**POTPOURRI**

**Department of Environmental Quality**
**Office of Environmental Assessment**

**Notice of Public Hearing**
**Substantive Changes to Proposed Rule AQ215**
**Control of Emissions of Nitrogen Oxides**
**(LAC 33:III.Chapter 22) (AQ215S)**
**and**
**Proposed Revisions to the Louisiana State Implementation Plan**

**(0112Pot2)**

Under the authority of the Louisiana Environmental Quality Act, R.S. 30:2001 et. seq., and in accordance with the provisions of the Administrative Procedure Act, R.S. 49:950, et. seq., the secretary gives notice that the department is seeking to incorporate substantive changes to the proposed amendments to the Air Quality regulations, LAC 33:III.Chapter 22 (Log #AQ215S), which was originally noticed as AQ215 in the August 20, 2001, edition of the *Louisiana Register*. This rule is also being proposed as a revision to the Louisiana State Implementation Plan (SIP).

The department is making substantive changes to the proposed rule as a result of comments received during the public comment period and completion of the modeling analysis for the Baton Rouge attainment plan. The changes include, but are not limited to, the following:

1. change to, or in, emission factors for some boilers;
2. addition of certain exemptions;
3. addition of monitoring alternatives;
4. move of previous Subsection C (Definitions) to Subsection B;
5. move of previous Subsection B (Exemptions) to Subsection C; and
6. clarifications and rewording.

The original fiscal and economic impact statement has been revised to reflect the estimated impact of the rule with substantive changes.

The proposed rule with substantive changes included can be found in the December 20, 2001, *Louisiana Register* under the Emergency Rules Section, as AQ215E. A strikeout/underline/shaded version of the proposed rule that distinguishes original proposed language from substantively changed language can be viewed by visiting the DEQ website at http://www.deq.state.la.us/planning/regs/addition/index.htm.

A public hearing on the substantive changes and the SIP will be held on January 24, 2002, at 1:30 p.m. in the Maynard Ketcham Building, Room 326, 7290 Bluebonnet Boulevard, Baton Rouge, LA 70810. Interested persons are invited to attend and submit oral comments on the substantive changes. Should individuals with a disability need an accommodation in order to participate, contact Lucy Kraft at the address given below or at (225) 765-0399.

Written comments regarding the substantive changes must be received no later than January 24, 2002, at 4:30 p.m., and should be sent to Patsy Deaville, Regulation Development Section, Box 82178, Baton Rouge, LA 70884-2178 or to FAX (225) 765-0389. Persons commenting should reference AQ215S in their correspondence.

Copies of the substantively changed regulation can be purchased at the above referenced address. Contact the Regulation Development Section at (225) 765-0399 for pricing information. Check or money order is required in advance for each copy of AQ215S.

This regulation is available for inspection at the following DEQ office locations from 8 a.m. until 4:30 p.m.: 7290 Bluebonnet Boulevard, Fourth Floor, Baton Rouge, LA 70810; 804 Thirty-first Street, Monroe, LA 71203; State Office Building, 1525 Fairfield Avenue, Shreveport, LA 71101; 3519 Patrick Street, Lake Charles, LA 70605; 201 Evans Road, Building 4, Suite 420, New Orleans, LA 70123; 100 Asma Boulevard, Suite 151, Lafayette, LA 70508; 104 Lococo Drive, Raceland, LA 70394 or on the Internet at http://www.deq.state.la.us/planning/regs/addition/index.htm.

James H. Brent, Ph.D.
Assistant Secretary

**Title 33**

**ENVIRONMENTAL QUALITY**

**Part III. Air Quality**

## Chapter 22. Control of Emissions of Nitrogen Oxides ($NO_x$)
## §2201. Affected Facilities in the Greater Baton Rouge $NO_x$ Control Area

A. Applicability

1. The provisions of this Chapter shall apply to any affected facility in the Greater Baton Rouge $NO_x$ Control Area (i.e., the entire parishes of Ascension, East Feliciana, East Baton Rouge, Iberville, Livingston, Pointe Coupee, St. Helena, West Baton Rouge, and West Feliciana).

2. The provisions of this Chapter shall apply during the ozone season (May 1 to September 30) of each year.

3. All affected facilities shall be in compliance as expeditiously as possible, but by no later than the dates specified in Subsection J of this Section ~~May 1, 2005~~.

B~~C~~. Definitions. Unless specifically defined in this Subsection or in LAC 33:III.111 or 502, the words, terms, and abbreviations in this Chapter shall have the meanings commonly used in the field of air pollution control. For purposes of this Chapter only, the following definitions shall supersede any definitions in LAC 33:III.111 or 502.

*Administrator*—the administrator, or an authorized representative, of the U. S. Environmental Protection Agency (EPA).

*Administrative Authority*—the secretary of the Department of Environmental Quality or his designee or the appropriate assistant secretary or his designee.

*Affected Facility*—any facility within the Greater Baton Rouge $NO_x$ Control Area with one or more affected point sources that collectively emit or have the potential to emit 50 tons or more per year of $NO_x$~~,~~ unless exempted in Subsection C of this Section. ~~Emissions from exempt sources, as listed in Subsection B of this Section, shall be included in the determination of an affected facility.~~

*Affected Point Source*—any ~~boiler, process heater/furnace, stationary gas turbine, stationary internal combustion engine, or other stationary combustion~~ point source located at an affected facility~~.~~ and subject to an emission factor listed in Subsection D.1 of this Section or used as part of an alternative plan in accordance with Subsection E of this Section, unless exempted ~~This is not exempt as defined~~ in Subsection ~~B~~C of this Section.

*Ammonia Reformer*—a type of process heater/furnace located in an ammonia production plant that is designed to heat a mixture of natural gas and steam to produce hydrogen and carbon oxides.

*Averaging Capacity*—the average actual heat input rate in MMBtu/hour at which an affected point source operated during the ozone season of the two calendar years of 2000 and 2001. Another period may be used to calculate the averaging capacity if approved by the department. For units with permit revisions that legally curtailed capacity or that were permanently shutdown after 1997, the averaging capacity is the average actual heat input during the last two ozone seasons of operation before the curtailment or shutdown.

*Biomass*—defined as bagasse, rice-husks, wood, or other combustible, vegetation-derived material that is suitable for use as fuel.

*Boiler*—any combustion equipment fired with any solid, liquid, and/or gaseous fuel that is primarily used to produce steam, or heat water, or any other heat transfer medium for power generation or for heat to an industrial, institutional, or commercial operation. Equipment that is operated primarily for waste treatment and that incidentally produces steam shall not be regulated under this Chapter as a boiler.

*Cap*—a system for demonstrating compliance whereby an affected facility, a subset of affected sources at an affected facility, or a group of affected facilities under common control are operated to stay below a mass emission rate expressed as mass per unit of time. The allowable mass emission rate is calculated by adding the allowable emissions for each affected point source. The allowable emission is the product of the source's averaging capacity and the applicable factor in Subsection D.1 of this Section.

*Chemical Processing Gas Turbine*—a gas turbine that vents its exhaust gases into the operating stream of a chemical process.

*Coal*—all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society for Testing and Materials, Designation D388-77. For the purposes of this Chapter, coal shall also include petroleum coke, solid carbon residues from the processing of petroleum products and coal-derived synthetic fuels, including but not limited to, solvent refined coal, coal-oil mixtures, and coal-water mixtures.

*Combined Cycle*—a combustion equipment configuration that generates electrical power with a stationary gas or liquid-fired turbine and/or a stationary internal combustion engine and that recovers heat from the discharge within equipment to heat water or generate steam.

*Continuous Emissions Monitoring System (CEMS)*—the total equipment used ~~necessary~~ to sample and condition, if applicable, to analyze, and to provide a permanent record of emissions or process parameters.

*Daily Average*—an average of the hourly data for one calendar day starting at 12-midnight and continuing until the following 12-midnight.

*Department*—the Louisiana Department of Environmental Quality.

*Elapsed Run-Time Meter*—an instrument designed to measure and record the time that an affected point source has run during a designated period.

*Electric Power Generating System*—all boilers, stationary internal combustion engines, stationary gas turbines, and other combustion equipment within an affected facility that are ~~is~~ used to generate electric power and that are ~~is~~ owned or operated by a municipality, an electric cooperative, an independent power producer, a public utility, or a Louisiana Public Service Commission regulated utility company, or any of its successors.

*Emergency Standby Gas Turbine or Engine*—a gas turbine or engine operated as an electrical or a mechanical power source for an affected facility when the primary source has been disrupted or discontinued during an emergency due to circumstances beyond the control of the owner or operator of the affected facility and that is operated only during such an emergency or when normal testing procedures, as recommended by the manufacturer, are being performed. The definition includes a stationary gas turbine or a stationary internal combustion engine that is used at a nuclear power plant as an emergency generator that is subject to Nuclear Regulatory Commission (NRC) regulations and a stationary internal combustion engine that is used for the emergency pumping of water for either fire protection or flood relief. This term does not include an electric generating unit in peaking service.

*Facility*—a contiguous area under common control that contains various types of equipment that emit or have the potential to emit $NO_x$.

*Facility-Wide Averaging Plan*—an alternative emission plan whereby an affected facility (or affected facilities with a common owner or operator) with multiple affected point sources of $NO_x$ emissions achieves the required reduction by a different mix of controls from that mandated by Subsection D of this Section. Some affected point sources may be over-controlled (more restrictive than the regulation) or shutdown in order to offset other affected point sources that are under-controlled (less restrictive than the regulation) or not controlled, provided the required overall $NO_x$ reduction is met.

