







# Safety Brief

JCFPD Training Division

March 2016

2016-03



Station \_\_\_\_\_  
(Initial and Date  
to indicate  
knowledge of  
contents)

- 8\_\_0\_\_\_\_\_
- 8\_\_1\_\_\_\_\_
- 8\_\_2\_\_\_\_\_
- 8\_\_3\_\_\_\_\_
- 8\_\_4\_\_\_\_\_
- 8\_\_5\_\_\_\_\_
- 8\_\_6\_\_\_\_\_
- 8\_\_7\_\_\_\_\_
- 8\_\_8\_\_\_\_\_
- 8\_\_9\_\_\_\_\_
- 8\_\_0\_\_\_\_\_
- 8\_\_1\_\_\_\_\_
- 8\_\_2\_\_\_\_\_
- 8\_\_3\_\_\_\_\_
- 8\_\_4\_\_\_\_\_
- 8\_\_5\_\_\_\_\_
- 8\_\_6\_\_\_\_\_
- 8\_\_7\_\_\_\_\_
- 8\_\_8\_\_\_\_\_
- 8\_\_9\_\_\_\_\_
- 8\_\_0\_\_\_\_\_
- 8\_\_1\_\_\_\_\_
- 8\_\_2\_\_\_\_\_
- 8\_\_3\_\_\_\_\_
- 8\_\_4\_\_\_\_\_
- 8\_\_5\_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_

## Severe Spring Weather Awareness

### Tornado

A tornado is a violently rotating column of air extending from the base of a thunderstorm down to the ground. Tornadoes are capable of completely destroying well-made structures, uprooting trees and hurling objects through the air like deadly missiles. Tornadoes can occur at any time of day or night and at any time of the year. Although tornadoes are most common in the Central Plains and southeastern United States, they have been reported in all 50 states.



While not all thunderstorms produce tornadoes, the potential is high during this time of the year. NOAA weather radios can be programmed to alert a specific area for weather warnings. A tornado watch indicates conditions are favorable for storms to produce tornados. A tornado warning indicates a tornado has been sighted or is indicated on radar.

### Severe Thunderstorms

Tornadoes are not the only threat. High winds, hail, lightning and torrential rain causing flooding are equally as dangerous as tornadoes. Severe straight-line wind gusts and large hail can damage buildings, trees and vehicles. Straight-line winds can exceed 100 mph. Downbursts, a small area of rapidly descending air beneath a thunderstorm, can cause damage equivalent to a strong tornado.

## NOAA Thunderstorm Safety Tips

- Listen to local news or NOAA Weather Radio for emergency updates. Watch for signs of a storm, like darkening skies, lightning flashes or increasing wind.
- If you can hear thunder, you are close enough to be in danger from lightning. If thunder roars, go indoors! Don't wait for rain. Lightning can strike out of a clear blue sky.
- Avoid electrical equipment and corded telephones. Cordless phones, cell phones and other wireless handheld devices are safe to use.
- Keep away from windows.
- If you are driving, try to safely exit the roadway and park. Stay in the vehicle and turn on the emergency flashers until the heavy rain ends.
- If you are outside and cannot reach a safe building, avoid high ground; water; tall, isolated trees; and metal objects such as fences or bleachers. Picnic shelters, dugouts and sheds are NOT safe.

### Protect Yourself

After the storm passes, keep tuned to local media to get an all-clear signal before leaving a shelter. Sometimes more than one tornado can develop from a storm. Once outside a building, stay out and seek help. Be alert for damaged and leaking utilities. Account for your family's safety before responding to any District calls for service. Keep an eye on the sky and stay safe!



