President’s Message…

“Happy, happy Christmas, that can win us back to the delusions of our childhood days, recall to the old man the pleasures of his youth, and transport the traveler back to his own fireside and quiet home!”

Charles Dickens

The New Jersey Chapter of the Society of Fire Protection Engineers wishes our members and friends a joyous Christmas, Happy Hanukkah and the very best for the New Year.

We are currently planning this spring’s joint symposium with the AFAANJ and are looking for your input as to topics. This year we will be providing presentations from SFPE who graciously has offered to condense full day presentation into half day to allow two or three of them. We also hope to have a NJ Code Update presentation as well. We will again be bringing in vendors to offset costs and allow those that attend to view emerging technologies in fire detection and suppression. Our format will be much the same as it has been these past three years of joint symposiums. A general morning session will be offered following in the afternoon with presentations dealing with either detection/alarm or suppression. We will be again using the Ramada Plaza (formerly the Holiday Inn) at 160 Frontage Road on the North side of Newark Airport. A great turnout will show our vendors that their participation is appreciated.

I’m excited to report that Russ Fleming, P.E., FSFPE president of the National Fire Sprinkler Association, will be our guest speaker for the January 7th, 2013 meeting. His topic concerns NFPA 25, the Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems. It will cover the changes in the new edition and an impact of 3rd party monitoring pros and cons. Russ has visited us many times and always provides an educational and interesting presentation.

I ask each of our members to make an effort to participate in you society in the coming year, attend meetings, attend the symposium, speak in a school in your town this career day and come out for our golf outing. Promoting Fire Protection Engineering should be all of our goals. We must work to ensure the growth of fire protection, the acceptance of the FPE and police ourselves to ensure no one is practicing outside their field of training and expertise.

I hope everyone had a wonderful holiday, got through 12/21/12 ok, and has a healthy, profitable 2013.

Yours in life safety

Ed Armm, SET
President NJSFPE
President Ed Armm convened the meeting at 6:04 PM at the Hanover Manor with a salute to the flag and the customary introductions. There were 19 attendees.

President Armm presented the President’s Award to Dave Kurasz. A motion was made and carried to accept six new members into the chapter:

- Larry Borshard – RDAR-QEW-D, Picatinny Arsenal
- Laurie Borshard – RDAR-QEW-D, Picatinny Arsenal
- Richard Luongo – Chubb
- Sung Lee, PE – Victaulic
- John P. Stoppi, Jr., PE – Arora Engineers
- David Waldock – City Fire Equipment

Glenn Buser presented the Treasurer’s Report of August-November 2012. A motion to accept the report was made and approved.

There was no Secretary’s Report as there was not a quorum at the September meeting.

Rich Reitberger and Joe Janiga attended the SFPE National Meeting in Savannah and updated the chapter on some key items. The NJ Chapter was awarded a Silver Achievement Award at the meeting. There was a discussion on how the chapter could achieve Gold status.

Rich Reitberger discussed the PE exam and informed the membership that Donna Spano would present some of her recent experiences in taking the exam at the next chapter meeting.

President Armm discussed the October field trip to FM.

Joe Janiga discussed the Audit Committee Report for the audit conducted on October 5, 2012.

President Armm gave a presentation on changes to NFPA - 72® 2013 – The National Fire Alarm and Signaling Code. The meeting was adjourned at 7:57.

---

**Xcel Energy Company Hydroelectric Tunnel Fire**

*Location: Georgetown, CO*

*October 02, 2007*

*Accident Type: Confined Space / Asphyxiation*

*Company Name: Xcel Energy Inc.*

**INVESTIGATION INFORMATION**

**Accident Description**

On October 2, 2007, five people were killed and three others injured when a fire erupted 1,000 feet underground in a tunnel at Xcel Energy Company’s hydroelectric power plant in Georgetown, Colorado, located approximately 45 miles west of Denver. The fatally injured workers were trapped deep underground during an operation to coat the inside of the tunnel with epoxy using highly flammable solvents. The tunnel is several thousand feet long and connects two reservoirs with electricity-generating turbines.

For the complete report and/or to see a reenactment video go to: [http://www.chemsafety.gov/investigations/detail.aspx?SID=9&Type=2&pg=1&F_All=y](http://www.chemsafety.gov/investigations/detail.aspx?SID=9&Type=2&pg=1&F_All=y)
Ed Armm, the guest speaker at the Chapter's December 3rd meeting. The Topic was reviewing the proposed new NFPA 72 (The National Fire Alarm and Signaling Code).

