Office of the State Fire Marshal—Prevention Division

Prevention Highlights

Winter 2015

2015

Happy New Year! With a new year brings exciting and innovative challenges to tackle in the world of prevention.

As we look to 2015 with new goals and resolutions we should each consider what we can do to help our State and our communities.

What are your goals for the year? How will you achieve those goals? Will you do it alone or partner with someone?

However you plan to "cross that finish line," know that you *can* do it. You can accomplish whatever goal you have in mind by taking that first step. Getting started is the hardest part. Taking that first step and getting outside your comfort zone is the critical part to reaching any goal. Afraid to fall? What if you fly!

In the world of prevention we all take risks. We have to take risks in order to keep persevering and keeping Kansans safe. Your perseverance is what continues to keep us moving ahead and looking for the best possible options and solutions for our State. *What would YOU do if you knew you would not fail?*

Our office has some exciting things that will be happening in 2015. We have been given the wonderful opportunity to have Doug Jorgensen as our State Fire Marshal once again and feel he will continue to lead us in a positive direction. Doug has great vision for our Agency and plans to keep on promoting what we do and how we can help save lives all across the state.

We will be adopting the 2012 Edition of the International Building Code and updating our references. This information will be available to you. We also plan to initiate an elderly fire prevention program to help older adults who live in their home with fire safety tips and information. Our inspection and enforcement processes will continue with additional training and education to our staff, a long with adding some additional positions.

So bring on 2015!!!!

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POWER STRIPS IN EDUCATIONAL FACILITIES

By: Mike Wikle, OFSM Enforcement Officer

Our office gets questions on a regular basis asking what codes cover the use of power strips. Usually only after a facility has been issued a violation notice for the improper use of. Below are current adopted fire codes. These items are covered by any of the following code locations depending on the type of occupancy.

2006 Edition, NFPA 101 LSC (section 9.1.2)
2006 Edition, IFC section (605.4.1)
2008 Edition, NEC (article 400)

Power strips, also known as relocatable power taps, strip plugs, temporary power taps or flex cords were invented and designed to be used as a multiple outlet extension in the laboratory and at home. Officially called relocatable power taps, they are listed by Underwriter Laboratories Inc. under standard UL1363. Those power taps have some degree of electrical surge protection and electrical noise filtering for the protection of sensitive electronic equipment are also known as transient voltage surge suppressors.

Relocatable power taps and transient voltage surge suppressors are only designed for use with a high concentration of low-powered loads such as computers, audio and video equipment, musical instruments, home movie lighting, home workshops and laboratory equipment. They are not intended for use with high load equipment such as refrigerators, coffee pots, space heaters, microwave ovens, toaster, toaster ovens, fans and shop equipment. Essentially anything with an electric motor and possibly a pulley and belt.

Relocatable power taps and transient voltage surge suppressors are not extension cords. Power taps are not considered temporary wiring. Although one of the alternative names is temporary power taps. The temporary, refers to the physical mounting of the device. Physical mounting of relocatable power taps is permitted as long as removal does not require the use of tools.

So all the fire code sections above direct us to look at the UL listing 1363, which is an installation instruction for power strips, relocatable power taps, strip plugs, power taps and temporary taps. These above references tell you what they can and can't be used for.

Here is what they are **NOT** intended for:

- Not intended to be series connected (daisy chained) to other relocatable power taps or to extension cords;
- Not intended for use at construction sites and similar locations;
- Not intended to be permanently secured to building structures, tables, work benches or similar structures, nor are they intended to be used as a substitute for fixed wiring; and
- The cords are not intended to be routed through walls, windows, ceilings, floors or similar openings.

Keep in mind the UL requirement on permanent securing. It is often desirable to secure the relocatable power taps to avoid damage but secured such that no tools are required to remove it. Do use relocatable power taps for their intended purpose and with the intended equipment or loads. Avoid physical damage, exposure to water or wet locations.

Consider the load before plugging into a relocatable power taps. Do not plug in heavy appliances with high-powered loads or into extension cords. Do not use outdoors or on construction sites.

So remember, living better with electricity safety is the key, and will help prevent violations; by your local fire inspectors.

FIRE SAFETY POSTER CONTEST

By: Mende Barnett, OFSM Education Consultant

(Top) Eva Daugherthy, 2nd Grade
Chanute Christian Academy, Chanute, Kansas
(Right) Marisela Pu, 3rd Grade, Rolla Elementary School, Rolla, Kansas
(Below) Amanda Bilby, 6th Grade, Mulvane Middle School, Mulvane, Kansas

I am excited to announce our second annual fire safety poster contest wrapped up in December.

