# PROPOSED RULE 1109.1. EMISSIONS OF OXIDES OF NITROGEN FROM PETROLEUM REFINERIES AND RELATED OPERATIONS

(a) Purpose

The purpose of this rule is to reduce emissions of Oxides Of Nitrogen (NOx), while not increasing carbon monoxide (CO) emissions, from Units at Petroleum Refineries and Facilities With Related Operations To Petroleum Refineries.

(b) Applicability

The provisions of this rule shall apply to an owner or operator of Facilities with Units at Petroleum Refineries and Facilities With Related Operations To Petroleum Refineries.

(c) Definitions

(1) ALTERNATIVE BARCT NOx LIMIT means a Unit specific NOx Concentration Limit that is selected by an owner or operator of a Facility for a B-Plan or B-Cap for Phase I, Phase II, or if applicable, Phase III of an I-Plan in Table 6.

(2) ASPHALT PLANT means a Facility that processes crude oil into asphalt.

(3) BARCT B-CAP ANNUAL EMISSIONS means the total Facility NOx mass emissions remaining in Phase I, Phase II, or if applicable, Phase III of an I-Plan in Table 6 based on the Alternative BARCT NOx Limits, decommissioned Units, and other emission reduction strategies to meet the respective Phase I, Phase II, or if applicable, Phase III Facility BARCT Emission Target in an I-Plan and are calculated pursuant to Attachment B of this rule.

(4) BARCT EQUIVALENT COMPLIANCE PLAN (B-PLAN) means a compliance plan that allows an owner or operator of a Facility to select Alternative BARCT NOx limits for all Units subject to the B-Plan that will achieve emission reductions that are equivalent, in the aggregate, to the mass emission reductions that would be achieved based on the Table 1 or Table 2 NOx Concentration Limits.

(5) BARCT EQUIVALENT MASS CAP PLAN (B-CAP) means a compliance plan that establishes a Facility mass emission cap for all units subject to the

B-Cap that, in the aggregate, is less than the Final Phase Facility BARCT Emission Target.

(6) BARCT EQUIVALENT MASS EMISSIONS means the total Facility NOx mass emissions remaining in Phase I, Phase II, or if applicable, Phase III of an I-Plan option in Table 6 based on the Alternative BARCT NOx Limits in an approved B-Plan that are designed to meet the respective Facility BARCT Emission Targets in an I-Plan and are calculated pursuant to Attachment B of this rule.

(7) BASELINE FACILITY EMISSIONS means the sum of all the Baseline Unit Emissions at a Facility as calculated according to Attachment B of this rule.

(8) BASELINE UNIT EMISSIONS means emissions from a Unit as reported in the 2017 NOx Annual Emissions Report, or another representative year, as approved by the Executive Officer.

(9) BIOFUEL PLANT means a Facility that produces fuel by processing feedstocks including vegetable oil, animal fats, and tallow.

(10) BOILER means any Unit that is fired with gaseous fuel and used to produce steam. For the purpose of this rule, boiler does not include CO Boilers.

(11) CO BOILER means a Unit that is fired with gaseous fuel with an integral waste heat recovery system used to oxidize CO-rich waste gases generated by the FCCU.

(12) CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) is as defined by Rule 218 – Continuous Emission Monitoring.

(13) CORRESPONDING CO CONCENTRATION LIMIT(S) means the CO concentration limit, that corresponds to the referenced NOx concentration limit, at the applicable percent $O_2$ correction and averaging period specified in either Table 1, Table 2, Table 3, or Table 6.

(14) DUCT BURNER means a device in the heat recovery steam generator of a Gas Turbine that combusts fuel and adds heat energy to the Gas Turbine exhaust.

(15) FACILITIES WITH RELATED OPERATIONS TO PETROLEUM REFINERIES includes Asphalt Plants, Biofuel Plants, Hydrogen Production Plants, Petroleum Coke Calcining Facilities, Sulfuric Acid Plants, and Sulfur Recovery Plants.

(16) FACILITIES WITH THE SAME OWNERSHIP means Facilities and their subsidiaries, Facilities that share the same board of directors, or Facilities that share the same parent corporation.

(17) FACILITY means, for the purpose of this rule, any Unit or group of Units which are located on one or more contiguous properties, in actual physical contact or separated solely by a public roadway or other public right-of-way, and operate under one South Coast AQMD Facility ID or Facilities With The Same Ownership.

(18) FACILITY BARCT EMISSION TARGET means the total Facility NOx mass emissions that must be achieved in an approved B-Plan or an approved B-Cap based on the percent reduction targets in Phase I, Phase II, or if applicable, Phase III of an I-Plan in Table 7 as calculated pursuant to Attachment B of this rule.

(19) FINAL DETERMINATION NOTIFICATION means the notification issued by the Executive Officer to a RECLAIM Facility designating that the Facility is no longer in the NOx RECLAIM program.

(20) FINAL PHASE FACILITY BARCT EMISSION TARGET means the total mass emissions remaining per Facility calculated based on the applicable concentration limits in Table 1 or Table 2 and the Baseline Unit Emissions as calculated pursuant to Attachment B of this rule.

(21) FLARE means, for the purpose of this rule, a combustion device that oxidizes combustible gases or vapors from tank farms or liquid unloading, where the combustible gases or vapors being destroyed are routed directly into the burner without energy recovery, and that is not subject to Rule 1118 – Control of Emissions from Refinery Flares.

(22) FLUIDIZED CATALYTIC CRACKING UNIT (FCCU) means a Unit in which petroleum intermediate feedstock is charged and fractured into smaller molecules in the presence of a catalyst; or reacts with a contact material to improve feedstock quality for additional processing; and the catalyst or contact material is regenerated by burning off coke and other deposits. The FCCU includes, but is not limited to, the riser, reactor, regenerator, air blowers, spent catalyst, and all equipment for controlling air pollutant emissions and recovering heat including a CO Boiler.

(23) FORMER RECLAIM FACILITY means a Facility, including its successors, that was in the NOx Regional Clean Air Incentives Market as of January 5, 2018, as established in Regulation XX, that has received a

Final Determination Notification, and is no longer in the NOx RECLAIM program.

(24) FUNCTIONALLY SIMILAR means, for the purpose of this rule, a Unit that will perform the same purpose as a Unit that was decommissioned in an approved B-Cap.

(25) GAS TURBINE means an internal-combustion engine in which the expanding combustion gases drive a turbine which then drives a generator to produce electricity. Gas Turbines can be equipped with a cogeneration Gas Turbine that recovers heat from the Gas Turbine exhaust and can include a Duct Burner.

(26) HEAT INPUT means the heat of combustion released by burning a fuel source, using the Higher Heating Value of the fuel. This does not include the enthalpy of incoming combustion air.

(27) HIGHER HEATING VALUE (HHV) means the total heat liberated per mass of fuel combusted expressed as British thermal units (Btu) per pound or cubic feet when fuel and dry air at Standard Conditions undergo complete combustion and all resulting products are brought to their standard states at Standard Conditions.

(28) HYDROGEN PRODUCTION PLANT means a Facility that produces hydrogen by steam hydrocarbon reforming, partial oxidation of hydrocarbons, or other processes which primarily supplies hydrogen for Petroleum Refineries and Facilities With Related Operations To Petroleum Refineries.

(29) IMPLEMENTATION COMPLIANCE PLAN (I-PLAN) means an implementation plan for an owner or operator of a Facility with six or more Units subject to this rule that includes an implementation schedule and emission reduction targets.

(30) I-PLAN PERCENT REDUCTION TARGET means the percent reduction target for each phase of an I-Plan as specified in Table 7.

(31) NATURAL GAS means a mixture of gaseous hydrocarbons, with at least 80 percent methane (by volume), and of pipeline quality, such as the gas sold or distributed by any utility company regulated by the California Public Utilities Commission.

(32) NEW UNIT means, for the purpose of this rule, any Unit that is subject to this rule that meets the applicability of subdivision (b) where the South

Coast AQMD Permit to Construct is issued on or after [*DATE OF ADOPTION*].

(33) NOx CONCENTRATION LIMIT(S) means the NOx concentration limit at the applicable percent $O_2$ correction and averaging period specified in either Table 1, Table 2, Table 3, or Table 6.

(34) OXIDES OF NITROGEN (NOx) EMISSIONS means the sum of nitric oxide and nitrogen dioxide emitted in the flue gas, calculated, and expressed as nitrogen dioxide.

(35) PARTS PER MILLION BY VOLUME (ppmv) means, for the purpose of this rule, Parts Per Million By Volume of a pollutant corrected to a dry basis at Standard Conditions.

(36) PETROLEUM COKE CALCINER means a Unit used to drive off contaminants from green petroleum coke by bringing the coke into contact with heated gas for the purpose of thermal processing. The Petroleum Coke Calciner includes, but is not limited to, a kiln, which is a refractory lined cylindrical device that rotates on its own axis, and a pyroscrubber, which combusts large carbon particles in a stream of waste gas.

(37) PETROLEUM COKE CALCINING FACILITY means a Unit within a Petroleum Refinery, or a separate Facility, that operates a Petroleum Coke Calciner.

(38) PETROLEUM REFINERY means a Facility identified by the North American Industry Classification System Code 324110, Petroleum Refineries.

(39) PROCESS HEATER means any Unit fired with gaseous and/or liquid fuels which transfers heat from combusted gases to water or process streams.

(40) RATED HEAT INPUT CAPACITY means the maximum Heat Input capacity, which is the total heat of combustion released by burning a fuel source, as specified by the South Coast AQMD permit.

(41) REPRESENTATIVE NOx CONCENTRATION means the most representative NOx emissions in the exhaust of a Unit, expressed as ppmv based on the applicable oxygen correction in Table 1, as approved by the Executive Officer and measured by either a certified CEMS if the Unit operates with a certified CEMS or the most recent approved source test for Units not operating a certified CEMS. The Representative NOx Concentration for Units that do not have CEMS or source test emission data

will be based on the South Coast AQMD Annual Emission Report default emission factor for those Units.

(42) STANDARD CONDITIONS for a Former RECLAIM Facility is as defined by Rule 102 – Definition of Terms.

(43) STEAM METHANE REFORMER (SMR) HEATER means any Unit that is fired with gaseous fuels and transfers heat from the combusted fuel to process tubes that contain catalyst, which converts light hydrocarbons combined with steam to hydrogen.

(44) SULFURIC ACID FURNACE means a Unit fueled with gaseous fuels and/or hydrogen sulfide gas used to convert elemental sulfur and/or decompose spent sulfuric acid, into sulfur dioxide ($SO_2$) gas.

(45) SULFURIC ACID PLANT means a Unit within a Petroleum Refinery, or a separate Facility, engaged in the production of commercial grades of sulfuric acid, or regeneration of spent sulfuric acid into commercial grades of sulfuric acid.

(46) SULFUR RECOVERY PLANT means a Unit within a Petroleum Refinery, or a separate Facility, that recovers elemental sulfur or sulfur compounds from sour or acid gases and/or sour water generated by Petroleum Refineries.

(47) SULFUR RECOVERY UNITS/TAIL GAS (SRU/TG) INCINERATORS means the thermal or catalytic oxidizer where the residual hydrogen sulfide in the gas exiting the Sulfur Recovery Plant (tail gas) is oxidized to $SO_2$ before being emitted to the atmosphere.

(48) UNIT means, for the purpose of this rule, any Boilers, Flares, FCCUs, Gas Turbines, Petroleum Coke Calciners, Process Heaters, SMR Heaters, Sulfuric Acid Furnaces, SRU/TG Incinerators, or Vapor Incinerators requiring a South Coast AQMD permit and not required to comply with a NOx concentration limit in another South Coast AQMD Regulation XI rule.

(49) UNIT BARCT B-CAP ANNUAL EMISSIONS means the mass to meet Phase I, Phase II, or if applicable, Phase III of an I-Plan in Table 6 based on the Alternative BARCT NOx Limits, decommissioned Units, and other emission reduction strategies to meet the respective Phase I, Phase II, or if applicable, Phase III Facility BARCT Emission Target in an I-Plan and are calculated pursuant to Attachment B of this rule.

(50) UNIT REDUCTION means the potential NOx emission reduction for a Unit if the NOx emissions for that Unit were reduced from the Representative

NOx Concentration to the applicable Table 1 NOx Concentration Limit based on the Baseline Unit Emissions calculated pursuant to Attachment B of this rule.

(51) UNITS WITH COMBINED STACKS means two or more Units where the flue gas from the Units are combined in one or more common stack(s).

(52) VAPOR INCINERATOR means a thermal oxidizer, afterburner, or other device for burning and destroying air toxics, volatile organic compounds, or other combustible vapors in gas or aerosol form in gas streams.

(d) Concentration Limits

(1) An owner or operator of a Facility shall not operate a Unit that exceeds the applicable NOx Concentration Limit and Corresponding CO Concentration Limit specified in Table 1, pursuant to the compliance schedule in subdivision (f).

