

REGULATION 12
MISCELLANEOUS STANDARDS OF PERFORMANCE
RULE 15
PETROLEUM REFINING EMISSIONS TRACKING
INDEX

12-15-100 GENERAL

12-15-101 Description

12-15-200 DEFINITIONS

12-15-201 Accidental Air Release
12-15-202 Ambient Air
12-15-203 Annual Emissions Inventory
12-15-204 Criteria Pollutant
12-15-205 Crude Oil
12-15-206 Emissions Inventory
12-15-207 Fence-line Monitoring System
12-15-208 Greenhouse Gases (GHGs)
12-15-209 Monthly Crude Slate Report
12-15-210 Petroleum Refinery
12-15-211 Source
12-15-212 Support Facility
12-15-213 Toxic Air Contaminant (TAC)

12-15-400 ADMINISTRATIVE REQUIREMENTS

12-15-401 Annual Emissions Inventory
12-15-402 Review and Approval of Annual Emissions Inventory
12-15-403 Air Monitoring Plans
12-15-404 Review and Approval of Air Monitoring Plans
12-15-405 Emissions Inventory Guidelines
12-15-406 Air Monitoring Guidelines
12-15-407 Designation of Confidential Information
12-15-408 Availability of Monthly Crude Slate Reports

12-15-500 MONITORING AND RECORDS

12-15-501 Fence-line Monitoring System
12-15-502 Recordkeeping

REGULATION 12
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RULE 15
PETROLEUM REFINING EMISSIONS TRACKING

(Adopted April 20, 2016)

12-15-100 GENERAL

12-15-101 Description: The purpose of this rule is to track air emissions and crude oil composition characteristics from Petroleum Refineries and Support Facilities over time and to establish air monitoring systems to provide air quality data along refinery boundaries.

12-15-200 DEFINITIONS

12-15-201 Accidental Air Release: An unanticipated emission of a criteria pollutant, toxic air contaminant, and/or greenhouse gas into the atmosphere required to be reported in a Risk Management Plan (RMP) under 40 CFR §68.168.

12-15-202 Ambient Air: The portion of the atmosphere external to buildings to which the general public has access.

12-15-203 Annual Emissions Inventory: An emissions inventory at a Petroleum Refinery covering a calendar year period.

12-15-204 Criteria Pollutant: An air pollutant for which an ambient air quality standard has been established, or that is an atmospheric precursor to such an air pollutant. For the purposes of this rule, criteria pollutants are carbon monoxide (CO), oxides of nitrogen (NO_x), particulate matter with an aerodynamic diameter of 10 micrometers or less (PM₁₀), particulate matter with an aerodynamic diameter of 2.5 micrometers or less (PM_{2.5}), precursor organic compounds (POC), and sulfur dioxide (SO₂).

12-15-205 Crude Oil / Crude Oil Blends: Unblended crude oil or blended crude oil at the first stage of processing at a Petroleum Refinery (typically at a crude distillation unit).

(Amended December 19, 2018)

12-15-206 Emissions Inventory: For purposes of this rule, an emissions inventory is a comprehensive and accurate accounting of the types and quantities of criteria pollutants, toxic air contaminants, and greenhouse gases that are released into the atmosphere based on current measurement technologies and estimation methodologies. It is intended to represent the actual emissions to the best precision possible based on those measurement technologies and estimation methodologies. For the purposes of this rule, emissions inventory data are data that are collected or calculated by the Petroleum Refinery for all continuous, intermittent, predictable, and accidental air releases resulting from Petroleum Refinery processes at stationary sources at a Petroleum Refinery.

(Amended December 19, 2018)

12-15-207 Fence-line Monitoring System: Equipment that measures and records air pollutant concentrations at or near the property boundary of a facility, and which may be useful for detecting and/or estimating the quantity of fugitive emissions, gas leaks, and other air emissions from the facility.

12-15-208 Greenhouse Gases (GHGs): The air pollutant that is defined in 40 CFR § 86.1818-12(a), which is a single air pollutant made up of a combination of the following six constituents: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For the purposes of this rule, GHG emissions should be calculated in manner consistent with California Air Resources Board requirements as contained in § 95113 of the Mandatory Greenhouse Gas Emissions Reporting Rule.

