## For Discussion Purposes Only

(Adopted August 4, 1989)(Amended December 21, 1990)(Amended July 19, 1991) (Amended November 2, 2018)(PAR 1135 January 7, 2022) (Version 12-03-2021)

# PROPOSED AMENDED RULE 1135. EMISSIONS OF OXIDES OF NITROGEN FROM ELECTRICITY GENERATING FACILITIES

#### [Rule index to be included after amendment]

- (a) Purpose
  - The purpose of this rule is to reduce emissions of oxides of nitrogen  $(NO_x)$  from electric generating units at electricity generating facilities.
- (b) ApplicabilityThis rule shall apply to electric generating units at electricity generating facilities.

### (c) Definitions

- (1) ANNUAL CAPACITY FACTOR means the ratio between the measured heat input (in <a href="MMBTUMMBtu">MMBTUMMBtu</a>) from fuel consumption to an electric generating unit during a calendar year and the potential heat input (in <a href="MMBTUMMBtu">MMBTUMMBtu</a>) to the electric generating unit had it been operated for 8,760 hours during a calendar year at the permitted heat input rating, expressed as a percent. Annual capacity factor does not include heat input of the electric generating unit during <a href="mailto:the-an-Emergency">the-an-Emergency</a> Phase of the California Energy Commission Energy Emergency Response Plan or a Governor-<a href="mailto:declared-Declared-Declared-State">declared-Declared-Declared-Declared-State</a> of Emergency or Energy Emergency.
- (2) BACKUP UNIT means any NO<sub>x</sub> emitting turbine which is used intermittently to produce energy on a demand basis, does not operate more than 1,300 hours per year, is not subject to 40 CFR Part 72, and was a NOx process unit prior to the facility owning or operating the unit becoming a former RECLAIM NOx facility.
- (23) BOILER means any combustion equipment fired with liquid and/or gaseous fuel, which is primarily used to produce steam that is expanded in a turbine generator used for electric power generation.
- (34) COGENERATION TURBINE means any <u>a</u> gas turbine which is designed to generate electricity and useful heat energy at the same time (combined heat and power).

- (4<u>5</u>) COMBINED CYCLE GAS TURBINE means <u>any a gas</u> turbine that recovers heat from the gas turbine exhaust gases for use in a heat recovery steam generator to generate additional electricity.
- (56) DAILY means a calendar day starting at 12 midnight and continuing through 11:59 p.m.
- (67) DUCT BURNER means a device located in the heat recovery steam generator of a gas turbine that combusts fuel and adds heat energy to the turbine exhaust to increase the output of the heat recovery steam generator.
- (78) ELECTRIC GENERATING UNIT means a boiler that generates electric power, a gas turbine that generates electric power with the exception of cogeneration turbines, or a diesel internal combustion engine that generates electric power and is located on Santa Catalina Island with the exception of emergency internal combustion engines and portable engines registered under the California Air Resources Board Statewide Portable Equipment Registration Program (PERP).
- (89) ELECTRICITY GENERATING FACILITY means a facility that is owned or operated by an investor-owned electric utility; is owned or operated by or a publicly owned electric utility and has one or more electric generating units; or has electric generating units with a combined generation capacity of 50 megawatts or more of electrical power for distribution in the state or local electrical grid system. Electricity generating facility does not include landfills, petroleum refineries, or publicly owned treatment works facilities subject to South Coast AQMD Rule 1109.1 Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations, South Coast AQMD Rule 1150.3 Emissions of Oxides of Nitrogen from Combustion Equipment at Landfills, or South Coast AQMD Rule 1179.1 Emission Reductions from Combustion Equipment at Publicly Owned Treatment Works Facilities.
- (10) EMISSION CAP is calculated as the total daily NO<sub>x</sub> emissions in pounds from all boilers at an electricity generating facility, expressed in pounds of NO<sub>x</sub>.
- (11) EMISSION RATE is calculated as the total daily NO<sub>x</sub> emissions in pounds from all boilers at an electricity generating facility, divided by the total daily net electric power generated and/or obtained in Megawatt-Hours from all boilers at an electricity generating facility, expressed in pounds of NO<sub>x</sub> per Megawatt-Hour.

