BOARD MEETING DATE: February 5, 2016 AGENDA NO. 31

PROPOSAL: Affirm Amendment to Regulation XX to Allow Use of Certified Emission Levels for Certain Rule 219 Exempt Equipment and Amend Definition of "Standard Gas Conditions" to Conform to Existing Practice

SYNOPSIS: SCAQMD staff is proposing the affirmation of the December 4, 2015 adoption of a specific amendment to the Proposed Amended Regulation XX - Regional Clean Air Incentives Market (RECLAIM). Rule 2012 provisions allowing the use of certified emissions values for Rule 219 equipment emission reporting were presented and adopted as part of the December 4, 2015 Board package, even though the staff report had stated in error that this amendment would not be included. Also, Rule 2011 and 2012 protocol provisions clarifying the calculation of missing data consistent with current practice and other minor clarifications were presented and adopted. While ~~this~~ these amendments ~~was~~ were legally adopted, staff believes the public should be given a clear opportunity to comment on ~~this~~ these amendments. Therefore, staff proposes that the Board affirm ~~this~~ these amendments (If not affirmed, the Board may choose to repeal ~~this~~ these amendments). In addition, SCAQMD staff is proposing to amend Rules 2011 and 2012 only to clarify a definition for "Standard Gas Conditions." This amended definition was inadvertently not included in the December 4, 2015 Board package although it was included in the October, 2015 Set Hearing package.

COMMITTEE: Stationary Source, January 22, 2016, Reviewed

RECOMMENDED ACTIONS:
Adopt the attached resolution:

1. Affirming amendments to Regulation XX, Rule 2012, to allow use of certified emission levels for certain Rule 219 – exempt equipment, and affirming amendments to Regulation XX, Rules 2011 and 2012, to require the use of substitute data for emissions reporting of Rule 219 – exempt equipment for missing data, and affirming amendments to Regulation XX, Rules 2011 and 2012, for other minor clarifications; and

2. Amending Definition of "Standard Gas Conditions" in Rule 2011, Attachment E, and Rule 2012, Attachment F, to conform to existing practice; and
3. Determining that the above two proposals are exempt from the California Environmental Quality Act.

Barry R. Wallerstein, D.Env.
Executive Officer

PMF:JW:JC:GQ:KO

Introduction
The SCAQMD Board adopted the Regional Clean Air Incentives Market (RECLAIM) program in October 1993. The purpose of the RECLAIM program is to reduce NOx and SO_x emissions through a market-based program.

At the December 4, 2015 public hearing, the SCAQMD Board adopted amendments to Regulation XX – RECLAIM to achieve additional NOx reductions. Staff has discovered that although the December 4, 2015 Board package included an amendment allowing use of certified levels of emissions for certain Rule 219 exempt equipment, the Staff Report erroneously stated that this amendment was not being proposed. Therefore, staff proposes that the Board affirm these amendments after the public has an opportunity to comment.

Staff is also proposing amendments of a definition listed in both Rules 2011 and 2012 of "standard conditions" to make it consistent with existing practice. These amendments were inadvertently omitted from the December 4, 2015 Board package although they were included in the October Set Hearing package.

This board letter serves as the Staff Report.

Public Process
These proposals were discussed at the Stationary Source Committee on January 22, 2016.

Proposal

1. **Affirmation of the December 4, 2015 adoption of the Rule 2012 protocol provisions pertaining to Rule 219 equipment emission reporting and Rule 2011 protocol provisions regarding missing data for Rule 219 equipment emission reporting**
   Amendments to ~~Rules 2011 (Appendix A, Ch. 3) and~~Rule 2012 (Appendix A, Ch. 4) to allow an alternative method of emissions reporting for certain equipment exempt from ~~permit~~permitting under Rule 219 were included in the December 4,

2015 public hearing package for RECLAIM. However, the staff report in response to comments erroneously states that these amendments were not being proposed. Emissions from this equipment are currently estimated using default emission factors. The provisions would allow certain Rule 219 equipment to use certified emissions levels. Additionally, the amendments would also require Facility Permit holders to use substitute data for NOx emissions reporting of Rule 219 equipment when valid fuel consumption data has not been obtained. The *italicized print* on pages 14 through 16 of this Chapter is the previously amended provisions recommended to be affirmed.

Amendments to Rule 2011 (Appendix A, Ch.3) to require Facility Permit holders to use substitute data for SOx emissions reporting of Rule 219 equipment when valid fuel consumption data has not been obtained. The *italicized print* on page 9 of this Chapter is the previously amended provisions recommended to be affirmed.

Amendments to Rule 2011 (Appendix A, Ch.3) and Rule 2012 (Appendix A, Ch. 4) to change the term *estimated* in several places on both chapters to *calculated* or *quantified*, because the term *"estimated"* does not accurately describe the results obtained which are calculated based on set formulas. Rule 2011 (Appendix A, Ch. 3): The *italicized print* on pages 3, 6, and 8 of this Chapter is the previously amended provisions recommended to be affirmed. Rule 2012 (Appendix A, Ch. 4): The *italicized print* on pages 4, 11, 13, and 14 of this Chapter is the previously amended provisions recommended to be affirmed.

2. Proposed Amendments to Rules 2011 – Attachment E – Definitions; and 2012 – Attachment F – Definitions

Rules 2011 and 2012 contain requirements for monitoring, recordkeeping, and reporting of emissions of SOx and NOx for RECLAIM sources. The proposed amendment is a clarification of the definition of "Standard Gas Conditions," which was inadvertently omitted from the Board package. Standard Gas Conditions is defined in Rule 2011, Appendix A, Attachment E and Rule 2012, Appendix A, Attachment F as "a temperature of 68 ºF and one atmosphere of pressure." Rule 102 – Definition of Terms, on the other hand, defines standard conditions as "a gas temperature of 60 ºF and a gas pressure of [one atmosphere]." The proposed amendments would resolve this situation by giving each facility operator the option to either apply the 60 ºF standard or the 68 ºF standard. for RECLAIM purposes. This proposed rule change would not significantly alter the current practice of applying standard conditions. The underlined print and ~~strikethrough text~~ on page 6 of Rule 2011, Attachment E and page 5 of Rule 2012, Attachment F is the proposed amended provisions.

Emission Reductions and Cost Effectiveness
The proposed changes to Regulation XX – RECLAIM will not affect emissions and will not require the modification or addition of control equipment. Using the alternative certified emissions value for Rule 219 equipment would involve costs, using the alternative method is only an option, not a requirement.

California Environmental Quality Act (CEQA) Analysis
SCAQMD staff has reviewed the procedures for Rule 219 equipment emission reporting that were included in the December 4, 2015 Board package as well as the currently proposed revisions to the definition of "Standard Gas Conditions." Also, Rule 2011 and 2012 provisions clarifying the calculation of missing data consistent with current practice and other minor clarifications were presented and adopted.

Pursuant to CEQA Guidelines §15002 (k) – General Concepts, and CEQA Guidelines §15061 – Review for Exemption, the SCAQMD staff has determined that it can be seen with certainty that there is no possibility that the proposed project may have any significant effects on the environment, and is therefore exempt pursuant to CEQA Guidelines §15061 - paragraph (b)(3) – "general rule" exemption. This is because allowing the use of certified levels of emissions for reporting on Rule 219 exempt equipment would not change actual emissions, and the clarification of the definition of standard gas conditions and the calculation of missing data represents existing practice. A Notice of Exemption has been prepared and, if the project is approved, will be filed with the county clerks of Los Angeles, Orange, Riverside and San Bernardino counties.

Attachments
1. Proposed Amended Rule 2011 Protocol – Attachment E
2. Proposed Amended Rule 2012 Protocol – Attachment F
3. Amended Rule 2011, Appendix A, Chapter 3 [Note: The *italicized print* on ~~page 9~~pages 3, 6, 8, and 9 of this Attachment is the previously amended provisions recommended to be affirmed]
4. Amended Rule 2012, Appendix A, Chapter 4 [Note: The *italicized print* on pages ~~14 to~~4, 11, and 13 through 16 of this Attachment is the previously amended provisions recommended to be affirmed]
5. Notice of Exemption

ATTACHMENT 1

PROPOSED AMENDED RULE 2011 PROTOCOL - ATTACHMENT E

DEFINITIONS

See page 6 for underline and strikethrough text.

DEFINITIONS

(1) AFTERBURNERS, also called VAPOR INCINERATORS, are air pollution control devices in which combustion converts the combustible materials in gaseous effluents to carbon dioxide and water.

(2) ALTERNATIVE EMISSION FACTOR is a SOx emission value expressed in units of pounds per million standard cubic feet or pounds per thousand gallons derived using the methodology specified in Appendix A, Protocols for Monitoring, Reporting, and Recordkeeping for Oxides of Sulfur (SOx) Emissions, Chapters 3 and 4.

(3) ANNUAL PERMIT EMISSIONS PROGRAM (APEP) is the annual facility permit compliance reporting, review, and fee reporting program.

(4) BOILER is any combustion equipment used to produce steam, including a carbon monoxide boiler. This does not include a process heater that transfers heat from combustion gases to process streams, a waste heat recovery boiler that is used to recover sensible heat from the exhaust of process equipment such as a combustion turbine, or a recovery furnace that is used to recover process chemicals. Boilers used primarily for residential space and/or water heating are not affected by this section.

(5) BURN means to combust any gaseous fuel, whether for useful heat or by incineration without recovery, except for flaring or emergency vent gases.

(6) BYPASS OPERATING QUARTER means each calendar quarter that emissions pass through the bypass stack or duct.

(7) CALCINER is a rotary kiln where calcination reaction is carried out between 1315 ^{o}C to 1480 ^{o}C.

(8) CEMENT KILN is a device for the calcining and clinkering of limestone, clay and other raw materials, and recycle dust in the dry-process manufacture of cement.

(9) CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) is the total equipment required for the determination of concentrations of air contaminants and diluent gases in a source effluent as well as mass emission rate. The system consists of the following three major subsystems:

(A) SAMPLING INTERFACE is that portion of the monitoring system that performs one or more of the following operations: extraction, physical/chemical separation, transportation, and conditioning of a sample of the source effluent or protection of the analyzer from the hostile aspects of the sample or source environment.

(B) ANALYZERS

(i) AIR CONTAMINANT ANALYZER is that portion of the monitoring system that senses the air contaminant and generates a signal output which is a function of the concentration of that contaminant.

(ii) DILUENT ANALYZER is that portion of the monitoring system that senses the concentration of oxygen or carbon dioxide or other diluent gas as applicable, and generates a signal output which is a function of a concentration of that diluent gas.

