

Summer 2010



The Oregon Fire Trail

I. A. A. I. OREGON CHAPTER 31
PO BOX 15118
SALEM, OREGON 97301

Hakim Receives Oregon Investigator of the Year

At the 2009 Fall Seminar and Banquet Oregon State Police Senior Trooper Bill Hakim received the Oregon Chapter 31, International Association of Arson Investigators— Investigator of the Year Award.

Senior Trooper Hakim along with Captain Tom Tennant of the



Woodburn Police Department lost their lives when a bomb exploded at West Coast Bank in Woodburn on December 12th, 2008.

Senior Trooper Hakim was an 11 year veteran of the Oregon State Police and was a Certified Hazardous Device Technician with the Arson and Explosives Section. Hakim was a member of the Mid-Willamette District of the IAAI and participated in various local fire investigation teams.

Other Award Recipients were:

- Ryan Fields of ORCA Fire Investigation in Medford received the C. Walter Stickney Distinguished Service Award
- Mark Carman of Jefferson County Fire District #1 received the William S. Hood Lifetime Membership Award.
- Darrin Sanger of Northwest Insurance Council received the Donald G. Petruzzelli Award of Recognition.

- Cindy Kettering of the Bend Fire Department received the first place award in the Accidental - Fire Photography category.
- Dennis Shew of Mohawk Valley Rural Fire District received the first place award in the Arson - Fire Photography category.

Awards of Recognition were awarded to Oregon Chapter 31, International Association of Arson Investigator board members for their service, dedication and time on the Board of Directors.

Dennis Shew
President
2008 - 2009

Susie Lovisco
1st Vice President
2008 - 2009

Maurice Austin
2nd Vice President
2008 - 2009

Andrew Lauersdorf
Director
2006 - 2009

James Carl
Director
2006 - 2009

Was it the Gas? Deputy State Fire Marshal Charles Chase LAAI-CFI, CFEI

As a fire investigator consideration must be given to the gas appliances in a structure in order to perform a systematic and thorough fire investigation.

Most structures have some type of heating system. Many are heated with a fuel gas such as LPG or natural gas. These gases are very similar and yet do have their differences.

LPG is heavier than air with a vapor density of 1.5-2.0 and therefore will tend to fall to lower areas. It has an upper explosive limit of 9.6% and an ignition temperature

of 493C-604C (920F-1120F).

Natural gas is lighter than air and will tend to rise. Natural gas (depending on its exact composition) has a vapor density of 0.59-0.72 and LEL of 3.9%-4.5% and a UEL of 14.5%-15%. Natural gas has an ignition temperature of 483C-632C (900F-1170F).

Therefore a LPG leak will tend to fall into the basement, under the floor or onto the lower surfaces of the structure and the natural gas may tend to accumulate near the ceiling or attic. These are general assumptions but are typical.

The gas fuel system in a structure can influence how the building may have burned. Here are four examples.

1. The gas served as the initial fuel source,
2. The gas system served as the initial ignition source,
3. The gas system served as both the initial ignition AND fuel source,
4. The gas influenced the fire spread.

(Continued on page 3)

Mark Your Calendar



Washington Chapter #21

General Meeting & Training

October 6th & 7th, 2010

At the Governor Hotel, Olympia

More information to follow at:

<http://www.iaai-wa.org/>



Cultivating Partnerships III: Juveniles with Fire & the Impact of the Media

August 17th & 18th, 2010

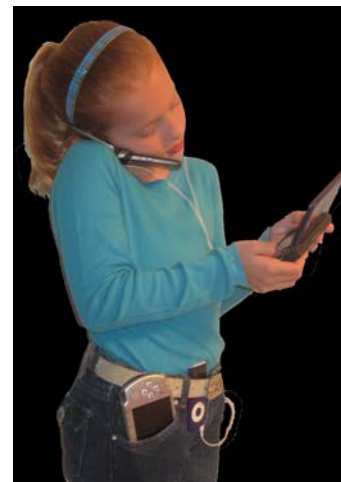
Hilton Eugene & Conference Center

Eugene Oregon

Register online at: <https://www.regonline.com/cultivatingpartnerships>

Questions? Contact Helen Feroli at (503)934-8240 or

Helen.feroli@state.or.us



How can gas serve as the fuel source?