In October, during Fire Prevention Week, we asked schools and fire departments from across the state to submit fire safety posters from grades K through 6th. This is a great way to help promote fire safety but also give us an idea as to what kids know about the subject.

This year we had over 100 entries from all across the state! The posters included general fire safety tips from, stop, drop and roll, don't play with matches, and even the importance of home sprinkler systems.

We want to thank all of those who participated and took the time to get their students entries in. One winner from each age category was chosen. The categories were K-2nd, 3rd & 4th, and 5th & 6th Grades. The decisions were not easy, but we are pleased to announce the winners!

HOME SWEET HIGBEE

By: Mende Barnett, OFSM Education Consultant

We all take for granted that as we leave our homes each morning we will come back to them the way we left them. You turn off all the lights, make sure the coffee pot is off and head out the door. On March 11, 2014, the Dodds family did just that.

It was a typical day, Kris and Liz Dodds took the kids to school and went to work. A few short hours later there was a call that came into the fire station where Kris Dodds works as a firefighter. His house was on fire.

Immediately, the fleet was sent to his home and along the way a thousand thoughts rushed through his head. It wasn't until he arrived at his home that the firefighter had then become the fire victim. The beloved family dog, Higbee, perished in the fire and the house was a total lost. Friends and family along with fellow firefighters swarmed in to help and assist.

The devastation and despair of losing all their belongings was almost too much to handle. How could this happen? How could one who fights the fires and helps to save lives be the one who needed saving?

Slowly, and with a lot of support from the community, friends and family they started to rebuild on new faith and hope. The material items lost could mostly be replaced. The four-legged family member could not and that hurt the most.

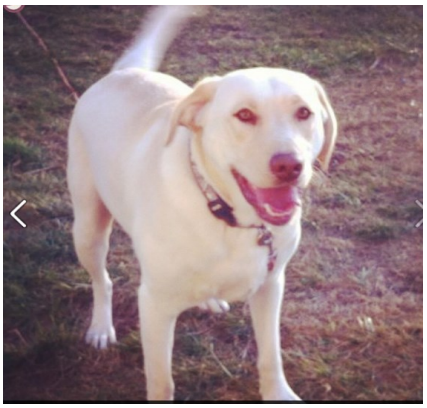
The Dodds family slowly started to rebuild their lives. Kris Dodds said, “This experience has tested our faith, and it’s been really tough not only on me but it has affected my entire family. I would never wish for this to happen to anyone. It makes what I do as a firefighter that much more important and it has changed our lives forever.”

Fires happen every day and every day someone’s life is changed because of it. As fire professionals, in any capacity, our job is to make sure that property and lives are saved. In events such as this, it becomes difficult because there was no way to fully prepare for such devastation.

The Dodds family feel very blessed to have had the outpouring love and support of those in their community. They are grateful to those who came to their aid in their time of need.

The fire was determined to be caused by an electrical malfunction in the freezer portion of their refrigerator.

“There was nothing we could have done to keep this from happening. We are thankful no one was hurt but of course wish that we could have saved our



dog. It was heart wrenching knowing what he went through.”

Being aware of what dangers may lurk in your home and protecting your belongings, as much as possible, is oftentimes all you can do. The Dodds family helps to remind us that no one is immune to the effects of fire. It can happen to anyone at any time.

Refrigerator where fire started

SENSITIVITY TESTING

By: Brenda Reber, OFSM Enforcement Officer

NFPA 72, National Fire Alarm Code, requires testing for the sensitivity of smoke detectors as part of the periodic testing of the fire alarm systems under Chapter 10. The sensitivity test is in addition to the functional test and is done to determine the alarm threshold of the detector.

If an alarm is too sensitive it will be susceptible to false alarms or nuisance alarms. If it is not sensitive enough it may not detect the presence of smoke. This helps to ensure that the sensing chamber remains calibrated within the sensitivity range established by the manufacturer of the alarm.

How often are these tests conducted? The rule of thumb is one, three and five years from the installation of the fire alarm system. However, if you perform a test and it comes back out of range, or fails, you will need to replace that alarm and continue the test again the following year.

IFC 2006, 901.6 states fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times. Records of all system inspections, tests, and maintenance shall be maintained on the premises for a minimum of 3 years and made available to the fire code official upon request.