- (912) FORCE MAJEURE NATURAL GAS CURTAILMENT means:
  - (A) An interruption in natural gas service due to unavoidable or unforeseeable failure, malfunction, or natural disaster, not resulting from an intentional or negligent act or omission on the part of the owner or operator of an electric generating unit; or
  - (B) <u>aA</u> supply restriction resulting from the application of a California Public Utilities Commission—(CPUC) priority allocation system of Southern California Gas Company Tariff Rule 23, such that the daily fuel needs of an electric generating unit cannot be met with the natural gas available.
- (1013) FORMER RECLAIM NO<sub>x</sub> SOURCE FACILITY for the purpose of this rule means an electric generating unit located at an electricity generating facility or any of its successors that was in the NO<sub>x</sub> Regional Clean Air Incentives Market (RECLAIM) as of January 5, 2018, as established in Regulation XX Regional Clean Air Incentives Market (RECLAIM) (Regulation XX), that has received a final determination notification from the Executive Officer or the owner or operator optsout of RECLAIM, and is no longer in the NO<sub>x</sub> RECLAIM program.
- (11-14) INTERNAL COMBUSTION ENGINE means a reciprocating type engine in which the combustion of a fuel occurs with an oxidizer (usually air) in a combustion chamber to produce mechanical energy.
- (1215) INVESTOR-OWNED ELECTRIC UTILITY means a business organization managed as a private enterprise that operates electric generating unit(s) for electric power distribution primarily in the grid system overseen by the California Public Utilities Commission.
- (13) LANDFILL means an entire disposal facility in a contiguous geographical space where solid waste is placed in or on land.
- (1416) NON-RECLAIM NO<sub>x</sub> SOURCE FACILITY for the purpose of this rule-means a<sub>n</sub> electric generating unit located at an electricity generating facility or any of its successors that was not in the NO<sub>x</sub> RECLAIM as of January 5, 2018, as established in Regulation XX.
- (1517) OXIDES OF NITROGEN (NO<sub>x</sub>) EMISSIONS means the sum of nitric oxides and nitrogen dioxides emitted, collectively expressed as nitrogen dioxide emissions.
- (16) PETROLEUM REFINERY means a facility identified by the North American Industry Classification System Code 324110, Petroleum Refineries.

- (4718) PUBLICLY OWNED ELECTRIC UTILITY means a special-purpose district or other jurisdiction, including municipal districts or municipalities, that operates electric generating unit(s) for electric power distribution, either partially or totally, to residents of that district or jurisdiction.
- (18) PUBLICLY OWNED TREATMENT WORKS means wastewater treatment or reclamation plants owned and operated by a public entity, including all operations within the boundaries of the wastewater and sludge treatment plant.
- (19) RECLAIM NO<sub>x</sub> SOURCE FACILITY for the purpose of this rule means an electric generating unit located at an electricity generating facility or any of its successors that is in the NOx RECLAIM as of January 5, 2018, as established in Regulation XX and is still in RECLAIM on the relevant date.
- (20) SCAQMD-WIDE DAILY LIMITS means the daily emissions limits applicable to any electricity generating facility consisting of an emissions cap and/or an emissions rate.
  - (A) EMISSIONS CAP is expressed in pounds of NO<sub>\*</sub> and calculated as the total daily NO<sub>\*</sub> emissions in pounds from all boilers at an electricity generating facility.
  - (B) EMISSIONS RATE is expressed in pounds of NO<sub>\*</sub> per Megawatt-Hour and calculated as the total daily NO<sub>\*</sub> emissions in pounds from all boilers at an electricity generating facility, divided by the total daily net electric power generated and/or obtained in Megawatt-Hours from all boilers at an electricity generating facility. NO<sub>\*</sub> emissions during start-ups and shutdowns, up to a maximum of 12 hours for each event, shall not be included in the determination of the emissions rate for an electricity generating facility if five or fewer boilers are in operation during this period.
- (2120) SHUTDOWN—means the time period during which an electric generating unit begins reducing load and ending in a period of zero fuel flow or as otherwise defined in the SCAQMD permit is as defined in South Coast AQMD Rule 429.2—Startup and Shutdown Exemption Provisions for Oxides of Nitrogen from Electricity Generating Facilities (Rule 429.2).
- (2221) SIMPLE CYCLE GAS TURBINE means any stationary combustion turbine that does not recover heat from the combustion turbine exhaust gases to heat water or generate steam.

- (2322) START UP STARTUP means the time period that begins when an electric generating unit-begins combusting fuel after a period of zero fuel flow and ends when the electric generating unit generates electricity for sale over the grid for power distribution, or as otherwise defined in the SCAQMD permit is as defined in South Coast AQMD Rule 429.2.
- (2423) TUNING means adjusting, optimizing, rebalancing, or other similar operations to an electric generating unit or an associated control device or as otherwise defined in the SCAQMD pPermit to Operate. Tuning does not include normal operations to meet load fluctuations.

#### (d) Emissions Limits

- Notwithstanding the exemptions contained in Rule 2001 Applicability, subdivision (j)—Rule Applicability and its accompanying Table 1: Existing Rules Not Applicable to RECLAIM Facilities for Requirements Pertaining to NO<sub>x</sub> Emissions, oOn and after January 1, 2024, or when required by a permit to operate issued to effectuate the requirements in this rule, whichever occurs first, the owner or operator of an electricity generating facility shall not operate a boiler or gas turbine in a manner that exceeds the NO<sub>x</sub> and ammonia emissions limits listed in Table 1: Emissions Limits for Boilers and Gas Turbines, where:
  - (A) Boilers and gas turbines for which the owner or operator has applied for <u>pP</u>ermits to <u>eC</u>onstruct after November 2, 2018 shall average the NO<sub>x</sub> and <u>ammonia</u> emissions limits in Table 1 over a 60-minute rolling average.
  - (B) Boilers and gas turbines installed or for which the owner or operator has applied for pPermits to eConstruct prior to November 2, 2018 shall:
    - (i) Average the  $NO_x$  and ammonia emissions limits in Table 1 over a 60-minute rolling average; or
    - (ii) Retain the averaging time requirements specified on <u>in</u> the <u>SCAQMD pP</u>ermit to <u>Operate</u> as of November 2, 2018.

