



Air Pollution Control Board

Greg Cox	District 1
Dianne Jacob	District 2
Pam Slarer	District 3
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Air Pollution Control District

R. J. Sommerville	Director
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COMPLIANCE ADVISORY

USE OF EMERGENCY STANDBY ENGINES/GENERATORS

Recently, the Air Pollution Control District (District) has been asked how emergency standby engines/generators can be used to produce electricity (or reduce electricity purchases) in both emergency and non-emergency situations.

This advisory is to clarify that an emergency standby engine/generator is authorized to operate only for the time period specified on its Permit to Operate (PO) or Certificate of Registration (CR) for non-emergency activities (e.g., maintenance and testing), and to provide power during an emergency. The District defines an "emergency" as:

1. an unforeseen failure by the serving utility to provide electrical power to the facility.

The District will consider such failure to exist when statewide electrical reserves fall to 3% or less and the California Independent System Operator (ISO) has officially forecast the clock time (e.g., 4:45 pm) when statewide electrical reserves will fall to 2% or less (i.e. a Stage 3 Electrical Emergency is imminent). The District considers the emergency to begin at this ISO forecasted clock time. Emergency generators may startup at this clock time and run until no more than 30 minutes after the ISO advises that the Stage 3 Electrical Emergency is no longer imminent (or in effect), or

2. an unforeseen failure of facility on-site electrical equipment including transmission equipment such as a transformer, or
3. an unforeseen flood or fire or life-threatening situation, or
4. operations at FAA licensed airports in anticipation of a power failure due to severe storm activity.

Facilities operating emergency standby engines/generators during these emergency situations must record the dates, times and hours of such operations, the nature of the emergency (if known) and the type of fuel used.

It is a violation of District rules and regulations to operate an emergency generator in non-emergency conditions except as allowed by a District PO or CR.

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OPERATION OF EMERGENCY EQUIPMENT IN NON-EMERGENCY CONDITIONS

If a facility seeks to run an emergency generator in non-emergency conditions (see above) in excess of current operating limits in the District PO or CR or applicable District rules and regulations, the facility must file an application for and receive a revised or new PO allowing such increased operation.

Before engines can be authorized for increased hours of operation, they may have to be equipped with Best Available Control Technology (BACT) for specific air contaminant emissions, including toxic air contaminants, and evaluated for potential air quality and public health impacts. **To allow sufficient time for permit approvals and installing any necessary emission controls, operators planning to request increased use of emergency standby engines for next summer's peak demand periods should apply for necessary permits within the next few months.**

If there is good reason why any required emission controls cannot be in place for next year's peak electricity demand periods, a facility may be able to enter into a stipulated Order of Abatement with the District. Conditions dealing with short-term and long-term mitigation of emissions can be negotiated with the District. A facility may operate in excess of permit limits in non-emergency conditions only if a stipulated Order of Abatement or variance has been granted by the Air Pollution Control District Hearing Board.

NON-FIRM STATUS

If a facility has elected to be in a non-firm status (e.g., voluntary curtailment) regarding electricity supply in order to receive a more favorable electricity rate and has electricity curtailed because of that non-firm status, such curtailment is not considered to be an "emergency." Such emergency generators cannot be operated except as allowed by their District PO's or CR's. A facility may only run an emergency generator in excess of current operating limitations on the District PO or CR if the facility has filed an application for and received a revised or new PO allowing such increased operation.

However, if a facility has elected to be in a non-firm status and a Stage 3 Electrical Emergency has been forecast by the ISO or is in effect, as described in #1 above, emergency generators at that facility can be operated only as described in #1 above.

Operation of emergency generators in a manner inconsistent with the above conditions can result in issuance of a Notice of Violation by the District and civil or criminal penalties. Such penalties may include any monetary gain made from running generators in a manner inconsistent with the above.

If you have any questions concerning District compliance policies related to operation of emergency generators, please contact Jorge Lopez at (858) 650-4555. If you have permit application questions, please contact Dan Speer at (858) 650-4607. If you have any questions concerning how the ISO will notify businesses that statewide electricity reserves have fallen to 2% or less, please contact Ali Amirali of the ISO staff at aamirali@caiso.com or (916)-351-4458.