(C) DATA RECORDER is that portion of the monitoring system that provides a permanent record of the output signals in terms of concentration units, and includes additional equipment such as a computer required to convert the original recorded value to any value required for reporting.

(10) CONTINUOUS PROCESS MONITORING SYSTEM is the total equipment required for the measurement and collection of process variables (e.g., fuel usage rate, oxygen content of stack gas, or process weight). Such CPMS data shall be used in conjunction with the appropriate fuel sulfur limit or fuel sulfur content to determine SOx emissions.

(11) CONTINUOUSLY MEASURE means to measure at least once every 15 minutes except during period of routine maintenance and calibration as specified in 40 CFR Part 60.13(e)(2).

(12) DAILY means a calendar day starting at 12 midnight and continuing through to the following 12 midnight hour.

(13) DIRECT MONITORING DEVICE is a device that directly measures the variables specified by the Executive Officer to be necessary to determine mass emissions of a RECLAIM pollutant and which meets all the standards of performance for CEMS set forth in the protocols for NOx and SOx.

(14) DRYER is equipment that removes substances by heating or other processes.

(15) ELECTRONICALLY TRANSMITTING means transmitting measured data without human alteration between the point/source of measurement and transmission.

(16) EMISSION FACTOR is the value specified in Tables 1 (NOx) or 2 (SOx) of Rule 2002-Baselines and Rates of Reduction for NOx and SOx.

(17) EXISTING EQUIPMENT is any equipment which can emit SOx at a SOx RECLAIM facility, for which on or before (Rule Adoption date) has:

(A) A valid permit to construct or permit to operate pursuant to Rule 201 and/or Rule 203 has been issued; or

(B) An application for a permit to construct or permit to operate has been deemed complete by the Executive Officer; or

(C) An equipment which is exempt from permit per Rule 219 and is operating on or before (Rule Adoption date).

(18) F_d FACTOR is the dry F factor for each fuel, the ratio of the dry gas volume of the products of combustion to the heat content of the fuel (dscf/10^6 Btu).

(19) GAS FLARE is a combustion equipment used to prevent unsafe operating pressures in process units during shut downs and start-ups and to handle miscellaneous hydrocarbon leaks and process upsets.

(20) FLUID CATALYTIC CRACKING UNIT (FCCU) breaks down heavy petroleum products into lighter products using heat in the presence of finely divided catalyst maintained in a fluidized state by the oil vapors. The fluid catalyst is continuously circulated between the reactor and the regenerator, using air, oil vapor, and steam as the conveying media.

(21) FURNACE is an enclosure in which energy in a nonthermal form is converted to heat.

(22) GAS TURBINES are turbines that use gas as the working fluid. It is principally used to propel jet aircraft. Their stationary uses include electric power generation (usually for peak-load demands), end-of-line voltage booster service for long distance transmission lines, and for pumping natural gas through long distance pipelines. Gas turbines are used in combined (cogeneration) and simple-cycle arrangements.

(23) GASEOUS FUELS include, but are not limited to, any natural, process, synthetic, landfill, sewage digester, or waste gases with a gross heating value of 300 Btu per cubic foot or higher, at standard conditions.

(24) HEAT VALUE is the heat generated when one lb. of combustible is completely burned.

(25) HEATER is any combustion equipment fired with liquid and/or gaseous fuel and which transfers heat from combustion gases to water or process streams.

(26) HIGH HEAT VALUE is determined experimentally by colorimeters in which the products of combustion are cooled to the initial temperature and the heat absorbed by the cooling media is measured.

(27) HOT STAND BY is the period of operation when the flow or emission concentrations are so low they can not be measured in a representative manner.

(28) INCINERATOR is equipment that consumes substances by burning.

(29) INTERNAL COMBUSTION ENGINE is any spark or compression-ignited internal combustion engine, not including engines used for self-propulsion.

(30) LIQUID FUELS include, but are not limited to, any petroleum distillates or fuels in liquid form derived from fossil materials or agricultural products for the purpose of creating useful heat.

(31) MASS EMISSION OF SOx in lbs/hr is the measured emission rates of sulfur oxides.

(32) MAXIMUM RATED CAPACITY means maximum design heat input in Btu per hour at the higher heating value of the fuels.

(33) MODEM converts digital signals into audio tones to be transmitted over telephone lines and also convert audio tones from the lines to digital signals for machine use.

(34) MONTHLY FUEL USE REPORTS could be sufficed by the monthly gas bill or the difference between the end and the beginning of the calendar month's fuel meter readings.

(35) NINETIETH (90th) PERCENTILE means a value that would divide an ordered set of increasing values so that at least 90 percent are less than or equal to the value and at least 10 percent are greater than or equal to the value

(36) OVEN is a chamber or enclosed compartment equipped to heat objects.

(37) PEAKING UNIT means a turbine used intermittently to produce energy on a demand basis and does not operate more than 1300 hours per year.

(38) PORTABLE EQUIPMENT is an equipment which is not attached to a foundation and is not operated at a single facility for more than 90 consecutive days in a year and is not a replacement equipment for a specific application which lasts or is intended to last for more than one year.

(39) PROCESS HEATER means any combustion equipment fired with liquid and/or gaseous fuel and which transfers heat from combustion gases to process streams.

(40) PROCESS WEIGHT means the total weight of all materials introduced into any specific process which may discharge contaminants into the atmosphere. Solid fuels charged shall be considered as part of the process weight, but liquid gaseous fuels and air shall not.

(41) RATED BRAKE HORSEPOWER (bhp) is the maximum rating specified by the manufacturer and listed on the nameplate of that equipment.

(42) RATED HEAT INPUT CAPACITY is the heat input capacity specified on the nameplate of the combustion unit. If the combustion unit has been altered or modified such that its maximum heat input is different than the heat input capacity specified on the nameplate, the new maximum heat input shall be considered as the rated heat input capacity.

(43) RECLAIM FACILITY is a facility that has been listed as a participant in the Regional Clean Air Incentives Market (RECLAIM) program.

(44) REMOTE TERMINAL UNIT (RTU) is a data collection and transmitting device used to transmit data and calculated results to the District Central Station Computer.

(45) RENTAL EQUIPMENT is equipment which is rented or leased for operation by someone other than the owner of the equipment

(46) SHUTDOWN is that period of time during which the equipment is allowed to cool from a normal operating temperature range to a cold or ambient temperature.

(47) SOLID FUELS include, but are not limited to, any solid organic material used as fuel for the purpose of creating useful heat.

(48) STANDARD GAS CONDITIONS are defined as one atmosphere of pressure and a temperature of 68 ^{O}F or 60 ^{O}F, provided that one of these temperatures is used throughout the facility~~and one atmosphere of pressure~~.

(49) START-UP is that period of time during which the equipment is heated to operating temperature from a cold or ambient temperature.

(50) SULFURIC ACID PRODUCTION UNIT means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides and mercaptans or acid sludge, but does not include facilities where conversion to sulfuric acid is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds.

(51) TAIL GAS UNIT is a SOx control equipment associated with refinery sulfur recovery plant.

(52) TEST CELLS are devices used to test the performance of engines such as internal combustion engine and jet engines.

(53) TIMESHARING OF MONITOR means the use of a common monitor for several sources of emissions.

(54) TURBINES are machines that convert energy stored in a fluid into mechanical energy by channeling the fluid through a system of stationary and moving vanes.

(55) UNIT OPERATING DAY means each calendar day that emissions pass through the stack or duct.

(56) UNIVERSE OF SOURCES FOR NOx is a list of RECLAIM facilities that emit NOx.

(57) UNIVERSE OF SOURCES FOR SOx is a list of RECLAIM facilities that emit SOx.

(58) AP 42 is a publication published by Environmental Protection Agency (EPA) which is a compilation of air pollution emission rates used to determine mass emission.

(59) ASTM METHOD D1945-81 Method for Analysis of natural gas by gas chromatography.

(60) ASTM METHOD 2622-82 Test Method for sulfur in petroleum products (Xray Spectrographic method)

(61) ASTM METHOD 3588-91 method for calculating colorific value and specific gravity (relative density) of gaseous fuels.

(62) ASTM METHOD 4294-90 test method for sulfur in petroleum products by non-dispersive Xray fluorescence spectrometry.

(63) ASTM METHOD 4891-84 test method for heating value of gases in natural gas range by stoichiometric combustion.

(64) DISTRICT METHOD 2.1 measures gas flow rate through stacks greater than 12 inch in diameter.

(65) DISTRICT METHOD 7.1 colorimetric determination of nitrogen oxides except nitrous oxide emissions from stationary sources by using the phenoldisulfonic acid (pds) procedure or ion chromatograph procedures. Its range is 2 to 400 milligrams NOx (as NO_2 per DSCM).

(66) DISTRICT METHOD 100.1 is an instrumental method for measuring gaseous emissions of nitrogen oxides, sulfur dioxide, carbon monoxide, carbon dioxide, and oxygen.

(67) DISTRICT METHOD 307-91 laboratory procedure for analyzing total reduced sulfur compounds and SO_2.

(68) EPA METHOD 19 is the method of determining sulfur dioxide removal efficiency and particulate, sulfur dioxide and nitrogen oxides emission rates from electric utility steam generators.

(69) EPA METHOD 450/3-78-117 air pollutant emission rate for Military and Civil Aircraft.

ATTACHMENT 2

PROPOSED AMENDED RULE 2012 PROTOCOL - ATTACHMENT F

DEFINITIONS

See page 5 for underline and strikethrough text.

DEFINITIONS

(1) AFTERBURNERS, also called VAPOR INCINERATORS, are air pollution control devices in which combustion converts the combustible materials in gaseous effluents to carbon dioxide and water.

(2) ANNUAL PERMIT EMISSIONS PROGRAM (APEP) is the annual facility permit compliance reporting, review, and fee reporting program.

(3) BOILER should generally be considered as any combustion equipment used to produce steam, including a carbon monoxide boiler. This would generally not include a process heater that transfers heat from combustion gases to process streams, a waste heat recovery boiler that is used to recover sensible heat from the exhaust of process equipment such as a combustion turbine, or a recovery furnace that is used to recover process chemicals. Boilers used primarily for residential space and/or water heating are not affected by this section.

(4) BURN means to combust any gaseous fuel, whether for useful heat or by incineration without recovery, except for flaring or emergency vent gases.

(5) BYPASS OPERATING QUARTER means each calendar quarter that emissions pass through the bypass stack or duct.