*Facility-Wide Emission Factor*—the total average allowable $NO_x$ emission factor in pound $NO_x$/MMBtu for affected point sources when firing at their averaging capacities.

*F Factor*—the ratio of the gas volume of the products of combustion to the heat content of the fuel, typically expressed in dry standard cubic feet (dscf) per MMBtu.

*Flare*—a type of equipment specifically designed for combusting ~~emergency~~ gaseous vents ~~and small, continuous purges and vents~~ at an above-ground location.

*Fluid Catalytic Cracking Unit Regenerator*—a unit in a refinery where catalyst is recovered (regenerated) by burning off coke and other deposits with hot air. The term includes the associated equipment for controlling air pollutant emissions and for heat recovery.

*Gas*—any gaseous substance that can be used as a fuel to create heat and/or mechanical energy including natural gas, synthetically produced gas from coal or oil, gaseous substances from the decomposition of organic matter, and gas streams that are by-products of a manufacturing process.

*Greater Baton Rouge $NO_x$ Control Area*—an area around Baton Rouge where $NO_x$ controls are being implemented under this Chapter. The area consists of the entire parishes of Ascension, East Baton Rouge, East Feliciana, Iberville, Livingston, Pointe Coupee, St. Helena, West Baton Rouge, and West Feliciana.

*Heat Input*—the heat released due to fuel combustion in an affected point source, using the higher heating value of the fuel, excluding the sensible heat of the incoming combustion air.

*Higher Heating Value*—a measurement of the heat evolved during the complete combustion of a substance, including the latent heat of condensation of any water that is produced.

*Horsepower Rating*—the engine manufacturer's maximum continuous load rating at the lesser of the engine or driven equipment's maximum published continuous speed.

*Incinerator*—any combustion equipment, with or without heat recovery, that is designed and operated primarily for the treatment of gaseous and/or liquid waste. If waste treatment is an incidental part of the operation, the unit shall not be classified as an incinerator. An example of incidental use is when a waste stream is injected into a boiler, process heater/furnace, or other piece of process combustion equipment and the waste streams contribute less than 50 percent of the total heat input. A device classified as a boiler or industrial furnace in accordance with LAC 33:V.Chapter 30 is not an incinerator.

*International Standards Organization (ISO) Conditions*—standard conditions of $59^0$F, 1.0 atmosphere, and 60 percent relative humidity.

*Kilns and Ovens*—combustion equipment used for drying, baking, cooking, and calcining. Kilns can also be used for the treatment of solid wastes.

*Lean-Burn Engine*—a spark-ignited or compression-ignited, Otto cycle, diesel cycle, or two-stroke engine that is not capable of being operated with an exhaust stream oxygen concentration ~~of~~ equal to or less than 1.0 percent ~~or more~~, by volume on a dry basis, as originally designed by the manufacturer. The exhaust gas oxygen concentration shall be determined from the uncontrolled exhaust stream.

*Liquid Fuel*—any substance in a liquid state that can be used as a fuel to create heat and/or mechanical energy including:

a. crude oil, petroleum oil, fuel oil, residual oil, distillate, or other liquid fuel derived from crude oil or petroleum;

b. liquid by-products of a manufacturing process or a petroleum refinery; and

c. any other liquid fuel.

*Low Ozone Season Capacity Factor Boiler or Process Heater/Furnace*—a boiler or process heater/furnace with maximum rated capacity greater than or equal to 80 MMBtu/hour and ozone season heat input less than or equal to 0.92 ~~1~~ x $10^{11}$ Btu.

*Malfunction*—any sudden and unavoidable failure, as defined in LAC 33:III.111.

*Maximum Rated Capacity*—the maximum annual design capacity, as determined by the equipment manufacturer or as proven by actual maximum annual performance in the field, unless the affected point source is limited by ~~operating restriction or~~ permit condition to a lesser annual capacity, in which case the limiting condition shall be used as the maximum rated capacity. Where the capacity of a point source is limited by an operating cap applicable to a group of point sources (e.g., several units capped to a combined total firing rate), the total firing rate cap shall be divided by the number of point sources in the cap to arrive at an equivalent maximum rated capacity. This equivalent maximum rated capacity shall be used to determine the applicability of the emission factors and monitoring provisions of this Chapter.

*Megawatt (MW) Rating*—the continuous power rating or mechanical equivalent by a stationary gas turbine manufacturer at ISO conditions, without consideration to the increase in turbine shaft output and/or decrease in turbine fuel consumption by the addition of energy recovered from exhaust heat.

*Nitric Acid Production Unit*—a facility that produces nitric acid by any process.

*Nitrogen Oxides ($NO_x$)*—the sum of the nitric oxide and nitrogen dioxide in a stream, collectively expressed as nitrogen dioxide.

*Nonattainment Parish*—in Louisiana, the parishes of Ascension, East Baton Rouge, Iberville, Livingston, or West Baton Rouge.

*Number 6 Fuel Oil*—fuel oil of the grade that is classified number 6, according to ASTM Standard Specification for classification of fuel oil by ASTM D396-84.

*Ozone Season*—May 1 to September 30, inclusively.

*Peaking Service*—a stationary gas turbine or stationary internal combustion engine that is operated intermittently to produce energy. To be in peaking service, the annual heat input or horsepower-hours for the affected point source shall be less than the product of 2500 hours and the MW rating of the turbine or the horsepower rating of the engine.

*Permanent Shutdown*—a shutdown lasting for two years or more or resulting in the removal of the source from the department emissions inventory.

*Predictive Emissions Monitoring System (PEMS)*—a system that uses process and other parameters as inputs to a computer program or other data reduction system to produce values in terms of the applicable emission limitation or standard. ~~estimates and records $NO_x$ emissions from an affected point source by using process variables and other parameters as inputs to a computer program or other data collection system.~~

*Process Heater/Furnace*—any combustion equipment fired with solid, liquid, and/or gaseous fuel that is used to transfer heat to a process fluid, superheated steam, or water for the purpose of heating the process fluid or causing a chemical reaction. The term process heater/furnace does not apply to any unfired waste heat recovery boiler that is used to recover sensible heat from the exhaust of any combustion equipment, or to boilers as defined in this Subsection.

*Pulp Liquor Recovery Furnace*—either a straight ~~k~~Kraft recovery furnace or a cross recovery furnace as defined in 40 CFR 60 subpart BB.

*Rich-Burn Engine*—all stationary reciprocating engines that do not fit the definition of lean-burn.

*Sensible Heat*—the heat energy stored in a substance as a result of an increase in its temperature.

*Stationary Gas Turbine*—any turbine system that is gas and/or liquid fuel fired and that is either attached to a foundation at an affected facility or is portable equipment operated at a specific affected facility for more than 60 days in any ozone season.

*Stationary Internal Combustion Engine*—a reciprocating engine that is either gas and/or liquid fuel fired and that is either attached to a foundation or is portable equipment operated at a specific affected facility for more than six months at a time. This term does not include locomotive engines or self-propelled construction engines.

*Supplemental Firing Unit*—a unit with burners that is installed in the exhaust duct of a stationary gas turbine or internal combustion engine for the purpose of supplying supplemental heat to a downstream heat recovery unit.

*Thirty-Day (30-Day) Rolling Average*—an average, calculated for each day that fuel is combusted, of hourly emissions data for the preceding 30 days that fuel is combusted in an affected point source.

*Totalizing Fuel Meter*—a meter or metering system that provides a cumulative measure of fuel consumption.

*Trading Allowances*—the tons of $NO_x$ emissions that result from over-controlling, permanently reducing the operating rate of, or permanently shutting down, an affected point source located within the Greater Baton Rouge $NO_x$ Control Area. The allowances are determined in accordance with LAC 33:III.Chapter 6 and from the emission factors required by Subsection D of this Section for the affected point source and the enforceable emission factor assigned by the owner or operator in accordance with Subsection E of this Section. Trading allowances will be granted only for reductions that are real, quantifiable, permanent, and federally enforceable. $NO_x$ reductions that are used in a facility-wide averaging plan cannot be also used in a trading plan.

*Wood*—wood, wood residue, bark, or any derivative fuel or residue thereof in any form, including but not limited to, sawdust, sander dust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

C~~B~~. Exemptions. The following categories of equipment or processes located at an affected facility within the Greater Baton Rouge $NO_x$ Control Area are exempted from the provisions of this Chapter~~, except that the $NO_x$ emissions from exempt point sources shall be included in the determination of what is an affected facility~~:

1. boilers and process heater/furnaces with a maximum rated capacity of less than 80 million British thermal units (MMBtu) per hour;

2. stationary gas turbines with a megawatt rating based on heat input of less than 10 megawatts (MW);

3. stationary internal combustion engines as follows: ~~with a horsepower rating of less than 300 horsepower (Hp);~~

   a. rich-burn engines with a rating of less than 300 horsepower (Hp); and

   b. lean-burn engines with a rating of less that 1500 Hp;

4. low ozone season capacity factor boilers and process heater/furnaces, in accordance with Subsection H.11 ~~as defined in Subsection C~~ of this Section;

5. stationary gas turbines and stationary internal combustion engines, that are:

   a. used in research and testing;

   b. used for performance verification and testing;

   c. used solely to power other engines or turbines during start-ups;

   d. operated exclusively for fire fighting or training and/or flood control;

   e. used in response to and during the existence of any officially declared disaster or state of emergency;

   f. used directly and exclusively for agricultural operations necessary for the growing of crops or the raising of fowl or animals; or

   g. used as chemical processing gas turbines.

