



Air Pollution Control Board
Brian P. Bilbray District 1
Dianne Jacob District 2
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Air Pollution Control Officer
R. J. Sommerville

COMPLIANCE ADVISORY

Notice of Adoption of New Rule 69.2 Industrial and Commercial Boilers, Process Heaters and Steam Generators

On September 27, 1994, the Air Pollution Control Board adopted Rule 69.2, a new rule that regulates emissions of oxides of nitrogen (NO_x) resulting from new and existing industrial and commercial boiler, process heater and steam generator. It reflects best available retrofit control technology for these sources as required by the California Clean Air Act.

The rule applies to any new or existing industrial and commercial boiler, process heater or steam generator in San Diego County that has a heat input rating of 5 million Btu per hour or more.

The rule has separate requirements for units with high and low annual usage:

Requirements for low usage units

Low usage units are boilers, heaters or steam generators with an annual heat input of less than 220,000 therms or with a capacity (usage) factor of less than 10%. They are exempt from the emission standards if they maintain a specified stack-gas oxygen concentration or are tuned at least once a year according to a prescribed procedure included in the rule.

Requirements for high usage units

High usage units are boilers, heaters or steam generators with an annual heat input of 220,000 therms or larger or with a capacity factor 10% or higher. They are required to meet NO_x and CO emission standards. The concentration of NO_x for units operating on gaseous fuel cannot exceed 30 parts per million by volume (ppmv) calculated at 3% oxygen on a dry basis. The concentration of NO_x for units operating on liquid fuel cannot exceed 40 ppmv. Carbon monoxide emissions for all units subject to the NO_x standards are limited to 400 ppmv.

Exemptions

Electricity generating steam boilers, thermal oxidizers, boilers used in residential dwellings with not more than four families, and waste heat recovery boilers are exempt from all rule requirements. Additionally, NO_x emission standards do not apply to units burning liquid fuel during periods of natural gas curtailment, emergencies, or testing for maintenance purposes provided that total cumulative operating hours do not exceed specified amounts.

Rule 69.2 has special provisions for monitoring, recordkeeping and testing of both high and low usage boilers and heaters. It requires:

Test Schedule

Annual source testing for high usage units unless a different schedule is approved in writing by the District.

Continuous monitoring

Installation of continuous monitors of operational parameters on high usage units.

Fuel meters required

Installation of non-resettable, totalizing fuel meters on dual fuel units and low usage units subject to the rule.

Compliance schedule provided for emission controls, monitoring equipment and/or unit modifications

The rule also provides separate compliance schedule for units located at major stationary sources (emitting 50 tons per year of NO_x or more) and units located at non-major sources.

Owners or operators of units located at major stationary sources must submit an application for Authority to Construct for emission controls, monitoring equipment and/or unit modifications by May 31, 1995.

Owners or operators of units located at non-major sources must submit the application by September 27, 1997. The application must contain information specified in the rule.

Major stationary sources must be in compliance with the rule by May 31, 1996, for low usage units and by May 31, 1997, for high usage units. Non-major sources must be in compliance with all rule provisions by September 27, 1999.

For more information, please call the District's Engineering Division at (619) 694-3307

For a copy of Rule 69.2, please call (619) 694-3307.

**Air Pollution Control Board**

Greg Cox	District 1
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Pam Slater	District 3
Ron Roberts	District 4
Bill Horn	District 5

Air Pollution Control Officer**R. J. Sommerville**

COMPLIANCE ADVISORY

SECOND NOTICE FOR MAY 31, 1995 **COMPLIANCE SCHEDULE FOR:**

Rule 69.2

Industrial and Commercial Boilers, Process Heaters and Steam Generators

On September 27, 1994, the Air Pollution Control Board adopted Rule 69.2, a new rule that regulates emissions of oxides of nitrogen (NO_x) from new and existing industrial and commercial boilers, process heaters and steam generators. The rule applies to any new or existing boiler, heater or generator located in San Diego County that has a heat input rating of 5 million Btu per hour or more. In October 1994, a Compliance Advisory was sent to sources and interested parties advising them of the rule requirements.