**TABLE 1: NOx AND CO CONCENTRATION LIMITS**

| Unit | NOx (ppmv) | CO (ppmv) | $O_2$ Correction (%) | Rolling Averaging Time[1] |
|---|---|---|---|---|
| Boilers <40 MMBtu/hour | Pursuant to paragraph (d)(2) | 400 | 3 | 24-hour |
| Boilers ≥40 MMBtu/hour | 5 | 400 | 3 | 24-hour |
| FCCU | 2 | 500 | 3 | 365-day |
| | 5 | | | 7-day |
| Flares | 20 | 400 | 3 | 2-hour |
| Gas Turbines fueled with Natural Gas | 2 | 130 | 15 | 24-hour |
| Gas Turbines fueled with Gaseous Fuel other than Natural Gas | 3 | 130 | 15 | 24-hour |
| Petroleum Coke Calciner | 5 | 2,000 | 3 | 365-day |
| | 10 | | | 7-day |
| Process Heaters <40 MMBtu/hour | Pursuant to paragraph (d)(2) | 400 | 3 | 24-hour |
| Process Heaters ≥40 MMBtu/hour | 5 | 400 | 3 | 24-hour |
| SMR Heaters | 5 | 400 | 3 | 24-hour |
| SMR Heaters with Gas Turbine | 5 | 130 | 15 | 24-hour |
| SRU/TG Incinerators | 30 | 400 | 3 | 24-hour |
| Sulfuric Acid Furnaces | 30 | 400 | 3 | 365-day |
| Vapor Incinerators | 30 | 400 | 3 | 24-hour |

[1] Averaging times apply to Units operating a certified CEMS and shall be calculated pursuant to Attachment A of this rule; emissions for Units without CEMS shall be demonstrated pursuant to paragraph (l)(1).

(2) Boilers and Process Heaters with Rated Heat Input Capacity Less Than 40 MMBtu/hour

An owner or operator of a Facility shall not operate a Boiler or Process Heater with a Rated Heat Input Capacity less than 40 MMBtu/hour that exceeds:

(A) A NOx concentration limit of 40 ppmv and the Corresponding CO Concentration Limit pursuant to the Table 5 Compliance Schedule for Boilers and Process Heaters;

(B) A NOx concentration limit of 5 ppmv for Boilers and the Corresponding CO Concentration Limits, pursuant to the Table 5 Compliance Schedule for Boilers and Process Heaters; and

(C) A NOx concentration limit of 9 ppmv for Process Heaters and the Corresponding CO Concentration Limit, pursuant to the Table 5 Compliance Schedule for Boilers and Process Heaters.

(3) Conditional NOx Concentration Limits

(A) An owner or operator of a Facility may elect to meet the Table 2 Conditional NOx Concentration Limit and Corresponding CO Concentration Limit for a Unit in lieu of the applicable Table 1 NOx Concentration Limit and Corresponding CO Concentration Limit provided:

(i) The Executive Officer has not issued a Permit to Construct on or after December 4, 2015 for the installation of post-combustion air pollution control equipment for the Unit;

(ii) For a Process Heater with a Rated Heat Input Capacity of greater than or equal to 40 MMBtu/hour and less than or equal to 110 MMBtu/hour, the Unit Reduction calculated pursuant to Attachment B of this rule is less than 10 tons per year based on the applicable Table 1 NOx Concentration Limit;

(iii) For a Boiler or Process Heater with a Rated Heat Input Capacity greater than 110 MMBtu/hour, the Unit Reduction calculated pursuant to Attachment B of this rule is less than 20 tons per year based on the applicable Table 1 NOx Concentration Limit;

(iv) The South Coast AQMD Permit to Construct or South Coast AQMD Permit to Operate for the Unit does not have a condition that limits the NOx concentration to a level at or below the applicable Table 1 NOx Concentration Limit;

(v) The Representative NOx Concentration of the Unit is not at or below the applicable Table 1 NOx Concentration Limit; and

(vi) The Unit is not identified as being decommissioned in an approved B-Cap pursuant to subparagraph (g)(2)(F).

(B) Notwithstanding the requirements pursuant to subparagraph (d)(3)(A) and the permit submittal deadline pursuant to subparagraph(f)(3)(A), an owner or operator of a Facility may elect to use the applicable Table 2 Conditional NOx Concentration Limits to establish the BARCT Equivalent Mass Emission Target in lieu of the Table 1 NOx Concentration Limits based on the schedule in an approved I-Plan if:

(i) The owner or operator is submitting a B-Plan or a B-Cap, and the Unit is listed in Table D-1 in Attachment D of this rule; or

(ii) The owner or operator is submitting a B-Cap, elects to comply with I-Plan Option 4, and the Unit is listed in Table D-2 in Attachment D of this rule.

**TABLE 2: CONDITIONAL NOx AND CO CONCENTRATION LIMITS**

| Unit | NOx (ppmv) | CO (ppmv) | $O_2$ Correction (%) | Rolling Averaging Time[1] |
|---|---|---|---|---|
| Boilers >110 MMBtu/hour | 7.5 | 400 | 3 | 24-hour |
| FCCUs | 8 | 500 | 3 | 365-day |
| | 16 | | | 7-day |
| Gas Turbines fueled with Natural Gas | 2.5 | 130 | 15 | 24-hour |
| Process Heaters ≥40 – ≤110 MMBtu/hour | 18 | 400 | 3 | 24-hour |
| Process Heaters >110 MMBtu/hour | 22 | 400 | 3 | 24-hour |
| SMR Heaters | 7.5 | 400 | 3 | 24-hour |
| Vapor Incinerators | 40 | 400 | 3 | 24-hour |

[1] Averaging times apply to Units operating a certified CEMS and shall be calculated pursuant to Attachment A of this rule; emissions for Units without CEMS shall be demonstrated pursuant to paragraph (l)(1).

(4) Gas Turbines

Notwithstanding the Table 1 NOx Concentration Limit, an owner or operator of a Facility shall not operate a Gas Turbine that exceeds a NOx Concentration Limit of 5 ppmv at 15 percent $O_2$ correction based on a 24-hour rolling average during Natural Gas curtailment periods, where there is a shortage in the supply of pipeline Natural Gas due solely to supply limitations or restrictions in distribution pipelines by the utility supplying the gas, and not due to the cost of Natural Gas.

(5) An owner or operator of a Facility with Units with Combined Stacks shall be subject to the most stringent applicable Table 1 or Table 2 NOx Concentration Limit and Corresponding CO Emission Limit.

(6) An owner or operator of a Facility with a Unit with a CO concentration limit in a South Coast AQMD Permit to Operate that was established before [*DATE OF ADOPTION*], shall meet the CO concentration limit in the South

Coast AQMD Permit to Operate in lieu of the applicable Table 1 or Table 2 Corresponding CO Concentration Limit.

(e) Interim Concentration Limits

(1) An owner or operator of a Former RECLAIM Facility complying with the concentration limits in Table 1 and Table 2 or that elects to comply with an approved B-Plan shall not operate a Unit that exceeds the applicable Table 3 Interim NOx Concentration Limit and Corresponding CO Concentration Limit until that Unit is required to meet another NOx Concentration Limit and Corresponding CO Concentration Limit pursuant to the compliance schedule in subdivision (f) or an approved I-Plan.

**TABLE 3: INTERIM NOx AND CO CONCENTRATION LIMITS**

| Unit | NOx (ppmv) | CO (ppmv) | $O_2$ Correction (%) | Rolling Averaging Time[1] |
|---|---|---|---|---|
| Boilers and Process Heaters <6 MMBtu/hour[2] | 60 | 400 | 3 | 365-day |
| Boilers and Process Heaters ≥6 MMBtu/hour and <40 MMBtu/hour[2] | 40 | 400 | 3 | 365-day |
| Boilers and Process Heaters ≥40 MMBtu/hour | Pursuant to paragraph (e)(2) | 400 | 3 | 365-day |
| Flares | 105 | 400 | 3 | 365-day |
| FCCUs | 40 | 500 | 3 | 365-day |
| Gas Turbines fueled with Natural Gas or Other Gaseous Fuel | 20 | 130 | 15 | 365-day |
| Petroleum Coke Calciners | 85 | 2,000 | 3 | 365-day |
| SMR Heaters | 20[3] | 400 | 3 | 365-day |
| | 60[4] | | | 365-day |
| SMR Heaters with Gas Turbine | 5 | 130 | 15 | 365-day |
| SRU/TG Incinerators | 100 | 400 | 3 | 365-day |
| Sulfuric Acid Furnaces | 30 | 400 | 3 | 365-day |
| Vapor Incinerators | 105 | 400 | 3 | 365-day |

[1] Averaging times are applicable to Units with a CEMS and shall be calculated pursuant to Attachment A of this rule; emissions for Units without CEMS shall be demonstrated pursuant to paragraph (l)(1).

[2] Boilers and Process Heaters with a Rated Heat Input Capacity <40 MMBtu/hour that operate with a certified CEMS may comply with the NOx concentration limit pursuant to paragraph (e)(2) in lieu of the Table 4 Interim NOx Concentration Limit.

[3] SMR Heaters equipped with post-combustion air pollution control equipment that was installed before [*DATE OF ADOPTION*].

[4] SMR Heaters not equipped with post-combustion air pollution control equipment as of [*DATE OF ADOPTION*].

(2) Interim NOx Emission Rates for Boilers and Process Heaters Operating with a Certified CEMS

An owner or operator of a Former RECLAIM Facility complying with the concentration limits in Table 1 and Table 2 or that elects to comply with an approved B-Plan shall:

(A) Not exceed the applicable Table 4 Interim NOx Emission Rate, calculated pursuant to Attachment A Section (A-2) of this rule for:

(i) All Boilers and Process Heaters with Rated Heat Input Capacity of greater than or equal to 40 MMBtu/hour; and

(ii) Boilers and Process Heaters with Rated Heat Input Capacity of less than 40 MMBtu/hour that operate with a NOx CEMS if the owner or operator elects to comply with the Table 5 Interim NOx Emission Rate in lieu of the Table 4 Interim NOx Concentration Limit.

(B) Demonstrate compliance with the Table 4 Interim NOx Emission Rate until all Boilers and Process Heaters subject to subparagraph (e)(2)(A) meet the applicable NOx concentration limits in Table 1, Table 2, or an approved B-Plan.

**TABLE 4: INTERIM NOx EMISSION RATES FOR BOILERS AND PROCESS HEATERS OPERATING WITH A CERTIFIED CEMS**

| Units | Facility NOx Emission Rate (pounds/million Btu) | Rolling Averaging Time |
|---|---|---|
| Boilers and Process Heaters: ≥40 MMBtu/Hour and <40 MMBtu/hour Operating with a Certified CEMS | 0.03 | 365-day |

(3) An owner or operator of a Facility that elects to comply with an approved B-Cap shall not operate any Unit included in the approved B-Cap unless the NOx emissions for all Units in the B-Cap are in aggregate below either:

(A) The Baseline Facility Emission if the Facility is complying with I-Plan Option 3;

(B) The Baseline Facility Emissions if the Facility is complying with I-Plan Option 4 and receives a Final Determination Notification on or before January 1, 2024; or

(C) The Phase I Facility BARCT Emission Target if the Facility is complying with I-Plan Option 4 and receives a Final Determination Notification after January 1, 2024 and on or before July 1, 2029.

(f) Compliance Schedule

(1) An owner or operator of a Facility with a Unit that is required to meet the Table 1 NOx Concentration Limit and Corresponding CO Concentration Limit, with the exception of Boilers and Process Heaters with a Rated Heat Input Capacity of less than 40 MMBtu/hour subject to the compliance schedules pursuant to paragraphs (f)(2) or (f)(3), shall:

(A) On or before July 1, 2023, submit a complete permit application to apply for a permit condition that limits the NOx and CO emissions to a level not to exceed the applicable Table 1 NOx Concentration Limit and Corresponding CO Concentration Limit, unless the owner or operator of a Facility has a South Coast AQMD Permit to Construct or a South Coast AQMD Permit to Operate with a condition that limits the NOx and CO emissions at or below the applicable Table 1 NOx Concentration Limit and Corresponding CO Concentration Limit; and

(B) Not operate a Unit that exceeds the Table 1 NOx Concentration Limit and Corresponding CO Emission Limit pursuant to subparagraph (f)(1)(A) on or after:

(i) 36 months from the date the South Coast AQMD issues a Permit to Construct or Permit to Operate; or

(ii) The date the South Coast AQMD issues a Permit to Construct or Permit to Operate if a complete permit application was not required pursuant to subparagraph (f)(1)(A).

(2) An owner or operator of a Facility with a Boiler or Process Heater with a Rated Heat Input Capacity less than 40 MMBtu/hour that is required to meet the NOx and CO concentration limits pursuant to paragraph (d)(2) shall:

(A) Not operate a Boiler or Process Heater that exceeds the NOx and CO concentration limits in paragraphs (d)(2) pursuant to the Table 5

Compliance Schedule for Boilers and Process Heaters unless the Boiler or Process Heater is included in an approved I-Plan; and

(B) Submit a complete permit application to apply for a permit condition that limits the NOx and CO emissions to a level not to exceed the NOx and CO concentration limits pursuant to subparagraph (d)(2)(B) for a Boiler and subparagraph (d)(2)(C) for a Process Heater no later than six months after an owner or operator of a Facility cumulatively replaces either 50 percent or more of the burners in a Boiler or Process Heater, or replaces burners that represent 50 percent or more of the Heat Input in a Boiler or Process Heater, where the cumulative replacement begins on July 1, 2022 for a Boiler and [*FIVE YEARS AFTER DATE OF ADOPTION*] for a Process Heater.