LEAKS:

Fuel gases may have escaped from piping, storage container or the heating systems itself. According to NFPA 921 9.9.3.7 corrosion has been reported to be the cause of as many as 30% of all known gas leaks.

IGNITION SOURCES:

Fuel gases have an ignition temperature of 384C to 632C (723F-1170F) and therefore are easily ignited by common ignition sources. An arc, spark or open flame in the presence of these gases will be enough for ignition. Many of the gas systems have a pilot light or igniter and fuel gas burners which may serve as competent ignition sources of other fuels or flammable gases or vapors of ignitable liquids or dusts.

OVER-HEATED APPLIANCE:

If the appliance or the flue of the appliance is too close to combustibles it may cause an ignition. Structural components have improper clearances or combustibles may be stored too close to the heating device.

During the fire, gas may escape from the system causing more damage to the structure or creating conflicting burn patterns. The fugitive gas can cause fire spread to areas of the structure that may not have normally burned. The flames issued from broken fuel gas lines (often called flares) can spread fire and burn through structural components.

When conducting a fire investigation always check for the presence of a gas

meter or LPG on both the exterior and in the interior of the building.

I investigated a fire in a structure that extended out to a porch. On the porch were conflicting burn patterns. Upon closer examination we found that the LPG barbeque fuel line had burned through allowing LPG to 'spray' in different directions and cause the conflicting patterns.

HOW TO DETERMINE if the patterns were from a fuel gas system? First determine if there is a fuel gas 'system' in the structure. If there is you may need to bring in a gas system expert. Many of the companies that provide LPG and natural gas are available to give advice. They can determine how much fuel was used and help you determine the average use of the system. The service provider can give you a typical amount of gas used on a monthly basis which may assist you in determining if a leak had occurred or if a major fuel line failure or break caused a large amount of fuel gas to escape. The service provider can tell you when the tank was last filled or the meter last read.

The piping and metering systems can be tested for leaks using a number of different methods. The heating device itself may need to be tested and examined by experts. NFPA 54,

National Fuel Gas Code, NFPA 58 and Liquefied Petroleum Gas Code are the leading standards on this topic.

Remember previous discussions regarding *spoliation*. It is NOT the origin and cause investigators place to dismantle and remove the heating system. Documentation through narratives, photos and diagrams should describe WHY you feel the fuel gas device was the cause of the fire. After determining cause and origin make this decision:

1. Is arson suspected? If yes, contact law enforcement and secure the scene.
2. If arson is not suspected release the scene to the responsible party e.g. owner/occupant, insurance agent, private origin and cause expert.

The fuel gas system is one of the many things that must be considered when conducting a thorough fire investigation. There are many resources to get more information on this topic. NFPA 921 will give you a good foundation. Remember that your local Deputy State Fire Marshal is also available to assist you on fire investigation.

Your local I.A.A.I. (International Association of Arson Investigators) is also another resource. Working together we can become better fire investigators.



A Confusing Journey By Jim Christiansen—CFI

Excited about my appointment as a fire investigator in the spring of 1999 with the St. Helens Rural Fire District, which is now Columbia River Fire and Rescue, was an additional duty assignment along with my role as a firefighter/paramedic. I was immediately assigned a copy of the 1998 edition of NFPA 921, and then sent to a two-day basic fire investigation course sponsored by the Oregon Office of State Fire Marshal. This class was taught by Ted Megert and Don Mills (*and for those of you 'old school' types, yes – Mr. Mills did have his tennis ball with him!*)

I was fortunate enough to enter the fire and explosion investigation profession when NFPA 921 was becoming quite popular and was evolving into a hot topic. I can vividly remember both Mr. Megert and Mr. Mills instructing us that NFPA 921 is “*here to stay, so become familiar with it.*” After my initial course work, I began studying NFPA 921 from cover to cover. The more I read it, the more confused I became. I should note that my confusion was not a reflection of my initial instruction. Rather, it stemmed from what seemed to be a two-day information overload and my brain was full. More specifically, I was confused on the underlying premise of what NFPA 921 is – is it a *guide*, *standard*, or could it be *both*? Despite my puzzlement, I continued learning more about the vast world of fire investigation.

