

**DRAFT – 2-19-2009**

<b>SEATTLE FIRE DEPARTMENT</b>	<b>DRAFT</b>	<b>Administrative Rule XX.XX.09</b>

<b>SUBJECT:</b>  <b>COMMERCIAL KITCHEN EXHAUST CLEANING REQUIREMENTS</b>	<b>EFFECTIVE DATE:</b>  XXXX XX, 200X
<b>REFERENCES:</b> 2006 Seattle Fire Code (SFC); 2006 Seattle Mechanical Code (SMC); NFPA Standard 96 – Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, 2004 (NFPA 96).	<b>SUPERSEDES:</b>  Not applicable.
	<b>FCAB REVIEW DATE:</b>  March 17, 2009
<b>NOTICE:</b> Administrative Rules are established per Seattle Fire Code Section 104.1, and they are subject to the Administrative Sections 104.8, Modifications, 104.9, Alternative Materials and Methods, and 108.1, Appeals.	<b>APPROVED:</b>  _____ KENNETH TIPLER, FIRE MARSHAL

**SECTION 1  
SCOPE**

This rule establishes Seattle Fire Department’s requirements and conditions for maintenance and cleaning of commercial kitchen exhaust systems in the City of Seattle. The purpose of this rule is to minimize personal injuries and property loss stemming from fires in which build-up of grease and combustible contaminants in commercial kitchen exhaust systems is a contributing factor.

This rule is established under the authority of the 2006 Seattle Fire Code, Section 102 Applicability. Public compliance with the requirements set forth in this Rule is mandatory. The Seattle Fire Department developed this rule in conjunction with members of Seattle’s commercial kitchen exhaust cleaning industry and representatives from Seattle’s restaurant industry.

Failure to comply with this rule is a violation of the Seattle Fire Code and is subject to legal action as a criminal gross misdemeanor or civil violation, in accordance with the Seattle Municipal Code (SMC) Chapter 22.600.020.

# DRAFT – 2-19-2009

## SECTION 2 DEFINITIONS

For the purposes of this rule the following words and terms have the meanings shown in this ruling:

**Combustible Contaminants** - grease, oil deposits, products of combustion and other residue that is produced from cooking operations.

**Commercial Cooking Appliances** – Cooking appliances, including residential cooking appliances, used in a commercial food service establishment for heating or cooking food and which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system. Such appliances include deep fat fryers; upright broilers; griddles; broilers; steam-jacketed kettles; hot-top ranges; under-fired broilers (char broilers); ovens; barbecues; rotisseries; and similar appliances.

**Commercial Kitchen Exhaust System** – All hoods, canopies, grease filters, spark arresters, plenums, ducts, access panels, and other appurtenances leading to a single exhaust fan or external termination, for the purpose of removing grease laden vapors, smoke, steam, vapor, heat and odors from cooking operations. A single kitchen may have multiple exhaust systems.

**Commercial Kitchen Exhaust System Cleaning Report** – A complete record of a commercial kitchen exhaust system cleaning, including problems found and any corrections made.

**Depth of Combustible Contaminants** – Is the measurable depth of combustible contaminants deposited in the kitchen exhaust system. This is used as a measurement system of deposition to trigger a need to clean, in addition to a time reference based on cooking appliances emissions.

<b>Light build-up</b>	Up to 0.002” inches (0.05 mm) of depth of combustible contaminants deposited in the kitchen exhaust system. This is an acceptable amount of combustible contaminant build-up in the kitchen exhaust system that does not require cleaning of the kitchen exhaust system.
<b>Medium build-up</b>	From 0.003” inches (0.07 mm) to 0.078” inches (1.98 mm) of depth of combustible contaminants deposited in the kitchen exhaust system. The kitchen exhaust system is required to be cleaned.
<b>Heavy build-up</b>	From 0.079” inches (2.00 mm) and more of depth of combustible contaminants deposited in the kitchen exhaust system. The kitchen exhaust system is required to be cleaned.

## DRAFT – 2-19-2009

**Exhaust Fan Hinges** – Approved hardware used for removal and securing of the exhaust fan for proper cleaning, while protecting the fan unit from damage, and personnel from a rooftop fall.