# Safety Brief

JCFPD Training Division

April 2016

2016-04



Station \_\_\_\_\_  
(Initial and Date  
to indicate  
knowledge of  
contents)

- 8\_\_0\_\_\_\_\_
- 8\_\_1\_\_\_\_\_
- 8\_\_2\_\_\_\_\_
- 8\_\_3\_\_\_\_\_
- 8\_\_4\_\_\_\_\_
- 8\_\_5\_\_\_\_\_
- 8\_\_6\_\_\_\_\_
- 8\_\_7\_\_\_\_\_
- 8\_\_8\_\_\_\_\_
- 8\_\_9\_\_\_\_\_
- 8\_\_0\_\_\_\_\_
- 8\_\_1\_\_\_\_\_
- 8\_\_2\_\_\_\_\_
- 8\_\_3\_\_\_\_\_
- 8\_\_4\_\_\_\_\_
- 8\_\_5\_\_\_\_\_
- 8\_\_6\_\_\_\_\_
- 8\_\_7\_\_\_\_\_
- 8\_\_8\_\_\_\_\_
- 8\_\_9\_\_\_\_\_
- 8\_\_0\_\_\_\_\_
- 8\_\_1\_\_\_\_\_
- 8\_\_2\_\_\_\_\_
- 8\_\_3\_\_\_\_\_
- 8\_\_4\_\_\_\_\_
- 8\_\_5\_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_

The most important piece of equipment we use is our PPE. We may be asked to make a rescue, so we must protect ourselves; if we enter a burning structure, we must protect ourselves. The first priority at any incident is life safety, both the public's, and ours and without the most important piece of equipment, we can't complete this duty.

## Hazards for Firefighters

Firefighters often believe that dirty gear is the sign of someone who isn't afraid to take a hose to the seat of the fire. But did you know that dirty turnout gear can actually be harmful to firefighters and minimize your safety? Some of the problems associated with dirty gear include:

- Dirty gear may conduct electricity;
- Dirty gear may ignite, even though the material is flame-resistant;
- Dirty gear will absorb heat rather than reflect heat;
- Dirty gear doesn't 'breathe' as well as clean gear;
- Dirty reflective trim is less visible;
- Dirt and contaminants can weaken fabrics;
- Dirt and contaminants may add weight to gear; and
- Dirt and contaminants can be hazardous to firefighters.



Never wash turnout gear at home. Our personal washers are not capable of extracting the contaminants from turnout gear. What little they may get out though could be transferred to any other item washed in that washer including family and friends clothes.

## Avoiding Injury

There are two types of cleaning for turnout gear; routine cleaning and advanced cleaning. Routine cleaning should be completed any time your turnout gear gets dirty. Advanced cleaning should be completed when

your gear is too dirty to be cleaned using routine cleaning techniques.

**Routine Cleaning:** First, you should brush off any dry debris. Other debris should be gently rinsed off with water. A soft brush can be used to gently scrub the fabric and help lift dirt and contaminants from the surface of the gear. After gentle scrubbing is complete, the gear should be rinsed to remove the dirt and debris. Mild detergents can be used to help remove the dirt.

**Advanced Cleaning:** Advanced cleaning requires the use of specialized washing and drying equipment for proper cleaning. The extractor (washer) and gear dryer are located in the upper bay of Headquarters Station 1. Instructions are located on the extractor and gear dryer.

While disassembling PPE for advanced cleaning, this is a great time to inspect your gear for any damage from the incident.

Check for rips, tears, and burns in your outer shell and inner liners, check that all the hardware (snaps and buckles) are still in place, ensure that the Velcro holds and the stitching holding the Velcro in place is not missing or coming undone, check for any rips, tears, or burns in your gloves and hood, check your boots for rips, tears, burns and also nails and screws or any other object which could

be caught in the soles.

## Protect Yourself

Keep your gear clean. Routine cleaning will keep our gear functional and help maintain our professional appearance. Periodic advanced cleaning using the extractor and gear dryer will reduce exposure to toxins and cancer-causing contaminants.

## Clean PPE



# Safety Brief

JCFPD Training Division

July 2016

2016-07



Station \_\_\_\_\_  
(Initial and Date  
to indicate  
knowledge of  
contents)

