

## **NOTICE OF ADOPTION OF FINAL RULE**

### **Department of Environmental Protection**

**NOTICE IS HEREBY GIVEN PURSUANT TO THE AUTHORITY VESTED IN THE COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION** by Section 1403 (c) of the New York Charter and Sections 24-105 and 24-149.4 of the New York City Administrative Code, that the Department of Environmental Protection has amended its rules to require control devices to reduce emissions from new commercial under-fired char broilers or from any existing or new chain-driven commercial char broilers used to cook more than 875 pounds of meat per week. These amendments were proposed and published in the City Record on May 25, 2016 and one comment was received. A public hearing was held on June 29, 2016. No testimony was given at the hearing.

### **Statement of Basis and Purpose**

Commercial char broilers throughout the five boroughs emit an estimated 1,400 tons of particulate matter per year. The Department of Health and Mental Hygiene estimates that those emissions contributed to more than 12% of PM2.5-attributable premature deaths annually in 2005 to 2007 or 400 deaths per year in that period; if all commercial char broilers had had control technology installed, the reduction in ambient PM2.5 concentrations could have prevented nearly 350 of these premature deaths each year.

To reduce the amount of the emissions released by commercial char broilers, in 2015 the City Council amended Title 24 of the Administrative Code of the City of New York by adding a new Section 24-149.4, which prohibits the operation of any new commercial char broiler and any existing chain-driven commercial char broiler used to cook more than 875 pounds of meat per week unless it has an emissions control device that meets the requirements established by the Commissioner of the Department of Environmental Protection (DEP) (Local Law Number 38 for the year 2015, effective May 6, 2016).

DEP promulgates these rules, as required by Section 24-149.4, to establish requirements for the control of emissions from char broilers. In accordance with Section 24-105 of the Administrative Code, an advisory committee, which includes representatives of the restaurant industry and related industries, representatives of the environmental protection and environmental justice communities, and persons with expertise regarding the health effects of pollutants associated with cooking devices, has been consulted in the development of these rules.

In response to a comment received on the proposed rule, the final rule expands the testing methodology authorized for determining particulate matter emissions on commercial char

broilers. In addition to EPA Methods 5 and 202, South Coast Air Quality Management District Method 5.1 may also be used.

Section 2 of the rule amends Chapter 43 of Title 15 of the Rules of the City of New York to correct an error in the Air Code Penalty Schedule that became effective on May 11, 2016.

Specifically, the proposed rules:

- Create a new chapter of DEP’s rules for char broiler emissions requirements (Title 15, Chapter 37),
- Set forth the requirements for emissions control devices, and
- Establish maintenance, certification and recordkeeping requirements.

The Rule is authorized by Section 1043 of the New York City Charter and sections 24-105 and 24-149.4 of the Administrative Code.

The text of the Rule follows.

“Shall” and “must” denote mandatory requirements and may be used interchangeably in the rules of this department, unless otherwise specified or unless the context clearly indicates otherwise.

Section 1. Title 15 of the Rules of the City of New York is amended by adding a new Chapter 37, to read as follows:

## **Chapter 37**

### **Emission Reduction Technologies for Char Broilers**

#### **§37-01 Definitions.**

Catalytic Oxidizer. “Catalytic Oxidizer” means an emissions control device which burns or oxidizes smoke and gases from the cooking process into carbon dioxide and water, using an infrastructure coated with a noble metal alloy.

Chain-driven commercial char broiler. “Chain-driven commercial char broiler” means a commercial char broiler that is a semi-enclosed cooking device with a mechanical chain that automatically moves food through the device.

Commercial char broiler. “Commercial char broiler” means a device that consists primarily of a grated grill and a heat source and that is used to cook meat, including beef, lamb, pork, poultry,

fish, and seafood, for human consumption at a food service establishment, as such term is defined in section 81.03 of the New York city health code.

Electrostatic Precipitator (ESP). “Electrostatic Precipitator (ESP)” means a filtration device that removes fine particles, like dust and smoke, from a flowing gas using the force of an induced electrostatic charge minimally impeding the flow of gases through the unit. An ESP is a type of emissions control device.