(6) CALCINER is a rotary kiln where calcination reaction is carried out between 1315 ^{o}C to 1480 ^{o}C.

(7) CEMENT KILN is a device for the calcining and clinkering of limestone, clay and other raw materials, and recycle dust in the dry-process manufacture of- cement.

(8) CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) is the total equipment required for the determination of concentrations of air contaminants and diluent gases in a source effluent as well as mass emission rate. The system consists of the following three major subsystems:

(A) SAMPLING INTERFACE is that portion of the monitoring system that performs one or more of the following operations: extraction, physical/chemical separation, transportation, and conditioning of a sample of the source effluent or protection of the analyzer from the hostile aspects of the sample or source environment.

(B) ANALYZERS

(i) AIR CONTAMINANT ANALYZER is that portion of the monitoring system that senses the air contaminant and generates a signal output which is a function of the concentration of that contaminant.

(ii) DILUENT ANALYZER is that portion of the monitoring system that senses the concentration of oxygen or carbon dioxide or other diluent gas as applicable, and generates a signal output which is a function of a concentration of that diluent gas.

(C) DATA RECORDER is that portion of the monitoring system that provides a permanent record of the output signals in terms of concentration units, and includes additional equipment such as a computer required to convert the original recorded value to any value required for reporting.

(9) CONTINUOUS PROCESS MONITORING SYSTEM is the total equipment required for the measurement and collection of process variables (e.g., fuel usage rate, oxygen content of stack gas, or process weight). Such CPMS data shall be used in conjunction with the appropriate emission rate to determine NOx emissions.

(10) CONTINUOUSLY MEASURE means to measure at least once every 15 minutes except during period of routine maintenance and calibration, as specified in 40CFR Part 60.13(e)(2).

(11) DAILY means a calendar day starting at 12 midnight and continuing through to the following 12 midnight hour.

(12) DIRECT MONITORING DEVICE is a device that directly measures the variables specified by the Executive Officer to be necessary to determine mass emissions of a RECLAIM pollutant and which meets all the standards of performance for CEMS set forth in the protocols for NOx and SOx.

(13) DRYER is equipment that removes substances by heating or other processes.

(14) ELECTRONICALLY TRANSMITTING means transmitting measured data without human alteration between the point/source of measurement and transmission.

(15) EMISSION FACTOR is the value specified in Tables 1 (NOx) or 2 (SOx) of Rule 2002-Baselines and Rates of Reduction for NOx and SOx.

(16) EMISSION RATE (ER) - is a value expressed in terms of NOx mass emissions per unit of heat input, and derived using the methodology specified in the "Protocol for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NOx) Emissions" Chapter .

(17) EXISTING EQUIPMENT is any equipment which can emit NOx at a NOx RECLAIM facility, for which on or before (Rule Adoption date) has:

(A) A valid permit to construct or permit to operate pursuant to Rule 201 and/or Rule 203 has been issued; or

(B) An application for a permit to construct or permit to operate has been deemed complete by the Executive Officer; or

(C) An equipment which is exempt from permit per Rule 219 and is operating on or before (Rule Adoption date).

(18) F_d FACTOR is the dry F factor for each fuel, the ratio of the dry gas volume of the products of combustion to the heat content of the fuel (dscf/10^6 Btu). F factors are available in 40 CFR Part 60, Appendix A, Method 19.

(19) FLUID CATALYTIC CRACKING UNIT (FCCU) breaks down heavy petroleum products into lighter products using heat in the presence of finely divided catalyst maintained in a fluidized state by the oil vapors. The fluid catalyst is continuously circulated between the reactor and the regenerator, using air, oil vapor, and steam as the conveying media.

(20) FURNACE is an enclosure in which energy in a nonthermal form is converted to heat.

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(23) GASEOUS FUELS include, but are not limited to, any natural, process, synthetic, landfill, sewage digester, or waste gases with a gross heating value of 300 Btu per cubic foot or higher, at standard conditions.

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(32) MAXIMUM RATED CAPACITY means maximum design heat input in Btu per hour at the higher heating value of the fuels.

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(39) PROCESS HEATER means any combustion equipment fired with liquid and/or gaseous fuel and which transfers heat from combustion gases to process streams.

(40) PROCESS WEIGHT means the total weight of all materials introduced into any specific process which may discharge contaminants into the atmosphere. Solid fuels charged shall be considered as part of the process weight, but liquid gaseous fuels and air shall not.

(41) RATED BRAKE HORSEPOWER (bhp) is the maximum rating specified by the manufacturer and listed on the nameplate of that equipment. If not available, then the rated brake horsepower of an internal combustion engine can be calculated by multiplying the maximum fuel usage per unit time, heating value of fuel, equipment

efficiency provided by the manufacturer, and the conversion factor (one brake horsepower = 2,545 Btu).

(42) RATED HEAT INPUT CAPACITY is the heat input capacity specified on the nameplate of the combustion unit. If the combustion unit has been altered or modified such that its maximum heat input is different than the heat input capacity specified on the nameplate, the new maximum heat input shall be considered as the rated heat input capacity.

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(46) SHUTDOWN is that period of time during which the equipment is allowed to cool from a normal operating temperature range to a cold or ambient temperature.

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(48) STANDARD GAS CONDITIONS are defined as one atmosphere of pressure and a temperature of 68 ^{O}F or 60 ^{O}F, provided that one of these temperatures is used throughout the facility~~and one atmosphere of pressure~~.

(49) START-UP is that period of time during which the equipment is heated to operating temperature from a cold or ambient temperature.

(50) SULFURIC ACID PRODUCTION UNIT means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides and mercaptans or acid sludge, but does not include facilities where conversion to sulfuric acid as utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds.

(51) TAIL GAS UNIT is a SOx control equipment associated with refinery sulfur recovery plant.

(52) TEST CELLS are devices used to test the performance of engines such as internal combustion engine and jet engines.

(53) TIMESHARING OF MONITOR means the use of a common monitor for several sources of emissions.

(54) TURBINES are machines that convert energy stored in a fluid into mechanical energy by channeling the fluid through a system of stationary and moving vanes.

(55) UNIT OPERATING DAY means each calendar day that emissions pass through the stack or duct.

(56) UNIVERSE OF SOURCES FOR NOx is a list of RECLAIM facilities that emit NOx.

(57) UNIVERSE OF SOURCES FOR SOx is a list of RECLAIM facilities that emit SOx.

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(60) ASTM METHOD 2622-82 Test Method for sulfur in petroleum products (Xray Spectrographic method)

(61) ASTM METHOD 3588-91 method for calculating colorific value and specific gravity (relative density) of gaseous fuels.

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(66) DISTRICT METHOD 100.1 is an instrumental method for measuring gaseous emissions of nitrogen oxides, sulfur dioxide, carbon monoxide, carbon dioxide, and oxygen.

(67) DISTRICT METHOD 307-91 laboratory procedure for analyzing total reduced sulfur compounds and SO_2.

(68) EPA METHOD 19 is the method of determining sulfur dioxide removal efficiency and particulate, sulfur dioxide and nitrogen oxides emission rates from electric utility steam generators.

(69) EPA METHOD 450/3-78-117 air pollutant emission rate for Military and Civil Aircraft.

ATTACHMENT 3

RULE 2011 PROTOCOL- CHAPTER 3

PROCESS UNITS - PERIODIC REPORTING AND RULE 219 EQUIPMENT

The *italicized print* on pages 3, 6, 8, and 9 of this Chapter is the previously amended provisions recommended to be affirmed.

February 5, 2016

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CHAPTER 3 - PROCESS UNITS - PERIODIC REPORTING

Process units may share fuel meters if each equipment has the same emission factor. This chapter also includes the equations describing the methods used to calculate SO_x process unit emissions and the reporting procedures. The interim reporting period does not apply to process units since existing fuel metering equipment or timers shall be used starting January 1, 1994 for Cycle 1 facilities and July 1, 1994 for Cycle 2 facilities.

A. GENERAL REQUIREMENTS

1. The equipment-specific or category-specific starting emission factor found in Table 2 of Rule 2002 - Allocations for Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx) shall be used for quantifying quarterly mass emissions for a SOx process unit.

2. Instead of using the equipment-specific or category-specific starting emission factor found in Table 2 of Rule 2002, the Facility Permit holder of a process unit may apply to the Executive Officer to use a representative emission factor or alternative emission factor for purposes of calculating SO_x emissions. The alternative emission factor shall be established by the requirements provided in Chapter 6, Subdivision E.

3. The Facility Permit holder of a process unit shall use an emission factor or alternative emission factor to calculate the mass emission according to the methodology specified in Chapter 3, Subdivision B, Paragraph 2. (fuel totalizing meters) or Chapter 3, Subdivision B, Paragraph 3, Subparagraph a (timers).

4. The Facility Permit holder of each SO_x process unit shall use a totalizing fuel meter or timer as applicable and specified in the Facility Permit for each affected equipment to measure and report the variables listed in Tables 3-A and 3-B, respectively, for each equipment.

5. The Facility Permit holder of each SO_x process unit shall monitor, report and maintain the following records on a quarterly basis:

   a. Type and quantity of fuel burned in units of million standard cubic feet per quarter (mmscf per quarter) for gaseous fuels or thousand gallons per quarter (mgal per quarter) for liquid fuels, expressed with three significant figures minimum; or

   b. Total hours of operation.

6. The Facility Permit holder of each SO_x process unit shall also provide any other data necessary for calculating the emission rates of oxides of sulfur as determined by the Executive Officer.

7. Fuel meters and/or timers must be non-resettable and tamper-proof. They shall have seals installed by the meter/timer manufacturer to prove the integrity of the measuring device.

   Meters which are unsealed for maintenance or repairs shall be resealed by an authorized manufacturers representative.

B. EMISSION CALCULATIONS FOR REPORTED DATA

1. Quarterly Mass Emissions for Interim Periods (January 1, 1994 thru December 31, 1994 for Cycle 1 facilities; and July 1, 1994 thru June 30, 1995 for Cycle 2 facilities)

a. Pursuant to Rules 2011(d)(3) and 2011(f)(2), starting January 1, 1994 for Cycle 1 facilities, and starting July 1, 1994 for Cycle 2 facilities, the quarterly emission of each process unit shall be calculated and recorded according to:

$$E_{ip} = \sum_{j=1}^{r} d_j \times EF_{sj} \qquad \text{(Eq.15)}$$

where:

E_{ip} = The quarterly mass emission of sulfur oxides for interim period (lb/quarter).

d_j = The quarterly fuel usage for each type of fuel recorded as mmscf/quarter or mgal/quarter.

