



January 6, 2021

## **NOTICE OF PUBLIC WEBINAR**

### **FOR DISCUSSION OF DRAFT PROPOSED AMENDMENTS TO RULE 69.3.1 – STATIONARY GAS TURBINE ENGINES-BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY, AND THE PROPOSED REPEAL OF EXISTING RULE 69.3 – STATIONARY GAS TURBINE ENGINES-REASONABLY AVAILABLE CONTROL TECHNOLOGY**

The San Diego County Air Pollution Control District (District) invites you to participate in the following public webinar to provide input regarding draft proposed amendments to Rule 69.3.1 – Stationary Gas Turbine Engines-Best Available Retrofit Control Technology, and the proposed repeal of existing Rule 69.3 – Stationary Gas Turbine Engines-Reasonably Available Control Technology. Comments and questions concerning these proposals may be submitted in writing before or made at the webinar, which is scheduled as follows:

**DATE:** Tuesday, February 2, 2021  
**TIME:** 10:00 a.m. to 12:00 Noon  
**HOW TO PARTICIPATE:** Via web browser or mobile device at:  
<https://primetime.bluejeans.com/a2m/live-event/zkudukpb>  
(Enter your name, e-mail address, and click on “Join as Guest”)

The San Diego region does not meet the current California and National Ambient Air Quality Standards for ozone pollution. Consequently, the District is required by State and federal law to update its rules to further control and reduce ozone-forming emissions from stationary sources in the region, including oxides of nitrogen (NOx) emissions from stationary gas turbine engines. Stationary gas turbines burn fuel, typically natural gas, to produce power for use in a broad scope of applications.

Rule 69.3 was last amended in 1998 and was approved by the U.S. Environmental Protection Agency (EPA) as part of the San Diego County portion of the State Implementation Plan (SIP) for attaining and maintaining the air quality standards. The rule reflects federal requirements for Reasonably Available Control Technology (RACT) to reduce NOx emissions from stationary gas turbine engines with a power rating of 0.3 megawatt (MW) or greater.

Rule 69.3.1 was last amended in 2010 and applies to new stationary gas turbine engines with a power rating of 0.3 MW or greater, and existing turbine engines with a power rating of 1.0 MW or greater. The rule contains more health-protective State requirements for Best Available Retrofit Control Technology (BARCT) for stationary gas turbine engines.

In 2016, the District submitted Rule 69.3.1 to the EPA for approval into the SIP to supplement, but not replace Rule 69.3 as meeting current RACT. Subsequently, the EPA identified deficiencies in Rule 69.3.1 that require correction to allow federal approval of the rule. Rule 69.3.1 is being proposed for amendment to address these deficiencies. If adopted, proposed amended Rule 69.3.1 would replace existing Rule 69.3, which would be repealed.

**OVER**

In summary, the draft proposed amendments to Rule 69.3.1 will:

- Revise the applicability to all gas turbine engines (both existing and new) with a power rating of 0.3 MW or greater.
- Revise the definition of “Extended Startup.”
- Add a definition for “Testing or Maintenance.”
- Add NOx emission standards that apply to extended startups, of 42 parts per million volume (ppmv) for gaseous fuel and 65 ppmv for liquid fuel.
- Remove requirements specific to peaking units installed before 1998, all of which have since been retired.
- Include other minor edits for clarification.

### **Draft Documents**

Copies of the draft proposed amendments to Rule 69.3.1 are available on the District's website at [https://www.sandiegocounty.gov/content/sdc/apcd/en/Rule\\_Development/Workshops.html](https://www.sandiegocounty.gov/content/sdc/apcd/en/Rule_Development/Workshops.html). Those unable to access the document may contact Janet McCue (858-586-2712 or [Janet.McCue@sdcounty.ca.gov](mailto:Janet.McCue@sdcounty.ca.gov)).

### **Comment Deadline**

Comments and questions regarding the draft proposed amendments to Rule 69.3.1 may be made orally, in writing, or by utilizing the chat/discussion feature during the public webinar. All written comments may be submitted in writing no later than February 16, 2021. Please email all written comments directly to Randy Consolacion ([Randy.Consolacion@sdcounty.ca.gov](mailto:Randy.Consolacion@sdcounty.ca.gov)) or Angela M. Fisch ([Angela.Fisch@sdcounty.ca.gov](mailto:Angela.Fisch@sdcounty.ca.gov)).

