

This model rule was developed by the Mid-Atlantic Regional Air Management Association (MARAMA) as part of a regional effort to assist states in developing State Implementation Plans for ozone, fine particles, and regional haze.

The MARAMA Technical Oversight Committee chose to use the most stringent limits (either from recent Consent Decrees or rules in other jurisdictions) for illustrative purposes to show how a rule could be structured. MARAMA member States may pursue these model rules as necessary and appropriate during state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates, or technologies to meet their particular attainment needs and control strategies.

NOTE: "XXXX" is a place holder for State-specific section numbers, title numbers, or State names.

Model Rule for Fluidized Catalytic Cracking Units

PART Env-A xxxx FLUIDIZED CATALYTIC CRACKING UNITS

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Env-A xxxx.01 Applicability. This part (subpart) applies on or after January 1, XXXX to fluid catalytic cracking units.

Env-A xxxx.02 Definitions. The following words, terms, and abbreviations used in this part (subchapter) shall have the following meanings:

Note: Each state's policies and rules regarding regulatory definitions vary. Listed here are critical definitions with suggested, broadly defined language that will need to be changed to be consistent with an individual state's rules.

() *Fluid catalytic cracking unit* means a refinery process unit in which petroleum derivatives are continuously charged; 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.

Env-A xxxx.03 Emission Standards for Particulate Matter.

- (a) The owner or operator of a fluid catalytic cracking unit shall not discharge or cause the discharge of particulate matter to the atmosphere in excess of 0.5 lb/1,000 lb coke burned in the catalyst regenerator on a 3-hr basis.

Env-A xxxx.04 Emission Standards for Sulfur Dioxide.

- (a) The owner or operator of a fluid catalytic cracking unit shall not discharge or cause the discharge of sulfur dioxide to the atmosphere in excess of 25 ppmvd @ 0% O₂ based on a 365-day rolling average or 50 ppmvd @ 0% O₂ based on a 7-day rolling average.

Env-A xxxx.05 Emission Standards for Oxides of Nitrogen.

- (a) The owner or operator of a fluid catalytic cracking unit shall not discharge or cause the discharge of nitrogen oxides to the atmosphere in excess of 20 ppmvd @ 0% O₂ based on a 365-day rolling average and 40 ppmvd @ 0% O₂ based as a 7-day rolling average.

Env-A xxxx.06 Emission Standards for Carbon Monoxide.

- (a) The owner or operator of a fluid catalytic cracking unit shall not discharge or cause the discharge of carbon monoxide to the atmosphere in excess 200 ppmvd @ 0% O₂ based on a 1-hr block average and 100 ppmvd @ 0% O₂ based on a 365-day rolling average.

Env-A xxxx.07 Compliance Schedule

- (a) By a date that is 120 days after the effective date of this part (subchapter), the owners or operator of an existing emission unit subject to the requirements of this part (subchapter) shall develop, and submit to the Department for approval, a schedule for bringing the affected emission unit into compliance with the applicable provisions of this part (subchapter). The compliance schedule shall indicate the method by which the owner or operator shall achieve compliance and the dates by which the owner or operator commits to complete major increments of progress toward achieving compliance.
- (b) The owner or operator of an emission unit subject to the provisions of this part (subchapter) shall modify the equipment and/or install emission control equipment, if such modification or installation is required pursuant to this part (subchapter), according to the schedule established by the Department and shall be as expeditiously as possible by not later than the date of the next refinery turnaround.

Env-A xxxx.8 Emissions Testing

- (a) All stationary sources subject to this part shall conduct an initial compliance stack test to demonstrate compliance with the emissions limits and/or air pollution control technology requirements specified in Env-A xxxx.03 through Env-A xxxx.07 using a Department-approved source testing program.
- (b) All stationary sources subject to this part shall conduct periodic stack testing in order to demonstrate compliance with the air pollution control requirements specified in Env-A xxxx.03 through Env-A xxxx.07. For particulate matter, the testing shall be conducted annually. For other pollutants, the testing shall be conducted on a frequency determined by the Department. .

- (c) The owner or operator of a stationary source or device required to conduct an initial compliance stack test or periodic stack testing shall submit a stack test report to the Department within x days of the date of such stack test.
- (d) Stationary sources subject to this part shall also comply with the testing requirements specified in Env-A xxxx.xx [refers to other State specific testing requirements].
- (e) Stationary sources subject to this part shall be exempt from the testing requirements for all pollutants where emissions are monitored using a Department-approved Continuous Emission Monitoring System.

Env-A xxxx.9 Emissions Monitoring Requirements

The Department shall require installation, operation, maintenance, and quality assurance testing of a CEM system for SO₂, NO_x, and CO which meets all of the requirements specified in Env-A xxxx.xx [refers to other State specific CEM requirements], if any of the following conditions exist:

- (a) A source utilizes air pollution control equipment in order to maintain compliance with an emission limit and continuous emission monitoring is determined by the Department to be necessary in order to ensure that this emission limit is not exceeded and that the control equipment is performing correctly; and
- (b) Any stationary source subject to the provisions of Env-A xxxx.xx [refers to other State specific CEM requirements].

Env-A xxxx.10 Recordkeeping Requirements. The owner or operator shall maintain records in a manner approved by the [Department] to demonstrate compliance with the emission limitations, testing, and monitoring requirements of this rule, as applicable, for a period of five (5) years and make such records available to the [Department] upon request.

Env-A xxxx.11 Reporting Requirements. The reporting requirements below apply to the he owner or operator of an emission unit subject to the provisions of this part (subchapter):

- (a) If a continuous emissions monitoring system has been installed on the equipment, an owner or operator shall submit to the Department a quarterly report in accordance with the requirement to report excess emissions contained Env-A xxxx.xx [refers to other State specific CEM requirements]. If no violations occurred during the quarter, the owner or operator should provide certification that no violations occurred and that the records are maintained at the facility.
- (b) If no such continuous emissions monitoring system has been installed the owner or operator shall submit to the Department on March 1 of each year an annual report for the preceding calendar year. Such annual report shall include any violations which occurred during the previous year. If no violations occurred during the year, the owner or operator shall provide certification that no violations occurred and that the records are maintained at the facility.