**TABLE 5: COMPLIANCE SCHEDULE FOR BOILERS AND PROCESS HEATERS <40 MMBTU/HOUR**

| Unit | NOx Concentration Limit (ppmv) | Permit Application Submittal Date[1] | Compliance Date[1] |
|---|---|---|---|
| Boilers <40 MMBtu/ hour | 40 ppmv pursuant to subparagraph (d)(2)(A) | On or before July 1, 2022 | • No later than the date the South Coast AQMD issues either a Permit to Construct or Permit to Operate |
| | 5 ppmv pursuant to subparagraph (d)(2)(B) | Pursuant to subparagraph (f)(2)(B) | • No later than 18 months after the date the South Coast AQMD issues either a Permit to Construct or Permit to Operate |
| Process Heaters <40 MMBtu/ hour | 40 ppmv pursuant to subparagraph (d)(2)(A) | On or before July 1, 2023 | • No later than 18 months after the date the South Coast AQMD issues either a Permit to Construct or a Permit to Operate; or<br>• No later than 36 months after the date the South Coast AQMD issues either a Permit to Construct or a Permit to Operate if the owner or operator of a Facility elects to meet the NOx concentration limit pursuant to subparagraph (d)(2)(C) in lieu of subparagraph (d)(2)(A) |
| | 9 ppmv pursuant to subparagraph (d)(2)(C) | Pursuant to subparagraph (f)(2)(B) | • No later than 18 months after the date the South Coast AQMD issues either a Permit to Construct or Permit to Operate |

[1] Does not apply to a Unit that has a South Coast AQMD Permit to Construct or a South Coast AQMD Permit to Operate with a condition that limits the NOx and CO emissions at or below the NOx and CO concentration limits pursuant to subparagraph (d)(2)(A).

(3) Table 2 Conditional Concentration Limits

An owner or operator of a Facility that meets the conditions in subparagraph (d)(3)(A) and elects to meet the Table 2 Conditional NOx

Concentration Limits and Corresponding CO Emission Limits in lieu of the Table 1 NOx Concentration Limits and Corresponding CO Emission Limits shall:

(A) On or before June 1, 2022, submit a complete permit application to apply for a permit condition that limits the NOx emissions to a level not to exceed the applicable Table 2 Conditional NOx Concentration Limits and Corresponding CO Concentration Limits; and

(B) Not operate a Unit that exceeds the Table 2 NOx Concentration Limits and Corresponding CO Emission Limits on or after 18 months from the date the South Coast AQMD issues either a Permit to Construct or Permit to Operate

(4) An owner or operator of a Facility that replaces existing NOx control equipment on a Unit complying with Table 2 Conditional Concentration Limits shall:

(A) Submit a complete permit application within six months of replacing the existing NOx control equipment to apply for a permit condition that limits the NOx and CO emissions to a level not to exceed the applicable Table 1 NOx Concentration Limit and Corresponding CO Concentration Limit. Replacement of existing NOx control equipment will be determined as:

(i) Existing post-combustion air pollution control equipment for an FCCU, Gas Turbine fueled with Natural Gas, Process Heater with a Rated Heat Input Capacity of greater than or equal to 40 MMBtu/hour, or SMR Heater is replaced such that the fixed capital cost of the new components for the post-combustion air pollution control equipment exceeds 50 percent of the fixed capital cost that would be required to construct and install a comparable new post-combustion air pollution control equipment; or

(ii) 50 percent or more of the burners in a Vapor Incinerator, or 50 percent or more of the Rated Heat Input Capacity of the burners in a Vapor Incinerator, are cumulatively replaced after [*DATE OF ADOPTION*];

(B) Not operate a Unit that exceeds the NOx and CO concentration limits pursuant to paragraph (f)(4)(A) on or after 18 months from the date the South Coast AQMD Permit to Construct is issued.

(5) An owner or operator of a Facility with a Unit exempt from the Table 1 NOx Concentration Limits and Corresponding CO Emission Limits pursuant to paragraphs (o)(2), (o)(3), (o)(6), (o)(7), (o)(8) or (o)(9) that exceeds the applicable exemption limitations shall:

(A) Within six months of the exceedance, submit a complete permit application to apply for a permit condition that limits the NOx and CO emissions to a level not to exceed the applicable Table 1 NOx Concentration Limit and Corresponding CO Concentration Limit; and

(B) Not operate a Unit that exceeds the NOx and CO concentration limits pursuant to subparagraph (f)(5)(A) on or after 18 months from the date the South Coast AQMD Permit to Construct is issued.

(6) An owner or operator of a Facility with a Unit complying with:

(A) Table 1 NOx and CO Concentration Limits that fails to submit a complete permit application on or before the date pursuant to subparagraph (f)(1)(A) shall meet the applicable Table 1 NOx and CO Concentration Limit no later than 36 months after the permit application submittal date pursuant to subparagraph (f)(1)(A);

(B) Table 1 NOx and CO Concentration Limits that fails to submit a complete permit application on or before the date pursuant to subparagraphs (f)(4)(A) or (f)(5)(A) shall meet the applicable Table 1 NOx and CO Concentration Limit no later than 18 months after the respective permit application submittal date pursuant to subparagraph (f)(4)(A) or (f)(5)(A); and

(C) Paragraph (d)(2) that fails to submit a complete permit application on or before the Permit Application Submittal Date pursuant to Table 5, shall meet the applicable NOx and CO concentration limits pursuant to paragraphs (d)(2) no later than 18 months after the applicable permit application submittal date pursuant to Table 5.

(7) An owner or operator of a Facility with a Unit subject to an averaging time less than a 365-day rolling average that operates a CEMS shall be required to demonstrate compliance with the applicable NOx Concentration Limits and Corresponding CO Concentration Limits six months after the date the South Coast AQMD Permit to Operate is issued, 36 months after the South Coast AQMD Permit to Construct is issued, or completion of a NOx compliance demonstration source test, whichever is sooner.

(8) An owner or operator of a Facility with a Unit subject to a 365-day rolling average shall demonstrate compliance with the applicable NOx Concentration Limit and Corresponding CO Concentration Limit beginning 14 months after the date the South Coast AQMD Permit to Operate is issued, 36 months after the Permit to Construct is issued, or completion of a NOx compliance demonstration source test, whichever is sooner.

(g) B-Plan and B-Cap Requirements

(1) An owner or operator of a Facility with six or more Units subject to this rule that elects to meet the NOx concentration limits in an approved B-Plan in lieu of meeting the Table 1 or Table 2 NOx Concentration Limits shall:

(A) On or before September 1, 2022, submit a complete B-Plan to the Executive Officer that includes all Units subject to this rule, identified by device identification number with a description of each Unit, with the exception of any Boiler or Process Heater with a Rated Heat Input Capacity of less than 40 MMBtu/hour that will meet the NOx concentration limits pursuant to subparagraph (d)(2)(B) or (d)(2)(C) after the last Compliance Date in Table 7 for the selected I-Plan option, for review pursuant to subdivision (i);

(B) Identifies all Facilities With The Same Ownership, by facility identification number, subject to the rule that are included in the B-Plan;

(C) Select an Alternative BARCT NOx Limit for each Unit included in the B-Plan to meet the respective Phase I, Phase II, or if applicable, Phase III BARCT Equivalent Mass Emissions where the Alternative BARCT NOx Limit shall not exceed the applicable Table 2 Conditional NOx Concentration Limit, for any Unit that qualifies for a Table 2 Conditional NOx Concentration Limit, pursuant to the

conditions in subparagraph (d)(3)(A) and the permit submittal deadline in subparagraph (f)(3)(A);

(E) Submit a complete permit application for each Unit in the approved B-Plan to apply for a permit condition that limits the NOx emissions to a level to not exceed the Alternative BARCT NOx Limit pursuant to paragraph (g)(1)(C) pursuant to the schedule in the approved I-Plan;

(F) Not operate a Unit that exceeds the Alternative BARCT NOx Limit pursuant to paragraph (g)(1)(C) pursuant to the schedule in the approved I-Plan; and

(G) Not include any Unit that has been or will be permanently decommissioned.

(2) An owner or operator of a Facility with six or more Units subject to this rule that elects to meet the NOx concentration limits in an approved B-Cap in lieu of meeting the Table 1 and Table 2 NOx Concentration Limits, shall:

(A) On or before September 1, 2022, submit a complete B-Cap to the Executive Officer that includes all Units subject to this rule, identified by device identification number with a description of each Unit, with the exception of any Boiler or Process Heater with a Rated Heat Input Capacity of less than 40 MMBtu/hour that will meet the NOx concentration limit pursuant to subparagraph (d)(2)(B) or (d(2)(C) after the last Compliance Date in Table 7 for the selected I-Plan option, for review pursuant to subdivision (i);

(B) Identify all Facilities With The Same Ownership, by facility identification number, subject to the rule that are included in the B-Cap;

(C) Select an Alternative BARCT NOx Limit for each Unit included in the B-Cap to meet the respective Phase I, Phase II, or if applicable, Phase III BARCT Equivalent Mass Emissions where the Alternative BARCT NOx Limit shall not exceed:

(i) The applicable Table 6 Maximum Alternative BARCT NOx Concentration Limit; and

(ii) The applicable Table 2 Conditional NOx Concentration Limit for any Unit that qualifies for a Table 2 Conditional NOx Concentration Limit pursuant to the conditions in

subparagraph (d)(3)(A) and the permit submittal deadline in subparagraph (f)(3)(A).

(D) Calculate the Phase I, Phase II, and if applicable, Phase III BARCT B-Cap Annual Emissions where the Unit BARCT B-Cap Annual Emissions are based on:

(i) The Alternative BARCT NOx Limit;

(ii) Any decommissioned Unit(s); or

(iii) Other emission reduction strategies;

(E) Provide an explanation when the Unit BARCT B-Cap Annual Emissions are less than the BARCT Equivalent Mass Emissions for any Unit;

(F) Specify which phase or phases in the I-Plan a complete permit application will be submitted for each Unit subject to the B-Cap to establish a permit condition that limits the NOx concentration to the Alternative BARCT NOx Limit;

(G) Specify each Unit that has an existing permit condition that limits the NOx concentration to the Alternative BARCT NOx Limit;

(H) Submit a complete permit application for each Unit in the approved B-Cap to apply for a permit condition that limits the NOx emissions to a level to not exceed the Alternative BARCT NOx Limit pursuant to paragraph (g)(2)(C) pursuant to the schedule in the approved I-Plan;

(I) Not operate a Unit that exceeds the Alternative BARCT NOx Limit pursuant to paragraph (g)(2)(C) pursuant to the schedule in the approved I-Plan;

(J) Not operate any Unit unless the NOx emissions for all Units in the approved B-Cap are in aggregate at or below the applicable Phase I, Phase II, or if applicable, Phase III Facility BARCT Emission Target pursuant to the schedule in the approved I-Plan;

(K) Designate any Unit that is decommissioned as Table 1 NOx Concentration Limit when establishing the Phase I, Phase II, or if applicable, Phase III Facility BARCT Emission Target in an approved B-Cap and:

(i) Surrender the South Coast AQMD Permit to Operate for the decommissioned unit no later than:

(A) The Table 7 Permit Submittal Date for each phase of I-Plan Option 3 with a B-Cap; or

(B) The Table 7 Compliance Date for Phase I in I-Plan Option 4 and no later than the Table 7 Permit Submittal Date for all other phases in a I-Plan Option 4;

(ii) Disconnect and blind the fuel line(s) for the decommissioned Unit on or before the date the South Coast AQMD Permit to Operate is surrendered pursuant to clause (g)(2)(K)(i); and

(iii) Not sell the decommissioned Unit to another entity for operation within the South Coast Air Basin.

(L) Not add a New Unit that will be subject to this rule that increases the Facility emissions above applicable Phase I, Phase II, or if applicable, Phase III Facility BARCT Emission Target, unless:

(i) Aggregated emissions for all Units in the approved B-Cap are below the Facility BARCT Emission Target when using the Alternative BARCT NOx Limits;

(ii) The New Unit is not Functionally Similar to any Unit that was decommissioned in the approved B-Cap; or

(iii) The new unit will not increase overall facility throughput; and

(iv) The total amount of NOx emission reductions from units that were decommissioned, represents 15 percent or less of Final Phase Facility BARCT Emission Target in an approved B-Cap.

**TABLE 6: MAXIMUM ALTERNATIVE BARCT NOx CONCENTRATION LIMITS FOR A B-CAP**

| Unit | Maximum Alternative BARCT NOx Limit | $O_2$ Correction (%) | Rolling Averaging Time[1] |
|---|---|---|---|
| Boilers and Process Heaters <40 MMBtu/hour | 40 ppmv | 3 | 24-hour |
| Boilers and Process Heaters ≥40 MMBtu/hour | 50 ppmv | 3 | 24-hour |
| FCCUs | 8 ppmv | 3 | 365-day |
| | 16 ppm | | 7-day |
| Gas Turbines | 5 ppmv | 15 | 24-hour |
| Petroleum Coke Calciners | 100 tons/year | N/A | 365-day |
| SMR Heaters | 12 ppm | 3 | 24-hour |
| SRU/TG Incinerators | 100 ppmv | 3 | 24-hour |
| Vapor Incinerators | 40 ppmv | 3 | 24-hour |

[1] Averaging times apply to Units operating a certified CEMS and shall be calculated pursuant to Attachment A of this rule; emissions for Units without CEMS shall be demonstrated pursuant to paragraph (l)(1).

