

## **Everyday Firestarters**

### **Kimberly Denman**

#### **Five common triggers for restaurant fires**

Restaurants pose a unique fire risk because of the large number of people congregating in one building, where cooking, the No. 1 cause of restaurant fires, is present.

According to the National Fire Protection Agency (NFPA), there were approximately 8,000 restaurant fires annually in the United States between 2006 and 2010. These fires caused an estimated \$246 million in property loss. The majority of the fires began in the kitchen or cooking area, with four in 10 fires actually beginning with food as the item that was initially ignited.

#### **Common Triggers for Restaurant Fires**

Restaurant fires originate from several causes, but the five most common causes are:

- Dirty hoods, ceiling, vents and work areas
- Electrical malfunctions, such as faulty wiring
- Cooking equipment, such as grills, deep fryers and ranges
- Unsafe use of cooking materials, such as grease and oil
- Combustibles stored too close to heat sources

"Lack of cleanliness, especially grease and other buildup on vent hoods and filters, is a major risk of restaurant fires," said Jack White, Vice President of Technical Services at Rainbow International, a global franchise organization providing residential and commercial restoration and cleaning services. "Unclean surfaces can be ignited by a small spark or flame, and quickly turn into a fire disaster."

In addition to the five common causes, lack of adequate fire prevention training for staff members is another contributing factor for fire disasters. AH restaurant owners and staff should be properly trained in basic restaurant fire prevention and know the establishment's fire escape plan to reduce potential casualties and damage from fires.

#### **Prevent Fires Before They Start**

Restaurants must operate under local and state regulations that are designed to prevent fires and protect customers and staff; however, restaurant owners can take it one step further by emphasizing the importance of proper fire safety training and practices at all times. Standard regulations include installation of exhaust and grease removal systems, knowledge of fire extinguishing equipment and maintenance of cooking equipment. Veteran staff members are no exception. Annual refresher training on fire prevention and fire safety equipment is important, as technology and methods are updated regularly.

The following safety tips from the NFPA and the National Restaurant Association can help reduce the risk of fires at restaurants:

#### **Cleanliness**

Clean the hood exhaust system regularly to prevent grease, dirt and dust buildup. NFPA requires

the hood fire protection system to be inspected by a trained and qualified professional every six months.

Grease accumulation from cooking is very sticky and difficult to remove. It poses a major fire hazard and must be removed regularly. Be sure all chemicals and grease are rinsed from the surfaces of the hood after cleaning. Clean and replace the filters in the hood exhaust system once they are fully clean and dry.

Refer to the NFPA 96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations for regulation details. Clean the walls, work surfaces, ranges, fryers, grills and ovens regularly. Many restaurants hire cleaning professionals for this job. Maintain a written cleaning schedule as a visual reminder to keep the system clean.

### **Electrical Hazards**

Be aware of electrical hazards, such as frayed wires and cords or broken switches and light fixtures. Have electrical equipment inspected regularly and repaired or replaced immediately if needed. Train staff on how to shut off the electrical power or gas in case of emergency.

### **Cooking Equipment**

Train the staff on proper usage of cooking equipment, including grills, deep fryers, stoves, ovens, microwaves and steam kettles. Place deep fryers away from other cooking equipment. Make sure the cooking staff knows how to use the equipment, as well as the safety measures to take in case of emergency. Also, make sure the staff knows how to maintain the cleanliness and safety of the equipment. Never leave cooking equipment unattended when in use.

### **Cooking Materials**

Cooking materials such as grease and oil are the most frequent items to start restaurant fires. Know the type of oil being used in the kitchen equipment and monitor oil temperature at all times to prevent it from overheating and igniting. Avoid oil splatter by very slowly adding product. Use the exhaust fan when possible.

### **Storage Safety**

Store supplies and combustible items away from cooking areas. Remove all cardboard food supply boxes and wooden delivery pallets from the cooking area. These items can serve as a fire source if a flame or spark comes in contact with them.

In addition, keep the cooking area clear of trash. Place trash in a dumpster that is far enough away from the restaurant that a dumpster fire will not affect anything around it. Store flammable liquids properly and keep them in their original containers or puncture-resistant, tightly sealed containers. Store flammable products in well-ventilated areas away from supplies, food, food-preparation areas or any source of heat or flames. Also, store paper products, linens, boxes and food away from heat and cooking sources.

### **Additional Fire Safety Suggestions**

- Install fire extinguishers and ensure they are in proper working order. Fire extinguishers should be inspected once a month. Make sure the units are not blocked or damaged. Hire a provider who

will check and maintain or replace fire extinguishers consistently. Train all staff on how to use the fire extinguisher upon hiring and schedule annual trainings for all staff.

- Identify and post several escape routes that lead people out of and away from the restaurant. Conduct fire drills with staff on a regular basis so they are familiar with the fire evacuation plan and can assist customers with the escape. Hang fire evacuation routes in visible locations throughout the establishment. The OSHA Code of Federal Regulations requires that all fire exit doors have exit signage and lighting that must remain illuminated at all times.

- Make sure a fire alarm system is in place and that all staff are educated on how to recognize danger. Once the emergency system is activated, staff should direct customers to the nearest evacuation route and then get out themselves. Call 911 once safely outside the building.

- Have your AC system and air ducts inspected and cleaned regularly. Poorly cleaned hoods and ducts account for 21 percent of all restaurant fires. Install HEPA filters to enhance air quality. Restaurants generate a great deal of contaminants and air pollutants, such as dirt, dust and chemicals, that are pulled into the AC system. These contaminants travel into the HVAC system and re-circulate five to seven times per day, on average. Over time, this re-circulation causes a buildup of contaminants in the ductwork. Having your system properly cleaned by a cleaning service professional can help maintain good air quality and decrease fire risk.

- Follow the proper steps in caring for greasy rags and towels to decrease the likelihood of spontaneous combustion. Restaurants often 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. 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. Even laundered linens and rags could still have some amounts of grease and oil residue, so store them in a metal cabinet or locker or a container with a closing lid as a precaution. The safest approach is to contract an outside vendor that specializes in cleaning and disposal of grease-filled, oily rags.

- Post "No Smoking" signs inside and outside the restaurant to help prevent fires. Discarded cigarettes outside could land on top of mulch, trash, wood chips and other flammable objects and ignite a fire. Fires caused by heat from open flames or smoking materials account for about 12 percent of larger, more serious fires.

Following these fire-safety suggestions and boosting fire safety awareness among staff are two solutions to help prevent fires and protect a restaurant from loss of revenue through extended closure. Reducing potential casualties and damage loss from fires takes work, but it is worth the effort for your restaurant's long-term success. ^

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