In the winter of 2001, I attended the National Fire Academy’s Basic Fire and Arson Investigation Course in Emmitsburg, Maryland. As expected, NFPA 921 was discussed and referenced each day of the two-week class. At one point, a guest speaker advocated that NFPA 921 was a *guide*, and it should be used as such. After absorbing his instruction, I felt better in my understanding of NFPA 921, and made a decision at that point and time to refer to the document as a *guide*.

But wait! Another guest speaker followed the next day, and this speaker advocated that NFPA 921 was a *standard*, and it should be used as such. After listening to both speakers’ respected points of view, I became somewhat agitated because I was not understanding the underlying premise of NFPA 921 – was it a *guide*, *standard*, or *both*?

In order to understand NFPA 921, I needed to break the document down into smaller parts by carefully navigating through it. I will take you on a journey by showing you portions of NFPA 921 that were relevant in my quest. I should note that I will be referencing the 2008 edition of NFPA 921. Our journey will begin with learning more about the National Fire Protection Association (NFPA).

If you look at the back side of the front cover, and also turn to page 117 and view section 13.6.1, there is information regarding the NFPA. You can also visit their website at www.nfpa.org for additional information. Further research in my journey revealed that NFPA *publishes* (does not author or develop) four (4) types of documents. These four (4) types of documents published by NFPA are guides, standards, codes, and recommended practices.

It is important to note that the NFPA is more than a passive publisher of NFPA 921 as it might indicate in the previous paragraph. The NFPA’s role is more complex as the organization controls the publishing process, maintains editorial control, and elects members to the NFPA Technical Committee on Fire Investigations. The previous paragraph was not written to confuse the reader, but to present my findings in a more simplistic approach. Even though the previous paragraph is not exactly correct, it should give the reader a basic idea or an educational starting point of NFPA’s role in the development of NFPA 921.

An analogy to this point between the NFPA and the NFPA 921 document is this; I am the author and developer of this article, but Jeff Mack who is Chairperson on the Oregon Chapter IAAI Newsletter Committee, *published* this article for circulation. Mr. Mack did not develop nor was he the co-author of this article, but he did *publish* it. Because Mr. Mack controls the publishing process of our newsletter, he has the right to include or exclude articles for publication.

A Confusing Journey Cont...

So if the NFPA does not develop NFPA 921, then who does? The responsibility of developing NFPA 921 rests with the NFPA Technical Committee on Fire Investigations. This is a diverse group of individuals with expertise in many different occupations, and they are responsible for developing and revising the 921 document. If you look at page 2 - 3 of NFPA 921, the individual names and their respected professional backgrounds are listed. This committee operates under the guidance of its parent affiliate, the NFPA, and it follows a *specific standard process* or a *sequence of events* in order to develop the NFPA 921 document. (*This standard process or sequence of events will be talked about shortly.*)

It can be deduced that the NFPA has clearly identified NFPA 921 as a *guide*. NFPA's firm stance on this issue is evident in the title of the document, as it is clearly stated on the front cover, "*Guide for Fire and Explosion Investigations.*"

So at this point, we all have a consensus or general agreement that NFPA 921 is a *guide* because the publisher, the NFPA, classifies it as a *guide*. So let's keep the document open, and we will continue with our journey.

Please turn to page 1 and read the 2nd paragraph (it is a single sentence.) The sentence reads, "This edition of NFPA 921 was approved as an American National Standard on December 31, 2007." Wait a minute! Let's hold up right here for a moment and summarize what our journey has given so far; the front cover says the document is a *guide*, and then on the first page the document states that it is a *standard* – what is going on? This can be confusing, but again, let's break it down into a smaller component by investigating further what the description is of an American National Standard (ANS).

The sentence, "This edition of NFPA 921 was approved as an American National Standard on December 31, 2007," can be explained in the following manner: The *standard process used to develop* or the *sequence of events leading to the development* of NFPA 921 so the NFPA can *publish* the document is a *standard* approved by the American National Standards Institute (ANSI.) Let's continue our journey by researching ANSI within NFPA 921.

If you turn to page 117 and read section 13.6.4, information regarding ANSI is provided. You can also visit their website at www.ansi.org to learn more about the organization. In my opinion, ANSI sets the ground rules so the NFPA 921 document is developed fairly by implementing their *standards process*, also known as the American National Standard.