12-15-209 Monthly Crude Slate Report: Summaries of the volume and certain properties of crude oil / crude oil blends at the first stage of processing at a Petroleum Refinery (typically at a crude distillation unit). The summary shall consist of the total volume of crude oil / crude oil blends processed in the calendar month, and single average value for each of the properties of the

total volume of crude oil / crude oil blends processed for the calendar month, as listed in Section 12-15-408, Table 1.

- 209.1 The non-crude oil feedstock summary shall consist of the total volume and certain properties of non-crude oil feedstock / non-crude oil feedstock blends that are non-gaseous at Standard Temperature and Pressure fed to a fluidized catalyst processing unit. On a calendar month basis, the Petroleum Refinery shall document the volume of all imported feedstocks to a fluidized catalyst process unit. The Petroleum Refinery will provide a single averaged representative value for the imported feedstock to a fluidized catalyst process unit for API, sulfur, iron, nickel, and vanadium if total imported feedstocks exceed one of the following conditions in the calendar month:
- 209.1.1 The volume of all imported feedstocks with an API equal to or greater than 15 is greater than 20 percent of the annualized daily limit listed within a Title V permit multiplied by 30; or
- 209.1.2 The volume of all imported feedstocks with an API less than 15 is greater than 50,000 bbls.
- 209.2 Based upon the five-year monitoring results, an owner or operator of a Petroleum Refinery may request that this provision terminate with respect to that Petroleum Refinery and, in the District's sole discretion, the provision will terminate as to the specific Petroleum Refinery. The owner or operator of the Petroleum refinery must submit the request in writing. The District must grant or deny the request within 30 days of receipt of the request. If the District fails to deny the request within 30 days, such failure will be deemed approval and the provision will sunset immediately with respect to that Petroleum Refinery.
- 209.3 By March 1, 2023, the District will evaluate the requirement for the non-crude oil feedstock summary based on the frequency of sampling, and will propose removing this requirement unless it finds that the frequency of sampled events justifies its continuation. The District will consult with affected Petroleum Refineries prior to reaching a decision.
- 209.4 Supporting data maintained by a Petroleum Refinery shall be made available for inspection and audit by the APCO at the Petroleum Refinery upon request in order to verify the summary data required in Section 12-15-408, Table 1. To ensure the protection of Confidential Information and prevent its inadvertent release, the District agrees to not remove the data described in this paragraph from the Petroleum Refinery or copy any source information or supporting data as described above. The District further agrees to use the supporting data only to verify the monthly cumulative statistical analysis of the summarized information found in Table 1. If the District creates its own notes based on review of the supporting data, it will ensure that its notes will not depict the supporting data in any form or manner such that a third party could deduce or reconstruct the supporting data (sometimes colloquially referred to as "reverse-engineering"). If the District finds a discrepancy between the monthly reports and supporting data, the District shall allow the Petroleum Refinery a reasonable opportunity to correct the discrepancy. If the discrepancy is not corrected, the District may use its notes (which are and shall be treated as confidential) and previous notification to correct the discrepancy as needed to document non-compliance with this Rule. The District will treat its notes as Confidential Information unless and until the source of the information affirmatively and in writing indicates to the District that the information contained in the notes is no longer Confidential Information (or a court of competent jurisdiction issues a final judgment ordering release of the information).

(Amended December 19, 2018)

12-15-210 Petroleum Refinery: An establishment that is located on one or more contiguous or adjacent properties that processes crude oil to produce more usable products such as gasoline, diesel fuel, aviation fuel, lubricating oils, asphalt or petrochemical feedstocks. Petroleum Refinery processes include separation processes (e.g., atmospheric or vacuum distillation, and light ends recovery), petroleum conversion processes (e.g., cracking, reforming, alkylation, polymerization, isomerization, coking, and visbreaking), petroleum treating processes (e.g., hydrosulfurization, hydrotreating, chemical sweetening, acid gas removal, and

deasphalting), feedstock and product handling (e.g., storage, crude oil blending, non-crude oil feedstock blending, product blending, loading, and unloading), and auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants).