EF_{sj} = The starting emission factor used to calculate unit emissions in the initial allocation, as specified in Table 2 of Rule 2002 - Allocations for Oxides of Nitrogen (NO_x) and Oxides of Sulfur (SO_x) (lb/mmscf or lb/mgal,).

r = The number of different types of fuel.

Example calculation: IC engine burning natural gas

Starting Emission factor = 0.60 lb/mmscf
Quarterly fuel usage = 2 mmscf/quarter

E_{ip} = (0.60) x (2.0)
= 1.2 lb/quarter

2. Totalizing Fuel Meter Based Calculations

The Facility Permit holder of each equipment in a SO_x process unit when equipped with a totalizing fuel meter shall use emission factor listed in Table 2 of Rule 2002 or alternative emission factors established according to the methodology provided in Chapter 4 to obtain the quarterly mass emissions according to:

$$E_{EF} = \sum_{k=1}^{n} d_k \times EF_k \qquad \text{Eq.15)}$$

where:

E_{EF} = The quarterly emissions of SO_x obtained using emission factor (lb/quarter.)

d_k = The quarterly fuel usage for each type of fuel (mmscf/quarter or mgal/quarter.)

EF_k = The emission factor as specified in Table 2 of Rule 2002 - Allocations for Oxides of Nitrogen (NO_x) and Oxides of Sulfur (SO_x) (lb/mmscf, lb/mgal or lb/mbbl) or an alternative emission factor proposed by the Facility Permit holder as established from the source test requirement provided in Chapter 4

k = Each type of gaseous or liquid fuel consumed by each process unit throughout the quarter.

n = The total number of different types of fuel consumed by each process unit throughout the quarter

3. Timer-Based Emission Calculations

If the SOx process unit is equipped with a timer, the Facility Permit holder shall *quantify* the quarterly fuel usage for each affected equipment according to Eq. 17 - Eq. 20 and *calculate* the quarterly mass emissions according to Eq. 16 - Eq. 20.

a. Quarterly Fuel Usage for Each Affected SO_x Process Unit

If the SO_x process unit does not measure fuel usage with a fuel meter, the quarterly fuel usage for each affected equipment in a process unit shall be *quantified* according to:

$$d = d_{pu} \times (H/H_{pu}) \qquad \text{(Eq.17)}$$

Where:

d = The quarterly fuel usage of an affected SO_x process unit without a dedicated fuel meter (mmscf/quarter or mgal/quarter).

d_{pu} = The quarterly fuel usage of all SO_x process units at the facility (mmscf/quarter or mgal/quarter).

H = The quarterly heat input of an affected SO_x process unit without a dedicated fuel meter (mmBtu/quarter).

H_{pu} = The quarterly heat input of all SO_x process units at the facility (mmBtu/quarter).

Example Calculation:

d_{pu} = 1,587 mmscf/quarter

H = 5,400 mmBtu/quarter

H_{pu} = 27,000 mmBtu/quarter

$d = d_{pu} \times (H/H_{pu})$

d = 1,587 mmscf/quarter x (5,400 mmBtu/quarter – 27,000 mmBtu/quarter

d = 317.4 mmscf/quarter

The quarterly fuel usage for all SO_x process units at the facility (d_{pu}) shall be calculated according to the following equation:

$$d_{pu} = d_{fac} - d_{major} \quad \text{(Eq.18)}$$

where:

d_{fac} = The quarterly fuel usage of all major sources and SO_x process units at the facility (mmscf/quarter or mgal/quarter).

d_{major} = The quarterly fuel usage of all major SO_x sources at the facility (mmscf/quarter or mgal/quarter).

Example Calculation:

d_{fac} = 58 mmscf/quarter
d_{major} = 42 mmscf/quarter
$d_{pu} = F_{fac} - F_{major}$
$d_{pu} = 58 - 42$
d_{pu} = 16 mmscf/quarter

The quarterly heat input of all SO_x process units at the facility (H_{pu}) shall be calculated according to:

$$H_{pu} = \sum_{i=1}^{n} (R_i \times T_i) \quad \text{(Eq.19)}$$

where:

R_i = The maximum rated heat input capacity of a SO_x process unit (mmBtu/hr).

T_i = The quarterly accumulated operation hours for a SO_x process unit (hr/quarter).

i = Each process unit

n = The total number of SO_x process units at the facility.

Example Calculation:

R_1 = 3.5 mmBtu/hr
R_2 = 2.7 mmBtu/hr
T_1 = 480 hr/quarter
T_2 = 120 hr/quarter

$$H_{pu} = \sum_{i=1}^{2} (R_i \times T_i)$$

H_{pu} = (3.5 x 480) + (2.7 x 120)
H_{pu} = 2004 mmBtu/quarter

The maximum rated heat input capacity of all SO_x process units shall be in units of mmBtu/hr. Since internal combustion engines are usually rated in units of brake horse power, the maximum rated heat input capacity of an engine shall be computed as follows.

R = 0.002545 x bhp / eff (Eq.20)

where:

R = The maximum rated heat input capacity

eff = The manufacturer's rated efficiency @LHV x (LHV/HHV)

= 0.25, if not provided by the operator

bhp = The manufacturer's rated shaft output in brake horse power

Example Calculation:

eff = 0.25
bhp = 75 bhp
R = 0.002545 x bhp / eff
R = 0.002545 x 75/.25
R = 0.7635 mmBtu/hr

If gas turbines are rated in kilowatts, the rating shall be converted to mmBtu/hr by applying the manufacturer's heat rate (in mmBtu/kw-hr). If the manufacturer's heat rate is not available, a default value of 15,000 Btu/kw-hr shall be used.

Example Calculation:

Quarterly fuel usage for an ICE with maximum rated bhp of 90 bhp, 0.25 eff and a boiler rated at 4 mmBtu/hr being served by one fuel totalizer reading 10.5 mmscf. The boiler and ICE burn landfill gas.

I.C.E.= 90 bhp Boiler= 4 mmBtu/hr C_g = 80 ppmv for landfill
Fuel meter reading = F_{pu} = 10.5 mmscf gas

I.C.E.

R = 0.002545 x 90/.25 = 0.916 mmBtu/hr
t = 3 hr/day x 7 days/wk. x 4 wk./mo. x 3 mo/qtr = 252 hr/qtr
H_{ice} = R x t = 0.916 x 252 = 230.8 mmBtu/qtr

Boiler

H_{boiler} = 4 mmBtu/hr x 24 hr./day x 7 day/wk. x 4 wk./mo. x 3 mo/qtr
H_{boiler} = 8064 mmBtu/qtr.
H_{pu} = 230.8 + 8064 = 8294.8 mmBtu/qtr.

$d_{ice} = d_{pu} \times (H_{ice}/H_{pu})$
= 10.5 mmscf/qtr. x (230.8/8294.8)
= .292 mmscf/qtr.

$d_{boiler} = d_{pu} \times (H_{boiler}/H_{pu})$
= 10.5 mmscf/qtr. x (8064/8294.8)
= 10.2 mmscf/qtr.

$E_{ice} = d_{ice} \times C_g \times 0.166$
E_{ice} = .292 mmscf/qtr x 80 ppmv x 0.166
E_{ice} = 3.88 lb/qtr.

$E_{boiler} = d_{boiler} \times C_g \times 0.166$
E_{boiler} = 10.2 mmscf/qtr x 80 ppmv x 0.166
E_{boiler} = 135 lb/qtr.

$E = E_{ice} + E_{boiler}$ = 3.88 + 135 = 138.88 lb/qtr.

C. TOTAL QUARTERLY EMISSIONS CALCULATION FOR ALL SO_x PROCESS UNITS AT THE FACILITY

Quarterly SO_x emissions of all SO_x process units at the facility shall be *quantified* according to:

$$E = \sum_{i=1}^{m} E_{EF} \qquad \text{(Eq.21)}$$

where:

E = The quarterly total emissions of SO_x for all SO_x process units (lb/quarter).

E_{EF} = The quarterly emissions of SO_x obtained using emission factor (lb/quarter).

i = Each process unit

m = The number of process units at the facility.

D. REPORTING PROCEDURES

1. The Facility Permit holder of any SO_x process unit that opts to monitor at the major source monitoring level shall meet the requirements set forth in Chapter 2 - "Major Sources - Continuous Emission Monitoring System."

2. The total recorded quarterly fuel usage data and SO_x emissions in pounds per quarter for all SO_x process units in any facility without RTU shall be recorded in a format approved by the Executive Officer and shall be submitted to the District as part of the Quarterly Certification of Emissions required by Rule 2004.

3. The Facility Permit holder of each SO_x process unit shall maintain daily records of hours of operation or quarterly usage for each SO_x process unit.

4. Any changes made in type of fuel used shall be recorded by the Facility Permit holder.

E. FUEL METER SHARING

1. A single totaling fuel meter shall be allowed to measure and record the fuel usage of more than one equipment in a process unit, provided that each piece of equipment elects for the same emission factor or alternative emission factor as specified in the Facility Permit.

2. Fuel meter sharing for the interim period shall be for those equipment in a process unit with the same emission factor.

F. RULE 219 EQUIPMENT

1. Emission Determination and Reporting Requirements

a. The Facility Permit holder shall determine the emissions for one or more equipment exempt under Rule 219 and report the emissions on a quarterly

basis as part of the Quarterly Certified Emissions report required by Rule 2004. The Facility Permit holder shall be allowed to use the existing fuel totalizer, the monthly fuel billing statement, or any other equivalent methodology to *quantify* their fuel usage for a quarterly period.

b. Quarterly reporting period shall start on January 1, 1994 for Cycle 1 facilities and July 1, 1994 for Cycle 2 facilities.

c. The Facility Permit holder of each equipment shall maintain the quarterly fuel usage data for all equipment exempt under Rule 219 for three years. Such data shall be made available to District staff upon request.

d. The fuel usage for equipment exempt under Rule 219 may be used in conjunction with process units provided that they have the same emission factor.

2. Emission Calculations

The Facility Permit holder shall determine SO_x emissions for equipment exempt under Rule 219 as follows:

$$E_{EF} = \sum_{k=1}^{n} d_k \times EF_k \qquad \text{(Eq.22)}$$

where:

E_{EF} = The quarterly emissions of SO_X obtained using emission factor (lb /quarter).

d_k = The quarterly fuel usage for each type of fuel (mmscf/quarter or mgal/quarter).