### **More Information**

Please contact Randy Consolacion (858-586-2752, [Randy.Consolacion@sdcounty.ca.gov](mailto:Randy.Consolacion@sdcounty.ca.gov)) or Angela M. Fisch (858-586-2753, [Angela.Fisch@sdcounty.ca.gov](mailto:Angela.Fisch@sdcounty.ca.gov)) with any questions.

### **\*\*ASSISTANCE FOR PERSONS WITH DISABILITIES**

Agendas and records are available in alternative formats upon request. Contact the District's Senior Departmental Human Resources Officer at (858) 586-2625, with questions or to request a disability-related accommodation. Individuals requiring sign language interpreters should contact the Countywide ADA Title II Coordinator at (619) 531-4908. To the extent reasonably possible, requests for accommodation or assistance should be submitted at least 72 hours in advance of the meeting so that arrangements may be made.

RR:AMF:jlm

**RULE 69.3.1. STATIONARY GAS TURBINE ENGINES ~~–BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY~~**

(~~Adopted and Effective 12/16/98; Rev. Effective 2/24/10~~ Rev. Adopted and Effective (date of adoption))

**(a) APPLICABILITY**

Except as provided in Subsection (b)(1), this rule shall apply to ~~any existing stationary gas turbine engine with a power rating of 1.0 megawatt (MW) or greater, or to any new stationary~~ gas turbine engine with a power rating of 0.3 megawatt (MW) or greater. Any unit subject to Section (d) Standards of this rule shall not be subject to Rule 68 ~~– Fuel-Burning Equipment- Oxides of Nitrogen.~~

**(b) EXEMPTIONS**

(1) The provisions of this rule shall not apply to the following:

(i) Any gas turbine engine when operated exclusively for the research, development or testing of gas turbine engines or their components.

(ii) Any portable gas turbine engine. It is the responsibility of any person claiming this exemption to maintain records indicating the dates that such gas turbine engine was located at each stationary source. These records shall be maintained for a minimum of two calendar years by the owner or operator of such gas turbine engine and made available to the District upon request.

(iii) Any stationary gas turbine engine with a power rating less than or equal to 0.4 MW used in conjunction with military tactical support equipment operated at military sites, provided that operations do not exceed 1,000 hours per calendar year. It is the responsibility of any person claiming this exemption to maintain records indicating the hours that such gas turbine engine was operated. These records shall be maintained for a minimum of two calendar years by the owner or operator of such gas turbine engine and made available to the District upon request.

(2) The provisions of Section (d) Standards shall not apply to any emergency unit provided that operation for ~~non-emergency testing or maintenance~~ purposes to ensure operability in the event of an emergency situation does not exceed 80 hours per calendar year. It is the responsibility of any person claiming this exemption to maintain records in accordance with Subsections (e)(5) and (e)(8) of this rule.

(3) The provisions of Subsections (d)(1) and (d)(2) shall not apply to the following:

(i) Any unit during startup, shutdown or a fuel change for a period not to exceed 120 consecutive minutes except as provided for in Subsection (b)(4). Nothing in this rule shall be construed to limit the actual time needed to conduct a startup, shutdown or fuel change.

(ii) For turbines equipped with lean premix combustors, periods of operation at low load provided that:

(A) The aggregate time of such periods does not exceed 130 minutes in any calendar day;<sup>1</sup>

(B) The aggregate of all such periods does not exceed 780 minutes in any calendar year;<sup>2</sup> and

(C) The turbine is equipped with a continuous emission monitoring system (CEMS) or other monitoring system that monitors and records turbine fuel flow and gross electrical output in increments of one minute or less.

(4) The provisions of Subsections (d)(1) and ~~(d)(2)~~ shall not apply to any combined-cycle gas turbine engine during an extended startup for a period not to exceed 360 consecutive minutes.