**CSB Releases Photos of Vapor Cloud Involved in August 6 Accident at Chevron Refinery in Richmond, CA**

August 20, 2012

Investigation Details:
[Chevron Refinery Fire](http://www.csb.gov/gallery/default.aspx?SID=105&F_All=y)

CLICK HERE to view photos showing a very large vapor cloud rising above the Chevron Richmond Refinery. In the first five photos the vapor cloud is whitish in color but after the cloud is ignited dark black smoke is visible.

The photos should be credited to Fototaker.net and were taken from Pier 39 in San Francisco located about nine miles across the bay from the Chevron Richmond Refinery.
Steel is a formidable material for building construction. Given its relative light weight and load-carrying capacities, it can be a good value for building designers. Modern high-rise and noncombustible buildings could not exist without steel.

However, when steel is not protected by fire-resisting materials, one of steel’s weaknesses is its performance under fire. (See Coffee Break Training FP-2010-1 for an illustration of spray-on fire resistant materials.) Steel’s strength remains essentially unchanged until about 600 F (316 C). The steel retains about 50 percent of its strength at 1,100 F (593 C) and loses all of its capacity when it melts at about 2,700 F (1,482 C). However, for design purposes, it is usually assumed that all load-carrying capacity is lost at about 2,200 F (1,204 C).

Apart from losing practically all of its load-bearing capacity, unprotected steel framing can undergo considerable expansion when it is sufficiently heated. This is described by a coefficient of thermal expansion, typically represented by the symbol “$\alpha$” and varies with the chemical composition of the steel. It is a measure of the change in length of a material in response to a change in its temperature. Materials expand as temperatures increase and contract with decreasing temperatures. The creep rate of steel is sensitive to higher temperatures and becomes significant for mild steel above 840 F (450 C). The thermal expansion can result in steel beams pushing supporting columns or walls out of alignment, increasing the risk of structural collapse.

Steel framing connections — where two steel elements are joined to form different geometry, such as the intersection of a column and floor beam — are the subject of additional consideration. The connections usually contain more material (additional plates, bolts, etc.) than the connected members (beams and columns). Connections often have less exposure to heat and possess higher capacity for heat dissipation because of their proximity to other members. Therefore, temperatures are likely to develop faster in beams and columns than in connections, making connections less critical for fire-protection design.

In the building codes, structures erected of noncombustible construction often are permitted larger “allowable areas” than similar occupancies in combustible buildings. Generally, this is because the noncombustible character of the structural elements does not add any fuel to a fire. However, noncombustible construction — especially if it is not protected by fire-resistant membranes, spray-on material or automatic sprinklers — is highly susceptible to catastrophic failure when exposed to heat from a fire in combustible contents.

*Review your locally adopted building code for an understanding of allowable areas and how they may be modified based on occupancy, fire resistance, fire protection features and setbacks from property lines or other structures.
Gems Sensors Recalls Pressure Transducers Used in Fire Pump Controllers Due to Risk of Failure in a Fire

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission, in cooperation with the firm named below, today announced a voluntary recall of the following consumer product. Consumers should stop using recalled products immediately unless otherwise instructed. It is illegal to resell or attempt to resell a recalled consumer product.

**Name of Product:** Gems 3100 Pressure Detectors/Transducers

**Units:** About 25,000

**Importer:** Gems Sensors Inc., of Plainville, Conn.

**Hazard:** The transducer can fail to accurately detect water pressure in a fire suppression sprinkler system. This could cause the sprinkler system to fail to activate and pump water to the sprinklers in the event of a fire.

**Incidents/Injuries:** None.

**Description:** The Gems 3100 Pressure Transducer is used to detect pressure in a range of applications, including the detection of water pressure as part of a fire pump controller in a fire suppression sprinkler system. The transducer has "Gems Sensors & Controls," as well as the 18-digit part number, printed on a label affixed to the center of the transducer. Part numbers beginning with "3100" are included in this recall.

**Sold by:** Gems sold the recalled 3100 Pressure Transducers directly to end-users and through distributors from January 2006 through February 2012 for about $250.

**Manufactured in:** England

**Remedy:** Contact Gems to receive enhanced twice monthly inspection instructions and information about a free replacement transducer, when warranted. End-users who use the 3100 Pressure Transducer in other applications in which water pressure is measured should contact Gems to determine if their units are affected.