**Frequency of Kitchen Exhaust System Cleaning** – A timed reference for cleaning of combustible contaminants build-up and the function of the kitchen exhaust system. The cleaning of the kitchen exhaust system will be performed on either a monthly, quarterly, semiannual, or annual time period unless a Fire Code official determines that a more frequent cleaning schedule is needed to maintain the kitchen exhaust system within an acceptable amount of combustible contaminant build-up.

**Hood** – An air-intake device used to capture by entrapment, impingement, adhesion or similar means, grease and similar contaminants before they enter a duct system.

- **Type I** – A kitchen range hood for collecting and removing grease vapors and smoke generated from medium-duty, heavy-duty, extra-heavy-duty and some light-duty cooking appliances
- **Type II** – A kitchen hood for collecting and removing steam, vapor, heat and odors generated from some light-duty cooking appliances. .

**Hot Work** – Hot work is any construction, alteration, repair, or operation involving riveting, welding, burning, brazing, soldering, heating, use of power-actuated tools or similar spark, arc or fire-producing activity. Grinding, abrasive blasting, or similar spark-producing operations are also considered hot work unless such operations are isolated physically from any atmosphere containing more than 10 percent of the lower explosive limit of a flammable or combustible substance.

**Kitchen Exhaust Cleaning** – The act of removing combustible contaminants and other residue from a commercial kitchen exhaust system.

**Listed Access Panel or Access** – A UL or equivalent listed closure device used to cover an opening into a duct, enclosure, equipment, or appurtenance.

**Liquid Tight** – Constructed and performing so as not to permit the passage of any liquid from the exhaust system to surrounding structure during cooking operations.

**Receptacle** – A container that is attached to an exhaust fan's drain to receive grease and other combustible contaminants not to exceed 1 gallon.

**Service Tags and Labels** – A hanging tag or label formatted in accordance with this Seattle Fire Department Administrative Rule and used for the purpose of indicating the cleaning status of the commercial kitchen exhaust system, e.g. see label for service tags at the end of this Administrative Rule.

- **Red Status** – Kitchen exhaust system that is out of service, and/or whose operation is seriously impaired. Examples include an exhaust fan that does not operate, heavy build-up on suppression system nozzles, and frayed wiring. After kitchen exhaust cleaning is completed, it shall be tagged with a

## DRAFT – 2-19-2009

red service tag either label or wire hanging. A kitchen exhaust system that has a red status cannot perform cooking operations under the range hood.

- **Yellow Status** – After kitchen exhaust cleaning is completed, kitchen exhaust systems that are functioning but have deficiencies. Examples include deficient access to parts of the system, broken filters, type II duct, and medium build-up on fire suppression system. The system shall be tagged with a yellow service tag, either label or wire hanging.
- **White Status** – Systems with no deficiencies shall be tagged with a white service tag, either label or wire hanging tag.

**Solid Cooking Fuel** – Any solid, organic consumable fuel used in the cooking process such as briquettes, mesquite, wood, or charcoal.

**Spark Arrester** – A device or method that minimizes the passage of airborne sparks and embers into a plenum, duct, and flue. Spark arresters are required to be installed in the kitchen exhaust system and functioning properly during solid fuel cooking operations.

### SECTION 3 GENERAL

Owners and operators of a commercial kitchen exhaust system shall be responsible to ensure that the commercial kitchen exhaust system is cleaned, inspected and maintained in accordance with this rule and the Seattle Fire Code.

