

RULE 4460 PETROLEUM REFINERY FENCE-LINE AIR MONITORING (Adopted December 19, 2019)

1.0 Purpose

The purpose of this rule is to require real-time fence-line air monitoring systems that provide air quality information to the public regarding concentrations of various air pollutants, which could include criteria air pollutants and toxic air contaminants, at or near property boundaries of petroleum refineries.

2.0 Applicability

This rule applies to petroleum refineries.

3.0 Definitions

3.1 Air Pollution Control Officer (APCO): as defined in Rule 1020 (Definitions).

3.2 District: as defined in Rule 1020 (Definitions).

3.3 Fence-line Air Monitoring System: a combination of equipment that measures and records air pollutant concentrations at or near the property boundary of a petroleum refinery.

3.4 Petroleum Refinery, or Refinery: a facility that processes petroleum as described in the Standard Industrial Classification Code under 2911 (Petroleum Refining).

3.5 Real-Time: the actual or near actual time during which pollutant levels are measured.

4.0 Exemptions

Refineries not currently engaged in refining crude oil shall be exempted from the requirements of this rule, except for Section 7.3. Not later than thirty (30) calendar days after adoption of this rule, the owner or operator of a refinery not currently engaged in refining crude oil shall submit to the District for APCO review and approval a declaration that the facility is not refining crude oil.

5.0 Requirements

Petroleum refineries shall install, operate, and maintain a fence-line air monitoring system and shall make available to the public in real-time the data collected in

accordance with the District approved fence-line air monitoring plan as required in Section 6.0.

6.0 Fence-line Air Monitoring Plan

- 6.1 No later than July 1, 2020, the owner or operator of a petroleum refinery shall submit to the APCO a written fence-line air monitoring plan for establishing and operating a real-time fence-line air monitoring system.
- 6.2 The fence-line air monitoring plan shall provide the following detailed information:
 - 6.2.1 Equipment to be used to continuously monitor, record, and report air pollutant concentrations for the pollutants specified in Table 1 – Equipment and Air Pollutants to be Considered in Air Monitoring Plan in real-time, at or near the property boundary of the petroleum refinery;
 - 6.2.2 Siting and equipment specifications;
 - 6.2.3 Equipment to be used to measure and continuously record wind speed and wind direction data within the boundaries of the petroleum refinery;
 - 6.2.4 Procedures for air monitoring equipment maintenance and failures must be addressed in the plan, including:
 - 6.2.4.1 Routine maintenance requirements and timelines for performing required periodic maintenance on the fence-line air monitoring equipment;
 - 6.2.4.2 Length of time that fence-line air monitoring equipment will not be operating during routine maintenance activities; and
 - 6.2.4.3 Temporary air monitoring measures that will be implemented in the event of an equipment failure or during routine maintenance activities and used until the fence-line air monitoring system is restored to normal operating conditions.
 - 6.2.5 Procedures for implementing quality assurance by a qualified independent party, including quality control and audits of the fence-line air monitoring systems;
 - 6.2.6 Procedures for implementing the fence-line air monitoring plan, including, information pertaining to the installation, operation,

maintenance, and quality assurance, for the fence-line air monitoring system;

6.2.7 Methods and timeframe for dissemination of data collected by the equipment specified in Subsections 6.2.1 and 6.2.3 to the public, local response agencies, and the District.

6.3 The fence-line air monitoring plan required by Section 6.1 shall address real-time air monitoring for pollutants released due to petroleum refinery-related processes, and should reference the most recent Office of Environmental Health Hazard Assessment refinery-related monitoring guidance. Pollutants to be considered in the fence-line air monitoring plan shall include pollutants specified in Table 1. Should owner or operator of a petroleum refinery propose to not monitor one or more of the specified pollutants in Table 1, sufficient justification shall be included in the proposed fence-line air monitoring plan.