**Consumer Contact:** For additional information, call the company toll-free at (855) 877-9666, between 8 a.m. and 4:30 p.m. ET, Monday through Friday, or visit the firm's website at http://www.gemssensors.com

Gems 3100 Pressure Transducer

The U.S. Consumer Product Safety Commission (CPSC) is still interested in receiving incident or injury reports that are either directly related to this product recall or involve a different hazard with the same product. Please tell us about your experience with the product on SaferProducts.gov

CPSC is charged with protecting the public from unreasonable risks of injury or death associated with the use of the thousands of consumer products under the agency's jurisdiction. Deaths, injuries, and property damage from consumer product incidents cost the nation more than $900 billion annually. CPSC is committed to protecting consumers and families from products that pose a fire, electrical, chemical, or mechanical hazard. CPSC's work to ensure the safety of consumer products - such as toys, cribs, power tools, cigarette lighters, and household chemicals - contributed to a decline in the rate of deaths and injuries associated with consumer products over the past 30 years.

Under federal law, it is illegal to attempt to sell or resell this or any other recalled product.

To report a dangerous product or a product-related injury, go online to: SaferProducts.gov, call CPSC's Hotline at (800) 638-2772 or teletypewriter at (301) 595-7054 for the hearing and speech impaired. Consumers can obtain this news release and product safety information at www.cpsc.gov. To join a free e-mail subscription list, please go to www.cpsc.gov/cpsslist.aspx.
A Word From Our Speaker for the Technical Presentation at Our January 7 Meeting

Russ Fleming, President of the National Fire Sprinkler Association will be presenting a review of NFPA 25 and 3rd Party Inspection, Testing and Maintenance.

Russ Fleming was elected President of the National Fire Sprinkler Association on March 2, 2012. He originally came to work for the sprinkler association in 1975 as the first technical member of the staff ever hired, having received bachelor's and master's degrees in civil engineering from Rensselaer Polytechnic Institute. Over the years his work has primarily been in the areas of codes and standards, helping to promote and defend the industry. Through his publications and committee work, he has also been the primary NFSA representative to a number of other organizations within the fire community. He is a past chair of the NFPA Standards Council, a past member of the NFPA Board of Directors, and a past President of the Society of Fire Protection Engineers (SFPE). He is one of only a handful of individuals honored by the NFPA with both of its two highest awards, the Standards Medal and the Paul Lamb Award. Prior to his election as President he had served for several years as Executive Vice President, overseeing most of the NFSA's individual operating departments.
MEETING NOTICE

Date: January 7, 2013

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

Price: $30.00

Dinner: 5:00-6:00 (Cash bar for mixed drinks)
Dinner at 6 PM

Topic: NFPA 25 and 3rd Party Inspection, Testing and Maintenance

Speaker: Speaker: Russ Fleming, President National Fire Sprinkler Association

Please note for this meeting:
All officers, directors and committee chairman are requested to attend a meeting at 4:00 p.m. at the Hanover Manor.

PLEASE COMPLETE AND RETURN WITH YOUR CHECK PAYABLE TO “SFPE NJ CHAPTER” TO:

Vicki Serafin
Affiliated FM
400 Interpace Parkway, Bldg C - 3rd Floor
Parsippany, NJ 07054-1196
vicki.serafin@affiliatedfm.com

OR PAY AT THE DOOR

NAME: ________________________________________________

COMPANY:___________________________________TELEPHONE:__________________________________
John P. Stoppi Jr., P.E. one of our Chapter Members giving a presentation in November to students at the Bayonne High School on employment opportunities in Fire protection Engineering. Out thanks to John for his time and efforts in delivering one of our Chapter’s goals of communicating the positive aspects of our discipline to society. John obtained SFPE Nationals presentation and made various modifications. A synopsis of his presentation follows below:

FPE: A Career Students Need to Know About:

When I was a high school junior, a Professional Engineer and professor at Penn State came in to my high school and discussed careers in engineering. This was one of the defining moments that led to my choice of engineering as a career path. I did not find out about fire protection engineering or choose it as a career path until after I had obtained my undergraduate degree and was working full time. I wanted to inform high school students of this career path at an early age, something I did not have.

