

## § 60.100a

40 CFR Ch. I (7–1–09 Edition)

(b) Authorities which shall not be delegated to States:

- (1) Section 60.105(a)(13)(iii),
- (2) Section 60.106(i)(12).

[54 FR 34031, Aug. 17, 1989, as amended at 55 FR 40178, Oct. 2, 1990]

### Subpart Ja—Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007

SOURCE: 73 FR 35867, June 24, 2008, unless otherwise noted.

#### § 60.100a Applicability, designation of affected facility, and reconstruction.

(a) The provisions of this subpart apply to the following affected facilities in petroleum refineries: fluid catalytic cracking units (FCCU), fluid coking units (FCU), delayed coking units, fuel gas combustion devices, including flares and process heaters, and sulfur recovery plants. The sulfur recovery plant need not be physically located within the boundaries of a petroleum refinery to be an affected facility, provided it processes gases produced within a petroleum refinery.

(b) Except for flares, the provisions of this subpart apply only to affected facilities under paragraph (a) of this section which commence construction, modification, or reconstruction after May 14, 2007. For flares, the provisions of this subpart apply only to flares which commence construction, modification, or reconstruction, after June 24, 2008.

(c) For the purposes of this subpart, under § 60.14, a modification to a flare occurs if:

- (1) Any new piping from a refinery process unit or fuel gas system is physically connected to the flare (e.g., for direct emergency relief or some form of continuous or intermittent venting); or
- (2) A flare is physically altered to increase the flow capacity of the flare.

(d) For purposes of this subpart, under § 60.15, the “fixed capital cost of the new components” includes the fixed capital cost of all depreciable components which are or will be re-

placed pursuant to all continuous programs of component replacement which are commenced within any 2-year period following May 14, 2007. For purposes of this paragraph, “commenced” means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

EFFECTIVE DATE NOTE: At 73 FR 78552, Dec. 22, 2008, § 60.100a(c) was stayed from Feb. 24, 2009 until further notice.

#### § 60.101a Definitions.

Terms used in this subpart are defined in the Clean Air Act, in § 60.2, and in this section.

*Coke burn-off* means the coke removed from the surface of the FCCU catalyst by combustion in the catalyst regenerator. The rate of coke burn-off is calculated by the formula specified in § 60.104a.

*Contact material* means any substance formulated to remove metals, sulfur, nitrogen, or any other contaminant from petroleum derivatives.

*Delayed coking unit* means one or more refinery process units in which high molecular weight petroleum derivatives are thermally cracked and petroleum coke is produced in a series of closed, batch system reactors.

*Flare* means an open-flame fuel gas combustion device used for burning off unwanted gas or flammable gas and liquids. The flare includes the foundation, flare tip, structural support, burner, igniter, flare controls including air injection or steam injection systems, flame arrestors, knockout pots, piping and header systems.

*Flexicoking unit* means one or more refinery process units in which high molecular weight petroleum derivatives are thermally cracked and petroleum coke is continuously produced and then gasified to produce a synthetic fuel gas.

*Fluid catalytic cracking unit* means a refinery process unit in which petroleum derivatives are continuously charged and hydrocarbon molecules in the presence of a catalyst suspended in a fluidized bed are fractured into

smaller molecules, or react with a contact material suspended in a fluidized bed to improve feedstock quality for additional processing and the catalyst or contact material is continuously regenerated by burning off coke and other deposits. The unit includes the riser, reactor, regenerator, air blowers, spent catalyst or contact material stripper, catalyst or contact material recovery equipment, and regenerator equipment for controlling air pollutant emissions and for heat recovery. When *fluid catalyst cracking unit* regenerator exhaust from two separate fluid catalytic cracking units share a common exhaust treatment (e.g., CO boiler or wet scrubber), the *fluid catalytic cracking unit* is a single affected facility.

*Fluid coking unit* means one or more refinery process units in which high molecular weight petroleum derivatives are thermally cracked and petroleum coke is continuously produced in a fluidized bed system. The *fluid coking unit* includes equipment for controlling air pollutant emissions and for heat recovery on the fluid coking burner exhaust vent.

*Fuel gas* means any gas which is generated at a petroleum refinery and which is combusted. *Fuel gas* includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. *Fuel gas* does not include gases generated by catalytic cracking unit catalyst regenerators and fluid coking burners, but does include gases from flexicoking unit gasifiers. *Fuel gas* does not include vapors that are collected and combusted to comply with the wastewater provisions in § 60.692, 40 CFR 61.343 through 61.348, 40 CFR 63.647, or the marine tank vessel loading provisions in 40 CFR 63.562 or 40 CFR 63.651.

*Fuel gas combustion device* means any equipment, such as process heaters, boilers, and flares, used to combust fuel gas, except facilities in which gases are combusted to produce sulfur or sulfuric acid.

*Fuel gas system* means a system of compressors, piping, knock-out pots, mix drums, and units used to remove sulfur contaminants from the fuel gas (e.g., amine scrubbers) that collects refinery fuel gas from one or more

sources for treatment as necessary prior to combusting in process heaters or boilers. A *fuel gas system* may have an overpressure vent to a flare but the primary purpose for a fuel gas system is to provide fuel to the refinery.