Emissions Control Device. “Emissions control device” means equipment that is installed on a commercial char broiler to reduce particulate matter emissions.

Existing. “Existing” means installed before May 6, 2016.

Meat. “Meat” means tissue of an animal body that is used for food and includes, but is not limited to, beef, lamb, pork, poultry, fish, or seafood.

New. “New” means installed on or after May 6, 2016.

Particulate Matter. “Particulate Matter” or “PM” means any air or gas-borne material, except water, that exists as a liquid or solid.

“PM 10” means PM with an aerodynamic diameter equal to or less than 10 micrometers.

Under-fired commercial char broiler. “Under-fired commercial char broiler” means a commercial char broiler that has a grill, a high temperature radiant surface, and a heat source that is located below the food.

Week. “Week” means a period of 7 consecutive days starting on Sunday, unless a different start day is specified in the registration filed pursuant to section 24-109 of the Administrative Code.

§37-02 Requirements for Emissions Control Devices to Reduce Emissions from Existing or New Chain-Driven Commercial Char Broilers and New Under-Fired Commercial Char Broilers.

- (a) No person shall operate any new or existing chain-driven commercial char broiler to cook more than 875 pounds of meat per week unless a flameless catalytic oxidizer or other emissions control device that has been tested and certified in accordance with Sections 37-05 and 37-06 of this chapter has been installed. Such emissions control device must reduce the chain-driven commercial char broiler’s baseline PM10 emissions, including condensable PM, at a reduction rate of 75% or greater.
  
- (b) No person shall operate any new under-fired commercial char broiler used to cook more than 875 pounds of meat per week unless an ESP or other emissions control device that has been tested and certified in accordance with Sections 37-05 and 37-06 of this chapter has been installed. Such emissions control device must reduce the under-fired commercial char broiler’s baseline PM10 emissions, including condensable PM, at a reduction rate of 75% or greater.

(c) Where a facility uses more than one commercial char broiler to cook meat, the amount of meat cooked per week must be calculated based on the total amount of meat cooked on all commercial char broilers at the same facility, and the emissions reduction required by subdivisions (a) and (b) of this section must be calculated per commercial char broiler.

§37-03 Emissions Control Device Maintenance.

(a) Any emissions control device installed and/or operated under this chapter shall be operated, cleaned, and maintained in accordance with the manufacturer's specifications.

(b) Notwithstanding subdivision (a) of this section every emissions control device installed and/or operated pursuant to this chapter must comply with Section FC 609.4.1 of the New York City Fire Code. Systems must be cleaned by a person holding a FDNY Certificate of Fitness P-64 Commercial Kitchen Exhaust & Precipitator Cleaning Technician.

§37-04 Records.

(a) Recordkeeping. (i) Effective May 6, 2016, any person operating a new under-fired commercial char broiler or an existing or new chain-driven commercial char broiler used to cook 875 pounds or less of meat per week, must maintain records showing the amount of meat purchased per month.

(ii) Effective May 6, 2016, any person operating a new under-fired commercial char broiler or an existing or new chain-driven commercial char broiler used to cook more than 875 pounds of meat per week must maintain records regarding the date of installation, replacement and maintenance of any emissions control device installed to abate emissions from the char broiler.

(iii) For purposes of this subdivision, maintenance includes, but is not limited to, preventative maintenance, breakdown repair, and cleaning performed on the emissions control device. The records must include the date, time, and a brief description of the work.

(b) Retention of Records. All records required by this section must be retained for at least one year and must be made available to the department upon request.

§37-05 Certification of Emissions Control Devices.

The manufacturer or owner of an emissions control device may seek department certification by submitting documentation from an independent testing laboratory that tests in accordance with an EPA accredited laboratory testing method that the emissions control device has been tested in accordance with the applicable procedures set forth in Section 37-06 of this title and that such device meets the requirements of Section 37-02 of this title. Such documentation must be submitted in accordance with the requirements of Section 37-06(c) of this title. The department will maintain a list of approved certified emissions control devices for use with particular models of commercial char broilers on the department's website and will update the list periodically as necessary.

§37-06 Protocols for Testing Emissions Control Devices.