6. any point source, in accordance with Subsection H.12 of this Section, that operates less than 400 hours during the ozone season;

7. flares, incinerators, kilns and ovens ~~and kilns~~ as defined in Subsection ~~C~~B of this Section;

8. any point source during start-up and shutdown as defined in LAC 33:III.111 or during a malfunction as defined in 40 CFR section 60.2;

9. any point source used solely to start up a process;

10. any point source firing biomass fuel that supplies greater than 50 percent of the heat input on a monthly basis;

11. any point source at a sugar mill;

12. fluid catalytic cracking unit regenerators;

13. pulp liquor recovery furnaces;

14. diesel-fired stationary internal combustion engines;

15. any affected point source that is required to meet a more stringent state or federal $NO_x$ emission limitation ~~or~~ (In this case, the monitoring, reporting, and ~~or~~ recordkeeping requirements shall be in accordance with the more stringent regulation and not this Chapter.) ~~(When comparing limits, the factors shall be converted to higher heating value for fuel, if applicable, and to the appropriate units of the factors in Subsection D of this Section.)~~;

16. wood-fired boilers that are subject to 40 CFR 60, subpart Db; ~~and~~

17. nitric acid production units that are subject to 40 CFR 60, subpart G or LAC 33:III.2307~~.~~;

18. any affected point source firing Number 6 Fuel Oil during a period of emergency and approved by the administrative authority;

19. boilers and industrial furnaces treating hazardous waste and regulated under LAC 33:V.Chapter 30 or 40 CFR part 264, 265, or 266, including halogen acid furnaces and sulfuric acid regeneration furnaces; and

20. high efficiency boilers or other combustion devices regulated under the Toxic Substance Control Act PCB rules under 40 CFR part 761.

D. Emission Factors

1. The following table lists $NO_x$ emission factors that shall apply to affected point sources located at affected facilities in the Greater Baton Rouge $NO_x$ Control Area:

| $NO_x$ Emission Factors | | |
|---|---|---|
| Category | Maximum Rated Capacity | NOx Emission Factor [a] |
| Electric Power Generating System Boilers:<br>Coal-fired<br>Number 6 Fuel Oil-fired<br>All Others (gaseous or liquid) | <br>>/= 80 MMBtu/Hour<br>>/= 80 MMBtu/Hour<br>>/= 80 MMBtu/Hour | <br>0.21 pound/MMBtu<br>0.18 pound/MMBtu<br>0.10 pound/MMBtu |
| Industrial Boilers | >/= 80 MMBtu/Hour | 0.10 pound/MMBtu ~~(gas, liquid or coal fired)~~ |
| Process Heater/Furnaces:<br>Ammonia Reformers~~[b]~~<br>All Others | ~~>/= 80 MMBtu/Hour~~<br>>/= 80 MMBtu/Hour<br>>/= 80 MMBtu/Hour | ~~0.08 pound/MMBtu~~<br>0.23 pound/MMBtu<br>0.08 pound/MMBtu |
| Stationary Gas Turbines | >/= 10 MW | 0.16 pound/MMBtu [b] ~~[c]~~ |
| Stationary Internal Combustion Engines:<br>Lean-burn<br>Rich-burn | <br>>/= 1500 Hp<br>>/= 300 Hp | <br>4g/Hp-hour<br>2g/Hp-hour |

| | | |
|---|---|---|
| ~~Stationary Internal Combustion Engines (rich-burn)~~ | ~~>/= 300 Hp~~ | ~~2 g/Hp-hour~~ |
| ~~Stationary Internal Combustion Engines (lean-burn)~~ | ~~>/= 1500 Hp~~ | ~~4 g/Hp-hour~~ |

[a] all factors are based on the higher heating value of the fuel.
~~[b] ammonia reformers are a specific type of process heater/furnace.~~
~~[c]~~ [b] equivalent to 42 ppmv (15 percent $O_2$, dry basis) with an F factor of 8710 dscf/MMBtu.

2. Any electric power generating system boiler ~~affected point source~~ that operates with a combination of fuels ~~gas, liquid, or coal fuel~~ shall comply with an adjusted ~~a variable~~ emission factor ~~limit~~ calculated ~~as the heat-input weighted average of the applicable limits in Subsection D.1 of this Section~~ as follows:~~. However, if the secondary fuel is less than 10 percent of the weighted average, the owner or operator may choose to comply with the unadjusted limit for the primary fuel.~~

a. if a combination of fuels is used normally, the emission factor from Subsection D.1 of this Section shall be adjusted by the weighted average heat input of the fuels based on the ozone season average usage in 2000 and 2001, or another period if approved by the department;

b. if the boiler is normally fired with a primary fuel and a secondary fuel is available for back-up, the unit shall comply with the emission factor for the primary fuel while firing the primary fuel and with the emission factor for the secondary fuel while firing the secondary fuel. In addition, the usage of the secondary fuel shall be limited to the ozone season average usage of the secondary fuel in 2000 and 2001, or another period if approved by the department; and

c. in either case, if the secondary fuel is less than 10 percent of the weighted average, the owner or operator may choose to comply with the unadjusted limit for the primary fuel.

3. For affected point sources in an electric power generating system that fire gaseous or liquid fuels, the emission factors from Subsection D of this Section shall apply as the mass of $NO_x$ emitted per unit of heat input (pound $NO_x$ per MMBtu), on a daily average basis. Alternatively, a facility may choose to comply with a ton per day or a pound per hour cap provided that monitoring is installed to demonstrate compliance with the cap. The cap for a facility or for multiple facilities under common control is calculated by adding the products of the factor from Subsection D.1 of this Section and the averaging capacity for each affected point source as follows:

$$Cap\ (tpd) = 0.012\ X \sum_{i=1}^{N} (R_{li}\ x\ HI_i) \qquad \text{Equation D-1}$$

Where:
$HI_i$ = the averaging capacity of each point source (MMBtu/hour)
i = each point source ~~in the facility~~ included in the cap
N = the total number of point sources ~~in the facility~~ included in the cap
$R_{li}$ = the limit for each point source from Subsection D of this Section (pound $NO_x$/MMBtu)

4. For all other affected point sources, including those in a coal-fired electric power generating system, the emission factors from Subsection D of this Section shall apply as the mass of $NO_x$ emitted per unit of heat input (pound $NO_x$ per MMBtu), on a 30-day rolling average basis. Alternatively, a facility may choose to comply with a cap as detailed in Subsection D.3 of this Section provided a system, approved by the department, is installed to demonstrate compliance.

5. If one affected point source discharges in part or in whole to another affected point source, the portion discharging into the second point source shall be treated as emanating from the second point source and shall be controlled to the same limit as that specified for the second point source, while the portion discharging directly to the atmosphere from the first point source shall be controlled to the limit of the first point source. This term shall not include a combined cycle unit that discharges into a supplemental firing unit or other type of combustion equipment. For this type of point source, the emissions shall be controlled as follows:

a. for the turbines and/or engines, at the appropriate limits for the turbines and/or engines alone; and

b. for the supplemental firing unit or other type of combustion equipment, at the appropriate limit for the supplemental firing or combustion equipment with the measured emission values adjusted for the emissions coming from the turbines and/or engines.

6. Where a common stack is used to collect vents from affected point sources or affected point sources and exempt point sources and monitoring and/or testing of individual units is not feasible, the department, upon application from the owner or operator, shall specify alternative methods to demonstrate compliance with the emission factors ~~limits~~ of this Subsection.

7. Any affected point source firing gaseous fuel that contains hydrogen and/or carbon monoxide may apply a multiplier, as calculated below, to the appropriate emission factor given in Subsection D.1 of this Section. The total hydrogen and/or carbon monoxide volume in the gaseous fuel stream is divided by the total gaseous fuel flow volume to determine the volume percent of hydrogen and/or carbon monoxide in the fuel supply. In order to apply this multiplier, the owner or operator of the affected point source shall sample and analyze the fuel gas composition for hydrogen and/or carbon monoxide in accordance with Subsection G.5~~4~~ of this Section.

$$\begin{gathered} If\ \ (Vol.\ \%\ H_2 + Vol.\ \%\ CO) = or < 50 \\ Then \\ fuel\ \ multiplier = 1 + \frac{0.5\ \ x\,(Vol.\ \%\ H_2 + Vol.\ \%\ CO)}{100} \\ Otherwise \\ fuel\ \ multiplier = 1.25 \end{gathered}$$

Equation D-2

8. The owner or operator of a stationary gas turbine using a fuel that has an F factor different than 8710 dscf/MMBtu may adjust the allowable emission factor shown in Subsection D.1 of this Section. The adjustment is made by dividing the actual F factor (dscf/MMBtu) of the fuel by 8710 and multiplying the result by 0.16 to get the adjusted allowable emission factor. The use of this option shall be detailed in the permit application or in the optional compliance plan described in Subsection F.7 of this Section.

9. ~~Any affected point source, including those in an electric power generating system, that uses ammonia or urea as a $NO_x$ reduction reagent shall comply with the ambient standard established in LAC 33:III.5112.~~ On a day that is designated as an Ozone Action Day by the department, a facility shall not fire an affected point source with Number 6 Fuel Oil or perform testing of emergency and training combustion units without prior approval of the administrative authority.

