

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 Community Air Monitoring System
12-15-205 Criteria Pollutant
12-15-206 Crude Oil
12-15-207 Crude Slate
12-15-208 Emissions Inventory
12-15-209 Fence-line Monitoring System
12-15-210 Greenhouse Gases (GHGs)
12-15-211 Monthly Crude Slate Report
12-15-212 Petroleum Refinery
12-15-213 Petroleum Refinery Owner/Operator
12-15-214 Receptor Location
12-15-215 Sensitive Receptor
12-15-216 Source
12-15-217 Toxic Air Contaminant (TAC)

12-15-400 ADMINISTRATIVE REQUIREMENTS

12-15-401 Annual Emissions Inventory and Monthly Crude Slate Reports
12-15-402 Review and Approval of Annual Emissions Inventory and Monthly Crude Slate Reports
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 Energy Utilization Analyses
12-15-409 Monthly Crude Slate Reports for Calendar Years 2012, 2013, 2014 and 2015
12-15-410 Requirement to Share Information with Refinery Owner/Operator

12-15-500 MONITORING AND RECORDS

12-15-501 Community Air Monitoring System
12-15-502 Fence-line Monitoring System
12-15-503 Recordkeeping

12-15-600 MANUAL OF PROCEDURES

12-15-601 Emissions Inventory Procedures
12-12-602 Air Monitoring Procedures

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

(Adopted [DATE])

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 over time and to establish air monitoring systems to provide air quality data along refinery boundaries and in nearby communities.

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 Community Air Monitoring System: Equipment that measures and records air pollutant concentrations in the ambient air at or near sensitive receptor locations near a facility, and which may be useful for estimating associated pollutant exposures and health risks, and in determining trends in air pollutant levels over time.

12-15-205 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).

12-15-206 Crude Oil: Petroleum, as it occurs after being extracted from geologic formations by an oil well, and after extraneous substances may have been removed, and which may be subsequently processed at a petroleum refinery.

12-15-207 Crude Slate: A record of the characteristics and quantities of crude oil and/or crude oil blends to be processed by a crude distillation unit at a petroleum refinery.

12-15-208 Emissions Inventory: A comprehensive accounting of the types and quantities of criteria pollutants, toxic air contaminants, and greenhouse gases that are released into the atmosphere based on state-of-the-art measurement technologies and estimation methodologies. For the purposes of this rule, emissions inventory data shall be collected or calculated for: (1) all continuous, intermittent, predictable, and accidental air releases resulting from petroleum refinery processes at stationary sources at a petroleum refinery, and (2) all air releases from cargo carriers (e.g., ships and trains), excluding motor vehicles, that load or unload materials at a petroleum refinery including emissions from such carriers while operating within the District or within California Coastal Waters as specified in Regulation 2-2-610 (adopted Dec. 19, 2012).

12-15-209 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.

12-15-210 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.

- 12-15-211 Monthly Crude Slate Report:** A summary of the volume of crude oil, and of the volume of pre-processed feedstocks imported from outside a petroleum refinery which are processed by refinery crude unit(s) or other process unit(s) each calendar month, submitted annually for the calendar year.
- 12-15-212 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., hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting), feedstock and product handling (e.g., storage, blending, loading, and unloading), auxiliary facilities (e.g., boilers, waste water treatment, hydrogen production, sulfur recovery plant, cooling towers, blowdown systems, compressor engines, and power plants), and support facilities (e.g., hydrogen plants, sulfuric acid plants, and electrical generation).
- 12-15-213 Petroleum Refinery Owner/Operator:** Any person who owns, operates, or exercises operational control over the majority of operations at a petroleum refinery. The refinery owner/operator is responsible for compliance with this rule for the entirety of the petroleum refinery, including any refinery processes, auxiliary facilities or support facilities that may be separately owned or operated.
- 12-15-214 Receptor Location:** A location outside the property boundary or control of the facility being evaluated where a member of the public may reasonably be expected to be exposed to air pollutants for the particular acute or chronic health risks being evaluated.
- 12-15-215 Sensitive Receptor:** A receptor location where an individual that may have increased vulnerability to exposure to air pollutants may be present. For the purposes of this rule, sensitive receptors are residences (where an individual may live for 6 months or more out of a year), schools (including colleges and universities), daycares, hospitals, and senior-care facilities.
- 12-15-216 Source:** As defined in BAAQMD Regulation 2, Rule 1, Section 221.
- 12-15-217 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 and Monthly Crude Slate Reports:** A refinery owner/operator shall obtain and maintain APCO approval of an Annual Emissions Inventory and Monthly Crude Slate Report. 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 refinery owner/operator shall submit to the APCO an Annual Emissions Inventory and Monthly Crude Slate Report 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 and Monthly Crude Slate Report covers.
 - 401.2** A summary of the total quantity of each criteria pollutant, TAC, and GHG that was emitted from the petroleum refinery 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.
 - 401.3** A detailed listing of the annual emissions of each criteria pollutant, TAC, and GHG emitted from each source at the petroleum refinery, 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 and Monthly Crude Slate Report 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 and Monthly Crude Slate Report for the calendar year 2017 (due on or before June 30, 2018), and for every subsequent calendar year Annual Emissions Inventory and Monthly Crude Slate Report, a table that shows, on a refinery-wide basis for each applicable air pollutant, the change in emissions that occurred between the current and most recent previous Annual Emissions Inventory and Monthly Crude Slate Report. Emission changes do not need to be shown for any newly-listed air pollutants in the current Annual Emissions Inventory and Monthly Crude Slate Report.