After discovering this information in my journey, I understood the word *standard* when referring to NFPA 921. An educational tool I use in assisting with any learning curve is frequency or repetitiveness, so the next paragraph explains ANSI's role and its *standard process* in slightly different verbiage.

If you look towards the back of NFPA 921 on page 1/08-A, you will see an outline explaining the individual steps or *sequence of events* leading toward the development of this document. These individual steps or *sequence of events* are collectively referred to as a *standard process*, and this *process* is termed an *American National Standard*, which has been approved by ANSI. Please remember from earlier, in order for the Technical Committee on Fire Investigations to *develop* NFPA 921, they must follow this *standard process* or *sequence of events*.

One of the reasons NFPA 921 is so popular is because the Technical Committee follows this *sequence of events* or *standard process*. The first *event* or step in the *standard process* is referred to as *call for proposals*, which allows any interested *person in the world* to submit new text or amend existing text for the next revision of NFPA 921. Allowing a comment or recommendation to be submitted by anyone to the Technical Committee is viewed as a powerful step in the standards process by the legal community. The second, third, fourth, and fifth *events* or steps are respectively referred to as *report on proposals*, *report on comments*, *technical report session*, and *standards council issuance*. These five *events* or steps must be completed in succession, and each individual step has its own set of requirements that must be fulfilled. For example, if a two-thirds vote is lacking in the second step, the

A Confusing Journey *Cont...*

Technical Committee cannot move on to the third step until the two-thirds requirement is met.

The strict adherence of this *standard process* by the Technical Committee has allowed public input and public review in developing NFPA 921. This is important because the evolution of NFPA 921 since its infancy has been created by multiple authors. Having multiple authors has allowed the document to become *peer reviewed* and *generally accepted* in the fire and explosion investigation profession. Additionally, because the material contained in NFPA 921 is scientifically based, the document has also been *generally accepted* by the scientific community, which has allowed the legal community to *generally accept* the document into our judicial system.

So now we know that NFPA 921 is a *guide*, and the *process* in developing it is a *standard*. But there is another set of words (a phrase) attached to the document because of its popularity which can make the understanding of NFPA 921 more complicated. The phrase is the *standard of care*.

Simply stated, NFPA 921 is the *standard of care* for individuals within the fire and explosion investigation profession. For example, if you walk into any fire marshal's office, private fire investigation company, law enforcement agency with an arson unit, or any occupation directly involved in fire and explosion investigation anywhere in the United States (also Canada and other developed countries) more than likely you will find the latest edition of NFPA 921 in their possession. A fire and explosion investigator who has been keeping up with our industry's evolution will have access to the latest edition of NFPA 921.

Here is another example to help clarify the phrase, *standard of care*. A fire investigator who resides in Florida is responsible for the origin and cause determination of a residential structure. This fire investigator will more than likely determine the origin and cause using a systematic approach, applying the scientific method which is described in NFPA 921. Another fire investigator who resides here in Oregon is also responsible for the origin and cause determination of a similar, but different fire scene. This fire investigator in Oregon will more than likely determine the origin and cause using a systematic approach, applying the scientific method as described in NFPA 921. In this example, we have two different fire investigators from two separate regions of the United States investigating two different fire scenes who are *applying the same principles from the same document*.

In order to mitigate the confusion surrounding the underlying premise of NFPA 921, I needed to carefully navigate through the document, and also provide an assessment on the document's evolving popularity within our profession. Breaking the document down into smaller parts assisted with the interpretation of the words *guide* and *standard*, and the phrase *standard of care*, and how they are applicable to NFPA 921.

If an individual is a newly appointed fire investigator, or a seasoned fire investigator teaching their craft to a student, just remember that the *process* used to develop NFPA 921 is a **standard** approved by ANSI, and the NFPA has clearly identified NFPA 921 as a **guide**, but NFPA 921 is also the **standard of care** for our fire and explosion investigation profession.

921 Tidbit—*Motive vs. Intent*

Section 22.4.9.2 Motive vs. Intent. There is an important distinction to be made between motive and intent. *Intent* refers to the purposefulness or deliberateness of the person's actions or in some instances, omissions. It also refers to the state of mind that exists at the time of the person's acts or failures to act. Intent is generally necessary to show proof of a crime. *Motive* is the reason that an individual or group may do something. It refers to what causes a person or group to act or not to act and the stimulus that causes action or inaction. Motive is not generally a required element of a crime.