### SECTION 4 COMMERCIAL KITCHEN OWNER / OPERATOR RESPONSIBILITIES

Kitchen owners/operators shall be responsible for:

1. Weekly cleaning of exhaust filters, spark arresters, canopy or hood, appliances including the areas under, on the sides and behind the appliances, floors, and all grease traps and drip trays and for all maintenance as required by the equipment's manufacturer;
2. Keeping all grease filters in place while cooking appliances are operating, and replacing broken filters;
3. Monthly inspection of the roof for the prevention of grease accumulation on the roof, and maintenance of rooftop grease collection devices;
4. Maintenance and repair of exhaust systems such that they remain liquid tight. Any combustible contaminants that have been deposited in attics, crawlspaces and/or other areas surrounding the kitchen exhaust system ductwork shall be removed from such areas.
5. Arranging for kitchen exhaust cleaning at the intervals required by this Administrative Ruling, to be performed only by companies or individuals in possession of an operational permit for kitchen exhaust system cleaning by the Seattle Fire Department;

## DRAFT – 2-19-2009

6. Confirming that the cleaning company or individual cleaning contractor has a valid Seattle Fire Department permit number;
7. Arranging for, and providing, access to all portions of the exhaust system during cleaning operations;
8. Arranging for the maintenance and cleaning, in accordance with manufacturer's instructions, of appurtenances requiring special service listed below:
  - Air pollution control devices;
  - Secondary filtration devices;
  - Fume incinerators;
  - Thermal recovery units;
  - Recirculating systems;
  - UV (ultraviolet) grease treatment systems;
  - Pre-engineered fire protection systems;
  - Water wash grease extractor systems (service only, cleaning can be performed by kitchen exhaust cleaning companies).
9. Maintaining Seattle Fire Department commercial kitchen exhaust system cleaning reports on the premises for a minimum of 2 years.
10. Notifying the Fire Department when changes in the cooking media, positioning, or replacement of the cooking equipment occurs.

### SECTION 5

## COMMERCIAL KITCHEN EXHAUST SYSTEM CLEANING PERMITS

### General

An annual permit is required from the Seattle Fire Department to engage in the business of kitchen exhaust system cleaning of Commercial Kitchen Exhaust System **Type I Hoods** within the corporate city limits of Seattle. The annual permit establishing permit conditions to conduct kitchen exhaust cleaning will be issued to permit applicants upon proof of Seattle Business License and payment of any applicable permit fee. The permit is valid for one year from the date of issuance unless suspended or revoked for failure to comply with conditions of the permit and this rule.

### Annual Permits

Any work conducted under the annual Commercial Kitchen Exhaust Cleaning permit must be performed by employees of the company identified on the permit as the permit holder.

### Responsible Party Identified on the Permit

The responsible party identified on the permit shall be the company having responsibility for the job in its entirety, and is responsible for ensuring that work is conducted in accordance with this rule and the conditions listed on the permit.

### Transfer of Permits

Permits are non-transferable and are issued to one company only or individual.

### Permit Fees

Permits fees shall be in accordance with Seattle Municipal Code Section 22.602. Questions about billing, payment, the status of a particular invoice, or method of remitting payment, may be directed to the Permit Section of the Fire Marshal's Office at 206-386-1331.

**SECTION 6  
ACCEPTED CLEANING METHODOLOGY**

**General**

This administrative ruling on commercial kitchen exhaust system cleaning establishes required specific cleaning standard procedures and criteria for type I hoods. The standards of acceptable cleaning of the kitchen exhaust system are required to be achieved before a white cleaning service tag is placed on the commercial kitchen exhaust system within the Seattle City limits. Failure to meet permit conditions will result in suspension or revocation of permits with possible civil and/or criminal prosecution.

**Cleaning Requirements**

The entire kitchen exhaust system shall be cleaned in accordance with this administrative rule and the commercial kitchen exhaust cleaning permit conditions. The cleaning of the kitchen exhaust system is the act of removing combustible contaminants and other residue from a commercial kitchen exhaust system. A medium and greater build-up of combustible contaminants in the kitchen exhaust system requires the kitchen exhaust system to be cleaned. Upon completion of the cleaning operation, surfaces must have less than 0.002 inches (0.05 mm) depth of combustible contaminants and residue on surfaces throughout the kitchen exhaust system.

Any areas of the commercial kitchen exhaust system that cannot be cleaned, that are inaccessible and/or have unsafe work areas shall be documented with the reasons why on the Seattle Fire Department Commercial Kitchen Exhaust System Cleaning Report. Systems with areas that cannot be cleaned, or have areas that are inaccessible, or have unsafe work areas shall be noted as being deficient and shall have the appropriate red or yellow service tag or label affixed.

