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FUSIBLE LINK

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President's Message...

This summer was HOT. Hope you all kept cool and enjoyed the great weather. Also HOT is our upcoming Chapter program which features new technologies and hazards that have evolved plus a field trip to the Nation's premier Fire Protection Engineering institution, the University of Maryland. We kick off the season Monday Sept 12th with a briefing by Gary Hartley of CODA Risk Analysis on the Hazards of Cannabis Extraction. A new emerging hazard that is finding its way into communities as marijuana medical use is legalized. A timely topic you don't want to miss. This year the SFPE International Conference is being held in Denver, CO Sept 25-30. If you have never been to this event, Denver is a great place to start. I hope to see a number of our members there this year. Our Annual Symposium & Trade Show is being planned for the April / May timeframe. As soon as we nail down the dates and topics we will publish the details. The remainder of the meeting speakers are being lined up. The dates are set and are published in this issue of the Fusible Link. As always our Holiday Party will be at the December Meeting (Dec 5th) and our Annual Meeting will be June 19th. The Scholarship Golf Outing will be at the NY Country Club again on June 12th. We have a full year planned. Keep an eye on this newsletter for all updates and any new events.

I want to thank all of you for your continued support of our Chapter and especially to our volunteer Officers, Directors and Committee members for helping to make the New Jersey Chapter a leader in our Fire Protection community.

See you all at the September meeting

Rich Reitberger
President

Lobbyists win again in South Carolina negating sprinklers in new residential housing

South Carolina fire officials decided to make sprinklers mandatory in new homes. Homebuilders overturned the rule with help behind the scenes from Gov. Nikki Haley. It was one more win for an industry that has spent millions of dollars in state capitals to block a life-saving upgrade included in the nation's model building code. More details of what happened can be found at the following Link:

https://www.propublica.org/article/fire-fight-the-homebuilding-industry-war-on-sprinklers?utm_source=pardot&utm_medium=email&utm_campaign=dailynewsletter

Our Sept. 12 Meeting – The technical topic is “The Hazards of Cannabis Extraction” the speaker will be Gary Hartley, CODA Risk Analysis

Gary has been in loss control for 40 years, starting with FM before migrating to Wausau HPR and becoming part of Liberty Mutual. In 2000 he started Coda Risk Analysis as a free-lance HPR consultant. Today Gary is President and Coda has 22 risk analysts based in the USA and working worldwide.

Over the years he has accumulated the professional designations of Associate in Risk Management (ARM), Accredited Adviser in Insurance (AAI), Associate in Underwriting (AU), among several others. In the insurance industry he's been a loss control rep, an underwriter, a broker and a large loss investigator. Individually he's a paid public speaker, instructor, professor of risk management, author, a jogger, a Toastmaster, and an avid reader with a second degree black belt in karate.

Recently Coda has been retained by an insurance carrier specializing in insuring marijuana growing and dispensary facilities. As the legal landscape is quickly changing to accept these types of risks, fire protection people are discovering new challenges in an industry that may range from boring to explosive. Tonight Gary Hartley will be providing us with some illumination on the burgeoning marijuana industry. Let's welcome Gary Hartley and his presentation, *Fire Hazards of*

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Fire-starting drone represents a new direction in wildfire preparedness

For almost two years, researchers at the [University of Nebraska-Lincoln](#) (UNL) have been working on a drone that can set fires while airborne, with the intention of making controlled burns easier. As [reported by Gizmag](#), the team recently carried out real-life testing of their creation, which they say will help reduce the risks facing firefighters by letting them set controlled burns remotely.

The aircraft carries balls of potassium permanganate powder that are injected with liquid glycerol before being launched to the ground. The combined chemicals set off a reaction that ignites the materials within 60 seconds after landing.



Controlled burning lowers the risk of dangerous wildfires by removing built up underbrush that could fuel an out-of-control blaze. This method, called a prescribed burn, has been [covered in NFPA Journal](#)® as a critical part of reducing the threat wildfires pose to communities. Currently, firefighters use helicopters and handheld launchers to avoid being too close to intentional burns. It's thought that drones have the potential to be a more efficient and affordable alternative.

NFPA Journal® has also covered the growing prevalence of drones, robots and other unmanned vehicles as emergency response tools in a 2015 article, [Rise of the Machines](#). Drones will also take center stage during [NFPA's Conference & Expo in Las Vegas](#) during the keynote address. Don't miss the chance to learn more about how drones, robotics and key analytics are helping to solve today's fire problems.

Photo courtesy of University of Nebraska-Lincoln

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June 7, 2016

Society Fire Protection Engineers
NY/NJ Chapters
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RE: Thank You

Gentlemen and Ladies:

Members of Society of Fire Protection Engineers NY/NJ Chapters, I would like to thank you for your continued support and for again providing me with a generous scholarship for this past semester. I appreciate all you have done for me, and your kindness throughout my college career.