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COMPLIANCE ADVISORY

NOTICE OF AMENDMENTS TO RULE 69.4 STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES - REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT)

On November 15, 2000, the Air Pollution Control Board adopted amendments to Rule 69.4. Rule 69.4 implements federally mandated RACT requirements for emissions of nitrogen oxide (NOx) from 50 brake horsepower (bhp) or greater stationary reciprocating internal combustion engines located at stationary sources emitting 50 tons or more of NOx per year. The amendments provide minor clarifications and ensure consistency with new Rule 69.4.1, which was also adopted on November 15, 2000.

The Rule 69.4 amendments accomplish the following:

- Exemptions** Adds an exemption for any engine operated exclusively within a permitted test cell solely for the research, development, or testing of gas turbines or reciprocating internal combustion engines, or their components.
- Reduces the allowable annual non-emergency operating hours from 500 to 200 for emergency standby engines located at a nuclear power generating station.
- Eliminates the operating restriction of 1,000 hours per year in the exemption for military tactical support equipment engines.
- Definitions** Adds, deletes and amends certain definitions for clarification.
- Emission Standards** Imposes no new emission standards. Deletes the 25% emission reduction requirement for diesel or kerosene fueled engines with add-on control equipment. Retains the existing controlled emission rate standards for these engines.
- Maintenance and Recordkeeping Requirements** Adds an annual maintenance requirement for engines exempt from the emission standards.
- Streamlines and clarifies recordkeeping requirements.
- Test Methods** Adds equivalent test methods which may be used to determine compliance.
- Clarifies that emission source tests shall consist of three subtests and that the reported emission rate shall be an average of those three subtests.

Copies of amended Rule 69.4 can be obtained by calling (858) 650-4700 or visiting the District's web site at www.sdapcd.co.san-diego.ca.us under Rules and Regulations - Recent and/or Repealed Rules. For more information, please call the District's Compliance Division at (858) 650-4550.

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COMPLIANCE ADVISORY

Notice of Adoption of Rule 69.4.1 Stationary Reciprocating Internal Combustion Engines - Best Available Retrofit Control Technology

On November 15, 2000, the Air Pollution Control District adopted new Rule 69.4.1 to implement state-mandated Best Available Retrofit Control Technology (BARCT) requirements. This new rule will reduce oxides of nitrogen (NO_x) emissions from existing and new stationary reciprocating internal combustion engines in San Diego County that have a manufacturer output rating of 50 brake horsepower (bhp) or greater.

New Rule 69.4.1 includes the following:

Applicability Rule 69.4.1 applies to stationary internal combustion engines with a bhp rating of 50 or greater.

An engine subject to this rule and located at a major stationary source of NO_x is also subject to the applicable requirements of Rule 69.4 (see Rule 69.4 advisory).

Exemptions The following engines are exempt from all Rule 69.4.1 requirements:

- Engines rated at less than 50 bhp.
- Engines used exclusively in connection with a dwelling for not more than four families.
- Engines used exclusively in agricultural operations.
- Engines used exclusively for the research, development and testing of gas turbine engines or reciprocating internal combustion engines or their components.
- Engines used exclusively in conjunction with military tactical support equipment.

The following engines are exempt from specified emission limits, monitoring, inspection and maintenance, recordkeeping, and source test requirements:

- Existing engines operating less than 200 hours per calendar year. (Existing engines are those which commenced operation in San Diego County on or before November 15, 2000.)
- Existing emergency standby engines provided that operation for non-emergency purposes does not exceed 52 hours per year.
- Existing emergency standby engines located at a nuclear power generating station and operating less than 200 hours per calendar year for non-emergency purposes.

Exemptions continued Although exempt from the rule's emission limits, these engines are still required to:

- Use only California Diesel Fuel.
- Install a non-resettable totalizing fuel meter and/or non-resettable elapsed operating time meter.
- Conduct periodic maintenance of the engine and any add-on control equipment, as applicable.
- Maintain records of engine manufacturer name, model number, bhp rating, combustion method, fuel type, California Diesel Fuel certification (if applicable), and a manufacturer's maintenance manual.
- Maintain an operating log containing the dates and times of engine operation, except if total engine operations for any purpose, including emergency situations, do not exceed 52 hours per calendar year.
- Maintain records of periodic engine maintenance, including dates maintenance was performed.

Existing low-use diesel engines equipped with any two of the following: turbocharger, aftercooler, or injection timing 4 degree retard are exempt from the emission standards.

Definitions The rule provides definitions for terms used in Rule 69.4.1.

