State of California
AIR RESOURCES BOARD

Resolution 80-22

March 27, 1980

WHEREAS, the Air Resources Board (the "Board") on August 7, 1978, in Resolution 78-48 adopted Rule 475.1 for the South Coast Air Quality Management District (the "District"); and

WHEREAS, the Board, in Resolution 79-2, adopted January 23, 1979, in response to a Petition for Reconsideration filed by the District, affirmed its adoption of Rule 475.1 and also remanded the Rule to the District for limited revisions; and

WHEREAS, the District has not acted to revise the Rule but has recommended that the Board itself consider revisions to the Rule; and

WHEREAS, Health and Safety Code Section 39605 authorizes the Board to provide any assistance to any district; and

WHEREAS, the Board is authorized pursuant to Health and Safety Code Section 40451, after holding a public hearing, to revise the rules and regulations of the District to implement and effectuate the purposes of Division 26 of the Health and Safety Code; and

WHEREAS, Sections 110(a)(2) and 172(a)(1) of the Clean Air Act require that a state implementation plan provide for the attainment of national ambient air quality standards in any nonattainment area as expeditiously as practicable; and

WHEREAS, a commitment was made in the South Coast Air Quality Management District's nonattainment plan to reduce emissions of oxides of nitrogen by means of the measures contained in the Rule adopted by this Resolution; and

WHEREAS, the staffs of the District and the Board have worked together to develop amendments that are satisfactory to the staff of the District; and

WHEREAS, the California Environmental Quality Act and ARB regulations require that an activity not be adopted as proposed if significant environmental impacts have been identified and where feasible alternatives and/or mitigation measures exist which would substantially reduce such impacts; and

WHEREAS, the Board has held a public hearing to consider amendments to Rule 475.1 of the South Coast Air Quality Management District; and

WHEREAS, the Board finds that:

1. It is technologically and economically feasible for the utilities subject to the provisions of Rule 475.1 to reduce emissions of oxides of nitrogen to the levels required in the amended and recodified version of the Rule adopted by this Resolution; and

2. The specified emissions reductions can be achieved by the dates specified in the amended Rule; and

3. The amended Rule provides flexibility to the utilities in complying with the Rule and meets the concerns raised by the utilities in a reasonable way; and

4. The provisions of the amended Rule are necessary to meet the requirements of the Clean Air Act and to achieve and maintain state ambient air quality standards; and

5. There have been no significant environmental impacts identified which would result from adoption of the proposed action.

NOW, THEREFORE, BE IT RESOLVED, that the Board rescinds Rule 475.1 of the South Coast Air Quality Management District controlling emissions of oxides of nitrogen from power plants and adopts for the District Rule 1135.1, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED, that the Executive Officer is directed to transmit Rule 1135.1 adopted by this Resolution to the Environmental Protection Agency for inclusion in the California State Implementation Plan.

I certify that the above is a true and correct copy of Resolution 80-22 as adopted by the Air Resources Board.

Sally Rump
Board Secretary

Rule 1135.1 of the South Coast Air Quality Management District
Adopted March 27, 1980

and

Rule 59.1 of the Ventura County Air Pollution Control District
Adopted March 27, 1980

for

Controlling Emissions of Oxides of Nitrogen
from Electric Power Generating Equipment

in the

South Coast Air Basin

and the

Ventura County Air Pollution Control District

Note: The differences between Rule 1135.1 and Rule 59.1 are:

1. The term Executive Officer/Air Pollution Control Officer refers to the Executive Officer of the South Coast Air Quality Management District or the Air Pollution Control Officer of the Ventura County Air Pollution Control District, whichever applies.
2. In Part V, "Maximum Allowable Emissions Rate Tables," only the first table for systems of over 5,000 megawatts generating capacity applies in Ventura County Air Pollution Control District.
3. Part VII, "Demonstration Unit," does not apply in the Ventura County Air Pollution Control District.
4. Occasional additional differences are noted in the Rule.
5. Where the term South Coast Air Basin/Ventura County appears, the words, "South Coast Air Basin" apply to Rule 1135.1 and the words Ventura County apply to Rule 59.1.

CONTENTS

Note: This table of contents is solely for the convenience of the reader and is not part of the Rule.

Part I. APPLICABILITY AND SEVERABILITY

(a) Geographical Limitations

Unless otherwise stipulated in this Rule, the following geographical limitations apply:

(1) Rule 1135.1 applies in the South Coast Air Basin only.

(2) Rule 59.1 applies in the Ventura County Air Pollution Control District only.

(b) Restricted References

Unless otherwise stipulated in this Rule, all references to Parts and Sections of this Rule mean those Parts and Sections of this Rule only.

(c) Severability

Except as otherwise provided in this rule, if any portion of this Rule is found to be unenforceable, such finding shall have no effect on the enforceability of the remaining portions of the Rule. These remaining portions of the Rule shall continue to be in full force and effect.

(d) Compliance With Other Rules and Regulations

Nothing in this Rule shall relieve a person from complying with Regulation XIII of the South Coast Air Quality Management District or with Rule 26 of the Ventura County Air Pollution Control District, whichever applies.

Part II. DEFINITIONS

Electric Power Generating System means one or more electric power generating units which have a common owner or operator, and which are located in the South Coast Air Basin and/or Ventura County Air Pollution Control District.

Existing System or Unit means any electric power generating system or unit, construction of which commenced prior to August 7, 1978.

Minimum Load means the minimum rate of electric power generation below which a system or unit cannot be continuously and safely operated. Minimum load shall be expressed in net megawatts.

Modified System or Unit means any existing electric power generating system or unit on which a modification is commenced on or after August 7, 1978. However, systems or units on which a modification is commenced for the purpose of complying with this Rule shall not be considered modified systems or units.

New System or Unit means any electric power generating system or unit, the construction of which is commenced on or after August 7, 1978.

Operating Range means all possible rates of electric power generation between the minimum load and the rated maximum load of any electric power generating system or unit. Operating range shall be expressed in net megawatts.

Oxides of Nitrogen Emissions Dispatch means the allocation of electric power demand to the various electric power generating units in any electric power generating system according to a method that will minimize the rate of emissions of oxides of nitrogen from the system.

Rated Maximum Load means the maximum continuous safe electric power generating capacity of a system or unit. Rated maximum load shall be expressed in net megawatts.

Rate of Emissions of Oxides of Nitrogen means the mass of oxides of nitrogen emitted in pounds per hour. In calculating this rate, the mass of oxides of nitrogen shall be expressed as an equivalent mass of nitrogen dioxide and shall be measured in a manner approved by the Executive Officer/Air Pollution Control Officer.

System means one or more electric power generating units that have a common owner or operator.

System-wide Composite Unit Table means a tabular presentation of the rate of emissions of oxides of nitrogen throughout the operating range of an electric power generating system. Criteria for preparing system-wide tables are contained in VI(a) and (b).

Unit means the minimum number of fossil fuel fired combustion devices or equipment necessary to produce electrical energy for sale or exchange.

Unit Table means a tabular presentation of the rate of emissions of oxides of nitrogen at each of 10 equally spaced points throughout the operating range of an electric power generating unit.

III. Options for Compliance

An owner or operator of a system must comply with one of the four options in this rule. A short summary of the four options is shown in Table III-1.

(a) Option Selection Requirements

(1) The owner or operator of an electric power generating system shall select either Option 1 or Option 2 or Option 3 or Option 4. Once an option is approved by the Executive Officer/Air Pollution Control Officer, that selection is final unless a change would not result in a delay in the installation of control equipment and the change is approved by the Executive Officer/Air Pollution Control Officer.

(2) Selection Notification Date

The owner or operator shall notify the Executive Officer/Air Pollution Control Officer of the option selected. Such selection must be made in writing on or before June 1, 1980.

Table III-1

Requirement	Option 1	Option 2	Option 3	Option 4
Number of Stages	2	2	1	1
Final Compliance Dates	Stage I - 12/31/83 Stage II - 1/1/90	Stage I - 12/31/83 Stage II - 1/1/88	1/1/90	1/1/90
Reduction Required	Stage I nearly 50% Stage II - 90%	Stage I - much less than 50% Stage II - 90%	90%	Annual average-90%; Annual peak day - 75%
Basis for Reduction	Reduction at all system loads	Reduction at all system loads	Reduction at all system loads	Reduction in total emissions & peak emissions
Credit for Reduced fossil fuel burning below 74-78 levels	Relax controls so emissions are same as without new energy	Relax controls so emissions are the same as without new energy	Relax controls so emissions are the same as without new energy	Pound for pound
Date of installation of controls for final compliance of 90% reduction	In time for final compliance in 1990	First scheduled outage of unit after 1983	First scheduled outage of unit after January 1, 1982	First scheduled outage of unit after January 1, 1982
Applicable parts of rule	I,II, III, IV, V, VI, VII, & VIII	I, II, III, IV, V, VI, VII, & VIII	I, II, III, IV, V(b), VI, & VII	I, II, III, & IX

Part IV. Control of Individual Units: Unit Tables and Emissions Dispatch

This part does not apply to Option 4.

(a) Unit Control: Emissions Allowed by Unit Table

A unit table is a tabular presentation of the rate of emissions of oxides of nitrogen at each of 10 or more equally spaced load points throughout the operating range of an electric power generating unit. The rate shall be shown in pounds of oxides of nitrogen per net megawatt hour.

(1) Compliance With Unit Table

An owner or operator of an electric power generating system shall not operate an electric power generating unit if at any point in the unit's operating load range the unit emits oxides of nitrogen at a rate greater than the rate allowed by the approved unit table.

(2) Required Tables; Required Approval

Prior to the operation of any new system or new or modified unit, the owner or operator of said system or unit shall submit to the Executive Officer/Air Pollution Control Officer, for consideration for his or her approval, additional or replacement tables for the affected units.

The owner or operator shall prepare unit tables in accordance with this Section, and as applicable:

(A) Stage I compliance requirements: V(a)(7)(I)

(B) Stage II compliance requirements: V(b)(7)(I)

(C) Demonstration unit compliance schedule: VIII(a)(5)(A)(ii)

(3) Noncompliance is a Violation

Operation of a unit in a manner that causes oxides of nitrogen to be emitted at a rate greater than allowed by the approved unit table is a violation of this Rule. Operation in this manner is a violation regardless of the operation of or emissions from any other unit in the system. Such violation exists regardless of the operation of or emissions from the same unit at any other load.

(4) Determining Rates of Emissions

To determine the rate of emissions of oxides of nitrogen from a unit, the Executive Officer/Air Pollution Control Officer may employ data obtained by in-stack monitors, continuous source testing equipment, or any other tests or equipment that the Executive Officer/Air Pollution Control Officer

determines are acceptable. The Executive Officer/ Air Pollution Control Officer shall consider the accuracy of such equipment and the manner of testing when making this determination.

(b) System-wide Control: Emissions Dispatch Plan

An oxides of nitrogen emissions dispatch plan shall be prepared for each system by the owner or operator of that system.

(1) Minimum Contents of Emissions Dispatch Plan

(A) A detailed methodology for oxides of nitrogen emissions dispatch for each unit in the system unless exempted by this Rule. The methodology shall provide adequate detail for a determination at any time by the Executive Officer/Air Pollution Control Officer of whether or not the system is being operated in accordance with the dispatch plan consistent with the units available at that time. The availability of units shall be determined by the owner or operator.

Such methodology shall also include a unit table for each unit. The unit table shall show actual measured emissions for a unit from which the

emissions have been measured or estimated emissions for a unit from which the emissions have not been measured.

Only the most current, approved emissions data shall be used.

(B) An assurance that available units in the system are dispatched and operated in a manner that minimizes the rate of emissions of oxides of nitrogen from the system.

(2) Plan Submittal and Operating Requirements

(A) Executive Officer Approval

Each emissions dispatch plan shall be submitted to the Executive Officer/Air Pollution Control Officer for consideration for approval.

(B) Initial Plan Submittal; Date of Submittal

An initial emissions dispatch plan shall be submitted to the Executive Officer/Air Pollution Control Officer prior to June 1, 1980.

(C) Revised Plan Submittal

A revised emissions dispatch plan shall be submitted to the Executive Officer/Air Pollution Control Officer within 30 days after a new or modified unit is added to the system.

(D) Operational Date of Plan

Effective 30 days after plan submittal, the electric power generating system shall be operated according to the submitted plan. Effective 30 days after approval by the Executive Officer/Air Pollution Control Officer, the system shall be operated according to the approved plan.

(3) Noncompliance with Approved Plan is a Violation.

Operation of an electric power generating system that is determined by the Executive Officer/Air Pollution Control Officer to be not in accordance with the approved emissions dispatch is a violation of this Rule.

(4) Requirements for Daily Records

The owner or operator of a system shall maintain daily records of the manner in which the system is operated. These daily records are to be maintained for the purpose of determining compliance with the approved emissions dispatch plan. The type of information to be recorded and the form in which it is to be recorded shall be specified by the Executive Officer/ Air Pollution Control Officer. Such records shall be

maintained for at least two years from the date of recording. Such records shall be available for inspection and/or reproduction upon the request of the Executive Officer/Air Pollution Control Officer or his or her authorized representative.

(5) Units Exempt From Emissions Dispatch Plan

Simple cycle gas turbines are exempt from the emissions dispatch plan; see VII(g)(2).

Alternative energy projects as defined in VII(g)(1) are exempt from the emissions dispatch plan.

V. Requirements and Compliance Schedules

This part does not apply to Option 4

(a) Stage I Requirements and Compliance Schedule

This section V(a) does not apply to Option 3.

The owner or operator of an existing electric power generating system shall comply with the following requirements for Stage I:

(1) Stage I Emissions Reductions

Emissions of oxides of nitrogen shall be reduced to no more than the emissions allowed by the Stage I rates in Part VI. This reduction shall be accomplished as expeditiously as practicable but not later than December 31, 1983.

For Option 1 and Option 2, the following requirements shall be fulfilled:

(A) Prior to June 1, 1980, Submit a final control plan to the executive Officer/Air Pollution Control Officer for his or her approval. Also submit a copy of this final control plan to the Executive Officer of the Air Resources Board. The final control plan shall include as a minimum;

(i) A description of compliance steps. This description shall include a list of the steps that will be

taken at each electric power generating unit to comply with the Stage I compliance schedule. The description must contain a construction schedule. The construction schedule must show that the construction and equipment installation phases of the final control plan will be completed prior to September 1, 1983. The description of compliance steps must also show that the Stage I maximum emission rates allowed by Part VI will be achieved by December 31, 1983.

(ii) Unit tables. A unit table shall be submitted for each unit in the system. Each unit table shall show the estimated emissions when the controls required for Stage I compliance are applied and the unit is burning oil.

Each unit table shall show the rate of emissions of oxides of nitrogen at each of 10 equally spaced load points from minimum load to rated maximum load. The rate shall be shown in pounds of oxides of nitrogen per net megawatt hour. The rate shown must be the rate to which the unit shall be controlled to achieve compliance with

the Stage I maximum emissions rates in Part VI for Option 1 or Option 2.

(B) Prior to July 1, 1980. Sign initial contracts for the construction and installation of equipment that will lead to the achievement of the Stage I maximum emission rates as required by Part VI of this Rule; issue orders for the purchase of component parts necessary to accomplish such reductions.

(C) Prior to September 1, 1983. Complete construction and installation of emissions control equipment and component parts as indicated on the construction schedule for the final control plan.

(D) Prior to December 31, 1983. Demonstrate compliance by achieving the Stage I maximum emission rates of Part VI of this Rule. Such demonstration shall also include the submission to the Executive Officer/Air Pollution Control Officer for his or her approval a unit table for each unit. Measured emissions at each unit shall not exceed the emissions at any point or increment on the unit table. In addition, a

system-wide composite unit table shall show that emissions from the system shall not exceed the Stage I maximum emission rates of Part VI of this Rule. This system-wide composite unit table shall be constructed in accordance with the criteria set forth in VI(a).

(2) Requirements for an Approvable Final Control Plan

An approvable final control plan shall:

(A) Result in compliance with Stage I emissions reduction requirements as expeditiously as practicable;

(B) Satisfy the minimum requirements for a description of compliance steps pursuant to V(a)(1)(A)(i); satisfy the minimum requirements for unit tables pursuant to V(a)(1)(A)(ii); and

(C) With reasonable certainty prevent localized violations of ambient air quality standards.

(D) Show the schedule of conservation efforts, construction or procurement of each new source or conservation of electrical energy which will result in a system-wide reduction of emissions of oxides of nitrogen emitted

in the South Coast Air Basin/Ventura County below average 1974 through 1978 annual average emissions, pursuant to §'s V(a)(6) & V(a)(7). The schedule of construction or procurement shall show:

(i) the date of approval of officers of the utility to proceed with the construction or procurement;

(ii) the date by which contracts shall be signed for new electrical energy for which construction is not required;

(iii) the latest dates for the following construction steps:

- Approval of contracts for construction
- Commencement of construction
- Completed installation of major equipment items such as turbines or boilers
- Generation of electrical energy needed to accomplish the emission reduction claimed in subsection V(a)(2)(E).

(E) For each of the years covered by the final control plan state the annual system-wide reduction in nitrogen oxide emissions which shall be achieved as a result of each new source of energy or conservation for the South Coast Air Basin/Ventura County.

(F) State the maximum amount of emissions of oxides of nitrogen which shall be emitted from the utility's system on any calendar day for each of the years to the final date of the plan. Emissions greater than the amount approved constitute a violation of this rule.

(G) State the maximum amount of electrical energy which shall be generated by the utility's combustion units in the South Coast Air Basin/Ventura County in each of the years covered by the plan.

(H) Describe the equipment which shall be installed and operated on the utility's existing units to reduce emissions by the amount claimed for new electrical energy or conservation in the event that such new energy or conservation or alternative new energy or conservation will not be obtained by the date specified in the schedule required by §V(a)(2)(D). Also show the latest date by which such equipment shall be installed and operated.

(3) Unapprovable Final Control Plan is a Violation

Submission of a final control plan that does not meet the criteria specified in IV(b)(2) above is a violation of this

Rule. Such violation shall commence on June 1, 1980. Such violation shall remain in effect until an acceptable final control plan has been approved by the Executive Officer/Air Pollution Control Officer.

(4) Reduced Emissions Reduction Requirements for Stage I Compliance

The emission reduction requirements for Stage I compliance may be reduced for a unit(s) provided all of the following are fulfilled:

(A) The final control plan meets the requirements of V(a)(1)(A) and V(a)(2);

(B) All of the emissions reduction equipment installed to comply with Stage I maximum allowable emissions rates of Part VI is operated at its full emissions reductions potential;

(C) Additional emissions reduction methods have been applied to all units if such methods are:

(i) Capable of being installed within the time left for Stage I compliance, that is, by December 31, 1983; and

(ii) More cost-effective than the least cost-effective control that has been installed to comply with Stage I other than the use of equipment to inject ammonia in the presence of a catalyst (selective catalytic reduction). Cost-effectiveness shall be computed in terms of 1979 dollars per pound of oxides of nitrogen removed.

(D) The Executive Officer/Air Pollution Control Officer has published for at least 30 days a notice asking for public comment on the proposal to excuse the owner or operator from compliance with unit tables for the affected units;

(E) The Executive Officer/Air Pollution Control Officer determines after a review of all comments and all evidence that compliance with the subject unit table(s) is not reasonably achieveable. This review shall include an evaluation of emission control techniques used elsewhere in this country and in other countries;

(F) The Executive Officer of the Air Resources Board

concurs with the determination made by the Executive Officer/Air Pollution Control Officer;

(G) When the Stage I emission reduction requirements for a unit have been reduced under the provisions of V(a)(4)(A) through V(a)(4)(F) above, the Stage II compliance requirements for the affected unit are altered as follows:

(i) On the first scheduled shutdown after January 1, 1984, control equipment for meeting Stage II maximum emissions rates of Part VI shall be installed on that unit;

(ii) Within 90 days of being excused under the provisions of V(a)(4)(A) through V(a)(4)(F), the system owner or operator shall submit a plan to the Executive Officer/Air Pollution Control Officer. The plan shall show the steps to be taken to install the control equipment necessary to meet Stage II emission rates for the affected unit; and

(iii) Within 90 days of completion of equipment installation to meet Stage II emissions rates, the system owner or operator shall demonstrate compliance with the maximum emissions rates of Stage II for the affected unit.

(5) Units Exempted from Stage I Compliance

Existing combined cycle generating units are exempt from Stage I requirements.

Alternative energy projects as defined in VII(g)(1) are exempt from Stage I requirements.

