The CSB investigation concluded that in the twelve years leading to the incident, a series of process safety management program deficiencies caused the heat exchanger to be unprotected from overpressure. As revealed in the investigation, during that time Management of Change Reviews, Pre-Startup Safety Reviews, and Process Hazard Analyses all failed to effectively identify and control the hazard. In addition, the CSB found that Williams failed to develop a written procedure for activities performed on the day of the incident, nor did the company have a routine maintenance schedule to prevent the operational heat exchanger from needing to be shut down for cleaning.

Finally, the video describes CSB’s recommendations made to the Williams Geismar plant which encourages similar companies to review and incorporate into their own facilities. These include:
- Conduct safety culture assessments that involve workforce participation, and communicate the results in reports that recommend specific actions to address safety culture weaknesses
- Develop a robust safety indicators tracking program that uses the data identified to drive continual safety improvement
- And perform comprehensive process safety program assessments to thoroughly evaluate the effectiveness of the facility’s process safety programs.

“Managers must implement and then monitor safety programs and encourage a strong culture of safety to protect workers and the environment,” Chairperson Vanessa Allen Sutherland said.

The CSB is an independent federal agency charged with investigating serious chemical accidents. CSB investigations examine all aspects of chemical accidents, including physical causes such as equipment failure as well as inadequacies in regulations, industry standards, and safety management systems. The Board does not issue citations or fines but makes safety recommendations to companies, industry organizations, labor groups, and regulatory agencies such as OSHA and EPA. Please visit our website, www.csb.gov.

For more information, contact Communications Manager Hillary Cohen at public@csb.gov or by phone at 202.446.8095.
Leading CFOs Identify Top Operational Risks That Have Harmed Their Companies in the Past Five Years

Equipment failure, cyber-attacks and natural disasters have negatively affected operations, according to new FM Global-commissioned study

A new study of senior financial executives has identified the top operational risks that have harmed their companies in the past five years. Sixty-six percent of financial executives surveyed say their organizations have been harmed by equipment failure, nearly 60 percent say their firms have been impaired by data breaches or cyber-attacks, and more than half (52 percent) have had their operations affected by natural disasters. Yet the majority (54 percent) say their organizations have not developed or tested formal loss-recovery plans.

The study, Finance’s Role in Operational Risk Management: CFO Research on Building a Resilient Company, was commissioned by FM Global, one of the world’s largest business property insurers, and conducted by CFO Research Services.

“It's surprising the number of companies that have been harmed by operational risk events, coupled with the relatively low number of companies that feel they are very well prepared for a disruption event,” said Eric Jones, operations vice president and global manager of business risk consulting, FM Global. “The findings reveal the opportunity for financial executives to implement stronger plans with increased data, to help move resilience forward within their organizations.”

The study also reveals:

Low Levels of Preparedness for Operational Risk Events: Only 34 percent of financial executives believe their firms are very well prepared to recover from an equipment failure. Just 33 percent feel their organizations are very well prepared to recover from a natural disaster, while merely 24 percent feel their companies are very well prepared to recover from a data breach/cyber-attack.

The CFO’s Increasing Perception of Risk: Almost 70 percent of financial executives are concerned that their revenues or earnings will become more vulnerable to operational risk over the next two years, and nearly 60 percent say the need to manage operational risks will make it more difficult to meet revenue and earnings targets over the next two years.

Focus on Protection from Operational Risk in the Near Future: Forty-one percent of financial executives say they will place more focus on preventing losses from operational risks over the next two years, with nearly the same percentage of respondents saying loss prevention and mitigation is more important than insurance coverage.

Need for Increased Resilience in the Future. Overall, the study found a need for improved resiliency in the future. Eighty-six percent of respondents say their companies will need to be more resilient in the future.

“The role of the CFO is being increasingly challenged by serious risk events, which drive volatility and will make it more difficult for them to meet revenues and earnings if these risks are not properly managed,” said Jones. “The pathway to a successful risk management program must include an effective loss prevention program, combined with resilience planning in order to deal with constantly evolving technological, political and environmental risks.”

The research is based on responses received during late 2016 from 100 chief financial officers or senior most financial executives at U.S.-based companies, the majority of whom are from Fortune 1000 organizations across a wide variety of industries.
At least 30 firefighters feared dead in Tehran hi-rise building collapse

(The blaze at the Plasco building. Photograph: Abedin Taherkenareh/EPA)

The Guardian and other international news outlets report that at least 30 and possibly up to 50 firefighters are trapped and assumed dead beneath the rubble after a high-rise building caught fire and collapsed in Tehran, Iran today.

The 17-storey Plasco building, the capital city’s oldest high-rise, housed 400 businesses including several clothing distributors, which likely contributed to the fire’s rapid spread. Located near the British embassy, the building caught fire about 7:30 a.m. on Thursday, engulfing the upper floors and quickly descending to the bottom levels.