EF_k = The emission factor as specified in Table 2 of Rule 2002 - Allocations for Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx) (lb/mmscf, or lb/mgal or lb/mbbl or an alternative emission factor proposed by the Facility Permit holder as established from the source test requirement provided in chapter 4.

k = Each type of gaseous or liquid fuel consumed by each process unit throughout the quarter.

n = The total number of different types of fuel consumed by each process unit throughout the quarter.

3. Missing Data Periods

The Facility Permit holder shall determine SOx emissions for equipment exempt under Rule 219 using the substitute data procedures specified in Subdivision G of this Chapter for any quarter for which the Facility Permit holder did not obtain and record valid fuel consumption data as required by Subdivision F Paragraphs 1 and 2 of this Chapter.

G. SUBSTITUTE DATA PROCEDURES

1. For each process unit or process units using a common fuel meter, elapsed time meter, or equivalent monitoring device, the Facility Permit holder shall provide substitute data as described below whenever a valid quarter of usage data has not been obtained and recorded. Alternative data, based on a back-up fuel meter, elapsed time meter, or equivalent monitoring device, is acceptable for substitution if the Facility Permit holder can demonstrate to the Executive Officer that the alternative system is fully operational during meter down time and within + or - 2% accuracy. The substitute data procedures are retroactively applicable from the adoption date of the RECLAIM program.

2. Whenever data from the process monitor is not available or not recorded for the affected equipment or when the equipment is not operated within the parameter range specified in the Facility Permit, the Facility Permit holder shall calculate substitute data for each quarter, when valid data has not been obtained, according to the following procedures.

    a. For a missing data period less than or equal to one quarter, substitute data shall be calculated using the process unit(s) average quarterly fuel usage for the previous four quarters. If four quarters of data are not available, substitute data shall be calculated as if the facility has no records.

    b. For a missing data period greater than one quarter, substitute data shall be calculated using the process unit(s) highest quarterly fuel usage data for the previous four quarters. If four quarters of data are not available, substitute data shall be calculated as if the facility has no records.

    c. If the facility has no records, substitute data shall be calculated using 100% uptime during the substitution period and the process unit(s) maximum rated capacity and uncontrolled emission factor for each quarter of missing data.

TABLE 3-A

MEASURED VARIABLES FOR ALL SO_x PROCESS UNITS

EQUIPMENT	MEASURED VARIABLES
Any SO_x unit that is not categorized as a major source	1. Fuel usage; or Operating time; 2. Production rate; 3. Fuel sulfur content.

TABLE 3-B

REPORTED VARIABLES FOR ALL SO_X PROCESS UNITS

EQUIPMENT	REPORTED VARIABLES
Any SO_x unit that is not categorized as a major source	Quarterly SO_x emissions from each unit.

ATTACHMENT 4

RULE 2012 PROTOCOL CHAPTER 4

PROCESS UNITS - PERIODIC REPORTING AND RULE 219 EQUIPMENT

The *italicized print* on pages 4, 11, and 13 through 16 of this Chapter is the previously amended provisions recommended to be affirmed

February 5, 2016

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CHAPTER 4 - PROCESS UNITS PERIODIC REPORTING AND RULE 219 EQUIPMENT

Process units are one or more pieces of equipment which are listed in Table 1-C. The process units emissions are reported quarterly as shown in Table 4-A and based primarily on fuel consumption or operating time in conjunction with an emission factor. The requirements and procedures for an emission factor and election conditions for an alternative emission factor or concentration limit shall apply to process units. For equipment designated as exempt from permit in Rule 219 emissions shall be determined according to the methodology specified in this Chapter 4, subdivision F.

Process units and equipment exempt from permit as designated in Rule 219 may share fuel meters if each equipment has the same emission factor. This chapter also includes the equations describing the methods used to calculate NO_X process unit emissions and the reporting procedures. The interim reporting period does not apply to process units since existing fuel metering equipment or timers shall be used starting January 1, 1994 for Cycle 1 facilities and July 1, 1994 for Cycle 2 facilities.

A. MONITORING, REPORTING, AND RECORDKEEPING REQUIREMENTS

1. The category-specific starting emission factor found in Table 1 of Rule 2002 - Allocations for Oxides of Nitrogen (NO_X) and Sulfur (SO_X) shall be used for quantifying quarterly mass emissions for a NO_X process unit.

2. The Facility Permit holder of a process unit may request a category-specific emission rate that is reliable, accurate, and representative for purposes of calculating NO_X emissions. The emission rate shall be determined based on the source testing protocol specified in Chapter 5. The Facility Permit holder of a process unit may apply for a concentration limit for purposes of calculating NO_X emissions.

3. The Facility Permit holder of a process unit shall calculate the mass emissions according to the methodology specified in Paragraph 4.B.2. (totalizing fuel meters) or 4.B.3.a. (timers).

4. The Facility Permit holder of each NO_X Process Unit shall use a totalizing fuel meter or timer as applicable, as specified in the Facility Permit for each NO_X process unit to measure and report the variables listed in Tables 4-A and 4-B, respectively, for each NO_X process unit.

5. Fuel flow measuring devices used for obtaining stack flow in conjunction with F-factors shall be tested, when required, as installed for relative accuracy using reference methods to determine stack flow.

   a. The relative accuracy of the fuel flow meter must be determined using District reference Methods 1-4 and a three-run relative accuracy audit (RAA) at normal operating load. The accuracy of the fuel flow measuring system must be determined using the following equation:

   $$A = (C_m - C_a)/C_a \times 100\% \quad \text{(Eq. 15a)}$$

   where:

   A = accuracy of the fuel flow meter (%)

C_m = average flow rate response (scfh)

C_a = average reference method flow rate (scfh)

The value of fuel flow meter accuracy, as defined in Eq. 15a, shall be less than or equal to 15%.

b. Other acceptable alternatives to the above procedures used to determine the relative accuracy of the facility fuel flow meter or stack flow meter are listed under Chapter 3, Subdivision H.

6. Fuel meters and/or timers have to be non-resettable and tamper-proof. They have to have seals installed by the meter/timer manufacturer to prove the integrity of the measuring device.

Meters which are unsealed for maintenance or repairs shall be resealed by an authorized manufacturers representative.

7. The Facility Permit holder of each NO_x process unit shall monitor, report, and maintain the following records on a quarterly basis:

a. Type and quantity of fuel burned, in units of millions of standard cubic feet per quarter (mmscf per quarter) for gaseous fuels or thousand gallons per quarter (mgal per quarter) for liquid fuels, expressed to at least three significant figures; or

b. Total hours of operation; and

c. Production/Processing/Feed rate.

8. The Facility Permit holder of each NO_x process unit shall also provide any other data necessary for calculating the emission rates of nitrogen oxides as determined by the Executive Officer.

B. EMISSION CALCULATION FOR REPORTING DATA

1. Quarterly Mass Emissions for Interim Periods

Pursuant to Rule 2012 (f) (1), between January 1, 1994 and December 31, 1994 for Cycle 1 facilities, and between July 1, 1994 and June 30, 1995 for Cycle 2 facilities, the monthly emission of each process unit shall be calculated and recorded according to:

$$E_{ip} = \sum_{j=1}^{r} d_j \times EF_{sj} \qquad \text{(Eq.22)}$$

where:

E_{ip} = The quarterly mass emission of nitrogen oxides for interim period (lb/quarter).

d_j = The quarterly fuel usage for each type of fuel recorded as mmscf/quarter or mgal/quarter).

EF_{sj} = The starting emission factor used to calculate unit emissions in the initial allocation, as specified in Table 1 of Rule 2002 - Allocations for Oxides of Nitrogen (NO_X) and Sulfur (SO_X) (lb/mmscf, lb/mgal).

r = The number of different types of fuel consumed per quarter.

j = Each type of fuel.0

Example calculation: Boiler burning natural gas, rated 6 mmBtu/hr, in compliance with Rule 1146
starting year 1994
Emission factor = 49.18 lb/mmscf
Quarterly fuel usage = 1.1 mmscf per quarter

E_{ip} = (49.18) x (1.1)
= 54.1 lb/quarter

Applicable emission factor is also found in Volume II - Supporting Documentation, Appendix II-F - Methodology for NO_X and SO_X Starting and Ending Allocation Factors, Table 2-4 - Startpoint 1994 Emission Factors for Nitrogen Oxides.

2. Totalizing Fuel Meter-Based Emission Calculation

The Facility permit holder shall use an emission factor shown in Table 1 of Rule 2002 or in Table 3-D or an approved equipment-specific or category-specific emission rate for each affected NO_x Process Unit to calculate the quarterly emissions according to:

$$E_k = \sum_{j=1}^{r} d_j \times EF_j \quad \text{(Eq.23)}$$

or

$$E_k = \sum_{j=1}^{r} d_j \times V_j \times ER_j \quad \text{(Eq.24)}$$

where:

E_k = The quarterly emissions of nitrogen oxides (lb/quarter).

d_j = The quarterly fuel usage for each type of fuel recorded by the fuel totalizer (mmscf/quarter or mgal/quarter)

EF_j= The emission factor specified in Table 1 of Rule 2002 - Allocations for Oxides of Nitrogen (NO_X) and Sulfur (SO_X) or specified in Table 3-D (lb/mmscf, lb/mgal). The emission factor found in Table 1 of Rule 2002 may or may not include the appropriate control efficiency.

V_j = The higher heating value of each type of fuel (mmBtu/mmscf or mmBtu/mgal) determined by the Facility Permit holder or assigned from Table 3-D.

ER_j = The equipment-specific or category-specific emission rate; fuel-specific emission rate requested by the Facility Permit holder (lb/mmBtu).

r = The number of different types of fuel consumed per month.

3. Timer-Based Emission Calculations

a. If the NO_x process unit is equipped with a timer, the quarterly fuel usage shall be *quantified* according to Eq. 25, 26 27, and 28 and the quarterly emissions for each affected NO_x process unit shall be calculated according to Eq. 23 and 24.

If the NO_x process unit does not measure fuel with a totalizing fuel meter, the quarterly fuel consumption for each affected equipment shall be *quantified* according to:

$$d = d_{pu} \times (H/H_{pu}) \quad \text{(Eq.25)}$$

where:

d = The quarterly fuel consumption of an affected NO_x process unit without a dedicated fuel meter (mmscf/quarter or mgal/quarter).

d_{pu} = The quarterly fuel consumption of all NO_x process units at the facility (mmscf/quarter or mgal/quarter).

H = The quarterly heat input of an affected equipment without a dedicated fuel meter (mmBtu/quarter).