Oxygen **Ammonia Equipment Type**  $NO_x (ppmv)^1$ Correction <del>(ppmv)</del> (%, dry) 5 5 3 Boiler Combined Cycle Gas Turbine 2 5 15 and Associated Duct Burner Simple Cycle Gas Turbine 2.5 5 15

**Table 1: Emissions Limits for Boilers and Gas Turbines** 

- (2) Electric Generating Units Located on Santa Catalina Island

  The owner or operator of an electricity generating facility located on Santa Catalina

  Island with diesel internal combustion engines shall:
  - (A) By January 1, 2024, meet a facility-wide mass emission limit of 40 tons of NOx annually, including mass emissions from startups and shutdowns;
  - (B) Not install or replace any diesel internal combustion engines after January 1, 2024; and
  - (C) On and after January 1, 2026, meet a facility-wide mass emission limit of 13 tons of NO<sub>x</sub> annually, mass emissions from startups and shutdowns.
- (23) Emissions Limits for Diesel Internal Combustion Engines
  - (A) Notwithstanding the exemptions contained in Rule 2001—Applicability, subdivision (j)—Rule Applicability and its accompanying Table 1: Existing Rules Not Applicable to RECLAIM Facilities for Requirements Pertaining to NO<sub>x</sub> Emissions, on On and after January 1, 2024, or when required by a permit to operate issued to effectuate the requirements in this rule, whichever occurs first, the owner or operator of an electricity generating facility located on Santa Catalina Island shall not operate a diesel internal combustion engine in a manner that exceeds the NO<sub>x</sub>, ammonia, carbon monoxide, volatile organic compounds, and particulate matter emissions

<sup>&</sup>lt;sup>1</sup>—The NO<sub>\*</sub> emission limits in Table 1 shall not apply during start up, shutdown, and tuning.

- limits listed in Table 2: Emissions Limits for Diesel Internal Combustion Engines.
- (B) Diesel internal combustion engines installed prior to November 2, 2018 may retain the averaging time requirements specified on in the SCAQMD Permit to Operate as of November 2, 2018.

**Table 2: Emissions Limits for Diesel Internal Combustion Engines** 

NO <sub>x</sub> (ppmv) <sup>1,4</sup>	Ammonia (ppmv) <sup>1</sup>	Carbon Monoxide (ppmv) <sup>2,4</sup>	Volatile Organic Compounds (ppmv) <sup>3,4</sup>	Particulate Matter (lbs/ <del>mmbtu</del> <u>MMbtu</u> ) <sup>4</sup>
45	5	250	30	0.0076

<sup>1 -</sup> Corrected to 15% oxygen on a dry basis and averaged over a 60 minute three-hour rolling average using hourly averages computed in accordance with South Coast Rule 218.3 - Continuous Emission Monitoring System: Performance Specifications (Rule 218.3).

- <sup>2</sup> Corrected to 15% oxygen on a dry basis and averaged over 15 minutes
- <sup>3</sup> Measured as carbon, corrected to 15% oxygen on a dry basis, and averaged over sampling time required by the test method
- <sup>4</sup>—The NO<sub>x</sub>, carbon monoxide, and volatile organic compounds emissions limits in Table 2 shall not apply during start up and shutdown
- 4 Applies to both filterable and condensable particulate matter

## (3) Start-up, Shutdown, and Tuning Requirements

The owner or operator of an electricity generating facility shall meet start up, shutdown, and tuning requirements in the SCAQMD permit for each electric generating unit. On and after January 1, 2024, the SCAQMD permit shall include limitations for duration, mass emissions, and number of start-ups, shutdowns, and, if applicable, tunings.

(4) Alternative Compliance Approach for Electric Generating Units Located on Santa Catalina Island

The owner or operator of an electricity generating facility located on Santa Catalina Island with diesel internal combustion engines that elects to meet a mass emission limit of 13 tons of NO<sub>\*</sub> annually by January 1, 2026 in lieu of complying with paragraph (d)(2)(A) shall:

- (A) On or before January 1, 2022, submit a written notification to the Executive Officer that specifies the decision to meet a mass emission limit of 13 tons of NO<sub>x</sub> annually by January 1, 2026; provide a description of the technologies that will be implemented to meet the emission limits; and provide a schedule of submittal of permits to the SCAQMD and any other approving agency, the timeframe to order equipment, and the timeframe for installation of equipment that will demonstrate the facility can meet a mass emission limit of 13 tons of NO<sub>x</sub> annually by January 1, 2026; and
- (B) On or before January 1, 2022, submit an application for a permit condition that limits total annual emissions from the facility to no more than 13 tons of NO<sub>\*</sub> emissions annually after December 31, 2025.