Cleaning methods shall be based upon on the following methods; hand cleaning, power scrubbing, chemical cleaning, and soaking. Hand cleaning shall consist of scraping with a blade device, scrubbing with steel wool, scrub pads, wire brushes, etc. Power scrubbing shall consist of using angle grinders with wire brushes, drills with brushes, and other rotating and reciprocating power tools. Chemical cleaning shall consist of using high alkali cleaners that come in aerosol, foaming and liquid forms. Soaking shall consist of a large container that is filled with water and alkali cleaner that kitchen exhaust system parts are soaked. These methods shall be applied consistent with recognized kitchen exhaust system cleaning industry standards (e.g. International Kitchen Exhaust Cleaning Association or similar model) approved by the Seattle Fire Department. Cleaning operations, using “Hot Work” systems, including weed burning torches are expressly prohibited.

**Scope of Responsibility for Cleaning Contractors**

The kitchen exhaust system cleaning company is required to clean commercial kitchen exhaust systems and report deficiencies in accordance with criteria, procedures and standards established by this administrative rule and permit conditions. Cleaning includes all accessible portions of the exhaust system beginning from the range hood, including the exhaust filters, spark arresters, up to the plenum, horizontal and vertical ducts, access panels, exhaust fan and housing, but not any appurtenances requiring special service as referenced elsewhere in this rule.

# DRAFT – 2-19-2009

## SECTION 7

### KITCHEN EXHAUST SYSTEM CLEANING REPORTING ITEMS.

Personnel performing cleaning of commercial kitchen exhaust systems shall perform the following checks as part of their cleaning process.

#### **Liquid Tight Kitchen Exhaust Systems**

Confirm all portions of the kitchen exhaust system are in a liquid tight condition. Systems are designed and installed to be liquid tight, but over time wear, loose fittings, rust, and other factors may allow leakage of liquids. Passage of liquids from inside the exhaust system to surrounding areas, crawl spaces, attics, roofs or other areas can create a significant fire hazard condition. If the kitchen exhaust system is not liquid tight the kitchen exhaust system cleaning company shall document the deficiency on the Seattle Fire Department Commercial Kitchen Exhaust System Cleaning Report.

#### **Spark Arrester Filter**

Clean spark arresters in the kitchen exhaust system, if required, prior to affixing the service tag.

#### **Access Panels**

Confirm all interior surfaces of the kitchen exhaust system are accessible for cleaning purposes. Where parts of a kitchen exhaust system cannot be reached through readily accessible means, the system shall be listed as having deficiencies and a yellow service tag shall be affixed.

#### **Exhaust Fan Hinges and Exhaust Fan**

Confirm for each exhaust fan, both sides of the fan blades, all areas of the fan housing, and the vertical ducts are accessible for cleaning

#### **Roof-Top Grease Receptacle**

Clean the roof-top grease receptacle. If the roof-top receptacle is full and allowing grease to spill onto the roof, note a deficiency in the Cleaning Report.

#### **Appurtenances Requiring Special Service**

Note any of the devices below on the cleaning report that may require service or cleaning from specially qualified, properly trained personnel.

1. Air pollution control devices;
2. Secondary filtration devices;
3. Fume incinerators;
4. Thermal recovery units;
5. Recirculating systems;
6. UV (ultraviolet) grease treatment systems;
7. Pre-engineered fire protection systems;
8. Water wash grease extractor systems (service only, cleaning can be performed by kitchen exhaust cleaning companies).

# DRAFT – 2-19-2009

## SECTION 8 COMMERCIAL KITCHEN EXHAUST CLEANING FREQUENCY

All portions of the exhaust system shall be inspected, and cleaned if necessary, at intervals sufficient to prevent the significant accumulation of combustible contaminants.