H_{pu} = The quarterly heat input of all NO_x process units at the facility (mmBtu/quarter).

Example Calculation:

d_{pu} = 1,587 mmscf/quarter
H = 5,400 mmBtu/quarter
H_{pu} = 27,000 mmBtu/quarter
d = d_{pu} x (H/H_{pu})
d = 1,587 mmscf/qtr x (5,400 mmBtu/qtr ÷27,000 mmBtu/qtr)
d = 317.4 mmscf/qtr

The quarterly fuel usage for all the NO_x process units at the facility (d_{pu}) shall be calculated according to:

$$d_{pu} = d_{fac} - (d_{large} + d_{major}) \quad \text{(Eq.26)}$$

where:

d_{fac} = The quarterly fuel usage of all major and large sources and NO_x process units at the facility (mmscf/quarter or mgal/quarter).

d_{major} = The quarterly fuel usage of all major NO_x sources at the facility (mmscf/quarter or mgal/quarter).

d_{large} = The quarterly fuel usage of all large NO_x sources at the facility (mmscf/quarter or mgal/quarter).

Example Calculation:

d_{fac} = 174 mmscf/quarter
d_{major} = 126 mmscf/quarter
d_{large} = 30 mmscf/quarter
d_{pu} = d_{fac} - (d_{large} + d_{major})
d_{pu} = 174 - (126 + 30)
d_{pu} = 18 mmscf/quarter

The quarterly heat input of all the NO_x process units at the facility (H_{pu}) shall be calculated according to:

$$H_{pu} = \sum_{i=1}^{n} (R_i \times T_i) \quad \text{(Eq.27)}$$

where:

R_i = The maximum rated fuel capacity of a NO_x process unit (mmBtu/hr).

T_i = The quarterly accumulated operation hours for a NO_x process unit (hrs/quarter).

n = The total number of NO_x process units at the facility.

Example Calculation:

R_1 = 3.5 mmBtu/hr
R_2 = 2.7 mmBtu/hr
T_1 = 480 hr/quarter
T_2 = 120 hr/quarter

$$H_{pu} = \sum_{i=1}^{2} (R_i \times T_i)$$

H_{pu} = (3.5 x 480) + (2.7 x 120)
H_{pu} = 2004 mmBtu/quarter

The maximum rated heat input capacity of all NO_x process units shall be in units of mmBtu/hr. Since internal combustion engines are usually rated in units of brake horse power, the maximum rated heat input capacity of an engine shall be computed as follows:

R = 0.002545 x bhp / eff (Eq.28)

where:

R = The maximum rated heat input capacity

eff = The manufacturer's rated efficiency @LHV x (LHV/HHV)

= 0.25, if not provided by the operator

bhp = The manufacturer's rated shaft output in brake horse power

Example Calculation:

eff = 0.25
bhp = 75 bhp
R = 0.002545 x bhp / eff
R = 0.002545 x 75/.25
R = 0.7635 mmBtu/hr

If gas turbines are rated in kilowatts, the rating shall be converted to mmBtu/hr by applying the manufacturer's heat rate (in mmBtu/kw-hr). If the manufacturer's heat rate is not available, a default value of 15,000 Btu/kw-hr shall be used.

Example Calculation:

Quarterly natural gas fuel usage for an ICE with maximum rated bhp of 90 bhp, 0.25 eff and a boiler rated at 4 mmBtu/hr is being served by one fuel meter reading 10.5 mmscf. The compliance emission rate of both ICE and boiler is 0.3 lb/mmBtu.

ICE = 90 bhp Boiler= 4 mmBtu/hr
Fuel meter reading = d_{pu} = 10.5 mmscf

I.C.E.
R = 0.002545 x 90/.25 = 0.916 mmBtu/hr
t = 3 hr/day x 7 days/wk. x 4 wk./mo. x 3 mo/qtr = 252 hr/qtr
H_{ice} = R x t = 0.916 x 252 = 230.8 mmBtu/ quarter

Boiler
H_{boiler} = 4 mmBtu/hr x 24 hr./day x 7 day/wk. x 4 wk./mo. x 3 mo/qtr
H_{boiler} = 8064 mmBtu/quarter
H_{pu} = 230.8 + 8064 = 8294.8 mmBtu/qtr

$d_{ice} = d_{pu} \times (H_{ice}/H_{pu})$
= 10.5 mmscf/qtr x (230.8/8294.8)
= .298 mmscf/qtr

$d_{boiler} = d_{pu} \times (H_{boiler}/H_{pu})$
= 10.5 mmscf/qtr x (8064/8294.8)
= 10.2 mmscf/qtr

$E_{ice} = d_{ice} \times V \times ER_c$
= 1050 mmBtu/mmscf x 0.30 lb/mmBtu x .298 mmscf/qtr
= 93.87 lb/qtr
$E_{boiler} = d_{boiler} \times V \times ER_c$
= 10.2 mmscf/qtr x 1050 mmBtu/mmscf x 0.3 lb/mmBtu
= 3213 lb/qtr

$E = E_{ice} + E_{boiler}$ = 93.87 + 3213 lb/qtr = 3307 lb/qtr

4. Concentration Limit based Emissions Calculations

When the Facility Permit holder elects to use the concentration limit, the quarterly mass emission shall be calculated and recorded according to one of the following equations:

a. Use the F-factor approach for oxygen except in cases where enriched oxygen is used, non-fuel sources of carbon dioxide are present (e.g., lime kilns and calciners), or the oxygen content of the stack gas is 19 percent or greater. Process units that are permitted to demonstrate compliance using the procedures in Rule 2012, Appendix A, Chapter 5, Subdivision H shall use the following equation to calculate and record nitrogen oxides mass emission rate even if the oxygen stack gas is 19 percent or greater. The following equation shall be used to calculate and record nitrogen oxides mass emission rate:

$$E_k = PPMV_{O2} \quad [20.9/(20.9 - b)] \times 1.195 \times 10^{-7} \times \sum_{j=1}^{r} (F_{di} \times d_i \times V_i) \qquad \text{(Eq.28a)}$$

where:

E_k = The quarterly mass emission of nitrogen oxides (lb/quarter).

$PPMV_{O2}$ = The RECLAIM concentration limit as listed in the Facility Permit. (ppmv) and based on standardized oxygen concentration in the exhaust stream.

b = The standard concentrations of oxygen as listed in the Facility Permit or as found in Table 3-F. (%).

r = The number of different types of fuel.

j = Each type of fuel.

$F_{d\,j}$ = The oxygen-based dry F factor for oxygen for each type of fuel, the ratio of the dry gas volume of the products of combustion to the heat content of the fuel (dscf/mmBtu) specified in 40 CFR Part 60, Appendix A, Method 19.

d_j = The quarterly fuel usage for each type of fuel recorded by the fuel totalizer (mmscf per quarter or mgal per quarter).

V_j = The higher heating value of the fuel for each type of fuel found in Table 3-D (mmBtu/mmscf or mmBtu/mgal) or determined by a continuous analyzer.

The product (d_j x V_j) shall have units of mmBtu per quarter (mmBtu/quarter).

For non-standard fuels that are not listed in 40 CFR Part 60, Appendix A, Method 19, a constant F-factor and heating value may be used if the Facility Permit holder demonstrates to the Executive Officer that the natural gas, fuel oil, or other fuels have stable F-factors and gross heating values. A stable F-factor or gross heating value is defined as not varying by more than + or - 2.5% from the

proposed constant value. For the fuels listed in 40 CFR 60, Appendix A, Method 19, Table 19-1, the F-factors are assumed to be stable at the value cited in Table 19-1. Any F-factor cited in Regulation XX shall supersede the F-factor in Table 19-1. For fuels not listed in the citations above, but which the Facility Permit holder demonstrates that the source-specific F-factor meets the same stability criteria, periodic reporting of F-factor may be accepted and the adequacy of the frequency of analyses shall be demonstrated by the Facility Permit operator such that the probability that any given analysis will differ from the previous analysis by more than 5% (relative to the previous analysis) or less than 5%. Analysis records shall be maintained, including all charts and laboratory notes.

For non-standard fuels that are not listed in 40 CFR Part 60, Appendix A, Method 19 and do not satisfy the criteria for constant F-factor and heating value, the fuels must be analyzed on a continuous basis using gas chromatographs or other continuous technique that is approved by the Executive Officer. The continuous technique employed shall be capable of providing at a minimum a reading every fifteen-minute period.

b. If the F-factor approach for oxygen cannot be used, use the F-factor approach for carbon dioxide as specified in 40 CFR Part 60, Appendix A, Method 19, except in cases where the carbon dioxide concentration is less than one volume percent dry, non-fuel sources of carbon dioxide are present (e.g., lime kilns and calciners), or non-metered sources of fuel are present (e.g., afterburners). The following equation shall be used to calculate and record nitrogen oxides mass emission rate:

$$E_k = PPMV_{CO2} \times (100/\%CO_2) \times 1.195 \times 10^{-7} \times \sum_{j=1}^{r} (F_{cj} \times d_i \times V_i) \quad \text{(Eq.28b)}$$

Where:

E_k = The quarterly mass emission of nitrogen oxides (lb/quarter).

$PPMV_{CO2}$ = The RECLAIM concentration limit as listed in the Facility Permit (ppmv) and based on standardized carbon dioxide concentration in the exhaust stream.

$\%CO_2$ = The standard concentrations of stack gas carbon dioxide as listed in the Facility Permit.

r = The number of different types of fuel.

j = Each type of fuel.

F_{cj} = The carbon dioxide-based dry F factor for carbon dioxide for each type of fuel, the ratio of the dry gas volume of the products of combustion to the

heat content of the fuel (dscf/mmBtu) specified in 40 CFR Part 60, Appendix A, Method 19.

d_j = The quarterly fuel usage for each type of fuel recorded by the fuel totalizer (mmscf per quarter or mgal per quarter).

V_j = The higher heating value of the fuel for each type of fuel found in Table 3-D (mmBtu/mmscf or mmBtu/mgal) or determined by a continuous analyzer.