For sensitivity tests, any of the following may be performed to ensure each alarm is within its manufactured range.

- A recognized, calibrated test method with smoke or listed aerosol.
- Using manufacturer calibrated sensitivity test instrument
- Listed control equipment that are arranged to perform sensitivity tests. (Fire Alarm Control Panel)
- Combination smoke detector/control unit where the detector causes a signal at the control unit when its sensitivity is outside its listed ranges.

When asked, “Does my facility need a sensitivity test?” If your facility has a fire alarm system, you fall under the code which states these types of tests shall be conducted.

Your testing documentation would show something like this below. This allows the inspector to see that it has passed the test and is within range.

Sensitivity %		2-WBSmoke Det
Pass	Fail	Range
2.40%		1.00 - 4.00,
2.40%		1.00 - 4.00
2.40%		1.00 - 4.00
2.40%		1.00 - 4.00
1.80%		1.50%-3.66%

Who performs theses tests? Sensitivity testing should be done by a technically qualified individual. A facility would need to contact their fire alarm company. They are the professionals and have the equipment and knowledge of your system.

Remember when you have any testing or maintenance done to your system to keep good records. This will help alleviate any problems when your inspectors asks for documentation.

What is NFPA 72?

NFPA 72 provides the latest safety provisions to meet society’s changing fire detection, signaling and emergency communications demands. In addition to the core focus on fire alarm systems, the Code includes requirements for mass notification systems used for weather emergencies; terrorist events; biological, chemical, and nuclear emergencies and other threats.

FIRE RATED DOORS

By: Jason Lady, OFSM Enforcement Officer

We pass through doors every day and often are unaware of their importance in life safety.

A lack of awareness can lead to the ineffectiveness of a fire rated door. With a little knowledge building owners and occupants can help to provide life safety measures in their facilities.

The role of a fire door is to inhibit the spread of smoke, flames and gases. Each assembly will have a rating requirement which is determined by specific codes. For example, corridor doors, will typically have a 90 minute fire rating.

You can located the fire rating label on a door by looking on the door edge or frame.

Per code, this labels should be legible and not painted over or covered up.

In order for a rated fire door to be effective and perform as it was designed, it must be closed and positively latch in the frame.

It is common during the inspection process, we see doors being held open by the use of a wedge, trash can, or another creative device. (we have seen it all)

The problem starts when an open door allows smoke and flames to spread into the space instead of withholding those elements to allow occupants to evacuate promptly.

The positive latching requirement for fire doors ensures that the pressure from a fire is not able to push the door open and allow smoke and flames to filter in. When items such as tape, magnets, or even the malfunction of the latching hardware becomes interrupted, this then causes to door to be noncompliant and not work properly.

Penetrations and modifications in fire rated doors can also cause them to become ineffective. If holes are left in a fire door when hardware it removed, or changed, then that door no longer serves as fire door and loses its rating. Those holes must be filled with steel fasteners or the same material as the door or frame. There is also a fire caulk that is available for use in small penetrations.

NFPA 101 and International Fire Code (IFC) contain annual inspection requirements for fire doors. It is the responsibility of the building owners to make sure these code requirements are conducted by a third-party inspector and documented. Any fire marshal or inspector can review this documentation and make sure you in compliance with code.

Keeping your fire rated doors properly maintained can not only save you from property damage but also the potential loss of life.

Knowing why the door is designed to stay closed and latched is more of a reason to get in the practice of closing the door behind you.

BUSY BOILERS

By: Charles Wilson III, Deputy State Boiler Inspector

With nearly 22,000 active boilers and pressure vessels in the state our inspectors are constantly busy. Some of the most frequently asked questions we receive are, “What is a boiler?” and “Do people still use them?”

While questions like this can be humorous at times, it often makes me concerned. Modern technology has done wonders in and around our lives. There still remains the basic need for hot water, heating, and steam for a multitude of reasons.

Kansas defines a “boiler” as a closed vessel in which water or other liquid is heated. Steam or vapor is generated or steam is superheated. In which any combination of these functions is accomplished under pressure of vacuum for use internal or external to itself by the direct application of energy from the combustion of fuels or of electric solar power. The term “boiler” shall also include fired units for heating or vaporizing liquids other than water where these units are separate from processing systems and are complete within themselves. Of course, there are more specific definitions depending on the particular use of the boiler.