8\_\_0\_\_\_\_\_

8\_\_1\_\_\_\_\_

8\_\_2\_\_\_\_\_

8\_\_3\_\_\_\_\_

8\_\_4\_\_\_\_\_

8\_\_5\_\_\_\_\_

8\_\_6\_\_\_\_\_

8\_\_7\_\_\_\_\_

8\_\_8\_\_\_\_\_

8\_\_9\_\_\_\_\_

8\_\_0\_\_\_\_\_

8\_\_1\_\_\_\_\_

8\_\_2\_\_\_\_\_

8\_\_3\_\_\_\_\_

8\_\_4\_\_\_\_\_

8\_\_5\_\_\_\_\_

8\_\_6\_\_\_\_\_

8\_\_7\_\_\_\_\_

8\_\_8\_\_\_\_\_

8\_\_9\_\_\_\_\_

8\_\_0\_\_\_\_\_

8\_\_1\_\_\_\_\_

8\_\_2\_\_\_\_\_

8\_\_3\_\_\_\_\_

8\_\_4\_\_\_\_\_

8\_\_5\_\_\_\_\_

8\_\_ \_\_\_\_\_

8\_\_ \_\_\_\_\_

8\_\_ \_\_\_\_\_

8\_\_ \_\_\_\_\_

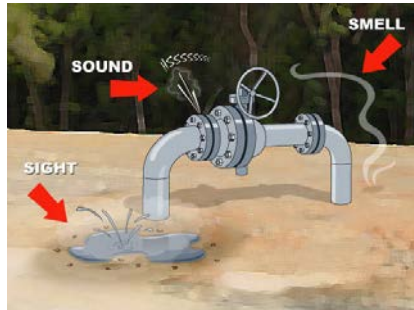
8\_\_ \_\_\_\_\_

8\_\_ \_\_\_\_\_

## Responding to Gas Leaks

One of the least respected, potentially deadly calls which fire departments respond to are the calls of "smell of gas in or near a residence or structure". In our run area, we have homes with both natural gas and propane. Responding to these calls routinely can lead to complacency. We must not forget that these types of calls can change for the worse in an instant. We are reminded of just how dangerous these incidents can be all the time including the gas leak eventually leading to an explosion sending nine firefighters to the hospital in Seattle's Greenwood neighborhood in March 2016.

While responding to a call involving unknown odors, get as much information from dispatch as you can. While en route, determine the most suitable water supply and staging areas for following incoming units. First, try to determine the type of gas service to the residence or business. If it is natural gas service, contact dispatch and ask for a response from Missouri Gas Energy (MGE) to assist. If the gas leak involves propane, determine the provider and ask for a response from the gas provider.



## Hazards for Firefighters

Natural gas is much lighter than air and will usually dissipate rapidly in the outside environment. Inside buildings, however, it tends to collect, particularly in attics and dead air spaces. The flammable (explosive) limits for natural gas are approximately 4-15 percent in air. Propane is heavier than air, and will sink to low spots if there is no wind to dissipate the release. The flammable (explosive) limits for propane are approximately 2-10% in air. Natural gas and propane are nontoxic; however, both gases can displace oxygen and can result in asphyxiation if in a confined space. Both natural gas and propane have no natural odor. As a result, leaks from transmission pipelines will not be identifiable by smell. An odorant is added to natural gas at the point of distribution to smaller pipes for delivery to individual homes so that

leaks can be recognized. An odorant is also added to propane when it is loaded into delivery trucks. Possible indications of a gas leak other than the odorant additive are:

- Discolored or dead vegetation over or near the line
- A hissing, whistling, or roaring sound near a line or appliance
- Dirt or debris being blown into the air
- Persistent bubbles in streams, ponds, or wet areas

## Avoiding Injury

As we have gathered the available information from dispatch while en route, the first arriving units should stop short of the incident address to limit the chance of the apparatus becoming an ignition source. Being upwind of the leak is recommended if at all possible. The number of personnel in the "hot" zone should be limited to the minimum number of personnel (at least two personnel) that it will take to effectively conduct the investigation. Ensure all personnel in the hot zone are wearing full PPE including SCBA. Do not rely solely on the smell of the additive in the gas as it can quickly desensitize your sense of smell.

## Protect Yourself

The district as a whole responds to many of these gas leaks or smell of gas inside a home or business each year. There is always the potential of the "routine" gas leak to develop into a fire or explosion, which can be very dangerous to our personnel and the public. If we use our training and the proper resources while on scene at a gas leak or odor investigation, we can greatly reduce the risk of injury.





