

RULE 4460 PETROLEUM REFINERY FENCE-LINE AIR MONITORING (Adopted December 19, 2019; Amended [rule adoption date])

1.0 Purpose

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

3.4 Petroleum Refinery, or Refinery: a facility permitted to engage in the activities 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.

3.6 Rule 4460 Petroleum Refinery Fence-line Air Monitoring Plan Guidelines: the written framework to be used by the APCO to evaluate a refinery fence-line air monitoring plan.

~~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.~~

45.0 Requirements

Petroleum refineries shall install, operate, and maintain a fence-line air monitoring system, and shall collect monitoring data in real-time, make such data available to the public as quickly as possible, in real-time the data collected and incorporate a public notification system in accordance with an APCO-the District approved fence-line air monitoring plan as required by Section 56.0.

56.0 Fence-line Air Monitoring Plan

56.1 No later than May 1, 2023~~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.

56.2 The fence-line air monitoring plan shall provide the following detailed information:

56.2.1 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 Addressed~~Considered in Air Monitoring Plan in real-time, at or adjacent to~~near~~ the property boundary of the petroleum refinery;

56.2.2 Siting and equipment specifications;

56.2.3 Equipment to be used to measure and continuously record wind speed and wind direction data within the boundaries of the petroleum refinery;

56.2.4 Procedures for addressing air monitoring equipment maintenance and failures ~~must be addressed in the plan~~, including:

56.2.4.1 Routine maintenance requirements and timelines for performing required periodic maintenance on the fence-line air monitoring system~~equipment~~;

56.2.4.2 Length of time that fence-line air monitoring equipment will not be operating during routine maintenance activities; and

56.2.4.3 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.

56.2.5 Procedures for implementing quality assurance by a qualified independent party, including quality control and audits of the fence-line air monitoring systems;

56.2.6 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;

56.2.7 Methods and timeframe for dissemination of data collected by the equipment specified in Subsections 56.2.1 and 56.2.3 to the public, local response agencies, and the District.

56.3 The fence-line air monitoring plan required by Section 56.1 shall address real-time air monitoring for pollutants released due to petroleum refinery-related processes, and should reference the most recent refinery-related monitoring guidance from California Air Resources Board and California Air Pollution Control Officers Association and refinery-related monitoring report from the Office of Environmental Health Hazard Assessment~~refinery-related monitoring guidance~~. Pollutants required to be monitored~~considered~~ in the fence-line air monitoring system~~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 in accordance with Rule 4460 Petroleum Refinery Fence-line Air Monitoring Plan Guidelines. The owner or operator of a petroleum refinery should also consider monitoring additional pollutants beyond Table 1 that are produced through the facility’s specific activities and processes. At minimum, a refinery shall monitor benzene, toluene, ethylbenzene, xylene, hydrogen sulfide, and sulfur dioxide.

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

<u>Acetaldehyde</u>
<u>Ammonia</u>
<u>Benzene</u>
<u>1,3-Butadiene</u>
<u>Cadmium</u>
<u>Diethanolamine</u>
<u>Ethylbenzene</u>
<u>Formaldehyde</u>
<u>Hydrogen Fluoride</u>
<u>Hydrogen Sulfide</u>
<u>Manganese</u>

Naphthalene
Nickel
Nitrogen Oxide
Polycyclic Aromatic Hydrocarbons (PAH)
Particulate Matter (PM)
Sulfur Dioxide
Sulfuric Acid
Toluene
Xylene

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

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

56.4.1 ~~Thirty (30)~~ ~~Ten (10)~~ calendar days after the date of any unplanned facility, equipment, process or administrative modification that could result in permanent changes to an approved fence-line air monitoring plan.

56.4.2 Forty-five (45) calendar days before the date of implementation of any planned facility, equipment, process or administrative modification that could result in permanent changes to an approved fence-line air monitoring plan.

56.4.3 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.

56.4.4 Failure to comply with the requirements of Subsections 56.4.1 through 56.4.3 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 56.2 and 56.3. The updated fence-line air monitoring plan shall not be subject to the implementation schedule in Section 67.0. 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.

56.5 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.

5.6 All fence-line air monitoring plans shall be consistent with the Rule 4460 Petroleum Refinery Fence-line Air Monitoring Plan Guidelines.

67.0 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 APCO~~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.~~

78.0 Refinery Fence-line Air Monitoring Plan Review Process

78.1 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 56.0.

78.1.1 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.

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

78.2 A fence-line air monitoring plan that is submitted pursuant to the requirements of Section 56.0 shall be made available, by the APCO, for public review and comment no less than thirty (30) calendar days prior to approval.

89.0 Reporting

8.1 Owners or operators subject to Section 45.0 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 45th~~30th~~ calendar day following the end of the calendar quarter.

8.2 Following a monitoring system's detection of a pollutant exceeding its threshold defined in the approved air monitoring plan, owners or operators subject to Section 4.0 shall submit a Follow-up Report to the APCO within ten calendar days. The Report shall include:

8.2.1 The pollutant detected,

8.2.2 The pollutant's notification threshold,

8.2.3 The initial date and time the exceedance was detected,

8.2.4 The date and time the exceedance ended or if it is ongoing,

8.2.5 The predominant wind speed and direction throughout the exceedance period, and

8.2.6 Indication whether or not the suspected source of the exceedance is located within the refinery's fence-line.

8.2.7 If the suspected source of the exceedance identified per Section 8.2.6 is located within the refinery's fence-line, the Follow-up Report shall also include:

8.2.7.1 The specific processes or equipment from where the release is suspected to have originated, and

8.2.7.2 All corrective actions taken.

8.3 Should a monitoring system detect multiple exceedances within the ten day Report period, only one Follow-up Report will be required if the processes or units from where the releases are suspected to have originated are identical. This consolidated report must include the information required in Section 8.2 for each exceedance detected. This consolidated report must be submitted ten days following the initial exceedance.

910.0 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.

This page is intentionally blank