The interval between cleanings shall not exceed the following limits:

1. All elements of solid fuel burning exhaust systems shall be cleaned at least monthly.
2. All other commercial cooking appliance exhaust systems serving type I hoods shall be cleaned at least quarterly, with the following exceptions:
  - Exhaust systems serving appliances that produce low accumulations of combustible contaminants, such as prep hoods, water/grease extractor systems, UV Systems, etc. or kitchen exhaust systems that have a low to medium build-up of combustible contaminants in a 6 month period, shall be inspected, and cleaned at least semi-annually.
  - Exhaust systems serving occasional use commercial cooking appliances, such as those in churches, day camps, senior centers, and test kitchens, that have a low to medium build-up of combustible contaminants in a 12 month period, shall be inspected, and cleaned at least annually.
3. Kitchen exhaust system's shall be inspected, and cleaned if necessary, on a shorter frequency interval if the above intervals do not keep the combustible contaminants below a heavy buildup.

Schedule for Cleaning of Kitchen Exhaust Systems:

Type of Appliance	Maximum Interval Between Cleaning
1. Solid Fuel	Monthly
2. All other commercial cooking appliances, except as noted in #3 and #4 of this table, e.g. Systems that have a medium build up of combustible contaminants in a 3 month period, such as 24-hr cooking, charbroiling, wok cooking, etc.	Quarterly
3. Any appliances producing low grease accumulation, such as prep hoods. Occupancies with water/grease extractor systems, UVC Systems, Systems that have a low to medium build up of combustible contaminants in a 6 month period.	Semi-Annually

## DRAFT – 2-19-2009

4. Occasional use kitchens, e.g. systems that have a low to medium build up of combustible contaminants in a 12 month period, such as churches, day camps, seasonal businesses, or senior centers, etc.	Annual
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### Fire Suppression System

At no time will the range hood fire suppression system be tampered with, or disabled, without a Seattle Fire Department certified extinguishment system technician present. Corrosive chemicals shall not be used directly on fusible links, link lines or conduit. The link line maintenance is the responsibility of the range hood fire suppression system technician. During commercial kitchen exhaust cleaning, all of the building's fire protection systems shall remain in service.

## SECTION 9 CLEANING STATUS TAG MINIMUM REQUIREMENTS

Cleaning Status Label/Tags shall be consistent with this Administrative Ruling and shall include the minimum of the following:

1. The words "**DO NOT REMOVE BY ORDER OF THE FIRE CHIEF**".
2. Description of work performed
3. Name of the permitted business or firm.
4. Address of permitted business or firm.
5. Telephone number of the permitted business or firm.
6. The Seattle Fire Department Cleaning permit number
7. Cleaning crews' supervisor's name
8. Area of kitchen exhaust system not cleaned (punch area)
9. Additional information on service cleaning report (punch area)
10. Date that work was performed. (punch area)
11. Expiration date of label/tag (punch area)
12. Kitchen exhaust system status; Red – Out of Service, Yellow – Has deficiencies, White – No Problems; (The system statuses will correspond to the color of the label/tag and only that status will be printed on label/tag).

The label/tag is required to be printed with black ink on either white, yellow or red paper stock to reflect the applicable status of the system.

The following areas of the label/tag are required to be in separate fields, design to be punched out, and must be able to withstand a year on the range hood in the cooking operation environment and remain legible.

- a) Area of kitchen exhaust system not cleaned
- b) Additional information on service cleaning
- c) Date that work was performed
- d) Expiration date of label/tag

**DRAFT – 2-19-2009**

<b>DO NOT REMOVE OR ALTER BY ORDER OF THE FIRE CHIEF</b>	<b>KITCHEN EXHAUST SYSTEM CLEANING</b>	
	Firm: Address: Phone: Fire Department Permit #: Supervising cleaner's name (print):	Company Logo Here
Areas of kitchen exhaust system not cleaned – refer to service cleaning report (Punch Out): O		
For additional information on service cleaning refer to service cleaning report (Punch Out): O		
<b>Cleaning Service Date</b> (Punch Out): 1 2 3 4 5 6 7 8 9 10 11 12 13  14 15 16 17 18 19 20 21 22 23  24 25 26 27 28 29 30 31  <b>Month:</b> Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec <b>Year:</b> 2008 2009 2010 2011	<b>Expiration Date</b> (Punch Out): 1 2 3 4 5 6 7 8 9 10 11 12 13  14 15 16 17 18 19 20 21 22 23  24 25 26 27 28 29 30 31  <b>Month:</b> Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec <b>Year:</b> 2008 2009 2010 2011	
<b>System Status:</b> Red – Out of Service Yellow – Has Deficiencies White – No Problems		

**System Status**

After the kitchen exhaust system has had a system cleaning, the system shall be reassembled. The system shall then be evaluated and given either a red, yellow, or white status.