32nd Annual Fire & Arson Seminar

The 2010 IAAI Fall Seminar will be held on September 27th—30th at the Hood River Inn located in beautiful Hood River.

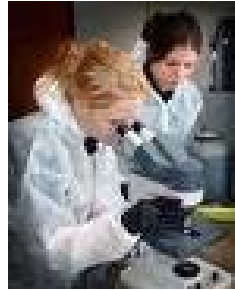
This year's seminar will provide some great training for all attendees.

Starting the seminar off will be "Fraud, the Insurance Policy & Fire Investigators' Responsibilities" presented by Joe Toscano of Chilworth Technology Inc.

Tuesday will be covering "Body is Evidence", presented by Elayne J. Pope, Ph.D with the International Academy of Public Safety in Florida. This presentation demonstrates the dynamic process of burning to soft tissue and bone for the entire body necessary for analyzing manner of death and unique circumstances of the fire scene.



On Wednesday Janelle Scott, P.H.D and Forensic Scientists from the Oregon State Police Portland Forensic Laboratory will be discussing "DNA/Trace Evidence" A primer on how trace, latent print, DNA and ignitable liquid analysis can aid investigation.



The closing day will be broken into two subjects. First will be "The Private Fire Investigation Business in Oregon", presented by Lynn Davis of C&O Services and Andy Lauersdorf of Maloney, Lauersdorf & Reiner PC. This will provide great insight into what private investigators do and how it differs from the public sector.

Closing the seminar will be "Digital Forensics as an Investigative Tool" presented by Charles Faulk with C.J. Faulk & Associates, LLC. This will be an introduction into digital forensics and the role it plays in both

criminal and civil litigation.

The banquet will be held on Wednesday night which is accompanied by the award presentation and the election of officers. If you are interested in becoming a board member please see website: <http://www.oriaai.net/BoardCommitmentLtr.doc>

Reserve your room by September 1st for reduced room rates.

If you need additional information contact GR Castillo at 503-934-0243 or John Wolff at 503-259-1504

Hope to see you there!!!

Is there someone in your organization you would like IAAI to honor in 2010 and this person meets our criteria? Please submit a nomination form.

Available on line: http://www.oriaai.net/nomination_Forms.doc



Newly Elected Board Officers & Board of Directors

At the 2009 Fall Seminar in Hood River the newly elected board members were sworn into office.

President: Susie Lovisco - Bend Fire Department

1st Vice President: Mo Austin - Big Foot Investigations

2nd Vice President: Ed Bonollo - Tualatin Valley Fire & Rescue

Directors:

2009-2011

Monty Neal - Oregon State Police

Kristina Deschaine - Oregon Office of State Fire Marshal

2009—2012

Jim Chistiansen - Columbia River Fire & Rescue

Andrew Lauersdorf - Maloney, Lauersdorf & Reiner P.C.

Ray Downey - Oregon State Police

**I.A.A.I. OREGON
CHAPTER 31
PO Box 15118
Salem, Oregon 97301**

www.or-iaai.net

CFItrainer.net

If budgets limit your ability to attend training there is a great resource available to you at CFItrainer.net. Which has many investigation training topics through different media outlets. Depending on your availability or technology you can get training to fit you. There are currently 27 different training modules that you can take online. Upon completion of the program you take a test online. Upon passing the test you can print your certificate off indicating the program you took and the CEU's obtained. For those of you on the run you can download Podcasts with a variety of subjects. Currently there are 16 Podcasts available.

CFItrainer.net has been created by the International Association of Arson Investigators through a grant provided by the Department of Homeland Security's Assistance to Firefighters Grant Program.

If you have time check out the site and take some of the training while it's available. It is a valuable tool that has been provided with great information for all levels of fire investigator whether you are in the public or private sector.

Expert Witness Class

If you are still in need of an expert witness class. Contact Ryan Fields at 541-944-3444 or through email at rfields@orcafire.com. Please be advised, participation in this class requires a lot of commitment from you including pre-course work. Refer to our website, www.or-iaai.net for Instructions/Advice to Students.

The *Oregon Fire Trail* is published Semi-Annually by the Oregon Chapter IAAI.

For submissions or suggestions contact

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