For non-standard fuels that are not listed in 40 CFR Part 60, Appendix A, Method 19, a constant F-factor and heating value may be used if the Facility Permit holder demonstrates to the Executive Officer that the natural gas, fuel oil, or other fuels have stable F-factors and gross heating values. A stable F-factor or gross heating value is defined as not varying by more than + or - 2.5% from the proposed constant value. For the fuels listed in 40 CFR 60, Appendix A, Method 19, Table 19-1, the F-factors are assumed to be stable at the value cited in Table 19-1. Any F-factor cited in Regulation XX shall supersede the F-factor in Table 19-1. For fuels not listed in the citations above, but which the Facility Permit holder demonstrates that the source-specific F-factor meets the same stability criteria, periodic reporting of F-factor may be accepted and the adequacy of the frequency of analyses shall be demonstrated by the Facility Permit operator such that the probability that any given analysis will differ from the previous analysis by more than 5% (relative to the previous analysis) or less than 5%. Analysis records shall be maintained, including all charts and laboratory notes.

For non-standard fuels that are not listed in 40 CFR Part 60, Appendix A, Method 19 and do not satisfy the criteria for constant F-factor and heating value, the fuels must be analyzed on a continuous basis using gas chromatographs or other continuous technique that is approved by the Executive Officer. The continuous technique employed shall be capable of providing at a minimum a reading every fifteen-minute period.

c. If the F-factor approach for carbon dioxide cannot be used, the nitrogen oxides mass emission rate shall be determined based on actual monthly stack flow rate from a continuous stack flow monitor and concentration limit at stack conditions as listed in the Facility Permit. The mass emission rate shall be determined by the following equation:

$$E_k = PPMV_{ST} \times 1.195 \times 10^{-7} \times \sum_{j=1}^{N} F_j \qquad \text{(Eq. 28c)}$$

where:

E_k = The quarterly mass emission of nitrogen oxides (lb/quarter).

$PPMV_{ST}$ = The concentration limit at stack condition as listed in the Facility Permit (ppmv).

F_j = Total quarterly stack flow rate (scf/quarter) of stack j.

N = Number of exhaust stacks.

For systems that record hourly exhaust flow rate data, the total quarterly stack flow rate shall be determined by the following equation:

$$F_j = \sum_{i=1}^{M} H_{ij} \qquad \text{(Eq. 28d)}$$

F_j = Total quarterly stack flow rate (scf/quarter) of stack j.

H_{ij} = Hourly stack flow rate (scf/hour) of stack j.

M = Total number of hours for the quarter.

Whenever valid stack flow rate data is not obtained for an hour, the Facility Permit holder shall calculate substitute data using the missing data procedures applicable to flow as set forth in Appendix A, Chapter 3, Subdivision K, Paragraph 2.

C. TOTAL QUARTERLY EMISSIONS CALCULATION FOR ALL NO_x PROCESS UNITS AT THE FACILITY

The quarterly NO_x emissions of all NO_x process units at the facility shall be *quantified* according to:

$$E = \sum_{i=1}^{n} E_i \qquad \text{(Eq.29)}$$

$$E_i = \sum_{j=1}^{m} E_j \qquad \text{(Eq. 30)}$$

where:

E = The total quarterly emissions for all NO_x process units

E_i = The quarterly emission of each NO_X process unit (lb/quarter)

E_j = The quarterly emission of each NO_x process unit per type of fuel (lb/quarter)

i = Each type of affected NO_x process unit

j = Each type of fuel

m = The total number of fuels consumed for each affected NO_x process unit per quarter

n = The total number of NO_x process units at the facility.

Example Calculation:

E_1 = 163.8 lb/quarter
E_2 = 78 lb/quarter
E_3 = 120 lb/quarter

$$E = \sum_{i=1}^{n} E_i = 163.8 + 78 + 120$$

E = 361.8 lb/quarter

D. REPORTING PROCEDURES

1. The emissions data in any facility with an RTU shall be reported to Central Station Computer at the end of any quarter and the data shall be computed to determine the quarterly total emissions for each source using Equations 22 through 28 as appropriate.

2. The total fuel usage data for all NO_x process units in any facility without an RTU shall be recorded in a format approved by the Executive Officer and submitted to the District as part of the Quarterly Certified Report required by Rule 2004.

3. The Facility Permit holder of NO_x process units shall maintain daily records of operation hours or quarterly usage rate for each NO_x process unit.

4. Any changes made in type of fuel used and rated capacity for each source shall be recorded by the Facility Permit holder.

5. The Facility Permit holder of any NO_x process unit that opts to monitor at the large source monitoring level shall meet the requirements set forth in "Chapter 3 Large Sources - Continuous Process Monitoring System (CPMS)".

E. FUEL METER SHARING

1. A single totalizing fuel meter shall be allowed to measure the cumulative fuel usage for more than one equipment provided that each equipment elects for the same emission rate or emission factor as specified in the Facility Permit and that any equipment in a process unit does not use the annual heat input in order to be categorized from a large source to a process unit.

2. One or more equipment in a process NO_x unit shall be allowed to share the fuel totalizing meter with the equipment in a process NO_x unit provided that each equipment elects for the same emission rate or emission factor as specified in the Facility Permit.

3. Fuel meter sharing for the interim period shall be allowed for those equipment in a process unit with the same emission rate or emission factor.

F. RULE 219 EQUIPMENT

1. Emission Determination And Reporting Requirements

a. The Facility Permit holder shall determine the emissions for one or more equipment exempt under Rule 219 and report the emissions on a quarterly basis as part of the Quarterly Certified Emissions Report Certification of Emissions required by Rule 2004. The Facility Permit holder shall be allowed to use the existing fuel totalizer, the monthly fuel billing statement, or any other equivalent methodology to *quantify* their fuel usage for a quarterly period.

b. Quarterly reporting periods shall start on January 1, 1994 for Cycle 1 Facilities and July 1, 1994 for Cycle 2 facilities.

c. The Facility Permit holder of each equipment shall maintain the quarterly fuel usage data for all equipment exempt under Rule 219 for three years. Such data shall be made available to District staff upon request.

d. The fuel usage for equipment exempt under Rule 219 may be used in conjunction with fuel usage for process units provided that they have the same emission factor.

2. Emission Calculations

The Facility Permit holder shall determine NO_x emissions for equipment exempt under Rule 219 as follows:

$$E_{219} = \sum_{i=1}^{n} EFR_i \times d_i \qquad \text{(Eq. 31)}$$

where:

E_{219} = The total emissions for equipment exempt under Rule 219 *quantified* over a quarterly period (lb/quarter).

EFR_i = The equipment-specific or category-specific emission factor for each equipment exempt under Rule 219 equipment. The emission factor can be found in Table 3-D (lb/mmscf or lb/mgal). *Alternatively, for an equipment certified by US EPA, CARB, or SCAQMD as meeting a certain emission level, an appropriate emission factor equivalent to the certified emission level may be used provided the facility complies with the source test or maintenance requirements specified in paragraph 4.*

d_i = The equipment-specific or category-specific fuel usage (mmscf/ quarter or mgal/quarter).

n = The number of equipment exempt under Rule 219.

3. Missing Data Periods

The Facility Permit holder shall determine NO_x emissions for equipment exempt under Rule 219 using the substitute data procedures specified in Subdivision G of this Chapter for any quarter for which the Facility Permit holder did not obtain and record valid fuel consumption data as required by Subdivision F, Paragraphs 1 and 2 of this Chapter.

4. Source Testing and Maintenance

Each equipment exempt under Rule 219 with NO_x emissions determined using an alternative emission factor based on a US EPA, CARB, or SCAQMD certified emission level shall either be periodically source tested pursuant to F.4.a. or maintained pursuant to F.4 b.

a. Source Testing

i. Conduct periodic source tests to verify that emissions are less than or equal to the US EPA, CARB, or SCAQMD certified emission level. Each such source test shall comply with the provisions of Chapter 5 D.1. and D.2.

ii. Each device subject to this source testing requirement shall be tested on the same schedule as specified in Table 5-B for Process Unit with Concentration Limit, except in cases where a facility has multiple devices subject to this source testing requirement, all with the same US EPA, CARB, or SCAQMD certification. In such cases the facility operator may conduct the source testing of at least half of the devices with the same certification each five-year period provided each device is source tested at least once every two successive five-year periods.

iii. *If a source test determines that an equipment exempt under Rule 219 with NO_x emissions quantification using an emission factor equivalent to the US EPA, CARB, or SCAQMD certified emission level has emissions greater than the emission factor used for emission quantification, emissions from that source and all other sources engaged in meter sharing with that source pursuant to subdivision E of this chapter shall quantify emissions using the appropriate equipment-specific or category-specific emission factor in Table 3-D from the start of the quarter in which the source test was conducted through the end of the quarter in which a subsequent source test demonstrates that the source's emissions are less than or equal to the emission factor.*

b. Maintenance

i. *Conduct annual maintenance on the equipment to ensure emissions remain at or below the US EPA, CARB, or SCAQMD certified emission level. Promptly after completing such maintenance, verify that the emissions from each device subject to this maintenance requirement remain at or below the US EPA, CARB, or SCAQMD certified emission level with a portable NOx, CO, and oxygen analyzer according to the Combustion Gas Periodic Monitoring Protocol for the Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and Oxygen from Combustion Sources Subject to South Coast Air Quality Management District Rules 1110.2, 1146, and 1146.1.*

ii. *If an annual maintenance emission check with a portable analyzer determines that an equipment exempt under Rule 219 with NO_x emissions quantification using an emission factor equivalent to the US EPA, CARB, or SCAQMD certified emission level has emissions greater than the emission factor used for emission quantification, emissions from that source and all other sources engaged in meter sharing with that source pursuant to subdivision E of this chapter shall quantify emissions using the appropriate equipment-specific or category-specific emission factor in Table 3-D from the start of the quarter in which the portable analyzer emission check was conducted through the end of the quarter in which a subsequent portable analyzer emission check demonstrates that the source's emissions are less than or equal to the emission factor.*

c. Recordkeeping

Each facility that elects to comply with subdivision 2 by implementing the procedures specified in paragraph 4.a. or 4.b. shall keep records of all testing, maintenance, and verification

conducted pursuant to those paragraphs for at least three years and make such records available to the Executive Officer upon request.

G. SUBSTITUTE DATA PROCEDURES

1. For each process unit or process units using a common fuel meter, elapsed time meter, or equivalent monitoring device, the Facility Permit holder shall provide substitute data as described below whenever a valid quarter of usage data has not been obtained and recorded. Alternative data, based on a back-up fuel meter, elapsed time meter, or equivalent monitoring device, is acceptable for substitution if the Facility Permit holder can demonstrate to the Executive Officer that the alternative system is fully operational during meter down time and within + or - 2% accuracy. The substitute data procedures are retroactively applicable from the adoption date of the RECLAIM program.

