

Mutualistic Fire Protection

By Oliver C. Moore, Utah deputy state fire marshal and fire safety specialist

It is a well-known fact that fire marshals and fire inspectors or the authority having jurisdiction (AHJ) have a dilemma. That is community or public safety leadership may require that all businesses within the jurisdictional boundary be inspected no less than annually. Yet, the underlying truth is that while the desire to get the job done is great, desiccated budgets, atrophied manpower, and the general overflowing of full plates play a substantial role in the declining influence a quality fire and life safety inspection program brings to existing standards, values, and ethics within a business community. Understanding this little detail turns us to the fact that some businesses may or may not be inspected on a two- or three-year turnaround. *If you'll keep it quiet, we'll keep it quiet! The [enter oversight agency here] really doesn't need to know that little secret, do they?*

What a novel idea: working together

Although driven by a different set of concerns, fire protection professionals (FPPs) have something of the same problem. FPPs have produced substantial sales and service opportunities by knocking on doors and kicking the bushes in the harvestable field of customers. They have created such a pool of renewable business it often becomes very difficult to meet inspection and service dates, and when they do, often the customer—as a result of perceived or actual economic conditions—declines the required fire extinguisher, fire suppression, or inspection or cleaning of exhaust systems. Meeting this challenge alone can be trying and somewhat overwhelming. The truth here is that some kitchens may not be visited for months on end or, in some cases, years.

In consideration of the risk, the fiduciary responsibility the FPPs have to their customers, and the requirement of law, the FPPs are helpless. This loss of revenue and the associated fading client base is a

little secret we just don't talk about.

Restaurants, fast food enterprises, and other cooking establishments, however, have troubles of their own. The kitchen owners desire to have their kitchens pristinely cleaned and sanitized by a professional, so they may embrace the confidence that everything in the kitchen will work smoothly, function when needed, and keep customers safe. However, mounting regulations and statutory mandates seem to drive the bottom line into a proverbial government food processor, blending a concoction mixed for their destruction. The high cost of wholesale foods, meats, and equipment does not help the situation at all.

Then, the fire protection technicians come on their semiannual rounds. What can the kitchen manager say? "We just cannot afford to update our extinguishers or service our fire suppression systems this year. We'll wait until the fire department requires us to service the system. For that matter, my kitchen staff cleans the grease and grime out of our hoods, plenums, and ducts daily. Your service is just too expensive and, frankly, a low economic priority in our budget. Come and see us next year."

With that being said, in today's economic climate, more often than not, the now-rejected technician can do nothing but walk away with, it seems, no options left. Both he and the restaurant owner understand that without regular, planned service and cleaning this commercial kitchen's fire risk will grow, and it multiplies every day the kitchen is in operation. The fans will draw, the traps collect, the filters accumulate, and the ducts will bake cooking residue into a flammable blend of greasy toxins, flammable gases, and dripping ooze.

These very efficient systems do their work daily in spite of the chef de cuisine, sous chef, saucier, grillardin, rôtiisseur, pâtissier, and Bob's son Freddy working at one of a thousand kitchens, who, because of their busy positions in the kitchen, completely ignore the mounting

danger developing each day the system misses an inspection, service, or thorough cleaning. Pending disaster looms under everyone's consciousness.

Weighing bottom-line costs against service responsibilities to customers and the pressure levied on the kitchen owner or manager forces him or her to balance the financial survival of the kitchen with elevated and potentially disastrous risks involving plenums, ducts, and fan housings. This unfortunate conundrum in today's competitive business environment weighs on the shoulders of all involved: owners, FPPs, fire marshals, and inspectors.

Cost vs. Risk, Value vs. Price, Desire vs. Reality, Right vs. Constraint, Safety vs. the Bottom Line: This Is the Eternal Round

Smart thinking would tell the FPP to get cozy with an AHJ and develop an ally's relationship: to get to know one another and communicate with each other to the point of trusting each other and sharing with each other.

What a novel idea: working together!

Partnering a Bright Light on Kitchen Safety

In the IKECA's Summer 2011 issue (number 32), Jim Narva, executive director of the National Association of State Fire Marshals, addressed the fire protection industry. He wrote, "Being aware of the relevant codes and requirements in all the places your business takes you, will go a long way toward establishing trust and demonstrating good faith to the local AHJ." Mr. Narva then followed with, "...developing familiarity with your AHJ can help in establishing trust that can result in a higher quality and level of communication." But...why?

Without knowing it, the fire protection industry, the AHJs, and restaurant owners have a naturally symbiotic relationship. As partners in code and rule educa-

Continued from previous page

tion, communications relevant to public safety, property and customer safety, and protection of the triad of relationships that includes kitchen proprietors, restaurateurs, and their employees, this is a natural blend of people who desire to keep restaurants, kitchen staff, and customers safe and secure. This partnering is called “mutualistic fire protection.”