(h) I-Plan Requirements

(1) On or before September 1, 2022, an owner or operator of a Facility with six or more Units subject to this rule that elects to meet the Table 1 or Table 2 NOx Concentration Limits and Corresponding CO Emission Limits using an alternative compliance schedule pursuant to paragraph(f)(1) or that elects to comply with an approved B-Plan or B-Cap shall submit a complete I-Plan to the Executive Officer pursuant to paragraph (i)(1) that includes all Units:

(A) In the accompanying B-Plan for the owner or operator that elects to comply with an approved B-Plan;

(B) In the accompanying B-Cap for the owner or operator that elects to comply with an approved B-Cap; or

(C) Subject to Table 1 or Table 2 NOx Concentration Limits, with the exception of any Boiler or Process Heater with a Rated Heat Input Capacity of less than 40 MMBtu/hour that will meet the NOx concentration limit pursuant to subparagraph (d)(2)(B) or (d)(2)(C)

after the last Compliance Date in Table 6 for the selected I-Plan option.

(2) An owner or operator of a Facility that submits an I-Plan pursuant to paragraph (h)(1) shall identify all Facilities With The Same Ownership, by facility identification number, subject to the rule that are included in the I-Plan;

(3) An owner or operator of a Facility that submits an I-Plan pursuant to paragraph (h)(1) shall calculate the Phase I, Phase II, and if applicable, Phase III Facility BARCT Emission Targets, pursuant to Attachment B of this rule where the NOx concentration limit for each Unit shall be determined based on:

(A) The applicable Table 2 Conditional NOx Concentration Limit for each Unit that meets the conditions in either subparagraph (d)(3)(A) or (d)(3)(B);

(B) 5 ppmv for any Boiler with a Rated Heat Input Capacity less than 40 MMBtu/hour included in the I-Plan;

(C) 40 ppmv for a Process Heater with a Rated Heat Input Capacity less than 40 MMBtu/hour included in the I-Plan with a Representative NOx Concentration greater than 75 ppmv, provided:

(i) The Unit will achieve a NOx Concentration Limit at or below 40 ppmv in Phase I of an I-Plan; and

(ii) Any future NOx emission reductions to achieve the NOx Concentration Limit in subparagraph (d)(2)(C) is not applied to meet the Facility BARCT Emission Target for Phase II, or if applicable, Phase III of an I-Plan;

(D) 9 ppmv for any Process Heaters with a Rated Heat Input Capacity of less than 40 MMBtu/hour that is not identified in subparagraph (h)(3)(C); and

(E) The applicable Table 1 NOx Concentration Limits for all other Units.

(4) An owner or operator of a Facility that submits an I-Plan pursuant to paragraph (h)(1) that elects to comply with a B-Plan shall:

(A) Calculate the Phase I, Phase II, and if applicable, Phase III BARCT Equivalent Mass Emissions, using the Alternative BARCT NOx Limits, pursuant to Attachment B of this rule;

(B) Demonstrate that the Phase I, Phase II, and if applicable, Phase III BARCT Equivalent Mass Emissions are less than the respective Phase I, Phase II, or if applicable, Phase III Facility BARCT Emission Target; and

(C) Implement emission reduction projects based on the schedule in the approved I-Plan to meet the Alternative BARCT NOx Concentration Limits in an approved B-Plan to achieve the Phase I, Phase II, and if applicable, Phase III Facility BARCT Emission Target.

(5) An owner or operator of a Facility that submits an I-Plan pursuant to paragraph (h)(1) that elects to comply with a B-Cap shall:

(A) Incorporate an additional 10 percent reduction to the Phase I, Phase II, and if applicable, Phase III Facility BARCT Emission Targets, pursuant to Attachment B of this rule;

(B) Demonstrate that the Phase I, Phase II, and if applicable, Phase III BARCT B-Cap Annual Emissions are less than the respective Phase I, Phase II, or Phase III Facility BARCT Emission Target;

(C) Implement emission reduction projects based on the schedule in the approved I-Plan to maintain NOx mass emissions below the Phase I, Phase II, and if applicable, Phase III Facility BARCT Emission Target; and

(D) Demonstrate daily compliance with the Phase I, Phase II, and if applicable, Phase III Facility BARCT Emission Target, based on a 365-day rolling average as measured pursuant to subdivisions (k) or (l), where the effective date of the Facility BARCT Emission Target is:

(i) January 1, 2024 for Phase I of I-Plan Option 4; and

(ii) 54 months from the permit application Submittal Date specified in Table 6 for:

(A) Phase I and Phase II for I-Plan Option 3; and

(B) Phase II and Phase III for I-Plan Option 4.

**TABLE 7: I-PLAN PERCENT REDUCTION TARGETS AND SCHEDULE**

| | | Phase I | Phase II | Phase III |
|---|---|---|---|---|
| I-Plan Option 1 for B-Plan or Table 1 and Table 2 Concentration Limits | Percent Reduction Targets | 80 | 100 | N/A |
| | Permit Application Submittal Date | January 1, 2023 | January 1, 2031 | N/A |
| | Compliance Date | No later than 36 months after a South Coast AQMD Permit to Construct is issued | | N/A |
| I-Plan Option 2 for B-Plan Only pursuant to paragraph (g)(3) | Percent Reduction Targets | 65 | 100 | N/A |
| | Permit Application Submittal Date | July 1, 2024 | January 1, 2030 | N/A |
| | Compliance Date | No later than 36 months after a South Coast AQMD Permit to Construct is issued | | N/A |
| I-Plan Option 3 for B-Plan or B-Cap pursuant to paragraph (g)(3) | Percent Reduction Targets | 40 | 100 | N/A |
| | Permit Application Submittal Date | July 1, 2025 | July 1, 2029 | N/A |
| | Compliance Date | No later than 36 months after a South Coast AQMD Permit to Construct is issued | | N/A |
| I-Plan Option 4 for B-Cap Only | Percent Reduction Targets | 50 | 80 | 100 |
| | Permit Application Submittal Date | N/A | January 1, 2025 | January 1, 2028 |
| | Compliance Date | January 1, 2024 | No later than 36 months after a South Coast AQMD Permit to Construct is issued | |
| I-Plan Option 5 for B-Plan Only | Percent Reduction Targets | 50 | 70 | 100 |
| | Permit Application Submittal Date | January 1, 2023 | January 1, 2025 | July 1, 2028 |
| | Compliance Date | No later than 36 months after a South Coast AQMD Permit to Construct is issued | | |

(6) Table 7 compliance schedule shall include the construction, commissioning and initial source test of the Unit but not the additional time allowed pursuant to paragraphs (f)(7) and (f)(8).

(7) I-Plan Option 2 and I-Plan Option 3 is only available to an owner or operator of a Facility achieving a NOx emission rate of less than 0.02 pound per million BTU of Heat Input, based on annual emissions for the applicable Units as reported in the 2021 Annual Emissions Report and calculated pursuant to Attachment A, for all the Boilers and Process Heaters with Rated Heat Input Capacity of greater than or equal to 40 MMBtu/hour based on the maximum Rated Heat Input Capacity by [*DATE OF ADOPTION*]; for Units firing at less than the maximum Rated Heat Input Capacity, mass emissions shall be less than or equal to the quantity that would occur at maximum Rated Heat Input Capacity.

(i) I-Plan, B-Plan, and B-Cap Submittal and Approval Requirements

(1) I-Plan Submittal Requirements

An owner or operator of a Facility that elects to implement an approved I-Plan pursuant to paragraph (h)(1) shall submit an I-Plan to the Executive Officer for review that:

(A) Identifies all Facilities With The Same Ownership, by facility identification number, subject to the rule that are included in the I-Plan;

(B) Identifies each Unit subject to the rule by device identification number with a description of each Unit;

(C) Identifies the anticipated start and end date (month and year) of the turnaround schedule for each Unit;

(D) Specifies either I-Plan Option 1 (for a B-Plan or Table 1 and Table 2 Concentration Limits), I-Plan Option 2 (for a B-Plan only), I-Plan Option 3 (for a B-Plan or B-Cap), I-Plan Option 4 (for a B-Cap only), or I-Plan Option 5 (for a B-Plan only) in Table 7;

(E) Calculates the Phase I, Phase II, and if applicable, Phase III Facility BARCT Emission Target, pursuant to Attachment B of this rule;

(F) Identifies each Unit in an approved B-Plan or an approved B-Cap using I-Plan Option 3 that qualifies for the Table 2 Conditional Concentration Limits pursuant to subparagraph (d)(3)(A) and

demonstrates that the owner or operator submitted a complete permit application pursuant to subparagraph (f)(3)(A);

(G) Calculates the Phase I, Phase II, and if applicable Phase III Facility BARCT Emission Target pursuant to Attachment B of this rule for the selected I-Plan Option pursuant to subparagraph (i)(1)(D); and

(H) Identifies each Unit by device identification number with a description of each Unit that cumulatively meets Phase I, Phase II, and if applicable, Phase III Facility BARCT Emission Target.

(2) B-Plan Submittal Requirements

An owner or operator of a Facility that elects to meet Alternative BARCT NOx Limits in an approved B-Plan pursuant to paragraph (g)(1), shall submit a B-Plan to the Executive Officer for review that:

(A) Identifies all Facilities With The Same Ownership, by facility identification number, subject to the rule that are included in the B-Plan;

(B) Identifies each Unit subject to this rule by device identification number with a description of each Unit;

(C) Specifies the Alternative BARCT NOx Limits for each Unit of the I-Plan that:

(i) Specifies which phase or phases in the I-Plan a complete permit application will be submitted for each Unit subject to the B-Plan to establish a permit condition that limits the NOx concentration to the Alternative BARCT NOx Limit; and

(ii) Specifies each Unit that has an existing permit condition that limits the NOx concentration to the Alternative BARCT NOx Limit;

(D) Calculates the Phase I, Phase II, and if applicable, Phase III BARCT Equivalent Mass Emissions using the Alternative BARCT NOx Limits identified in subparagraph (i)(2)(C), as calculated pursuant to Attachment B of this rule; and

(E) Demonstrates that the Phase I, Phase II, and if applicable, Phase III BARCT Equivalent Mass Emissions are less than the respective Phase I, Phase II, or Phase III Facility BARCT Emission Target.

(3) B-Cap Submittal Requirements

An owner or operator of a Facility that elects to comply with an approved B-Cap pursuant to paragraph (g)(2), shall submit a B-Cap to the Executive Officer for review that:

(A) Identifies all Facilities With The Same Ownership, by facility identification number, subject to the rule that are included in the B-Cap;

(B) Identifies each Unit subject to this rule by the device identification number with a description of the Unit;

(C) Specifies the Alternative BARCT NOx Limits for each Unit of the I-Plan;

(i) Specifies which phase or phases in the I-Plan a complete permit application will be submitted for each Unit subject to the B-Plan to establish a permit condition that limits the NOx concentration to the Alternative BARCT NOx Limit; and

(ii) Specifies each Unit that has an existing permit condition that limits the NOx concentration to the Alternative BARCT NOx Limit;

(D) Identifies any Unit that will be decommissioned for each phase of the approved I-Plan;

(E) Identifies any Unit that will have other reductions in mass emission for each phase of the approved I-Plan;

(F) Calculates the Phase I, Phase II, and if applicable, Phase III BARCT B-Cap Annual Emissions based on emission reduction strategies identified in subparagraph (g)(2)(D) as calculated pursuant to Attachment B of this rule; and

(G) Demonstrates that the Phase I, Phase II, and if applicable, Phase III BARCT B-Cap Annual Emissions are less than the respective Phase I, Phase II, or Phase III Facility BARCT Emission Target that incorporates an additional 10 percent reduction pursuant to subparagraph (h)(5)(A).

(4) I-Plan, B-Plan, and B-Cap Review and Approval Process

The Executive Officer will notify the owner or operator of a Facility in writing whether the I-Plan, B-Plan, or B-Cap is approved or disapproved based on the following criteria:

(A) The I-Plan contains information required in paragraph (i)(1), the B-Plan contains information required in paragraph (i)(2), and the B-Cap contains information required in paragraph (i)(3);

(B) All of the Units identified in subparagraph (i)(2)(B) for a B-Plan or identified in subparagraph (i)(3)(B) for a B-CAP are included in the corresponding I-Plan pursuant to subparagraph (i)(1)(B);

(C) Any Units that will establish the Phase I, Phase II, and if applicable, Phase III Facility BARCT Emission Target based on the Table 2 Conditional NOx limits, in lieu of a Table 1 NOx Concentration Limit, have been identified and the applicable requirements of subparagraphs (d)(3)(A) and (f)(3)(A) have been met;

(D) The Phase I, Phase II, or if applicable, Phase III Facility BARCT Emission Targets were established pursuant to paragraph (h)(3);

(E) The Phase I, Phase II, and Phase III Equivalent BARCT Emissions for a B-Plan are less than the respective Phase I, Phase II, or if applicable, Phase III Facility BARCT Emission Target pursuant to subparagraph (h)(4)(B);

(F) The Phase I, Phase II, and if applicable, Phase III BARCT B-Cap Annual Emissions for a B-Cap are less than the respective Phase I, Phase II, or if applicable, Phase III Facility BARCT Emission Target that incorporates a 10 percent NOx emission reduction pursuant to subparagraph (h)(5)(A); and

(G) The Alternative BARCT NOx Limit for any Unit in a B-Cap does not exceed the applicable Table 6 Maximum Alternative BARCT NOx Limit.