#### (54) Time Extensions

- (A) The owner or operator of an electricity generating facility on Santa Catalina Island may submit a request to the Executive Officer for approval of an time extension of up to three years to meet the facility-wide mass emissions limits specified in paragraphs (d)(2) or (d)(4) subparagraph (d)(2)(C) provided the owner or operator:
  - (i) If electing to comply with paragraph (d)(2), a minimum of two units, excluding units exempt under paragraph (g)(3), shall meet the emissions limits in Table 2 by January 1, 2023; or—
  - (ii) If electing to comply with paragraph (d)(4), the facility shall meet a mass emission limit of 50 tons of NO<sub>\*</sub> annually for compliance year 2022, and meet a mass emission limit of 40 tons of NO<sub>\*</sub> annually for compliance year 2023.
  - (<u>Bi</u>) The owner or operator that elects to submit a request for a time extension shall s<u>S</u>ubmits the request to the Executive Officer at least 365 days before the compliance deadline specified in subparagraph (<u>d</u>)(2)(A)(d)(2)(C) or paragraph (<u>d</u>)(4).; and
  - (Cii) The owner or operator that submits a request for a time extension request shall provide the following information to the Executive Officer: The request includes:
    - (iA) Identification of the <u>electric generating</u> units for which a time extension is needed;
    - (iiB) The reason(s) a time extension is needed;

- (iiiC) Progress of replacing or retrofitting the electric generating units; and
- (D) A description of the technology or technologies that will be used to achieve the facility-wide mass emission limit; and
- (ivE) The length of time requested.
- $(\underline{DB})$  The Executive Officer will approve or disapprove the request for a time extension. Approval or disapproval will be based on the following criteria:
  - (i) The owner or operator prepared the request for a time extension in compliance with subparagraphs (d)(5)(A) through (d)(5)(C) (d)(4)(A); and
  - (ii) The owner or operator provided sufficient details identifying the reason(s) a time extension is needed that demonstrates to the Executive Officer that there are extenuating circumstances that necessitate additional time to complete implementation. Such a demonstration may include, but is not limited to, providing detailed schedules, engineering designs, construction plans, land acquisition contracts, permit applications, and purchase orders.
- $(\underline{\pm C})$  If the Executive Officer approves the request for a time extension, the owner or operator shall:
  - (i) Submit an application at least 18 months before the new compliance deadline for a permit condition that limits total annual emission from the facility to no more than 13 tons of NO<sub>\*</sub> emission annually on and after the new compliance deadline, if electing to comply with paragraph (d)(4); and
  - (ii) Ppay a mitigation fee within 30 days of the date of approval. The mitigation fee shall be \$100,000/year, or any portion of a year, after the compliance date specified in subparagraph (d)(2)(A) (d)(2)(C) or paragraph (d)(4).
- (5) Startup, Shutdown, and Tuning Requirements

The NO<sub>x</sub> emission limits in Table 1 and the NO<sub>x</sub>, carbon monoxide, and volatile organic compounds emissions limits in Table 2 shall not apply during startup and shutdown, pursuant to Rule 429.2, or tuning, if limitations for duration and number of tunings are included in the Permit to Operate.

- (6) City of Glendale
  - (A) Until compliance with the provisions pursuant to paragraph (d)(1) is achieved, the City of Glendale or any of its successors, shall not operate its boilers unless at least one of the following SCAQMD wide daily limits on emissions rate or emissions cap is met:
    - (i) Emissions rate of 0.20 pounds of NO<sub>x</sub> per net Megawatt-Hour. NO<sub>x</sub> emissions during startups and shutdowns of boilers, up to a maximum of 12 hours for each event, shall not be included in the determination of the emissions rate if five or fewer boilers are in operation during this period; or
    - (ii) Emissions cap of 390 pounds of  $NO_x$  per day.
  - (B) Until compliance with paragraph (d)(1) is achieved, the City of Glendale shall not emit total quantities of NO<sub>x</sub> from all boilers in excess of 35 tons of NO<sub>x</sub> per calendar year. If Grayson combined cycle gas turbine Unit 8BC cannot produce electricity because of a breakdown for 30 continuous days or more, the annual NO<sub>x</sub> emissions limit shall be increased by 65 pounds per day, up to a maximum of 41 tons per year.
    - (C) A violation of any requirement specified in subparagraphs (d)(6)(A) or (d)(6)(B) shall constitute a violation of this rule for every applicable unit operating during the exceedance period.
- (76) On or before July 1, 2022, the owner or operator of an electricity generating facility RECLAIM NO<sub>x</sub> facility or former RECLAIM NO<sub>x</sub> facility, excluding the owner or operator of an electricity generating facility on Santa Catalina Island, shall submit an application for a change of permit conditions to reconcile their permit(s) with Rule 1135.
- On or before January 1, 2023, the owner or operator of an electricity generating facility on Santa Catalina Island shall submit an application for a change of permit conditions to reconcile their permit(s) with Rule 1135 or for a Permit to Construct(s) to comply with paragraphs (d)(2) and (d)(3).
- (8) On or before January 1, 2023, the owner or operator a non-RECLAIM NO<sub>x</sub> facility shall submit an application for a change of permit conditions to reconcile their permit(s) with Rule 1135.