(6) Additional Replacement of In-Basin Generated Electrical Energy by New Electrical Energy or Conservation is an Acceptable Method of Reducing Emissions

Reduction of South Coast Air Basin/Ventura County emissions by the replacement of in-basin generated electrical energy by new electrical energy or conservation is an acceptable method of achieving emission reductions in the final control plan provided that the electric utility owner or operator demonstrates to the satisfaction of the Executive Officer/Air Pollution Control Officer that:

(A) The owner or operator has a legally enforceable entitlement to such replacement power which lasts for the period during which the reduction in emissions is claimed;

(B) Legally enforceable commitments are made in the final control plan to install and operate control equipment on in-basin unit(s) or obtain equivalent alternative energy to reduce emissions by the amount claimed for replacement power in the event that such replacement power is not obtained by the date specified in the final control plan for achieving such claimed emissions reductions; and

(C) Emissions are reduced by the amounts claimed in the final control plan and in accordance with the schedule in that plan.

(D) The utility will implement programs which will reduce consumption of electrical energy by the amount claimed.

Prior to approval of a final control plan the Executive Officer/Air Pollution Control Officer may require the surrender for modification of permits to construct and/or operate pursuant to subsection VII(e).

(7) Methodology for Claiming Credit for Conservation Efforts or New Electrical Energy

The owner or operator who claims emission reductions for conservation efforts or new energy shall compute such reductions according to the method given here. The method is described in text form, and an illustration is provided. The sample is calculated for one load increment for one unit. If credit for conservation efforts or new energy is to be claimed, these calculations shall be performed for each load increment for each unit.

The Following Steps Assume No Replacement Power is Available

A. Determine the hourly emissions in pounds with controls applied to each of the 10 load increments for the unit. This value is derived from the unit table used for compliance with the maximum allowable emissions rate tables in Part VI of the Rule assuming no replacement power is available. Enter this number in the appropriate block in Row A. In the sample problem, the figure is 100 pounds/hour at load increment 7.

Example of Calculations for Replacement Electrical Energy

Unit xyz

Assume No Replacement Power Available

		LOAD INCREMENT										Sum of annual emissions for unit 3/
		1	2	3	4	5	6	7	8	9	10	
A 1/	Hourly emissions (pounds) with controls applied assuming no replacement power							100				
B	Average annual hours of operation in 1974 through 1978*							500				
C	Average annual emissions without replacement power (A times B)							50,000				D 3/
E	Average annual emissions from the system = sum of unit annual emissions (D) for all units											

Assume Replacement Power Available

F 2/	Hourly emissions (pounds) with relaxed controls assuming replacement power							150				
G	Annual hours of operation in 1984 with replacement power							200				
H	Annual emissions with replacement power (F times G)							30,000				I 3/
J	Average annual emissions from the system = sum of unit annual emissions (I) for all units											

1/ Row A from unit tables used for compliance with Part V of the rule.
2/ Row F is from unit tables with less stringent controls applied than in Row A.
3/ Annual emissions from a unit equals the sum of annual emissions at each of the 10 load increments.

* See Paragraph V(a)(7)(B)

B. Estimate the average annual hours of operation at each of the 10 load increment in base years 1974 through 1978 by a method acceptable to the Executive Officer/Air Pollution Control Officer. Estimates must agree with actual capacity factors for units. Enter this estimate in the appropriate block in Row B. In this sample, the hours at load increment 7 are 500 hours. The number of hours shall be consistent with capacity factors in the Common Forecasting Methodology III approved by the Energy Commission.

C. Determine the average annual emissions for each of the 10 load increments if no replacement power is supplied. To do this, multiply the appropriate entries in Row A by the appropriate entries in Row B. In this sample,

100 lbs/hr times 500 hrs/yr = 50,000 lbs/yr
at load increment 7

D. Determine the average annual emissions for the unit. This is done by adding the average annual emissions at each of the 10 load increments calculated in Step C.

E. Determine the systems total average annual emissions if no replacement power is available and adequate controls are applied to each unit to comply with the maximum allowable emissions rate table in Part VI of the Rule. To do this, add the average annual emissions from each unit in the system as calculated in Step D.

The Following Steps Assume Replacement Power is Available

F. Determine the hourly emissions in pounds with relaxed controls applied to each of the 10 load increments for the unit. This value is derived from relaxing controls that are assumed for the unit in Step A. Enter this number in the appropriate block on Row F. In the sample problem, the emissions for the less stringently controlled unit at load increment 7 is now 150 pounds/hr.

G. Determine the average annual hours of operation at each of the 10 load increments in 1984 assuming replacement power is available. Enter this estimate in the appropriate block in Row G. In this sample, the hours at load increment 7 with replacement power available is 200 hours.

H. Determine the average annual emissions for each of the 10 load increments if replacement power is supplied and controls are relaxed. To do this, multiply the appropriate entries in Row F by the appropriate entries in Row G. In this sample,

150 lbs/hr times 200 hrs = 30,000 lbs/yr
at load increment 7

I. Determine the average annual emissions for the unit with relaxed controls and new hours of operation by adding the average annual emissions at each of the 10 load increments calculated in Step H.

J. Determine the system's total annual emissions if replacement power is available and controls are relaxed on some units. To do this, add the annual emissions from each unit as calculated in Step I.

(8) Violation of Control Plan is a Violation of Rule

A violation of an approval final control plan is a violation of this rule. Where the Executive Officer/Air Pollution Control Officer determines that a violation of the schedules of equipment installation or procurement of new power shown in the Final Control Plan has occurred, as a result of circumstances beyond the control of the affected utility, a "Notice to Comply" shall first be issued to the violating utility before the issuance of any "Notice of Violation." Failure to correct the violation within sixty days from the date of issuance of "Notice to Comply" shall be followed by a "Notice of Violation" of the rule and enforcement action.

(b) Stage II Requirements and Compliance Schedule

The owner or operator of an existing electric power generating system shall comply with the following requirements for Stage II.

(1) Stage II Emissions Reductions

Emissions of oxides of nitrogen shall be reduced to no more than the emissions allowed by the Stage II rates in Part VI. This reduction shall be accompanied as expeditiously as practicable but not later than January 1, 1990 for Options 1 and 3 and January 1, 1988 for Option 2.

For Options 1, 2, and 3 the following requirements shall be fulfilled:

(A) (i) Prior to July 1, 1984, for Option 1 or July 1, 1981, for Option 2 or January 1, 1981 for Option 3. Submit a final control plan to the Executive Officer/Air Pollution Control Officer for his or her approval. Also submit a copy of this final control plan to the Executive Officer of the Air Resources Board.

(ii) For Option 2, the final control plan shall show the completion of all the work that cannot be done while the unit is operating but that is necessary for the proper operation of control equipment. This work shall be done during the first scheduled shutdown of the unit after January 1, 1984.

(iii) For Option 3, the final control plan shall show the completion of all the work that cannot be done while the unit is operating but that is necessary for the proper operation of control equipment. This work shall be done during the first scheduled shutdown of the unit after January 1, 1982. For the purpose of this section, a scheduled shutdown shall be a scheduled major maintenance shutdown which the utility uses for the purpose of preventative maintenance and which is scheduled at least eighteen months prior to the shutdown. Postponement of a shutdown does not exempt the owner or operator of a system from the requirement to install controls.

In the event that the owner or operator of such utility can demonstrate to the District's Hearing Board that controls on a unit cannot be installed during the first scheduled shutdown because: 1, The control equipment cannot be acquired from supplier(s) in time for the shutdown, or 2, The amount of time required for the installation of equipment would cause the duration of the shutdown to be extended such that the reliability of the system would be jeopardized, then the Hearing Board may extend the date by which controls must be installed on that unit by not more than two years. Such a variance shall not affect the requirement to install control equipment on other units. If the provisions of this paragraph relating to Option 3 are found to be invalid or unenforceable, Option 3 as specified in this Rule shall not be available as a method of compliance with the provisions of this Rule.

Additional Minimum Requirements for a Final Control Plan for Stage II include:

(iv) A Description of Compliance Steps.

This description shall include a list of the steps that will be taken at each electric power generating unit to comply with the Stage II compliance schedule. The description must contain a construction schedule. The construction and equipment installation phases of the final control plan will be completed prior to October 1, 1989, for Option 1, or prior to October 1, 1987, for Option 2 or prior to October 1, 1987 for Option 3. This description shall also show that the Stage II maximum emission rates allowed by Part VI of this Rule shall be achieved by January 1, 1990, for Options 1 and 3 or by January 1, 1988 for Option 2.

(v) Unit Tables

A unit table shall be submitted for each unit in the system. Each unit table shall show the estimated emissions when the controls required for Stage II compliance are applied and the unit is burning oil.

Each unit table shall show the rate of emissions

oxides of nitrogen at each of 10 equally spaced load points from minimum load to rated maximum load. The rate shall be shown in pounds of oxides of nitrogen per net megawatt hour. The rate shown shall be the rate to which the unit shall be controlled to achieve compliance with the Stage II maximum emissions rates in Part VI.

(vi) Schedule of Scheduled Shutdowns

The plan shall include a schedule of scheduled shutdowns of units where such shutdowns have a duration of six weeks or more.

(B) Prior to January 1, 1985, for Option 1 or prior to January 1, 1982, for Option 2 or January 1, 1981 for Option 3. Sign initial contracts for the construction and installation of equipment that will lead to the achievement of the Stage II maximum emission rates as required by Part VI of this Rule; issue orders for the purchase of component parts necessary to accomplish such reductions.

(C) Prior to October 1, 1989, for Option 1 or prior to October 1, 1987, for Option 2 or prior to October 1, 1987 for Option 3. complete construction and installation of emissions control equipment and component parts as indicated on the construction schedule of the final control plan.

(D) Prior to January 1, 1990, for Options 1 and 3 or prior to January 1, 1988, for Option 2. Demonstrate compliance by achieving the Stage II maximum emission rates of Part VI of this Rule. Such demonstration shall also include the submission to the Executive Officer/Air Pollution Control Officer for his or her approval a unit table for each unit. Measured emissions at each unit shall not exceed the emissions at any point or increment on the unit table. In addition, a system-wide composite unit table shall show that emissions from the system shall not exceed the Stage II maximum emission rates of Part VI of this Rule. This system-wide composite unit table shall be constructed in accordance with the criteria set forth in VI(a).

(2) Requirements for an Approval Final Control Plan

An approvable final control plan shall:

(A) Result in compliance with Stage II emissions reduction requirements as expeditiously as practicable;

(B) Satisfy the minimum requirements for a description of compliance steps pursuant to V(b)(1)(A)(i); satisfy the minimum requirements for unit tables pursuant to V(b)(1)(A)(ii); and

(C) With reasonable certainty prevent localized violations of ambient air quality standards.

(D) Show the schedule of conservation efforts, construction or procurement of each new source or conservation of electrical energy which will result in a system-wide reduction of emissions of oxides of nitrogen emitted in the South Coast Air Basin/Ventura County below average 1974 through 1978 annual average emissions, pursuant to Sections V(b)(6) and V(b)(7). The schedule of construction or procurement shall show:

i) the date of approval of officers of the utility to proceed with the construction or procurement;

ii) the date by which contracts shall be signed for new electrical energy for which construction is not required;

iii) the latest dates for the following construction steps:

- Approval of contracts for construction
- Commencement of construction
- Completed installation of major equipment items such as turbines or boilers
- Generation of electrical energy needed to accomplish the emission reduction claimed in subsection V(b)(2)(E)

(E) For each of the years covered by the final control plan state the annual amount of electrical energy which will be produced from each new source of energy or conservation for the South Coast Air Basin/Ventura County.

(F) State the maximum amount of emissions of oxides of nitrogen which shall be emitted from the utility's system on any calendar day for each of the years to the final date of the plan. Emissions greater than the amount approved shall constitute a violation of this rule.

(G) State the maximum amount of electrical energy which shall be generated by the utility's combustion units in the South Coast Air Basin/Ventura County in each of the years covered by the plan.

(H) Describe the equipment which shall be installed and operated on the utility's existing units to reduce emissions by the amount claimed for new electrical energy or conservation in the event that such new

energy or conservation or alternative new energy or conservation will not be obtained by the date specified in the schedule required by Section V(b)(2)(D). Also show the latest date by which such equipment shall be installed and operated.

(3) Unapprovable Final Control Plan is a Violation

An owner or operator who submits a final control plan that does not meet the criteria specified in V(b)(2) above is in violation of this Rule. Such violation shall commence on July 1, 1984 for Option 1 or July 1, 1981 for Option 2 or January 1, 1981 for Option 3. Such violation shall remain in effect until an acceptable final control plan has been approved by the Executive Officer/Air Pollution Control Officer.

(4) Reduced Emissions Reduction Requirements for Stage II Compliance

Section V(b)(4) shall not apply to Option 3

The emissions reductions required for Stage II compliance may be reduced provided all of the following are fulfilled:

(A) Establishment of Demonstration Unit Performance

Demonstration unit performance shall be established as either:

(i) The demonstration unit has achieved at least 90 percent control; or

(ii) The demonstration unit has been excused from compliance pursuant to VIII(a)(7).

(B) Request by Owner or Operator

The owner or operator may request from the Executive Officer/Air Pollution Control Officer a determination as to whether the affected system can achieve the Stage II maximum allowable emissions rates required by Part VI.

(C) Requirement for Public Hearing

Within 60 days of receiving the request specified in V(b)(4)(B) above, the Executive Officer/Air Pollution Control Officer shall conduct a public hearing on the matter. The owner or operator or any other interested party shall have the right to appear and present evidence at such hearing.

(D) Burden of Proof

The burden of proof shall be upon the party seeking to be excused from compliance with Stage II emission rates. This party shall show that compliance with these rates is not technically feasible or is not cost-effective within the timetable set for compliance by this Rule.

(E) Determination by Executive Officer

In making a determination, the Executive Officer/Air Pollution Control Officer shall consider the following factors:

(i) The performance and cost-effectiveness of any available control measures or combinations of control measures including but not limited to the technology employed on the demonstration unit;

(ii) The efforts taken by the owner or operator to effect compliance; and

(iii) The emissions of pollutants other than oxides of nitrogen.

The Executive Officer/Air Pollution Control Officer shall make a determination within 30 days after the public hearing.

If the Executive Officer/Air Pollution Control Officer determines that compliance with Stage II emissions rates is not technically feasible or cost-effective, the Executive Officer/Air Pollution Control Officer shall modify the Stage II maximum allowable emission rates in Part VI of this Rule. The modifications shall be made to the extent dictated by the evidence.

(5) Units Exempted from Stage II Compliance

Existing combined cycle generating units are exempt from Stage II requirements.

Alternative energy projects as defined in VII(g)(1) are exempt from Stage II requirements.

(6) Additional Replacement of In-Basin Generated Electrical Energy by New Electical Energy or Conservation is an Acceptable Method of Reducing Emissions

Reduction of South Coast Air Basin/Ventura County emissions by the replacement of in-basin generated electrical energy by new electrical energy or conservation is an acceptable method of achieving emission reductions in the final control plan provided

that the electric utility owner or operator demonstrates to the satisfaction of the Executive Officer/Air Pollution Control Officer that:

(A) The owner or operator has a legally enforceable entitlement to such replacement power which lasts for the period during which the reduction in emissions is claimed;

(B) Legally enforceable commitments are made in the final control plan to install and operate control equipment on in-basin unit(s) or obtain equivalent alternative energy to reduce emissions by the amount claimed for replacement power in the event that such replacement power is not obtained by the date specified in the final control plan for achieving such claimed emissions reductions; and

(C) Emissions are reduced by the amounts claimed in the final control plan and in accordance with the schedule in that plan.

(D) The utility will implement programs which will reduce consumption of electrical energy by the amount claimed.

Prior to approval of a final control plan the Executive Officer/Air Pollution Control Officer may require the surrender for modification of permits to construct and/or operate pusuant to subsection VII(e).

(7) Methodology for Claiming Credit for Conservation Efforts or New Electrical Energy

The owner or operator who claims emission reductions for conservation efforts or new energy shall compute such reductions according to the method given here. The method is described in text form, and an illustration is provided. The sample is calculated for one load increment for one unit. If credit for conservation efforts or new energy is to be claimed, these calculations shall be performed for each load increment for each unit.

The Following Steps Assume No Replacement Power is Available

A. Determine the hourly emissions in pounds with controls applied to each of the 10 load increments for the unit. This value is derived from the unit table used for compliance with the maximum allowable emissions rate

tables in Part VI of the Rule assuming no replacement power is available. Enter this number in the appropriate block in Row A. In the sample problem, the figure is 100 pounds/hour at load increment 7.

B. Estimate the average annual hours of operation at each of the 10 load increments in base years 1974 through 1978 by a method acceptable to the Executive Officer/Air Pollution Control Officer. Estimates must agree with the actual capacity factors of the units. Enter this estimate in the appropriate block in Row B. In this sample, the hours at load increment 7 are 500 hours. The number of hours shall be consistent with capacity factors in the Common Forecasting Methodology III approved by the Energy Commission.

C. Determine the average annual emissions for each of the 10 load increments if no replacement power is supplied. To do this, multiply the appropriate entries in Row A by the appropriate entries in Row B. In this sample,

100 lbs/hr times 500 hrs/yr = 50,000 lbs/yr
at load increment 7

D. Determine the average annual emissions for the unit. This is done by adding the average annual emissions at each of the 10 load increments calculated in Step C.

Example of Calculations for Replacement Electrical Energy

Unit xyz

Assume No Replacement Power Available

		LOAD INCREMENT										Sum of annual emissions for unit 3/
		1	2	3	4	5	6	7	8	9	10	
A 1/	Hourly emissions (pounds) with controls applied assuming no replacement power							100				
B	Average annual hours of operation in 1974 through 1978*							500				
C	Average annual emissions without replacement power (A times B)							50,000				D 3/
E	Average annual emissions from the system = sum of unit annual emissions (D) for all units											

Assume Replacement Power Available

F 2/	Hourly emissions (pounds) with relaxed controls assuming replacement power							150				
G	Annual hours of operation in 1990 for Option 1 & 3 or 1988 for Option 2 with replacement power							200				
H	Annual emissions with replacement power (F times G)							30,000				I 3/
J	Average annual emissions from the system = sum of unit annual emissions (I) for all units											

1/ Row A from unit tables used for compliance with Part V of the rule.
2/ Row F is from unit tables with less stringent controls applied than in Row A.
3/ Annual emissions from a unit equals the sum of annual emissions at each of the 10 load increments.

* See Paragraph V(b)(7)(B)

E. Determine the systems total average annual emissions if no replacement power is available and adequate controls are applied to each unit to comply with the maximum allowable emissions rate table in Part VI of the Rule. To do this, add the average annual emissions from each unit in the system as calculated in Step D.

The Following Steps Assume Replacement Power is Available

F. Determine the hourly emissions in pounds with relaxed controls applied at each of the 10 load increments for the unit. This value is derived from relaxing controls that are assumed for the unit in Step A. Enter this number in the appropriate block on Row F. In the sample problem, the emissions for the less stringently controlled unit at load increment 7 is now 150 pounds/hr.

G. Determine the average annual hours of operation at each of the 10 load increment in 1990 for Option 1 and 3 or 1988 for Option 2 assuming replacement power is available. Enter this estimate in the appropriate block in Row G. In the sample, the hours at load increment 7 with replacement power available is 200 hours.

H. Determine the average annual emissions for each of the 10 load increments if replacement power is supplied and controls are relaxed. To do this, multiply the appropriate entries in Row F by the appropriate entries in Row G. In this sample,

150 lbs/hr times 200 hrs = 30,000 lbs/yr
at load increment 7

I. Determine the average annual emissions for the unit with relaxed controls and new hours of operation by adding the average annual emissions at each of the 10 load increments calculated in Step H.

J. Determine the system's total annual emissions if replacement power is available and controls are relaxed on some units. To do this, add the annual emissions from each unit as calculated in Step I.

K. The system's total annual emissions with replacement power and relaxed controls shall be less than or equal to the system's total annual emissions with no replacement power and with adequate controls applied to each unit to meet the maximum allowable emissions rate tables in Part (VI) of the Rule. Specifically J shall be less than or equal to E.

(8) Violation of Control Plan is a Violation of Rule

A violation of an approved final control plan is a violation of this rule. Where the Executive Officer/Air Pollution Control Officer determines that a violation of the schedules of equipment installation or procurement of new power shown in the Final Control Plan has occurred, as a result of circumstances beyond the control of the affected utility, a "Notice to Comply" shall first be issued to the violating utility before the issuance of any "Notice of Violation." Failure to correct the violation within sixty days from the date of issuance of "Notice to Comply" shall be followed by a "Notice of Violation" of the rule and enforcement action.

