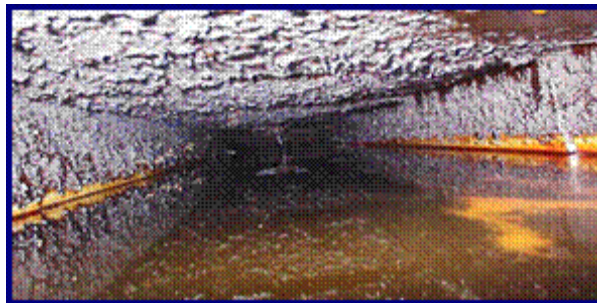


Proper Inspection of Hood & Duct Systems
Presentation by Western Commercial Services
www.westerncommercial.net

Jack Greene, of Western Commercial Services, provided an overview of proper cleaning for grease-exhaust systems. Most fires in restaurants flare from the cooking systems into the kitchen-exhaust systems. Improperly cleaned ducts are common, as many service providers clean only the easy-to-reach places.

Problem:

Grease/debris accumulates inside ductwork to fuel the fire. Proper seals essential around the ductwork, fans, and other equipment.



As with the Boston Fire that killed 2 firefighters in February of 2008, the ductwork often extends throughout the building.

In the kitchen ceiling, the fire, which had been burning long before firefighters arrived, was starving for oxygen.

Cahill aimed his fire hose up at the ceiling, where flames could be seen next to the exhaust system over the stove. The force of the water stream dislodged ceiling tiles in the kitchen and the neighboring dining room...

Within seconds, a bank of heavy smoke dropped from the ceiling to within inches of the floor. Suddenly the fire burst like a giant blow torch through a hole where a tile had been in the dining room ceiling. The blaze descended on Payne and burst out the front windows of the restaurant.

Investigators determined that the system was rusty, thick with grease, and had not been installed or maintained in compliance with state fire codes, the report says.

The state of the system "directly led to the fire and the products of combustion escaping from the containment area." (FireHouse.com "In the Line of Duty"; 02/22/08)

Standards/Regulations

NFPA 96, Section A, 11.6.2, 2008 Edition (2004 currently utilized by most Nevada jurisdictions) sets the standard for proper exhaust-service cleaning. Grease/debris removal must approximately equate to 2-times the thickness of human hair. Depth should be measured with grease-gauge comb. Very different from hood washing the easy-to-reach places!

Other requirements of NFPA 96:

11.4 Time Frequency

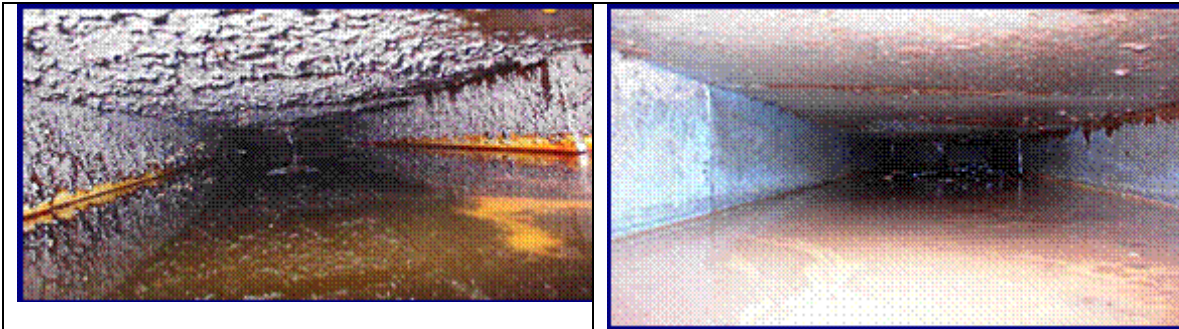
11.6 AHJ has authority to change the time frequency required

Licensing Requirements:

- Employees of a licensed provider may work on a system if the actual licensee is on the premises the entire time the work is performed.
- Inspection certificate must be filled out by licensed individual
- NV SFM is moving toward requiring tags be punched, not inked
- Cleaners should also have City-Business Licenses

Systems

Lateral/Horizontal Ductwork



- Most commonly missed, yet most critical
 - Not atypical for casinos to have over 600 foot ductwork extending 3 stories to cover a 10-foot hood system
- Access panels crucial
 - Every 12'
 - Every change of direction



2 Main Type-I Hood Systems

- Traditional Filter Hoods (baffle filters/run vertically)
 - Should be cleaned 3-5 times weekly
 - Not normally part of exhaust-system service
- Water-wash hoods (pumps hot water and soap through)
 - After 30 days providers typically see these loaded with flammables
 - Soap reservoir must be re-filled
 - Cleaners must have both E1 and G licenses to service

New Technology: Ultra Violet Systems

- Particulate separators
New name
Identical to mesh filters “outlawed” by NFPA 96
- Grease build-up still occurs
 - Only works in close proximity to UV bulbs
- UV reacts with grease
 - Leaves white powder residue
 - Coats UV bulbs
 - Lowers efficiency
 - Decreases life span
- No real fail-check if system faults (alarms easily silenced)
- Potential damage to ozone (contains mercury) & those nearby

Inspections: What to look for

- Tag
- Control panels for water-wash and UV systems with alarm-indicating light
- Have entity remove filters
- Use camera/extension pole
- Fans must have hinges (2004 & 2008 Edition of NFPA 96)



Tags—Must Have's

- Name & Certification # of Cleaner
- Certification of cleaning and date
- Schedule of required service
- Date next service scheduled