~~10. All affected point sources that rely on periodic stack testing to demonstrate continuous compliance shall be tested as soon as practicable after each occurrence of maintenance that may reasonably be expected to affect emissions (i.e., shutdowns involving component replacement, turbine overhaul, catalyst change-out, etc.). Portable analyzers shall be acceptable for this check. Documentation shall be maintained on-site, if practical, of the date, the person doing the test, and the test results. Documentation shall be made available for inspection upon request.~~

E. Alternative Plans

1. Facility-Wide Averaging Plan. A facility-wide averaging plan is established in this Chapter for single affected facilities and multiple affected facilities that are owned and operated by the same entity. Within the Greater Baton Rouge $NO_x$ Control Area, an owner or operator of one or more affected facilities may use the facility-wide averaging plan as an alternative ~~alternate~~ means of compliance with the emission factors from Subsection D of this Section. A request for approval to use a facility-wide averaging plan, that includes the details of the plan, shall be submitted to the department either separately or with ~~The details for use of a facility-wide averaging plan shall be requested in~~ the permit application or in the optional compliance plan described in Subsection F.7 of this Section. A facility-wide averaging plan submitted under this provision shall be approved if the department determines that it will provide emission reductions equivalent to or more than that required by the emission factors in Subsection D of this Section ~~substantially equivalent emission reductions to those who fall under the requirements of this Chapter~~ and the plan establishes satisfactory means for determining ongoing compliance, including appropriate monitoring and recordkeeping requirements. Approval of the alternative plans by the administrative authority ~~department~~ does not necessarily indicate automatic approval by the administrator.

a. An owner or operator who elects to use a facility-wide averaging plan for compliance shall establish an emission factor ~~limit~~ for each applicable affected point source ~~at the source~~ such that if each ~~all~~ affected point source~~s~~ ~~were~~ was operated at ~~their~~ its averaging capacity, the cumulative emission factor in ~~rate of~~ pounds $NO_x$ /MMBtu from all ~~these~~ point sources in the averaging group would not exceed the facility-wide emission factor ~~limit~~, as shown in Equation E-3. The equations below shall be used to calculate the cumulative emission rate and the facility-wide emission factor ~~limit~~.

$$FL = \sum_{i=1}^{N} ( R_{li} \ x \ f_i ) \qquad \text{Equation E-1}$$

where:

$$f_i = HI_i / \sum_{i=1}^{N} HI_i \qquad \text{Equation E-2}$$

$$\sum_{i=1}^{N} ( R_{ai} \ x \ f_i ) \leq FL \qquad \text{Equation E-3}$$

where:

$f_i$ = fraction of total system averaging capacity for point source i
$HI_i$ = the averaging capacity of each point source (MMBtu/hour)
i = each point source in the averaging group
N = the total number of point sources in the averaging group

$R_{ai}$ = the limit assigned by the owner to each point source in the averaging plan (pound $NO_x$/MMBtu)

$R_{li}$ = the limit for each point source from Subsection D of this Section (pound $NO_x$/MMBtu)

FL = facility-wide emission factor ~~limit~~ (pound $NO_x$/MMBtu) of all point sources included in the averaging plan

b. An owner or operator of an electric power generating system that fires gaseous or liquid fuels and that chooses to use an averaging plan shall demonstrate compliance by either of the following methods:

i. operating such that each affected point source does not exceed its assigned individual limit in pound $NO_x$/MMBtu on a daily average basis; or

ii. complying with a ~~ton per day or a pound per hour~~ cap as described in Subsection D.3 of this Section, provided that a monitoring system is installed to demonstrate compliance with the cap.

c. Owners or operators of all other affected point sources, including those in a coal-fired electric power generating system, that choose to use an averaging plan shall demonstrate compliance by either of the following methods:

i. operating such that each affected point source does not exceed its assigned individual limit in pound $NO_x$/MMBtu on a 30-day rolling average basis; or

ii. complying with a ~~ton per day or a pound per hour~~ cap as described in Subsection D.4 of this Section, provided a system, approved by the department, is installed to demonstrate compliance with the cap.

d. ~~The use of an averaging plan, by itself, shall not be construed to limit the maximum rated capacities of affected point sources to less than that already specified in permits issued prior to the adoption of this rule, where there are specific limits on such capacities.~~ Notwithstanding the compliance methods described in Subsection E.1.b.i and c.i of this Section, the owner or operator that chooses to use an averaging plan shall include in the submitted plan provisions that demonstrate to the department that any under-controlled unit will not be operated at more than ten percent above its calculated averaging capacity fraction ($f_i$ in Equation E-2). If this limit is not adequately demonstrated, the department shall require that the facility demonstrate compliance by operating such that the facility-wide emission factor, FL, is not exceeded, instead of by the methods described in Subsection E.1.b.i or c.i of this Section.

e. The owner or operator of affected point sources complying with the requirements of this Subsection can include in the plan either all of the affected point sources at the facility or select only certain sources to be included. ~~Point sources that are reduced in capacity with a permit modification or permanently shutdown may be included in the averaging plan.~~

f. $NO_x$ reductions accomplished after 1997 through curtailments in capacity of a point source with a permit revision or by permanently shutting down the point source may be included in the averaging plan. In order to include a unit with curtailed capacity in the averaging plan, the old averaging capacity, determined from the average of the two ozone seasons prior to the capacity curtailment, shall be used to calculate the unit's contribution to the term FL. The new averaging capacity, determined from the enforceable permit revision, shall be multiplied by the owner assigned limit to calculate the contribution of the curtailed unit to the cumulative emission factor for the averaging group. ~~Point sources on which $NO_x$ reductions were achieved after 1997 may be used in the averaging plan.~~

g. $NO_x$ reductions from e~~E~~xempted point sources, as defined in Subsection ~~B~~C of this Section, may be used in a facility-wide averaging plan. If a unit exempted in Subsection C of this Section is included in an averaging plan, the term $R_{li}$ in Equation E-1 shall be established, in accordance with Subsection

G of this Section, from a stack test that was performed before the $NO_x$ reduction project was implemented and the term $R_{ai}$ shall be established from the owner-assigned emission factor in accordance with Subsection E.1.a of this Section.

h. Solely for the purpose of calculating the facility-wide emission factor ~~limit~~, the allowable emission factor (pound $NO_x$/MMBtu) for each affected stationary internal combustion engine is the applicable $NO_x$ emission factor from Subsection D of this Section (g/Hp-hour) divided by the product of the engine manufacturer's rated heat rate (expressed in Btu/Hp-hour) at the engine's Hp rating and 454 $x10^{-6}$.

i. The owner or operator of affected point sources complying with the requirements of this Subsection in accordance with an emissions averaging plan shall carry out recordkeeping that includes, but is not limited to, a record of the data on which the determination of each point source's hourly, daily, or 30-day, as appropriate, compliance with the facility-wide averaging plan is based.

2. Trading Plan. ~~A t~~Trading ~~plan~~ is established in this Chapter as an alternate means of compliance with the emission factors from Subsection D of this Section. Within the Greater Baton Rouge $NO_x$ Control Area, trading allowances, as defined in Subsection ~~C~~B of this Section, may be traded between affected facilities owned by different companies in accordance with the provisions of LAC 33:III.Chapter 6. The approval to use trading shall be requested in the permit application or in the optional compliance plan described in Subsection F.7 of this Section. A trading plan submitted under this provision shall be approved if the department ~~administrative authority~~ determines that it will provide $NO_x$ emission reductions equivalent to or more than that required by the emission factors of Subsection D of this Section ~~substantially equivalent emission reductions to those who fall under the requirements of this Chapter~~ and the plan establishes satisfactory means for determining ongoing compliance ~~with the trading plan~~, including appropriate monitoring and recordkeeping requirements. Approval of trading plans by the administrative authority does not necessarily indicate automatic approval of the administrator.

~~a. The trading plan shall contain the following, as applicable:~~

~~i. a signed commitment between the parties agreeing to comply with the trading provisions;~~

~~ii. identification of the point source and details of the method used to quantify the allowances;~~

~~iii. details of how the allowances will be used;~~

~~iv. calculations demonstrating that the plan will provide equivalent to or more emission reductions than that required by the emission factors in Subsection D of this Section~~;

~~v. an explanation of how on-going compliance will be demonstrated; and~~

~~vi. monitoring and recordkeeping procedures.~~

~~b. Trading plan provisions, as specified in the permit, shall be federally enforceable.~~

~~c. Trading allowances for exempt point sources shall be determined from stack tests and the enforceable emission factor assigned by the owner or operator.~~

F. Permits

1. Authorization to Install and Operate $NO_X$ Control Equipment

a. An owner or operator may obtain approval to install and operate $NO_X$ control equipment that does not result in ammonia emissions above the minimum emission rate (MER) in LAC 33:III.Chapter 51 by submitting documentation in accordance with LAC 33:III.511. This documentation shall include an estimate of any carbon monoxide (CO), sulfur dioxide ($SO_2$), particulate matter ($PM_{10}$), and/or volatile organic compound (VOC) emission increases associated with the $NO_X$ control technology. If approved, ~~T~~the administrative authority shall grant an authorization to construct and operate in accordance with ~~where consistent with~~ LAC 33:III.501.C.3. Any appropriate permit revision reflecting the emission reduction shall be obtained ~~made~~ no later than 180 days after commencement of operation and in accordance with the procedures of LAC 33:III.Chapter 5.

b. In accordance with LAC 33:III.5111.C, installation of $NO_X$ control equipment that results in ammonia emissions above the MER in LAC 33:III.Chapter 51 shall not commence until a permit or permit modification has been approved by the administrative authority ~~department~~. In accordance with LAC 33:III.5107.D.1, the administrative authority ~~department~~ shall provide at least 30 days for public comment before issuing any such permit.