Standards A stationary internal combustion engine must comply with the following emission standards:

Engine Category	NOx emission rate (g/bhp-hr)	NOx concentration (ppmv)	NOx percent reduction	CO concentration (ppmv)	VOC concentration (ppmv)
Rich-burn: fossil derived gaseous fuel or gasoline	N/A	25	96	4,500	250
Rich-burn: exclusively waste derived gaseous fuel	N/A	50	90	4,500	250
Lean-burn: any fuel	N/A	65	90	4,500	N/A
All high-use: diesel or kerosene fuel	6.9	535	90	4,500	N/A
Existing: low: use & cyclic - diesel or kerosene fuel	9.0	700	N/A	4,500	N/A
New or replacement: low-use & cyclic - diesel or kerosene fuel	6.9	535	N/A	4,500	N/A

Compliance with the NOx emission standard may be by either the listed NOx emission rate (g/bhp-hr or ppmv) or by the emission reduction percentage.

Any engine described above and operating on diesel fuel shall use only California Diesel Fuel.

Monitoring Requirements Requires engine operating parameters such as engine air-to-fuel ratio, engine inlet manifold temperature, and pressure or oxygen content of the exhaust gas as recommended by the manufacturer to be monitored, except where monitoring is determined by the District to be infeasible or ineffective.

Monitoring Requirements continued	<p>Requires operators of engines with add-on control equipment to install, operate and maintain in calibration, devices that continuously monitor the operational characteristics of the engine and any NOx emission reduction system such as engine air-to-fuel ratio, temperature of exhaust gas at the inlet and outlet of the add-on control equipment, oxygen content of exhaust gas at the inlet and outlet of the add-on control equipment, and flow rate of NOx reducing agent added to the engine exhaust gas.</p> <p>Requires the installation of a non-resettable totalizing fuel meter and/or non-resettable elapsed operating time meter.</p>
Inspection and Maintenance Requirements	<p>Requires periodic inspections of the engine and any add-on control equipment, as applicable, every 4,000 hours of operation, or every six months, whichever is less.</p> <p>Requires periodic maintenance of the engine and any add-on control equipment, as applicable, at least once each calendar year, or more frequently if deemed necessary.</p>
Recordkeeping Requirements	<p>Requires records of engine manufacturer name, model number, bhp rating, combustion method, fuel type, California Diesel Fuel certification (if applicable), manufacturer maintenance manual, dates and times of engine operation or fuel consumption, and dates of engine inspection and maintenance.</p> <p>Requires an operating log, for emergency standby engines and engines operated less than 200 hours per year, containing the dates and times of engine operation, purpose of operation, the total cumulative hours of operation per calendar year and records of periodic engine maintenance including dates maintenance was performed.</p> <p>Certain records are not required if total emergency standby engine operations for any purpose, including emergency situations, do not exceed 52 hours per calendar year.</p> <p>Requires records to be retained on site for at least three years.</p>
Test Methods	<p>Specifies test methods for determining compliance with the rule.</p>
Source Test Requirements	<p>Requires specified engines subject to the emission standards be source tested at least once every 24 months after initial compliance has been determined.</p> <p>Requires emission source testing be conducted using approved test methods and source test protocol.</p> <p>Requires emission source testing be conducted at no less than 80 percent of the bhp rating, unless otherwise specified by the District.</p> <p>Exempts from source test requirements any existing, new or replacement emergency standby engine, and any existing, new or replacement engine which operates less than 200 hours per calendar year.</p> <p>Exempts from source test requirements any engine operating on diesel or kerosene fuel without add-on emission controls and certified by EPA or ARB at emission rates equal to or below the applicable emission standards until an appropriate test method is approved by the District and ARB.</p>

Compliance Schedule Requires engines operating on diesel fuel use only California Diesel Fuel on or after **May 15, 2001**.

Requires the owner or operator of an existing engine subject to the requirements of this rule to submit an application to modify conditions on the Permit to Operate or to convert a Certificate of Registration to a Permit to Operate by **May 15, 2001**.

Requires the owner or operator of an existing engine subject to the emission standards to submit to the District documentation which demonstrates that the engine is in compliance with the emission limits and all other applicable requirements of this rule by **November 15, 2002**.

Requires new or replacement engines to comply with all applicable requirements of this rule (including use of California clean diesel) upon installation and startup.

Copies of new Rule 69.4.1 can be obtained by calling (858) 650-4700 or visiting the District's web site at www.sdapcd.co.san-diego.ca.us under Rules and Regulations – Recent and/or Repealed Rules. Permit application forms are also available on the District's web site under Permits & Forms. For more information, please call the District's Compliance Division at (858) 650-4550.