(5) Within 30 days of receiving written notification from Executive Officer that the I-Plan, B-Plan, or B-Cap is disapproved, the owner or operator shall correct any deficiencies and re-submit the I-Plan, B-Plan, or B-Cap.

(6) Upon receiving written notification from the Executive Officer that the I-Plan, B-Plan, or B-Cap re-submitted pursuant to paragraph (i)(5) is disapproved, the owner or operator shall comply with the compliance schedule pursuant to paragraph (f)(1).

(7) Modifications to an Approved I-Plan, an Approved B-Plan, and an Approved B-Cap

An owner or operator of a Facility that seeks approval to modify an approved I-Plan, an approved B-Plan, or an approved B-Cap shall:

(A) Submit a request in writing to the Executive Officer to modify an Approved I-Plan, an Approved B-Plan, and an Approved B-Cap that includes all the plan submittal requirements pursuant to paragraph (i)(1) for an approved I-Plan, paragraph (i)(2) for an approved B-Plan, or paragraph (i)(3) for an approved B-Cap; and

(B) Modify an approved I-Plan, B-Plan, or B-Cap if:

(i) A Unit identified as qualifying for Table 2 Conditional NOx Concentration Limit no longer meets the requirements pursuant to subparagraph (d)(3)(A);

(ii) A Unit in an approved B-Cap identified as qualifying for the Table 2 Conditional NOx Concentration Limit for establishing the Phase I, Phase II, or Phase III BARCT Facility Emission Target is decommissioned or a Unit in an approved B-Plan is decommissioned;

(iii) A higher Alternative BARCT NOx Limit will be proposed in the complete permit application than the Alternative BARCT NOx Limit for that Unit in an approved I-Plan, an approved B-Plan, or an approved B-Cap;

(iv) Any emission reduction project is moved to a later implementation phase, any emission reduction project is moved between phases, or any emission reduction project is removed from a phase; or

(v) The owner or operator receives written notification from the Executive Officer that modifications to the I-Plan, B-Plan, or B-Cap are needed.

(8) The Executive Officer will review any modifications to an I-Plan, B-Plan, or B-Cap in accordance with the review and approval process pursuant to paragraph (i)(4).

(9) Notification of Pending Approval of an I-Plan, B-Plan, or B-Cap

The Executive Officer will make the proposed I-Plan, B-Plan, or B-Cap or proposed modifications to an approved I-Plan, an approved B-Plan, or an approved B-Cap available to the public on the South Coast AQMD website 30 days prior to approval.

(10) Plan Fees

The review and approval of an I-Plan, B-Plan, and B-Cap, or review and approval of a modification of an approved I-Plan, an approved B-Plan, and

an approved B-Cap shall be subject to applicable plan fees pursuant to Rule 306 – Plan Fees.

(11) An I-Plan, B-Plan, or B-Cap shall be subject to Rule 221 – Plans.

(j) Time Extensions

(1) An owner or operator of a Facility may request one 12-month extension for each Unit from the Compliance Date in paragraph (f)(1) or the Compliance Date in Table 7 to meet an Alternative NOx Limit for a Unit in a B-Plan, B-Cap, or Table 1 NOx Concentration Limit and Corresponding CO Concentration Limit provided:

(A) The complete permit application for the Unit was submitted on or before the date specified in paragraph (f)(1) or the approved I-Plan; and

(B) There are specific circumstances outside of the control of the owner or operator that necessitate an extension of time.

(2) An owner or operator of a Facility with an approved I-Plan may request a time extension from the Compliance Date in Table 7 to meet an Alternative NOx Limit for a Unit in a B-Plan, B-Cap, or Table 1 NOx Concentration Limit and Corresponding CO Concentration Limit provided:

(A) The complete permit application for the Unit was submitted on or before the date specified in the approved I-Plan;

(B) The month and year of the scheduled turnaround and the month and year of the subsequent turnaround for the Unit is submitted in writing at the time of complete permit application submittal; and

(C) One or more of the following occurred:

(i) The South Coast AQMD Permit to Construct for the Unit was issued after the scheduled turnaround date or the South Coast AQMD Permit to Construct for the Unit was issued more than 24 months after the complete permit application was submitted, and either:

(ii) The subsequent scheduled turnaround for the Unit will not occur until 12 months after the Compliance Date in the approved I-Plan; or

(iii) The subsequent scheduled turnaround for the Unit will occur more than 48 months after the South Coast AQMD Permit to Construct was issued.

(3) An owner or operator of a Facility with an approved B-Cap may request a time extension for the effective date of the Facility BARCT Emission Target beyond the 54 months from the permit application submittal date specified in subparagraph (h)(6)(B) if:

(A) The South Coast AQMD Permit to Construct for one or more Units was issued more than 18 months after the complete permit application was submitted;

(B) A time extension is requested pursuant to paragraph (j)(1); or

(C) A time extension is requested pursuant to paragraph (j)(2).

(4) An owner or operator of a Facility shall submit a time extension request in writing to the Executive Officer:

(A) No later than 90 days prior to the Compliance Date in paragraph (f)(1) or the approved I-Plan, for a time extension request pursuant to paragraphs (j)(1) or (j)(2); or

(B) No later than 90 days prior to the effective date of the Facility BARCT Emission Target referenced in subparagraph (h)(6)(B), for a time extension request pursuant to paragraph (j)(3).

(5) An owner or operator of a facility that submits a time extension request pursuant to paragraph (j)(4) shall include:

(A) The phase and the Unit needing a time extension;

(B) The date the complete permit application was submitted;

(C) The date the Executive Officer issued the Permit to Construct;

(D) For a time extension request pursuant to paragraph (j)(3), specify the Unit BARCT B-Cap Annual Emissions;

(~~D~~E) The additional time needed to complete the emission reduction project;

(~~E~~F) Specify if the time extension request is for paragraph(j)(1), (j)(2), and/or (j)(3);

(~~F~~G) Provide the month and year of the scheduled turnaround, and the subsequent turnaround, if applicable, for the Unit to qualify for time extension request pursuant to paragraph (j)(2); and

(~~G~~H) The reason(s) a time extension is requested.

(6) The Executive Officer will review the request for the time extension and act on the request within 60 days of receipt provided an owner or operator of a Facility:

(A) Meets the requirements of paragraph (j)(1), (j)(2), or (j)(3) as applicable;

(B) Submitted the written request within the timeframe and includes the applicable information pursuant to paragraph (j)(4);

(C) For a time extension request pursuant to paragraphs (j)(1) at a minimum:

(i) Provides information on schedules and/or construction plans documenting the key milestones and which key milestone(s) were delayed with an explanation of actions the operator took to ensure milestones were met and why the delay necessitates additional time for delays due to missed milestones;

(ii) Provides information to substantiate that the information submitted to another agency was timely, including the date when the application was submitted, and documentation from the agency of reason for the delay for delays related to the other agency approvals;

(iii) Provides purchase orders, invoices, and communications from vendors that demonstrate that equipment was ordered in a timely fashion and delays are outside of the control of the operator for delays related to the delivery of parts or equipment; and

(iv) Provides an explanation of the service, when the service was requested, the response time, and information to substantiate why the delay necessitates additional time for delays related to contract workers, source testers, installers, or other services.

(D) Provides documentation to substantiate that one of the provisions under subparagraph (j)(2)(C) has been met if requesting a time extension request pursuant to paragraph (j)(2); and

(E) Provides documentation of the date the Permit to Construct was issued for each Unit, to substantiate that the Executive Officer issued the Permit to Construct more than 18 months after the permit

application was required to be submitted pursuant to an approved I-Plan if requesting a time extension request pursuant to paragraph (j)(3).

(7) If the Executive Officer requests additional information to substantiate the time extension request, the owner or operator of a Facility shall provide that information within the timeframe specified by the Executive Officer.

(8) If the Executive Officer notifies the owner or operator of a Facility of approval of a time extension request, the owner or operator shall meet the NOx and CO concentration limits in Table 1, an approved B-Plan, or an approved B-Cap within the timeframe in the approval, and the approval represents an amendment to the I-Plan.

(9) The Facility BARCT Emission Target will be adjusted by adding the Unit BARCT B-Cap Annual Emissions to the Facility BARCT Emission Target for each Unit where a time extension is approved pursuant to paragraph (j)(8) where adjustments to the Facility BARCT Emission Target shall be in increments no less than six months.

(10) If the Executive Officer notifies the owner or operator of a Facility of a disapproval of a time extension request, the owner or operator shall meet the NOx and CO concentration limits in Table 1, an approved B-Plan, or an approved B-Cap within 60 calendar days after receiving notification of disapproval of the time extension request or pursuant to the compliance schedule in paragraph (f)(1) or the schedule in an approved I-Plan.

(k) CEMS Requirements

(1) An owner or operator of a Former RECLAIM Facility with a Unit with a Rated Heat Input Capacity of greater than or equal to 40 MMBtu/hour shall install, certify, operate, and maintain a CEMS to measure NOx and $O_2$ emissions pursuant to the applicable Rule 218.2 and Rule 218.3 requirements to demonstrate compliance with the applicable NOx Concentration Limit and Corresponding CO Concentration Limit.

(2) An owner or operator of a Former RECLAIM Facility with a Sulfuric Acid Furnace subject to the NOx and CO concentration limits in Table 1, Table 3, an approved B-Plan or an approved B-Cap shall:

(A) Install, certify, operate, and maintain a CEMS to measure NOx emissions pursuant to the applicable Rules 218.2 and 218.3 requirements to demonstrate compliance with the applicable NOx

Concentration Limit and Corresponding CO Concentration Limit; and

(B) Within 12 months from [*DATE OF ADOPTION*] install, certify, operate, and maintain a CEMS that complies with the Rules 218.2 and 218.3 requirements to measure $O_2$ and demonstrate compliance with the applicable NOx Concentration Limit and Corresponding CO Concentration Limit.

(3) An owner or operator of a Unit with a CEMS that measures CO at [*DATE OF ADOPTION*] must operate and maintain the CO CEMS pursuant to the applicable Rules 218.2 and 218.3 requirements to demonstrate compliance with the Table 1, Table 2, or Table 6 Corresponding CO Concentration Limits and certify the CEMS within 12 months of [*DATE OF ADOPTION*] pursuant to the applicable Rules 218.2 and 218.3 requirements.

(4) An owner or operator of a Former RECLAIM Facility with a Unit with a CEMS shall exclude invalid CEMS data pursuant to Rule 218.2 – Continuous Emission Monitoring System: General Provisions and Rule 218.3 – Continuous Emission Monitoring System: Performance Specifications.

(5) Missing Data Procedures for a Facility Complying with a B-Cap

An owner or operator of a Facility with a Unit with an approved B-Cap with a non-operational CEMS that is not collecting data, shall:

(A) Calculate missing data using the average of the recorded emissions for the hour immediately before the missing data period and the hour immediately after the missing data period, if the missing data period is less than or equal to 8 continuous hours; or

(B) Calculate missing data using the maximum hourly emissions recorded for the previous 30 days, commencing on the day immediately prior to the day the missing data occurred, if the missing data period is more than 8 continuous hours.

(l) Source Test Requirements

(1) An owner or operator of a Facility with a Unit that is not required to install and operate a CEMS pursuant to subdivision (k) shall be required to conduct a source test, with a duration of at least 60 minutes but no longer than 120 minutes, to demonstrate compliance with the applicable NOx

Concentration Limit and Corresponding CO Concentration Limit pursuant to the source test schedule in either Table 8 or Table 9.

(2) Source Test Schedule for Units without Ammonia Emissions in the Exhaust

An owner or operator of a Facility with a Unit that is not required to install and operate a CEMS pursuant to subdivision (k) and does not vent to post-combustion air pollution control equipment with ammonia injection, shall demonstrate compliance with the applicable NOx Concentration Limit and Corresponding CO Concentration Limit by conducting source tests according to the schedule in Table 8.

**TABLE 8: SOURCE TESTING SCHEDULE**
**FOR UNITS WITHOUT AMMONIA EMISSIONS IN THE EXHAUST**

| Combustion Equipment | Source Test Schedule |
|---|---|
| Vapor Incinerators <40 MMBtu/ hr, Flares | • Conduct source test simultaneously for NOx and CO within 36 months from previous source test and every 36 months thereafter |
| All Other Units | |
| Units Operating without NOx or CO CEMS | • Conduct source test simultaneously for NOx and CO within 12 months of being subject to a NOx Concentration Limit and Corresponding CO Concentration Limit and quarterly thereafter<br>• Source tests may be conducted annually after the first 12 months of being subject to a NOx Concentration Limit and Corresponding CO Concentration Limit if four consecutive quarterly source tests demonstrate compliance with the NOx and CO concentration limits<br>• If an annual test is failed, four consecutive quarterly source tests must demonstrate compliance with the NOx and CO concentration limits prior to resuming annual source tests |
| Units operating with NOx CEMS and without CO CEMS | • Conduct source test for CO within 12 months from previous source test and annually thereafter |

| Combustion Equipment | Source Test Schedule |
|---|---|
| Units operating without NOx CEMS and with CO CEMS | • Conduct source test for NOx during the first 12 months of being subject to a NOx Concentration Limit and Corresponding CO Concentration Limit and quarterly thereafter<br>• Source tests may be conducted annually after the first 12 months of being subject to a NOx Concentration Limit and Corresponding CO Concentration Limit if four consecutive quarterly source tests demonstrate compliance with the NOx and CO concentration limits<br>• If an annual test is failed, four consecutive quarterly source tests must demonstrate compliance with the NOx concentration limits prior to resuming annual source tests |

(3) Source Test Schedule for Units with Ammonia Emissions in the Exhaust

An owner or operator of a Facility with a Unit that is not required to install and operate a CEMS pursuant to subdivision (k) and vents to post-combustion air pollution control equipment with ammonia injection shall demonstrate compliance with the applicable NOx Concentration Limit and Corresponding CO Concentration Limit and ammonia South Coast AQMD permit limit by conducting a source test according to the schedule in Table 9.