Many people we come in contact with have come to believe that because the term “boiler” is not associated with a particular object, it therefore means they do not have a “boiler”. One of our jobs is to educate and make people aware that while there is a broad definition for the term “boiler”, there are still more refined definitions for a variety of objects being used within the state of Kansas that do require jurisdictional authority.

These objects like many others, can pose a risk if they are not properly taken care of. We recommend you be aware of your equipment and should you have questions or concerns please contact our office. We are happy to assist you. Please see our website for additional boiler information.

You may have recently received some paperwork from our office indicating the need to update your contact information. This is to ensure we have the best possible way of communicating with you and providing you with the best service.

Here is a snap shot of a “few” we have received. We will be continually updating our system as more updates come in.

In the mean time, if you have changes in your contact information please let us know, by calling our office at 785-296-3401.

Can You Spot the Violation?

By: Travis Sutton, OFSM Enforcement Officer

Answers on last page

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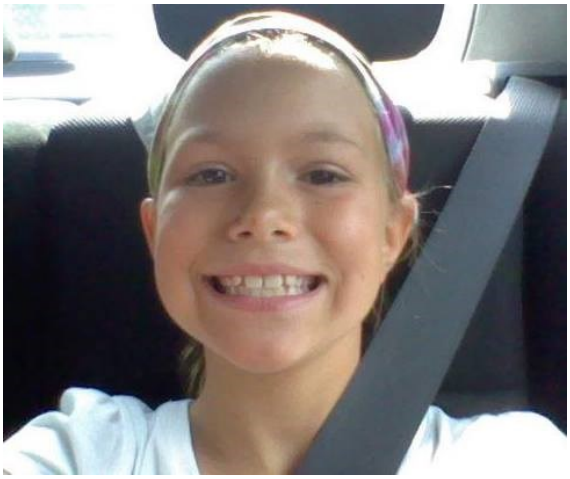
Taylor Your Home 4 Safety

By: Mende Barnett, OFSM Education Consultant



This beautiful young girl is Taylor Jackson. A typical 8 year old who loved karate and girl scouts. She enjoyed hanging out with her friends and having fun.

On October 2, 2011, Taylor's life was cut short after she spent the night at a friend's house and an electrical fire broke out. Two others in the home escaped the fire but Taylor was not able to make it out. The home where she was staying the night was in the process a few weeks earlier of replacing the smoke alarm, but had not completed the project. There were no other alarms in the house.

Taylor's mom, Terri Jackson, continues to devote her time to promote the use of smoke alarms. Every day she lives with the loss of her daughter and encourages others to have working smoke alarms in their homes. "It only takes 8 seconds a month to push that little test button," Terri said. "It's not much time to take when you could be saving your child's life."

Taylor's life could have been saved if the home had a working smoke alarm.

Terri has started a campaign called. "Taylor Your Home 4 Safety", which helps spread the word about the importance of working smoke alarms in homes.

An average smoke alarm can cost between $6 to $11 each and come with ten year lithium batteries. They are easy to install and require little maintenance.

Follow these smoke alarm life saving tips to ensure your home is safe.

- Install smoke alarms on every level of your home including inside and outside bedrooms
- Check smoke alarms monthly by pushing the test button
- Do not remove the batteries from your smoke alarm to use for another appliance
- Consider installing a 10 year lithium battery or buying a device that has sealed batteries so they cannot be removed or tampered with
- Change batteries in your alarms at least once a year when you change your clocks

Fires occur every day and with a little education and preparation your home can be fire safe.

Terri Jackson is a great advocate to have speak at public events and open houses. She helped our office kick-off our smoke alarm program. If you would like to contact her please let me know. You may also go to Taylors Facebook page for more information about her story and her mother's efforts to protect others. If you or someone you know need a smoke alarm, please contact your local fire department or Safe Kids Coalition.

Don't allow someone you love become a victim to fire.

Not only should you have working smoke alarms, you should also have and practice a home fire escape plan, which includes a meeting place outside and visible address numbers on your home.

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MANUAL FIRE ALARM BOX

By: Jack Chatmon, OFSM Fire Protection Specialist

Our office frequently gets questions regarding the testing of manual fire alarm box or pull stations.

NFPA 72, National Fire Alarm and Signaling Code, Chapter 14 specifies that manual fire alarm boxes should be tested annually. “Operate manual fire alarm boxes per the manufacturer’s published instructions, test both key-operated pre-signal and general alarm manual fire alarm boxes.”