- (e) Monitoring, Recordkeeping, and Reporting
  - (1) RECLAIM NO<sub>x</sub> Source Facility

    The owner or operator of each RECLAIM NO<sub>x</sub> source facility subject to Rule 1135 shall comply with South Coast AQMD Rule 2012 Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NO<sub>x</sub>) Emissions to demonstrate compliance with the NO<sub>x</sub> emissions limits of this rule.
  - The owner or operator of each former RECLAIM NO<sub>x</sub> source facility and non-RECLAIM NO<sub>x</sub> facility subject to Rule 1135, shall comply with South Coast AQMD Rule 2012—Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NO<sub>x</sub>) Emissions—Rule 218—Continuous Emission Monitoring, South Coast AQMD Rule 218.1—Continuous Emission Monitoring Performance Specifications, South Coast AQMD Rule 218.2—Continuous Emission Monitoring System: General Provisions, South Coast AQMD Rule 218.3—Continuous Emission Monitoring System: Performance Specifications, and 40 CFR Part 75 to demonstrate compliance with the NO<sub>x</sub> emissions limits of this rule.5 excluding the following:
    - (A) Paragraphs (c)(3) through (c)(8), reporting and Super Compliant facilities;
    - (B) Subparagraphs (d)(2)(B) through (d)(2)(E), reporting and emission factors;
    - (C) Subdivision (e), NO<sub>x</sub> Process Units;
    - (D) Paragraphs (g)(5) through (g)(8), reporting;
    - (E) Paragraphs (h)(1), (h)(2), and (h)(4) through (h)(6), reporting and mass emissions;
    - (F) Subdivisions (i), (k), and (l), Recordkeeping, Exemptions, and Appeals; and
    - (G) Reported Data and Transmitting/Reporting Frequency requirements from Appendix A "Protocol for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen (NO<sub>\*</sub>) Emissions."
  - (3) Non-RECLAIM NO<sub>\*</sub> Source

The owner or operator of a non-RECLAIM NO<sub>\*</sub> source subject to Rule 1135 shall comply with the following provisions to demonstrate compliance with the NO<sub>\*</sub> emissions limits of this rule:

- (A) 40 CFR Part 75 and calculating NO<sub>\*</sub> in ppmv pursuant to SCAQMD Rule 218 Continuous Emission Monitoring; or
- (B) SCAQMD Rule 218 Continuous Emission Monitoring.

- (3) Backup Units
  - <u>Until July 1, 2026, the owner or operator of a backup unit is not subject to paragraph</u> (e)(2), provided that the owner or operator, for each backup unit:
  - (A) <u>Install, maintain, and operate a totalizing fuel meter or any device approved</u> by the Executive Officer to be equivalent in accuracy, reliability, reproducibility, and timeliness, to measure quarterly fuel usage;
  - (B) Conduct annual source testing to demonstrate compliance with the NO<sub>x</sub> emission limits as specified on the Permit to Operate according to South Coast AQMD Method 100.1 Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling, South Coast AQMD Method 7.1 Determination of Nitrogen Oxide Emissions from Stationary Sources, U.S. EPA Method 20 Nitrogen Oxides from Stationary Gas Turbines; or U.S. EPA Method 7E Nitrogen Oxide Instrumental Analyzer;
  - (C) Conduct the initial source test pursuant to subparagraph (e)(3)(B) within six months from the time the facility becomes a former RECLAIM NO<sub>x</sub> facility or within one year from the date of the last source test, whichever is later;
  - (D) Submit a source test protocol to the Executive Officer for written approval at least 60 days before the scheduled date of the source test(s) required in subparagraphs (e)(3)(B) and (e)(3)(C). The source test protocol shall include the following:
    - (i) Brief descriptions of the unit to be tested and process;
    - (ii) Operating conditions under which the test(s) will be conducted;
    - (iii) Planned sampling parameters, including a process schematic diagram showing the ports and sampling locations, with the dimensions of ducts and stacks at the sampling locations and distances of flow disturbances from the sampling locations;
    - (iv) Brief description of test, sampling, and analytical methods used to measure pollutant, temperature, flow rates, and moisture;
    - (v) Description of calibration and quality assurance procedures; and
    - (vi) Information on equipment, logistics, personnel, and other resources necessary to conduct an efficient and coordinated source test;
  - (E) In lieu of subparagraph (e)(3)(D), a previously approved source test protocol may be used if:

- (i) The unit has not been altered in a manner that requires a permit modification;
- (ii) The permit emission factors or concentration limits or equipmentspecific or category-specific emission rates have not changed since the previous test;
- (iii) The approved source test protocol is representative of the operation and configuration of the unit;
- (iv) The approved source test protocol meets the requirements in clauses (e)(3)(D)(i) through (e)(3)(D)(vi); and
- (v) The approved source test protocol references the test method(s) required in subparagraph (e)(3)(B);
- (F) Submit a report of quarterly NO<sub>x</sub> mass emissions to the Executive Officer, using a format approved by the South Coast AQMD, as calculated using the emission factor specified in the Permit to Operate within 30 days after the end of the first three quarters and 60 days after the end of the fourth quarter of a compliance year;
- (G) Tune-up once a year to manufacturer's specifications;
- (H) Maintain the following records on-site for five years and make this information available to South Coast AQMD upon request:
  - (i) Data collected and calibration records from the totalizing fuel meter or the Executive Officer-approved device as required by subparagraph (e)(3)(A);
  - (ii) Source test protocols and reports as required by subparagraphs (e)(3)(B) and (e)(3)(D) or (e)(3)(E);
  - (iii) Quarterly NO<sub>x</sub> mass emission reports as required by subparagraph (e)(3)(F), including data used to calculate the NO<sub>x</sub> mass emissions; and
  - (iv) Record of each tune-up as required by subparagraph (e)(3)(G); and
- (I) Within six months of becoming a former RECLAIM NO<sub>x</sub> facility, submit a permit application that limits total annual operation time to no more than 1,300 hours per calendar year.
- (4) City of Glendale

The City of Glendale or any of its successors shall demonstrate compliance with paragraph (d)(6) and calculate  $NO_x$  emissions rate in pounds of  $NO_x$  per net

Megawatt-Hour or NO<sub>x</sub> emissions cap in pounds of NO<sub>x</sub> per day and tons of NO<sub>x</sub> per calendar year as established in their approved Continuous Emission Monitoring System (CEMS) Plan.

- (5) Diesel Internal Combustion Engines
  - The owner or operator of each diesel internal combustion engine electric generating unit shall comply with the following provisions:
  - (A) Demonstrate compliance with the carbon monoxide and volatile organic compound emissions limits of this rule pursuant to South Coast AQMD Rule 1110.2 Emissions from Gaseous- and Liquid-Fueled Engines subdivisions (f) Monitoring, Testing, Recordkeeping and Reporting and (g) Test Methods; and
  - (B) Conduct yearly source test for particulate matter emissions according to South Coast AQMD Method 5.1 Determination of Particulate Matter Emissions from Stationary Sources Using a Wet Impingement Train or South Coast AQMD Method 5.2 Determination of Particulate Matter Emissions from Stationary Sources <u>uUsing</u> Heated Probe and Filter to demonstrate compliance with the particulate matter emission limit. The yearly emission limit shall be defined as a period of <u>twelve-12</u> consecutive months determined on a rolling basis with a new <u>twelve-12</u>-month period beginning on the first day of each calendar month;
  - Submit a source test protocol to the Executive Officer for written approval at least 60 days before the scheduled date of the source test(s) required in subparagraph (e)(5)(B). The source test protocol shall include the information specified in clauses (e)(3)(D)(i) through (e)(3)(D)(vi); and
  - (D) In lieu of subparagraph (e)(5)(C), a previously approved source test protocol may be used if the approved source test protocol meets all the criteria specified in clauses (e)(3)(E)(i) through (e)(3)(E)(v).
- (6) <u>Catalytic and Non-Catalytic Control Devices with Ammonia Injection Emissions</u> <u>Limits</u>
  - (A) The owner or operator of each electric generating unit with <u>a catalytic or non-catalytic control devices with ammonia injection</u> shall conduct quarterly source tests to demonstrate compliance with the ammonia emission limit <u>specified in the Permit to Operate</u> according to <u>South Coast AQMD Method 207.1</u> Determination of Ammonia Emissions from

Stationary Sources during the first twelve—12 months of operation of the electric generating unit with a catalytic or non-catalytic control device with ammonia injection and annually thereafter when four consecutive quarterly source tests demonstrate compliance with the ammonia emission limit specified in the Permit to Operate. If an annual test is failed, the owner or operator shall conduct four consecutive quarterly source tests must—to demonstrate compliance with the ammonia emissions limits specified in the Permit to Operate prior to resuming annual source tests.