(9) At any time after January 1, 1982, the owner or operator may petition the Air Resources Board to amend the requirements of this rule, based upon circumstances which have changed since the date of adoption of this rule, including, but not by way of limitation, the following:

(A) The cost-effectiveness or technical feasibility of emission control equipment comtemplated in any control plan submitted pursuant to this rule.

(B) The effect of power plant NOx emission on federal and state ambient air quality standards and the cost-effectiveness of power plant NOx reduction to achieve or maintain such ambient air quality standards.

(C) Federal or state law, rules, regulations, or policy affecting the utilization of gas or oil as power plant fuel.

Part VI. MAXIMUM ALLOWABLE EMISSIONS RATE TABLES

This part does not apply to Option 4.

(a) Table Criteria

The criteria set forth here were assumed in the construction of the maximum allowable emissions rate tables:

(1) All existing electric power generating units were considered to be available and burning oil;

(2) Each unit of the system was assumed to have nine equal increments of load between the unit's minimum load and its rated maximum load and one increment of load between zero load and minimum load;

(3) The incremental rate of emissions was determined for each increment of load assumed in Criterion 2 above. This rate is based on the assumption that emission controls required for compliance with the appropriate stage are installed and properly operating on the unit. The rate is calculated in incremental pounds of emissions of oxides of nitrogen per incremental net megawatt hour;

(4) A unit table was prepared for each electrical power generating unit. Each unit table is based on Criteria 1, 2, and 3 above. Each unit table was constructed to show the rate of emissions at each of 10 equally spaced load points from minimum load to maximum rated load;

(5) The increments of load identified in Criteria 2 and 3 above were ranked in order of increasing incremental pounds per net megawatt hour;

(6) Individual unit tables were combined for each size electrical power generating system shown in the maximum allowalbe emissions rate tables; and

(7) Demand for electrical energy was assumed to be filled by changing load in the increments identified in Criterion 2 above and in the order determined in Criterion 5 above. For the purpose of filling the next highest system-wide increment of deamnd, no unit was assumed to be reduced in load. In addition, no increment of load was used unless all lower increments for that same unit had been used.

(b) Construction of Additional Tables

The construction of any additional maximum allowable emissions rate tables or system-wide composite unit tables shall be accomplished in accordance with the criteria in V(a) above.

In addition, any other method of adding increments of capacity of units to satisfy system-wide load can be used provided it is shown to yield equivalent results.

Part VI MAXIMUM ALLOWABLE EMISSIONS RATE TABLES

TABLE I

MAXIMUM ALLOWABLE RATE OF EMISSIONS OF OXIDES OF NITROGEN ASSUMING THAT ALL ELECTRIC POWER GENERATING UNITS IN THE SYSTEM ARE AVAILABLE, AS A FUNCTION OF NET SYSTEM LOAD FOR ELECTRIC POWER GENERATING SYSTEMS HAVING A TOTAL GENERATING CAPACITY OF GREATER THAN 5000 MEGAWATTS AS OF JANUARY 1, 1978

NET SYSTEM LOAD IN MEGAWATTS	MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER DECEMBER 31, 1983		MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER JANUARY 1, 1990 FOR Options for 1 & 3 AFTER JANUARY 1, 1988 FOR OPTION 2
	Option 1	Option 2	
500	733	808	88
1000	1,234	1,430	173
1500	1,736	2,052	255
2000	2,238	2,673	332
2500	2,758	3,295	424
3000	3,331	3,917	519
3500	3,904	4,642	633
4000	4,478	5,402	731
4500	5,054	6,197	839
5000	5,632	7,042	948
5500	6,211	7,887	1071
6000	6,800	8,732	1186
6500	7,400	9,577	1318
7000	8,210	10,422	1459
7500	9,002	11,267	1627
8000	10,370	12,650	1871
8500	12,762	15,115	2312
9000 or Greater	30,217	36,463	5709

NOTE: To determine the maximum allowable emissions for net system loads other than those shown, use linear interpolation between the two net system loads that bracket the net system load desired.

TABLE II

MAXIMUM ALLOWABLE RATE OF EMISSIONS OF OXIDES OF NITROGEN ASSUMING THAT ALL ELECTRIC POWER GENERATING UNITS IN THE SYSTEM ARE AVAILABLE, AS A FUNCTION OF NET SYSTEM LOAD FOR ELECTRIC POWER GENERATING SYSTEMS HAVING A TOTAL GENERATING CAPACITY OF LESS THAN 5000 MEGAWATTS AND EQUAL TO OR MORE THAN 500 MEGAWATTS AS OF JANUARY 1, 1978

NET SYSTEM LOAD IN MEGAWATTS	MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER DECEMBER 31, 1983		MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER JANUARY 1, 1990 FOR Options 1 & 3 AFTER JANUARY 1, 1988 FOR OPTION 2
	Option 1	Option 2	
200	271	305	27
400	482	588	54
600	693	871	88
800	912	1,154	130
1000	1,133	1,437	159
1200	1,355	1,720	205
1400	1,576	2,003	243
1600	1,790	2,286	290
1800	1,969	2,570	335
2000	2,195	2,853	390
2200	2,407	3,136	439
2400	2,749	3,419	507
2600	3,281	3,854	581
2800	3,945	4,533	674
3000	4,783	5,372	784
3200	5,890	6,479	919
3400 or Greater	8,401	8,989	1199

NOTE: To determine the maximum allowable emissions for net system loads other than those shown, use linear interpolation between the two net system loads that bracket the net system load desired.

TABLE III

MAXIMUM ALLOWABLE RATE OF EMISSIONS OF OXIDES OF NITROGEN ASSUMING THAT ALL ELECTRIC POWER GENERATING UNITS IN THE SYSTEM ARE AVAILABLE, AS A FUNCTION OF NET SYSTEM LOAD FOR ELECTRIC POWER GENERATING SYSTEMS HAVING A TOTAL GENERATING CAPACITY OF LESS THAN 500 MEGAWATTS AS OF JANUARY 1, 1978

NET SYSTEM LOAD IN MEGAWATTS	MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER DECEMBER 31, 1983		MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER JANUARY 1, 1990 FOR Options 1 & 3 AFTER JANUARY 1, 1988 FOR OPTION 2
	Option 1	Option 2	
20	64	82	7
40	103	137	12
60	154	192	18
80	206	247	26
100	257	302	35
120	311	368	46
140	370	439	58
160	428	510	72
180	503	581	86
200	587	681	105
220	756	850	130
240 or greater	996	1,090	166

NOTE: To determine the maximum allowable emissions for net system loads other than those shown, use linear interpolation between the two net system loads that bracket the net system load desired.

Part VII. ADDITIONAL PROVISIONS

This part does not apply to Option 4.

(a) Data Requirements

(1) Data to be Obtained by Measurements

Any oxides of nitrogen emissions data required by this Rule shall be based on measurements of emissions on applicable units. Such measurements shall be conducted at times and in a manner acceptable to the Executive Officer/Air Pollution Control Officer

The term "Any oxides of nitrogen emissions data" used above includes that data on which unit tables are based.

(2) Need for Additional Information

Additional information that is deemed necessary by the Executive Officer/Air Pollution Control Officer to ascertain the validity of submitted data shall be furnished to the Executive Officer/Air Pollution Control Officer the owner or operator of the effected unit within 60 days of the Executive Officer's/ Air Pollution Control Officer's written request.

(3) Resolving Discrepancies in Data

If the Executive Officer/ Air Pollution Control Officer determines that the rate of emissions of oxides of nitrogen from any unit is different from the rate shown

in the data submitted for approval, the Executive Officer/Air Pollution Control Officer shall notify in writing the owner or operator that a difference exists. The Executive Officer/ Air Pollution Control Officer may then substitute the data from his or her determination for the data submitted.

(b) Interpolation

The rate of emissions of oxides of nitrogen at points in the operating range of a unit or system that is not coincident with data submitted shall be determined by linear interpolation between the two points that bracket the point desired.

(c) Agreement to Combine Systems

Owners or operators of electrical power generating systems may enter into mutual written agreements to combine systems. For the purposes of this Rule, these combined systems shall be considered as one. If systems are combined, the maximum allowable emissions rate table in Part VI of this Rule and which is applicable to said owners or operators shall be superseded and replaced by a new table of like form. The new table shall reflect such agreement and provide for an identical level of system-wide control. Such revised table shall be derived by the Executive Officer/Air Pollution Control Officer.

An agreement to combine systems does not alter the status of demonstration units. Units previously selected as demonstration units shall continue to serve that purpose, and the provisions of VIII shall remain in effect for those units.

(d) Consultation with Other Districts

Prior to making a determination regarding the acceptability of any plans, data, or any other information required by this Rule, the Executive Officer/Air Pollution Control Officer shall consult with the Executive Officer/Air Pollution Control Officer of any other Air Pollution Control District that would be affected by this Rule.

(e) Permit Provisions

Any person operating basic equipment under permit pursuant to this Rule and who plans to make modifications to that equipment or related control equipment for the purpose of reducing oxides of nitrogen emissions as required by this Rule, shall apply for new permits to construct or operate both basic and control equipment involved in such reductions regardless of whether modifications or additions are to be made to either basic or control equipment or both.

Existing permits to operate pertaining to the basic and control equipment as specified above shall be surrendered and cancelled when such new permits to operate are issued. New permits shall not be effective unless surrender of such existing permits is made.

(f) Continuous Monitoring of Ammonia

An owner or operator of an electric power generating unit that uses ammonia to comply with this Rule shall not operate that unit unless the unit is equipped with instruments to continuously monitor and record the concentration of ammonia in the flue gas. Ammonia concentrations shall be monitored when ammonia is being introduced into the flue gas of the unit. The recorded data shall be retained by the owner or operator of the affected electric power generating system for at least two years from the date of recording. These data shall be available for inspection and/or reproduction upon the request of the Executive Officer/ Air Pollution Control Officer.

The Executive Officer/Air Pollution Control Officer shall determine the acceptability of any instrument used to comply with this Section. Such determination shall be made prior to the instrument's installation.

(g) Exemptions

(1) Alternative Energy Projects

(A) Cogeneration and Alternative Fuel Units

The provisions of this Rule do not apply to cogeneration units or units in which refuse-derived fuel or biomass fuel is burned to satisfy at least 50 percent of the total heat demand of that unit. For the purposes of this Rule, a cogeneration unit is one that concurrently recovers for sale by the system's owner or operator a substantial fraction of the input energy as other forms of energy for industrial or commercial heating or cooling purposes. The Executive Officer shall determine what a substantial fraction is, but in no event shall it be less than 25 percent.

For the purposes of this Rule, cogeneration units do not include combined cycle generating units.

(B) Existing Units Modified to Cogeneration Units

Existing units modified to cogeneration units that do not meet the requirements for cogeneration units in VII(g)(1)(A) above on or before August 7, 1978, but are thereafter modified to meet those requirements shall for the purposes of this Rule be considered as new units. These units shall be subject to the new source review provisions of Regulation XIII of the South Coast Air Quality Management District or with Rule 26 of the Ventura County Air Pollution Control District, whichever applies.

(2) Simple Cycle Gas Turbine Units

The provisions of this Rule do not apply to simple cycle gas turbine electric power generating units.

(3) Existing Combined Cycle Units: PARTIAL EXEMPTION

Electric power generating units that are permitted to operate as combined cycle gas turbine units on or before August 7, 1978, are exempt from the provisions of this Rule except for IV(b), "Emissions Dispatch Plan," which applies fully.

(h) Prohibited Modification

An existing unit shall not be modified so as to result in a net increase in its emissions of oxides of nitrogen.

Part VIII. DEMONSTRATION UNIT

This part does not apply to Options 3 and 4.

(a) Demonstration Unit Requirements

A demonstration unit is a unit selected to demonstrate control technology that can be used to achieve Stage II system-wide reductions of 90 percent.

(1) Applicable Unit

A demonstration unit is an electric power generating unit with an electrical generating capacity equal to or greater than:

(A) 100 megawatts or equivalent flue gas volume: Selection 1; or

(B) 350 megawatts or equivalent flue gas volume: Selection 2.

(2) Applicable System

The requirement for a demonstration unit applies only to owners or operators of electric power generating systems with power generating capacities equal to or greater than 500 megawatts.

(3) Number of Required Units

Each system of at least 500 megawatts shall have at least one demonstration unit.

(4) Required Emissions Reductions

The owner or operator of the demonstration unit shall reduce the rate of emissions of oxides of nitrogen by at least 90 percent throughout the demonstration unit's operating range. The rate of reduction shall be determined from the approved unit table for the affected unit. A unit table for a demonstration unit shall meet the minimum requirements stated in the compliance schedule

in VIII(a)(5) below.

(5) Demonstration Unit Compliance Schedule

The emission reductions required by VIII(a)(4) above shall be achieved as expeditiously as practicable but prior to January 1, 1982, for Selection 1 or October 1, 1983, for Selection 2. The owner or operator of a demonstration unit shall fulfill the following minimum requirements:

(A) Prior to May 1, 1980, for both Selection 1 and Selection 2 submit the following to the Executive Officer/Air Pollution Control Officer. Also submit a copy to the Executive Officer of the Air Resources Board:

(i) A final control plan that identifies the unit selected to be the demonstration unit. The final control plan shall describe the minimum steps that will be taken to achieve the required 90 percent reduction by January 1, 1982, for Selection 1 or prior to October 1, 1983, for Selection 2.

The final control plan shall also contain a construction schedule. The construction schedule shall show completion of the construction and equipment installation phases prior to October 1, 1981, for Selection 1 or prior to July 1, 1983, for Selection 2.

(ii) Unit tables as described here. One unit table shall show emissions upstream of control equipment when the unit is burning oil. A second unit table shall show estimated emissions downstream of control equipment when the unit is burning oil. A comparison of the two unit tables shall be made by the Executive Officer/Air Pollution Control Officer to determine if the 90 percent reduction shall be achieved. This second unit table shall also be used when constructing the system-wide composite unit tables required for Stage I compliance pursuant to V(a)(1)(D) and for Stage II compliance pursuant to V(b)(1)(D).

(B) Prior to May 1, 1980. Sign initial contracts for the construction and installation of equipment that will begin to effect the emissions reductions required by this Rule; issue orders for the purchase of component parts to accomplish such reductions. Such contracts and orders shall be submitted to the Executive Officer/ Air Pollution Control Officer. Also, submit copies of such contracts to the Executive Officer of the Air Resources Board.

(C) Prior to October 1, 1981, for Selection 1 or prior to July 1, 1983, for Selection 2. Complete construction and installation of emissions control equipment and component parts as indicated on the construction schedule of the final control plan.

(D) Prior to January 1, 1982, for Selection 1 or prior to October 1, 1983, for Selection 2. Demonstrate compliance by achieving the required 90 percent reduction. Such demonstration shall include the submission of unit tables to the Executive Officer/ Air Pollution Control Officer for his or her approval.

(6) Compliance

(A) Inadequate Final Control Plan is a Violation

An inadequate final control plan is one that will not achieve the 90 percent emissions reduction requirement as expeditiously as practicable. This criterion applies even if the plan ensures compliance by the date specified in the compliance schedule.

If the Executive Officer/Air Pollution Control Officer determines at any time that a final control plan is inadequate according to the criteria above. the owner or operator of the affected electric power generating system shall be in violation of this Rule. Such violation shall commence on the date the determination was made be the Executive Officer/Air Pollution Control Officer. Such violation shall remain in effect until an adequate final control plan has been approved by the Executive Officer/Air Pollution Control Officer.

(B) Noncompliance with Plan is a Violation

Unless otherwise excused by VIII (a)(7) below, any failure to achieve and demonstrate the required 90 percent reduction shall constitute a violation of this Rule.

(7) Excusal from Required Emissions Reduction

Any system owner or operator which is required to achieve such 90 percent reduction shall be excused from this requirement if the Executive Officer/Air Pollution Control Officer makes a final determination that:

(A) The maximum achievable reduction has been demonstrated;

(B) The maximum achievable reduction is less than 90 percent; and

(C) The owner or operator has taken all reasonably available steps to effect such reduction.

Part IX Option 4

This part does not apply to Options 1, 2 and 3.

(a) Emission Reduction Requirements

The owner or operator of a system shall reduce system-wide annual average and daily maximum oxides of nitrogen emissions by 90% and 75%, respectively, from the system-wide average of 1974 through 1978 annual average and maximum daily amounts respectively by January 1990, the final compliance date for this rule. The owner or operator shall also reduce oxides of nitrogen emissions before 1990 by at least the percentages and by the dates shown in Table IX-1 of this section. In addition to meeting the percentage reductions identified in Table IX-1, the owner or operator shall obtain the further emission reductions which will result from compliance with the requirements of paragraph (e) of this Part IX. Except as required by Section (e), variations may be allowed if approved in writing by the Executive Officer/Air Pollution Control Officer and if the Executive Officer/Air Pollution Control Officer determines that subsequent reductions will be achieved in accordance with the schedule in Table IX-1.

Table IX-1
NOx Emission Reduction from
Average of Years 1974 through 1978

Year	Average %Reduction	Daily Maximum % Reduction
1982	18	15
1983	27	22.5
1984	36	30
1985	45	37.5
1986	54	45
1987	63	52.5
1988	72	60
1989	81	67.5
1990	90	75

Compliance with these emission reduction requirements shall be based on annual average and daily maximum total South Coast Air Basin/Ventura County emissions in tons per day, developed using unit NOx concentration measurements and calculated exhaust gas flow levels. These values shall not exceed emission limits established according to the reductions contained in Table IX-1. The utility shall submit on a monthly basis and not later than 30 days following the end of each month daily NOx emissions data for each unit in the South Coast Air Basin/Ventura County for the purpose of determining compliance.

(b) Reduction Methods

Emission reductions shall be accomplished by any method the utility chooses including, but not limited to the following:

(1) Application of new emission controls

(2) Modification or optimization of existing emission controls

(3) Use of cleaner fuels (including natural gas if under firm contract).

(4) Reduction of generation in the South Coast Air Basin/Ventura County by increased generation outside that area. Such electrical energy shall be credited to the extent it reduces emissions within the South Coast Air Basin/Ventura County.

(5) Least NOx dispatch

(c) Exceptions

The owner or operator may, during a system emergency, operates a unit or system in excess of the emissions limits in Section (a) provided that total oxides of nitrogen emissions are otherwise minimized.

The Executive Officer/Air Pollution Control Officer shall be advised of any violation, the reason for it, and expected duration within 24 hours of the occurrence or within four hours after the start of the next normal business day. The utility shall file a written report to the Executive Officer/Air Pollution Control Officer within one week of the occurrence and shall include estimated emissions in excess of this rule. The utility shall make available for inspection by the Executive Officer/ Air Pollution Control Officer such records that establish that there was a system emergency.

For the purpose of this rule, a "system emergency" means a situation when, due to unavailability of scheduled generating capacity or due to unanticipated peak demand, the projected on-line energy producing capacity (including firm purchased power) directly available to the system operator is less than five percent of the anticipated system peak load and appears to be further decreasing to 2-1/2 percent or less.

(d) Compliance Plan

The utility shall submit a compliance plan to the Executive Officer/Air Pollution Control Officer no later than June 1, 1980, for approval and shall submit updated plans annually thereafter. Each plan shall show which methods shall be utilized to reduce South Coast Air Basin/Ventura County emissions to meet the requirements of Section IX(a). The control plan and each annual update shall contain as a minimum:

(1) A resource plan identifying out-of-South-Coast-Air-Basin/Ventura-County generation to be integrated into the utility system and a projection

of the resulting South Coast Air Basin/Ventura County emissions reductions for each of the remaining years to 1990.

(2) A description of the control equipment which will be installed on units and which will be necessary to comply with final emissions reductions requirements of this rule (90 percent annual average and 75 percent peak daily emissions reductions) and the respective units on which such equipment will be installed.

(3) A description of all other steps by which emissions will be reduced to comply with the final emissions reduction requirements of this rule.

(4) A construction schedule and date of operation for all equipment installation necessary to meet the provisions of this part, consistent with Section (e) of this part.

(5) Contingency plans and implementation dates for achieving the required South Coast Air Basin/Ventura County emission reductions in the event the generation identified in the resource plan in #1 above is not obtained in accordance with the plan. Such contingency plans and/or implementation dates may be amended upon filing of an amended contingency plan or schedule and approved by the Executive Officer/Air Pollution Control Officer.

