One of the biggest threats to restaurant and bar owners is fire, which can be a costly and potentially business-ending disaster. Grease accumulation, equipment malfunction and general poor housekeeping are all potential dangers and perpetual fire hazards. From 2006-2010, an estimated average of 7,640 structure fires in restaurants and bars were reported to U.S. fire departments per year. Associated annual losses included two civilian deaths per year, 115 civilian injuries and $246 million in property loss.

While cooking and cooking equipment account for 57 percent of all restaurant and bar building fires, potential threats also lurk in some often-overlooked spaces. For example, grease accumulations, while not as obvious a danger, resulted in 21 percent of fires, while heating equipment failure accounted for 22 percent. Electrical failure fires can be the most damaging, often becoming large, nonconfined building fires.

Although 71 percent of restaurant and bar fires remain relatively small, they are no less damaging to business owners. Loss of revenue and staff and cost of repairs make bouncing back an expensive task. On top of this, owners run the risk of losing customers to competitors when “Closed” signs decorate the windows.

In the time it takes a restaurant to repair fire damage, which varies greatly due to factors like smoke and water damage on top of the fire’s actual destruction, customers tend to go elsewhere. While a week may do little damage to the bar’s or restaurant’s reputation and customer traffic, a month or longer may mean customers’ loyalty will stray. And by the time the establishment is able to reopen, it may be too little, too late.

TODAY’S PREPARATION CAN MAKE OR BREAK YOUR BUSINESS

Commercial cooking is a special hazard involving unique controls to prevent fires as it generates grease, which is highly combustible. Because of this, there is really no way to completely erase the threat of fire. However, there are precautions you can take to decrease the likelihood of a potentially catastrophic event.

Safeguard Your Working Environment with Proper Duct and Hood Cleaning

Exhaust hoods and ducts in restaurant and bar kitchens are designed to collect cooking vapors and residues. Poorly cleaned hoods and ducts account for 21 percent of all fires.

The National Fire Protection Association’s fire code, NFPA 96, prescribes the minimum fire safety guidelines for cooking equipment, exhaust hoods, grease removal devices, exhaust ductwork and all other components involved in the capture, containment and control of grease-laden cooking residue. The NFPA 96 standards are considered necessary to provide an appropriate level of property protection and loss of life.

Restaurant and bar owners should install a UL300-approved automatic fixed fire suppression system to protect the ducts, grease removal systems, hoods, and commercial cooking equipment such as deep fat fryers, woks, ranges, griddles, and broilers. This system should be serviced every six months.

In addition to complying with fire, health and building codes, a professionally installed exhaust hood and ventilation system helps maintain a clean, safe environment. Commercial cooking generates grease-laden air and other pollutants. An adequately-designed exhaust system is vital to maintain good airflow.

Kitchen hoods should be made of — and supported by — steel or stainless steel that meets minimum thickness requirements. Other approved materials of equivalent strength and fire corrosion resistance may also be used.

NFPA 96 recommends hood and duct cleaning frequency based on an individual restaurant or bar’s cooking volume:

- **Monthly** – For systems serving solid fuel cooking operations
- **Quarterly** – For systems with high-volume cooking operations such as 24-hour cooking, charbroiling or wok cooking operations
- **Semi-Annually** – For systems serving moderate-volume cooking operations
- **Annually** – For systems serving low-volume cooking

2. Facilitec West.
Grease filters are the first line of removal for grease-laden vapors. Clean filters improve ventilation and reduce the fire hazard significantly. Filters should be cleaned on a weekly basis for moderate to high-volume cooking operations.

**Prevent Hazardous Conditions with Proper Laundering, Storage and Disposal of Grease Rags**

Restaurants and bars typically use rags and towels to clean up cooking oil and grease residues and spills. Grease and oil are combustible materials, which means they easily ignite when introduced to a heat source. In addition, the fabric fibers trap grease and oil residue. Over time, these combustible compounds accumulate in the rags, creating an opportunity for spontaneous combustion.

Spontaneous combustion of soiled rags and linens is a result of a chemical reaction within the material and can even occur without the addition of an external heat source.