**TABLE 9: SOURCE TESTING SCHEDULE**
**FOR UNITS WITH AMMONIA EMISSIONS IN THE EXHAUST**

| Combustion Equipment | Source Test Schedule |
|---|---|
| Units operating without NOx, CO, or ammonia CEMS | • Conduct source test simultaneously for NOx, CO, and ammonia quarterly during the first 12 months of being subject to a NOx Concentration Limit and Corresponding CO Concentration Limit or ammonia South Coast AQMD permit limit and quarterly thereafter<br>• Source tests may be conducted annually after the first 12 months of being subject to a NOx Concentration Limit and Corresponding CO Concentration Limit or ammonia South Coast AQMD permit limit if four consecutive quarterly source tests demonstrate compliance with the CO, NOx, and ammonia concentration limit<br>• If an annual test is failed, four consecutive quarterly source tests must demonstrate compliance with the NOx, CO, and ammonia concentration limits prior to resuming annual source tests |
| Units operating with NOx CEMS and without CO and ammonia CEMS | • Conduct source test for CO and ammonia quarterly during the first 12 months of being subject to a NOx Concentration Limit and Corresponding CO Concentration Limit or ammonia South Coast AQMD permit limit and quarterly thereafter<br>• Source tests may be conducted annually after the first 12 months of being subject to a NOx Concentration Limit and Corresponding CO Concentration Limit or ammonia South Coast AQMD permit limit if four consecutive quarterly source tests demonstrate compliance with the CO and ammonia concentration limit<br>• If an annual test is failed, four consecutive quarterly source tests must demonstrate compliance with the CO and ammonia concentration limits prior to resuming annual source tests |

| Combustion Equipment | Source Test Schedule |
|---|---|
| Units operating with NOx and CO CEMS and without ammonia CEMS | • Conduct source test for ammonia quarterly during the first 12 months of being subject to an ammonia South Coast AQMD permit limit and quarterly thereafter<br>• Source tests may be conducted annually after the first 12 months of being subject to an ammonia South Coast AQMD permit limit if four consecutive quarterly source tests demonstrate compliance with the ammonia concentration limit<br>• If an annual test is failed, four consecutive quarterly source tests must demonstrate compliance with the ammonia concentration limits prior to resuming annual source tests |
| Units operating with NOx and ammonia CEMS and without CO CEMS | • Conduct source test for CO within 12 months from previous source test and annually thereafter |
| Units operating with ammonia CEMS and without NOx or CO CEMS | • Conduct source tests to determine compliance with NOx and CO concentration limits pursuant to Table 8 |

(4) An owner or operator of a Facility that is required to conduct an annual source test pursuant to Table 8 or Table 9 shall:

(A) Conduct the source test every calendar year but no earlier than six calendar months after the previous source test; or

(B) Conduct a source test no later than 90 days after the date of resumed operation for a Unit that has not operated for at least six consecutive calendar months and maintain monthly fuel usage using a non-resettable fuel meter to demonstrate that the Unit has not been operated for at least six consecutive calendar months.

(5) An owner or operator of a Facility that elects to install and operate a CEMS to demonstrate compliance with the applicable NOx Concentration Limit and Corresponding CO Concentration Limit or ammonia South Coast AQMD permit limit shall meet the CEMS requirements under subdivision (k).

(6) An owner or operator of a Facility with a Unit subject to a NOx Concentration Limit and Corresponding CO Concentration Limit or ammonia South Coast AQMD permit limit, that is not required to install and operate a CEMS pursuant to subdivision (k) and has not conducted a source test within the schedule in Table 8 or Table 9, shall conduct a source test within:

(A) Six months from being subject to the NOx Concentration Limit and Corresponding CO Concentration Limit for Units with a Rated Heat Input Capacity of greater than or equal to 20 MMBtu/hour.

(B) 12 months from being subject to the NOx Concentration Limit and Corresponding CO Concentration Limit for Units with a Rated Heat Input Capacity of less than 20 MMBtu/hour.

(7) An owner or operator of a Facility with a new or modified Unit shall demonstrate compliance:

(A) Through an initial source test conducted within six months from commencing operation for a Unit with an averaging time less than 120 minutes pursuant to paragraph (l)(1);

(B) With a certified CEMS for Units with an averaging time greater than 120 minutes pursuant to Table 1 or Table 2; or

(C) Through CEMS recertification pursuant to the applicable requirements in Rule 218.2 and Rule 218.3 for Units that are required to adjust NOx span range.

(8) An owner or operator of a Facility with a Unit required to conduct a source test pursuant to subdivision (l) shall:

(A) For a unit that receive a South Coast AQMD Permit to Construct to comply with a NOx Concentration Limit and Corresponding CO Concentration Limit, submit a source test protocol that includes an averaging time duration of at least 60 minutes but no longer than 120 minutes, for approval within 60 days after the Permit to Construct was issued unless otherwise approved by the Executive Officer;

(B) For units that receive a South Coast AQMD permit condition that limits NOx or CO emissions to a NOx Concentration Limit and Corresponding CO Concentration Limit, submit a source test protocol that includes an averaging time duration of at least 60 minutes but no longer than120 minutes, for approval within 60 days after being subject to a NOx Concentration Limit and Corresponding CO Concentration Limit, unless otherwise approved by the Executive Officer; and

(C) Conduct the source test within 90 days after a written approval of the source test protocol by the Executive Officer is distributed, unless otherwise approve by the Executive Officer.

(9) At least one week prior to conducting a source test, an owner or operator of a Facility shall notify the Executive Officer by calling 1-800-CUT-SMOG of the intent to conduct source testing for a Unit and shall provide:

(A) Facility name and identification number;

(B) Device identification number; and

(C) Date when source test will be conducted.

(10) Unless requested by the Executive Officer, after the approval of the initial source test protocol pursuant to paragraph (l)(8), an owner or operator of a Facility is not required to resubmit a source test protocol for approval pursuant to paragraph (l)(8) if:

(A) The method of operation of the Unit has not been altered in a manner that requires a complete permit application submittal;

(B) Rule or South Coast AQMD permit concentration limits have not become more stringent since the previous source test;

(C) There have been no changes in the source test method that is referenced in the approved source test protocol; and

(D) The approved source test protocol is representative of the operation and configuration of the Unit.

(11) An owner or operator of a Facility with a Unit shall conduct the source test using a South Coast AQMD approved contractor under the Laboratory Approval Program:

(A) Using a South Coast AQMD approved source test protocol;

(B) Using at least one of the following test methods:

(i) South Coast AQMD Source Test Method 100.1 – Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling;

(ii) South Coast AQMD Source Test Method 7.1 – Determination of Nitrogen Oxide Emissions from Stationary Sources and South Coast AQMD Source Test Method 10.1 – Carbon Monoxide and Carbon Dioxide by Gas Chromatograph/Non-Dispersive Infrared Detector – Oxygen by Gas Chromatograph-Thermal Conductivity (GC/TCD);

(iii) South Coast AQMD Source Test Method 207.1 for Determination of Ammonia Emissions from Stationary Sources; or

(iv) Any other test method determined to be equivalent and approved by the Executive Officer, and either the California Air Resources Board or the U. S. Environmental Protection Agency, as applicable.

(C) During operation other than startup and shutdown; and

(D) In as-found operating condition.

(12) An owner or operator of a Facility with a Vapor Incinerator may elect to demonstrate that the Unit meets the applicable NOx Concentration Limit based on the NOx emission from only the burner, without the waste stream being directed to the Unit.

(13) An owner or operator of a Facility shall submit all source test reports, including the source test results and a description of the Unit tested, to the Executive Officer within 60 days of completion of the source test.

(14) Emissions determined to exceed any limits established by this rule by any of the reference test methods in subparagraph (l)(11)(B) shall constitute a violation of the rule.

(15) An owner or operator of a Facility with a Unit that exceeds the applicable limit established by this rule by any of the reference test methods in subparagraph (l)(11)(B) shall inform the Executive Officer within 72 hours from the time the owner or operator knew of excess emissions, or reasonably should have known.

(m) Diagnostic Emission Checks

(1) An owner or operator of a Facility with a Unit required to perform a source test every 36 months pursuant to subdivision (l) shall also:

(A) Perform 30-minute diagnostic emissions checks of NOx, CO, and $O_2$ emissions, with a portable NOx, CO, and $O_2$ analyzer that is calibrated, maintained and operated in accordance with manufacturers specifications and recommendations of the South Coast AQMD Combustion Gas Periodic Monitoring Protocol for the Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and Oxygen from Combustion Sources Subject to Rules 1110.2 – Emissions from Gaseous- and Liquid-Fueled Engines, 1146 – Emissions of Oxides of Nitrogen From Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters, and 1146.1 – Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters;

(B) Conduct the diagnostic emission checks by a person who has completed an appropriate training program approved by South Coast AQMD in the operation of portable analyzers and has received a certification issued by the South Coast AQMD; and

(C) Conduct the diagnostic test every 365 days or every 8760 operating hours, whichever occurs earlier.

(2) A diagnostic emissions check that finds the emissions in excess of those allowed by this rule or a South Coast AQMD permit condition shall not constitute a violation of this rule if an owner or operator of a Facility corrects the problem and demonstrates compliance with another diagnostic emissions check within 72 hours from the time the owner or operator knew of excess emissions, or reasonably should have known, or shut down the Unit by the end of an operating cycle, whichever is sooner. Any diagnostic emission check conducted by South Coast AQMD staff that finds emissions in excess of those allowed by this rule or a South Coast AQMD permit condition shall be a violation.

(n) Monitoring, Recordkeeping, and Reporting Requirements

(1) Operating Log

An owner or operator of a Facility shall maintain the following daily records for each Unit, in a manner approved by the Executive Officer:

(A) Time and duration of startup and shutdown events;

(B) Total hours of operation;

(C) Quantity of fuel; and

(D) Cumulative hours of operation to date for the calendar year.

(2) An owner or operator of a Facility that elects to meet the NOx concentration limits in an approved B-Cap pursuant to paragraph (g)(2) shall:

(A) Maintain CEMS for all applicable equipment or an enforceable method approved by the Executive Officer to determine daily mass emissions for those Units without CEMS;

(B) Maintain daily records of mass emissions, in pounds (lbs) per day, from all Units included in an approved B-Cap including:

(i) Emissions during start-ups, shutdowns, and maintenance;

(ii) CEMS data identified as invalid and justification;

(iii) Data substituted for missing data pursuant to paragraph (k)(5);

(C) Demonstrate compliance with the Facility BARCT Emission Target in the B-Cap on a daily basis from 365-day rolling average.

(3) An owner or operator of a Facility subject to the Interim Emission Rate pursuant to paragraph (e)(2) shall maintain the following daily records for each Unit, in a manner approved by the Executive Officer:

(A) Actual daily mass emissions, in pounds, for all Boilers and Process Heaters with a Rated Heat Input Capacity of greater than or equal to 40 MMBtu/hour;

(B) Combined maximum Rated Heat Input Capacity for all Boilers and Process Heaters with a Rated Heat Input Capacity of greater than or equal to 40 MMBtu/hour; and

(C) Calculated interim NOx emission rate pursuant to Attachment A Section (A-2) of this rule.

(4) An owner or operator of a Facility shall keep and maintain the following records on-site for five years, except that all data gathered or computed for intervals of less than 15 minutes shall be maintained for a minimum of 48 hours, and shall make them available to the Executive Officer upon request:

(A) CEMS data;

(B) Source tests reports;

(C) Diagnostic emission checks; and

(D) Written logs of startups, shutdowns, and breakdowns, all maintenance, service and tuning records, and any other information required by this rule.

(5) An owner or operator of a Facility with a Boiler or Process Heater that is exempt from the applicable Table 1 NOx Concentration Limits pursuant to paragraphs (o)(5) and (o)(6), or an owner or operator of a Facility with a Flare that is exempt from the applicable Table 1 NOx Concentration Limits pursuant to subparagraph (o)(8)(A) shall:

(A) Within 90 days of [*DATE OF ADOPTION*], install and operate a non-resettable totalizing time meter or a fuel meter, unless a metering system is currently installed and the fuel meter is approved in writing by the Executive Officer;

(B) Within 90 days of [*DATE OF ADOPTION*], each non-resettable totalizing time meter or a fuel meter required under subparagraph (n)(5)(A) that requires dependable electric power to operate shall be equipped with a permanent supply of electric power that cannot be unplugged, switched off, or reset except by the main power supply circuit for the building and associated equipment or the safety shut-off switch;

(C) Ensure that the continuous electric power to the non-resettable totalizing time meter or fuel meter required under subparagraph (n)(5)(A) may only be shut off for maintenance or safety;

(D) Within 90 days of [*DATE OF ADOPTION*], ensure that each non-resettable totalizing time meter or fuel meter is calibrated and recalibrate the meter annually, thereafter, based on the manufacturer's recommended procedures. If the non-resettable totalizing time meter or fuel meter was calibrated within one year prior to [*DATE OF ADOPTION*], the next calibration shall be

conducted within one year of anniversary date of the prior calibration; and

(E) Monitor and maintain hours of operation records using a:

(i) Calibrated non-resettable totalizing time meter or equivalent method approved in writing by the Executive Officer for the hours per year validation; or

(ii) Calibrated fuel meter or equivalent method approved in writing by the Executive Officer for the annual throughput limit equivalent to hours per year validation.