12-15-211 Source: As defined in BAAQMD Regulation 2, Rule 1, Section 221.

12-15-212 Support Facility: For purposes of this rule, a hydrogen plant, sulfuric acid plant or electrical generation plant that is not owned or operated by a Petroleum Refinery, and that provides more than 50% of its production output to a Petroleum Refinery.

12-15-213 Toxic Air Contaminant (TAC): An air pollutant that may cause or contribute to an increase in mortality or in serious illness or that may pose a present or potential hazard to human health. For the purposes of this rule, TACs consist of the substances listed in the most recent health risk assessment guidelines adopted by OEHHA.

12-15-400 ADMINISTRATIVE REQUIREMENTS

12-15-401 Annual Emissions Inventory: A Petroleum Refinery or Support Facility owner/operator shall obtain and maintain APCO approval of an Annual Emissions Inventory. Timely submittal as described in the next sentence shall constitute compliance with this requirement unless and until there is a determination of disapproval by the APCO pursuant to Section 12-15-402. On or before June 30, 2017, and every subsequent June 30, a Petroleum Refinery or Support Facility owner/operator shall submit to the APCO an Annual Emissions Inventory covering the previous calendar year period in an APCO-approved format. This report shall include, at a minimum, the following:

401.1 Identification of the calendar year that the Annual Emissions Inventory covers.

401.2 A summary of the total quantity of each criteria pollutant, TAC, and GHG that was emitted from the Petroleum Refinery or Support Facility during the Annual Emission Inventory period, including a table for each source and each pollutant listing whether the pollutant was (a) continuously monitored, (b) monitored by direct measurement, (c) not monitored and estimated by some other method, or (d) not monitored and estimated to be zero. For those Petroleum Refineries using a "common pipe" calculation method for GHGs based on the fuel gas system configuration, the following approach shall be used in the calculation method:

2.1 Identify the total GHG emissions associated with the common pipe sources.

2.2 Identify in the summary all common pipe sources.

2.3 Prorate the total GHG emissions to each source based on that source's actual fuel consumed.

2.4 The calculation will conclude and be deemed sufficient when 95% or more of the total GHG emissions associated with the common pipe sources are allocated.

401.3 A detailed listing of the annual emissions of each criteria pollutant, TAC, and GHG emitted from each source at the Petroleum Refinery or Support Facility, and a complete description of the methodology used for monitoring and determining these emissions, any changes made, and including documentation of the basis for any assumptions used. Any methodologies that are unchanged from a previously submitted Annual Emissions Inventory under this section may instead be noted as such. Emissions resulting from accidental releases and flaring events addressed in Regulation 12, Rules 11 and 12 shall be identified, included and quantified as such, along with the date(s) and time(s) that the release occurred.

401.4 Beginning with the Annual Emissions Inventory for the calendar year 2017 (due on or before June 30, 2018), and for every subsequent calendar year Annual Emissions Inventory, a table that shows, on a Petroleum Refinery-wide or Support Facility-wide basis for each applicable air pollutant, the change in emissions that occurred between the current and most recent previous Annual Emissions Inventory. Emission changes do not need to be shown for any newly-listed air pollutants in the current Annual Emissions Inventory.

(Amended December 19, 2018)

12-15-402 Review and Approval of Annual Emissions Inventory: The procedure for determining whether an Annual Emissions Inventory meets the requirements of this rule is as follows:

402.1 Preliminary Review: Within 45 days of receipt of the report, the APCO will complete a preliminary review of the report to identify any deficiencies that need to be corrected. If the APCO determines that the submitted report does not meet the requirements of Rule 12-15, the APCO will notify the owner/operator in writing. The notification will specify the basis for this determination and the required corrective action. The APCO shall provide the owner/operator with the opportunity to meet and confer to discuss any objections to the APCO's preliminary determinations before they become final. If a notification containing specific deficiencies is not sent by the APCO to the owner/operator within 45 days after the APCO's receipt of the report, the Preliminary Review shall be deemed complete.