But how do we do that? Who takes the first step; who steps off the cliff into this unknown abyss first? When a dilemma like this presents itself, let’s turn to nature for the answer. Clearly, the fire service and the fire protection industry are in an unwitting symbiotic relationship. The restaurant industry and the fire protection industry are also in an unwitting symbiotic relationship. Could that also mean the fire marshal, owners of restaurants, and the fire protection technician have a symbiotic relationship as well?

Wikipedia defines “symbiosis” as a close and often long-term interaction between different biological species having a cooperative and mutually dependent relationship with reciprocal benefit between unlike organisms. Here are some examples:

- Sharks and remora: demonstrate commensalism
- Clown fish and sea anemone: demonstrate mutualism (shelter vs. protection)



- Humans and intestinal bacteria: demonstrate mutualism (digestion vs. supply of nutrients)
- Fire marshals and fire protection technicians: demonstrate mutualism (inspection and expertise vs. enforcement)

Wikipedia defines “mutualism” as relationships in which each individual derives a fitness benefit, and both living organisms profit with respect to each other and their natural environment.

Let’s see how this works.

A Simple Test for Symbiosis

Fire marshals:

- How many inspectors do you have on staff? (Possible answers: 1, 2, or 10.)
- How often do your inspectors inspect kitchens, behind appliances, automatic fire suppression systems, and in the ducts; pull access panels; review fusible link dates; and examine fan housings, fan blades, and the rooftop around the fan housing? (Possible answers: Every annual visit, every biannual visit, or every third yearly visit.)
- Do your inspectors know how to identify a UL 300 wet chemical system and how to identify its functionality (does the darned thing work)? (Possible answer: Of course they do.)
- Do your inspectors know precisely what to look for in a fire suppression system, an exhaust system, the distance between access panels, manual activation, gas valves, and hydrostatic dates for cylinders and agent tanks when are they due? (Possible answer: What are they, and what are you talking about; that’s clearly not my job.)
- Do they check the entire length and condition of the ductwork? (Possible answer: How clean is clean?)
- Do they actually climb to the roof to inspect the fan housing? What are they looking for?
- Do they look at and recognize the condition of the roof around the fan discharge area? Do they examine the levels of grease or oil saturation into the roof structure?

Fire protection technicians:

- Semiannually, the FFP inspects kitchens within your jurisdiction from floor to roof.

- They are required by code and through good business practices to make sure that the inspection is thorough and complete.
- The FFP will fill out and leave with the owner an inspection and/or service report (with photographs) after the completion of every visit.
- When inspecting a kitchen and it is found that fire code, common sense, or life and fire safety violations are found, what can the fire protection technician actually do about it? Answer: Without the fire marshal, absolutely nothing!

Is the result of the above test that there is a symbiotic or protective relationship between the fire marshal (FM) and the FFP? Can the FM accomplish his or her charge without the FFP, and can the FFP accomplish his or her charge without the FM? The answer to both is yes, but to what outcome? Both can profit and receive benefit with respect to each other and their natural environment.

Boy, nature knows its way around a definition! For safety’s sake, reason would dictate that fire protection technicians are getting into restaurants every six months and inspecting the kitchens and servicing the systems. A fire marshal with wisdom and trust could rely on the considerable knowledge and experience of the FFP with regard to inspections, public education, and enforcement support. This partnering is called “mutualism.” Each individual is deriving a fitness benefit for both and profit with respect to each other and their natural environment.

Mutualistic Fire Protection

This new term directly references the cooperative relationship that can be developed between the FFP, the fire marshal, and restaurant owners. To begin to understand mutualistic fire protection, we find that this partnership is similar to a three-legged stool with the seat of the stool representing protection and safety. The first leg of the stool is the fire protection industry. This includes the kitchen

Mutualistic Fire Protection

Continued from previous page

exhaust system inspectors and cleaners, the automatic fire suppression service technicians, and the fire extinguisher service industry. Together, they make up a very strong leg indeed.

The second leg of the stool is the AHJ. Where the AHJ may not be able to inspect certain kitchens effectively or annually, the AHJ does respond to citizen complaints with vigor, enthusiasm, and extreme prejudice. They must; it's their nature and their duty. A partnership with the AHJ will show productive results when a professional friendship is developed and managed with honor and trust.

The third leg of the stool is the commercial kitchen owners, including their professional associations. With cooperative interaction, soon kitchen owners and managers will recognize that becoming a partner with the FPP will help stabilize their relationship with risk managers and their insurance company—to understand that rules and regulations are not intended to create unnecessary burdens, but to help insure the long life and vitality of the restaurant and to stimulate business productivity for the long term.