2. Alternatively to Subsection F.1.a of this Section, an owner or operator of an affected facility that is operating with a Louisiana air permit may submit a completed permit modification application for the changes proposed to comply with this Chapter.

3. Any owner or operator with an affected facility that has retained grandfathered status, as described in LAC 33:III.501.B.6, shall submit an application in accordance with LAC 33:III.501.C.1 for the changes proposed to comply with this Chapter.

4. Duty to Supplement. In accordance with LAC 33:III.517.C, if an owner or operator has a permit application on file with the department, but the department has not released the proposed permit, the applicant shall supplement the application as necessary to address this Chapter.

5. Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) Considerations. A significant net emissions increase in CO, $SO_2$, $PM_{10}$, and/or VOC in accordance with LAC 33:III.504 or 509, that is a direct result of, and incidental to, the installation of $NO_X$ control equipment or implementation of a $NO_X$ control technique required to comply with the provisions of this Chapter shall be exempt from the requirements of LAC 33:III.509 and/or 504, as appropriate, provided the following conditions are met:

a. the project shall not:

i. cause or contribute to a violation of the national ambient air quality standard (NAAQS); or

ii. adversely affect visibility or other air quality related value (AQRV) in a class I area;

b. any increase in CO, $SO_2$, $PM_{10}$, and/or VOC emissions shall be:

i. quantified in the submittal required by Subsection F.1-4 of this Section; and

ii. tested in accordance with Subsection G of this Section, as applicable;

~~c. the owner or operator shall submit a CO and/or VOC minimization plan, describing all reasonable measures taken to minimize any increase in CO and/or VOC emissions resulting from installation of $NO_x$ abatement equipment or implementation of a $NO_x$ control technique. This plan shall be included in the application required by Subsection F.1-4 of this Section;~~

c~~d~~. notwithstanding the requirements of ~~Subsection D of this Section and~~ Table 1 of LAC 33:III.504, any increase of VOC emissions at an affected facility located in a nonattainment parish shall be offset at a ratio of at least 1:1 ~~1.0 to 1~~. Offsets shall be surplus, permanent, quantifiable, and federally enforceable and calculated in accordance with LAC 33:III.Chapter 6; and

d~~e~~. a 30-day public comment period shall be provided in accordance with LAC 33:III.519.C prior to issuance of a permit or permit modification.

6. ~~An increase in any criteria pollutant other than CO or VOC shall be subject to the applicable requirements of LAC 33:III.509~~. Increases above the MER in ~~hazardous air pollutant (HAP) or~~ toxic air pollutant (TAP) emissions shall be subject to the applicable requirements of ~~40 CFR part 63 subpart B and~~ LAC 33:III.Chapter 51~~, respectively~~.

7. When pre-permit application approval of plans is desired by an owner or operator, a compliance plan may be submitted in accordance with this Subsection. The administrative authority shall

approve the plan if it contains all of the required information to determine that the affected sources will be in compliance with this Chapter and is accurate. The compliance plan may address individual point sources, groups of point sources, or all point sources at the facility, as determined by the owner. The following information shall be submitted as appropriate:

a. the facility designation, as indicated by the identification number, submitted to the Office of Environmental Services, Permits Division;

b. a list of all units in the compliance plan, the emission point number as designated on the emission inventory questionnaire, the averaging capacity, and the maximum rated capacity;

c. identification of all combustion units with a claimed exemption in accordance with Subsection C~~B~~ of this Section, and the rule basis for the claimed exemption;

d. a list of any units that have been, or will be, curtailed or permanently shutdown ~~de-rated or shutdown and rendered inoperable~~;

e. for each unit, the actual emission factor that will be used to achieve compliance;

f. the control technology to be applied for each unit subject to control, and an anticipated construction schedule for each control device including the dates for completion of engineering, submission of permit applications, start and finish of construction, and initial start-up; and

g. the calculations to demonstrate that each unit will achieve the required $NO_x$ emission rate.

G. Initial Demonstration of Compliance

1~~7~~. Emissions testing to demonstrate ~~I~~initial compliance with the $NO_x$ emission factors of Subsection D ~~or E~~ of this Section, or with emission limits that are part of an alternative plan under Subsection E of this Section, for affected point sources operating with a CEMS or PEMS that has been certified in accordance with Subsection H of this Section is not required. The certification of the CEMS or PEMS shall be considered demonstration of initial compliance. Testing for initial compliance is not required for an existing CEMS or PEMS that meets the requirements of Subsection H of this Section.

2~~1~~. Emissions testing is required for ~~A~~all ~~affected~~ point sources that are subject to the emission limitations of Subsection D ~~or E~~ of this Section or used in one of the alternative plans of Subsection E of this Section. ~~shall be tested for $NO_x$,~~ Test results must demonstrate that actual $NO_x$ emissions are in compliance with the appropriate limits of this Chapter. As applicable, CO, $SO_2$, $PM_{10}$, oxygen ($O_2$), $NH_3$, and VOC~~,~~ shall also be measured. ~~if applicable, emissions while firing gaseous fuel (and, as applicable, hydrogen and/or carbon monoxide composition of the fuel for affected point sources using a fuel multiplier from Subsection D.7 of this Section). Affected point sources with urea or ammonia injection into the exhaust stream for $NO_x$ control shall be tested for ammonia emissions.~~ Performance testing of these point sources shall be performed in accordance with the schedule specified in Subsection J of this Section.

3~~2~~. The tests required by Subsection G.2~~1~~ of this Section shall be performed by the test methods referenced in Subsection G.5~~4~~ of this Section, except as approved by the administrative authority in accordance with Subsection G.7 of this Section. ~~and shall be used for determination of initial compliance with either the emission factors from Subsection D of this Section or the assigned emission factors from Subsection E of this Section, as applicable.~~ Test results shall be reported in the units of the applicable emission factors and for the corresponding averaging periods.

4~~3~~. Emission testing conducted in the three years prior to the initial demonstration of compliance date may be used to demonstrate compliance with the limits of Subsection D or E of this Section, if the owner or operator demonstrates to the department ~~administrative authority~~ that the prior testing meets the requirements of this Subsection. The request to waive emissions testing according to this Paragraph shall be included in the permit application. The department ~~administrative authority~~ reserves the right to request performance testing or CEMS performance evaluation upon reasonable notice ~~at any time~~.

5~~4~~. Compliance with the emission specifications of Subsection D or E of this Section for affected point sources operating without CEMS or PEMS shall be demonstrated while operating at the maximum rated capacity, or as near thereto as practicable. The stack tests shall be performed according to emissions testing guidelines located on the department website in the technology section. Three minimum one-hour tests shall be performed and the following methods from 40 CFR part 60, appendix A shall be used:

a. Methods 1, 2, 3, and 4 or 19, with prior approval, for exhaust gas flow;

b. Method 3A or 20 for $O_2$ ;

c. Method 5 for PM;

d. Method 6C for $SO_2$;

~~c~~e. Method 7E or 20 for $NO_x$;

~~d~~f. Method 10 or 10A for CO;

~~e~~g. Method 18 or 25A for VOC;

~~f~~h. modified Method 5, or a department-approved equivalent, for $NH_3$; and/ or

~~g~~i. American Society of Testing and Materials (ASTM) Method D1945-96~~e1~~ or ASTM Method D2650-99 for fuel composition; ASTM Method D1826-94 or ASTM Method D3588-98 for calorific value.

6~~5~~. ~~Any~~ All alternative or equivalent test methods, waivers, monitoring methods, testing and monitoring procedures, customized or correction factors, and alternatives to any design, equipment, work practices, or operational standards must be approved by both the administrative authority and the administrator, if applicable, before they ~~it~~ become~~s~~ effective.

7~~6~~. An owner or operator may request approval from the department ~~administrative authority~~ for minor modifications to the test methods listed in Subsection G.5~~4~~ of this Section, including alternative sampling locations and testing a subset of similar affected sources, prior to actual stack testing.

8. The information required in this Subsection shall be provided in accordance with the effective dates ~~compliance schedule~~ in Subsection J of this Section.

H. Continuous Demonstration of Compliance. After the initial demonstration of compliance required by Subsection G of this Section, continuous compliance with the emission factors of Subsection D or E of this Section, as applicable, shall be demonstrated by the methods described in this Subsection. For any alternative method, the department's approval does not necessarily constitute compliance with all federal requirements nor eliminate the need for approval by the administrator.

