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(Adopted May XX, 2017)

12-16-100 GENERAL

12-16-101 Description: The purpose of this rule is to limit GHG, PM_{10}, $PM_{2.5}$, NO_x and SO_2 emissions from petroleum refineries and associated support facilities.

12-16-102 Exemption, Small Refineries: This rule shall not apply to any refinery that is limited by an Air District Permit to Operate to a total crude oil throughput or total crude oil processing capacity of 5,000 barrels per day or less.

12-16-200 DEFINITIONS

12-16-201 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.

12-16-202 Ambient Air: The portion of the atmosphere external to buildings to which the general public has access.

12-16-203 Annual Emissions Inventory: An emissions inventory at a Petroleum Refinery covering a calendar year period.

12-16-204 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 (NOx), particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}), particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$), precursor organic compounds (POC), and sulfur dioxide (SO_2).

12-16-205 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.

12-16-206 Emissions Inventory: As defined in Rule 12-15-206.

12-16-207 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.

12-16-208 Permit to Operate: A written authorization obtained per BAAQMD Regulation 2, Rule 1, Section 301.

12-16-209 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).

12-16-210 Source: As defined in BAAQMD Regulation 2, Rule 1, Section 221.

12-16-300 STANDARDS

12-16-301 Greenhouse Gas Emissions Limits: Effective January 1, 2018, the owner/operator of any petroleum refinery or listed related facility shall not emit greenhouse gas emissions that exceed the emissions limits shown in Table 12-16-301.

Table 12-16-301: GHG Emission Limits

Facility	**2011–2015 Baseline[1]** (metric tons/year)	**Seven Percent Operating Variation** (metric tons/year)	**Emission Limit** (metric tons/year)
Chevron Refinery A-0010	4.46 M	312 K	4.77 M
Shell Refinery A-0011	4.26 M	298 K	4.56 M
Phillips 66 Refinery A-0016	1.50 M	105 K	1.61 M
Tesoro Refinery B-2758/2759	2.44 M	171 K	2.61 M
Valero Refinery, B-2626 & Asphalt Plant, B-3193	2.94 M	206 K	3.15 M
Martinez Cogen LP A-1820	421 K	29.5 K	450 K
Air Liquide H2 Plant B7419	885 K	61.9 K	947 K
Air Products H2 Plant B-0295	271 K	19.0 K	290 K

M = Millions, K = Thousands

[1]Maximum annual emissions from 2011 – 2015 baseline years, California Air Resources Board Emissions Inventory: Mandatory GHG Reporting - Reported Emissions, ARB Calculated Covered Emissions (metric tons CO2e) https://www.arb.ca.gov/cc/reporting/ghg-rep/reported-data/ghg-reports.htm

12-16-302 Particulate Matter (PM_{10}) Emissions Limits: Effective January 1, 2018, the owner/operator of any petroleum refinery or listed related facility shall not emit particulate matter (PM_{10}) emissions that exceed the emissions limits shown in Table 12-16-302.

Table 12-16-302: Particulate Matter (PM_{10}) Emission Limits

Facility	**2010–2014 Baseline[2]** (tons/year)	**Seven Percent Operating Variation** (tons/year)	**Emission Limit** (tons/year)
Chevron Refinery A-0010	491	34.4	525
Shell Refinery A-0011	550	38.5	589
Phillips 66 Refinery A-0016	77.7	5.44	83.1
Tesoro Refinery B-2758/2759	90.7	6.35	97.0
Valero Refinery, B-2626 & Asphalt Plant, B-3193	125	8.75	134
Martinez Cogen LP A-1820	17.6	1.23	18.8
Air Liquide H2 Plant	16.1	1.13	17.2

Facility	2010–2014 Baseline[2] (tons/year)	Seven Percent Operating Variation (tons/year)	Emission Limit (tons/year)
B7419			
Air Products H2 Plant B-0295	9.71	0.68	10.4

[2]Maximum annual emissions from 2010 – 2014 baseline years, Annual Emissions Inventories (reported to ARB via CEIDARS), adjusted to exclude Flare and Cooling Water Tower emissions.

12-16-303 Particulate Matter ($PM_{2.5}$) Emissions Limits: Effective January 1, 2018, the owner/operator of any petroleum refinery or listed related facility shall not emit particulate matter ($PM_{2.5}$) emissions that exceed the emissions limits shown in Table 12-16-303.

Table 12-16-303: Particulate Matter ($PM_{2.5}$) Emission Limits

Facility	2010–2014 Baseline[3] (tons/year)	Seven Percent Operating Variation (tons/year)	Emission Limit (tons/year)
Chevron Refinery A-0010	469	32.8	502
Shell Refinery A-0011	463	32.4	495
Phillips 66 Refinery A-0016	70.1	4.91	75.0
Tesoro Refinery B-2758/2759	72.6	5.08	77.7
Valero Refinery, B-2626 & Asphalt Plant, B-3193	124	8.72	133
Martinez Cogen LP A-1820	17.6	1.23	18.8
Air Liquide H2 Plant B7419	15.0	1.06	16.1
Air Products H2 Plant B-0295	9.06	0.63	9.69

[3]Maximum annual emissions from 2010 – 2014 baseline years, Annual Emissions Inventories (reported to ARB via CEIDARS), adjusted to exclude Flare and Cooling Water Tower emissions.