Lastly, the unseen force that holds all three legs and the seat together are the “glue and nail” that education, education, education, and then more education provide. This is the linchpin that holds all the relationships together. The flow of information must be ongoing and interactive throughout the network of the partnership. Each and all parties must be involved and active in maintaining the standard of protection and safety that allows businesses to flourish.

Mutualistic fire protection is an all-encompassing and driving force that can promote success for all.

The FPP now has a place to turn when violations and unsafe practices are apparent, when red tags are necessary. He calls his friend, his confidant and partner, the local fire marshal (AHJ).

That local fire marshal then does something for a trusted friend, the FPP, that is extraordinary and quite outside his instincts, training, and his legal judgment. He simply waits.

To wait is not illegal, nor is it favoritism or special treatment. However, it does bump up against tradition, and it causes a little extra work. But what it is definitely and most decisively doing is building trust with an equal hand, protecting the source, and locating life and fire safety violations that otherwise would not have been found.

His waiting is a product of not being an expert on kitchen exhaust systems, automatic fire suppression systems, or fire extinguisher requirements. Before he dares to respond to this complicated complaint, he must study NFPA 17A and 96, the International Mechanical Code Chapter 5. He adjusts and fits this complaint into his very busy schedule; he reviews legal steps and requirements if enforcement might be necessary; and he reviews city, county, and state policies, rules, and ordinances prior to the appointment.

This all takes time—approximately three to four weeks before an enlightened inspection can actually take place. Keep in mind that this is an annual inspection: You inspect the whole and complete restaurant, and then just happen upon, find, or bump into the listed violations found within your friend's complaint. Remember: document, document, document all of the above, and by all means, protect your source!

Working as a Team

Symbiosis between business owners, fire protection technicians, and the AHJ, all working individually and together to solve risk problems; to mitigate risk; and to influence its probability and impact through communication, education, and support, may be a long-term proposition. However, it is a wise and important undertaking. Partnering would help to establish a predictable and serviceable

preventive maintenance and inspection alert and mitigation program.



With the communication, care, and planning it provides, the transfer and sharing of the risk as a fire protection team becomes the goal. Working together to reduce the impact of the risk and to shelter its consequences when a disaster does happen should be the goal of every participant. When the owner, contractor, and fire marshal partner in such a way as to qualify the risk mitigation effort and, with assurance, reduce any inevitable liability cost or enforcement effect, the synergistic effect can only produce successful and low-impact outcomes.

How does this happen? If a fire should occur in a kitchen, because of the efforts of the mutualistic fire protection coalition, liability charges, depositions, court appearances, subrogations, and stress may all be somewhat diffused through the work and efforts of the coalition.

Mutualistic fire protection is a new term with well-established practices of collaboration, planning, cooperation, and communication. When kitchen owners, FPPs, and the AHJ partner together and lubricate their relationship with trust, this well-oiled relationship will insure the reduction of risk and that safety and protection are certain for commercial kitchens and the associated restaurant industry. In today's economic environment, it can be no other way.

Continued from previous page

Oliver C. Moore
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Oliver C. Moore retired as a Battalion Chief with an illustrious and honorable thirty-six year career in the fire service. Chief Moore has served as both volunteer and full paid firefighter, emergency medical technician, engineer/driver, station captain, and fire ground & field commander, hazardous materials technician, fire operations training officer, medical training officer, administrative officer, public information officer, fire cause and arson investigator, public fire educator and juvenile fire-setter intervention evaluator. Chief

Moore was assigned as Fire Marshal and lead fire cause investigator for West Valley City, the second largest city in Utah up to the time of his retirement. As Fire Marshal he also served in the Homeland Security Division Volunteer Management and Response arena. He is an authority in a variety of community preparedness initiatives including, fire safety, public education and marketing, citizen corp./fire corp. councils, CERT program coordinator, and community preparedness planner.

Chief Moore currently serves the Utah State Fire Marshal in the role of Fire Prevention Specialist with a focus on, life and fire safety inspections of state buildings and schools, commerce and trade licens-

ing coordinator with an emphasis on fire protection concern licensing and technician certifications, to include the fire extinguisher service, automatic fire suppression systems service and kitchen exhaust systems inspection and cleaning service industries. He has developed training curriculums for fire protection initiatives and on-line testing for these subjects. His development and oversight of the new "Reduced Cigarette Ignition Propensity and Firefighter Protection" program for the State Fire Marshal is remarkable.