Standard consumer washers and dryers are not designed to launder grease- or oil-laden materials. On top of that, consumer detergents and chemicals may not be strong enough to remove the grease or oils entirely. A study done by the Consumer Product Safety Commission found that towels containing as little as 3 percent residue of vegetable cooking oil after conventional laundering practices could still cause spontaneous combustion.  

Implementing and following the proper steps in caring for greasy rags and towels greatly decrease the likelihood of spontaneous combustion. While the best approach is to contract with an outside vendor that specializes in cleaning and disposal of grease-filled, oily rags, there are steps you can take to minimize the risk if you launder the materials yourself.

**AS LOW AS 3% OIL RESIDUE IN FABRICS CAN CAUSE SPONTANEOUS COMBUSTION**

**CLEANING**

- Only use commercial-grade appliances designed to clean grease-laden linens and rags. If you’re unsure, check the owner’s manual. No owner’s manual? Don’t use the washer.
- Pre-soak towels and rags to remove as much of the oily debris as possible.
- Use detergents and chemicals specially designed to clean these fabrics and the grease and oil from them.
- Remove materials from the dryer as soon as the cycle is done. Do not leave materials in the dryer for long periods of time or overnight.

**STORING CLEAN RAGS**

- Store clean rags separate from dirty materials.
- Even clean linens and rags have some amount of grease and oil residue, so keep them in a metal cabinet or locker.
- As a precaution, even clean linens should be stored in a container with a closing lid.

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3. Removal of Cooking Oil from Terry Cloth Towels, cpsc.gov.
Empowering Employees with Fire Safety and Response Training

The time to think of how to best prevent and respond to an emergency is not during the actual event. Preparation is key. Employee fire safety and response training — which should include a fire prevention plan and an emergency action plan — is a powerful defense against fire threats and can mean the difference between a localized fire and an uncontrolled blaze.

FIRE PREVENTION PLAN

In addition to basic fire training and an action plan, hands-on training can provide a better understanding of fighting fires. Employees should be familiar with identifying types of fires and proper techniques for fighting each type, personal protective equipment, fire evacuation routes and actual training in using a fire extinguisher.

A basic fire prevention plan should include:

- A list of all major fire hazards, proper handling and storage procedures for hazardous materials and potential ignition sources
- Procedures to control the accumulation of flammable and combustible waste material
- Procedures for regular maintenance of safeguards installed on heat-producing equipment
- Names or job titles of employees responsible for maintaining equipment

EMERGENCY ACTION PLAN

A well-developed emergency action plan should provide employees with basic training on what to do in the event of a fire. Employers should review the emergency action plan:

- When the plan is developed
- When the employee’s responsibilities or designated actions under the plan change
- Whenever the plan changes
Stepping Up Your Housekeeping

When it comes to fires, the best offense is a good defense. Here are some precautionary practices to help businesses safeguard their restaurants and bars against fires:

- ✔ Install, maintain and professionally service all cooking equipment.
- ✔ Clean all surface areas regularly and thoroughly to cut down on grease accumulation.
- ✔ Hire professionals to clean the hood(s) and duct(s) at least twice a year, or more often for restaurants and bars that do extensive frying.
- ✔ Clean grease filters based on cooking volume.
- ✔ Mount Class-K portable fire extinguishers in kitchens, and post signs indicating they are for grease fires only. Train all staff on their use.
- ✔ Keep a detailed log of when systems have been cleaned and by whom. Clearly mark the next date of service.
- ✔ Position fryers at least 16 inches away from any flame-producing equipment.
- ✔ Install an automatic fuel shut-off device that is actuated by the suppression system for cooking equipment.

While proper employee training and prevention efforts can substantially mitigate fire risks, restaurants’ and bars’ use of flames, oil and grease makes it difficult to fully fireproof these types of businesses. Instituting a prevention plan and maintaining a clean, properly cared for working space minimizes these hazards.

Society’s team of loss control experts, association partners and agents can help restaurant and bar owners ensure they have the proper practices and policies in place — right down to the smallest details — to prevent and recover from a fire. With extensive experience in insuring restaurants and bars, Society can provide policyholders with a custom plan that fits their needs. Get in touch with a Society agent today by visiting www.societyinsurance.com to learn more about how to best protect your business.