- (B) In lieu of complying with <u>subparagraph</u> (e)(6)(A), the owner or operator of <u>each—an</u> electric generating unit <u>with a catalytic or non-catalytic control</u> <u>device with ammonia injection</u> may utilize ammonia CEMS certified under an approved S<u>outh Coast AQMD</u> protocol to demonstrate compliance with the ammonia emission limit specified in the Permit to Operate.
- (7) The owner or operator of each former RECLAIM NO<sub>x</sub> source facility and non-RECLAIM NO<sub>x</sub> source facility shall maintain information pursuant to this subdivision at the facility for a period of 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 made available to South Coast AQMD upon request.
- (8) Operating Log Operations Recordkeeping

The owner or operator of each former RECLAIM NO<sub>x</sub> source-<u>facility</u> and non-RECLAIM NO<sub>x</sub> source-<u>facility</u> shall maintain records, in a mannerusing a format approved by the <u>South Coast AQMD</u>, in an operating log on a daily basis, for the following parameter(s) or item(s):

- (A) Time and duration of start-upsstartups and shutdowns;
- (B) Total hours of operation;
- (C) Quantity of fuel consumption;
- (D) Cumulative hours of operation to date for the calendar year;
- (E) Megawatt-hours of electricity produced; and
- (F) Net megawatt--hours electricity produced.
- (f) Use of Liquid Petroleum Fuel
  - (1) Force Majeure Natural Gas Curtailment

The owner or operator of an electric generating unit shall not be subject to Tthe NO<sub>x</sub> emissions limits specified in subdivision (d) shall not apply to an electric

generating unit during force majeure natural gas curtailment when the use of liquid petroleum fuel is required and the electric generating unit may burn liquid petroleum fuel, provided that:

- (A) Within 15 days of each occurrence, the owner or operator of each electricity generating facility submits an affidavit signed by a corporate officer affirming that liquid petroleum fuel was burned due to force majeure natural gas curtailment; and
- (B) Each electric generating unit, when it burns liquid petroleum fuel, emits  $NO_x$  at no more than the applicable unit-specific liquid petroleum fuel  $NO_x$  emission limit specified in the SCAQMD pPermit to Operate.

## (2) <u>Distillate Fuel Oil Readiness Testing</u>

The owner or operator of an electric generating unit shall not be subject to Tthe NO<sub>x</sub> emissions limits specified in subdivision (d) shall not apply to an electric generating unit during distillate fuel oil readiness testing and the electric generating unit may burn liquid petroleum fuel, provided that:

- (A) <u>Distillate Ffuel oil readiness testing does not exceed sixty 60 minutes per week;</u>
- (B) Each electric generating unit, when it burns liquid petroleum fuel, emits NO<sub>x</sub> at no more than the applicable unit-specific liquid petroleum <u>fuel</u> NO<sub>x</sub> emission limit specified in the <del>SCAQMD p</del>Permit to Operate;
- (C) The owner or operator conducts distillate Ffuel oil readiness testing shall only occur after the equipment has reached the emissions limits specified in paragraph (d)(1) while firing on natural gas and shall commence no later than sixty 60 minutes after achieving emissions limits specified in paragraph (d)(1) while firing on natural gas; and
- (D) Each <u>distillate fuel oil</u> readiness test <u>shall</u>-commences with the equipment switching from natural gas to liquid petroleum fuel and concludes with the equipment switching from liquid petroleum fuel to natural gas.

## (3) Source Testing

The owner or operator of an electric generating unit shall not be subject to Tthe NO<sub>x</sub> emissions limits specified in subdivision (d) shall not apply to an electric generating unit when it burns liquid petroleum fuel during emissions source testing, and the electric generating unit may burn liquid petroleum fuel for emissions source testing as specified by South Coast AQMD rules or the Permit to Operate, including

initial certifications of Continuous Emissions Monitoring Systems (CEMS) and semi-annual Relative Accuracy Test Audits (RATAs). The owner or operator shall only conduct RATA tests shall only be conducted concurrently with distillate fuel oilweekly readiness testing.

#### (g) Exemptions

(1) Combined Cycle Gas Turbines

The owner or operator of a combined cycle gas turbine installed prior to November 2, 2018 shall not be subject to paragraph (d)(1) for that combined cycle gas turbine, provided that:

- (A) The <u>SCAQMD pPermit to Operate</u> as of November 2, 2018 includes a condition limiting the NO<sub>x</sub> concentration to 2.5 ppmv NO<sub>x</sub> or less averaged over 60 minutes at 15% percent oxygen on a dry basis; and
- (B) <u>The NO<sub>x</sub> and ammonia limits, averaging times, and <u>start-up startup</u>, shutdown, and, <u>if applicable</u>, tuning requirements specified on the <u>SCAQMD pPermit to Operate</u> as of November 2, 2018 are retained.</u>
- Once-Through-Cooling Electric Generating Units to Be Retired

  <u>Until December 31, 2029, The the</u> owner or operator of an electric generating unit subject to the Clean Water Act Section 316(b) shall not be subject to paragraph (d)(1) for that electric generating unit, provided that:
  - (A) The owner or operator retires the electric generating unit on or before the compliance date set forth in Table 1 of Section 2(B) of the State Water Resources Control Board's Statewide Water Quality Control Policy on the Use of Coastal Estuarine Waters for Power Plant Cooling (Once-Through-Cooling Policy) implementing Section 316(b) of the Clean Water Act;
  - (AB) The NO<sub>x</sub> and ammonia limits, averaging times, and start-up startup, shutdown, and, if applicable, tuning requirements specified on the SCAQMD pPermit to Operate as of November 2, 2018 are retained;
  - (<u>BC</u>) On or before January 1, 2023, the owner or operator notifies South Coast AQMD of the compliance dates set forth in Table 1 of Section 2(B) of the State Water Resources Control Board's Statewide Water Quality Control Policy on the Use of Coastal Estuarine Waters for Power Plant Cooling (Once-Through-Cooling Policy) implementing Section 316(b) of the Clean Water Act; and