Please feel free to contact him at: omoore@utah.gov or 801-284-6349

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IKECA: Setting the Standard

By Jack Grace, CECS/CESI

The International Kitchen Exhaust Cleaning Association, a nonprofit business association committed to fire prevention and life safety by promoting kitchen exhaust cleaning to a higher standard, has taken a historic step in fulfilling our mission by producing the first ANSI standard for the cleaning of kitchen exhaust systems: *ANSI/IKECA C10: Standard for Cleaning of Commercial Exhaust Systems*.

The *ANSI/IKECA C10* standard was accepted by ANSI—the American National Standards Institute—through the hard work and dedication of a group of industry professionals. Now, IKECA has indeed set the standard for the kitchen exhaust cleaning industry. The *ANSI/IKECA C10* standard is established to determine the frequency of and necessity for commercial kitchen exhaust system cleaning through inspection procedures, to define acceptable methods for cleaning exhaust systems and components, and to set standards for acceptable post-cleaning cleanliness. This standard has the stated purpose of enhancing public safety by reducing the potential fire-safety hazards associated with commercial kitchen exhaust systems through the performance of professional cleaning services. Our IKECA certified personnel and IKECA member companies can now all benefit from this established ANSI standard and confidently follow this blueprint for best practices in the exhaust cleaning industry.

ANSI/IKECA C10 is a complete standard wherein we see, for the first time, a standardized pre-cleaning inspection process including the inspection of the mechanical components of the exhaust system. This standard calls for the inspection of deficiencies and details the necessity to communicate that information to the owner of the system in a timely manner. This pre-cleaning inspection and reporting process has the potential to improve life safety dramatically by establishing a guideline for what exactly needs to be inspected and reported back to the facility owner, thus ensuring systems that may have been found to have deficiencies

are being systematically reported to their owners.

The standard continues to improve safety by directly addressing energy-source protection as well as personnel protection. Referencing OSHA, these critical areas of protection are established and presented in a straightforward manner. Every exhaust system cleaner will benefit from the outlined protections listed in this document. Keeping our employees, clients, and everyone affected by the work performed by a professional exhaust system cleaning company safer is a key component to the success of this document and a lasting tribute to its creators.

Protection of the work space as well as byproduct control are also standardized through *ANSI/IKECA C10*. These are areas where the IKECA has indeed shown leadership and met our commitment to cleaning to a higher standard. By properly preparing the kitchen work space, the likelihood of contamination is sufficiently decreased, thereby creating a healthier environment. Additionally, by addressing the real and difficult issue of byproduct removal, *ANSI/IKECA C10* sets clear standards for acceptable methods of dealing with byproducts and leaves no doubt as to the proper disposal methods. Covering both solid waste and liquid byproduct disposal procedures, *ANSI/IKECA C10* clearly provides the answer to this previously ambiguous conundrum.

At the very heart of the standard is the cleaning process and controls section. This section, cross-referencing NFPA 96 standards of definition for cleaning, incorporates the use of the depth-gauge comb as a trigger for the need to clean. This standard removes much of the ambiguity of time-based cleaning or subjective measurements, such as “heavily contaminated.” It is measurable, and therefore, it becomes a clear illustration for the need to clean as well as the definition of how clean is clean. The various methods used independently or in conjunction with others are covered—including hand scraping, pressure

washing, steam cleaning, and chemical application—and the decision of which of these methods is appropriate to use is placed on the qualified individual responsible for the cleaning. The standard continues to add definition by specifically addressing vertical and horizontal duct cleaning, setting forth a clear definition of what instructions must be followed when properly cleaning these components of an exhaust system. In addition to the exhaust ducts, access panels for cleaning the ducts are specifically addressed, and a standard has been established for the labeling of these panels during the cleaning process.

The standard closes with a section regarding the labeling of systems as being properly cleaned as well as the proper reporting for system cleaning. This part of the standard represents the first time in which the recognized best practice of producing photographs of completed work is now incorporated into a standard. By providing a clear definition that photographs are a part of proper documentation for system compliance, the IKECA truly is living up to our mission of cleaning to a higher standard.

I urge you to please educate as many entities and individuals as possible about this historic document. This document is truly a testament to the industry leadership that the IKECA and our members have demonstrated by giving our time and experience in the challenging and complicated process of producing this ANSI standard. As an ANSI standard-writing body, the IKECA shall continue in our quest to produce such standards and to constantly strive to improve and build upon them. These are to become living documents that will indeed need to be revised, revisited, and worked on in perpetuity. Whether you are an exhaust system cleaner, an authority having jurisdiction over exhaust cleaning, a manufacturer of exhaust cleaning equipment, or the end user of an exhaust system, this standard and those that shall be produced through the efforts of the International Kitchen Ex-

Continued on next page