12-16-304 Nitrogen Oxide (NO_x) Emissions Limits: Effective January 1, 2018, the owner/operator of any petroleum refinery or listed related facility shall not emit nitrogen oxide (NOx) emissions that exceed the emissions limits shown in Table 12-16-304.

Table 12-16-304: Nitrogen Oxide (NO_x) Emission Limits

Facility	2010–2014 Baseline[4] (tons/year)	Seven Percent Operating Variation (tons/year)	Emission Limit (tons/year)
Chevron Refinery A-0010	907	63.5	970
Shell Refinery A-0011	998	69.9	1.07 K
Phillips 66 Refinery A-0016	270	18.9	289
Tesoro Refinery	949	66.4	1.02 K

Facility	**2010–2014 Baseline[4]** (tons/year)	**Seven Percent Operating Variation** (tons/year)	**Emission Limit** (tons/year)
B-2758/2759			
Valero Refinery, B-2626 & Asphalt Plant, B-3193	1.20 K	84.0	1.28 K
Martinez Cogen LP A-1820	111	7.77	119
Air Liquide H2 Plant B7419	12.7	0.90	13.6
Air Products H2 Plant B-0295	8.25	0.58	8.83

K = Thousands

[4]Maximum annual emissions from 2010 – 2014 baseline years, Annual Emissions Inventories (reported to ARB via CEIDARS), adjusted to exclude Flare and Cooling Water Tower emissions.

12-16-305 Sulfur Dioxide (SO_2) Emissions Limits: Effective January 1, 2018, the owner/operator of any petroleum refinery or listed related facility shall not emit sulfur dioxide (SO_2) emissions that exceed the emissions limits shown in Table 12-16-305.

Table 12-16-305: Sulfur Dioxide (SO_2) Emission Limits

Facility	**2010–2014 Baseline[5]** (tons/year)	**Seven Percent Operating Variation** (tons/year)	**Emission Limit** (tons/year)
Chevron Refinery A-0010	368	25.8	394
Shell Refinery A-0011	1.36 K	95.2	1.46 K
Phillips 66 Refinery A-0016	365	25.6	391
Tesoro Refinery B-2758/2759	602	42.1	644
Valero Refinery, B-2626 & Asphalt Plant, B-3193	65.1	4.56	69.7
Martinez Cogen LP A-1820	2.15	0.15	2.30
Air Liquide H2 Plant B7419	2.35	0.16	2.51
Air Products H2 Plant B-0295	2.70	0.19	2.89

K = Thousands

[5]Maximum annual emissions from 2010 – 2014 baseline years, Annual Emissions Inventories (reported to ARB via CEIDARS), adjusted to exclude Flare and Cooling Water Tower emissions.

12-16-400 ADMINISTRATIVE REQUIREMENTS

12-15-500 MONITORING AND RECORDS

12-16-501 Determination of Compliance: Compliance is determined by comparing the Annual Emissions Inventory submitted by each petroleum refinery and support facility, reviewed and approved by the APCO, to the total emissions limits established in Section 12-16-301 - 305.

501.1 Annual Emissions Inventory: The Annual Emissions Inventory shall be submitted to the Air District by June 30 of each year as required by Regulation 12, Rule 15, Section 401.

501.2 Adjusted Annual Emissions Inventory: The District will adjust the Annual Emissions Inventory to exclude Flare and Cooling Water Tower emissions. The adjusted Annual Emissions Inventory establishes the actual emissions for each calendar year, and will be compared to each facility's emissions limits.

501.3 Emissions Limits: Emissions limits are established in Sections 12-16-301 – 305.

501.4 Compliance Determination: Beginning in 2019 the District will compare the previous year's annual emission inventory for each pollutant from each facility with the emission limit for each pollutant from each facility. If the emission limit is greater than the annual emission inventory for each of the five limited pollutants (GHG, PM_{10}, $PM_{2.5}$, NO_x and SO_2) the facility is in compliance.

501.5 Emission Limit Exceedance: If the annual emission inventory is greater than the emission limit for any of the five limited pollutants (GHG, PM_{10}, $PM_{2.5}$, NO_x and SO_2) the facility is not in compliance. Each exceedance of an emission limit shall be considered a violation for each day of the calendar year for the relevant emission inventory.

12-16-502 Records: The Annual Emissions Inventory Report shall be submitted to the District by June 30 of each year, as required by Regulation 12, Rule 15, Section 401.

12-15-600 MANUAL OF PROCEDURES

12-16-601 Determination of Compliance Procedure: Manual of Procedures (MOP) Volume 1, Enforcement Procedures; Part XX, Assessment of Refinery and Support Facility Emissions Compliance establishes the procedure for excluding Flare and Cooling Water Tower emissions from the Annual Emissions Inventories, and comparing the Annual Emissions Inventories to the Emission Limits for each Petroleum Refinery and Support Facility.