This past semester was very busy but rewarding as I completed my degree in Fire Protection and Safety Technology. I graduated Oklahoma State University on December 12th 2015 and began my full time position as an Associate with JENSEN HUGHES on January 4th 2016 in the New York City office. I am excited to be working for such a large company in an area with so much opportunity.

Since returning home I have been continued my service with my town's volunteer fire department, in Lake Hopatcong, NJ. I am looking forward to what the future will bring and all the challenges that lie ahead of me in my career.

Thank you again for all you support and help over the past four years, and I look forward to working with you all in the fire protection field one day.

Sincerely,

Tyler Lambert

TOP 10

MOST COSTLY HURRICANES in the United States

While this is not a fire or explosion related article, many of us are involved in various forms of property risk and many may find the article below of interest being that there is still 3 months of hurricane season to go.

Rank	Date	Name	Estimated insured loss in 2016 dollars (in billions)
1	Aug. 25-30, 2005	Katrina	\$50.35
2	Aug. 24-25, 1962	Andrew	\$26.43
3	Oct. 29-31, 2012	Sandy	\$19.54
4	Sept. 12-14, 2008	Ike	\$13.89
5	Oct. 24, 2005	Wilma	\$12.62
6	Aug. 13-14, 2004	Charley	\$9.47
7	Sept. 15-21, 2004	Ivan	\$9.01
8	Sept. 17-22, 1989	Hugo	\$8.09
9	Sept. 20-25, 2005	Rita	\$6.89
10	Sept. 3-9, 2004	Frances	\$5.82



Protect Your Home

7 Ways Residents Can Reduce the Risk that their Homes & Property Will Become Fuel for a Wildfire

#1

Clear

Clear off pine needles, dead leaves & anything that can burn from your rooflines, gutters, decks, porches, patios & along fence lines. Falling embers will have nothing to burn.

#3

Screen & Seal

Wind-borne embers can get into homes easily through vents & other openings and burn the home from the inside out. Walk around your house to see what openings you can screen or temporarily seal up.

#5

Trim

Trim back any shrubs or tree branches that come closer than 5 feet to the house and attachments, and any overhanging branches.

#7

Close

If ordered to evacuate, make sure all windows & doors are closed tightly, and seal up any pet doors. Many homes are destroyed by embers entering these openings and burning the house from the inside out.

#2

Store Away

Store away furniture cushions, rattan mats, potted plants & other decorations from decks, porches & patios. These items catch embers and help ignite your home if you leave them outside.

#4

Rake

Embers landing in mulch that touches your house, deck or fence is a big fire hazard. Rake out any landscaping mulch to at least five feet away.

#6

Remove

Walk around your house and remove anything within 30 feet that could burn, such as woodpiles, spare lumber, vehicles and boats - anything that can act as a large fuel source.



NFPA has many more tips and safety recommendations on its websites, including www.firewise.org.

Chapter Supporting the PE exam Again This Year

The chapter is looking to organize a PE Exam Study Group that would meet once a week and prepare those who are interested in taking the FPE exam in October, 2016. The Chapter would arrange a classroom to meet one evening per week where students could watch the on-line SFPE course. Students would have to enroll in the course themselves. The Chapter would only arrange for the classroom space. The link below is the SFPE Course information. The Chapter is looking to see who may be interested in the course.

<http://sfpe.site-ym.com/?page=PEExamPrepCourse>

If you have an interest please contact Rich Reitberger at richreit522@gmail.com

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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 !!

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Loss ALERT - Uncontrolled Fire Results in Lengthy Business Interruption

LOSS DETAIL

A fire started in a plastic tank utilized for the surface treatment of metal parts. It is believed the fire was likely caused by overheating of a corroded electrical connection supplying power to the tank heater.

This facility consists of two main building areas, each about 54,000 square feet (5,000 square meters). The entire facility is of noncombustible construction, and the two areas are separated by a steel frame/precast concrete wall. One area contains two electroplating lines and the other houses a galvanization line. The electroplating process includes plastic tanks in which liquid plating solutions are heated by immersed electric resistance heaters.

Unfortunately, not all of the tanks have independent high-temperature shutoffs. Also, there are no automatic sprinklers in this facility.

Early one morning over a weekend, while the facility was idle, a fire detection alarm indicated the presence of a fire in the electroplating area. The fire department arrived soon after receiving notice of the alarm and began firefighting efforts. It was not until later that afternoon that the fire was fully extinguished.

Although the building wall construction was noncombustible, the fire spread throughout the electroplating area due to the presence of plastic equipment such as tanks, ductwork and pipes, which provided fuel for the fire to spread. A significant portion (about 70 percent) of the electroplating area was severely damaged. The metal frame deformed and one area of the building collapsed.

Most of the equipment in this building, including electrical supply equipment, motors and cables, suffered fire damage and were determined to be beyond repair. Fire did not spread into the building with the galvanization line, but heavy smoke permeated the building due to openings in the wall—requiring decontamination efforts to limit potential corrosion of equipment.

Facility operations completely stopped. Replacement of the electroplating lines is estimated to take 12 months or more.