# Safety Brief

JCFPD Training Division

November 2016

2016-11



Station \_\_\_\_\_  
(Initial and Date  
to indicate  
knowledge of  
contents)

- 8\_\_0\_\_\_\_\_
- 8\_\_1\_\_\_\_\_
- 8\_\_2\_\_\_\_\_
- 8\_\_3\_\_\_\_\_
- 8\_\_4\_\_\_\_\_
- 8\_\_5\_\_\_\_\_
- 8\_\_6\_\_\_\_\_
- 8\_\_7\_\_\_\_\_
- 8\_\_8\_\_\_\_\_
- 8\_\_9\_\_\_\_\_
- 8\_\_0\_\_\_\_\_
- 8\_\_1\_\_\_\_\_
- 8\_\_2\_\_\_\_\_
- 8\_\_3\_\_\_\_\_
- 8\_\_4\_\_\_\_\_
- 8\_\_5\_\_\_\_\_
- 8\_\_6\_\_\_\_\_
- 8\_\_7\_\_\_\_\_
- 8\_\_8\_\_\_\_\_
- 8\_\_9\_\_\_\_\_
- 8\_\_0\_\_\_\_\_
- 8\_\_1\_\_\_\_\_
- 8\_\_2\_\_\_\_\_
- 8\_\_3\_\_\_\_\_
- 8\_\_4\_\_\_\_\_
- 8\_\_5\_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_
- 8\_\_ \_\_\_\_\_

## Home Cooking Safety

As we are all well aware of by now, this is the time of the year when families get together and cook some fantastic, food-coma dinners. These are often joyful times as the holiday season has arrived and summer has given way to fall, which will eventually give way to winter (though that may February). We use these times of gathering to catch up with family and friends, and a time to relax after a great meal. There is a hazard though with all this time spent in the kitchen, cooking fires. Cooking fires are the number one cause of home fires and home injuries.

Here is a look at a breakdown of cooking fire incidents between 2009 and 2013 according to the NFPA.

- Cooking equipment was the leading cause of home fires and fire injuries, causing 46% of home fires that resulted in 19% of the home fire deaths and 44% of the injuries.
- Two-thirds of home cooking fires started with the ignition of food or other cooking materials.
- Clothing was the item first ignited in less than 1% of these fires, but these incidents accounted for 18% of the cooking fire deaths.
- Ranges or cooktops accounted for the majority (61%) of home cooking fire incidents. Ovens accounted for 13%.
- More than half of reported non-fatal home cooking fire injuries occurred when the victims tried to fight the fire themselves.
- Frying poses the greatest risk of fire.

Thanksgiving is the peak day for home cooking fires.



- Be on alert! If you are sleepy or have consumed alcohol don't use the stove or stovetop.
- Stay in the kitchen while you are frying, grilling, or broiling food. If you leave the kitchen for even a short period of time, turn off the stove.
- If you are simmering, baking, roasting, or boiling food, check it regularly; remain in the home while food is cooking, and use a timer to remind you that you are cooking.
- Keep anything that can catch fire— oven mitts, wooden utensils, food packaging, towels or curtains away from the range.

### Avoiding Injury

If you have a grease fire, there are a few simple things that can be done to minimize the risk of the grease fire becoming a structure fire. **Do not pick the pan up and**

**attempt to take it outside.** Slide a lid over the fire and turn the burner off. Leave the pan on the range to completely cool.

The same principle applies to an oven fire. Turn the heat off and keep the door closed. Let the stove cool with the door closed.

### Protect Yourself

Our goal as always is for everyone to be safe all year long and especially during the holiday season. If you have any doubt about fighting a small fire or the fire has become to large to handle on your own without additional resources, **GET OUT.** Close the door behind you as you go. **Call 911** from a cell phone or neighbors house, outside of the house. Yours and your family's safety comes first. Houses and possessions can be replaced, you and your loved ones cannot. Have a safe and memorable holiday season.



# Safety Brief

JCFPD Training Division

December 2016

2016-12



Station \_\_\_\_\_  
 (Initial and Date  
 to indicate  
 knowledge of  
 contents)