~~(5) The provisions of Subsection (d)(3) shall not apply on any calendar day for which the California Independent System Operator (CAISO), or its successor has declared a System Emergency or on any calendar day during which the local serving utility's transmission operations department is unable to contact the CAISO and has declared the need for operation of one or more emission units to protect transmission system reliability.~~

~~(6) The provisions of Subsection (d)(3)(i) and (d)(3)(ii) shall not apply when burning liquid fuel is required due to a force majeure natural gas curtailment.~~

### (c) DEFINITIONS

For the purposes of this rule, the following definitions shall apply:

(1) **"Best Available Retrofit Control Technology (BARCT)"** means an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy and economic impacts by each class or category of source.

(2) **"Combined-Cycle Gas Turbine Engine"** means any stationary gas turbine engine which recovers heat from the gas turbine exhaust gases to generate steam that is used to create additional power output in a steam turbine.

(32) **"Emergency Situation"** means any one of the following:

(i) An unforeseen electrical power failure of the serving utility or of onsite electrical transmission equipment ~~that is demonstrated by the owner or operator to the Air Pollution Control Officer's satisfaction to have been beyond the reasonable control of the owner or operator; or~~

(ii) An unforeseen flood or fire; or

(iii) ~~A life-threatening situation.~~ An unforeseen event that requires the use of gas turbine engines to help alleviate the threat to public health and safety.

Emergency situation shall not include operation of any unit for training purposes or other foreseeable events, or operation of any peaking unit for the purpose of supplying power for distribution to an electrical grid.

(43) **"Emergency Unit"** means a stationary gas turbine engine used ~~only exclusively in the event of an emergency situations, or for testing or maintenance purposes only.~~ A peaking unit shall not be considered an emergency unit.

(5) **"Existing" or "Existing Unit"** ~~means any stationary gas turbine engine which was installed and operating in San Diego County on or before December 16, 1998.~~

(64) **"Extended sStartup"** means the startup of a combined-cycle gas turbine engine ~~when, as determined by the Air Pollution Control Officer, any of the following key operational parameters, such as the steam turbine reheat bowl temperature, indicate that more than 120 consecutive minutes are needed to meet the emission limits of Section (d):~~ Standards:

(i) The steam turbine reheat bowl temperature is less than or equal to 750°F when the startup period begins; or

(ii) The steam turbine inner casing temperature is less than or equal to 500°F when the startup period begins; or

(iii) The unit has experienced zero fuel flow for a period of 24 hours or more.

~~(7) "Force Majeure Natural Gas Curtailment" means an interruption in natural gas service such that the daily fuel needs of a gas turbine engine subject to this rule cannot be met with the natural gas available due to:~~

~~(i) Unforeseeable natural disaster or other cause resulting in the failure or malfunction of natural gas supply, delivery or storage system facilities, not resulting from an intentional or negligent act or omission on the part of an owner or operator of a unit, or~~

~~(ii) A supply restriction resulting from a California Public Utilities Commission priority allocation ruling, or~~

~~(iii) Delivery restrictions due to pipeline capacity limitations of the natural gas supplier or upstream transports or within a gas utility's delivery system.~~

~~(85) "Fuel Change" means the transitory operating period when a switch occurs between liquid or gaseous fuels, or any combination thereof.~~

~~(96) "Gaseous Fuel" means natural gas, digester gas, landfill gas, methane, ethane, propane, butane, or any gas stored as a liquid at high pressure such as liquefied petroleum gas.~~

~~(107) "Higher Heating Value (HHV)" means the total heat liberated, including the heat of condensation of water, per mass of fuel burned (Btu per pound) when fuel and dry air at standard conditions undergo complete combustion and all resultant products are brought to standard conditions.~~

~~(8) "Lean Mixture" means a mixture of air and fuel such that the operating air-to-fuel ratio is more than 1.1 times the stoichiometric air-to-fuel ratio.~~

~~(119) "Lean Premix Combustor" means any turbine combustor design where the air and majority of the fuel are thoroughly mixed to form a lean mixture before combustion under normal operational conditions, as determined by the Air Pollution Control Officer. Mixing may occur before or in the combustion chamber. A lean premix combustor may operate in a non-lean-premix mode (diffusion flame mode) during operating conditions such as startup and shutdown, extreme ambient temperature, or low or transient load period of operation at low load.~~

~~(1210) "Liquid Fuel" means any fuel which is a liquid at standard conditions including, but not limited to, distillate oils, kerosene and jet fuel. Liquefied gaseous fuels are not liquid fuels.~~

(1311) **"Lower Heating Value (LHV)"** means the total heat liberated, excluding the heat of condensation of water, per mass of fuel burned (Btu per pound) when fuel and dry air at standard conditions undergo complete combustion and all resultant products are brought to standard conditions.