*Oxidation control system* means an emission control system which reduces emissions from sulfur recovery plants by converting these emissions to sulfur dioxide (SO<sub>2</sub>) and recycling the SO<sub>2</sub> to the reactor furnace or the first-stage catalytic reactor of the Claus sulfur recovery plant or converting the SO<sub>2</sub> to a sulfur product.

*Petroleum* means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

*Petroleum refinery* means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, asphalt (bitumen) or other products through distillation of petroleum or through redistillation, cracking, or reforming of unfinished petroleum derivatives.

*Process heater* means an enclosed combustion device used to transfer heat indirectly to process stream materials (liquids, gases, or solids) or to a heat transfer material for use in a process unit instead of steam.

*Process upset gas* means any gas generated by a petroleum refinery process unit as a result of upset or malfunction.

*Reduced sulfur compounds* means hydrogen sulfide (H<sub>2</sub>S), carbonyl sulfide, and carbon disulfide.

*Reduction control system* means an emission control system which reduces emissions from sulfur recovery plants by converting these emissions to H<sub>2</sub>S and either recycling the H<sub>2</sub>S to the reactor furnace or the first-stage catalytic reactor of the Claus sulfur recovery plant or converting the H<sub>2</sub>S to a sulfur product.

*Refinery process unit* means any segment of the petroleum refinery in which a specific processing operation is conducted.

*Sulfur pit* means the storage vessel in which sulfur that is condensed after each Claus catalytic reactor is initially accumulated and stored. A *sulfur pit* does not include secondary sulfur storage vessels downstream of the initial Claus reactor sulfur pits.

*Sulfur recovery plant* means all process units which recover sulfur from HS<sub>2</sub> and/or SO<sub>2</sub> at a petroleum refinery. The *sulfur recovery plant* also includes sulfur pits used to store the recovered sulfur product, but it does not include secondary sulfur storage vessels downstream of the sulfur pits. For example, a Claus sulfur recovery plant includes: Reactor furnace and waste heat boiler, catalytic reactors, sulfur pits, and, if present, oxidation or reduction control systems, or incinerator, thermal oxidizer, or similar combustion device. Multiple sulfur recovery units are a single affected facility only when the units share the same source of sour gas. Sulfur recovery plants that receive source gas from completely segregated sour gas treatment systems are separate affected facilities.

**§ 60.102a Emissions limitations.**

(a) Each owner or operator that is subject to the requirements of this subpart shall comply with the emissions limitations in paragraphs (b) through (h) of this section on and after the date on which the initial performance test, required by § 60.8, is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after initial startup, whichever comes first.

(b) An owner or operator subject to the provisions of this subpart shall not discharge or cause the discharge into the atmosphere from any FCCU or FCU:

(1) Particulate matter (PM) in excess of the limits in paragraphs (b)(1)(i), (ii), or (iii) of this section.

(i) 1.0 kilogram per Megagram (kg/Mg) (1 pound (lb) per 1,000 lb) coke burn-off or, if a PM continuous emission monitoring system (CEMS) is used, 0.040 grain per dry standard cubic feet (gr/dscf) corrected to 0 percent excess air for each modified or reconstructed FCCU.

(ii) 0.5 gram per kilogram (g/kg) coke burn-off (0.5 lb PM/1,000 lb coke burn-off) or, if a PM CEMS is used, 0.020 gr/dscf corrected to 0 percent excess air for each newly constructed FCCU.

(iii) 1.0 kg/Mg (1 lb/1,000 lb) coke burn-off; or if a PM CEMS is used, 0.040 grain per dry standard cubic feet (gr/

dscf) corrected to 0 percent excess air for each affected FCU.

(2) Nitrogen oxides (NO<sub>x</sub>) in excess of 80 parts per million by volume (ppmv), dry basis corrected to 0 percent excess air, on a 7-day rolling average basis.

(3) Sulfur dioxide (SO<sub>2</sub>) in excess of 50 ppmv dry basis corrected to 0 percent excess air, on a 7-day rolling average basis and 25 ppmv, dry basis corrected to 0 percent excess air, on a 365-day rolling average basis.

(4) Carbon monoxide (CO) in excess of 500 ppmv, dry basis corrected to 0 percent excess air, on an hourly average basis.

(c) The owner or operator of a FCCU or FCU that uses a continuous parameter monitoring system (CPMS) according to § 60.105a(b)(1) shall comply with the applicable control device parameter operating limit in paragraph (c)(1) or (2) of this section.

(1) If the FCCU or FCU is controlled using an electrostatic precipitator:

(i) The 3-hour rolling average total power and secondary current to the entire system must not fall below the level established during the most recent performance test; and

(ii) The daily average exhaust coke burn-off rate must not exceed the level established during the most recent performance test.

(2) If the FCCU or FCU is controlled using a wet scrubber:

(i) The 3-hour rolling average pressure drop must not fall below the level established during the most recent performance test; and

(ii) The 3-hour rolling average liquid-to-gas ratio must not fall below the level established during the most recent performance test.

(d) If an FCCU or FCU uses a continuous opacity monitoring system (COMS) according to the alternative monitoring option in § 60.105a(e), the 3-hour rolling average opacity of emissions from the FCCU or FCU as measured by the COMS must not exceed the site-specific opacity limit established during the most recent performance test.

(e) The owner or operator of a FCCU or FCU that is exempted from the requirement for a CO continuous emissions monitoring system under