(a) Protocols for Testing Emissions Control Devices on Chain-Driven Commercial Char Broilers.

- (i) Laboratory testing must be performed on an emissions control device that is installed on a chain-driven commercial char broiler per manufacturer's specifications. ASTM International Standard Test Method F 2239-10 must be followed using heavy load cooking tests and careful attention must be given to the following specifications as set forth in greater detail in such test method:
  - a. The chain-driven commercial char broiler must be positioned such that a minimum of 6 inches is maintained between the edge of the hood and the vertical plane of the front and sides of the appliance.
  - b. The patties must consist of 18-22% fat by weight and 58-62% moisture. The patties must be shaped into 0.375 inch thick round patties of 5 inch diameter. The fat and moisture content of the patties must be verified in accordance with the laboratory procedures set forth in the Association of Official Analytical Chemists Official Actions 960.39 and 950.46B.
  - c. Patties must be loaded, cooked, and removed in accordance with Section 10 of ASTM International Standard Test Method F2239-10 using heavy load conditions.
- (ii) Emissions testing for filterable and condensable particulate matter must be performed following EPA Method 5, Appendix A-3 to 40 CFR Part 60, or EPA Method 202, Appendix M to 40 CFR Part 51, or South Coast Air Quality Management District Method 5.1. During each test, samples must be collected from the outlet of the control.

(b) Protocols for Testing Emissions Control Devices on Under-Fired Commercial Char Broilers.

- (i) Laboratory testing must be performed on an emissions control device that is installed on an under-fired commercial char broiler per manufacturer's specifications. ASTM International Standard Test Method F 1695-03 must be followed using heavy load cooking tests and careful attention must be given to the following specifications as set forth in greater detail in such test method:
  - a. The exhaust hood must have the capacity to operate at a nominal net exhaust ventilation rate of 400 cubic feet per minute (cfm) for each linear foot of active hood length. The hood must extend over the surface of the under-fired commercial char broiler by at least 6 inches in the front and sides.

- b. The under-fired commercial char broiler must be warmed up for a minimum of 30 minutes before testing and the controls must be set to operate at a maximum temperature of 600 degrees Fahrenheit, with a cooking energy rate established at this setting.
- c. Pure beef, finished grind hamburgers of 0.33 lbs each must be cooked on the under-fired commercial char broiler during testing. The patties must be shaped into 0.625 inch thick round patties of 5 inch diameter.
- d. The patties must consist of 18-22% fat by weight and 58-62% moisture.
- e. The fat and moisture content of the patties must be verified in accordance with the laboratory procedures set forth in the Association of Official Analytical Chemists Official Actions 960.39 and 950.46B.
- f. Hamburger patties must be loaded, cooked, and removed in accordance with Section 10 of ASTM International Test Method F1695-03 using heavy load conditions.

(ii) Emissions testing for filterable and condensable particulate matter must be performed following EPA Method 5, Appendix A-3 to 40 CFR Part 60, or EPA Method 202, Appendix M to 40 CFR Part 51, or South Coast Air Quality Management District Method 5.1. During each test, samples must be collected from the outlet of the control.

(c) Reporting. The results of the testing required by this section must be submitted on forms prescribed by the department available on the department’s website and must include the following information:

- a. Name and address of the manufacturer of the commercial char broiler, brand name, trade name, model number of the commercial char broiler, any accoutrements installed to enhance or support the operation of the emissions control device, the maximum air flow rate, and other relevant operating conditions during the test, as specified by the department.
- b. A description of the emissions control device used on the commercial char broiler model being certified.
- c. A statement that testing has been conducted in accordance with the requirements of this section.

Section 2. The Air Code Penalty Schedule set forth in § 43-02 of Chapter 43 of Title 15 of the Rules of the City of New York is amended to read as follows:

24-149.4[(d)] e	Failure to keep maintenance records for commercial char broiler	Maintain records – forthwith	800	800	3,200	1,600	1,600	2,400	2,400
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24-149.4(e) <u>f</u>	Failure to maintain records showing amount of meat cooked/purchased for commercial char broiler	Maintain records – forthwith	800	800	3,200	1,600	1,600	2,400	2,400
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