One specific manufacturer of manual fire alarm boxes states that in its installation and operating instructions, “to activate a single-action pull station, simply pull down the handle. To activate dual-action stations, push in, then pull down the handle. “This manufacturer mentions several times pulling down the handle. Some service technicians in the field believe that they may test the manual fire alarm box by using a key and don’t actually pull the handle. This type of testing does not constitute a code compliant test.

Some may argue that it doesn't matter how the test is completed, as long as it works then the pull box is fine. Many don’t want to have the extra cost of those types of manual pull boxes that have a break-glass front. However, the physical act of the “pull” test is important because failures have occurred. It is possible for the pull lever to become frozen in place or the seal around the alarm could deteriorate causing the switch to malfunction. It has been found that someone replaced the glass rod with a brass rod to lower false alarms from actuated manual boxes. Opening the box to initiate a test would not necessarily discover this issue.

If you have a box that has not been tested in a long time how do you know for sure that station will work properly in a fire?

By reviewing the manufacturers instructions and test the pull station as if one would in an actual fire. Any other method of testing does not comply with code.

Proper testing helps to increase the reliability of the alarm. It also protects the interests of all those involved.

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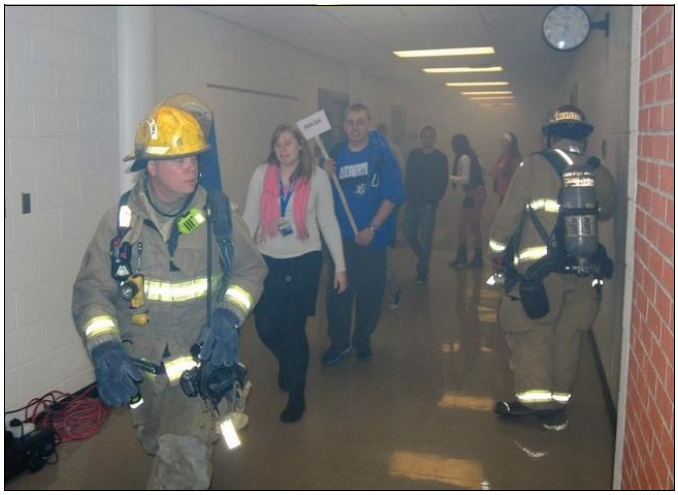
What Are You Doing?

By: Mende Barnett, OFSM Education Consultant

We want to know what you are doing! Tell us what prevention methods you use in your facilities that help promote fire safety! By sharing your practices you could help someone else in their fire safety efforts. Take a look at what Leavenworth School District is doing.



Matt Dedke, Director of Facilities for Leavenworth Public Schools is partnering with the Leavenworth Fire Department to bring realism to their fire drills.

Theatrical smoke was used during the drills to simulate a more realistic effect while the firefighters searched for students who were told to remain in their classrooms.

These drills not only helped to prepare the school in case of a fire but also helped the firefighters assisting them to know what they may become exposed to.

Every school building is different and by working together they are able to practice and provide the best rescue efforts for that location.

Thank you Leavenworth schools and Fire Department for all your efforts!!

Answers: A: Sprinkler head clearance B: Not a positive latch in door frame C: Card reader on egress doors D: Exit obstruction

In the Prevention Division we oversee many different types of building occupancies and we are constantly being asked, “What exactly does your office do?”

Let me explain, so you know what all is under the Prevention umbrella. I will preface it with we do not do it alone, we have inspectors at the local level mostly through fire departments that inspect their community occupancies. They oftentimes get confused with our state inspectors. Without these local inspectors we would never be able to keep all these facilities fire safe. In the state there are just too many facilities. It also helps the fire departments to become familiar with buildings in their area.

Our Agency is divided in three divisions, Investigations, Prevention and Hazmat. Prevention covers all prevention efforts. Public Education, Fire Code Enforcement, Inspections, and most recently Boiler inspections. We oversee life safety issues in facilities such as healthcare, jails and detention centers, educational facilities, above ground storage tanks (propane), hotel and motels, restaurants, childcare centers and daycares.

We have a lot of facilities to keep an eye on. It is our job as fire code officials to enforce those codes and make sure others follow them. These codes keep visitors, patients, and all those entering these buildings safe.

It is not an easy task, one like I mentioned before that we can not do alone. We need your help to assist us in making sure your facilities are as safe as possible.

We’re on the Web!
www.ksfm.ks.gov