(6) Oil reduction compliance plans filed with Federal and/or State agencies.

(7) The compliance schedule shall contain aggregate emission limits for all units within the District and shall represent an enforceable daily and annual emission limit upon approval of the Compliance Plan.

(8) A methodology for determining compliance with provisions of this rule. Such methodology may be detailed in the form of a Letter of Agreement between the Executive Officer/Air Pollution Control Officer.

(9) A schedule of scheduled shutdowns of units where such shutdowns will have a duration of six weeks or more.

(e) Dates When Controls Must be Installed

(1) The controls identified in the compliance plan required to comply with the final emissions reductions requirement of this part shall be installed as expeditiously as practicable but in no event later than during the first regularly scheduled shutdown of each affected unit which commences after January 1, 1982. For the purpose of this section, a scheduled shutdown shall be of six weeks or more duration and scheduled at least eighteen months in advance of the shutdown. Postponement of a shutdown does not exempt the owner or operator of the system from the requirement to install controls.

(2) In the event that the owner or operator of such utility can demonstrate to the District's Hearing Board that controls on a unit cannot be installed during the first scheduled shutdown because: 1. The control equipment cannot be delivered by the supplier(s) in time for the shutdown; or 2. The amount of time required for the installation of equipment would cause the duration of the shutdown to be extended such that the reliability of the system would be jeopardized, then the Hearing Board may extend the date controls must be installed on that unit by not more than two years. Such a variance shall not affect the requirement to install controls on other units.

(3) If this Section IX(e) is found to be invalid or unenforceable, Option 4 as specified in this Rule shall not be available as a method of compliance with the provisions of this Rule.

(f) Requirement for New Permits

Any person operating basic equipment under permit pursuant to this

Rule and who plans to make modifications to that equipment or related control equipment for the purpose of reducing oxides of nitrogen emission as required by this Rule, shall apply for new permits to construct or operate both basic and control equipment involved in such reductions regardless of whether modifications or additions are to be made to either basic or control equipment or both.

Existing permits to operate pertaining to the basic and control equipment as specified above shall be surrendered and cancelled when such new permits to operate are issued. New permits shall not be effective unless surrender of such existing permits is made.

(g) Right to Petition for Variance

At any time after January 1, 1982, the owner or operator may petition the Air Resources Board to amend the requirements of this rule based upon circumstances which have changed since the date of adoption of this rule, including, but not by any way of limitation, the following:

(1) The cost-effectiveness or technical feasibility of emission control equipment contemplated in any control plan submitted pursuant to this rule.

(2) The effect of power plant NOx emission on federal and state ambient air quality standards and the cost-effectiveness of power plant NOx reductions to achieve or maintain such ambient air quality standards.

(3) Federal or state laws, rules, regulations, or policy affecting the utilization of gas or oil as power plant fuel.

State of California

Memorandum

To : Huey D. Johnson
Secretary
RESOURCES AGENCY

Date : April 14, 1980

Subject: Filing of Notice of Decision of the Air Resources Board

From : Air Resources Board

Pursuant to Title 17, Section 60007(b) and in compliance with Air Resources Board certification under section 21080.5 of the Public Resources Code, the Air Resources Board hereby forwards for posting the attached notice of decision and response to environmental comments raised during the comment period.

Sally Rump
BOARD SECRETARY

Attachments:

[redacted]
Resolution 80-23

State of California
AIR RESOURCES BOARD

Response to Environmental Issues Raised

ITEM: Adoption of Amendments to Rule 475.1 of the South Coast Air Quality Management District and Rule 59.1 of the Ventura County Air Pollution Control District which Control the Emissions of Oxides of Nitrogen from Power Plants

Public Hearing Date: March 27, 1980
Response Date; March 27, 1980
Issuing Authority: Air Resources Board

COMMENT: Efforts to control ozone in the South Coast Air Shed may be adversely impacted by further controls upon emissions of nitrogen oxides and the relative contribution of nitrogen oxides from power plants is extremely small. (The Southern California Edison Company).

RESPONSE: The air quality impacts of controlling emissions of oxides of nitrogen are not a significant environmental issue related to the proposed action. The Board thoroughly examined and considered the air quality need before adopting the existing Rules 495.1 and 59.1 of the South Coast Air Quality Management District and Ventura County, respectively, on August 7, 1978 and May 24, 1979. At those times the Board found that such rules were needed to meet air quality standards and hence would have a positive environmental effect. At this hearing the matter before the Board is the revision to the existing rules to make them more compatible with recent findings on control techniques and to allow for the reduction of fossil fuel burning within the South Coast Air Shed as a way of reducing emissions to comply with the rules. The proposed revisions do not significantly change the air quality impacts of the existing rules. Therefore, the air quality information submitted by Edison

State of California
AIR RESOURCES BOARD

Resolution 80-22

March 27, 1980

WHEREAS, the Air Resources Board (the "Board") on August 7, 1978, in Resolution 78-48 adopted Rule 475.1 for the South Coast Air Quality Management District (the "District"); and

WHEREAS, the Board, in Resolution 79-2, adopted January 23, 1979, in response to a Petition for Reconsideration filed by the District, affirmed its adoption of Rule 475.1 and also remanded the Rule to the District for limited revisions; and

WHEREAS, the District has not acted to revise the Rule but has recommended that the Board itself consider revisions to the Rule; and

WHEREAS, Health and Safety Code Section 39605 authorizes the Board to provide any assistance to any district; and

WHEREAS, the Board is authorized pursuant to Health and Safety Code Section 40451, after holding a public hearing, to revise the rules and regulations of the District to implement and effectuate the purposes of Division 26 of the Health and Safety Code; and

WHEREAS, Sections 110(a)(2) and 172(a)(1) of the Clean Air Act require that a state implementation plan provide for the attainment of national ambient air quality standards in any nonattainment area as expeditiously as practicable; and

WHEREAS, a commitment was made in the South Coast Air Quality Management District's nonattainment plan to reduce emissions of oxides of nitrogen by means of the measures contained in the Rule adopted by this Resolution; and

WHEREAS, the staffs of the District and the Board have worked together to develop amendments that are satisfactory to the staff of the District; and

WHEREAS, the California Environmental Quality Act and ARB regulations require that an activity not be adopted as proposed if significant environmental impacts have been identified and where feasible alternatives and/or mitigation measures exist which would substantially reduce such impacts; and

WHEREAS, the Board has held a public hearing to consider amendments to Rule 475.1 of the South Coast Air Quality Management District; and

State of California

Memorandum

To : Huey D. Johnson
Secretary
RESOURCES AGENCY

Date : April 14, 1980

Subject: Filing of Notice of Decision of the Air Resources Board

From : Air Resources Board

Pursuant to Title 17, Section 60007(b) and in compliance with Air Resources Board certification under section 21080.5 of the Public Resources Code, the Air Resources Board hereby forwards for posting the attached notice of decision and response to environmental comments raised during the comment period.

Sally Rump

Sally Rump
BOARD SECRETARY

Attachments:
Resolution 80-22
Resolution 80-23

I certify that this is a correct copy of the document on file in this office.

Thomas E. Hill
Assistant Secretary

AIR RESOURCES BOARD

Response to Environmental Issues Raised

ITEM: Adoption of Amendments to Rule 475.1 of the South Coast Air Quality Management District and Rule 59.1 of the Ventura County Air Pollution Control District which Control the Emissions of Oxides of Nitrogen from Power Plants

Public Hearing Date: March 27, 1980
Response Date: March 27, 1980
Issuing Authority: Air Resources Board

COMMENT: Efforts to control ozone in the South Coast Air Shed may be adversely impacted by further controls upon emissions of nitrogen oxides and the relative contribution of nitrogen oxides from power plants is extremely small. (The Southern California Edison Company).

RESPONSE: The air quality impacts of controlling emissions of oxides of nitrogen are not a significant environmental issue related to the proposed action. The Board thoroughly examined and considered the air quality need before adopting the existing Rules 495.1 and 59.1 of the South Coast Air Quality Management District and Ventura County, respectively, on August 7, 1978 and May 24, 1979. At those times the Board found that such rules were needed to meet air quality standards and hence would have a positive environmental effect. At this hearing the matter before the Board is the revision to the existing rules to make them more compatible with recent findings on control techniques and to allow for the reduction of fossil fuel burning within the South Coast Air Shed as a way of reducing emissions to comply with the rules. The proposed revisions do not significantly change the air quality impacts of the existing rules. Therefore, the air quality information submitted by Edison

State of California
AIR RESOURCES BOARD

Resolution 80-23

March 27, 1980

WHEREAS, the Air Resources Board (the "Board") in Resolution 79-49, May 29, 1979, adopted Rule 59.1 for the Ventura County Air Pollution Control District; and

WHEREAS, Rule 59.1 is complementary to Rule 475.1 of the South Coast Air Quality Management District in that one of the utility companies subject to both rules has power plants in both districts and the emissions from the power plants are controlled systemwide. Therefore both rules must contain substantially identical provisions; and

WHEREAS, the Board in Resolution 80-22, dated March 27, 1980, rescinded Rule 475.1 of the South Coast Air Quality Management District and replaced it with Rule 1135.1, which is in certain respects substantially different from Rule 475.1; and

WHEREAS, Rule 59.1 of the Ventura County Air Pollution Control District must now be changed to contain complementary provisions to those of Rule 1135.1 of the South Coast Air Quality Management District; and

WHEREAS, the Board originally adopted Rule 59.1 in response to a request from the Ventura County Board of Supervisors, and representatives of the County have expressed the desire that the Board at this time consider further revisions to the Rule; and

WHEREAS, Health and Safety Code Section 39605 authorizes the Board to provide any assistance to any district; and

WHEREAS, Sections 110(a)(2) and 172(a)(1) of the Clean Air Act require that a state implementation plan provide for the attainment of national ambient air quality standards in any nonattainment area as expeditiously as practicable; and

WHEREAS, a commitment was made in the Ventura County Air Pollution Control District's nonattainment plan to reduce emissions of oxides of nitrogen by means of the measures contained in the Rule adopted by this Resolution; and

WHEREAS, the staffs of the Ventura County Air Pollution Control District and the Board have worked together to develop amendments that are satisfactory to the staff of the Ventura County Air Pollution Control District; and

WHEREAS, the California Environmental Quality Act and ARB regulations require that an activity not be adopted as proposed if significant environmental impacts have been identified and where feasible alternatives and/or mitigation measures exist which would substantially reduce such impacts; and

WHEREAS, the Board has held a public hearing to consider amendments to Rule 59.1 of the Ventura County Air Pollution Control District; and

WHEREAS, the Board finds that:

1. It is technologically and economically feasible for the utilities subject to the provisions of Rule 59.1 to reduce emissions of oxides of nitrogen to the levels required in the amendments to the Rule adopted by this Resolution; and

2. The specified emissions reductions can be achieved by the dates specified in the amended Rule; and

3. The amended Rule provides flexibility to the utilities in complying with the Rule and meets the concerns raised by the utilities in a reasonable way; and

4. The provisions of the amended Rule are necessary to meet the requirements of the Clean Air Act and to achieve and maintain state ambient air quality standards; and

5. There have been no significant environmental impacts identified which would result from adoption of the proposed action.

NOW, THEREFORE, BE IT RESOLVED, that the Board amends Rule 59.1 of the Ventura County Air Pollution Control District controlling emissions of oxides of nitrogen from power plants as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED, that the Executive Officer is directed to transmit Rule 59.1 adopted by this Resolution to the Environmental Protection Agency for inclusion in the California State Implementation Plan.

I certify that the above is a true and correct copy of Resolution 80-23 as adopted by the Air Resources Board.

Sally Rump
Board Secretary

ATTACHMENT A

Rule 1135.1 of the South Coast Air Quality Management District
Adopted March 27, 1980

and

Rule 59.1 of the Ventura County Air Pollution Control District
Adopted March 27, 1980

for

Controlling Emissions of Oxides of Nitrogen
from Electric Power Generating Equipment

in the

South Coast Air Basin

and the

Ventura County Air Pollution Control District

Note: The differences between Rule 1135.1 and Rule 59.1 are:

1. The term Executive Officer/Air Pollution Control Officer refers to the Executive Officer of the South Coast Air Quality Management District or the Air Pollution Control Officer of the Ventura County Air Pollution Control District, whichever applies.
2. In Part V, "Maximum Allowable Emissions Rate Tables," only the first table for systems of over 5,000 megawatts generating capacity applies in Ventura County Air Pollution Control District.
3. Part VII, "Demonstration Unit," does not apply in the Ventura County Air Pollution Control District.
4. Occasional additional differences are noted in the Rule.
5. Where the term South Coast Air Basin/Ventura County appears, the words, "South Coast Air Basin" apply to Rule 1135.1 and the words Ventura County apply to Rule 59.1.

CONTENTS

Note: This table of contents is solely for the convenience of the reader and is not part of the Rule.

Part I. APPLICABILITY AND SEVERABILITY

(a) Geographical Limitations

Unless otherwise stipulated in this Rule, the following geographical limitations apply:

(1) Rule 1135.1 applies in the South Coast Air Basin only.

(2) Rule 59.1 applies in the Ventura County Air Pollution Control District only.

(b) Restricted References

Unless otherwise stipulated in this Rule, all references to Parts and Sections of this Rule mean those Parts and Sections of this Rule only.

(c) Severability

Except as otherwise provided in this rule, if any portion of this Rule is found to be unenforceable, such finding shall have no effect on the enforceability of the remaining portions of the Rule. These remaining portions of the Rule shall continue to be in full force and effect.

(d) Compliance With Other Rules and Regulations

Nothing in this Rule shall relieve a person from complying with Regulation XIII of the South Coast Air Quality Management District or with Rule 26 of the Ventura County Air Pollution Control District, whichever applies.

Part II. DEFINITIONS

Electric Power Generating System means one or more electric power generating units which have a common owner or operator, and which are located in the South Coast Air Basin and/or Ventura County Air Pollution Control District.

Existing System or Unit means any electric power generating system or unit, construction of which commenced prior to August 7, 1978.

Minimum Load means the minimum rate of electric power generation below which a system or unit cannot be continuously and safely operated. Minimum load shall be expressed in net megawatts.

Modified System or Unit means any existing electric power generating system or unit on which a modification is commenced on or after August 7, 1978. However, systems or units on which a modification is commenced for the purpose of complying with this Rule shall not be considered modified systems or units.

New System or Unit means any electric power generating system or unit, the construction of which is commenced on or after August 7, 1978.

Operating Range means all possible rates of electric power generation between the minimum load and the rated maximum load of any electric power generating system or unit. Operating range shall be expressed in net megawatts.

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New System or Unit means any electric power generating system or unit, the construction of which is commenced on or after August 7, 1978.

Operating Range means all possible rates of electric power generation between the minimum load and the rated maximum load of any electric power generating system or unit. Operating range shall be expressed in net megawatts.

Oxides of Nitrogen Emissions Dispatch means the allocation of electric power demand to the various electric power generating units in any electric power generating system according to a method that will minimize the rate of emissions of oxides of nitrogen from the system.

Rated Maximum Load means the maximum continuous safe electric power generating capacity of a system or unit. Rated maximum load shall be expressed in net megawatts.

Rate of Emissions of Oxides of Nitrogen means the mass of oxides of nitrogen emitted in pounds per hour. In calculating this rate, the mass of oxides of nitrogen shall be expressed as an equivalent mass of nitrogen dioxide and shall be measured in a manner approved by the Executive Officer/Air Pollution Control Officer.

System means one or more electric power generating units that have a common owner or operator.

System-wide Composite Unit Table means a tabular presentation of the rate of emissions of oxides of nitrogen throughout the operating range of an electric power generating system. Criteria for preparing system-wide tables are contained in VI(a) and (b).

Unit means the minimum number of fossil fuel fired combustion devices or equipment necessary to produce electrical energy for sale or exchange.

Unit Table means a tabular presentation of the rate of emissions of oxides of nitrogen at each of 10 equally spaced points throughout the operating range of an electric power generating unit.

III. Options for Compliance

An owner or operator of a system must comply with one of the four options in this rule. A short summary of the four options is shown in Table III-1.

(a) Option Selection Requirements

(1) The owner or operator of an electric power generating system shall select either Option 1 or Option 2 or Option 3 or Option 4. Once an option is approved by the Executive Officer/Air Pollution Control Officer, that selection is final unless a change would not result in a delay in the installation of control equipment and the change is approved by the Executive Officer/Air Pollution Control Officer.

(2) Selection Notification Date

The owner or operator shall notify the Executive Officer/Air Pollution Control Officer of the option selected. Such selection must be made in writing on or before June 1, 1980.

Unit Table means a tabular presentation of the rate of emissions of oxides of nitrogen at each of 10 equally spaced points throughout the operating range of an electric power generating unit.

III. Options for Compliance

An owner or operator of a system must comply with one of the four options in this rule. A short summary of the four options is shown in Table III-1.

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(2) Selection Notification Date

The owner or operator shall notify the Executive Officer/Air Pollution Control Officer of the option selected. Such selection must be made in writing on or before June 1, 1980.

Table III-1

Requirement	Option 1	Option 2	Option 3	Option 4
Number of Stages	2	2	1	1
Final Compliance Dates	Stage I - 12/31/83 Stage II - 1/1/90	Stage I - 12/31/83 Stage II - 1/1/88	1/1/90	1/1/90
Reduction Required	Stage I nearly 50% Stage II - 90%	Stage I - much less than 50% Stage II - 90%	90%	Annual average-90%; Annual peak day - 75%
Basis for Reduction	Reduction at all system loads	Reduction at all system loads	Reduction at all system loads	Reduction in total emissions & peak emissions
Credit for Reduced fossil fuel burning below 74-78 levels	Relax controls so emissions are same as without new energy	Relax controls so emissions are the same as without new energy	Relax controls so emissions are the same as without new energy	Pound for pound
Date of installation of controls for final compliance of 90% reduction	In time for final compliance in 1990	First scheduled outage of unit after 1983	First scheduled outage of unit after January 1, 1982	First scheduled outage of unit after January 1, 1982
Applicable parts of rule	I,II, III, IV, V, VI, VII, & VIII	I, II, III, IV, V, VI, VII, & VIII	I, II, III, IV, V(b), VI, & VII	I, II, III, & IX

Part IV. Control of Individual Units: Unit Tables and Emissions Dispatch

This part does not apply to Option 4.

(a) Unit Control: Emissions Allowed by Unit Table

A unit table is a tabular presentation of the rate of emissions of oxides of nitrogen at each of 10 or more equally spaced load points throughout the operating range of an electric power generating unit. The rate shall be shown in pounds of oxides of nitrogen per net megawatt hour.

(1) Compliance With Unit Table

An owner or operator of an electric power generating system shall not operate an electric power generating unit if at any point in the unit's operating load range the unit emits oxides of nitrogen at a rate greater than the rate allowed by the approved unit table.

(2) Required Tables; Required Approval

Prior to the operation of any new system or new or modified unit, the owner or operator of said system or unit shall submit to the Executive Officer/Air Pollution Control Officer, for consideration for his or her approval, additional or replacement tables for the affected units.

Part IV. Control of Individual Units: Unit Tables and Emissions Dispatch

This part does not apply to Option 4.

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A unit table is a tabular presentation of the rate of emissions of oxides of nitrogen at each of 10 or more equally spaced load points throughout the operating range of an electric power generating unit. The rate shall be shown in pounds of oxides of nitrogen per net megawatt hour.

(1) Compliance With Unit Table

An owner or operator of an electric power generating system shall not operate an electric power generating unit if at any point in the unit's operating load range the unit emits oxides of nitrogen at a rate greater than the rate allowed by the approved unit table.

(2) Required Tables; Required Approval

Prior to the operation of any new system or new or modified unit, the owner or operator of said system or unit shall submit to the Executive Officer/Air Pollution Control Officer, for consideration for his or her approval, additional or replacement tables for the affected units.

The owner or operator shall prepare unit tables in accordance with this Section, and as applicable:

(A) Stage I compliance requirements: V(a)(7)(I)

(B) Stage II compliance requirements: V(b)(7)(I)

(C) Demonstration unit compliance schedule: VIII(a)(5)(A)(ii)

(3) Noncompliance is a Violation

Operation of a unit in a manner that causes oxides of nitrogen to be emitted at a rate greater than allowed by the approved unit table is a violation of this Rule. Operation in this manner is a violation regardless of the operation of or emissions from any other unit in the system. Such violation exists regardless of the operation of or emissions from the same unit at any other load.