2. Whenever data from the process monitor is not available or not recorded for the affected equipment or when the equipment is not operated within the parameter range specified in the Facility Permit, the Facility Permit holder shall calculate substitute data for each quarter, when valid data has not been obtained, according to the following procedures.

    a. For a missing data period less than or equal to one quarter, substitute data shall be calculated using the process unit(s) average quarterly fuel usage for the previous four quarters. If four quarters of data are not available, substitute data shall be calculated as if the facility has no records.

    b. For a missing data period greater than one quarter, substitute data shall be calculated using the process unit(s) highest quarterly fuel usage data for the previous four quarters. If four quarters of data are not available, substitute data shall be calculated as if the facility has no records.

    c. If the facility has no records, substitute data shall be calculated using 100% uptime during the substitution period and the process unit(s) maximum rated capacity and uncontrolled emission factor for each quarter of missing data.

    d. For a process monitor which uses a gas chromatograph or equivalent continuous method to continuously determine the F-factor and higher heating value of the fuel (Rule 2012, Appendix A, Chapter 4, Subdivision B.4.a.i), the Facility Permit holder shall use the stack gas flow rate missing data substitution procedure for major sources (Rule 2011 or 2012, Appendix A, Chapter 2, Subdivision E.2).

TABLE 4-A

MEASURED VARIABLES FOR ALL NO_x PROCESS UNITS

EQUIPMENT	MEASURED VARIABLES
All NO_x process units	1. Fuel usage or exhaust flow rate (for sources with stack flow monitors) or processing/feed rate or operating time 2. Production rate (for sources permitted with emission rates corresponding to the measured variable);

TABLE 4-B

REPORTED VARIABLES FOR ALL NO_x PROCESS UNITS

EQUIPMENT	REPORTED VARIABLES
All NO_x process units	1. Quarterly mass emissions

ATTACHMENT 5

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SUBJECT: **NOTICE OF EXEMPTION FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT**

PROJECT TITLE: **AFFIRM AMENDMENT TO REGULATION XX TO ALLOW USE OF CERTIFIED EMISSION LEVELS FOR CERTAIN RULE 219 EXEMPT EQUIPMENT AND AMEND DEFINITION OF "STANDARD GAS CONDITIONS" TO CONFORM TO EXISTING PRACTICE**

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, the South Coast Air Quality Management District (SCAQMD) is the Lead Agency and has prepared a Notice of Exemption for the project identified above.

SCAQMD staff is proposing the affirmation of the December 4, 2015 adoption of a specific amendment to the Proposed Amended Regulation XX - Regional Clean Air Incentives Market (RECLAIM). Rule 2012 provisions allowing the use of certified emissions values for certain Rule 219 exempt equipment were presented and adopted as part of the December 4, 2015 Board package, even though the staff report had stated in error that this amendment would not be included. While this amendment was legally adopted, staff believes the public should be given a clear opportunity to comment on this amendment. Also, Rule 2011 and 2012 provisions clarifying the calculation of missing data consistent with current practice and other minor clarifications were also presented and adopted. Therefore, staff proposes that the Board affirm these amendments. (If not affirmed, the Board may choose to repeal these amendments.) In addition, SCAQMD staff is proposing to amend Rules 2011 and 2012 to clarify a definition for "Standard Gas Conditions." This amended definition was inadvertently not included in the December 4, 2015 Board package although it was included in the October, 2015 Set Hearing package.

As part of the December 4, 2015 Board package, the Governing Board certified the Final Program Environmental Assessment (PEA) prepared pursuant to CEQA which comprehensively analyzed the environmental impacts that were expected to occur as a result of implementing the amendments to Regulation XX. The project description in the Final PEA contained a general summary of each the proposed changes to the rule language, definitions, and associated protocols. However, the general summary in the Final PEA did not specifically identify any proposed changes to the procedures for Rule 219 equipment emission reporting or to the definition of "Standard Gas Conditions." In the Final PEA, SCAQMD staff examined the original project, which comprised of several changes spanning multiple rules and protocols, and determined that the only portion of the changes to the rules and protocols that would be expected to cause environmental effects upon implementation was the requirement to reduce NOx RTC holdings from certain NOx RECLAIM RTC holders, which was expected to result in physical modifications and resulting environmental impacts. No other proposed changes to the rule language, definitions and associated protocols were identified as having any potential environmental impacts.

The main effect of including the amendments pertaining to the use of certified levels of emissions for certain Rule 219 exempt equipment would result in correcting a problem of emissions being reported for certain Rule 219 exempt equipment that are higher than what is actually emitted

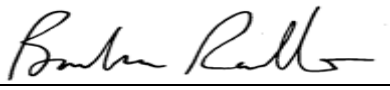
instead allowing certified emission levels to be used. Thus, affirming the inclusion of the use of certified levels of emissions for certain Rule 219 exempt equipment would improve emissions data reporting accuracy without affecting how the affected Rule 219 exempt equipment would operate. Thus, no environmental impacts would be expected to occur if these amendments are affirmed. Alternately, should the Board choose to repeal these amendments, then the emission factors in place prior to the December 4, 2015 public hearing would remain in effect for calculating and reporting emissions from the affected Rule 219 exempt equipment without affecting how this equipment would operate. Likewise, no environmental impacts would be expected to occur if these amendments are repealed.

The main effect of proposing to revise the definition of "Standard Gas Conditions" would give each facility operator the option to either apply the 60 ºF standard or the 68 ºF standard, to align the requirements in Rule 102 with Rule 2011. This proposed rule change would not substantially alter the current practice of applying standard gas conditions and no environmental impacts would be expected to occur if this definition is revised.

Thus, pursuant to CEQA Guidelines §15002 (k) – General Concepts, and CEQA Guidelines §15061 – Review for Exemption, the SCAQMD has determined that it can be seen with certainty that there is no possibility that the proposed project may have any significant effects on the environment, and is therefore exempt. A Notice of Exemption has been prepared. If the project is approved, the Notice of Exemption will be filed with the county clerks of Los Angeles, Orange, Riverside and San Bernardino counties.

Further, SCAQMD staff has reviewed the proposed project and concluded that in the event that the Governing Board chooses to either affirm or repeal the amendments relative to the use of certified levels of emissions for certain Rule 219 exempt equipment and to modify the definition of "Standard Gas Conditions," none of these actions constitute: 1) significant new information; 2) a substantial increase in the severity of an environmental impact; or, 3) provide new information of substantial importance relative to the analysis in the Final PEA. In addition, the proposed project would not create new, avoidable significant effects.

Any questions regarding this Notice of Exemption should be sent to my attention at the above address. I can also be reached at (909) 396-2716. Mr. Gary Quinn is also available at (909) 396-3121 to answer any questions regarding the proposed amendments.

Date: January 28, 2016 **Signature:** 

Barbara Radlein
Program Supervisor, CEQA Section
Planning, Rule Development, & Area Sources

Reference: California Code of Regulations, Title 14

NOTICE OF EXEMPTION

To:	County Clerks Counties of Los Angeles, Orange, Riverside and San Bernardino	**From:**	South Coast Air Quality Management District 21865 Copley Drive Diamond Bar, CA 91765

Project Title:
Affirm Amendment to Regulation XX to Allow Use of Certified Emission Levels for Certain Rule 219 Exempt Equipment and Amend Definition of "Standard Gas Conditions" to Conform to Existing Practice

Project Location:
South Coast Air Quality Management District (SCAQMD) area of jurisdiction consisting of the four-county South Coast Air Basin (Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties), and the Riverside County portions of the Salton Sea Air Basin and the Mojave Desert Air Basin.

Description of Nature, Purpose, and Beneficiaries of Project:
SCAQMD staff is proposing the affirmation of the December 4, 2015 adoption of a specific amendment to the Proposed Amended Regulation XX - Regional Clean Air Incentives Market (RECLAIM). Rule 2012 provisions allowing the use of certified emissions values for certain Rule 219 exempt equipment were presented and adopted as part of the December 4, 2015 Board package, even though the staff report had stated in error that this amendment would not be included. While this amendment was legally adopted, staff believes the public should be given a clear opportunity to comment on this amendment. Also, Rule 2011 and 2012 provisions clarifying the calculation of missing data consistent with current practice and other minor clarifications were also presented and adopted. Therefore, staff proposes that the Board affirm these amendments. (If not affirmed, the Board may choose to repeal these amendments.) In addition, SCAQMD staff is proposing to amend Rules 2011 and 2012 to clarify a definition for "Standard Gas Conditions." This amended definition was inadvertently not included in the December 4, 2015 Board package although it was included in the October, 2015 Set Hearing package.

Public Agency Approving Project:	**Agency Carrying Out Project:**
South Coast Air Quality Management District	South Coast Air Quality Management District

Exempt Status:
CEQA Guidelines §15002 (k)(1) - General Concepts (Three Step Process)
CEQA Guidelines §15061 - Review for Exemption

Reasons why project is exempt:
SCAQMD staff has determined that implementation of the proposed project (e.g., affirming the inclusion of use of certified levels of emissions for certain Rule 219 exempt equipment and modifying the definition of "Standard Gas Conditions") would result in administrative, procedural changes that would not be expected to cause any environmental impacts. Should the Board choose to repeal the inclusion of the use of certified levels of emissions for certain Rule 219 exempt equipment, no environmental impacts would be expected to occur. Finally, should the Board choose not to adopt the proposed modifications to the definition of "Standard Gas Conditions," no environmental impacts would be expected. Thus, pursuant to CEQA Guidelines §15002 (k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA and CEQA Guidelines §15061 – Review for Exemption, procedures for determining if a project is exempt from CEQA, the SCAQMD has reviewed the proposed project has determined that it can be seen with certainty that there is no possibility that the proposed project may have any significant effects on the environment, and is therefore, also exempt pursuant to CEQA Guidelines §15061 - Review for Exemption, paragraph (b)(3) – "general rule" exemption.

Project Approval Date:
SCAQMD Governing Board Hearing: February 5, 2016, 9:00 a.m.; SCAQMD Headquarters

CEQA Contact Person:	**Phone Number:**	**Fax Number:**	**Email:**
Ms. Barbara Radlein	(909) 396-2716	(909) 396-3324	bradlein@aqmd.gov
Rules Contact Person:	**Phone Number:**	**Fax Number:**	**Email:**
Mr. Gary Quinn	(909) 396-3121	(909) 396-3324	gquinn@aqmd.gov

Date Received for Filing: _____ **Signature:** *(Signed Upon Project Approval)*

Barbara Radlein
Program Supervisor, CEQA Section
Planning, Rule Development & Area Sources