(1412) **"Manufacturer's Rated Thermal Efficiency (MRTE)"** means the manufacturer's continuous rated percent thermal efficiency of the gas turbine engine, including the effect of any air pollution control equipment if such equipment is installed, at peak load, after correction to lower heating value.

(1513) **"Military Tactical Support Equipment"** means any equipment owned by the U.S. Department of Defense or the National Guard and used in combat, combat support, combat service support, tactical or relief operations, or training for such operations.

~~(16) **"New" or "New Unit"** means a stationary gas turbine engine installed in San Diego County after December 16, 1998.~~

(1714) **"Peaking Unit"** means a stationary gas turbine engine that is only operated ~~intermittently~~ for generation of electric power during periods of high energy demand as directed by the California Independent System Operator (CAISO), or for testing or maintenance purposes only.

(1815) **"Period of Operation at Low Load"** means a period of time that begins when the gas turbine power level is reduced from a higher level to ~~below a critical lower level, as determined by the Air Pollution Control Officer,~~ such that the gas turbine is unable to comply with the standards of Section (d) Standards, and ends 10 minutes after the turbine power level next exceeds the ~~critical level~~ where the gas turbine is capable of complying with the standards of Section (d) Standards, provided that fuel is continuously combusted during the entire period. No period of operation at low load shall begin during a period when the provisions of Section (d) Standards do not apply pursuant to Subsection (b)(3)(i), or Subsection (b)(4).

(1916) **"Portable Gas Turbine Engine"** means a gas turbine engine which meets the definition of a portable emission unit in Rule 20.1 – New Source Review (NSR)-General Provisions.

(2017) **"Power Augmentation"** means an increase in the gas turbine engine shaft output, or a decrease in turbine fuel consumption, by the addition of energy recovered from exhaust heat.

(2118) **"Power Rating"** means the maximum, continuous, gross power output of a unit, in megawatts (MW) or equivalent at ISO standard day conditions, as certified by the manufacturer unless limited by a condition in a District Authority to Construct or a Permit to Operate. Power augmentation shall not be included in power rating.

(2219) **"Selective Catalytic Reduction (SCR)"** means a post-combustion control technology that utilizes a reducing agent, such as ammonia, injected into the exhaust gas stream where it converts oxides of nitrogen (NOx) to molecular nitrogen in the presence of a catalyst.

(2320) **"Shutdown"** means an action necessary to cease operation of a unit and includes the amount of time needed to safely do so. For gas turbines equipped with a ~~continuous emission monitoring system (CEMS)~~ or other continuous monitoring system that monitors and records fuel flow in increments of one minute or less, a shutdown period ends five minutes after fuel flow to the unit ceases.

(2421) **"Stationary Gas Turbine Engine"** means any gas turbine engine system, with or without power augmentation, which is permanently attached to a foundation, or is not a portable gas turbine engine. Two or more gas turbines powering a common shaft shall be treated as one gas turbine.

(2522) **"Stationary Source"** means the same as defined in Rule 2 – Definitions.

(2623) **"Startup"** means an action necessary to begin operation of a unit and includes the amount of time needed for a unit and ancillary equipment to achieve stable operation. For gas turbines equipped with a CEMS or other continuous monitoring system that monitors and records fuel flow in increments of one minute or less, a startup period begins when fuel starts flowing to the gas turbine engine.