- (<u>CD</u>) Within 3 months of approval of an extension of the compliance date set forth in Table 1 of Section 2(B) of the Once-Through-Cooling Policy, the owner or operator notifies South Coast AQMD of the extension. This extension is not applicable to facilities that have utilized the Modeling and Offset Exemptions in Rule 1304 Exemptions paragraph (a)(2) and the associated replacement electric generating unit is in operation; and
- (D) The owner or operator complies with the compliance date set forth in Table 1 of Section 2(B) of the Once Through Cooling Policy.
- (3) Diesel Internal Combustion Engines

The owner or operator of a diesel internal combustion engine installed prior to November 2, 2018 shall not be subject to paragraph  $\frac{d}{2}\frac{d}{3}$  for that diesel internal combustion engine provided that:

- (A) The SCAQMD pPermit to Operate as of November 2, 2018 includes a condition limiting the NO<sub>x</sub> concentration to 51 ppmv NO<sub>x</sub> or less averaged over 60 minutes at 15%- percent oxygen on a dry basis; and
- (B) The NO<sub>x</sub>, ammonia, carbon monoxide, volatile organic compounds, and particulate matter limits, averaging times, and start-up startup and shutdown requirements specified on the SCAQMD pPermit to Operate as of November 2, 2018 are retained.
- (4) Low-Use
  - (A) Gas Turbines

The owner or operator of a gas turbine installed prior to November 2, 2018 shall not be subject to emissions limits specified under paragraph (d)(1) for that gas turbine, provided that the gas turbine:

- (i) Maintains an annual capacity factor of less than twenty-five percent each calendar year;
- (ii) Maintains an annual capacity factor of less than ten percent averaged over three consecutive calendar years on a rolling basis; and
- (iii) Retains the NO<sub>x</sub> and ammonia limits, averaging times, and start-up startup, shutdown, and, if applicable, tuning requirements specified on the SCAQMD pPermit to Operate as of November 2, 2018.
- (B) Boilers

The owner or operator of a boiler installed prior to November 2, 2018 shall not be subject to paragraph (d)(1) for that boiler, provided that the boiler:

- (i) Maintains an annual capacity factor of less than two and one half two-and-one-half percent each calendar year;
- (ii) Maintains an annual capacity factor of less than one percent averaged over three consecutive calendar years on a rolling basis; and
- (iii) Retains the NO<sub>x</sub> and ammonia limits, averaging times, and start up startup and shutdown requirements specified on the SCAQMD Permit to Operate as of November 2, 2018.
- (C) Initial Requirement for Low-Use Exemption

The owner or operator of an electricity generating facility that elects the low-use exemption pursuant to subparagraph (g)(4)(A) or (g)(4)(B) for a gas turbine or boiler shall submit permit applications by July 1, 2022 for each electric generating unit requesting the change of <del>SCAQMD</del>-permit conditions to incorporate the low-use exemption.

- (D) Eligibility for Low-Use Exemption
  Eligibility of the low-use exemption shall be determined annually for each electric generating unit and reported to the Executive Officer no later than March 1 following each reporting year.
- (E) Exceedance of Low-Use Exemption
  - (i) If an electric generating unit with a low-use exemption pursuant to subparagraph (g)(4)(A) or (g)(4)(B) exceeds the annual or three year average annual capacity factor limit, such exceedance shall be a violation of this rule and the owner or operator of that electric generating unit is subject to issuance of a notice of violation each year there is an exceedance for each annual and/or three-year exceedance.
  - (ii) If an electric generating unit with a low-use exemption pursuant to subparagraph (g)(4)(A) or (g)(4)(B) exceeds the annual or three-year average annual capacity factor limit, the owner or operator of that electric generating unit shall:
    - (A) Within six months of the date of reported exceedance of subparagraph (g)(4)(A) or (g)(4)(B), submit complete SCAQMD-permit applications to repower, retrofit, or retire that electric generating unit;

## (Amended November 2, 2018 PAR 1135 January 7, 2021)

- (B) Submit a CEMS Plan within six months from the date of complete SCAQMD-permit application submittal pursuant to subclause (g)(4)(E)(ii)(A); and
- (C) Not operate that electric generating unit in a manner that exceeds the emissions limits listed in Table I after two years from the date of the reported exceedance of subparagraph (g)(4)(A) or (g)(4)(B).
- (5) Internal combustion engines located on Santa Catalina Island are exempt from subdivision (f).