“About 20 to 25 firefighters have been trapped beneath the rubble,” Mohammad-Bagher Ghalibaf, mayor of Tehran said. A spokesperson for the rescue operation put the number of responders missing between 30 and 50, according to the state Irna news agency.

Eshagh Jahangiri, Iran’s first vice-president, visited the scene with other senior officials. “It was shocking and unbelievable,” Jahangiri said on state television. “A number of our people, especially our great firefighters, have been trapped. The government is assisting with help from other forces including the military.”

There have been safety concerns about the Plasco in the past. Eghbal Shkeri, a senior official from Tehran’s city council indicated that previous warnings regarding the building’s safety had been ignored, and said, “Repeated warnings had been given about the building, and its fire control system was very weak.”

According to a research report released by NFPA in April 2016, U.S. fire departments respond to an estimated yearly average of 14,500 reported structure fires in high-rise buildings. The two deadliest high-rise fires in U.S. history were caused by terrorism. The fires and building collapses that occurred when two planes flew into the World Trade Center twin towers in NYC on September 11, 2001 killed 2,666 people, not including the 157 passengers and crew on the two planes; and on April 19, 1995, a truck bomb outside a nine-story federal building in Oklahoma City killed 169 people. During the years 2006-2015, there were five firefighter deaths in four high-rise building fires.
Record low number of NYC fire fatalities in 2016 reveals best practices in fire protection

by Brianna Crandall — January 20, 2017 — 2016 was the Big Apple’s safest year in terms of fire fatalities, according to the Fire Department of New York (FDNY), revealing exemplary fire protection best practices and initiatives that can be followed in other locations. The world’s busiest fire department reported 48 fire-related deaths, the lowest number since the city began recordkeeping in 1916. This represents a 19% decline over the 2015 numbers, and a 17% drop from the previous record low of 58 fire-related deaths in 2012. The FDNY also reported a 9% reduction in “serious fires.”

FDNY Commissioner Daniel Nigro stated:

“We pushed ourselves to save even more lives in 2016 – embarking on a life-saving citywide smoke alarm program [GetAlarmedNYC] that has reached tens of thousands of homes – and we’ve seen the outstanding results with a historic 100-year low for fire fatalities in our city. I’m very proud of all our fire and EMS members who worked hard this year to achieve this historic milestone, and – as we enter a new year – we commit again to doing all we can to protect, serve and educate New Yorkers to keep them safe from fire.

In addition to the significant and commendable work of the FDNY, fire sprinkler systems have also had a tremendous life and property savings impact in New York City. According to the National Fire Protection Association (NFPA), water-based fire protection systems reduce fire deaths by 82% and property damage by 68%.

Anthony Saporito, executive vice president of Mechanical Contractors Association of New York, commented:

“The coordinated efforts among the FDNY, its inspection unit and the unionized fire suppression contracting industry have succeeded in achieving life-saving results. Aggressive improvements to fire code and public safety laws following the Happy Land Social Club fire in 1990, two deadly high-rise fires in 1998, and the Deutsche Bank fire in 2007 have collectively led to landmark changes which continue to save lives today.

Passed in 1973, New York City Local Law 5 mandated that all high-rise office buildings in New York City that exceed 100 feet tall have a sprinkler system or pressurized and compartmentalized stairwells. This legislation followed two fatal 1970 office building fires that resulted in five fatalities and dozens of injuries. That year, the city had 310 fire-related deaths. Since then, there has been a gradual and significant 85% reduction in fire fatalities leading to this record year.

In 1999, Local Law 10 was passed, mandating the installation of fire sprinklers in all newly constructed multifamily dwellings with three or more units. It also applied to existing buildings undergoing alterations or renovations with costs totaling more than 50% of its value and established stricter inspection and maintenance standards.

Patrick Dolan, Steamfitters Local 638 president, pointed out:

“Sprinklers have repeatedly proved to save lives and reduce property damage, even before the Fire Department arrives on the scene. If trapped in a fire today, a victim has only about three minutes to get out because modern fires grow incredibly toxic and hot in just a matter of minutes.

According to Underwriters Laboratories, fires today are more toxic and burn 800% faster because of petroleum-based synthetics in newer furnishings. This illustrates the importance of close coordination between New York City property owners, the unionized mechanical contracting industry and the FDNY, now more than ever.
Specific Application Sprinkler Offers 16’ x 16’ Coverage for CombustibleInterstitial Spaces

The Viking Corporation has introduced a new quick response specific application sprinkler for combustible interstitial (concealed) spaces, such as those found between floors and for low-pitch attics with roof pitches up to 2/12.