(27) **"System Emergency"** ~~means that the condition of the electrical grid as determined by the California Independent System Operator (CAISO) or its successor agency is, or will be, such that the reliability of the electrical grid is threatened. System emergencies include, but are not limited to, Stage 1, Stage 2, or Stage 3 Emergencies or Transmission Emergency Notices issued by the CAISO that are applicable to a portion of the CAISO controlled grid that includes all or part of San Diego County or the CAISO controlled grid as a whole. System Emergency also includes the unscheduled loss of generation or transmission resources such that the reliability of the electrical grid is threatened. Restricted maintenance operation notices to facilities, power watches urging consumers to conserve electricity, alerts advising of marginal conditions the next day, and warnings advising of marginal conditions the next hour issued by the CAISO are not by themselves considered electrical emergencies.~~

~~(28) “Under the Same Common Ownership” means units in San Diego County that are owned or operated by the same person including all units that are owned or operated by another entity in which the person has a controlling interest.~~

(24) “Testing or Maintenance” means operating an emergency unit, or a peaking unit as otherwise indicated, to:

(i) Evaluate the ability of the unit or its supported equipment to perform during an emergency. “Supported Equipment” includes, but is not limited to, generators, pumps, transformers, switchgear, uninterruptible power supply, and breakers; or

(ii) Facilitate the training of personnel on emergency activities; or

(iii) Provide electric power for the facility when the utility distribution company takes its power distribution equipment offline to service that equipment for any reason that does not qualify as an emergency situation; or

(iv) Provide additional hours of operation to perform testing on an emergency unit that has experienced a breakdown or failure during maintenance. Upon approval by the Air Pollution Control Officer, these additional hours of operation will not be counted in the maximum allowable annual hours of operation for the emergency unit that provided the electrical power. Operation for testing or maintenance purposes as described in this Subsection may be allowed for not more than 10 hours per year, with prior written authorization from the Air Pollution Control Officer, provided that an owner or operator demonstrates to the satisfaction of the Air Pollution Control Officer that such additional operation is necessary; or

(v) Provide electric power from the emergency unit for the facility during an electrical upgrade, such as the replacement or addition of electrical equipment and systems resulting in increased generation, transmission and/or distribution capacity; or

(vi) Provide electric power from the emergency unit for the facility during the repair of supported equipment as defined in Subsection (c)(24)(i); or

(vii) Evaluate the ability of the peaking unit or its supported equipment, as defined in Subsection (c)(24)(i), to operate as directed by the CAISO.

(2925) "Unit" means any stationary gas turbine engine.

(3026) "Unit Thermal Efficiency (E)" means the percent thermal efficiency of the gas turbine engine and is calculated as follows:

$$E = \frac{(\text{MRTE})(\text{LHV})}{(\text{HHV})}$$

A gas turbine engine with an efficiency lower than 25 percent shall be assigned a unit thermal efficiency of 25 percent.

(d) **STANDARDS**

(1) Except as provided for in Section (b) Exemptions and Subsection (d)(2), the emissions concentration in parts per million by volume (ppmv) of NOx from any unit subject to this rule, calculated as nitrogen dioxide at 15% oxygen on a dry basis, shall not exceed the following:

<u>Power Rating (Gross Megawatts)</u>	<u>NOx Emissions Concentration</u> <u>(ppmv @ 15% O<sub>2</sub>)</u>	
	<u>Gaseous Fuel</u>	<u>Liquid Fuel</u>
≥0.3 and <2.9 ( <del>new units</del> )	42	65
≥1.0 and <2.9 ( <del>existing units</del> )	42	65
<4.0 and operating less than 877 hours per <u>calendar year</u>	<u>42</u>	<u>65</u>
≥2.9 and <10.0	25 x E/25	65
≥10.0 without installed post-combustion air pollution control equipment	15 x E/25	42 x E/25
≥10.0 with installed post-combustion air pollution control equipment	9 x E/25	25 x E/25

(2) Except as provided for in Section (b) Exemptions, and notwithstanding Subsection (d)(1), the emissions concentration in parts per million by volume (ppmv) of NOx from any unit subject to this rule ~~and described below~~, calculated as nitrogen dioxide at 15% oxygen on a dry basis, shall not exceed the following:

<u>Unit Description</u>	<u>NOx Emissions Concentration</u> <u>(ppmv @ 15% O<sub>2</sub>)</u>	
	<u>Gaseous Fuel</u>	<u>Liquid Fuel</u>
Peaking units $\geq$ 4 MW and operating less than 877 hours per calendar year and installed on or before December 16, 1998.	42	65
Units $<$ 4 MW and operating less than 877 hours per calendar year	42	65
<u>Combined-cycle units, following the first 120 consecutive minutes of an extended startup</u>	<u>42</u>	<u>65</u>