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COMPLIANCE ADVISORY

SECOND NOTICE OF MAY 15, 2001, COMPLIANCE REQUIREMENTS FOR ENGINES SUBJECT TO

Rule 69.4.1

Stationary Reciprocating Internal Combustion Engines - Best Available Retrofit Control Technology (BARCT)

On November 15, 2000, the Air Pollution Control District adopted Rule 69.4.1 to implement state-mandated Best Available Retrofit Control Technology (BARCT) requirements. This new rule was implemented to reduce oxides of nitrogen (NOx) emissions from existing and new stationary reciprocating internal combustion engines in San Diego County that have a manufacturer output rating of 50 brake horsepower (bhp) or greater. In December 2000, a Compliance Advisory was sent to affected sources and interested parties advising them of the rule requirements. This second advisory is being provided to remind affected sources that the first compliance deadline for engines subject to this rule is **May 15, 2001**. A list of the May 15, 2001, compliance requirements is provided below by engine type and/or use.

All Engines Operating on Diesel Fuel

All diesel-fired engines are required to use California Diesel Fuel after May 15, 2001. Operators are required to maintain records, such as delivery invoices or fuel specifications, indicating that the diesel fuel being used is ARB Certified California Diesel Fuel.

Existing Permitted and Previously Exempt Engines

By May 15, 2001, all owners or operators of existing engines or engines no longer exempt from permit requirements (*except those still eligible for registration-see below*), must submit an application to obtain a Permit to Operate or modify their current Permit to Operate conditions, and provide information indicating how the engine will comply with the Rule 69.4.1 requirements which become applicable on November 15, 2002.

Existing Registered Engines

Many currently registered engines can continue to be registered and do not need to apply for a District Permit to Operate. Specifically, *existing* registered emergency standby engines, and *existing* engines rated at less than 200 bhp and operated less than 200 hours per year, remain eligible for the Registration Program. (*Existing* engine means installed and operated in San Diego County on or before November 15, 2000.) However, the following types of engines are no longer eligible for Registration:

- Newly installed or replacement (after November 15, 2000) emergency standby engines.
- Engines rated less than 500 bhp and installed before April 5, 1983, except existing emergency standby engines and existing engines below 200 bhp and used less than 200 hours per year.
- Aircraft auxiliary power units rated at 200 bhp or less, except existing units if used less than 200 hours per year.
- Aircraft air start units rated at 500 bhp or less, except existing engines rated below 200 bhp and used less than 200 hours per year.

By May 15, 2001, all owners or operators of engines no longer eligible for Registration must submit an application for a Permit to Operate, and provide information indicating how the engine will comply with the Rule 69.4.1 requirements which become applicable on November 15, 2002.

Existing Emergency Standby Engines (Registered and Permitted)

The District will issue revised Certificates of Registration or Permits to Operate (as applicable), for all existing emergency standby engines to incorporate the new requirements of Rule 69.4.1. It is not necessary for the owners or operators of these engines to submit an application to the District to obtain a revised Registration Certificate or Permit.

Operation of these engines is limited to emergency situations and 52 hours per year for testing and maintenance purposes. Due to the California energy crisis, emergency standby engines may also be used when the California Independent System Operator (ISO) declares a Stage 3 Alert. An engine operator can determine if a Stage 3 Alert has been issued by logging on to the System Status page of ISO's web site at: www.aiso.com/awe/systemstatus.html.

Replacement of any currently registered engine, even if the replacement engine is identical (i.e. same make and model), will cause the replacement engine to no longer be eligible for registration. Prior to replacing such engines, the owner or operator must submit an application to obtain an Authority to Construct and Permit to Operate for the replacement engine.

All New or Replacement Engines

The owner or operator of any new or replacement engine (rated at or above 50 bhp) must submit an application to obtain an Authority to Construct and Permit to Operate prior to installing the engine. The engine must comply with Rule 69.4.1 and other applicable rules upon startup.

Attached is a copy of the first Rule 69.4.1 Compliance Advisory which contains more detailed information on rule requirements and exemptions.

Copies of Rule 69.4.1 can be obtained by visiting the District's web site at: www.sdapcd.co.san-diego.ca.us under Rules and Regulations, Recent and/or Repealed Rules, or by calling (858) 650-4700 and asking for a copy to be mailed to you.

Permit application forms are also available on the District's web site under Permits & Forms. If you have any questions regarding application submittals, please call Dan Speer at (858) 650-4607.

For additional information, please contact the District's Compliance Division at (858) 650-4550.