8\_\_0 \_\_\_\_\_  
 8\_\_1 \_\_\_\_\_  
 8\_\_2 \_\_\_\_\_  
 8\_\_3 \_\_\_\_\_  
 8\_\_4 \_\_\_\_\_  
 8\_\_5 \_\_\_\_\_  
 8\_\_6 \_\_\_\_\_  
 8\_\_7 \_\_\_\_\_  
 8\_\_8 \_\_\_\_\_  
 8\_\_9 \_\_\_\_\_  
 8\_\_0 \_\_\_\_\_  
 8\_\_1 \_\_\_\_\_  
 8\_\_2 \_\_\_\_\_  
 8\_\_3 \_\_\_\_\_  
 8\_\_4 \_\_\_\_\_  
 8\_\_5 \_\_\_\_\_  
 8\_\_6 \_\_\_\_\_  
 8\_\_7 \_\_\_\_\_  
 8\_\_8 \_\_\_\_\_  
 8\_\_9 \_\_\_\_\_  
 8\_\_0 \_\_\_\_\_  
 8\_\_1 \_\_\_\_\_  
 8\_\_2 \_\_\_\_\_  
 8\_\_3 \_\_\_\_\_  
 8\_\_4 \_\_\_\_\_  
 8\_\_5 \_\_\_\_\_  
 8\_\_ \_\_\_\_\_  
 8\_\_ \_\_\_\_\_  
 8\_\_ \_\_\_\_\_  
 8\_\_ \_\_\_\_\_  
 8\_\_ \_\_\_\_\_  
 8\_\_ \_\_\_\_\_

## SCBA USE

Something that just goes with the job; we are often exposed to hazardous environments, which can cause respiratory problems, or in the worst cases; death. Some respiratory hazards are easily recognized, such as smoke exiting openings of a structure. Other respiratory hazards may not be visible, yet should be expected based upon the nature of the incident and information gathered in route and on scene, such as carbon monoxide alarm, and gas leak calls. From time to time, firefighters may forget or just neglect when self-contained breathing apparatus (SCBA) use is essential.

### Hazards for Firefighters

SCBAs **must** be worn when firefighters must enter environments, which are immediately dangerous to life and health (IDLH). See the October 2015 Safety Brief for more information on IDLH environments. Conditions considered to be IDLH include: High-temperature environments; Toxic environments; Flammable environments; and Oxygen deficient environments. The hazards associated with not wearing SCBA in these types of environments are evolving year after year with the new modern products of today's world. For more information on two of the biggest hazards we face today in environments that involve smoke; or the off gassing of materials, see the October 2016 Safety Brief; The Toxic Twins.

### Avoiding Injury

Respiratory injuries can be avoided by wearing SCBA for all types of fires other than natural-cover fires. The contaminants at structure fires are well documented, and firefighters regularly don their SCBA **before approaching** a burning building. Carbon monoxide emergencies should be recognized as an IDLH environment requiring SCBA use. Until you can characterize the level of hazard, one must assume a hazard is present and wear the maximum level of protection available (SCBA). Gas leaks present a similar problem (unknown level of hazard) until the amount of gas in the environment can be identified. Some gas leaks may have limited flammability, like anhydrous ammonia, while natural gas and propane are extremely flammable under the right conditions. When you don't know how bad it is, opt to wear your SCBA as a precaution.

Vehicle fires present numerous hazards. The increasing amount of plastics found in modern vehicles can produce high levels of toxic materials, which should not be allowed into the respiratory system. Freon gas converts to phosgene gas when heated which has been used as a chemical warfare agent in the past. Battery acids can be aerosolized by fire. Carbon monoxide will be produced, and many other contaminants found at structure fires will also be present. Cars can contain almost any other type of hazardous material, which warrants full PPE, including your SCBA. Dumpster fires, like car fires, can cause firefighters to let down their guard. However, the level of unknowns in a dumpster fire can be very high! Almost any kind of hazard is possible, because that's what we do with all the nasty things that we don't want anymore, we throw it away. In nearly every case, the only life hazard present at a dumpster fire is the firefighters themselves. Exercise caution, consider the potential hazards, and wear your PPE, including your SCBA. Confined space emergencies are not common, but can go terribly wrong in an instant. In addition to toxic environments, oxygen deficiency may also be a hazard. All confined spaces should be considered IDLH, warranting the use of SCBA. Also, with the information gathered once on scene, full PPE may also be required.



### Protect Yourself

The SCBA cannot help you while sitting in the mounting bracket in the truck. There are essentially an unknown number of incident types in which an SCBA should be worn. The types of incidents we normally run which should always require the use of SCBA have been discussed here yet any incident has the potential to produce an IDLH environment. Wear your SCBA.