(3) Notwithstanding Subsection (d)(2), on or after January 1, 2012, a person shall not operate a peaking unit with a power rating greater than or equal to 4 megawatts that was installed on or before December 16, 1998, and that does not comply with the emissions concentration limits specified in Subsection (d)(1), as determined by the most recent source test pursuant to Subsection (g) as approved by the Air Pollution Control Officer, on any calendar day that the Air Pollution Control Officer has predicted an exceedance of the federal eight hour ambient air quality standard for ozone, unless the following standards are complied with:

(i) For each peaking unit permitted to operate on natural gas and liquid fuel before December 16, 1998, and not complying with Subsection (d)(1), the gas turbine engine shall operate on natural gas only.

(ii) For each peaking unit permitted to operate on natural gas and liquid fuel before December 16, 1998, and not complying with Subsection (d)(1), the aggregate emissions of NOx per calendar day, as expressed as nitrogen dioxide, from all such units combined that are under the same common ownership shall not exceed the following aggregate calendar day NOx emission limits expressed in pounds, as applicable:

(A) From January 1, 2012 through December 31, 2014, the limit, expressed in pounds, shall be equal to 1.2652 multiplied by the sum of the rated heat inputs, expressed in MMBtu per hour, of all such turbines under the same common ownership.

(B) On and after January 1, 2015, the limit, expressed in pounds, shall be equal to 0.8594 multiplied by the sum of the rated hourly heat inputs, expressed in MMBtu per hour, of all such turbines under the same common ownership.

In calculating the aggregate calendar day emission limit, the rated heat input for each unit shall be the unit's heat input as described on the applicable District Permit to Operate as it exists on February 24, 2010.

~~(iii) For the gas turbine engine permitted to operate on liquid fuel only before December 16, 1998, and not complying with Subsection (d)(1), the aggregate emissions of NO<sub>x</sub>, as expressed as nitrogen dioxide, from all such units combined that are under the same common ownership shall not exceed the following aggregate calendar day NO<sub>x</sub> emission limits, as applicable:~~

~~(A) From January 1, 2012, through December 31, 2014, 550 pounds during each calendar day.~~

~~(B) On and after January 1, 2015, 430 pounds during each calendar day.~~

~~(4) For purposes of Subsection (d)(3), an exceedance of the federal 8-hour ozone standard on a calendar day shall be considered to have been predicted if the Air Pollution Control Officer makes such a prediction that is applicable to any location at any time in the San Diego air basin and makes the prediction publicly available no earlier than three calendar days before the day for which the prediction is made and no later than 5:30 PM of the day immediately preceding the day for which the prediction is made.~~

**(e) MONITORING AND RECORD KEEPING REQUIREMENTS**

(1) An owner or operator of a unit which is subject to the requirements of Section (d) Standards shall install, calibrate and maintain continuous monitors in accordance with the manufacturer's recommended procedures to monitor and record the operational characteristics of the unit and of any NO<sub>x</sub> emissions reduction system, as applicable, to demonstrate continuous compliance, such as including, but not limited to:

- (i) fuel flow rate;
- (ii) exhaust gas temperature;
- (iii) ammonia injection rate;
- (iv) water injection rate;
- (v) stack-gas oxygen content;
- (vi) inlet or outlet SCR catalyst temperature; and
- (vii) operational parameters defining an extended startup.

~~The Air Pollution Control Officer may require recording of one or more of the above parameters, or other parameters, as necessary to ensure compliance.~~

(2) An owner or operator of any unit with a power rating of 10 MW or more that operates more than 4,000 hours per calendar year shall install and operate a CEMS to measure and record NO<sub>x</sub> emissions. The CEMS shall be certified, calibrated and maintained in accordance with all applicable federal regulations including, but not limited to, the requirements of Sections 60.7(c), 60.7(d), and 60.13 of Title 40, Code of Federal Regulations, Part 60 (40 CFR Part 60), performance specifications of Appendix B of 40 CFR Part 60, quality assurance procedures of Appendix F of 40 CFR Part 60, Sections 75.10 and 75.12 of 40 CFR Part 75, the specifications and test procedures of Appendix A of 40 CFR Part 75, the quality assurance and quality control procedures of Appendix B of 40 CFR Part 75, and a protocol approved in writing by the San Diego County Air Pollution Control Officer.