(6) An owner or operator of a Facility with a Vapor Incinerator that is exempt from the applicable Table 1 NOx Concentration Limits pursuant to paragraph (o)(9) shall record:

(A) The annual throughput using a calibrated fuel meter or equivalent method approved in writing by the Executive Officer; and

(B) Emissions using a source test pursuant to subdivision (l) or by using a default emission factor approved in writing by the Executive Officer.

(7) An owner or operator of a Facility with a Unit subject to the compliance schedule in subparagraphs (d)(2)(B), (d)(2)(C), and (f)(4)(A) shall maintain records of burner replacement, including number of burners and date of installation.

(8) An owner or operator of a Facility with a Unit subject to the compliance schedule in subparagraph (f)(4)(A) shall maintain records of the date the existing post-combustion air pollution control equipment was installed or replaced.

(9) An owner or operator of a Facility with a Gas Turbine complying with the NOx concentration limit pursuant to paragraph (d)(5) shall:

(A) Maintain a daily operating record that includes the actual start and stop time, total hours of operation, and type (liquid or gas) and quantity of the fuel used;

(B) Maintain the operating records for at least five years from the initial date the Gas Turbine complied with the concentration limit pursuant to paragraph (d)(5); and

(C) Make the operating records available to the Executive Officer upon request.

(10) An owner or operator of a Former RECLAIM Facility shall submit a list of Boilers and Process Heaters, identified by device identification number with a description of each Unit, to the Executive Officer identifying which Units will meet the Table 4 Interim NOx and CO Concentration Limits and which Units will meet the Table 4 Interim NOx Concentration Limits for Boilers and Heater pursuant to paragraph (e)(2).

(o) Exemptions

(1) Boilers or Process Heater with a Rated Heat Input Capacity of 2 MMBtu/hour or less

The provisions of this rule shall not apply to an owner or operator of a Facility with a Boiler or Process Heater with a Rated Heat Input Capacity of 2 MMBtu/hour or less that are fired with liquid and/or gaseous fuel and used exclusively for space or water heating and are subject to Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters.

(2) Low-Use Boilers with a Rated Heat Input Capacity of less than 40 MMBtu/hour

An owner or operator of a Facility with a Boiler with a Rated Heat Input Capacity of less than 40 MMBtu/hour that operates 200 hours or less per calendar year, or with an annual throughput limit equivalent to 200 hours per calendar year, shall be exempt from the requirements in:

(A) Subdivisions (d) provided:

(i) The Boiler has an enforceable South Coast AQMD permit conditions that limits the operating hours to 200 hours or the annual throughput equivalent to 200 hours; and

(ii) The Boiler operates in compliance with the permit conditions pursuant to clause (o)(2)(A)(i).

(B) Subdivisions (l) and (m) provided the Unit is not included in an approved B-Cap.

(3) Low-Use Process Heater with a Rated Heat Input Capacity of greater than or equal to 40 MMBtu/hour

An owner or operator of a Facility with a Process Heater with a Rated Heat Input Capacity of greater than or equal to 40 MMBtu/hour that is fired at less than 15 percent of the Rated Heat Input Capacity per calendar year,

shall be exempt from the applicable concentration limits in Table 1, Table 2, and an approved B-Plan.

(4) An owner or operator of a Facility with a FCCU that must bypass the post-combustion air pollution control equipment to conduct Boiler inspections required under California Code of Regulations, Title 8, Section 770(b) shall be exempt from the applicable NOx Concentration Limit and Corresponding CO Concentration Limit during the required Boiler inspections.

(5) FCCU Startup Boilers and Process Heaters

An owner or operator of a Facility with a Boiler or Process Heater which is used only for startup of a FCCU and that Boiler or Process Heater is operated for 200 hours or less per calendar year shall be exempt from the requirements in:

(A) Subdivisions (d) provided:

(i) The Boiler or Process Heater has a South Coast AQMD permit that specifies conditions that limits the operating hours at or less than 200 hours per calendar year; and

(ii) The Boiler or Process Heater operates in compliance with the permit condition pursuant to clause (o)(5)(A)(i).

(B) Subdivisions (l) and (m) provided the Unit is not included in an approved B-Cap.

(6) Startup or Shutdown Boilers and Process Heaters at Sulfuric Acid Plants

An owner or operator of a Facility with a Process Heater used for startup or a Boiler used during startup or shutdown at a Sulfuric Acid Plant that does not exceed 90,000 MMBtu of annual Heat Input per calendar year shall be exempt from the requirements in subdivisions (d), (k), (l), and (m) provided:

(A) The Process Heater or Boiler has a South Coast AQMD permit that specifies conditions that limits the Heat Input to 90,000 MMBtu or lower per calendar year; and

(B) The Process Heater or Boiler operates in compliance with the South Coast AQMD permit condition pursuant to subparagraph (o)(6)(A).

(7) Boiler or Process Heater Operating Only the Pilot

An owner or operator of a Facility with a Boiler or Process Heater operating only the pilot prior to startup or after shutdown shall be exempt from the concentration limits in paragraph (d)(2), Table 1, Table 2, Table 6, an

approved B-Plan, or an approved B-Cap and may exclude those emission from the rolling average calculation pursuant to Attachment A of this rule.

(8) Flares

(A) An owner or operator of a Facility with a Flare that emits less than or equal to 550 pounds of NOx per calendar year shall be exempt from the requirements in subdivisions (d), (f) and (l), provided:

(i) The Flare has enforceable South Coast AQMD permit conditions that limits the emissions to not exceed 550 pounds of NOx per year; and

(ii) The Flare is in compliance with the permit condition pursuant to clause (o)(8)(A)(i).

(B) An owner or operator of a Facility with an open Flare, which is an unshrouded Flare, shall not be required to conduct source testing pursuant to subdivision (l).

(9) Vapor Incinerators

An owner or operator of a Facility with a Vapor Incinerator with a Rated Heat Input Capacity of 2 MMBtu/hour or less that emits:

(A) Less than 100 pounds of NOx per calendar year shall be exempt from the requirements in subdivision (d) provided the Vapor Incinerator:

(i) Has enforceable South Coast AQMD permit conditions that limit NOx emissions to less than 100 pounds of NOx per calendar year through operating hours or annual throughput; and

(ii) Operates in compliance with the permit condition pursuant to clause (o)(9)(A)(i).

(B) Less than 1,000 pounds but more than 100 pounds of NOx per calendar year shall be exempt from the requirements in subdivision (d) until the Unit is replaced or [*TEN YEARS AFTER DATE OF ADOPTION*], whichever is sooner, provided the Vapor Incinerator:

(i) Has enforceable South Coast AQMD permit conditions that limit NOx emissions to less than 1,000 pounds of NOx per calendar year through operating hours or annual throughput; and

(ii) Operates in compliance with the permit condition pursuant to clause (o)(9)(B)(i).

# ATTACHMENT A

## SUPPLEMENTAL CALCULATIONS

(A-1) Rolling Average Calculation for Emission Data Averaging

$$C_{Avg} = \sum_{i=t}^{t+N-1} C_i \Big/ N$$

Where:

$C_{Avg}$ = The average emission concentration at time $t$

$t$ = Time of average concentration (hours)

$C_i$ = The measured or calculated concentration for a Unit with a CEMS at the $i^{th}$ subset of data; one-hour for a Unit with an averaging time of 24 hours or less and 24-hour for a Unit with an averaging time of greater than 24 hours[1]

$N$ = Averaging time (hours).

[1] As calculated pursuant to South Coast AQMD Rule 218.3 – Continuous Emission Monitoring System: Performance Specifications.

(A-2) Interim NOx Emission Rate Calculation

An owner of operator shall calculate interim NOx emission rates as follows:

(A-2.1) Hourly Mass Emissions (lbs/hour)

Sum the actual annual mass emissions of all Boilers and Process Heaters with a Rated Heat Input Capacity of greater than or equal to 40 MMBtu/hour and any Boilers and Process Heaters with a Rated Heat Input Capacity of less than 40 MMBtu/hour that operate a certified CEMS, and divide by 8760 hours for pounds per hour.

(A-2.2) Combined Maximum Rated Heat Input Capacity (MMBtu/hour)

Sum the combined maximum Rated Heat Input Capacity for all Boilers and Process Heaters with a Rated Heat Input Capacity of greater than or equal to 40 MMBtu/hour and any Boilers and Process Heaters with a Rated Heat Input Capacity of less than 40 MMBtu/hour that operate a certified CEMS.

(A-2.3) Interim Facility Wide NOx Emission Rate (lbs/MMBtu)

Divide the Hourly Mass Emissions in Section (A-2.1) by the combined Maximum Heat Input in Section (A-2.2) to determine the interim NOx emission rate.

# ATTACHMENT B

## CALCULATION METHODOLOGY FOR THE I-PLAN, B-PLAN, AND B-CAP

The purpose of this attachment is to provide details regarding how key elements of the I-Plan, B-Plan, and B-Cap are calculated. Key calculations provided in this attachment include: Baseline Unit Emissions and Baseline Facility Emissions; Final Phase Facility BARCT Emission Target; Total Facility NOx Emission Reductions; Phase I, Phase II, or Phase III Facility BARCT Emission Target; Phase I, Phase II or Phase III BARCT Equivalent Mass Emissions for a B-Plan; and Phase I, Phase II, or Phase III BARCT B-Cap Annual Emissions for a B-Cap.

(B-1) Baseline Unit Emissions and Baseline Facility Emissions

Baseline Unit Emissions shall be determined by the Executive Officer based on the applicable 2017 NOx Annual Emissions Reporting data, or another representative year, as approved by the Executive Officer, expressed in pounds per year. Baseline Facility Emissions are the sum of all the Baseline Unit Emissions subject to this rule and shall not include Baseline Unit Emissions for Units that are not operational on and after [*DATE OF ADOPTION*].

(B-2) Final Phase Facility BARCT Emission Target

The Final Phase Facility BARCT Emission Target is the Phase II Facility BARCT Emission Target for an I-Plan option with two phases or the Phase III Facility BARCT Emission Target for an I-Plan option with three phases. The Final Phase Facility BARCT Emission Target is used to establish the Phase II or Phase III BARCT Emission Target for a B-Cap. To establish the Final Phase Facility BARCT Emission Target, the owner or operator of a Facility must select if the basis of the emission target for each Unit will be based on Table 1 or Table 2 NOx Concentration Limits. The owner or operator of a Facility shall only select Table 2 Conditional NOx Concentration Limits if the requirements of subparagraphs (d)(2)(A) and (d)(2)(B) for the Conditional NOx Concentration Limits are met or if the Unit is identified in Attachment D. For all other Units, the owner or operator of a Facility shall use Table 1 NOx Concentration Limits as the basis of the Facility BARCT Emission Target. To calculate the Final Phase Facility BARCT Emission Target for B-Cap, the owner or operator of a Facility shall use the Table 1 NOx Concentration Limit for the Units that will be decommissioned.

(B-2.1) The Final Phase Facility BARCT Emission Target for a Facility complying with NOx concentration limits in Table 1, Table 2, an approved B-Plan or an approved B-Cap shall be calculated using the following equation:

$$\text{Final Phase Facility BARCT Emission Target} = \sum_{i=1}^{N} \left( \frac{C_{\text{Table 1 or Table 2}}}{C_{\text{Baseline}}} \times \text{Baseline Unit Emissions} \right)_i$$

Where:

N = Number of included Units in B-Plan or B-Cap

$C_{\text{Table 1 or Table 2}}$ = The applicable NOx concentration limit for each Unit i included in B-Plan or B-Cap

$C_{\text{Baseline}}$ = Representative NOx Concentration as defined in subdivision (c) for Unit i included in B-Plan

Baseline Unit Emissions = Baseline Unit Emissions for Unit i as defined in subdivision (c) and included in the I-Plan, B-Plan or B-Cap as determined pursuant to section (B-1).

(B-3) Calculating Total Facility NOx Emission Reductions

Total Facility NOx Emission Reductions is the total reduction in NOx mass emissions per Facility or Facilities With The Same Ownership that would have been achieved if all Units met the Table 1 or Table 2 NOx Concentration Limits of this rule based on the Baseline Facility Emissions.