May 31, 1995 is the first compliance date in this rule. By that date, owners or operators of existing units subject to the provisions of this rule and located at a major stationary source must submit an application for Authority to Construct for emission controls, monitoring equipment and any modification(s) necessary to meet the requirements of the rule. The estimated application fee for time and material is \$1000.00 and must accompany the application upon submittal.

Attached is a copy of the first advisory which contains more detailed information on rule requirements, exemptions, recordkeeping, etc.

If you have any questions regarding this advisory, please contact Gary Smith, Engineering Division, at (619) 694-3587 or Jerry Carrier, Compliance Division, at (619) 495-5342.

For a copy of Rule 69.2, please call (619) 694-3307.

GMH:gmh 5/9/95



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COMPLIANCE ADVISORY

DEADLINE MAY 31, 1996

NOx Control Requirements of Rule 69.2 Industrial and Commercial Boilers, Process Heaters and Steam Generators

Major NOx Sources

This is the third advisory regarding the requirements of District Rule 69.2.

District Rule 69.2 - Industrial and Commercial Boilers, Process Heaters and Steam Generators, was adopted by the San Diego Air Pollution Control Board on September 27, 1994. It regulates the emissions of oxides of nitrogen (NOx) from new and existing boilers, process heaters and steam generators having a heat input rating of 5 million Btu per hour or more. The rule implements the requirements of state law for NOx emission controls from this type of equipment and is an element in the San Diego regional plan to meet air quality standards for ozone.

Low-Usage Units - All units located at a major source of NOx emissions (50 tons or more per year) and having a heat input rating less than or equal to 50 million Btu/hr and an annual heat input of less than 220,000 therms **OR** having a heat input rating greater than 50 million Btu/hr and an annual capacity factor less than 10% must comply with one of the following provisions of Rule 69.2(d)(2) by **May 31, 1996**:

1. The unit must be operated in a manner to maintain stack-gas oxygen concentration at less than or equal to 3.00 percent by volume on a dry basis. This option requires annual testing to verify compliance. Emission stacks must have sampling ports to accommodate source testing. **OR**
2. The unit must be operated with a stack-gas oxygen trim system to maintain stack-gas oxygen concentration at 3.00 ± 0.15 percent by volume on a dry basis. This option requires annual testing to verify compliance. Emission stacks must have sampling ports to accommodate source testing. **OR**
3. The unit must be tuned at least once per year using the District's tuning procedure (see Rule 69.2(g)) or a District approved tuning procedure. **OR**
4. The unit must be operated in compliance with the following NOx and carbon monoxide (CO) emission standards contained in Rule 69.2(d)(1) and (d)(3):

Gaseous fuel - 30 ppmv NOx, 400 ppmv CO
Liquid fuel - 40 ppmv NOx, 400 ppmv CO

All concentration limits are calculated at 3% oxygen on a dry basis. This option requires annual testing to verify compliance. Emission stacks must have sampling ports to accommodate source testing.

In addition, the owner or operator of a qualifying low usage unit as described above must by **May 31, 1996**, and thereafter:

- Install and maintain a non-resettable, totalizing meter in each fuel line to measure the mass flow rate of each fuel or the volumetric flow rate, temperature and pressure of each fuel to the unit. (Rule 69.2(e)(1))
- Monitor and record the higher heating value and annual usage (calendar year) of each fuel used in each unit. (Rule 69.2(e)(3))
- Monitor and record the dates, times and cumulative annual hours of operation on liquid fuel when used during a natural gas curtailment or an emergency, or during equipment testing. (Rule 69.2(e)(4) and (e)(5))
- Maintain documentation of annual unit tune-ups if that is the chosen compliance option.
- Maintain all records for three years.

