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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: 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.

12-15-206 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) air releases from cargo carriers (e.g., ships and trains), excluding motor vehicles, during loading or unloading operations at a Petroleum Refinery.

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 or crude oil blends at the first stage of processing at a Petroleum Refinery (typically at a crude distillation unit), and of the volume and certain properties of non-crude oil feedstock or feedstock blends which have been imported from outside a Petroleum Refinery, at the point it is first introduced into any refinery processing equipment other than storage, product blending, loading or unloading. The crude oil 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. The non-crude oil feedstock summary shall consist of the total volume of non-crude oil feedstock / non-crude oil feedstock blends processed in the calendar month, and single average value for each of the properties of the total volume of non-crude oil feedstock / non-crude oil feedstock blends processed for the calendar month, as listed in Section 12-15-408, Table 1. Supporting information for each crude oil and each non-crude oil feedstock shall be available for audit upon request in order to verify the summary data required in Section 12-15-408, Table 1.

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., hydrodesulfurization, 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.

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.

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 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.

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 this rule, and shall provide written notification to the 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 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.

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.

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 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. 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 air monitoring plan.

- 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.
 - 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 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.
 - 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.
- 12-15-405 Emissions Inventory Guidelines:** The APCO shall publish, and periodically update, emissions inventory guidelines describing best practices to be used when producing emissions inventories required under this rule. Emission factors and 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 will use these guidelines as criteria for review of Petroleum Refinery and Support Facility 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 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.
- 12-15-407 Designation of Confidential Information:** When submitting any documents or records required by this rule, 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. 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 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 this information is available. Detailed supporting data shall be made available upon APCO request for verification of the monthly summaries, effective April 20, 2017.

408.2 Ongoing Monthly Crude Slate Reports: Beginning with January 2017, summarized information as described in Table 1. Detailed supporting data shall be made available upon APCO request for verification of the monthly summaries, no later than 30 days after the end of each calendar month.

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 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 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.</p>
<p>Sulfur content (weight percent)</p> <p>a. Average sulfur content of total volume of crude oils / crude oil blends 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.</p>
<p>Vapor pressure (psia)</p> <p>a. Average vapor pressure of total volume of crude oils / crude oil blends fed to all crude units.</p> <p>b. Average vapor pressure of total volume of non-crude oil feedstocks / feedstock blends fed to all other process units.</p>
<p>BTEX (benzene, toluene, ethylbenzene, and xylene content in volume percent)</p> <p>a. Average BTEX of total volume of crude oils / crude oil blends fed to all crude units.</p> <p>b. Average BTEX of total volume of non-crude oil feedstocks / feedstock blends fed to all other process 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 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.</p>

12-15-500 MONITORING AND RECORDS

12-15-501 Fence-line Monitoring System: Within one year of the approval of an air monitoring plan under Section 12-15-404, the Petroleum 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.

12-15-502 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.