401.5 The Monthly Crude Slate Report shall include summaries of the volumes of crude oil and other feedstocks as specified in Section 12-15-211 for each calendar month, reported for the calendar year period covered by the Annual Emissions Inventory, and also include the information listed in Section 409.2.

12-15-402 Review and Approval of Annual Emissions Inventory and Monthly Crude Slate Reports: The procedure for determining whether an Annual Emissions Inventory and Monthly Crude Slate Report 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 is deficient, the APCO will notify the refinery owner/operator in writing. The notification will specify the basis for this determination and the required corrective action.

402.2 Corrective Action: Upon receipt of such notification, the refinery owner/operator shall correct the identified deficiencies and resubmit the report within 45 days. If the APCO determines that the refinery 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 Public Comment: The Annual Emissions Inventory Report, including any revisions made to correct deficiencies will be made available for public review for 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 reports. 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.

402.4 Final Action: Within 45 days of the close of the public comment period under Section 12-15-402.3 (if applicable), the APCO will approve the report if the APCO determines that the report meets the requirements of this rule, and shall provide written notification to the refinery owner/operator. This period may be extended if necessary as determined by the APCO. If the APCO determines that the report does not meet the requirements of this rule, the APCO will notify the refinery owner/operator in writing. The notification will specify the basis for this determination. Upon receipt of such notification, the refinery owner/operator shall correct the identified deficiencies and resubmit the report within 45 days. If the APCO determines that the refinery owner/operator failed to correct any deficiency identified in the notification, the APCO will determine that the refinery 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.

402.5 Public Inspection: Within 15 days of the approval or disapproval of a report under

Section 12-15-402.4, the APCO shall post the approved or disapproved report on the District's website, and shall notify any member of the public who submitted comments under Section 12-15-402.3, or who otherwise requested such notification of this action in writing. In making information available for public inspection, the confidentiality of trade secrets, as designated by the refinery owner/operator, shall be handled in accordance with Section 6254.7 of the Government Code.

12-15-403 Air Monitoring Plans: A refinery owner/operator, but not the owner/operator of a support facility as described in Section 12-15-212, shall obtain and maintain APCO approval of a plan for establishing and operating a fence-line monitoring system and community air 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 December 31, 2016, the refinery owner/operator shall submit to the APCO a 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 and a community air monitoring system to aid in assessing air quality impacts in communities near refineries. 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. 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/operator shall submit to the APCO an updated air monitoring plan. The siting of community air monitors shall be addressed in an Air Monitoring Plan Siting Addendum that may be submitted subsequent to the required time for submittal of the Air Monitoring Plan, provided the community air monitoring system is installed and operated in a timely manner as provided in 12-15-501.

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 refinery owner/operator in writing. The notification will specify the basis for this determination and the required corrective action.

404.2 Corrective Action: Upon receipt of such notification, the refinery owner/operator shall correct the plan and resubmit the proposed plan within 45 days. If the APCO determines that the refinery 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 Section 12-15-602, and shall provide written notification to the refinery owner/operator. This period may be extended if necessary as determined by the APCO. If the APCO determines that the plan does not meet the requirements of Section 12-15-403 and Section 12-15-602, the APCO will notify the refinery owner/operator in writing. The notification will specify the basis for this determination. Upon receipt of such notification, the refinery owner/operator shall correct the identified deficiencies and resubmit the air monitoring plan within 45 days. If the APCO determines that the refinery owner/operator failed to correct any deficiency identified in the notification, the APCO will determine that the refinery owner/operator has failed to meet the requirements of Sections 12-15-403 and Section 12-15-602 and will disapprove the plan.

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 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 refinery owner/operator, shall be handled in accordance with Section 6254.7 of the Government Code.

404.6 Siting of Community Monitors: If the APCO determines that sites proposed for community monitors in the Air Monitoring Plan Siting Addendum are inappropriate, the APCO shall notify the refinery owner/operator of any deficiencies. Within 30 days of receiving this notice, the refinery owner/operator shall correct siting deficiencies and resubmit the Siting Addendum. If the proposed sites continue to be inappropriate, the APCO shall disapprove the Air Monitoring Plan.

404.7 Separate Approvals for Fence-Line and Community Monitoring Possible: The APCO may approve both the fence-line monitoring and community air monitoring system elements of the Air Monitoring Plan, or may approve only the element that is determined to be adequate while disapproving the remainder. A refinery owner/operator shall implement the approved elements of an Air Monitoring Plan.