Please advise the District, in writing, by **May 31, 1996**, of which boilers, process heaters, and steam generators are subject to the low-usage requirements of Rule 69.2(d)(2) and which compliance option (numbers 1 through 4 above) applies to each unit. Following receipt of this information, the District will advise you of any changes to your current District permits to operate that will result or if you need to submit an application to modify any of your existing permits.

High Usage Units - All units located at a major source with a heat input rating less than or equal to 50 million Btu/hr and an annual heat input of 220,000 therms or more, **OR** any unit with a heat input rating greater than 50 million Btu/hr and an annual capacity factor of 10% or greater must comply with the provisions of Rule 69.2(d)(1) and (d)(3), and Section (e) by **May 31, 1997**.

If you operate any boilers, process heaters or steam generators with manufacturer's maximum gross heat input ratings equal to or greater than 1 million Btu/hr (5 million Btu/hr if fired exclusively with natural gas and /or liquefied petroleum gas) that do not currently have District permits to operate or applications pending, you must apply for permits to operate such units by September 27, 1996. A separate application is required for each unit. Please specify in your applications how you intend to comply with Rule 69.2 for each unit having a heat input rating of 5 million Btu/hr or more.

If you have any questions regarding this advisory, please contact Alta Stengel, Engineering Division, at (619) 694-2510 or Jerry Carrier, Compliance Division, at (619) 495-5342.

A copy of Rule 69.2 may be obtained by calling Permit Processing at (619) 694-3307.



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NOx Control Requirements of Rule 69.2 Industrial and Commercial Boilers, Process Heaters and Steam Generators

Non-Major NOx Sources

Summary: This Compliance Advisory applies to new and existing boilers, process heaters and steam generators, with a heat input rating of 5 million Btu per hour or more located at non-major sources of nitrogen oxides (NOx) emissions (with facility-wide emissions of NOx less than 50 tons of NOx per year). A new unit is one that has been installed after September 27, 1994. These new units must comply with this rule upon initial installation and startup. An existing unit is one that was installed on or before September 27, 1994. Existing units which are not in compliance with this rule must submit an application to modify the unit by September 27, 1996, and must be in compliance with the rule by September 27, 1998.

District Rule 69.2 - Industrial and Commercial Boilers, Process Heaters and Steam Generators, was adopted by the San Diego Air Pollution Control Board on September 27, 1994. It regulates the emissions of oxides of nitrogen (NOx) from existing and new boilers, process heaters and steam generators having a heat input rating of 5 million Btu per hour or more. The rule implements the requirements of state law for NOx emission controls from this type of equipment, and is an element in the San Diego regional plan to meet air quality standards for ozone.

In October 1994, a Compliance Advisory was sent to facilities advising them of the rule requirements. In May 1995, a second advisory was sent to major sources of NOx emissions since the rule required these large NOx emission sources to comply with Rule 69.2 sooner than non-major sources.

New boilers, process heaters and steam generators installed after September 27, 1994, and subject to Rule 69.2, are required to comply with Rule 69.2 on and after initial startup. Existing units installed and operating at non-major NOx sources on or before September 27, 1994, must be in compliance with Rule 69.2 by September 27, 1998.

However, there are certain interim requirements that must be met. **This advisory is to remind non-major NOx sources of upcoming requirements of Rule 69.2 that could affect their future operations.**

For non-major NOx sources, the following compliance dates apply to existing units:

- **September 27, 1996** - By this date, you should decide how you intend to meet the requirements of Rule 69.2 for each existing boiler, process heater and steam generator with a heat input capacity of 5 million Btu/hr or more.