1. The owner or operator of boilers that are subject to this Chapter and that have a maximum rated capacity that is equal to or greater than 80 MMBtu/hour shall demonstrate continuous compliance as follows:

a. for boilers with a maximum rated capacity less than 250 MMBtu/hour:

i. install, calibrate, maintain, and operate a totalizing fuel meter to continuously measure fuel usage;

ii. install, calibrate, maintain, and operate an oxygen monitor to measure oxygen concentration; and

iii. in order to continuously demonstrate compliance with the $NO_x$ limits of Subsection D or E of this Section, implement procedures to operate the boiler within the fuel and oxygen limits established during the initial compliance run in accordance with Subsection G~~.4~~ of this Section; and

b. for boilers with a maximum rated capacity equal to or greater than 250 MMBtu/hour:

i. install, calibrate, maintain, and operate a totalizing fuel meter to continuously measure gas and/or liquid fuel usage. For coal-fired boilers, belt scales or an equivalent device shall be provided;

ii. install, calibrate, maintain, and operate a diluent (either oxygen or carbon dioxide) monitor. The monitor shall meet all of the requirements of performance specification 3 of 40 CFR 60, appendix B;

iii. install, calibrate, maintain, and operate a $NO_x$ CEMS to demonstrate continuous compliance with the $NO_x$ emission factors of Subsection D or E of this Section, as applicable. The CEMS shall meet all of the requirements of 40 CFR part 60.13 and performance specification 2 of 40 CFR 60, appendix B; and

iv. install, calibrate, maintain, and operate a CO monitor. The monitor shall meet all of the requirements of performance specification 4 of 40 CFR 60, appendix B~~.~~; or

v. alternatively to Subsection H.1.b. ii - iv of this Section, for demonstration of continuous compliance, the owner or operator may install, calibrate, certify, maintain, and operate a PEMS to predict $NO_x$ , diluent ($O_2$ or $CO_2$), and CO emissions for each affected point source. As an alternative to using the PEMS to monitor diluent ($O_2$ or $CO_2$), a monitor for diluent according to Subsection H.1.b.ii of this Section or similar alternative method approved by the department ~~administrative authority~~ may be used. The PEMS shall be certified while operating on primary boiler fuel and, separately, on any alternative fuel. The certification shall be in accordance with EPA documents, "Example Specifications and Test Procedures for Predictive Emission Monitoring Systems" and "Predictive Emission Monitoring System to Determine $NO_x$ and CO Emissions from an Industrial Furnace" that are located on the EPA website in the emission monitoring section, both with posting dates of July 31, 1997~~.~~; or

vi. alternatively to Subsection H.1.b.ii-iv of this Section, the owner or operator may request approval from the administrator for an alternative monitoring plan that uses a fuel-oxygen operating window to demonstrate continuous compliance of $NO_x$ and CO. The corners of the window shall be established during the initial compliance test required by Subsection G of this Section or similar testing at another time. The details for use of an alternative monitoring plan shall be submitted in the permit application or in the optional compliance plan described in Subsection F.7 of this Section. The plan shall become part of the facility permit and shall be federally enforceable.

2. The owner or operator of process heater/furnaces that are subject to this Chapter and that have a maximum rated capacity that is equal to or greater than 80 MMBtu/hour shall demonstrate continuous compliance as follows:

a. for process heater/furnaces with a maximum rated capacity less than 250 MMBtu/hour:

i. install, calibrate, maintain, and operate a totalizing fuel meter to continuously measure fuel usage;

ii. install, calibrate, maintain, and operate an oxygen monitor to measure oxygen concentration; and

iii. in order to continuously demonstrate compliance with the $NO_x$ limits of Subsection D or E of this Section, implement procedures to operate the process heater/furnace within the fuel and oxygen limits established during the initial compliance run in accordance with Subsection G~~.4~~ of this Section; and

b. for process heater/furnaces with a maximum rated capacity equal to or greater than 250 MMBtu/hour:

i. install, calibrate, maintain, and operate a totalizing fuel meter to continuously measure fuel usage;

ii. install, certify, maintain, and operate an oxygen or carbon dioxide diluent monitor in accordance with the requirements of Subsection H.1.b.ii of this Section;

iii. install, certify, maintain, and operate a $NO_x$ CEMS in accordance with the requirements of Subsection H.1.b.iii of this Section; and

iv. install, certify, maintain, and operate a CO monitor in accordance with the requirements of Subsection H.1.b.iv of this Section; or

v. alternatively to Subsection H.2.b.ii - iv of this Section, the owner or operator may install, calibrate, certify, maintain, and operate a PEMS in accordance with the requirements of Subsection H.1.b.v of this Section~~.~~; or

vi. alternatively to Subsection H.2.b.ii-iv of this Section, the owner or operator may request approval from the department for an alternative monitoring plan that uses a fuel-oxygen operating window, or other system, to demonstrate continuous compliance of $NO_x$ and CO. The corners of the window shall be established during the initial compliance test required by Subsection G of this Section or similar testing at another time. The details for use of an alternative monitoring plan shall be submitted in the permit application or in the optional compliance plan described in Subsection F.7 of this Section. The plan shall become part of the facility permit and shall be federally enforceable.

3. The owner or operator of stationary gas turbines that are subject to this Chapter and that have a megawatt rating based on heat input that is equal to or greater than 10 MW shall demonstrate continuous compliance as follows:

a. for stationary gas turbines with a megawatt rating based on heat input less than 30 MW:

i. if the stationary gas turbine uses steam or water injection to comply with the $NO_x$ emission factors, install, calibrate, maintain, and operate a continuous system to monitor and record the average hourly fuel and steam or water consumption and the water or steam to fuel ratio. To demonstrate continuous compliance with the appropriate emission factor, the stationary gas turbine shall be operated at the required steam-to-fuel or water-to-fuel ratio as determined during the initial compliance test; and

ii. for other stationary gas turbines, install, calibrate, maintain, and operate a totalizing fuel meter to continuously measure fuel usage. Compliance with the emission factors of Subsection D or E of this Section shall be demonstrated by operating the turbine within the fuel limits established during the initial compliance run in accordance with Subsection G~~.4~~ of this Section and by annual testing for $NO_x$ and CO with an approved portable analyzer; ~~and~~or

iii. alternatively to Subsection H.3.a.i or ii of this Section, an owner or operator may choose to comply with the requirements of Subsection H.3.b.i-iv or v of this Section to demonstrate continuous compliance with the limits of Subsection D or E of this Section; and

b. for stationary gas turbines with a megawatt rating based on heat input of 30 MW or greater:

i. install, calibrate, maintain, and operate a totalizing fuel meter to continuously measure fuel usage;

ii. install, certify, maintain, and operate an oxygen or carbon dioxide diluent monitor in accordance with the requirements of Subsection H.1.b.ii of this Section;

iii. install, certify, maintain, and operate a $NO_x$ CEMS in accordance with the requirements of Subsection H.1.b.iii of this Section; and

iv. install, certify, maintain, and operate a CO monitor in accordance with the requirements of Subsection H.1.b.iv of this Section; or

v. alternatively to Subsection H.3.b.ii – iv of this Section, the owner or operator may install, calibrate, certify, maintain, and operate a PEMS in accordance with the requirements of Subsection H.1.b.v of this Section~~.~~; or

vi. alternatively to Subsection H.3.b.ii-iv of this Section, the owner or operator may request approval from the department for an alternative monitoring plan that complies with the provisions of Subsection H.3.a.i of this Section, if the turbine uses steam or water injection for compliance, or Subsection H.3.a.ii of this Section for other turbines. The alternative plan shall also require annual testing for

$NO_x$ and CO with an approved portable analyzer and triennial stack testing for $NO_x$ and CO in accordance with the methods specified in Subsection G.5 of this Section. The details for use of an alternative monitoring plan shall be submitted in the permit application or in the optional compliance plan described in Subsection F.7 of this Section. The plan shall become part of the facility permit and shall be federally enforceable.

4. The owner or operator of stationary internal combustion engines that are subject to this Chapter and have a horsepower rating of 300 Hp or greater for rich-burn engines or 1500 Hp or greater for lean-burn engines shall demonstrate continuous compliance as follows:

a. ~~for stationary internal combustion engines,~~install, calibrate, maintain, and operate a totalizing fuel meter to continuously measure fuel usage and demonstrate continuous compliance by operating the engine within the fuel limits established during the initial compliance run and by annual testing for $NO_x$ and CO with an approved portable analyzer and by ~~performing biennial~~ triennial stack testing ~~tests~~ for $NO_x$ and CO in accordance with the methods specified in Subsection G.5~~4~~ of this Section; or

b. alternatively to Subsection H.4.a of this Section, an owner or operator may choose to comply with the requirements of Subsection H.3.b.i-iv or v of this Section to demonstrate continuous compliance with the limits of Subsection D or E of this Section.

5. A CEMS unit may be used to monitor multiple point sources provided that each source is sampled at least once every 15 minutes and the arrangement is approved by the department ~~administrative authority~~.

6. Existing instrumentation for any requirement in this Subsection shall be acceptable upon approval of the department.

7. For any affected point source that uses a chemical reagent for reduction of $NO_x$, a $NO_x$ CEMS, in accordance with Subsection H.1.b.iii of this Section, and a CO monitor, in accordance with Subsection H.1.b.iv of this Section, shall be provided.

8. For boilers or process heater/furnaces that are covered by this Chapter, that discharge through a common stack, and where the combined heat input is greater than 250 MMBtu, a $NO_x$ CEMS, in accordance with Subsection H.1.b.iii of this Section, and a CO monitor, in accordance with Subsection H.1.b.iv of this Section, shall be provided.

9. The owner or operator of any affected point source firing gaseous fuel for which a fuel multiplier from Subsection D.7 of this Section is used shall sample, analyze, and record the fuel gas composition on a daily basis or on an alternative schedule approved by the administrative authority. If an owner or operator desires to use an alternative sampling schedule, he shall specify a sampling frequency in his permit application and provide an explanation for the alternative schedule. Fuel gas analysis shall be performed according to the methods listed in Subsection G.5~~4~~.g of this Section, or other methods that are approved by the department ~~administrative authority~~. A gaseous fuel stream containing 99 percent $H_2$ and/or CO by volume or greater may use the following procedure to be exempted from the sampling and analysis requirements of this Subsection:

a. a fuel gas analysis shall be performed initially using the test methods in Subsection G.5~~4~~.g of this Section to demonstrate that the gaseous fuel stream is 99 percent $H_2$ and/or CO by volume or greater; and

b. the owner or operator shall certify that the fuel composition will continuously remain at 99 percent $H_2$ and/or CO by volume or greater during its use as a fuel to the point source.