(Amended December 19, 2018)

402.2 Corrective Action: Upon receipt of such notification, the owner/operator shall correct the identified deficiencies and resubmit the report within 45 days. If the APCO determines that the owner/operator failed to correct any deficiency identified in the notification, the APCO will disapprove the report, or the APCO may make the necessary corrections to the emissions inventory report with a designation that the report includes Air District revisions.

402.3 APCO Action: Within 45 days of the completion of preliminary review, or of resubmittal of a corrected report, the APCO will approve the report if the APCO determines that the report meets the requirements of Rule 12-15, and shall provide written notification to the owner/operator. This period may be extended by 45 days if necessary as determined by the APCO, and such extension will be communicated to the applicable refinery prior to the completion of the 45-day period. If the APCO determines that the report does not meet the requirements of Rule 12-15, the APCO will notify the owner/operator in writing. The notification will specify the basis for this determination. Upon receipt of such notification, the owner/operator shall correct the identified deficiencies and resubmit the report within 45 days. If the APCO determines that the owner/operator failed to correct any deficiency identified in the notification, the APCO will determine that the owner/operator has failed to meet the requirements of this rule, and will disapprove the report, or the APCO may make the necessary corrections and approve the report with a designation that the report was approved with Air District revisions. If a notification containing specific deficiencies is not sent by the APCO to the owner/operator within 45 days after the APCO's receipt of the corrected report, the Annual Emissions Inventory shall be deemed complete.

402.4 Public Inspection: Within 15 days of the approval or disapproval of a report under Section 12-15-402.3, the APCO shall post the approved or disapproved report on the Air District's website. The Air District shall consider any written comments submitted by the public or regulated community regarding this report and will make any corrections needed to ensure accuracy and completeness of the report. The public versions of these reports will not include detailed calculation methodologies for individual sources, but a short methodological description will be provided. In addition, the public versions of these reports will provide aggregated, rather than source specific emissions information for GHG.

(Amended December 19, 2018)

12-15-403 Air Monitoring Plans: A Petroleum Refinery owner/operator, but not a Support Facility owner/operator, shall obtain and maintain APCO approval of a plan for establishing and operating a fence-line monitoring system. Timely submittal as described in the next sentence shall constitute compliance with this requirement unless and until there is a determination of disapproval by the APCO pursuant to Section 404. On or before April 20, 2017, the owner/operator shall submit to the APCO a site-specific plan for establishing and operating a fence-line monitoring system to aid in determining specified pollutants that cross the refinery fence-line(s) in real-time. The plan shall include detailed information describing the equipment to be used to monitor, record, and report air pollutant levels, the siting, operation, and maintenance of this equipment, and procedures for implementing data quality assurance and

quality control. The District will allow for a tailored implementation date for each Petroleum Refinery's initial site-specific plan. Tailored implementation dates may be affected by factors beyond the refinery's control, including timing considerations for the design, permitting, sourcing, installation, testing, and start-up of fence-line monitoring systems, and other potential delays that are explained and supported in the site-specific plan. Within one year of approval by the District Board of Directors of updated air monitoring guidelines published by the APCO under Section 12-15-406, the refinery owner/operator shall submit to the APCO an updated site-specific air monitoring plan. The District will allow for a tailored implementation date for each Petroleum Refinery's updated site-specific air monitoring plan.

(Amended December 19, 2018)

12-15-404 Review and Approval of Air Monitoring Plans: The procedure for determining whether an air monitoring plan submitted under Section 12-15-403 meets the applicable requirements of this rule is as follows:

404.1 Preliminary Review: Within 45 days of receipt of the air monitoring plan, the APCO will complete a preliminary review of the plan to identify any deficiencies that need to be corrected. If the APCO determines that the submitted plan is deficient, the APCO will notify the owner/operator in writing. The notification will specify the basis for this determination and the required corrective action. If a notification containing specific deficiencies is not sent by the APCO to the owner/operator within 45 days after the APCO's receipt of the air monitoring plan, the Preliminary Review shall be deemed complete.

