Remarks NFPA President Jim Pauley

Fire Safety Asia Conference (FiSAC) 2014

Thank you ____

It is a pleasure being with you here today in Singapore. This is my first official international trip as the new president of the National Fire Protection Association, having taken over from Jim Shannon, who I know many of you know very well, July first.

When the request came in from Mr. Siew Yee Cheong on behalf of FiSAC Organizing Committee and I read about the theme of this year's event – Fire Safety and Emergency Management: The Way Forward – I wanted to be here. I wanted to be here because all of you are discussing the same issues that so many of us in fire safety are confronting all across the globe. Today there are many new challenges in emergency management and, there are also the same old challenges that need new approaches.

I may be new to the role of president of NFPA, but am proud to say I have been associated with NFPA for most of my career, having served on NFPA technical committees and as chair of its Standards Council. I also recently served as the chair of ANSI, the American National Standard Institute and have seen how important collaboration between countries and regions is to improve safety infrastructure for our citizens through standards development and enforcement. I am excited to move into this new position and join with all of you to confront the global challenges of our times.

As the leader of an organization dedicated to reducing fires throughout the world, I know first-hand the value of sharing information on fire safety with audiences far and wide. There is so much we can learn from each other. Events like this one are important. I sincerely thank each and every one of you for being here today and for your many contributions to this cause.

The National Fire Protection Association is an international, private, non-profit organization founded in 1896. Over the past two decades, NFPA has transformed itself from a national organization into a truly international organization. To help those involved in our international efforts, we have offices in Canada, Mexico, France, China and last year opened an office United Arab Emirates serving the Middle East; and many of our codes have been translated into Spanish, French, Portuguese, Japanese, Thai, Arabic, Chinese, and Korean.

One of the strengths of NFPA is in bringing people together to work toward a common goal. We often say we bring the right people to the table. Our organization considers itself extremely fortunate to benefit from the involvement of its members, thousands of volunteers and many international counterparts. As we strive to fulfill our mission of reducing the worldwide burden of fire and other hazards we need and appreciate those

who join us in our mission. This isn't something we do alone. NFPA has long standing relationships in Singapore, particularly in the area of training. We've worked with the Singapore Chapter of IFE, the Civil Defense/Fire Service, Singapore Aviation Academy, Land Transport Authority and your country's national standard developer SPRING. We have a number of members in Singapore and throughout Asia and are pleased to once again work with Mr. Siew, a true friend of NFPA and a dedicated professional.

Events such as this one this week, further our ability to meet others with shared interests and hear what is being discussed in order to have a greater impact on the fire problem and other emergencies faced by communities of all sizes.

Modern fire codes, and in particular those developed by NFPA trace, their origin to the development of automated sprinklers. Sprinklers, though effective in dousing a fire, were originally installed in so many different ways that they were unreliable. Out of this experience grew the need for consistency through codes and standards and the creation of NFPA.

It is collaboration that makes it possible for NFPA to develop NFPA's 300 consensus-based codes and standards. Our codes influence every building, process, service, design and installation in the United States, as well as many of those used in other countries. Some of our most widely-used codes for the built environment are NFPA 1: Fire Code, NFPA 70: The National Electrical Code, NFPA 101: the Life Safety Code and NFPA 13: Standard for the Installation of Sprinkler Systems. NFPA is committed to creating a true consensus among those interested in public safety, and our codes and standards save lives and protect property around the world. As part of this commitment, NFPA began providing free access to its codes and standards more than 10 years ago. Free access conveniently allows traditional users and others interested in NFPA documents to view important safety information on desktop computers or mobile devices. This means that individuals anywhere including all of you, anytime can access and read any one of NFPA's codes or standards. We are committed to serving the public's increasing interest in technical information, and free access to these codes is a valuable resource. This is also away for us to serve a wider audience in more places through the web. We know that we have increasing traffic to our website from almost 30 countries today. The most frequently viewed pages on our website are the document information pages – pages related to each of our standards.

Since NFPA was founded more than 100 years ago there have been many improvements in fire protection that save lives – smoke alarms, sprinklers, changes to building materials, codes and standards, flame-retardant materials, public education and the implementation of other new technologies. As a result of improvements, in the U.S. we have seen the number of fires cut by more than half from 3.3 million in 1977 to 1.4 million today. The number of fire deaths per year for that same period has gone

from more than seven thousand to roughly three thousand. Other developed countries show similar downward trends, with people getting safer every year. This is good news and a success story, however roughly three thousand people dying from fires each year in the U.S. alone is still far too many – I would argue that even one fire death is too many. Now is NOT the time to sit back and celebrate these successes; it IS time to face the challenges that lie ahead. It IS time to honor the victims of these fires by taking what we have learned at their expense and work to further reduce the number of fires, injuries and deaths in the U.S. and throughout the world. NFPA is ready to face that challenge with you and is working to ensure that every country in the world benefits from what we have learned about how to move fire protection forward.