10. All affected point sources that rely on periodic stack testing to demonstrate continuous compliance and use a catalyst to control $NO_x$ emissions shall be tested after each occurrence of catalyst replacement. Portable analyzers shall be acceptable for this check. Documentation shall be maintained on-site, if practical, of the date, the person doing the test, and the test results. Documentation shall be made available for inspection upon request.

11~~10~~. The owner or operator of any low ozone season capacity factor boiler or process heater/furnace for which an exemption is granted shall install, calibrate, and maintain a totalizing fuel meter, with instrumentation approved by the department ~~administrative authority~~, and keep a record of the fuel input for each affected point source during each ozone season. The owner or operator of any boiler or process heater/furnace covered under this exemption shall notify the administrative authority within seven days if the Btu-per-ozone season limit is exceeded. If the Btu-per-ozone season limit is exceeded, the exemption shall be permanently withdrawn. Within 90 days after receipt of notification from the administrative authority ~~department~~ of the loss of the exemption, the owner or operator shall submit a permit modification detailing how to meet the applicable emission factor ~~limit~~ as soon as possible, but no later than 24 months, after exceeding the Btu-per-ozone season limit. Included with this permit modification, the owner or operator shall submit a schedule of increments of progress for the installation of the required control equipment. This schedule shall be subject to the review and approval of the department ~~administrative authority~~.

12~~11~~. The owner or operator of any affected point source that is granted an exemption for operating less than 400 hours during the ozone season shall install, calibrate, and maintain a nonresettable, elapsed run-time meter to record the operating time in order to demonstrate compliance. The owner or operator shall notify the administrative authority within seven days if the hours-per-ozone season limit is exceeded. If the hour-per-ozone season limit is exceeded, the exemption shall be permanently withdrawn. Within 90 days after receipt of notification from the ~~department~~ administrative authority of the loss of the exemption, the owner or operator shall submit a permit modification detailing how to meet the applicable emission factor ~~limit~~ as soon as possible, but no later than 24 months, after exceeding the limit. Included with this permit modification, the owner or operator shall submit a schedule of increments of progress for the installation and operation of the required control equipment. This schedule shall be subject to the review and approval of the department ~~administrative authority~~.

I. Notification, Recordkeeping, and Reporting Requirements

1. The owner or operator of an affected point source shall notify the department at least 30 days prior to ~~follow the guidelines in Louisiana Air Permit General Condition VIII for~~ any compliance testing conducted under Subsection G of this Section and any CEMS or PEMS performance evaluation conducted under Subsection H of this Section in order to give the department an opportunity to conduct a pretest meeting and observe the emission testing. All necessary sampling ports and such other safe and proper sampling and testing facilities as required by LAC 33:III.913, or alternatives approved by the department, shall be provided for the testing. The test report shall be submitted to the department within 60 days after completing the testing.

2. The owner or operator of an affected point source required to demonstrate continuous compliance in accordance with Subsection H of this Section shall submit a written report within 90 days of the end of each quarter to the administrative authority ~~in accordance with Louisiana Air Permit General Condition XI,~~ for any noncompliance of the applicable emission limitations of Subsection D or E of this Section. The required information may be included in reports provided to the administrative authority to meet other requirements, so long as the report meets the deadlines and content requirements of this Paragraph. The report shall include the following information:

a. description of the noncompliance;

b. cause of the noncompliance;

c. anticipated time that the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance; and

d. steps taken to prevent recurrence of the noncompliance.

3. The owner or operator of an affected point source shall maintain records of all continuous monitoring, performance test results, hours of operation, and fuel usage rates for each affected point

source. Such records shall be kept for a period of at least five years and shall be made available upon request by authorized representatives of the department ~~administrative authority~~. The emission monitoring (as applicable) and fuel usage records for each affected point source shall be recorded and maintained:

a. hourly for affected point sources complying with an emission factor on an hourly basis;

b. daily for affected point sources complying with an emission factor enforced on a daily average basis or on a 30-day rolling average basis; and

c. monthly for affected point sources exempt from the emission specifications based on ozone season heat input or hours of operation per ozone season.

4. The owner or operator shall maintain the following records:

a. records for a facility-wide averaging plan in accordance with Subsection E.1.i of this Section;

b. records approved for a trading plan in accordance with Subsection E.2 of this Section; and

c. records in accordance with Subsections H.7, 8, 9, ~~and~~ 10, 11, and 12 of this Section.

5. Ammonia emissions resulting from the operation of a $NO_x$ control equipment system shall be reported annually in accordance with LAC 33:III.5107.A.

~~6. The owner or operator shall notify, submit, or maintain any other records that are considered appropriate and requested by the administrative authority.~~

J. Effective Dates ~~Compliance Schedule~~

~~1. The owner or operator of an affected facility shall make an effort to accomplish $NO_x$ emission reductions as soon as possible after this Chapter is promulgated so that an early evaluation of the effectiveness of these regulations can be made.~~

1~~2~~. The owner or operator of an affected facility shall modify and/or install and bring into normal operation $NO_x$ control equipment and/or ~~implement~~ $NO_x$ ~~control techniques~~ monitoring systems in accordance with this Chapter as expeditiously as possible, but by no later than May 1, 2005.

2. The owner or operator shall complete all initial compliance testing, specified by Subsection G of this Section, for equipment modified with $NO_x$ reduction controls or a $NO_x$ monitoring system to meet the provisions of this Chapter within 60 days of achieving normal production rate or after the end of the shake down period, but in no event later than 180 days after initial start-up. Required testing to demonstrate the performance of existing, unmodified equipment shall be completed in a timely manner, but by no later than November 1, 2005.

~~3. In accordance with Subsection G of this Section, the owner or operator shall test all $NO_x$ abatement equipment and all $NO_x$ control techniques to demonstrate initial compliance with this Chapter within 60 days of achieving normal operation, but in no event later than 180 days after initial start-up. All initial compliance testing shall be completed by November 1, 2005.~~

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2054.
HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Environmental Assessment, Environmental Planning Division, LR 28:

**FISCAL AND ECONOMIC IMPACT STATEMENT**
**FOR ADMINISTRATIVE RULES** LOG #: AQ215S

Person Preparing Statement: Paul Heussner
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Dept.: Department of Environmental Quality
Office: Office of Environmental Assessment
Rule Title: Control of Emissions of Nitrogen Oxides-LAC 33:III.Chapter 22 (Substantive Changes Included)

Date RuleTakes Effect: Upon Promulgation

**SUMMARY**
(Use complete sentences)

In accordance with Section 953 of Title 49 of the Louisiana Revised Statutes, there is hereby submitted a fiscal and economic impact statement on the rule proposed for adoption, repeal or amendment. THE FOLLOWING STATEMENTS SUMMARIZE ATTACHED WORKSHEETS, I THROUGH IV AND WILL BE PUBLISHED IN THE LOUISIANA REGISTER WITH THE PROPOSED AGENCY RULE.

**I. ESTIMATED IMPLEMENTATION COSTS (SAVINGS) TO STATE OR LOCAL GOVERNMENTAL UNITS (Summary)**

There is one known government-owned utility, which operates on a contingency basis and could possibly incur compliance costs.

**II. ESTIMATED EFFECT ON REVENUE COLLECTIONS OF STATE OR LOCAL GOVERNMENTAL UNITS (Summary)**

DEQ collects an annual fee of $9.72 per ton of permitted NOx emissions. Following full implementation of this regulation by 2005 and based upon current NOx emissions estimates, the rule is expected to reduce these emissions by 29,574 tons per year, consequently, reducing state fee collections by $287,459.

**III. ESTIMATED COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS OR NON-GOVERNMENTAL GROUPS (Summary)**

The estimated costs for implementing the NOx control rule in the 9-parish control area on approximately 90% of the sources are in the range of $76 to $169 million. The cost estimate for all sources would be marginally higher. Estimates utilize cost factors from the NESCAUM (Northeast States for Coordinated Air Use Management) publication *Status Report on NOx Controls* dated December 2000. Some additional cost data was provided by consulting firms and affected facilities.

Additionally, there will be annual operating costs and costs associated with non-routine plant turnaround operations.

## IV. ESTIMATED EFFECT ON COMPETITION AND EMPLOYMENT (Summary)

The proposed rule affects 9 parishes in southern Louisiana. Within that area competition would be unaffected. However, many of the facilities sell their products statewide and some are national and international marketers. Consequently, if they have to compete against companies operating in unregulated areas, they may be at a competitive disadvantage. If compliance costs become too high, facilities with the flexibility to do so may consider relocating, thus negatively impacting employment and the local economy.

| | |
|---|---|
| ______________________________ | ______________________________ |
| Signature of Agency Head or Designee | LEGISLATIVE FISCAL OFFICER OR DESIGNEE |
| James H. Brent, Ph.D., Assistant Secretary | |
| Typed Name and Title of Agency Head or Designee | |
| ______________________________ | ______________________________ |
| Date of Signature | Date of Signature |

LFO 7/1/94

# FISCAL AND ECONOMIC IMPACT STATEMENT
# FOR ADMINISTRATIVE RULES

The following information is requested in order to assist the Legislative Fiscal Office in its review of the fiscal and economic impact statement and to assist the appropriate legislative oversight subcommittee in its deliberation on the proposed rule.