12-15-405 Emissions Inventory Guidelines: The APCO shall publish, and periodically update, emissions inventory guidelines for petroleum refineries that describe the emission factors/estimation methodologies that refinery owner/operators apply for each source category when producing emissions inventories required under this rule. Methods 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 will use these guidelines as criteria for review of refinery emissions inventory submittals.

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 community air monitoring systems and 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 and community air monitoring systems established under this rule.

12-15-407 Designation of Confidential Information: When submitting an Annual Emissions Inventory and Monthly Crude Slate Report, an Energy Utilization Analysis, air monitoring plan, or other documents or records required by this rule, the refinery 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. If a document is submitted that contains information designated confidential in accordance with this section, the owner/operator shall provide a justification for this designation and shall submit a separate copy of the document with the information designated confidential redacted.

12-15-408 Energy Utilization Analyses: A refinery owner/operator shall submit to the APCO no later than [180 days after adoption] an assessment of the refinery's fuel and energy consumption. This assessment must evaluate energy efficiency at processes or systems that cumulatively account for at least 95 percent of the facility's total greenhouse gas emissions, and must identify energy management practices and/or energy infrastructure that result in less-than-optimum energy management as compared to best industry practices. For energy management practices and/or energy infrastructure identified as less-than-optimum, the assessment must describe potential improvements in operation or equipment, whether planned or not, as well as, to the extent possible, an estimate of capital and operation costs or savings associated with each improvement.

12-15-409 Monthly Crude Slate Reports for Calendar Years 2012, 2013, 2014 and 2015: A refinery owner/operator, but not the owner/operator of a support facility as described in Section 12-15-212, shall obtain APCO approval of historical documentation of Monthly Crude Slate

Reports covering the calendar years 2012, 2013, 2014 and 2015 in an APCO-approved format on or before September 1, 2016. These reports shall include the following:

409.1 Identification of the calendar year that the Monthly Crude Slate Report covers.

409.2 Summaries of the petroleum refinery's crude and other pre-processed feedstock inputs for each calendar month, including:

2.1 Total volume (million barrels) processed by crude unit(s) and other pre-processed feedstocks imported from outside a petroleum refinery that are processed at other process unit(s), and

2.2 Averaged API gravity (degrees), and

2.3 Averaged sulfur content (percentage by weight), and

2.4 Averaged nitrogen content (parts per million by weight), and

2.5 Averaged vapor pressure to the extent such information is available, (psi), and

2.6 Averaged Total Reduced Sulfur to the extent such information is available, [H₂S + mercaptan content (parts per million by weight)], and

2.7 Averaged BTEX if such information is available, (benzene, toluene, ethylbenzene, and xylene) content (percentage by volume), and

2.8 Averaged total acid number to the extent such information is available, (milligrams of potassium hydroxide per gram), and

2.9 Averaged metals content for iron, nickel and vanadium to the extent such information is available, (parts per million by weight).

12-15-410 Requirement to Share Information with Refinery Owner/Operator: Any person who owns, operates, or exercises operational control over a support facility must provide the Refinery Owner/Operator with information sufficient to allow the Owner/Operator to comply with this rule, and must provide that information to the APCO upon request. A refinery Owner/Operator shall not be liable for errors or omissions that are solely the responsibility of a support facility.

12-15-500 MONITORING AND RECORDS

12-15-501 Community Air Monitoring System: Within two years of the approval of an air monitoring plan under Section 12-15-404, the refinery owner/operator will ensure that a community air monitoring system is installed, and is operated and maintained in accordance with the approved air monitoring plan. Community air monitoring system data shall also be reported as specified in the approved plan.

12-15-502 Fence-line Monitoring System: Within one year of the approval of an air monitoring plan under Section 12-15-404, the refinery owner/operator will ensure that a fence-line monitoring system is installed, and 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.

12-15-503 Recordkeeping: The refinery owner/operator shall maintain records of all monitoring information, source test results, material and fuel throughputs, and other information used to establish emissions inventories required under this rule. The refinery owner/operator shall also maintain records of the quantity and characteristics of crude oil that is processed through the crude unit(s), and other pre-processed feedstocks imported from outside a petroleum refinery that are processed at other process unit(s). Characteristics for crude oil and other pre-processed feedstocks shall include the properties listed in Section 12-15-401. Such records shall be maintained for a period of five years after the submittal of a required Annual Emissions Inventory and Monthly Crude Slate Report, and shall be made available to the APCO upon request.

12-15-600 MANUAL OF PROCEDURES

12-15-601 Emissions Inventory Procedures: Each emissions inventory required under this rule shall be prepared following the District's Emission Inventory Guidelines for Petroleum Refineries established under Section 12-15-405.

12-15-602 Air Monitoring Procedures: Each air monitoring plan required under this rule shall be prepared following the District's Air Monitoring Guidelines for Petroleum Refineries

established under Section 12-15-406.