Tragic fires throughout the world in recent years underscore that there is still work to be done and the extreme need for continued action. World news has brought us horrific details from every corner of the world like the Santinka Nightclub fire in Bangkok and the recent factory fires in South East Asia. In Central America, the Camayagua (KAH-MAH-YAWA) prison fire in Honduras resulted in 361 deaths, and last year the tragic Kiss nightclub fire in Santa Maria, Brazil left 241 dead – this fire, by the way, now ranks as the third deadliest nightclub fire in world history, according to NFPA records.

Several of the deadliest fires in the world since 2000 occurred outside the United States. While we are seeing these horrific events happen across the globe, we saw one very close to us in the United States. In 2003, a tragic nightclub fire happened not too far from NFPA headquarters at The Station nightclub in West Warwick, Rhode Island. Many in our office were shocked and saddened when that event happened, feeling that it would be unlikely to see a fire of that magnitude in our own backyard given what we had learned decades before from the Coconut Grove fire, a nightclub fire in Boston in 1942, that remains the deadliest nightclub fire killing nearly 500 people.

The Station fire killed 100 people. There were clearly lessons to be learned from this incident. The club was overcrowded, they didn't have sprinklers, pyrotechnics were being used indoors and exits were not cleared. When Brazil's Kiss nightclub fire occurred in January of 2013 – it was especially heartbreaking because of the similarities to The Station fire 10 years earlier - overcrowding, the use of pyrotechnics, no sprinklers and people unable to exit. The parallels of the circumstances involved in these two fires that happened 10 years apart is disturbing. What was meant to be a night of celebration for more than 200 young people in Santa Maria turned to tragedy very quickly. Why? We have codes and standards that when implemented and enforced would prevent incidents like The Station nightclub fire from happening again. This was absolutely avoidable. The same can be said for the Cromagnon Nightclub Fire in Buenos Aires in December of 2004 which involved pyrotechnics, and a number of other nightclub fires with similar scenarios.

We must learn from history and take action to not repeat it. Throughout time, NFPA codes have developed or changed based on tragic events. For example the lessons of Coconut Grove did reduce the number of nightclub fires and we are using the lessons from the Station to assist in the aftermath of the Kiss fire.

Another example is NFPA's study of how to make workplaces safer that goes all the way back to the Triangle Fire in 1911 in New York City. It is the largest accidental industrial building fire in U.S. history and at the time prompted NFPA to create the Committee on Life Safety, which developed a fire safety code to address building exits and was the precursor to today's widely used Life Safety Code. We are putting a century of experience dealing with those issues to work in Bangladesh today. Out of those tragedies is coming new collaborations to improve safety in these factories.

But where do we go from here? What is the way forward, as you have aptly named this conference? Clearly these are challenging times and there is more work to be done when it comes to fire protection and emergency management. Today we rely on our fire service to deal with much more than fire. We expect them to be prepared to respond to a myriad of events that are happening with unfortunately greater frequency – both manmade and natural. As communities grow and change, fire protection plans, emergency preparedness and systems must keep pace. Communities that flourish must be proactive in making sure that fire protection is modernized to protect people and property and equipped to deal with other events. I'm sure some of you are here today with that in mind. Based on history, we've learned that the best way to keep communities safe from fire is through the implementation and enforcement of the latest codes and standards. We've set the framework necessary to ensure our resources and expertise can be shared, to move forward toward a common cause. We have the knowledge to work with our partners across the globe to face this challenge together and improve fire safety. And technology is allowing us to do this faster and easier than ever before.

I would like to tell you about ways NFPA is working to improve fire protection and ensure communities are better equipped for disasters…

- WE recently signed an agreement with the Rio Fire Department to develop a fire code based on NFPA 1. WE are encouraging more use of NFPA codes and standards and will work with any country that asks us to provide them with royalty-free use of our codes if it is to be their national code.
- WE are advocating for the use of new technology, like fire sprinklers, that will have a significant impact on reducing fire loss. This technology has existed for more than a century and remains one of the most effective life safety devices we have.