Red status system is a kitchen exhaust system that is out of service, and/or whose operation is seriously impaired. A kitchen exhaust system that has a red status cannot perform cooking operations under the range hood. The following deficiencies (including but not limited to) shall require the kitchen exhaust system to be given a red status:

- Heavy build up over all or a major portion of the system
- Heavy build up on fire suppression system nozzles
- Heavy build up on roof
- Exhaust Fan does not operate
- Clogged filters
- Exposed wiring (i.e. frayed or broken)
- Junction box filled with grease
- No spark arrestor or spark arrestor is not functioning (for solid fuel appliances)
- Exposed light fixture

Yellow status system is a kitchen exhaust system that is functioning, but has deficiencies. The following deficiencies (including but not limited to) shall require the kitchen exhaust system to be given a yellow status:

**Medium build-up over entire system**

## **DRAFT – 2-19-2009**

- Medium build-up on nozzles
- Medium build-up on roof
- Lack of access to parts of system
- Improper access doors
- Upblast fan with no hinges
- Fan too close to building structure
- Type II duct
- Missing filters
- Broken filters
- Hole(s) in the canopy
- Exhaust Fan operates very slowly
- Low spots in duct; improper slope
- Conduit inside duct
- Wiring problems
- Lack of grease receptacle on the roof
- Build-up of grease on the outside and/or on top of the canopy

White status system is a system with no deficiencies.

### **Location of Commercial Exhaust System Cleaning Service Label/Tag**

The kitchen exhaust cleaning company shall place the service tag or label on the outside of the range hood in an area that is easily seen and readable.

### **Records of Cleaning Reports**

#### **Red and Yellow Status:**

Commercial kitchen exhaust system cleaning companies shall submit a Seattle Fire Department Commercial Kitchen Exhaust System Cleaning Report after every kitchen exhaust cleaning to the Seattle Fire Marshals Office and the kitchen owner/operator by the end of the next business day following the cleaning for a kitchen exhaust system that has a red status, and within 15 days of the date of the cleaning for a yellow status.

#### **White Status:**

On all white status systems, a Seattle Fire Department Commercial Kitchen Exhaust System Cleaning Report shall only be submitted to the kitchen owner/operator within 30 days of the date of the cleaning.

One report will be submitted per kitchen exhaust system. The report shall include the signature and printed name of the supervisor of the kitchen exhaust system cleaning crew and all deficiencies found.

Copies of commercial kitchen exhaust cleaning reports shall be maintained on the premises where the systems are located and made available for Fire Department inspection for a minimum of two years from the date of the cleaning.

### **Housekeeping**

All combustible materials used by the cleaning company, e.g. debris, paper, cardboard, wood, oily rags, plastic, etc., are to be removed and properly disposed of after cleaning.

## DRAFT – 2-19-2009

operations are completed. The kitchen exhaust system shall be properly reassembled to include all filters in place, exhaust fan lowered and secured, and all access panels secured.

### List of Service Performed

Kitchen exhaust system cleaning companies shall forward list weekly of all of the locations that they have perform a kitchen exhaust system cleaning service in the last 7 days. The list shall have the name of the cleaning company, name of the occupancy, address, occupancy telephone number, date of service, and the type of service performed. The list shall be sent electronically via e-mail to [Exhaust.Cleaning@seattle.gov](mailto:Exhaust.Cleaning@seattle.gov). *Note: File type and layout to be specified in final version of rule.*

### General

Fire Department inspectors may arrive at the job site randomly and unannounced to verify kitchen owner/operator and/or cleaning company compliance with Administrative Rule and permit conditions.