Table 1: Equipment and Air Pollutants to be Considered in Fence-line Air Monitoring Plan

Petroleum Refinery Capacity (barrels per day)	Equipment for Fence-line Air Monitoring System	Pollutants to be Considered in Monitoring Plan
Less than 40,000	Point monitoring or open path system	Sulfur dioxide, hydrogen sulfide, BTEX compounds (benzene, toluene, ethylbenzene and xylene)
40,000 or greater	Open path system and point monitoring as needed	Sulfur dioxide, nitrogen oxides, total VOCs, BTEX compounds (benzene, toluene, ethylbenzene and xylene), formaldehyde, acetaldehyde, acrolein, 1,3 butadiene, styrene, hydrogen sulfide, carbonyl sulfide, ammonia, hydrogen cyanide, hydrogen fluoride, black carbon

6.4 The owner or operator of a petroleum refinery shall submit an updated fence-line air monitoring plan to the APCO as follows:

6.4.1 Ten (10) calendar days after the date of any unplanned facility, equipment, process or administrative modification that could result in changes to an approved fence-line air monitoring plan.

- 6.4.2 Forty-five (45) calendar days before the date of implementation of any planned facility, equipment, process or administrative modification that could result in changes to an approved fence-line air monitoring plan.
 - 6.4.3 Sixty (60) calendar days after the date of receiving information that an approved fence-line air monitoring plan does not adequately measure one or more pollutant(s) identified in Table 1 that are emitted from the petroleum refinery.
 - 6.4.4 Failure to comply with the requirements of Subsections 6.4.1 through 6.4.3 shall result in revocation of an approved fence-line air monitoring plan. Thirty (30) calendar days after revocation of an approved fence-line air monitoring plan, the owner or operator of a petroleum refinery shall submit a new fence-line air monitoring plan to the APCO pursuant to Sections 6.2 and 6.3. The updated fence-line air monitoring plan shall not be subject to the implementation schedule in Section 7.0. An updated implementation schedule subject to approval by the APCO shall be included in the new fence-line air monitoring plan but in no case shall implementation exceed 180 calendar days.
- 6.5 The owner or operator of a petroleum refinery may include the use of emerging technologies in a fence-line air monitoring plan that is compliant with the requirements of this rule.

7.0 Fence-line Air Monitoring Implementation Timeline Requirements

- 7.1 The owner or operator of an existing petroleum refinery shall complete installation and begin operation of a real-time fence-line air monitoring system within 365 calendar days of District approval of proposed monitoring plans.
- 7.2 The owner or operator of a refinery with the capacity to process less than 40,000 barrels per day that subsequently increases processing capacity to greater than or equal to 40,000 barrels per day must submit an amended fence-line air monitoring plan in accordance with Section 6.0 at least six (6) months prior to increasing processing capacity. The owner or operator of the facility must complete installation and begin operation of a real-time fence-line air monitoring system in accordance with the approved fence-line air monitoring plan prior to increasing petroleum processing activities.
- 7.3 The owner or operator of a refinery not currently engaged in refining crude oil must submit a proposed fence-line air monitoring plan at least six (6) months prior to planned recommencement of refining operations. The owner or operator of the facility must complete installation and begin operation of a real-time fence-line air monitoring system in accordance with the approved fence-

line air monitoring plan prior to recommencement of petroleum refining activities.

- 7.4 Refinery facilities that cease to engage in refining crude oil shall notify the District in writing at least thirty (30) calendar days prior to ceasing petroleum refinery operations if fence-line air monitoring is also to be suspended or terminated.

8.0 Refinery Fence-line Air Monitoring Plan Review Process

- 8.1 The APCO shall notify the owner or operator in writing whether the fence-line air monitoring plan is approved or disapproved. Determination of approval status for the fence-line air monitoring plan shall be based on, at a minimum, submittal of information that satisfies the criteria in Section 6.0.

8.1.1 If disapproved, the owner or operator shall revise and resubmit the fence-line and air monitoring plan within thirty (30) calendar days after notification of disapproval of the plan. The resubmitted plan shall include any information necessary to address deficiencies identified in the disapproval letter.

8.1.2 The APCO shall either approve the revised and resubmitted fence-line air monitoring plan or modify the plan and approve it as modified.

- 8.2 A fence-line air monitoring plan that is submitted pursuant to the requirements of Section 6.0 shall be made available, by the APCO, for public review no less than thirty (30) calendar days prior to approval.

9.0 Reporting

Owners or operators subject to Section 5.0 shall submit a written report for each calendar quarter to the District. The quarterly report shall include the time and date of each period during which the fence-line air monitoring system was inoperative and the nature of system repairs and adjustments. The report is due by the 30th calendar day following the end of the calendar quarter.

10.0 Recordkeeping

The owner or operator of a petroleum refinery shall maintain onsite records of all information, required under this rule for at least five (5) years and shall make the information readily available to the District upon request.

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