(3) An owner or operator of any unit with a CEMS which has been installed to monitor and record NO<sub>x</sub> emissions pursuant to any federal regulation shall certify, calibrate and maintain the CEMS in accordance with applicable federal regulations including the requirements of Sections 60.7(c), 60.7(d), and 60.13 of Title 40, Code of Federal Regulations Part 60 (40 CFR Part 60), performance specifications of Appendix B of 40 CFR Part 60, quality assurance procedures of Appendix F of 40 CFR Part 60, and a protocol approved in writing by the San Diego County Air Pollution Control Officer.

(4) An owner or operator of any unit subject to this rule shall maintain, as applicable for the type of unit, records of dates and times of operation, times of all startups, shutdowns, periods of operation at low load, fuel changes and records of the type and quantity of each fuel used during each calendar day and calendar year.

(5) An owner or operator of an emergency unit shall maintain records of dates and times of operation, including operating hours for ~~non-emergency testing or maintenance~~ purposes and during each emergency situation. At a minimum, these records shall include the dates and times of all startups and shutdowns, total cumulative hours of operation for ~~non-emergency testing or maintenance~~ purposes during each calendar year, and a description of each emergency situation.

(6) An owner or operator of a peaking unit shall maintain records of dates and times of operation, the hours of operation each calendar day, and the total cumulative hours of operation during each calendar year.

(7) An owner or operator of any unit operating less than 877 hours per calendar year and subject to Subsection (d)(2-1) shall maintain records of the total cumulative hours of operation during each calendar year.

(8) An owner or operator of any unit subject to this rule shall maintain all records required by this Section (e) Monitoring and Record Keeping Requirements and records of all source tests required by Subsection (g)(2) or Subsection(g)(3) for a minimum of two calendar years. These records shall be maintained on the premises and made available to the District upon request. Records for facilities that are unmanned may be kept at an alternative location approved in writing by the San Diego County Air Pollution Control Officer.

(9) An owner or operator of any ~~peaking unit subject to Subsection (d)(2) or~~ emergency unit subject to Subsection (b)(2) shall install and maintain a non-resettable meter that measures elapsed operating time if deemed necessary by the San Diego County Air Pollution Control Officer.

~~(10) The owner or operator of any unit or units subject to Subsection (d)(3) shall maintain following records:~~

~~(i) Records of calendar day aggregate NOx mass emissions for all such units combined under the same common ownership;~~

~~(ii) For each unit, calendar day records of the applicable operational parameter(s) that are used to calculate the aggregate NOx mass emissions for that unit.~~

~~The recorded calendar day NOx mass emissions shall be based on each individual unit's most recent source test results and a suitable operational parameter(s) and calculated in accordance with a protocol approved in writing by the Air Pollution Control Officer. Any such protocol shall rely on existing recordkeeping and monitoring to the extent feasible and may provide for calculation of NOx mass emissions for a group of emission units based on an average emission factor for the group units and an operational parameter(s) applicable to the group as a whole in order to minimize additional monitoring or recordkeeping.~~

~~In lieu of calculating and recording aggregate NOx mass emissions for each calendar day pursuant to Subsection (e)(10)(i), the owner or operator may, with the advanced written approval of the Air Pollution Control Officer, maintain records of a suitable surrogate parameter for aggregate NOx mass emissions on some or all calendar days provided that the Air Pollution Control Officer determines that the surrogate parameter is adequate to~~

~~determine compliance with Subsection (d)(3). In this event, the final determination of compliance for a calendar day shall be based on mass emissions calculated pursuant to the approved protocol and the records maintained pursuant to Subsection (e)(10)(ii).~~

~~(11) For peaking units subject to Subsection (d)(3), the owner or operator shall maintain records that indicate if a day on which the peaking unit operates is a day that the Air Pollution Control Officer had predicted an exceedance of the federal eight hour ozone standard and, if an exceedance of the federal eight hour ozone standard was predicted, if a System Emergency as specified in Subsection (b)(5) was declared.~~

~~(12) An owner or operator of any unit subject to Subsection (d)(3)(i) shall maintain records of dates and times liquid fuel is used as a result of a force majeure natural gas curtailment.~~

**(f) TEST METHODS**

When more than one test method or set of test methods are specified in this section, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

(1) To determine compliance with Section (d) Standards, measurement of NOx and stack-gas oxygen content shall be conducted in accordance with the U.S. Environmental Protection Agency (EPA) Method 7E (Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)), May 2018, and Method 3A (Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure)), August 2017;<sup>5</sup> or District Source Test Method 100 (Test Procedures for the Determination of Nitrogen Oxides, Carbon Monoxide and Diluent Gases by Continuous Emission Monitoring), May 1995, as approved by the EPA.