I live right up the street from Bayonne High School so the idea came to me to approach them about talking to the students. I found David Minard, Director of Technology and Science, on the Bayonne High School website and reached out to him about talking to the students about engineering. He informed me that the HS has a pre engineering course/program, and directed me to its teacher, Marie Aloia. The school’s superintendent contacted me and thanked me for volunteering to be a guest speaker.

Marie expounded on the school’s pre-engineering program and discussed her background as a former chemical engineer. We discussed presentation options and she advised me to present on Fire Protection Engineering, an engineering specialty career option.

I met Chris Jelenewicz, P.E (National SFPE’s program manager) at an SFPE NJ Chapter meeting. I contacted him later via email about presentation approaches and materials to give to HS students. He supplied me with a canned presentation and flyers for “Careers in Fire Protection Engineering.”

I contacted Patti Gibson, Arora’s Marketing Manager, for materials to hand out to students. She graciously supplied me with Arora lanyards, airplane transformer pens, and calendar calculators.

I adapted SFPE’s presentation and added some discussion points Marie suggested. I went to the school the morning of November 14th. The vice principal met me and escorted me to the classroom. I was introduced to the school principal on the way to the classroom. I delivered the presentation to three separate periods and fielded questions. I met David Minard, Director of Technology and Science, who sat in on one of the presentations. Afterwards, David and Marie congratulated me on keeping the students engaged and attentive and for a job well done. The kids liked the “door prizes.” The pens were the biggest hit. Marie said they would send me a signed certificate of appreciation. I told her to keep in touch and inform other schools that I am available for similar engagements (schedule permitting).
### Meeting Dates/Programs 2012-2013

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Speaker/Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 7</td>
<td>NFPA 25 and 3rd Party Inspection, Testing and Maintenance—Speaker: Russ Fleming,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>President National Fire Sprinkler Association</td>
<td></td>
</tr>
<tr>
<td>Feb. 4</td>
<td>Designing of Foam systems and the challenges that go along with making these</td>
<td></td>
</tr>
<tr>
<td></td>
<td>systems work—Speaker: Jim Schwander, Territory Manager Foam Systems - East</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Central Regions USA, Tyco Fire Protection Products</td>
<td></td>
</tr>
<tr>
<td>March 4</td>
<td>NFPA speaker to review trends in fire loss statistics—Speaker: Marty Ahrens, Fire</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Analysis and Research Division: National Fire Protection Association</td>
<td></td>
</tr>
<tr>
<td>April 26</td>
<td>Chapter Annual Spring Seminar- Newark, NJ</td>
<td></td>
</tr>
<tr>
<td>May 6</td>
<td>Reliable Valve Trailer and NJFSAB Fire Sprinkler Burn Trailer—Speaker: Tom Fields</td>
<td></td>
</tr>
<tr>
<td>June 3</td>
<td>Chemical Safety Board speaker on Large Loss Causes and Lessons Learned</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ANNUAL MEETING—Officer &amp; Director Elections</td>
<td></td>
</tr>
<tr>
<td>June 17</td>
<td>Scholarship golf outing at West Point</td>
<td></td>
</tr>
</tbody>
</table>
HELPFUL LINKS

ADAAG  http://www.access-board.gov/adaag/about/index.htm
AFAA National  http://www.afaa.org/
AFSA  http://www.firesprinkler.org/
ANSI  http://web.ansi.org/
ASHRAE  http://www.ashrae.org/
Campus-Firewatch  http://www.campus-firewatch.com/
Coffee Break Training  http://www.usfa.dhs.gov/nfa/coffee-break/
CPSC  http://www.cpsc.gov/
CSAA  http://www.csaa.org/
Municipal Codes (E Codes)  http://www.generalcode.com/Webcode2.html
FM Global  http://www.fmglobal.com/
FSDANY  http://www.fsdany.org/reps.htm
FSI  http://www.firesprinklerinitiative.org/
FSSA  http://www.fssa.net/
Fire Tech Productions—Nicet Training (FTP)  http://www.firetech.com/
Home Fire Spklr Coalition  http://www.homefiresprinkler.org/
AFAA-NJ  http://www.afaanj.org/
National of Fire Equipment Distributors (NAFED)  -  http://www.nafed.org/index.cfm

ADVERTISE IN THE FUSIBLE LINK

Do you want your business to be known by over 125 professionals in the local Fire Protection industry? Advertise in the Fusible Link. $100 per chapter fiscal year. Contact Vicki Serafin for more info: Vicki.serafin@affiliated.fm.com