- WE are working with other organizations to play a more active role in their prevention programs.
- WE are encouraging the development of infrastructures that support the use of codes and standards, and working hard to see that codes and standards are implemented and enforced.
- WE are working with Authorities Having Jurisdiction to provide training on NFPA 1 and 101; we have done this for more than 10 years in over a dozen countries.
- WE are utilizing technology to expand international participation in our codes and standards process. I'm going to come back to this later because I want you to understand how easy we are making it for you all to play a more active role in this process and how much we want your input.
- WE are growing our international training offerings to include different languages and to include online capabilities as well to reach more audiences.
- WE make NFPA 1600 the Standard on Disaster/Emergency Management and Business Continuity Programs available for free on our website so for profit, non-profits and government agencies can have the best information on preparing for disasters.
- WE publish a quarterly magazine, the NFPA Journal and its Spanish counterpart *Journal Latinoamericano* – which cover in detail all of the tragedies with a focus on lessons learned.
- WE are extremely active in social media – using facebook, twitter, blogs and linked in to connect with people and share information and engage in conversations quickly all over the world. For example, almost half of our facebook likes are outside the United States.
- WE conduct and provide timely research and data analysis through both NFPA and NFPA's Fire Protection Research Foundation on many aspects of the fire problem.

I have talked about the history of NFPA. More than 100 years ago, our challenges may have been different. But nonetheless the approach was the same. What codes and standards do we need, what can research tell us about the problem that will lead to solutions, what can we learn about the tragedies of the past to be better prepared today, how do we train and educate those that need the information? We are bringing that approach to some of the issues we face today. Let me talk about a few specifics. Demographic shifts, climate change, emerging technologies and sustainability lead the list.

Demographic shifts will require us to do more to ensure proper protections for an aging population that is growing rapidly. In the United States In the year 2000 we had a little over four million people over the age of 85. By 2040 we will have more than fourteen

million people over the age of 85. It is predicted for Asia that there will be a 314 percent increase in the number of people over age 65. That population is expected to grow to 857 million by 2050. And we are seeing changes in where and how older adults live, remaining more active and living in more homelike settings. It is terrific that we have made such great advances in longevity but it will be a great challenge for us to figure out how to ensure their safety in their homes and in all the other types of facilities in which they will be living out their lives. We are seeing the impact in our life safety and health care related codes and standards and our public education programs directed towards older adults.

Rising temperatures have increased the problem of wildfires dramatically over the last years and it is getting much worse. Every year we see a longer wildfire season, much bigger fires and many more of them. In fact in 2012, two of the three largest loss fires involved wildfires, reported at $453.7 million and $113.7 million, respectively. Wildland events have produced fires resulting in the largest direct property damage in seven of the past 10 years.

The National Research Council tells us that if the average temperature goes up by one degree Celsius it could quadruple the size of the area burned in the Western U.S. We are seeing wildfire in places that have never had them before and this same scenario is unfolding in places throughout the globe. NFPA has stepped up our efforts and poured new resources into our wildland fire programs. We work closely with the U.S. Forest Service and state officials on the front lines through our *Firewise* and *Fire Adapted Communities* programs. We are increasingly sharing the information from these US based efforts with global organizations. Wildland fires could and probably will become the greatest fire threat to many countries in this century and NFPA is working to play a bigger part in shaping wildland fire policy and programs to meet that threat.

Another key issue for today's emergency responders is the growing presence of alternative energy as everyone looks for cleaner fuel sources. The fire service has always adapted to a changing environment and responded to any new hazards, alternative energy is only one of the latest to present new issues, not insurmountable, just ones that need to be addressed through again – codes, research and or training. While slow but growing, electric vehicles sales are increasing all over the world. Most major car manufacturers have an electric or hybrid version in their line and we are seeing more and more fleet electric vehicles adding to the need for emergency responders to be well equipped to deal with accidents.

NFPA has already trained tens of thousands of emergency responders on how to deal with crashes involving electric vehicles without electrocuting themselves. The components of these cars are different. The firefighting tactics are different. The batteries burn differently. We have a website with the latest resources for dealing with

these emergencies and recently released a new online training program for first responders that covers all of these issues.

We have done important work in the Fire Protection Research Foundation on the safe handling and storage of lithium ion batteries, the main component in these vehicles.

Another area that poses similarly new challenges is the use of photovoltaics. As their use in businesses and homes increases, so to does the need to ensure there is good information about how to keep first responders safe as they battle fires in such buildings. Two recent fires in the United States exemplified the challenges, such as how to safely shut off electrical power or how to ventilate or navigate a rooftop covered with solar panels.

NFPA's Fire Protection Research Foundation has conducted two studies on this issue and we are using the information to inform both the standards making process as well as training programs.

This is also an area that underscores the importance of adopting the latest versions of NFPA codes and standards. Codes and standards are updated on a three-year cycle. That is a very long time for technology that is changing all time. By adopting the latest versions, users ensure they are getting the latest updates on how to safely use the newest technologies.