With a coverage area up to 16’ x 16’, and a maximum height of 60”, the new 5.6K COIN® (COMbustible INterstitial) Model VK950 features a glass bulb operating element and special deflector that delivers the operation speed and broad distribution pattern required in shallow combustible concealed spaces. COIN® sprinklers are designed to protect areas constructed of wood truss, non-combustible bar joist, solid wood joists, or composite wood joists.

COIN® sprinklers are cULus Listed for use in specific light hazard combustible as well as non-combustible concealed spaces requiring sprinkler protection as outlined in NFPA 13, and can be installed in both CPVC and steel wet pipe sprinkler systems. When using steel pipe, they can be also be used in dry sprinkler systems.

Building Fire and Life Safety Directors - A New NFPA Standard Coming Up, Tim Costello, Jensen Hughes, Inc.

Description: NFPA has formed a new Technical Committee which will have primary responsibility for documents related to the duties, requirements, competencies and professional qualifications required of Building Fire and Life Safety Directors. This committee will also have primary responsibility for the establishment of minimum requirements for emergency action plans addressing all-hazard emergencies within occupied structures having an occupant load of greater than 500. The expected Standard will identify the minimum job performance requirements (JPRs) for building fire and life safety directors. The purpose of this standard shall be to ensure that persons meeting the requirements of this standard who are engaged in building fire and life safety planning, training and implementation are qualified.
Internally Galvanized Steel Pipe Blamed for Explosions

Two decades ago the NFPA Committee on Automatic Sprinklers was considering a requirement that all steel pipe used in dry pipe sprinkler systems be internally galvanized, but recently the rules have actually become much less favorable to galvanized pipe. The 2013 edition of the sprinkler standard removed the long-standing allowance to increase the hydraulic C-factor from 100 to 120 for galvanized dry pipe and preaction systems. The 2016 edition of NFPA 13 removed the requirement that steel pipe used with control mode specific application (CMSA) sprinklers be internally galvanized, a requirement that had been in place since large drop sprinklers were first permitted to be used in dry pipe systems in the 1991 edition of the standard. Now galvanized pipe has been blamed for several explosions in Europe, and researchers have developed an explanation of the chemical reactions that can result in such incidents.

The most recent explosion destroyed a pump house in France in late October, after a sprinkler contractor drained a sprinkler system to allow some work to be performed on the system. The control valves for the system were located within the pump house, and the explosion reportedly took place about 15 minutes after the drain valve was opened, the system left unattended and draining. Although the pump house was destroyed, no one was injured. The diesel engine and fuel tank were originally suspected to somehow be the source of the explosion. Later, however, parallels were found to two explosions that had taken place in 2014 in Denmark, both of which took place in sprinkler piping following drainage of water from the systems, and both of which resulted in injuries to maintenance personnel.

The Confederation of Fire Protection Associations-Europe reports that a technical investigation funded by Finance Norway led to the conclusion that water within the systems had reacted with the internal zinc linings of the piping to produce hydrogen gas. Random sparks ignited the gases as they were released during draining of the systems.

With the wide use of galvanized steel sprinkler pipe in Europe, some authorities are beginning to develop safety guidelines for use when draining the systems, such as the following:

- Be on the lookout for abnormal pressure increases within the systems
- Ensure good ventilation as the systems are being drained
- Avoid doing work in the areas while systems are being drained
- If work must be performed in areas where systems are being drained, use only non-sparking tools Consider the use of gas detectors or explosimeters to monitor for hydrogen gas levels

A presentation of research on the subject of hydrogen produced in galvanized steel pipe systems conducted at the Sintef laboratory in Norway can be accessed at:

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P.O. Box 1647
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The NY/NJ Chapters Scholarship Golf Outing Committee sends their special thanks to our long time sponsor Russ Fleming and the National Fire Sprinkler Association. We appreciate your continued support!!

JENSEN HUGHES
Advancing the Science of Safety

Timothy R. Costello, PE
Director - Manhattan NY Office

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MEETING NOTICE
NJ Chapter SFPE

Date: Monday, February 6, 2017

Place: Hanover Manor
16 Eagle Rock Avenue
East Hanover, NJ 07936

Price: $30.00

Time: Gathering starts at 5 PM, meeting starts at 6 PM

Topic: Flammable and Combustible Liquid Storage
NFPA 13 & NFPA 30 Standards

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**JMCC**

John M. Cholin P.E., FSFPE, M.E.

J.M. Cholin Consultants, Inc.

Fire Protection Engineering and Consulting Services

101 Roosevelt Drive, Oakland NJ 07436 USA

Telephone: 201-337-8621 • Fax: 201-337-5603

jmc@jmcholinconsultants.com • www.jmcholinconsultants.com

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**SOS**

Richard Rauzioli
Manager

30A Myrtle Street
Cranford, NJ 07016

TEL 908-272-0096
FAX 908-272-8144
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**Oliver Fire Protection & Security**

Jim Burge
Vice President

550 East Main Street
Chesapeake, NJ 07930

908-832-5111

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