(4) Determining Rates of Emissions

To determine the rate of emissions of oxides of nitrogen from a unit, the Executive Officer/Air Pollution Control Officer may employ data obtained by in-stack monitors, continuous source testing equipment, or any other tests or equipment that the Executive Officer/Air Pollution Control Officer

determines are acceptable. The Executive Officer/ Air Pollution Control Officer shall consider the accuracy of such equipment and the manner of testing when making this determination.

(b) System-wide Control: Emissions Dispatch Plan

An oxides of nitrogen emissions dispatch plan shall be prepared for each system by the owner or operator of that system.

(1) Minimum Contents of Emissions Dispatch Plan

(A) A detailed methodology for oxides of nitrogen emissions dispatch for each unit in the system unless exempted by this Rule. The methodology shall provide adequate detail for a determination at any time by the Executive Officer/Air Pollution Control Officer of whether or not the system is being operated in accordance with the dispatch plan consistent with the units available at that time. The availability of units shall be determined by the owner or operator.

Such methodology shall also include a unit table for each unit. The unit table shall show actual measured emissions for a unit from which the

determines are acceptable. The Executive Officer/ Air Pollution Control Officer shall consider the accuracy of such equipment and the manner of testing when making this determination.

(b) System-wide Control: Emissions Dispatch Plan

An oxides of nitrogen emissions dispatch plan shall be prepared for each system by the owner or operator of that system.

(1) Minimum Contents of Emissions Dispatch Plan

(A) A detailed methodology for oxides of nitrogen emissions dispatch for each unit in the system unless exempted by this Rule. The methodology shall provide adequate detail for a determination at any time by the Executive Officer/Air Pollution Control Officer of whether or not the system is being operated in accordance with the dispatch plan consistent with the units available at that time. The availability of units shall be determined by the owner or operator.

Such methodology shall also include a unit table for each unit. The unit table shall show actual measured emissions for a unit from which the

emissions have been measured or estimated emissions for a unit from which the emissions have not been measured.

Only the most current, approved emissions data shall be used.

(B) An assurance that available units in the system are dispatched and operated in a manner that minimizes the rate of emissions of oxides of nitrogen from the system.

(2) Plan Submittal and Operating Requirements

(A) Executive Officer Approval

Each emissions dispatch plan shall be submitted to the Executive Officer/Air Pollution Control Officer for consideration for approval.

(B) Initial Plan Submittal; Date of Submittal

An initial emissions dispatch plan shall be submitted to the Executive Officer/Air Pollution Control Officer prior to June 1, 1980.

(C) Revised Plan Submittal

A revised emissions dispatch plan shall be submitted to the Executive Officer/Air Pollution Control Officer within 30 days after a new or modified unit is added to the system.

(D) Operational Date of Plan

Effective 30 days after plan submittal, the electric power generating system shall be operated according to the submitted plan. Effective 30 days after approval by the Executive Officer/Air Pollution Control Officer, the system shall be operated according to the approved plan.

(3) Noncompliance with Approved Plan is a Violation.

Operation of an electric power generating system that is determined by the Executive Officer/Air Pollution Control Officer to be not in accordance with the approved emissions dispatch is a violation of this Rule.

(4) Requirements for Daily Records

The owner or operator of a system shall maintain daily records of the manner in which the system is operated. These daily records are to be maintained for the purpose of determining compliance with the approved emissions dispatch plan. The type of information to be recorded and the form in which it is to be recorded shall be specified by the Executive Officer/Air Pollution Control Officer. Such records shall be

(D) Operational Date of Plan

Effective 30 days after plan submittal, the electric power generating system shall be operated according to the submitted plan. Effective 30 days after approval by the Executive Officer/Air Pollution Control Officer, the system shall be operated according to the approved plan.

(3) Noncompliance with Approved Plan is a Violation.

Operation of an electric power generating system that is determined by the Executive Officer/Air Pollution Control Officer to be not in accordance with the approved emissions dispatch is a violation of this Rule.

(4) Requirements for Daily Records

The owner or operator of a system shall maintain daily records of the manner in which the system is operated. These daily records are to be maintained for the purpose of determining compliance with the approved emissions dispatch plan. The type of information to be recorded and the form in which it is to be recorded shall be specified by the Executive Officer/Air Pollution Control Officer. Such records shall be

maintained for at least two years from the date of recording. Such records shall be available for inspection and/or reproduction upon the request of the Executive Officer/Air Pollution Control Officer or his or her authorized representative.

(5) Units Exempt From Emissions Dispatch Plan

Simple cycle gas turbines are exempt from the emissions dispatch plan; see VII(g)(2).

Alternative energy projects as defined in VII(g)(1) are exempt from the emissions dispatch plan.

V. Requirements and Compliance Schedules

This part does not apply to Option 4

(a) Stage I Requirements and Compliance Schedule

This section V(a) does not apply to Option 3.

The owner or operator of an existing electric power generating system shall comply with the following requirements for Stage I:

(1) Stage I Emissions Reductions

Emissions of oxides of nitrogen shall be reduced to no more than the emissions allowed by the Stage I rates in Part VI. This reduction shall be accomplished as expeditiously as practicable but not later than December 31, 1983.

For Option 1 and Option 2, the following requirements shall be fulfilled:

(A) Prior to June 1, 1980, Submit a final control plan to the executive Officer/Air Pollution Control Officer for his or her approval. Also submit a copy of this final control plan to the Executive Officer of the Air Resources Board. The final control plan shall include as a minimum:

(i) A description of compliance steps. This description shall include a list of the steps that will be

V. Requirements and Compliance Schedules

This part does not apply to Option 4

(a) Stage I Requirements and Compliance Schedule

This section V(a) does not apply to Option 3.

The owner or operator of an existing electric power generating system shall comply with the following requirements for Stage I:

(1) Stage I Emissions Reductions

Emissions of oxides of nitrogen shall be reduced to no more than the emissions allowed by the Stage I rates in Part VI. This reduction shall be accomplished as expeditiously as practicable but not later than December 31, 1983.

For Option 1 and Option 2, the following requirements shall be fulfilled:

(A) Prior to June 1, 1980. Submit a final control plan to the executive Officer/Air Pollution Control Officer for his or her approval. Also submit a copy of this final control plan to the Executive Officer of the Air Resources Board. The final control plan shall include as a minimum:

(i) A description of compliance steps. This description shall include a list of the steps that will be

taken at each electric power generating unit to comply with the Stage I compliance schedule. The description must contain a construction schedule. The construction schedule must show that the construction and equipment installation phases of the final control plan will be completed prior to September 1, 1983. The description of compliance steps must also show that the Stage I maximum emission rates allowed by Part VI will be achieved by December 31, 1983.

(ii) Unit tables. A unit table shall be submitted for each unit in the system. Each unit table shall show the estimated emissions when the controls required for Stage I compliance are applied and the unit is burning oil.

Each unit table shall show the rate of emissions of oxides of nitrogen at each of 10 equally spaced load points from minimum load to rated maximum load. The rate shall be shown in pounds of oxides of nitrogen per net megawatt hour. The rate shown must be the rate to which the unit shall be controlled to achieve compliance with

the Stage I maximum emissions rates in Part VI for Option 1 or Option 2.

(B) Prior to July 1, 1980. Sign initial contracts for the construction and installation of equipment that will lead to the achievement of the Stage I maximum emission rates as required by Part VI of this Rule; issue orders for the purchase of component parts necessary to accomplish such reductions.

(C) Prior to September 1, 1983. Complete construction and installation of emissions control equipment and component parts as indicated on the construction schedule for the final control plan.

(D) Prior to December 31, 1983. Demonstrate compliance by achieving the Stage I maximum emission rates of Part VI of this Rule. Such demonstration shall also include the submission to the Executive Officer/Air Pollution Control Officer for his or her approval a unit table for each unit. Measured emissions at each unit shall not exceed the emissions at any point or increment on the unit table. In addition, a

the Stage I maximum emissions rates in Part VI for Option 1 or Option 2.

(B) Prior to July 1, 1980. Sign initial contracts for the construction and installation of equipment that will lead to the achievement of the Stage I maximum emission rates as required by Part VI of this Rule; issue orders for the purchase of component parts necessary to accomplish such reductions.

(C) Prior to September 1, 1983. Complete construction and installation of emissions control equipment and component parts as indicated on the construction schedule for the final control plan.

(D) Prior to December 31, 1983. Demonstrate compliance by achieving the Stage I maximum emission rates of Part VI of this Rule. Such demonstration shall also include the submission to the Executive Officer/Air Pollution Control Officer for his or her approval a unit table for each unit. Measured emissions at each unit shall not exceed the emissions at any point or increment on the unit table. In addition, a

system-wide composite unit table shall show that emissions from the system shall not exceed the Stage I maximum emission rates of Part VI of this Rule. This system-wide composite unit table shall be constructed in accordance with the criteria set forth in VI(a).

(2) Requirements for an Approvable Final Control Plan

An approvable final control plan shall:

(A) Result in compliance with Stage I emissions reduction requirements as expeditiously as practicable;

(B) Satisfy the minimum requirements for a description of compliance steps pursuant to V(a)(1)(A)(i); satisfy the minimum requirements for unit tables pursuant to V(a)(1)(A)(ii); and

(C) With reasonable certainty prevent localized violations of ambient air quality standards.

(D) Show the schedule of conservation efforts, construction or procurement of each new source or conservation of electrical energy which will result in a system-wide reduction of emissions of oxides of nitrogen emitted

in the South Coast Air Basin/Ventura County below average 1974 through 1978 annual average emissions, pursuant to §'s V(a)(6) & V(a)(7). The schedule of construction or procurement shall show:

(i) the date of approval of officers of the utility to proceed with the construction or procurement;

(ii) the date by which contracts shall be signed for new electrical energy for which construction is not required;

(iii) the latest dates for the following construction steps:

- Approval of contracts for construction
- Commencement of construction
- Completed installation of major equipment items such as turbines or boilers
- Generation of electrical energy needed to accomplish the emission reduction claimed in subsection V(a)(2)(E).

(E) For each of the years covered by the final control plan state the annual system-wide reduction in nitrogen oxide emissions which shall be achieved as a result of each new source of energy or conservation for the South Coast Air Basin/Ventura County.

in the South Coast Air Basin/Ventura County below average 1974 through 1978 annual average emissions, pursuant to §'s V(a)(6) & V(a)(7). The schedule of construction or procurement shall show:

(i) the date of approval of officers of the utility to proceed with the construction or procurement;

(ii) the date by which contracts shall be signed for new electrical energy for which construction is not required;

(iii) the latest dates for the following construction steps:

- Approval of contracts for construction
- Commencement of construction
- Completed installation of major equipment items such as turbines or boilers
- Generation of electrical energy needed to accomplish the emission reduction claimed in subsection V(a)(2)(E).

(E) For each of the years covered by the final control plan state the annual system-wide reduction in nitrogen oxide emissions which shall be achieved as a result of each new source of energy or conservation for the South Coast Air Basin/Ventura County.

(F) State the maximum amount of emissions of oxides of nitrogen which shall be emitted from the utility's system on any calendar day for each of the years to the final date of the plan. Emissions greater than the amount approved constitute a violation of this rule.

(G) State the maximum amount of electrical energy which shall be generated by the utility's combustion units in the South Coast Air Basin/Ventura County in each of the years covered by the plan.

(H) Describe the equipment which shall be installed and operated on the utility's existing units to reduce emissions by the amount claimed for new electrical energy or conservation in the event that such new energy or conservation or alternative new energy or conservation will not be obtained by the date specified in the schedule required by §V(a)(2)(D). Also show the latest date by which such equipment shall be installed and operated.

(3) Unapprovable Final Control Plan is a Violation

Submission of a final control plan that does not meet the criteria specified in IV(b)(2) above is a violation of this

Rule. Such violation shall commence on June 1, 1980. Such violation shall remain in effect until an acceptable final control plan has been approved by the Executive Officer/Air Pollution Control Officer.

(4) Reduced Emissions Reduction Requirements for Stage I Compliance

The emission reduction requirements for Stage I compliance may be reduced for a unit(s) provided all of the following are fulfilled:

(A) The final control plan meets the requirements of V(a)(1)(A) and V(a)(2);

(B) All of the emissions reduction equipment installed to comply with Stage I maximum allowable emissions rates of Part VI is operated at its full emissions reductions potential;

(C) Additional emissions reduction methods have been applied to all units if such methods are:

(i) Capable of being installed within the time left for Stage I compliance, that is, by December 31, 1983; and

Rule. Such violation shall commence on June 1, 1980. Such violation shall remain in effect until an acceptable final control plan has been approved by the Executive Officer/Air Pollution Control Officer.

(4) Reduced Emissions Reduction Requirements for Stage I Compliance

The emission reduction requirements for Stage I compliance may be reduced for a unit(s) provided all of the following are fulfilled:

(A) The final control plan meets the requirements of V(a)(1)(A) and V(a)(2);

(B) All of the emissions reduction equipment installed to comply with Stage I maximum allowable emissions rates of Part VI is operated at its full emissions reductions potential;

(C) Additional emissions reduction methods have been applied to all units if such methods are:

(i) Capable of being installed within the time left for Stage I compliance, that is, by December 31, 1983; and

(ii) More cost-effective than the least cost-effective control that has been installed to comply with Stage I other than the use of equipment to inject ammonia in the presence of a catalyst (selective catalytic reduction). Cost-effectiveness shall be computed in terms of 1979 dollars per pound of oxides of nitrogen removed.

(D) The Executive Officer/Air Pollution Control Officer has published for at least 30 days a notice asking for public comment on the proposal to excuse the owner or operator from compliance with unit tables for the affected units;

(E) The Executive Officer/Air Pollution Control Officer determines after a review of all comments and all evidence that compliance with the subject unit table(s) is not reasonably achieveable. This review shall include an evaluation of emission control techniques used elsewhere in this country and in other countries;

(F) The Executive Officer of the Air Resources Board

concurs with the determination made by the Executive Officer/Air Pollution Control Officer;

(G) When the Stage I emission reduction requirements for a unit have been reduced under the provisions of V(a)(4)(A) through V(a)(4)(F) above, the Stage II compliance requirements for the affected unit are altered as follows:

(i) On the first scheduled shutdown after January 1, 1984, control equipment for meeting Stage II maximum emissions rates of Part VI shall be installed on that unit;

(ii) Within 90 days of being excused under the provisions of V(a)(4)(A) through V(a)(4)(F), the system owner or operator shall submit a plan to the Executive Officer/Air Pollution Control Officer. The plan shall show the steps to be taken to install the control equipment necessary to meet Stage II emission rates for the affected unit; and

(iii) Within 90 days of completion of equipment installation to meet Stage II emissions rates, the system owner or operator shall demonstrate compliance with the maximum emissions rates of Stage II for the affected unit.

concurs with the determination made by the Executive Officer/Air Pollution Control Officer;

(G) When the Stage I emission reduction requirements for a unit have been reduced under the provisions of V(a)(4)(A) through V(a)(4)(F) above, the Stage II compliance requirements for the affected unit are altered as follows:

(i) On the first scheduled shutdown after January 1, 1984, control equipment for meeting Stage II maximum emissions rates of Part VI shall be installed on that unit;

(ii) Within 90 days of being excused under the provisions of V(a)(4)(A) through V(a)(4)(F), the system owner or operator shall submit a plan to the Executive Officer/Air Pollution Control Officer. The plan shall show the steps to be taken to install the control equipment necessary to meet Stage II emission rates for the affected unit; and

(iii) Within 90 days of completion of equipment installation to meet Stage II emissions rates, the system owner or operator shall demonstrate compliance with the maximum emissions rates of Stage II for the affected unit.

(5) Units Exempted from Stage I Compliance

Existing combined cycle generating units are exempt from Stage I requirements.

Alternative energy projects as defined in VII(g)(1) are exempt from Stage I requirements.

(6) Additional Replacement of In-Basin Generated Electrical Energy by New Electrical Energy or Conservation is an Acceptable Method of Reducing Emissions

Reduction of South Coast Air Basin/Ventura County emissions by the replacement of in-basin generated electrical energy by new electrical energy or conservation is an acceptable method of achieving emission reductions in the final control plan provided that the electric utility owner or operator demonstrates to the satisfaction of the Executive Officer/Air Pollution Control Officer that:

(A) The owner or operator has a legally enforceable entitlement to such replacement power which lasts for the period during which the reduction in emissions is claimed;

(B) Legally enforceable commitments are made in the final control plan to install and operate control equipment on in-basin unit(s) or obtain equivalent alternative energy to reduce emissions by the amount claimed for replacement power in the event that such replacement power is not obtained by the date specified in the final control plan for achieving such claimed emissions reductions; and

(C) Emissions are reduced by the amounts claimed in the final control plan and in accordance with the schedule in that plan.

(D) The utility will implement programs which will reduce consumption of electrical energy by the amount claimed.

Prior to approval of a final control plan the Executive Officer/Air Pollution Control Officer may require the surrender for modification of permits to construct and/or operate pursuant to subsection VII(e).

(B) Legally enforceable commitments are made in the final control plan to install and operate control equipment on in-basin unit(s) or obtain equivalent alternative energy to reduce emissions by the amount claimed for replacement power in the event that such replacement power is not obtained by the date specified in the final control plan for achieving such claimed emissions reductions; and

(C) Emissions are reduced by the amounts claimed in the final control plan and in accordance with the schedule in that plan.

(D) The utility will implement programs which will reduce consumption of electrical energy by the amount claimed.

Prior to approval of a final control plan the Executive Officer/Air Pollution Control Officer may require the surrender for modification of permits to construct and/or operate pursuant to subsection VII(e).

(7) Methodology for Claiming Credit for Conservation Efforts or New Electrical Energy

The owner or operator who claims emission reductions for conservation efforts or new energy shall compute such reductions according to the method given here. The method is described in text form, and an illustration is provided. The sample is calculated for one load increment for one unit. If credit for conservation efforts or new energy is to be claimed, these calculations shall be performed for each load increment for each unit.

The Following Steps Assume No Replacement Power is Available

A. Determine the hourly emissions in pounds with controls applied to each of the 10 load increments for the unit. This value is derived from the unit table used for compliance with the maximum allowable emissions rate tables in Part VI of the Rule assuming no replacement power is available. Enter this number in the appropriate block in Row A. In the sample problem, the figure is 100 pounds/hour at load increment 7.

Example of Calculations for Replacement Electrical Energy

Unit xyz

Assume No Replacement Power Available

		LOAD INCREMENT										Sum of annual emissions for unit 3/
		1	2	3	4	5	6	7	8	9	10	
A 1/	Hourly emissions (pounds) with controls applied assuming no replacement power							100				
B	Average annual hours of operation in 1974 through 1978*							500				
C	Average annual emissions without replacement power (A times B)							50,000				D 3/
E	Average annual emissions from the system = sum of unit annual emissions (D) for all units											

Assume Replacement Power Available

F 2/	Hourly emissions (pounds) with relaxed controls assuming replacement power							150				
G	Annual hours of operation in 1984 with replacement power							200				
H	Annual emissions with replacement power (F times G)							30,000				I 3/
J	Average annual emissions from the system = sum of unit annual emissions (I) for all units											

1/ Row A from unit tables used for compliance with Part V of the rule.
2/ Row F is from unit tables with less stringent controls applied than in Row A.
3/ Annual emissions from a unit equals the sum of annual emissions at each of the 10 load increments.

* See Paragraph V(a)(7)(B)

Example of Calculations for Replacement Electrical Energy

Unit xyz

Assume No Replacement Power Available

		LOAD INCREMENT										Sum of annual emissions for unit 3/
		1	2	3	4	5	6	7	8	9	10	
A 1/	Hourly emissions (pounds) with controls applied assuming no replacement power							100				
B	Average annual hours of operation in 1974 through 1978*							500				
C	Average annual emissions without replacement power (A times B)							50,000				D 3/
E	Average annual emissions from the system = sum of unit annual emissions (D) for all units											

Assume Replacement Power Available

F 2/	Hourly emissions (pounds) with relaxed controls assuming replacement power							150				
G	Annual hours of operation in 1984 with replacement power							200				
H	Annual emissions with replacement power (F times G)							30,000				I 3/
J	Average annual emissions from the system = sum of unit annual emissions (I) for all units											

1/ Row A from unit tables used for compliance with Part V of the rule.
2/ Row F is from unit tables with less stringent controls applied than in Row A.
3/ Annual emissions from a unit equals the sum of annual emissions at each of the 10 load increments.