404.2 Corrective Action: Upon receipt of such notification, the owner/operator shall correct the plan and resubmit the proposed plan within 45 days. If the APCO determines that the owner/operator failed to correct any deficiency identified in the notification, the APCO will disapprove the plan.

404.3 Public Comment: The plan, including any revisions made to correct deficiencies, will be made available for public review within 45 days (with the exception of information designated confidential). The APCO will consider any written comments received during this period prior to approving or disapproving the final plan.

404.4 Final Action: Within 45 days of the close of the public comment period under Section 12-15-404.3, the APCO will approve the air monitoring plan if the APCO determines that the plan meets the requirements of Section 12-15-403, and shall provide written notification to the owner/operator. This period may be extended by 45 days if necessary as determined by the APCO. If the APCO determines that the plan does not meet the requirements of Section 12-15-403, the APCO will notify the owner/operator in writing. The notification will specify the basis for this determination. Upon receipt of such notification, the owner/operator shall correct the identified deficiencies and resubmit the air monitoring plan within 45 days. If the APCO determines that the owner/operator failed to correct any deficiency identified in the notification, the APCO will determine that the owner/operator has failed to meet the requirements of Sections 12-15-403 and will disapprove the plan. If a notification containing specific deficiencies is not sent by the APCO to the owner/operator within 45 days after the APCO's receipt of the corrected air monitoring plan, the air monitoring plan shall be deemed complete.

404.5 Public Inspection: Within 15 days of the approval or disapproval of an air monitoring plan under Section 12-15-404.4, the APCO shall post the plan on the Air District's website, and shall notify any member of the public who submitted comments under Section 12-15-404.3, or who otherwise has requested such notification of this action in writing. In making information available for public inspection, the confidentiality of trade secrets, as designated by the owner/operator, shall be handled in accordance with Section 6254.7 of the Government Code.

(Amended December 19, 2018)

12-15-405 Emissions Inventory Guidelines: The APCO shall publish, and periodically update, emissions inventory guidelines describing best practices to be used when calculating emissions required to be reported in accordance with Rule 12-15. Emission factors and emission estimation methodologies included in these guidelines may include, but are not limited to, continuous monitoring to measure emissions, applying the results of emissions

source tests to known activity levels, combining published emission factors with known activity levels, material balances, or empirical formulae. The District shall request comments from affected facilities at least 60 days in advance of making changes to the Emissions Inventory Guidelines. The District shall respond to comments received. Affected facilities shall be allowed at least 90 days to implement the changes in the Emissions Inventory Guidelines. The District will use these guidelines as criteria to determine whether a Petroleum Refinery and Support Facility emissions inventory meets the requirements of Rule 12-15.

(Amended December 19, 2018)

12-15-406 Air Monitoring Guidelines: The APCO shall publish air monitoring guidelines for Petroleum Refineries that describe the factors that the District will apply in reviewing fence-line monitoring systems required under this rule. These guidelines may include, but are not limited to, specifications for pollutant coverage, siting, instrumentation, operation, maintenance, quality assurance, quality control, and data reporting. The guidelines shall be reviewed by the APCO within five years of initial issuance in consideration of advances in air monitoring technology, updated information regarding the health effects of air pollutants, and review of data collected by existing fence-line air monitoring systems established under this rule. The District shall request comments from affected facilities at least 60 days in advance of making changes to the Air Monitoring Guidelines. The District shall respond to comments received.

(Amended December 19, 2018)

12-15-407 Designation of Confidential Information: Except as stated in Sections 12-15-209 and 12-15-408, when providing any documents or records required by this rule to the District, the Petroleum Refinery or Support Facility owner/operator shall designate as confidential any information claimed to be exempt from public disclosure under the California Public Records Act, Government Code Section 6250 et seq.