The last one I wanted to single out is tall wood buildings. Now I said earlier that 100 years ago our challenges were different. Maybe not so much. A century ago we were dealing with primarily wood structures. And we know all too well some of the major conflagrations associated with wood buildings in the 1800's in places like London, Chicago and our hometown of Boston. With the continued interest in sustainability and green construction, we are now seeing a return to building wood structures but this time, they are taller wood buildings using wood composites. It will be very important for us to examine this tread and determine the fire, life and building safety ramifications and what that means for codes and standards.

The Fire Protection Research Foundation conducted a preliminary project to gain an understanding of how these buildings perform under fire scenarios to ensure the safety of the occupants to emissions and thermal hazards, as well as the property protection of the building and nearby structures. The purpose of this first phase project was to pull together relevant information and analyze the knowledge gaps to set the stage for future research. The literature review looked at a number of fires that occurred in structures in the UK, Canada the US and Japan. The study looked at both light timber and heavy timber buildings. Light timber construction is characterized by timber walls and floors that are constructed from timber stud and joist members. Heavy timber construction is

characterized by beams and columns with timber section sizes greater than 150 mm by 150 mm.

The full report can be found on the Research Foundation's website. The Foundation is now pursuing another report to fill one of the main gaps identified in phase one – quantification of the contribution of timber to a compartment fire. This information is essential for the code development process and for emergency responders.

As I mentioned earlier, NFPA does not do ANY of this alone. The model for our Research Foundation is to have an advisory panel for every one of their projects. That allows for wide and varied participation by a panel of experts to guide and advise the project from beginning to end. With technology it is much more practical to have international participation on these panels and we are doing more of that and I encourage you to look at their website and see what projects are underway and what is coming up.

I also said earlier that I would come back to the topic of international participation in our codes and standards development process. NFPA is extremely proud of its codes and standards developing process. We think, and many others do too, we have the best process in the world. I have had the opportunity throughout my career including my work with ANSI to see standards developing in many different forms in many different places and I can personally attest to the fact that NFPA's standard developing process is second to none. It is thorough, transparent and truly consensus based. But we thought it could be even better. In the last couple of years, we have streamlined NFPA's codes and standards developing process, further leveraging technology. We have moved from a system that was part paper based, part computer based to a totally electronic system where anyone, anywhere can submit proposed changes, make comments and view documents as they are moving through the revision cycle online. With this updated system, it is even easier for people to participate and by having more people participate we think we will have even better standards.

Our system is also efficient and able to move quickly to address new issues or threats. I'll mention two examples. The first is the aftermath of a power plant explosion in the US in 2010. It was one of the worst workplace accidents to occur in the United States in recent years. A gas-blowing operation to clean debris from pipes led to an explosion and fire that killed six people and injured about 50 others.

Investigators determined that there was no safety standard governing the operation that caused this catastrophe. NFPA was the only organization that stepped up to deal with this issue. Our new standard, NFPA 56, closed a dangerous gap in the standards that protect the lives and safety of thousands of workers. Because NFPA was able to bring together the right experts who were committed to moving quickly, that gap took months rather than years to close.

The second example relates to emergency preparedness. NFPA 1600, our Standard for Disaster/Emergency Management and Business Continuity Program is widely used throughout the world by public and private organizations for disaster planning and recovery. NFPA is now adding to its preparedness standards with the development of NFPA 1616, Standard for Mass Evacuation and Sheltering. The request for this project was based on the re-occurrence of disasters happening around the world and the large loss of life associated with these disasters. The development of this standard will assist emergency personnel to develop a program for their communities to address natural, man-made and industrial accidents that would require the evacuation of a community or neighborhood. It establishes a common set of criteria for the process of organizing, planning, implementing, and evaluating a program for mass evacuation, sheltering, and reentry.

The committee completed the draft of the standard in a one-year period and the standard was approved in August.

These are great examples of a solid codes and standards system making a difference, saving lives and reducing loss. They and the thousands of other stories behind the codes illustrate what can be done when a group of committed individuals come together in our process. Many of you are involved in all of it and I appreciate that. You understand that the use and enforcement of codes and standards will move fire safety forward in Singapore and across the globe to avoid future tragedies. I encourage those of you who are not involved to get involved. We need you. And we have made it very easy to participate.

I have a personal quest that everyone goes home – firefighters and other first responders go home at the end of their shift and that everyone has a home to go home to – they are safe from fire and other hazards confronting us today.

We all have a role to play to see we are moving fire safety and emergency preparedness forward. We have made tremendous progress in the U.S. and across the globe when it comes to fire protection, but we need only look at a recent news story about a fire or other threat to be reminded our work is not done and there are some areas of the world that need more help. We must remain vigilant in our efforts to improve fire and life safety for all. But working together we have the ability to meet the challenges head on with the right people and the right solutions.

Thank you for inviting me to join you. I look forward to meeting as many of you as possible over the next few days.