* See Paragraph V(a)(7)(B)

B. Estimate the average annual hours of operation at each of the 10 load increment in base years 1974 through 1978 by a method acceptable to the Executive Officer/Air Pollution Control Officer. Estimates must agree with actual capacity factors for units. Enter this estimate in the appropriate block in Row B. In this sample, the hours at load increment 7 are 500 hours. The number of hours shall be consistent with capacity factors in the Common Forecasting Methodology III approved by the Energy Commission.

C. Determine the average annual emissions for each of the 10 load increments if no replacement power is supplied. To do this, multiply the appropriate entries in Row A by the appropriate entries in Row B. In this sample,

100 lbs/hr times 500 hrs/yr = 50,000 lbs/yr
at load increment 7

D. Determine the average annual emissions for the unit. This is done by adding the average annual emissions at each of the 10 load increments calculated in Step C.

E. Determine the systems total average annual emissions if no replacement power is available and adequate controls are applied to each unit to comply with the maximum allowable emissions rate table in Part VI of the Rule. To do this, add the average annual emissions from each unit in the system as calculated in Step D.

<u>The Following Steps Assume Replacement Power is Available</u>

F. Determine the hourly emissions in pounds with relaxed controls applied to each of the 10 load increments for the unit. This value is derived from relaxing controls that are assumed for the unit in Step A. Enter this number in the appropriate block on Row F. In the sample problem, the emissions for the less stringently controlled unit at load increment 7 is now 150 pounds/hr.

E. Determine the systems total average annual emissions if no replacement power is available and adequate controls are applied to each unit to comply with the maximum allowable emissions rate table in Part VI of the Rule. To do this, add the average annual emissions from each unit in the system as calculated in Step D.

The Following Steps Assume Replacement Power is Available

F. Determine the hourly emissions in pounds with relaxed controls applied to each of the 10 load increments for the unit. This value is derived from relaxing controls that are assumed for the unit in Step A. Enter this number in the appropriate block on Row F. In the sample problem, the emissions for the less stringently controlled unit at load increment 7 is now 150 pounds/hr.

G. Determine the average annual hours of operation at each of the 10 load increments in 1984 assuming replacement power is available. Enter this estimate in the appropriate block in Row G. In this sample, the hours at load increment 7 with replacement power available is 200 hours.

H. Determine the average annual emissions for each of the 10 load increments if replacement power is supplied and controls are relaxed. To do this, multiply the appropriate entries in Row F by the appropriate entries in Row G. In this sample,

150 lbs/hr times 200 hrs = 30,000 lbs/yr
at load increment 7

I. Determine the average annual emissions for the unit with relaxed controls and new hours of operation by adding the average annual emissions at each of the 10 load increments calculated in Step H.

J. Determine the system's total annual emissions if replacement power is available and controls are relaxed on some units. To do this, add the annual emissions from each unit as calculated in Step I.

(8) Violation of Control Plan is a Violation of Rule

A violation of an approval final control plan is a violation of this rule. Where the Executive Officer/Air Pollution Control Officer determines that a violation of the schedules of equipment installation or procurement of new power shown in the Final Control Plan has occurred, as a result of circumstances beyond the control of the affected utility, a "Notice to Comply" shall first be issued to the violating utility before the issuance of any "Notice of Violation." Failure to correct the violation within sixty days from the date of issuance of "Notice to Comply" shall be followed by a "Notice of Violation" of the rule and enforcement action.

(b) Stage II Requirements and Compliance Schedule

The owner or operator of an existing electric power generating system shall comply with the following requirements for Stage II.

(1) Stage II Emissions Reductions

Emissions of oxides of nitrogen shall be reduced to no more than the emissions allowed by the Stage II rates in Part VI. This reduction shall be accompanied as expeditiously as practicable but not later than January 1, 1990 for Options 1 and 3 and January 1, 1988 for Option 2.

For Options 1, 2, and 3 the following requirements shall be fulfilled:

(A) (i) Prior to July 1, 1984, for Option 1 or July 1, 1981, for Option 2 or January 1, 1981 for Option 3. Submit a final control plan to the Executive Officer/Air Pollution Control Officer for his or her approval. Also submit a copy of this final control plan to the Executive Officer of the Air Resources Board.

(b) Stage II Requirements and Compliance Schedule

The owner or operator of an existing electric power generating system shall comply with the following requirements for Stage II.

(1) Stage II Emissions Reductions

Emissions of oxides of nitrogen shall be reduced to no more than the emissions allowed by the Stage II rates in Part VI. This reduction shall be accompanied as expeditiously as practicable but not later than January 1, 1990 for Options 1 and 3 and January 1, 1988 for Option 2.

For Options 1, 2, and 3 the following requirements shall be fulfilled:

(A) (i) Prior to July 1, 1984, for Option 1 or July 1, 1981, for Option 2 or January 1, 1981 for Option 3. Submit a final control plan to the Executive Officer/Air Pollution Control Officer for his or her approval. Also submit a copy of this final control plan to the Executive Officer of the Air Resources Board.

(ii) For Option 2, the final control plan shall show the completion of all the work that cannot be done while the unit is operating but that is necessary for the proper operation of control equipment. This work shall be done during the first scheduled shutdown of the unit after January 1, 1984.

(iii) For Option 3, the final control plan shall show the completion of all the work that cannot be done while the unit is operating but that is necessary for the proper operation of control equipment. This work shall be done during the first scheduled shutdown of the unit after January 1, 1982. For the purpose of this section, a scheduled shutdown shall be a scheduled major maintenance shutdown which the utility uses for the purpose of preventative maintenance and which is scheduled at least eighteen months prior to the shutdown. Postponement of a shutdown does not exempt the owner or operator of a system from the requirements to install controls.

In the event that the owner or operator of such utility can demonstrate to the District's Hearing Board that controls on a unit cannot be installed during the first scheduled shutdown because: 1, The control equipment cannot be acquired from supplier(s) in time for the shutdown, or 2, The amount of time required for the installation of equipment would cause the duration of the shutdown to be extended such that the reliability of the system would be jeopardized, then the Hearing Board may extend the date by which controls must be installed on that unit by not more than two years. Such a variance shall not affect the requirement to install control equipment on other units. If the provisions of this paragraph relating to Option 3 are found to be invalid or unenforceable, Option 3 as specified in this Rule shall not be available as a method of compliance with the provisions of this Rule.

Additional Minimum Requirements for a Final Control Plan for Stage II include:

In the event that the owner or operator of such utility can demonstrate to the District's Hearing Board that controls on a unit cannot be installed during the first scheduled shutdown because: 1, The control equipment cannot be acquired from supplier(s) in time for the shutdown, or 2, The amount of time required for the installation of equipment would cause the duration of the shutdown to be extended such that the reliability of the system would be jeopardized, then the Hearing Board may extend the date by which controls must be installed on that unit by not more than two years. Such a variance shall not affect the requirement to install control equipment on other units. If the provisions of this paragraph relating to Option 3 are found to be invalid or unenforceable, Option 3 as specified in this Rule shall not be available as a method of compliance with the provisions of this Rule.

Additional Minimum Requirements for a Final Control Plan for Stage II include:

(iv) A Description of Compliance Steps.

This description shall include a list of the steps that will be taken at each electric power generating unit to comply with the Stage II compliance schedule. The description must contain a construction schedule. The construction and equipment installation phases of the final control plan will be completed prior to October 1, 1989, for Option 1, or prior to October 1, 1987, for Option 2 or prior to October 1, 1987 for Option 3. This description shall also show that the Stage II maximum emission rates allowed by Part VI of this Rule shall be achieved by January 1, 1990, for Options 1 and 3 or by January 1, 1988 for Option 2.

(v) Unit Tables

A unit table shall be submitted for each unit in the system. Each unit table shall show the estimated emissions when the controls required for Stage II compliance are applied and the unit is burning oil.

Each unit table shall show the rate of emissions

oxides of nitrogen at each of 10 equally spaced load points from minimum load to rated maximum load. The rate shall be shown in pounds of oxides of nitrogen per net megawatt hour. The rate shown shall be the rate to which the unit shall be controlled to achieve compliance with the Stage II maximum emissions rates in Part VI.

(vi) Schedule of Scheduled Shutdowns

The plan shall include a schedule of scheduled shutdowns of units where such shutdowns have a duration of six weeks or more.

(B) Prior to January 1, 1985, for Option 1 or prior to January 1, 1982, for Option 2 or January 1, 1981 for Option 3. Sign initial contracts for the construction and installation of equipment that will lead to the achievement of the Stage II maximum emission rates as required by Part VI of this Rule; issue orders for the purchase of component parts necessary to accomplish such reductions.

(C) Prior to October 1, 1989, for Option 1 or prior to October 1, 1987, for Option 2 or prior to October 1, 1987 for Option 3. complete construction and installation of emissions control equipment and component parts as indicated on the construction schedule of the final control plan.

oxides of nitrogen at each of 10 equally spaced load points from minimum load to rated maximum load. The rate shall be shown in pounds of oxides of nitrogen per net megawatt hour. The rate shown shall be the rate to which the unit shall be controlled to achieve compliance with the Stage II maximum emissions rates in Part VI.

(vi) Schedule of Scheduled Shutdowns

The plan shall include a schedule of scheduled shutdowns of units where such shutdowns have a duration of six weeks or more.

(B) Prior to January 1, 1985, for Option 1 or prior to January 1, 1982, for Option 2 or January 1, 1981 for Option 3. Sign initial contracts for the construction and installation of equipment that will lead to the achievement of the Stage II maximum emission rates as required by Part VI of this Rule; issue orders for the purchase of component parts necessary to accomplish such reductions.

(C) Prior to October 1, 1989, for Option 1 or prior to October 1, 1987, for Option 2 or prior to October 1, 1987 for Option 3. complete construction and installation of emissions control equipment and component parts as indicated on the construction schedule of the final control plan.

(D) Prior to January 1, 1990, for Options 1 and 3 or prior to January 1, 1988, for Option 2. Demonstrate compliance by achieving the Stage II maximum emission rates of Part VI of this Rule. Such demonstration shall also include the submission to the Executive Officer/Air Pollution Control Officer for his or her approval a unit table for each unit. Measured emissions at each unit shall not exceed the emissions at any point or increment on the unit table. In addition, a system-wide composite unit table shall show that emissions from the system shall not exceed the Stage II maximum emission rates of Part VI of this Rule. This system-wide composite unit table shall be constructed in accordance with the criteria set forth in VI(a).

(2) Requirements for an Approval Final Control Plan

An approvable final control plan shall:

(A) Result in compliance with Stage II emissions reduction requirements as expeditiously as practicable;

(B) Satisfy the minimum requirements for a description of compliance steps pursuant to V(b)(1)(A)(i); satisfy the minimum requirements for unit tables pursuant to V(b)(1)(A)(ii); and

(C) With reasonable certainty prevent localized violations of ambient air quality standards.

(D) Show the schedule of conservation efforts, construction or procurement of each new source or conservation of electrical energy which will result in a system-wide reduction of emissions of oxides of nitrogen emitted in the South Coast Air Basin/Ventura County below average 1974 through 1978 annual average emissions, pursuant to Sections V(b)(6) and V(b)(7). The schedule of construction or procurement shall show:

i) the date of approval of officers of the utility to proceed with the construction or procurement;

ii) the date by which contracts shall be signed for new electrical energy for which construction is not required;

iii) the latest dates for the following construction steps:

- Approval of contracts for construction
- Commencement of construction
- Completed installation of major equipment items such as turbines or boilers
- Generation of electrical energy needed to accomplish the emission reduction claimed in subsection V(b)(2)(E)

(C) With reasonable certainty prevent localized violations of ambient air quality standards.

(D) Show the schedule of conservation efforts, construction or procurement of each new source or conservation of electrical energy which will result in a system-wide reduction of emissions of oxides of nitrogen emitted in the South Coast Air Basin/Ventura County below average 1974 through 1978 annual average emissions, pursuant to Sections V(b)(6) and V(b)(7). The schedule of construction or procurement shall show:

i) the date of approval of officers of the utility to proceed with the construction or procurement;

ii) the date by which contracts shall be signed for new electrical energy for which construction is not required;

iii) the latest dates for the following construction steps:

- Approval of contracts for construction
- Commencement of construction
- Completed installation of major equipment items such as turbines or boilers
- Generation of electrical energy needed to accomplish the emission reduction claimed in subsection V(b)(2)(E)

(E) For each of the years covered by the final control plan state the annual amount of electrical energy which will be produced from each new source of energy or conservation for the South Coast Air Basin/Ventura County.

(F) State the maximum amount of emissions of oxides of nitrogen which shall be emitted from the utility's system on any calendar day for each of the years to the final date of the plan. Emissions greater than the amount approved shall constitute a violation of this rule.

(G) State the maximum amount of electrical energy which shall be generated by the utility's combustion units in the South Coast Air Basin/Ventura County in each of the years covered by the plan.

(H) Describe the equipment which shall be installed and operated on the utility's existing units to reduce emissions by the amount claimed for new electrical energy or conservation in the event that such new

energy or conservation or alternative new energy or conservation will not be obtained by the date specified in the schedule required by Section V(b)(2)(D). Also show the latest date by which such equipment shall be installed and operated.

(3) Unapprovable Final Control Plan is a Violation

An owner or operator who submits a final control plan that does not meet the criteria specified in V(b)(2) above is in violation of this Rule. Such violation shall commence on July 1, 1984 for Option 1 or July 1, 1981 for Option 2 or January 1, 1981 for Option 3. Such violation shall remain in effect until an acceptable final control plan has been approved by the Executive Officer/Air Pollution Control Officer.

(4) Reduced Emissions Reduction Requirements for Stage II Compliance

Section V(b)(4) shall not apply to Option 3

The emissions reductions required for Stage II compliance may be reduced provided all of the following are fulfilled:

energy or conservation or alternative new energy or conservation will not be obtained by the date specified in the schedule required by Section V(b)(2)(D). Also show the latest date by which such equipment shall be installed and operated.

(3) Unapprovable Final Control Plan is a Violation

An owner or operator who submits a final control plan that does not meet the criteria specified in V(b)(2) above is in violation of this Rule. Such violation shall commence on July 1, 1984 for Option 1 or July 1, 1981 for Option 2 or January 1, 1981 for Option 3. Such violation shall remain in effect until an acceptable final control plan has been approved by the Executive Officer/Air Pollution Control Officer.

(4) Reduced Emissions Reduction Requirements for Stage II Compliance

Section V(b)(4) shall not apply to Option 3

The emissions reductions required for Stage II compliance may be reduced provided all of the following are fulfilled:

(A) Establishment of Demonstration Unit Performance

Demonstration unit performance shall be established as either:

(i) The demonstration unit has achieved at least 90 percent control; or

(ii) The demonstration unit has been excused from compliance pursuant to VIII(a)(7).

(B) Request by Owner or Operator

The owner or operator may request from the Executive Officer/Air Pollution Control Officer a determination as to whether the affected system can achieve the Stage II maximum allowable emissions rates required by Part VI.

(C) Requirement for Public Hearing

Within 60 days of receiving the request specified in V(b)(4)(B) above, the Executive Officer/Air Pollution Control Officer shall conduct a public hearing on the matter. The owner or operator or any other interested party shall have the right to appear and present evidence at such hearing.

(D) Burden of Proof

The burden of proof shall be upon the party seeking to be excused from compliance with Stage II emission rates. This party shall show that compliance with these rates is not technically feasible or is not cost-effective within the timetable set for compliance by this Rule.

(E) Determination by Executive Officer

In making a determination, the Executive Officer/Air Pollution Control Officer shall consider the following factors:

(i) The performance and cost-effectiveness of any available control measures or combinations of control measures including but not limited to the technology employed on the demonstration unit;

(ii) The efforts taken by the owner or operator to effect compliance; and

(iii) The emissions of pollutants other than oxides of nitrogen.

The Executive Officer/Air Pollution Control Officer shall make a determination within 30 days after the public hearing.

(D) Burden of Proof

The burden of proof shall be upon the party seeking to be excused from compliance with Stage II emission rates. This party shall show that compliance with these rates is not technically feasible or is not cost-effective within the timetable set for compliance by this Rule.

(E) Determination by Executive Officer

In making a determination, the Executive Officer/Air Pollution Control Officer shall consider the following factors:

(i) The performance and cost-effectiveness of any available control measures or combinations of control measures including but not limited to the technology employed on the demonstration unit;

(ii) The efforts taken by the owner or operator to effect compliance; and

(iii) The emissions of pollutants other than oxides of nitrogen.

The Executive Officer/Air Pollution Control Officer shall make a determination within 30 days after the public hearing.

If the Executive Officer/Air Pollution Control Officer determines that compliance with Stage II emissions rates is not technically feasible or cost-effective, the Executive Officer/Air Pollution Control Officer shall modify the Stage II maximum allowable emission rates in Part VI of this Rule. The modifications shall be made to the extent dictated by the evidence.

(5) Units Exempted from Stage II Compliance

Existing combined cycle generating units are exempt from Stage II requirements.

Alternative energy projects as defined in VII(g)(1) are exempt from Stage II requirements.

(6) Additional Replacement of In-Basin Generated Electrical Energy by New Electical Energy or Conservation is an Acceptable Method of Reducing Emissions

Reduction of South Coast Air Basin/Ventura County emissions by the replacement of in-basin generated electrical energy by new electrical energy or conservation is an acceptable method of achieving emission reductions in the final control plan provided

that the electric utility owner or operator demonstrates to the satisfaction of the Executive Officer/Air Pollution Control Officer that:

(A) The owner or operator has a legally enforceable entitlement to such replacement power which lasts for the period during which the reduction in emissions is claimed;

(B) Legally enforceable commitments are made in the final control plan to install and operate control equipment on in-basin unit(s) or obtain equivalent alternative energy to reduce emissions by the amount claimed for replacement power in the event that such replacement power is not obtained by the date specified in the final control plan for achieving such claimed emissions reductions; and

(C) Emissions are reduced by the amounts claimed in the final control plan and in accordance with the schedule in that plan.

that the electric utility owner or operator demonstrates to the satisfaction of the Executive Officer/Air Pollution Control Officer that:

(A) The owner or operator has a legally enforceable entitlement to such replacement power which lasts for the period during which the reduction in emissions is claimed;

(B) Legally enforceable commitments are made in the final control plan to install and operate control equipment on in-basin unit(s) or obtain equivalent alternative energy to reduce emissions by the amount claimed for replacement power in the event that such replacement power is not obtained by the date specified in the final control plan for achieving such claimed emissions reductions; and

(C) Emissions are reduced by the amounts claimed in the final control plan and in accordance with the schedule in that plan.

(D) The utility will implement programs which will reduce consumption of electrical energy by the amount claimed.

Prior to approval of a final control plan the Executive Officer/Air Pollution Control Officer may require the surrender for modification of permits to construct and/or operate pusuant to subsection VII(e).

(7) Methodology for Claiming Credit for Conservation Efforts or New Electrical Energy

The owner or operator who claims emission reductions for conservation efforts or new energy shall compute such reductions according to the method given here. The method is described in text form, and an illustration is provided. The sample is calculated for one load increment for one unit. If credit for conservation efforts or new energy is to be claimed, these calculations shall be performed for each load increment for each unit.

The Following Steps Assume No Replacement Power is Available

A. Determine the hourly emissions in pounds with controls applied to each of the 10 load increments for the unit. This value is derived from the unit table used for compliance with the maximum allowable emissions rate

tables in Part VI of the Rule assuming no replacement power is available. Enter this number in the appropriate block in Row A. In the sample problem, the figure is 100 pounds/hour at load increment 7.

B. Estimate the average annual hours of operation at each of the 10 load increments in base years 1974 through 1978 by a method acceptable to the Executive Officer/Air Pollution Control Officer. Estimates must agree with the actual capacity factors of the units. Enter this estimate in the appropriate block in Row B. In this sample, the hours at load increment 7 are 500 hours. The number of hours shall be consistent with capacity factors in the Common Forecasting Methodology III approved by the Energy Commission.

C. Determine the average annual emissions for each of the 10 load increments if no replacement power is supplied. To do this, multiply the appropriate entries in Row A by the appropriate entries in Row B. In this sample,

100 lbs/hr times 500 hrs/yr = 50,000 lbs/yr
at load increment 7

D. Determine the average annual emissions for the unit. This is done by adding the average annual emissions at each of the 10 load increments calculated in Step C.

tables in Part VI of the Rule assuming no replacement power is available. Enter this number in the appropriate block in Row A. In the sample problem, the figure is 100 pounds/hour at load increment 7.