(B-3.1) For a Facility complying with NOx Concentration Limits in Table 1 or Table 2, or an approved B-Plan, the Total NOx Emission Reductions is the difference between Baseline Facility Emissions and the Final Phase Facility BARCT Emission Target.

$$\text{Total Facility NOx Emission Reductions} = \text{Baseline Facility Emissions} - \text{Final Phase Facility BARCT Emission Target}$$

(B-3.1) For a Facility complying with NOx concentration limits in an approved B-Cap, the Total NOx Emission Reductions is the difference between Baseline Facility Emissions and the Final Phase Facility BARCT Emission Target with a 10 percent reduction.

$$\text{Total Facility NOx Emission Reductions} = (\text{Baseline Facility Emissions} - \text{Final Phase Facility BARCT Emission Target}) \times 0.9$$

(B-4) Calculating Phase I, Phase II, or Phase III Facility BARCT Emission Target
The Phase I, Phase II, or Phase III Facility BARCT Emission Targets are the total NOx mass emissions per Facility based on the Total Facility NOx Emission Reductions and the Percent Reduction Target of Phase I, Phase II or Phase III of an I-Plan option in Table 6. For a B-Cap, each phase Facility BARCT Emission Targets shall be reduced by 10 percent.

(B-4.1) The Phase I Facility BARCT Emission Target represents the level of NOx emissions that must be achieved based on taking the difference between the Baseline Facility Emissions and applying the selected I-Plan Phase I Percent Reduction Target from Table 6 to the Total NOx Emission Reductions.

$$\text{Phase I Facility BARCT Emission Target}_{\text{B-Plan}} = \text{Baseline Emissions} - (\text{Phase I Percent Reduction Target} \times \text{Total Facility NOx Emission Reductions})$$

(B-4.3) If Phase II is not final phase, Phase II Facility BARCT Emission Target represents the level of NOx emissions that must be achieved based on taking the difference between the Baseline Emissions and applying the selected I-Plan Phase II Percent Reduction Target from Table 6 to the Total NOx Emission Reductions.

$$\text{Phase II Facility BARCT Emission Target}_{\text{B-Plan}} = \text{Baseline Emissions} - (\text{Phase II Percent Reduction Target} \times \text{Total NOx Emission Reductions})$$

(B-4.5) For the final phase, Phase II for the two phase I-Plan or Phase III for the three phase I-Plan, the Phase II or Phase III Final Facility BARCT is the Final Phase Facility BARCT Target as calculated in Section B-2.1.

$$\text{Phase II or Phase III Facility BARCT Emission Target}_{\text{B-Plan}} = \text{Final Phase Facility BARCT Emission Target}$$

(B-5) Calculating Phase I, Phase II, or Phase III BARCT Equivalent Mass Emissions for a B-Plan

The Phase I, Phase II, or Phase III BARCT Equivalent Mass Emissions are the total remaining NOx mass emissions per Facility that incorporates emission reduction strategies designed to meet Phase I, Phase II, or Phase III target reductions in an I-Plan. The Phase I, Phase II, or Phase III BARCT Equivalent Mass Emissions incorporate the Alternative BARCT NOx Limit for each of the Units included in different phases of the I-Plan. The Alternative BARCT NOx Limits are the Unit specific NOx concentration limits that are selected by the owner or operator of a Facility in the B-Plan to achieve the Facility BARCT Emission Targets in the aggregate, where the NOx and CO concentration limits will include the corresponding percent $O_2$ correction based on the averaging time pursuant to Table 1 or paragraph (k)(1), whichever is applicable. For the B-Plan, decommissioned Units shall be removed from the Baseline Facility Emissions and the Facility BARCT Emission Targets.

(B-5.1) For a B-Plan, the Phase I BARCT Equivalent Mass Emissions for all Units included in a B-Plan shall be calculated using the following equation:

$$\text{Phase I BARCT Equivalent Mass Emissions}_{B-Plan} = \sum_{i=1}^{N} \left( \frac{C_{\text{Phase I Alternative BARCT NOx Limit}}}{C_{\text{Baseline}}} \times \text{Baseline Unit Emissions} \right)_i$$

Where:

$N$ = Number of included Units in B-Plan under Phase I

$C_{\text{Phase I Alternative BARCT NOx Limit}}$ = The applicable Alternative BARCT NOx Limit in an approved B-Plan for Unit i included in the B-Plan

$C_{\text{Baseline}}$ = Representative NOx Concentration as defined in subdivision (c) for Unit i included in the B-Plan

Baseline Unit Emissions = Baseline Unit Emissions for Unit i as defined in subdivision (c) and included in the B-Plan.

(B-5.2) For a B-Plan, the Phase II and if applicable, Phase III Equivalent Mass Emissions for each Unit included in a B-Plan shall be calculated using the equation for Section B-5.1, with the use of the Alternative BARCT NOx Limit for that Unit included in Phase II or Phase III, if applicable.

(B-6) Calculating Phase I, Phase II, or Phase III BARCT B-Cap Annual Emissions for a B-Cap

The Phase I, Phase II, or Phase III BARCT B-Cap Annual Emissions are the total remaining NOx mass emissions per Facility that incorporates emission reduction strategies. The Phase I, Phase II, or Phase III BARCT B-Cap Annual Emissions must be at or below the respective Phase I, Phase II, or Phase III Facility BARCT Emission Targets an I-Plan. Under the B-Cap, there are three emission reduction strategies that can be used to meet the Facility BARCT Emission Targets: Establishing an Alternative BARCT NOx Limit for each Unit included in Phase I, Phase II, or Phase III, decommissioning Units, Replacing Units and Reducing Throughput for Units. The Phase I, Phase II, or

Phase III BARCT B-Cap Annual Emissions calculation for the B-Cap acknowledges the three emission reduction strategies for each phase of the I-Plan. The Alternative BARCT NOx Limits are the Unit specific NOx concentration limits that are selected by the owner or operator of a Facility in the B-Cap to achieve the Final Phase Facility BARCT Emission Target in the aggregate,. The emission reductions from Decommission Units shall be incorporated in B-Cap pursuant to section (B-2.2). Other reductions in mass emission reductions to demonstrate that the BARCT B-Cap Annual Emissions include emission reductions from reduced throughput, efficiency, reduced capacity, and any other strategy to reduce mass emissions.

(B-6.1) The Phase I BARCT B-Cap Annual Emissions for each Unit included in a B-Cap shall be calculated using the following equation

$$\text{Phase I BARCT B} - \text{Cap Annual Emissions} = \sum_{i=1}^{N} \left( \frac{C_{\text{Phase I Alternative BARCT NOx Limit}}}{C_{\text{Baseline}}} \times \text{Baseline Unit Emissions} \right)_i + (0_{\text{Decommissioned Units}})_i - (\text{Throughput or Other Reductions})$$

Where:

N = Number of included Units in B-Cap under Phase I

$C_{\text{Phase I Alternative BARCT NOx Limit}}$ = The applicable Alternative BARCT NOx Limit in an approved B-Cap for Unit i included in the B-Cap

$C_{\text{Baseline}}$ = Representative NOx Concentration as defined in subdivision (c) for Unit i included in the B-Cap

Baseline Unit Emissions = Baseline Unit Emissions as defined in subdivision (c) and for Unit i included in the B-Cap

Throughput or Other Reductions =

Emission reductions occurred from other than reducing the concentration limit.

(B-6.2) For a B-Cap, the emission reductions the Phase II and if applicable, Phase III BARCT B-Cap Annual Emissions for each Unit included in a B-Cap shall be calculated using the equation for Section B-6.1, with the use of three emission reduction strategies for Phase II and Phase III, if applicable.

(B-7) Emissions Reductions from Decommissioned Unit

For a B-Cap, emission reductions from decommissioned Units can be used to meet a Phase I, Phase II, or Phase III Facility BARCT Emission Target. The amount of emission reductions from a decommissioned Unit shall be determined using the equation below.

$$\text{Emission Reductions from Decommissioned Units} = \sum_{i=1}^{N} \left( \frac{C_{\text{Table 1}}}{C_{\text{Baseline}}} \times \text{Baseline Unit Emissions} \right)_i$$

Where:

| | | |
|---|---|---|
| $N$ | = | Number of decommissioned Units in B-Cap |
| $C_{\text{Table 1}}$ | = | Table 1 NOx Concentration Limit for Unit i |
| $C_{\text{Baseline}}$ | = | Representative NOx Concentration as defined in subdivision (c) for Unit i included in an approved B-Cap |
| Baseline Unit Emissions | = | Baseline Unit Emissions for Unit i as defined in subdivision (c) and included in an approved B-Cap. |

(B-8) Unit Reductions for Table 2 Conditional NOx and CO Concentration Limits

An owner or operator of a Facility with a Unit in a B-Plan that is demonstrating that the Unit Reduction is less than the thresholds pursuant to clauses (d)(2)(A)(i) or (d)(2)(A)(ii) shall calculate the Unit Reduction using the following equation:

$$\text{Unit Reduction} = \left(1 - \frac{C_{\text{Table 1}}}{C_{\text{Baseline}}}\right) \times \text{Baseline Unit Emissions}$$

Where:

$C_{Table\ 1}$ = The applicable Table 1 NOx Concentration Limit the Unit

$C_{Baseline}$ = Representative NOx Concentration for the Unit

Baseline Unit Emissions = Baseline Unit Emissions.

# ATTACHMENT C
## FACILITIES EMISSIONS BASELINE

(C-1) Baseline Facility Emissions Table C-1 provides the Baseline Mass Emissions for Facilities with six or more Units subject to this rule. Baseline Facility Emissions in Table C-1 are based on 2017 reported emissions for Rule 1109.1 Units. A year other than 2017 was used for Units where the 2017 reported emissions were not representative of normal operations.

**TABLE C-1: Baseline Mass Emissions for Facilities with Six or More Units**

| Facility | Facility ID | Baseline Facility Emissions (2017 or Representative Year) (tons/year) |
|---|---|---|
| AltAir Paramount, LLC | 187165 | 28 |
| Chevron Products Co. | 800030 | 701 |
| Lunday-Thagard Co. DBA World Oil Refining | 800080 | 26 |
| Phillips 66 Company/Los Angeles Refinery | 171109 | 386 |
| Phillips 66 Co/LA Refinery Wilmington PL | 171107 | 462 |
| Tesoro Refining and Marketing Co., LLC – Carson | 174655 | 636 |
| Tesoro Refining and Marketing Co., LLC – Wilmington | 800436 | 674 |
| Tesoro Refining and Marketing Co., LLC – Sulfur Recovery Plant | 151798 | 8 |
| Tesoro Refining and Marketing Co., LLC, Calciner | 174591 | 261 |
| Torrance Refining Company LLC | 181667 | 899 |
| Ultramar Inc. | 800026 | 248 |
| Valero Wilmington Asphalt Plant | 800393 | 5 |

# ATTACHMENT D

## UNITS QUALIFY FOR CONDITIONAL LIMITS IN B-PLAN AND B-CAP

**TABLE D-1: Units That Qualify for Conditional Limits in B-Plan or B-Cap**

| Facility ID | Device ID | Size (MMBtu/hr) |
|---|---|---|
| 171109 | D429 | 352 |
| 171109 | D78 | 154 |
| 174655 | D1465 | 427 |
| 174655 | D419 | 52 |
| 174655 | D532 | 255 |
| 174655 | D63 | 300 |
| 181667 | D1236 | 340 |
| 181667 | D1239 | 340 |
| 181667 | D231 | 60 |
| 181667 | D232 | 60 |
| 181667 | D234 | 60 |
| 181667 | D235 | 60 |
| 181667 | D950 | 64 |
| 800026 | D1550 | 245 |
| 800026 | D6 | 136 |
| 800026 | D768 | 110 |
| 800030 | D643 | 220 |
| 800030 | D82 | 315 |
| 800030 | D83 | 315 |
| 800030 | D84 | 219 |
| 800436 | D1122 | 140 |
| 800436 | D384 | 48 |
| 800436 | D385 | 24 |
| 800436 | D388 | 147 |
| 800436 | D770 | 63 |
| 800436 | D777 | 146 |

**TABLE D-2: Units That Qualify for Conditional Limits in a B-Cap using I-Plan Option 4**

| Facility ID | Device ID | Size (MMBtu/hr) |
|---|---|---|
| 171107 | D220 | 350 |
| 171107 | D686 | 304 |
| 171109 | D429 | 352 |
| 171109 | D78 | 154 |
| 171109 | D79 | 154 |
| 174655 | D250 | 89 |
| 174655 | D33 | 100 |
| 174655 | D419 | 52 |
| 174655 | D421 | 82 |
| 174655 | D532 | 255 |
| 174655 | D539 | 52 |
| 174655 | D570 | 650 |
| 181667 | D1236 | 340 |
| 181667 | D1239 | 340 |
| 181667 | D231 | 60 |
| 181667 | D232 | 60 |
| 181667 | D234 | 60 |
| 181667 | D235 | 60 |
| 181667 | D920 | 108 |
| 181667 | D950 | 64 |
| 800026 | D1550 | 245 |
| 800026 | D378 | 128 |
| 800026 | D429 | 30 |
| 800026 | D430 | 200 |
| 800026 | D53 | 68 |
| 800026 | D6 | 136 |
| 800026 | D768 | 110 |
| 800026 | D98 | 57 |
| 800030 | D453 | 44 |
| 800030 | D643 | 220 |
| 800030 | D82 | 315 |
| 800030 | D83 | 315 |
| 800030 | D84 | 219 |
| 800436 | D1122 | 140 |
| 800436 | D158 | 204 |
| 800436 | D33 | 252 |
| 800436 | D384 | 48 |
| 800436 | D385 | 24 |
| 800436 | D386 | 48 |
| 800436 | D387 | 71 |
| 800436 | D388 | 147 |
| 800436 | D770 | 63 |
| 800436 | D777 | 146 |