- *If you do not already have a District Permit to Operate or a pending permit application for any existing boiler, process heater or steam generator with a manufacturer's maximum gross heat input rating of 1 million Btu/hr or more (5 million Btu or more if fired exclusively with natural gas or liquefied petroleum gas), you must apply for a permit for that unit by **September 27, 1996**. A separate permit application is required for each unit. For units with a heat input rating of 5 million Btu/hour or more, you should specify in your permit application(s) how you intend to comply with the requirements of Rule 69.2. You do not need to comply with Rule 69.2 requirements immediately, but you must comply with the rule by September 27, 1998.*
- *If you already have a District Permit to Operate for an existing boiler, process heater or steam generator, you must determine whether any of your equipment will qualify as a low-usage unit, i.e., whether it has an annual capacity factor of less than 10% (for units rated greater than 50 MM Btu/hr), or has an annual heat input less than 220,000 therms (for units rated at 50 MM Btu/hr or less). Low usage units have an option to comply with the alternative operational standards in Subsection (d)(2) of the rule instead of complying with the specified levels of NO_x and carbon monoxide (CO) emissions. However, they do require that you maintain certain oxygen levels in the boiler flue gas or tune the boiler annually. You are not required to meet these usage limits and alternative operational standards until September 27, 1998.*
- *For those existing units with permits which will qualify for the alternative (low usage) operational standards, your permits will be modified at a later date to limit fuel usage to ensure each unit remains eligible for the alternative operational standards. In addition, you will be required: to have fuel flow meters on each unit, to comply with the alternative operational standards, and keep records to show that each unit is eligible for and in compliance with the alternative operational limits. These requirements will become effective September 27, 1998. You will be notified prior to that date of any additional steps you will need to take for existing low-usage units.*
- *For those existing units with permits which are not eligible for the low-usage alternative operational standards, you must comply with the NO_x and carbon monoxide (CO) emission limits specified in Subsections (d)(1) and (d)(3), and the applicable monitoring and recordkeeping requirements specified in Section (e) of the rule by September 27, 1998. You must decide which units may already be in compliance and which must be modified to be in compliance.*
- *For those existing units with permits which must be modified to be in compliance, you must submit an application to the District by **September 27, 1996**, for an Authority to Construct and modified Permit to Operate for each existing unit for which you intend to add or modify NO_x emission controls and/or monitoring equipment in order to comply with Rule 69.2. Compliance with Rule 69.2 is not required until September 27, 1998. However, time is needed to evaluate your applications, approve and complete the construction or modifications, and demonstrate compliance. You must continue to comply with current permit conditions in the interim.*
- *A separate application is not required for each unit to be modified. A single application can be submitted to make similar modifications to more than one unit. However, in order to expedite permit processing, a separate application should be submitted for each significantly different modification. For example, one application could be submitted for the same low-NO_x burners to retrofit five similar boilers, but a separate application should be submitted for a selective catalytic reduction system to control emissions from a sixth, larger boiler.*

- *For those existing units with permits which are already in compliance with the NOx and CO emission limits of Rule 69.2, you must continue to comply with your current permit conditions. You will need to fully comply with the requirements of Rule 69.2, including fuel use meters and emission control monitoring and recordkeeping by September 27, 1998. You will be notified prior to that date of any additional steps you will need to take for such units.*

Please be aware that the above compliance categories for boilers, process heaters and steam generators are not exclusive. A unit for which you have submitted an application to install NOx controls, but which you subsequently determine will qualify for the low-usage alternative operational standards, can comply with the latter. However, you will need to notify the District of the change in status. Similarly, a unit which you expected to qualify for the alternative (low usage) operational standards can subsequently comply with the NOx and CO emission standards, or can be replaced with a new unit that complies with those standards, provided the existing unit complies with the appropriate standards by September 27, 1998. Replacement units must comply with Rule 69.2 upon startup. A District Authority to Construct is required for modifications needed to bring an existing unit into compliance, or for a replacement unit. You should plan 3 - 6 months for issuance of the Authority to Construct.

If you have any questions regarding this advisory, please call Alta Stengel, Engineering Division, at (619) 694-2510 or Jerry Carrier, Compliance Division, at (619) 495-5342.

A copy of Rule 69.2 and permit application forms may be obtained by calling Permit Processing at (619) 694-3307.

AS:jl
07/19/96