B. Estimate the average annual hours of operation at each of the 10 load increments in base years 1974 through 1978 by a method acceptable to the Executive Officer/Air Pollution Control Officer. Estimates must agree with the actual capacity factors of the units. Enter this estimate in the appropriate block in Row B. In this sample, the hours at load increment 7 are 500 hours. The number of hours shall be consistent with capacity factors in the Common Forecasting Methodology III approved by the Energy Commission.

C. Determine the average annual emissions for each of the 10 load increments if no replacement power is supplied. To do this, multiply the appropriate entries in Row A by the appropriate entries in Row B. In this sample,

100 lbs/hr times 500 hrs/yr = 50,000 lbs/yr
at load increment 7

D. Determine the average annual emissions for the unit. This is done by adding the average annual emissions at each of the 10 load increments calculated in Step C.

Example of Calculations for Replacement Electrical Energy

Unit xyz

Assume No Replacement Power Available

		LOAD INCREMENT										Sum of annual emissions for unit 3/
		1	2	3	4	5	6	7	8	9	10	
A 1/	Hourly emissions (pounds) with controls applied assuming no replacement power							100				
B	Average annual hours of operation in 1974 through 1978*							500				
C	Average annual emissions without replacement power (A times B)							50,000				D 3/
E	Average annual emissions from the system = sum of unit annual emissions (D) for all units											

Assume Replacement Power Available

F 2/	Hourly emissions (pounds) with relaxed controls assuming replacement power							150				
G	Annual hours of operation in 1990 for Option 1 & 3 or 1988 for Option 2 with replacement power							200				
H	Annual emissions with replacement power (F times G)							30,000				I 3/
J	Average annual emissions from the system = sum of unit annual emissions (I) for all units											

1/ Row A from unit tables used for compliance with Part V of the rule.
2/ Row F is from unit tables with less stringent controls applied than in Row A.
3/ Annual emissions from a unit equals the sum of annual emissions at each of the 10 load increments.

* See Paragraph V(b)(7)(B)

E. Determine the systems total average annual emissions if no replacement power is available and adequate controls are applied to each unit to comply with the maximum allowable emissions rate table in Part VI of the Rule. To do this, add the average annual emissions from each unit in the system as calculated in Step D.

The Following Steps Assume Replacement Power is Available

F. Determine the hourly emissions in pounds with relaxed controls applied at each of the 10 load increments for the unit. This value is derived from relaxing controls that are assumed for the unit in Step A. Enter this number in the appropriate block on Row F. In the sample problem, the emissions for the less stringently controlled unit at load increment 7 is now 150 pounds/hr.

G. Determine the average annual hours of operation at each of the 10 load increment in 1990 for Option 1 and 3 or 1988 for Option 2 assuming replacement power is available. Enter this estimate in the appropriate block in Row G. In the sample, the hours at load increment 7 with replacement power available is 200 hours.

E. Determine the systems total average annual emissions if no replacement power is available and adequate controls are applied to each unit to comply with the maximum allowable emissions rate table in Part VI of the Rule. To do this, add the average annual emissions from each unit in the system as calculated in Step D.

The Following Steps Assume Replacement Power is Available

F. Determine the hourly emissions in pounds with relaxed controls applied at each of the 10 load increments for the unit. This value is derived from relaxing controls that are assumed for the unit in Step A. Enter this number in the appropriate block on Row F. In the sample problem, the emissions for the less stringently controlled unit at load increment 7 is now 150 pounds/hr.

G. Determine the average annual hours of operation at each of the 10 load increment in 1990 for Option 1 and 3 or 1988 for Option 2 assuming replacement power is available. Enter this estimate in the appropriate block in Row G. In the sample, the hours at load increment 7 with replacement power available is 200 hours.

H. Determine the average annual emissions for each of the 10 load increments if replacement power is supplied and controls are relaxed. To do this, multiply the appropriate entries in Row F by the appropriate entries in Row G. In this sample,

150 lbs/hr times 200 hrs = 30,000 lbs/yr
at load increment 7

I. Determine the average annual emissions for the unit with relaxed controls and new hours of operation by adding the average annual emissions at each of the 10 load increments calculated in Step H.

J. Determine the system's total annual emissions if replacement power is available and controls are relaxed on some units. To do this, add the annual emissions from each unit as calculated in Step I.

K. The system's total annual emissions with replacement power and relaxed controls shall be less than or equal to the system's total annual emissions with no replacement power and with adequate controls applied to each unit to meet the maximum allowable emissions rate tables in Part (VI) of the Rule. Specifically J shall be less than or equal to E.

(8) Violation of Control Plan is a Violation of Rule

A violation of an approved final control plan is a violation of this rule. Where the Executive Officer/Air Pollution Control Officer determines that a violation of the schedules of equipment installation or procurement of new power shown in the Final Control Plan has occurred, as a result of circumstances beyond the control of the affected utility, a "Notice to Comply" shall first be issued to the violating utility before the issuance of any "Notice of Violation." Failure to correct the violation within sixty days from the date of issuance of "Notice to Comply" shall be followed by a "Notice of Violation" of the rule and enforcement action.

(8) Violation of Control Plan is a Violation of Rule

A violation of an approved final control plan is a violation of this rule. Where the Executive Officer/Air Pollution Control Officer determines that a violation of the schedules of equipment installation or procurement of new power shown in the Final Control Plan has occurred, as a result of circumstances beyond the control of the affected utility, a "Notice to Comply" shall first be issued to the violating utility before the issuance of any "Notice of Violation." Failure to correct the violation within sixty days from the date of issuance of "Notice to Comply" shall be followed by a "Notice of Violation" of the rule and enforcement action.

(9) At any time after January 1, 1982, the owner or operator may petition the Air Resources Board to amend the requirements of this rule, based upon circumstances which have changed since the date of adoption of this rule, including, but not by way of limitation, the following:

(A) The cost-effectiveness or technical feasibility of emission control equipment comtemplated in any control plan submitted pursuant to this rule.

(B) The effect of power plant NOx emission on federal and state ambient air quality standards and the cost-effectiveness of power plant NOx reduction to achieve or maintain such ambient air quality standards.

(C) Federal or state law, rules, regulations, or policy affecting the utilization of gas or oil as power plant fuel.

Part VI. MAXIMUM ALLOWABLE EMISSIONS RATE TABLES

This part does not apply to Option 4.

(a) Table Criteria

The criteria set forth here were assumed in the construction of the maximum allowable emissions rate tables:

(1) All existing electric power generating units were considered to be available and burning oil;

(2) Each unit of the system was assumed to have nine equal increments of load between the unit's minimum load and its rated maximum load and one increment of load between zero load and minimum load;

(3) The incremental rate of emissions was determined for each increment of load assumed in Criterion 2 above. This rate is based on the assumption that emission controls required for compliance with the appropriate stage are installed and properly operating on the unit. The rate is calculated in incremental pounds of emissions of oxides of nitrogen per incremental net megawatt hour;

(4) A unit table was prepared for each electrical power generating unit. Each unit table is based on Criteria 1, 2, and 3 above. Each unit table was constructed to show the rate of emissions at each of 10 equally spaced load points from minimum load to maximum rated load;

(5) The increments of load identified in Criteria 2 and 3 above were ranked in order of increasing incremental pounds per net megawatt hour;

Part VI. MAXIMUM ALLOWABLE EMISSIONS RATE TABLES

This part does not apply to Option 4.

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(1) All existing electric power generating units were considered to be available and burning oil;

(2) Each unit of the system was assumed to have nine equal increments of load between the unit's minimum load and its rated maximum load and one increment of load between zero load and minimum load;

(3) The incremental rate of emissions was determined for each increment of load assumed in Criterion 2 above. This rate is based on the assumption that emission controls required for compliance with the appropriate stage are installed and properly operating on the unit. The rate is calculated in incremental pounds of emissions of oxides of nitrogen per incremental net megawatt hour;

(4) A unit table was prepared for each electrical power generating unit. Each unit table is based on Criteria 1, 2, and 3 above. Each unit table was constructed to show the rate of emissions at each of 10 equally spaced load points from minimum load to maximum rated load;

(5) The increments of load identified in Criteria 2 and 3 above were ranked in order of increasing incremental pounds per net megawatt hour;

(6) Individual unit tables were combined for each size electrical power generating system shown in the maximum allowalbe emissions rate tables; and

(7) Demand for electrical energy was assumed to be filled by changing load in the increments identified in Criterion 2 above and in the order determined in Criterion 5 above. For the purpose of filling the next highest system-wide increment of deamnd, no unit was assumed to be reduced in load. In addition, no increment of load was used unless all lower increments for that same unit had been used.

(b) Construction of Additional Tables

The construction of any additional maximum allowable emissions rate tables or system-wide composite unit tables shall be accomplished in accordance with the criteria in V(a) above.

In addition, any other method of adding increments of capacity of units to satisfy system-wide load can be used provided it is shown to yield equivalent results.

Part VI MAXIMUM ALLOWABLE EMISSIONS RATE TABLES

TABLE I

MAXIMUM ALLOWABLE RATE OF EMISSIONS OF OXIDES OF NITROGEN ASSUMING THAT ALL ELECTRIC POWER GENERATING UNITS IN THE SYSTEM ARE AVAILABLE, AS A FUNCTION OF NET SYSTEM LOAD FOR ELECTRIC POWER GENERATING SYSTEMS HAVING A TOTAL GENERATING CAPACITY OF GREATER THAN 5000 MEGAWATTS AS OF JANUARY 1, 1978

NET SYSTEM LOAD IN MEGAWATTS	MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER DECEMBER 31, 1983		MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER JANUARY 1, 1990 FOR Options for 1 & 3 AFTER JANUARY 1, 1988 FOR OPTION 2
	Option 1	Option 2	
500	733	808	88
1000	1,234	1,430	173
1500	1,736	2,052	255
2000	2,238	2,673	332
2500	2,758	3,295	424
3000	3,331	3,917	519
3500	3,904	4,642	633
4000	4,478	5,402	731
4500	5,054	6,197	839
5000	5,632	7,042	948
5500	6,211	7,887	1071
6000	6,800	8,732	1186
6500	7,400	9,577	1318
7000	8,210	10,422	1459
7500	9,002	11,267	1627
8000	10,370	12,650	1871
8500	12,762	15,115	2312
9000 or Greater	30,217	36,463	5709

NOTE: To determine the maximum allowable emissions for net system loads other than those shown, use linear interpolation between the two net system loads that bracket the net system load desired.

Part VI MAXIMUM ALLOWABLE EMISSIONS RATE TABLES

TABLE 1

MAXIMUM ALLOWABLE RATE OF EMISSIONS OF OXIDES OF NITROGEN ASSUMING THAT ALL ELECTRIC POWER GENERATING UNITS IN THE SYSTEM ARE AVAILABLE, AS A FUNCTION OF NET SYSTEM LOAD FOR ELECTRIC POWER GENERATING SYSTEMS HAVING A TOTAL GENERATING CAPACITY OF GREATER THAN 5000 MEGAWATTS AS OF JANUARY 1, 1978

NET SYSTEM LOAD IN MEGAWATTS	MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER DECEMBER 31, 1983		MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER JANUARY 1, 1990 FOR Options for 1 & 3 AFTER JANUARY 1, 1988 FOR OPTION 2
	Option 1	Option 2	
500	733	808	88
1000	1,234	1,430	173
1500	1,736	2,052	255
2000	2,238	2,673	332
2500	2,758	3,295	424
3000	3,331	3,917	519
3500	3,904	4,642	633
4000	4,478	5,402	731
4500	5,054	6,197	839
5000	5,632	7,042	948
5500	6,211	7,887	1071
6000	6,800	8,732	1186
6500	7,400	9,577	1318
7000	8,210	10,422	1459
7500	9,002	11,267	1627
8000	10,370	12,650	1871
8500	12,762	15,115	2312
9000 or Greater	30,217	36,463	5709

NOTE: To determine the maximum allowable emissions for net system loads other than those shown, use linear interpolation between the two net system loads that bracket the net system load desired.

TABLE II

MAXIMUM ALLOWABLE RATE OF EMISSIONS OF OXIDES OF NITROGEN ASSUMING THAT ALL ELECTRIC POWER GENERATING UNITS IN THE SYSTEM ARE AVAILABLE, AS A FUNCTION OF NET SYSTEM LOAD FOR ELECTRIC POWER GENERATING SYSTEMS HAVING A TOTAL GENERATING CAPACITY OF LESS THAN 5000 MEGAWATTS AND EQUAL TO OR MORE THAN 500 MEGAWATTS AS OF JANUARY 1, 1978

NET SYSTEM LOAD IN MEGAWATTS	MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER DECEMBER 31, 1983		MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER JANUARY 1, 1990 FOR Options 1 & 3 AFTER JANUARY 1, 1988 FOR OPTION 2
	Option 1	Option 2	
200	271	305	27
400	482	588	54
600	693	871	88
800	912	1,154	130
1000	1,133	1,437	159
1200	1,355	1,720	205
1400	1,576	2,003	243
1600	1,790	2,286	290
1800	1,969	2,570	335
2000	2,195	2,853	390
2200	2,407	3,136	439
2400	2,749	3,419	507
2600	3,281	3,854	581
2800	3,945	4,533	674
3000	4,783	5,372	784
3200	5,890	6,479	919
3400 or Greater	8,401	8,989	1199

NOTE: To determine the maximum allowable emissions for net system loads other than those shown, use linear interpolation between the two net system loads that bracket the net system load desired.

TABLE III

MAXIMUM ALLOWABLE RATE OF EMISSIONS OF OXIDES OF NITROGEN ASSUMING THAT ALL ELECTRIC POWER GENERATING UNITS IN THE SYSTEM ARE AVAILABLE, AS A FUNCTION OF NET SYSTEM LOAD FOR ELECTRIC POWER GENERATING SYSTEMS HAVING A TOTAL GENERATING CAPACITY OF LESS THAN 500 MEGAWATTS AS OF JANUARY 1, 1978

NET SYSTEM LOAD IN MEGAWATTS	MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER DECEMBER 31, 1983		MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER JANUARY 1, 1990 FOR Options 1 & 3 AFTER JANUARY 1, 1988 FOR OPTION 2
	Option 1	Option 2	
20	64	82	7
40	103	137	12
60	154	192	18
80	206	247	26
100	257	302	35
120	311	368	46
140	370	439	58
160	428	510	72
180	503	581	86
200	587	681	105
220	756	850	130
240 or greater	996	1,090	166

NOTE: To determine the maximum allowable emissions for net system loads other than those shown, use linear interpolation between the two net system loads that bracket the net system load desired.

TABLE III

MAXIMUM ALLOWABLE RATE OF EMISSIONS OF OXIDES OF NITROGEN ASSUMING THAT ALL ELECTRIC POWER GENERATING UNITS IN THE SYSTEM ARE AVAILABLE, AS A FUNCTION OF NET SYSTEM LOAD FOR ELECTRIC POWER GENERATING SYSTEMS HAVING A TOTAL GENERATING CAPACITY OF LESS THAN 500 MEGAWATTS AS OF JANUARY 1, 1978

NET SYSTEM LOAD IN MEGAWATTS	MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER DECEMBER 31, 1983		MAXIMUM ALLOWABLE RATE OF OXIDES OF NITROGEN EMISSIONS POUNDS/HOUR, ON OR AFTER JANUARY 1, 1990 FOR Options 1 & 3 AFTER JANUARY 1, 1988 FOR OPTION 2
	Option 1	Option 2	
20	64	82	7
40	103	137	12
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140	370	439	58
160	428	510	72
180	503	581	86
200	587	681	105
220	756	850	130
240 or greater	996	1,090	166

NOTE: To determine the maximum allowable emissions for net system loads other than those shown, use linear interpolation between the two net system loads that bracket the net system load desired.

Part VII, ADDITIONAL PROVISIONS

This part does not apply to Option 4.

(a) Data Requirements

(1) Data to be Obtained by Measurements

Any oxides of nitrogen emissions data required by this Rule shall be based on measurements of emissions on applicable units. Such measurements shall be conducted at times and in a manner acceptable to the Executive Officer/Air Pollution Control Officer

The term "Any oxides of nitrogen emissions data" used above includes that data on which unit tables are based.

(2) Need for Additional Information

Additional information that is deemed necessary by the Executive Officer/Air Pollution Control Officer to ascertain the validity of submitted data shall be furnished to the Executive Officer/Air Pollution Control Officer the owner or operator of the effected unit within 60 days of the Executive Officer's/ Air Pollution Control Officer's written request.

(3) Resolving Discrepancies in Data

If the Executive Officer/ Air Pollution Control Officer determines that the rate of emissions of oxides of nitrogen from any unit is different from the rate shown

in the data submitted for approval, the Executive Officer/Air Pollution Control Officer shall notify in writing the owner or operator that a difference exists. The Executive Officer/ Air Pollution Control Officer may then substitute the data from his or her determination for the data submitted.

(b) Interpolation

The rate of emissions of oxides of nitrogen at points in the operating range of a unit or system that is not coincident with data submitted shall be determined by linear interpolation between the two points that bracket the point desired.

(c) Agreement to Combine Systems

Owners or operators of electrical power generating systems may enter into mutual written agreements to combine systems. For the purposes of this Rule, these combined systems shall be considered as one. If systems are combined, the maximum allowable emissions rate table in Part VI of this Rule and which is applicable to said owners or operators shall be superseded and replaced by a new table of like form. The new table shall reflect such agreement and provide for an identical level of system-wide control. Such revised table shall be derived by the Executive Officer/Air Pollution Control Officer.

An agreement to combine systems does not alter the status of demonstration units. Units previously selected as demonstration units shall continue to serve that purpose, and the provisions of VIII shall remain in effect for those units.

in the data submitted for approval, the Executive Officer/Air Pollution Control Officer shall notify in writing the owner or operator that a difference exists. The Executive Officer/ Air Pollution Control Officer may then substitute the data from his or her determination for the data submitted.

(b) Interpolation

The rate of emissions of oxides of nitrogen at points in the operating range of a unit or system that is not coincident with data submitted shall be determined by linear interpolation between the two points that bracket the point desired.

(c) Agreement to Combine Systems

Owners or operators of electrical power generating systems may enter into mutual written agreements to combine systems. For the purposes of this Rule, these combined systems shall be considered as one. If systems are combined, the maximum allowable emissions rate table in Part VI of this Rule and which is applicable to said owners or operators shall be superseded and replaced by a new table of like form. The new table shall reflect such agreement and provide for an identical level of system-wide control. Such revised table shall be derived by the Executive Officer/Air Pollution Control Officer.

An agreement to combine systems does not alter the status of demonstration units. Units previously selected as demonstration units shall continue to serve that purpose, and the provisions of VIII shall remain in effect for those units.

(d) Consultation with Other Districts

Prior to making a determination regarding the acceptability of any plans, data, or any other information required by this Rule, the Executive Officer/Air Pollution Control Officer shall consult with the Executive Officer/Air Pollution Control Officer of any other Air Pollution Control District that would be affected by this Rule.

(e) Permit Provisions

Any person operating basic equipment under permit pursuant to this Rule and who plans to make modifications to that equipment or related control equipment for the purpose of reducing oxides of nitrogen emissions as required by this Rule, shall apply for new permits to construct or operate both basic and control equipment involved in such reductions regardless of whether modifications or additions are to be made to either basic or control equipment or both.

Existing permits to operate pertaining to the basic and control equipment as specified above shall be surrendered and cancelled when such new permits to operate are issued. New permits shall not be effective unless surrender of such existing permits is made.

(f) Continuous Monitoring of Ammonia

An owner or operator of an electric power generating unit that uses ammonia to comply with this Rule shall not operate that unit unless the unit is equipped with instruments to continuously monitor and record the concentration of ammonia in the flue gas. Ammonia concentrations shall be monitored when ammonia is being introduced into the flue gas of the unit. The recorded data shall be retained by the owner or operator of the affected electric power generating system for at least two years from the date of recording. These data shall be available for inspection and/or reproduction upon the request of the Executive Officer/ Air Pollution Control Officer.

The Executive Officer/Air Pollution Control Officer shall determine the acceptability of any instrument used to comply with this Section. Such determination shall be made prior to the instrument's installation.

(f) Continuous Monitoring of Ammonia

An owner or operator of an electric power generating unit that uses ammonia to comply with this Rule shall not operate that unit unless the unit is equipped with instruments to continuously monitor and record the concentration of ammonia in the flue gas. Ammonia concentrations shall be monitored when ammonia is being introduced into the flue gas of the unit. The recorded data shall be retained by the owner or operator of the affected electric power generating system for at least two years from the date of recording. These data shall be available for inspection and/or reproduction upon the request of the Executive Officer/ Air Pollution Control Officer.