A. Provide a brief summary of the content of the rule (if proposed for adoption or repeal) or a brief summary of the change in the rule (if proposed for amendment). Attach a copy of the notice of intent and a copy of the rule proposed for initial adoption or repeal (or, in the case of a rule change, copies of both the current and proposed rules with amended portions indicated).

This rule establishes requirements for reducing emissions of nitrogen oxides (NOx) to allow the 5-parish Baton Rouge nonattainment area to come into compliance with the National Ambient Air Quality Standard (NAAQS) for ozone by November 15, 2005. The Baton Rouge ozone nonattainment area includes the parishes of Ascension, East Baton Rouge, Iberville, Livingston, and West Baton Rouge. Modeling has demonstrated that the nonattainment area cannot be brought into attainment without controlling emissions from certain outlying parishes. Therefore, the attainment parishes of East Feliciana, Pointe Coupee, St. Helena, and West Feliciana are included in the control area for the rule. The rule establishes emission factors for reducing emissions from boilers, heaters, furnaces, turbines, and internal combustion engines at affected facilities. The rule also establishes requirements for permits, compliance, recordkeeping, and reporting.

B. Summarize the circumstances which require this action. If the Action is required by federal regulation, attach a copy of the applicable regulation.

Louisiana experienced many days of elevated ozone levels during the summer of 2000, especially in the Baton Rouge area, and a number of the monitored readings exceeded the one-hour standard. In addition, the 5-parish Baton Rouge ozone nonattainment area, which includes the parishes of Ascension, East Baton Rouge, Iberville, Livingston, and West Baton Rouge, did not meet the 1999 statutory deadline to comply with the one-hour ozone NAAQS. Urban Airshed Modeling (UAM) indicates that a reduction in $NO_x$ emissions is required to lower ozone levels. Therefore, it is necessary to identify and promulgate regulations to implement emission reduction controls. The LDEQ is preparing a revision to the State Implementation Plan (SIP) that will specify emission reduction control strategies so that Louisiana can comply with the ozone NAAQS. This rule to control emissions of nitrogen oxides is only one measure identified to reduce emissions.

A rule to control emissions of nitrogen oxides was proposed in the *Louisiana Register* at LR 27: 1406 (August 2001). Subsequently, additional modeling showed that coal-fired and oil-fired boiler emissions factors could be raised while still showing attainment with the one-hour ozone standard. This substantive change will result in a reduction in compliance costs of between $150 and $200 million.

C. Compliance with Act II of the 1986 First Extraordinary Session

(1) Will the proposed rule change result in any increase in the expenditure of funds? If so, specify amount and source of funding.

No, this proposed rule will not result in any increase in the expenditure of funds.

2) If the answer to (1) above is yes, has the Legislature specifically appropriated the funds necessary for the associated expenditure increase?

(a) ____ Yes. If yes, attach documentation.
(b) ____ No. If no, provide justification as to why this rule change should be published at this time.

This proposed rule will not result in any increase in the expenditure of funds.

## FISCAL AND ECONOMIC IMPACT STATEMENT

## WORKSHEET

### I. A. COSTS OR SAVINGS TO STATE AGENCIES RESULTING FROM THE ACTION PROPOSED

1. What is the anticipated increase (decrease) in costs to implement the proposed action?

   There will be no additional costs or savings to state governmental units as a result of this rule.

| COSTS | FY 01-02 | FY 02-03 | FY 03-04 |
|---|---|---|---|
| PERSONAL SERVICES | -0- | -0- | -0- |
| OPERATING EXPENSES | -0- | -0- | -0- |
| PROFESSIONAL SERVICES | -0- | -0- | -0- |
| OTHER CHARGES | -0- | -0- | -0- |
| EQUIPMENT | -0- | -0- | -0- |
| TOTAL | -0- | -0- | -0- |
| MAJOR REPAIR & CONSTR. | –0- | -0- | -0- |
| POSITIONS(#) | | | |

2. Provide a narrative explanation of the costs or savings shown in "A.1.", including the increase or reduction in workload or additional paperwork (number of new forms, additional documentation, etc.) anticipated as a result of the implementation of the proposed action. Describe all data, assumptions, and methods used in calculating these costs.

   There are no costs or savings associated with the proposed rule. Any workload adjustment will be absorbed by existing staff.

3. Sources of funding for implementing the proposed rule or rule change.

| SOURCE | FY 01-02 | FY 02-03 | FY 03-04 |
|---|---|---|---|
| STATE GENERAL FUND | -0- | -0- | -0- |
| AGENCY SELF-GENERATED | -0- | -0- | -0- |

| | | | |
|---|---|---|---|
| DEDICATED | -0- | -0- | -0- |
| FEDERAL FUNDS | -0- | -0- | -0- |
| OTHER (Specify) | -0- | -0- | -0- |
| TOTAL | -0- | -0- | -0- |

4. Does your agency currently have sufficient funds to implement the proposed action? If not, how and when do you anticipate obtaining such funds?

   No additional funds are required to implement the proposed action.

**B. COST OR SAVINGS TO LOCAL GOVERNMENTAL UNITS RESULTING FROM THE ACTION PROPOSED.**

1. Provide an estimate of the anticipated impact of the proposed action on local governmental units, including adjustments in workload and paperwork requirements. Describe all data, assumptions and methods used in calculating this impact.

   There is one known government-owned utility, which operates on a contingency basis and could possibly incur compliance costs.

2. Indicate the sources of funding of the local governmental unit that will be affected by these costs or savings.

   There is no information on sources of funding should funding be needed.

## FISCAL AND ECONOMIC IMPACT STATEMENT WORKSHEET

**II. EFFECT ON REVENUE COLLECTIONS OF STATE AND LOCAL GOVERNMENTAL UNITS**

A. What increase (decrease) in revenues can be anticipated from the proposed action?

| REVENUE INCREASE/DECREASE | FY 01-02 | FY 02-03 | FY 03-04 |
|---|---|---|---|
| STATE GENERAL FUND | -0- | -0- | -0- |
| AGENCY SELF-GENERATED | -0- | -0- | -0- |
| RESTRICTED FUNDS* | -0- | -0- | -0- |
| FEDERAL FUNDS | -0- | -0- | -0- |

| | | | |
|---|---|---|---|
| LOCAL FUNDS | -0- | -0- | -0- |
| TOTAL | -0- | -0- | -0- |

*Specify the particular fund being impacted.

B. Provide a narrative explanation of each increase or decrease in revenues shown in "A." Describe all data, assumptions, and methods used in calculating these increases or decreases.

DEQ collects an annual fee of $9.72 per ton of permitted NOx emissions. Following full implementation of this regulation by 2005 and based upon current NOx emissions estimates, the rule is expected to reduce these emissions by 29,574 tons per year, consequently, reducing state fee collections by $287,459.

## III. COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS OR NONGOVERNMENTAL GROUPS

A. What persons or non-governmental groups would be directly affected by the proposed action? For each, provide an estimate and a narrative description of any effect on costs, including workload adjustments and additional paperwork (number of new forms, additional documentation, etc.), they may have to incur as a result of the proposed action.

The estimated costs for implementing the NOx control rule in the 9-parish control area is in the range of $76 to $169 million based on NESCAUM (Northeast States for Coordinated Air Use Management) cost factors and available utility system estimates. The point sources for which cost data is available account for about 90% of the total point sources that will be affected by the rule. Cost estimates for the remaining 10% of affected point sources are not available.

Additionally, there will be annual operating costs and costs associated with non-routine plant turnaround operations.

The 5-parish Baton Rouge ozone nonattainment area includes the parishes of Ascension, East Baton Rouge, Iberville, Livingston, and West Baton Rouge. The rule applies to any facility with one or more affected point sources that collectively emit or have the potential to emit 50 tons or more per year of NOx.

Modeling has demonstrated that the nonattainment area cannot be brought into attainment without controlling emissions from certain outlying parishes. Therefore, the parishes of East Feliciana, Pointe Coupee, St. Helena, and West Feliciana are included in the rule.

B. Also provide an estimate and a narrative description of any impact on receipts and/or income resulting from this rule or rule change to these groups.

As stated above, compliance costs for the rule are expected to be high. All facilities will attempt to pass these costs through to their customers. However, since many of the companies involved have large and complex product mixes and operate worldwide, it is very difficult to gauge the precise impact of this regulation.

One of the most severely impacted facilities (in terms of compliance costs) is an electric utility, whose rates are set by a commission. It will undoubtedly attempt to pass its increased costs on in the form of higher electric bills. Further data is not available.

## IV. <u>EFFECTS ON COMPETITION AND EMPLOYMENT</u>

Identify and provide estimates of the impact of the proposed action on competition and employment in the public and private sectors. Include a summary of any data, assumptions and methods used in making these estimates.

The proposed rule affects 9 parishes in southern Louisiana. Within that area competition would be unaffected since all facilities follow the same rules. However, many of the facilities sell their products statewide and some are national and international marketers. Consequently, if they have to compete against companies operating in unregulated areas, they may be at a competitive disadvantage.

One of the most severely impacted facilities is an electric utility, whose rates are set by a commission. Utilities may attempt to pass increased regulatory compliance costs to their customers. Since some utility customers are industrial facilities, which may incur their own compliance costs with the proposed NOx rule, these affected customers would incur their cost to comply with the rule as well as potentially an increased cost of electric utilities.

With collective costs estimated to be between $76 and $169 million, facilities may consider shutting down or relocating. This could have an impact on employment and the local economy.