(Amended December 19, 2018)

12-15-408 Availability of Monthly Crude Slate Reports: A Petroleum Refinery owner/operator, but not a Support Facility owner/operator, shall make available to the APCO, upon request, in an APCO-approved format, the following information:

408.1 Historical Monthly Crude Slate Reports: For each month of the years 2013, 2014, 2015 and 2016, summarized information as described in Table 1, to the extent such information is available based on the records maintained in the normal course of business. Detailed supporting data, based on records maintained by the Petroleum Refinery in the normal course of business, shall be made available at the Petroleum Refinery upon APCO request for verification of the monthly summaries described in Section 12-15-209, effective April 20, 2017. To ensure the protection of Confidential Information and prevent its inadvertent release, the District will not remove or make copies of the detailed supporting data. The District shall use the supporting data only to verify the monthly cumulative statistical analysis of the summarized information found in Table 1. Any notes the District creates based on review of the supporting data will not depict the supporting data in any form or manner such that a third party could deduce or reconstruct the supporting data (sometimes colloquially referred to as "reverse-engineering"). If the District finds a discrepancy between the monthly reports and supporting data, the District shall allow the Petroleum Refinery a reasonable opportunity to correct the discrepancy. If the discrepancy is not corrected, the District may use its notes and previous notification to correct the discrepancy (which are and shall be treated as confidential) as needed to document non-compliance with this Rule. The District will treat its notes and information it generates as Confidential Information unless and until the source of the information affirmatively and in writing indicates to the District that the information contained in the notes is no longer Confidential Information (or a court of competent jurisdiction issues a final judgment ordering release of the information).

(Amended December 19, 2018)

408.2 Ongoing Monthly Crude Slate Reports: Beginning with January 2017, summarized information as described in Table 1. Detailed supporting data, based on records maintained by the Petroleum Refinery shall be made available at the Petroleum Refinery upon APCO request for verification of the monthly summaries, no later than 30 days after the end of each calendar month. To ensure the protection of Confidential

Information, the District will not remove the data from the Refinery or make any type of copies of the source information. Any information the District generates and takes possession of during its review of this detailed supporting data will not depict the supporting data in any form or manner such that a third party could deduce or reconstruct the supporting data (sometimes colloquially referred to as "reverse-engineering"). The District will treat any such information that it generates as Confidential Information unless and until the source of the information indicates otherwise.

| Table 1- Summarized Information Required in Monthly Crude Slate Report |
|--|
| <p>Processed Volume (thousand barrels)</p> <p>a. Total volume of crude oils / crude oil blends as fed to all crude units.</p> <p>b. Total volume of non-crude oil feedstocks / feedstock blends fed to all other process units.</p> |
| <p>API gravity (degrees)</p> <p>a. Average API gravity of total volume of crude oils / crude oil blends as fed to all crude units.</p> <p>b. Average API gravity of total volume of non-crude oil feedstocks / feedstock blends fed to all other process units as defined in Section 12-15-209.</p> |
| <p>Sulfur content (weight percent)</p> <p>a. Average sulfur content of total volume of crude oils / crude oil blends as fed to all crude units.</p> <p>b. Average sulfur content of total volume of non-crude oil feedstocks / feedstock blends fed to all other process units as defined in Section 12-15-209.</p> |
| <p>Vapor pressure (psia)</p> <p>a. Average vapor pressure of total volume of crude oils / crude oil blends as fed to all crude units.</p> |
| <p>Metals (iron, nickel and vanadium content in ppmw)</p> <p>a. Average metals content of total volume of crude oils / crude oil blends as fed to all crude units.</p> <p>b. Average metals content of total volume of non-crude oil feedstocks / feedstock blends fed to all other process units as defined in Section 12-15-209.</p> |

(Amended December 19, 2018)

12-15-500 MONITORING AND RECORDS

12-15-501 Fence-line Monitoring System: Once the fence-line monitoring system is installed and operational pursuant to Section 12-15-403, the Petroleum Refinery owner/operator will ensure that the fence-line monitoring system is operated in accordance with the approved air monitoring plan. Fence-line monitoring system data shall also be reported as specified in the approved plan.

(Amended December 19, 2018)

12-15-502 Recordkeeping: The Petroleum Refinery or Support Facility owner/operator shall maintain records of all information required under this rule. Such records shall be maintained for a period of five years after the date of the records, and shall be made available to the APCO upon request.