The Executive Officer/Air Pollution Control Officer shall determine the acceptability of any instrument used to comply with this Section. Such determination shall be made prior to the instrument's installation.

(g) Exemptions

(1) Alternative Energy Projects

(A) Cogeneration and Alternative Fuel Units

The provisions of this Rule do not apply to cogeneration units or units in which refuse-derived fuel or biomass fuel is burned to satisfy at least 50 percent of the total heat demand of that unit. For the purposes of this Rule, a cogeneration unit is one that concurrently recovers for sale by the system's owner or operator a substantial fraction of the input energy as other forms of energy for industrial or commercial heating or cooling purposes. The Executive Officer shall determine what a substantial fraction is, but in no event shall it be less than 25 percent.

For the purposes of this Rule, cogeneration units do not include combined cycle generating units.

(B) Existing Units Modified to Cogeneration Units

Existing units modified to cogeneration units that do not meet the requirements for cogeneration units in VII(g)(1)(A) above on or before August 7, 1978, but are thereafter modified to meet those requirements shall for the purposes of this Rule be considered as new units. These units shall be subject to the new source review provisions of Regulation XIII of the South Coast Air Quality Management District or with Rule 26 of the Ventura County Air Pollution Control District, whichever applies.

(2) Simple Cycle Gas Turbine Units

The provisions of this Rule do not apply to simple cycle gas turbine electric power generating units.

(3) Existing Combined Cycle Units: PARTIAL EXEMPTION

Electric power generating units that are permitted to operate as combined cycle gas turbine units on or before August 7, 1978, are exempt from the provisions of this Rule except for IV(b), "Emissions Dispatch Plan," which applies fully.

(h) Prohibited Modification

An existing unit shall not be modified so as to result in a net increase in its emissions of oxides of nitrogen.

(2) Simple Cycle Gas Turbine Units

The provisions of this Rule do not apply to simple cycle gas turbine electric power generating units.

(3) Existing Combined Cycle Units: PARTIAL EXEMPTION

Electric power generating units that are permitted to operate as combined cycle gas turbine units on or before August 7, 1978, are exempt from the provisions of this Rule except for IV(b), "Emissions Dispatch Plan," which applies fully.

(h) Prohibited Modification

An existing unit shall not be modified so as to result in a net increase in its emissions of oxides of nitrogen.

Part VIII. DEMONSTRATION UNIT

This part does not apply to Options 3 and 4.

(a) Demonstration Unit Requirements

A demonstration unit is a unit selected to demonstrate control technology that can be used to achieve Stage II system-wide reductions of 90 percent.

(1) Applicable Unit

A demonstration unit is an electric power generating unit with an electrical generating capacity equal to or greater than:

(A) 100 megawatts or equivalent flue gas volume: Selection 1; or

(B) 350 megawatts or equivalent flue gas volume: Selection 2.

(2) Applicable System

The requirement for a demonstration unit applies only to owners or operators of electric power generating systems with power generating capacities equal to or greater than 500 megawatts.

(3) Number of Required Units

Each system of at least 500 megawatts shall have at least one demonstration unit.

(4) Required Emissions Reductions

The owner or operator of the demonstration unit shall reduce the rate of emissions of oxides of nitrogen by at least 90 percent throughout the demonstration unit's operating range. The rate of reduction shall be determined from the approved unit table for the affected unit. A unit table for a demonstration unit shall meet the minimum requirements stated in the compliance schedule

in VIII(a)(5) below.

(5) Demonstration Unit Compliance Schedule

The emission reductions required by VIII(a)(4) above shall be achieved as expeditiously as practicable but prior to January 1, 1982, for Selection 1 or October 1, 1983, for Selection 2. The owner or operator of a demonstration unit shall fulfill the following minimum requirements:

(A) Prior to May 1, 1980, for both Selection 1 and Selection 2 submit the following to the Executive Officer/Air Pollution Control Officer. Also submit a copy to the Executive Officer of the Air Resources Board:

(i) A final control plan that identifies the unit selected to be the demonstration unit. The final control plan shall describe the minimum steps that will be taken to achieve the required 90 percent reduction by January 1, 1982, for Selection 1 or prior to October 1, 1983, for Selection 2.

The final control plan shall also contain a construction schedule. The construction schedule shall show completion of the construction and equipment installation phases prior to October 1, 1981, for Selection 1 or prior to July 1, 1983, for Selection 2.

in VIII(a)(5) below.

(5) Demonstration Unit Compliance Schedule

The emission reductions required by VIII(a)(4) above shall be achieved as expeditiously as practicable but prior to January 1, 1982, for Selection 1 or October 1, 1983, for Selection 2. The owner or operator of a demonstration unit shall fulfill the following minimum requirements:

(A) Prior to May 1, 1980, for both Selection 1 and Selection 2 submit the following to the Executive Officer/Air Pollution Control Officer. Also submit a copy to the Executive Officer of the Air Resources Board:

(i) A final control plan that identifies the unit selected to be the demonstration unit. The final control plan shall describe the minimum steps that will be taken to achieve the required 90 percent reduction by January 1, 1982, for Selection 1 or prior to October 1, 1983, for Selection 2.

The final control plan shall also contain a construction schedule. The construction schedule shall show completion of the construction and equipment installation phases prior to October 1, 1981, for Selection 1 or prior to July 1, 1983, for Selection 2.

(ii) Unit tables as described here. One unit table shall show emissions upstream of control equipment when the unit is burning oil. A second unit table shall show estimated emissions downstream of control equipment when the unit is burning oil. A comparison of the two unit tables shall be made by the Executive Officer/Air Pollution Control Officer to determine if the 90 percent reduction shall be achieved. This second unit table shall also be used when constructing the system-wide composite unit tables required for Stage I compliance pursuant to V(a)(1)(D) and for Stage II compliance pursuant to V(b)(1)(D).

(B) Prior to May 1, 1980. Sign initial contracts for the construction and installation of equipment that will begin to effect the emissions reductions required by this Rule; issue orders for the purchase of component parts to accomplish such reductions. Such contracts and orders shall be submitted to the Executive Officer/ Air Pollution Control Officer. Also, submit copies of such contracts to the Executive Officer of the Air Resources Board.

(C) Prior to October 1, 1981, for Selection 1 or prior to July 1, 1983, for Selection 2. Complete construction and installation of emissions control equipment and component parts as indicated on the construction schedule of the final control plan.

(D) Prior to January 1, 1982, for Selection 1 or prior to October 1, 1983, for Selection 2. Demonstrate compliance by achieving the required 90 percent reduction. Such demonstration shall include the submission of unit tables to the Executive Officer/ Air Pollution Control Officer for his or her approval.

(6) Compliance

(A) Inadequate Final Control Plan is a Violation

An inadequate final control plan is one that will not achieve the 90 percent emissions reduction requirement as expeditiously as practicable. This criterion applies even if the plan ensures compliance by the date specified in the compliance schedule.

If the Executive Officer/Air Pollution Control Officer determines at any time that a final control plan is inadequate according to the criteria above. the owner or operator of the affected electric power generating system shall be in violation of this Rule. Such violation shall commence on the date the determination was made be the Executive Officer/Air Pollution Control Officer. Such violation shall remain in effect until an adequate final control plan has been approved by the Executive Officer/Air Pollution Control Officer.

(B) Noncompliance with Plan is a Violation

Unless otherwise excused by VIII (a)(7) below, any failure to achieve and demonstrate the required 90 percent reduction shall constitute a violation of this Rule.

(D) Prior to January 1, 1982, for Selection 1 or prior to October 1, 1983, for Selection 2. Demonstrate compliance by achieving the required 90 percent reduction. Such demonstration shall include the submission of unit tables to the Executive Officer/ Air Pollution Control Officer for his or her approval.

(6) Compliance

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(B) Noncompliance with Plan is a Violation

Unless otherwise excused by VIII (a)(7) below, any failure to achieve and demonstrate the required 90 percent reduction shall constitute a violation of this Rule.

(7) Excusal from Required Emissions Reduction

Any system owner or operator which is required to achieve such 90 percent reduction shall be excused from this requirement if the Executive Officer/Air Pollution Control Officer makes a final determination that:

(A) The maximum achievable reduction has been demonstrated;

(B) The maximum achievable reduction is less than 90 percent; and

(C) The owner or operator has taken all reasonably available steps to effect such reduction.

Part IX Option 4

This part does not apply to Options 1, 2 and 3.

(a) Emission Reduction Requirements

The owner or operator of a system shall reduce system-wide annual average and daily maximum oxides of nitrogen emissions by 90% and 75%, respectively, from the system-wide average of 1974 through 1978 annual average and maximum daily amounts respectively by January 1990, the final compliance date for this rule. The owner or operator shall also reduce oxides of nitrogen emissions before 1990 by at least the percentages and by the dates shown in Table IX-1 of this section. In addition to meeting the percentage reductions identified in Table IX-1, the owner or operator shall obtain the further emission reductions which will result from compliance with the requirements of paragraph (e) of this Part IX. Except as required by Section (e), variations may be allowed if approved in writing by the Executive Officer/Air Pollution Control Officer and if the Executive Officer/Air Pollution Control Officer determines that subsequent reductions will be achieved in accordance with the schedule in Table IX-1.

Table IX-1
NOx Emission Reduction from
Average of Years 1974 through 1978

Year	Average %Reduction	Daily Maximum % Reduction
1982	18	15
1983	27	22.5
1984	36	30
1985	45	37.5
1986	54	45
1987	63	52.5
1988	72	60
1989	81	67.5
1990	90	75

Part IX Option 4

This part does not apply to Options 1, 2 and 3.

(a) Emission Reduction Requirements

The owner or operator of a system shall reduce system-wide annual average and daily maximum oxides of nitrogen emissions by 90% and 75%, respectively, from the system-wide average of 1974 through 1978 annual average and maximum daily amounts respectively by January 1990, the final compliance date for this rule. The owner or operator shall also reduce oxides of nitrogen emissions before 1990 by at least the percentages and by the dates shown in Table IX-1 of this section. In addition to meeting the percentage reductions identified in Table IX-1, the owner or operator shall obtain the further emission reductions which will result from compliance with the requirements of paragraph (e) of this Part IX. Except as required by Section (e), variations may be allowed if approved in writing by the Executive Officer/Air Pollution Control Officer and if the Executive Officer/Air Pollution Control Officer determines that subsequent reductions will be achieved in accordance with the schedule in Table IX-1.

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Compliance with these emission reduction requirements shall be based on annual average and daily maximum total South Coast Air Basin/Ventura County emissions in tons per day, developed using unit NOx concentration measurements and calculated exhaust gas flow levels. These values shall not exceed emission limits established according to the reductions contained in Table IX-1. The utility shall submit on a monthly basis and not later than 30 days following the end of each month daily NOx emissions data for each unit in the South Coast Air Basin/Ventura County for the purpose of determining compliance.

(b) Reduction Methods

Emission reductions shall be accomplished by any method the utility chooses including, but not limited to the following:

(1) Application of new emission controls

(2) Modification or optimization of existing emission controls

(3) Use of cleaner fuels (including natural gas if under firm contract).

(4) Reduction of generation in the South Coast Air Basin/Ventura County by increased generation outside that area. Such electrical energy shall be credited to the extent it reduces emissions within the South Coast Air Basin/Ventura County.

(5) Least NOx dispatch

(c) Exceptions

The owner or operator may, during a system emergency, operates a unit or system in excess of the emissions limits in Section (a) provided that total oxides of nitrogen emissions are otherwise minimized.

The Executive Officer/Air Pollution Control Officer shall be advised of any violation, the reason for it, and expected duration within 24 hours of the occurrence or within four hours after the start of the next normal business day. The utility shall file a written report to the Executive Officer/Air Pollution Control Officer within one week of the occurrence and shall include estimated emissions in excess of this rule. The utility shall make available for inspection by the Executive Officer/ Air Pollution Control Officer such records that establish that there was a system emergency.

For the purpose of this rule, a "system emergency" means a situation when, due to unavailability of scheduled generating capacity or due to unanticipated peak demand, the projected on-line energy producing capacity (including firm purchased power) directly available to the system operator is less than five percent of the anticipated system peak load and appears to be further decreasing to 2-1/2 percent or less.

(d) Compliance Plan

The utility shall submit a compliance plan to the Executive Officer/Air Pollution Control Officer no later than June 1, 1980, for approval and shall submit updated plans annually thereafter. Each plan shall show which methods shall be utilized to reduce South Coast Air Basin/Ventura County emissions to meet the requirements of Section IX(a). The control plan and each annual update shall contain as a minimum:

(1) A resource plan identifying out-of-South-Coast-Air-Basin/Ventura-County generation to be integrated into the utility system and a projection

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(1) A resource plan identifying out-of-South-Coast-Air-Basin/Ventura-County generation to be integrated into the utility system and a projection

of the resulting South Coast Air Basin/Ventura County emissions reductions for each of the remaining years to 1990.

(2) A description of the control equipment which will be installed on units and which will be necessary to comply with final emissions reductions requirements of this rule (90 percent annual average and 75 percent peak daily emissions reductions) and the respective units on which such equipment will be installed.

(3) A description of all other steps by which emissions will be reduced to comply with the final emissions reduction requirements of this rule.

(4) A construction schedule and date of operation for all equipment installation necessary to meet the provisions of this part, consistent with Section (e) of this part.

(5) Contingency plans and implementation dates for achieving the required South Coast Air Basin/Ventura County emission reductions in the event the generation identified in the resource plan in #1 above is not obtained in accordance with the plan. Such contingency plans and/or implementation dates may be amended upon filing of an amended contingency plan or schedule and approved by the Executive Officer/Air Pollution Control Officer.

(6) Oil reduction compliance plans filed with Federal and/or State agencies.

(7) The compliance schedule shall contain aggregate emission limits for all units within the District and shall represent an enforceable daily and annual emission limit upon approval of the Compliance Plan.

(8) A methodology for determining compliance with provisions of this rule. Such methodology may be detailed in the form of a Letter of Agreement between the Executive Officer/Air Pollution Control Officer.

(9) A schedule of scheduled shutdowns of units where such shutdowns will have a duration of six weeks or more.

(e) Dates When Controls Must be Installed

(1) The controls identified in the compliance plan required to comply with the final emissions reductions requirement of this part shall be installed as expeditiously as practicable but in no event later than during the first regularly scheduled shutdown of each affected unit which commences after January 1, 1982. For the purpose of this section, a scheduled shutdown shall be of six weeks or more duration and scheduled at least eighteen months in advance of the shutdown. Postponement of a shutdown does not exempt the owner or operator of the system from the requirement to install controls.

(2) In the event that the owner or operator of such utility can demonstrate to the District's Hearing Board that controls on a unit cannot be installed during the first scheduled shutdown because: 1. The control equipment cannot be delivered by the supplier(s) in time for the shutdown; or 2. The amount of time required for the installation of equipment would cause the duration of the shutdown to be extended such that the reliability of the system would be jeopardized, then the Hearing Board may extend the date controls must be installed on that unit by not more than two years. Such a variance shall not affect the requirement to install controls on other units.

(3) If this Section IX(e) is found to be invalid or unenforceable, Option 4 as specified in this Rule shall not be available as a method of compliance with the provisions of this Rule.

(f) Requirement for New Permits

Any person operating basic equipment under permit pursuant to this

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(f) Requirement for New Permits

Any person operating basic equipment under permit pursuant to this

Rule and who plans to make modifications to that equipment or related control equipment for the purpose of reducing oxides of nitrogen emission as required by this Rule, shall apply for new permits to construct or operate both basic and control equipment involved in such reductions regardless of whether modifications or additions are to be made to either basic or control equipment or both.

Existing permits to operate pertaining to the basic and control equipment as specified above shall be surrendered and cancelled when such new permits to operate are issued. New permits shall not be effective unless surrender of such existing permits is made.

(g) Right to Petition for Variance

At any time after January 1, 1982, the owner or operator may petition the Air Resources Board to amend the requirements of this rule based upon circumstances which have changed since the date of adoption of this rule, including, but not by any way of limitation, the following:

(1) The cost-effectiveness or technical feasibility of emission control equipment contemplated in any control plan submitted pursuant to this rule.

(2) The effect of power plant NOx emission on federal and state ambient air quality standards and the cost-effectiveness of power plant NOx reductions to achieve or maintain such ambient air quality standards.

(3) Federal or state laws, rules, regulations, or policy affecting the utilization of gas or oil as power plant fuel.

State of California
AIR RESOURCES BOARD

Response to Environmental Issues Raised

ITEM: Adoption of Amendments to Rule 475.1 of the South Coast Air Quality Management District and Rule 59.1 of the Ventura County Air Pollution Control District which Control the Emissions of Oxides of Nitrogen from Power Plants

Public Hearing Date: March 27, 1980
Response Date; March 27, 1980
Issuing Authority: Air Resources Board

COMMENT: Efforts to control ozone in the South Coast Air Shed may be adversely impacted by further controls upon emissions of nitrogen oxides and the relative contribution of nitrogen oxides from power plants is extremely small. (The Southern California Edison Company).

RESPONSE: The air quality impacts of controlling emissions of oxides of nitrogen are not a significant environmental issue related to the proposed action. The Board thoroughly examined and considered the air quality need before adopting the existing Rules 495.1 and 59.1 of the South Coast Air Quality Management District and Ventura County, respectively, on August 7, 1978 and May 24, 1979. At those times the Board found that such rules were needed to meet air quality standards and hence would have a positive environmental effect. At this hearing the matter before the Board is the revision to the existing rules to make them more compatible with recent findings on control techniques and to allow for the reduction of fossil fuel burning within the South Coast Air Shed as a way of reducing emissions to comply with the rules. The proposed revisions do not significantly change the air quality impacts of the existing rules. Therefore, the air quality information submitted by Edison

State of California

Memorandum

To : Huey D. Johnson
Secretary
RESOURCES AGENCY

Date : April 14, 1980

Subject: Filing of Notice of Decision of the Air Resources Board

From : Air Resources Board

Pursuant to Title 17, Section 60007(b) and in compliance with Air Resources Board certification under section 21080.5 of the Public Resources Code, the Air Resources Board hereby forwards for posting the attached notice of decision and response to environmental comments raised during the comment period.

Sally Rump

Sally Rump
BOARD SECRETARY

Attachments:
Resolution 80-22
[redacted]

State of California
AIR RESOURCES BOARD

Resolution 80-23

March 27, 1980

WHEREAS, the Air Resources Board (the "Board") in Resolution 79-49, May 29, 1979, adopted Rule 59.1 for the Ventura County Air Pollution Control District; and

WHEREAS, Rule 59.1 is complementary to Rule 475.1 of the South Coast Air Quality Management District in that one of the utility companies subject to both rules has power plants in both districts and the emissions from the power plants are controlled systemwide. Therefore both rules must contain substantially identical provisions; and

WHEREAS, the Board in Resolution 80-22, dated March 27, 1980, rescinded Rule 475.1 of the South Coast Air Quality Management District and replaced it with Rule 1135.1, which is in certain respects substantially different from Rule 475.1; and

WHEREAS, Rule 59.1 of the Ventura County Air Pollution Control District must now be changed to contain complementary provisions to those of Rule 1135.1 of the South Coast Air Quality Management District; and

WHEREAS, the Board originally adopted Rule 59.1 in response to a request from the Ventura County Board of Supervisors, and representatives of the County have expressed the desire that the Board at this time consider further revisions to the Rule; and

WHEREAS, Health and Safety Code Section 39605 authorizes the Board to provide any assistance to any district; and

WHEREAS, Sections 110(a)(2) and 172(a)(1) of the Clean Air Act require that a state implementation plan provide for the attainment of national ambient air quality standards in any nonattainment area as expeditiously as practicable; and

WHEREAS, a commitment was made in the Ventura County Air Pollution Control District's nonattainment plan to reduce emissions of oxides of nitrogen by means of the measures contained in the Rule adopted by this Resolution; and

WHEREAS, the staffs of the Ventura County Air Pollution Control District and the Board have worked together to develop amendments that are satisfactory to the staff of the Ventura County Air Pollution Control District; and

State of California
AIR RESOURCES BOARD

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BOARD SECRETARY

Attachments:
Resolution 80-22
Resolution 80-23

RECEIVED
Office of the Secretary
APR 15 1980
Resources Agency of California

I certify that this is a correct copy of the document on file in this office.

Thomas E. Hill
Assistant Secretary