High-temperature shutoffs and/or automatic sprinkler protection could have prevented or significantly reduced the downtime associated with this event.

LOSS HISTORY

Unfortunately, fires in metal processing industries like this one involving plastic tanks and heaters are not uncommon. However, automatic sprinklers can make a huge difference. The average fire loss of this type is US\$900,000 gross when sprinklers are present, and US\$7,500,000 when sprinklers are not present. *This loss resulted in more than US\$19 million in property damage and business interruption.*

Development of Fire Mitigations Solutions for PV Systems Installed on Building Roofs - Phase 1

The Fire protection Research Foundation has published a new research paper on the above topic dated July 2016. The introduction to the paper is as follows:

The installation of large PV systems on commercial building roofs is an emerging risk due to a favorable value proposition attracting building owners to install the technology. With these systems, the likelihood of a rooftop fire significantly increases since electrical breakdown – leading to arc faults, ground faults, and short circuits - can occur anywhere across the system. Any electrical fault can be accompanied by ensuing fire.

The rooftop placement is beyond the building fixed fire protection and detection features. This can mean delayed fire detection and no fixed fire protection. In addition, combustible features of the module and other components add fuel to support a fire. Where a fire develops below PV modules, the modules will reflect heat from a fire back down towards the roof enhancing the combustion rate of conventional roof materials. Roof assemblies traditionally considered “noncombustible” become combustible or fast-burning.

With these types of systems, the fire service takes a cautious approach as power generated by the panels cannot be turned off. Even at night, fire service scene lighting has been identified as sufficient to generate an electrical shock hazard. Defensive fire service actions – spraying water from a distance - have been found to have reduced impact as the PV panels conceal and shield the fire below.

The executive summary of the paper that will give you an idea of the project and the contents of the paper is as follows:

This draft final report is part of a research project aimed at identifying features and solutions that can be used to mitigate fire spread between and within PV arrays installed on roofs. This report contains a brief introduction to rooftop PV array technology, describes several recent large-loss fires involving roof-mounted solar PV arrays, and presents the results of the first three tasks of the project.

Task 1 of this project is the identification of previous fire testing on PV systems installed on building roofs. This report presents data on the current state of standardized testing of roofing assemblies and PV modules, full scale test data on roofing assemblies with solar PV arrays, and testing of mitigation solutions to prevent flame spread on roofs with solar PV arrays.

Task 2 of this project is the establishment of general parameters for large-scale tests, including the array geometry, ignition source, and air flow conditions. Test arrays of 4 by 5 modules and target arrays of 4 by 1 and 1 by 5 modules are expected to satisfy the test objectives. These arrays are expected to allow for appropriate fires to be initiated and the effectiveness of mitigation measures to be evaluated. A gas burner with a gas output that corresponds to a heat release rate that is similar to the fire exposure used for the ASTM E108 spread of flame test is expected to satisfy the test objectives. An air supply comprised of an array of fans with louvers to direct a stream of air towards the test array at a velocity of 12 mph is expected to satisfy the test objectives. This ignition source and these air flow conditions have been shown to be capable of spreading flames across Class A fire rated roofs with PV modules installed.

Task 3 of this project is the establishment of the roof assemblies that will be tested. Roof assemblies constructed from polyisocyanurate insulation on a steel roof deck with single-ply TPO and EPDM membranes are expected to satisfy the test objectives. A review of current industry practices has shown that these assemblies represent the most common low-slope roof being installed.

Task 4 of this project is the development of a test plan to evaluate potential mitigation solutions for limiting flame spread on low-slope commercial building roofs. A test matrix has been developed to evaluate mitigation solutions that include walkways, non-combustible cover board, vertical barriers, gravel ballast, and non-combustible module backing layers.

The test plan that is developed in this report will be implemented in a later phase of the project.

The link for the full 55 page paper PDF formatted paper can be downloaded at:

http://www.nfpa.org/news-and-research/fire-statistics-and-reports/research-reports/electrical-safety/new-technologies-and-electrical-safety/development-of-fire-mitigations-solutions-for-pv-systems-installed-on-building-roofs-phase-1?order_src=C246

Meeting Dates/Programs 2016-2017

Sept. 12	Gary Hartley, CODA Risk Analysis - The Hazards of Cannabis Extraction
Sept. 25—30	SFPE International Conference, Denver, CO
Oct. 3	Protectowire FireSystems, New Technologies: Optical Linear Heat (Fiber), CTI
Nov. 3	Bus Trip, University of Maryland – FPE Program tour and briefings
Dec. 5	Holiday Party - Bruce Johnson, UL - Energy Storage Systems Fire Safety Considerations
Jan. 9	Stat X Presentation
Feb. 6	Jerry Naylis - Learning from Losses
March 6	TBD
April/May	Annual Symposium & Trade Show
June 4—7	NFPA Conference, Boston, MA
June 12	NJ NY Metro SFPE Foundation Golf

JMCC 

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