(2) The higher heating value and lower heating value of a fuel shall be determined by the following methods or their most current versions and can be provided by a fuel supplier:

(i) ASTM Test Method D240-~~09-19~~, “Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter”, or D4809-~~09-18~~, “Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method)” for liquid fuels, or their most current versions, and

(ii) ASTM Test Method D1826-94(2003-2017), Standard Test Method for Calorific (Heating) Value of Gases in Natural Gas Range by Continuous Recording Calorimeter”, or D1945-03-14(2019), “Standard Test Method for Analysis of Natural Gas by Gas Chromatography”, in conjunction with ASTM Test Method D3588-98(2003-2017)e1, “Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density of Gaseous Fuels” for gaseous fuels, or their most current versions.

**(g) SOURCE TEST REQUIREMENTS AND COMPLIANCE DETERMINATION**

(1) Any required source testing shall be performed at no less than 80% of the power rating. If an owner or operator of a gas turbine engine demonstrates to the satisfaction of the San Diego County Air Pollution Control Officer that the turbine cannot operate at these conditions, then emissions source testing shall be performed at the highest achievable continuous power rating.

(2) Except as specified in Subsection (g)(3), a unit subject to the requirements of Section (d) Standards shall be tested for compliance at least once annually in the twelve-calendar-month period ending on the last day of the Permit to Operate expiration month, unless more frequent testing is specified in writing by the San Diego County Air Pollution Control Officer.

(3) Unless more frequent testing is specified in writing by the San Diego County Air Pollution Control Officer, a unit equipped with a continuous emission monitoring system (CEMS), subject to the requirements of Section (d) Standards, and subject to the provisions of the federal Acid Rain Program pursuant to Section 72.6 of 40 CFR Part 72, shall be tested for compliance at a frequency in accordance with 40 CFR Part 75 Appendix B Section 2.3.1 and Section 2.3.3.

(4) All testing shall be conducted in accordance with the requirements of Section (f) Test Methods and a source test protocol approved in writing by the San Diego County Air Pollution Control Officer.

(5) Test reports shall include the operational characteristics, as described in Subsection (e)(1), of the unit and of all add-on NOx control systems.

(6) For the purposes of a compliance determination based on source testing, the NOx emissions concentration shall be calculated as an average of three subtests.

(7) For the purposes of a compliance determination based on CEMS data, the averaging period to calculate NOx emissions concentration shall be one clock hour. For the purposes of compliance determination, the clock hour average NOx emissions concentration shall not include the data during periods of startup, shutdown, fuel change, and operation at low.

(8) Notwithstanding provisions of this Section (g) Source Test Requirements and Compliance Determination, the San Diego County Air Pollution Control Officer may require source testing to determine compliance with these Rules and Regulations or to determine emissions at any time.

**(h) COMPLIANCE SCHEDULE**

An owner or operator of a new or replacement unit shall comply with all applicable provisions of this rule upon initial installation and commencement of operation.

**RULE 69.3      STATIONARY GAS TURBINE ENGINES - REASONABLY  
AVAILABLE CONTROL TECHNOLOGY** (Adopted & Effective  
9/27/94) (Rev. Adopted & Effective 12/16/98)

**(a)    APPLICABILITY**

This rule shall apply to any stationary gas turbine engine with a power rating of 0.3 megawatt (MW) or greater. Any unit subject to this rule shall not be subject to Rule 68.

**(b)    EXEMPTIONS**

(1)    The provisions of this rule shall not apply to the following:

(i)    Any gas turbine engine when operated exclusively for the research, development or testing of gas turbine engines or their components.

(ii)   Any portable gas turbine engine. It is the responsibility of any person claiming this exemption to maintain records indicating the dates that such gas turbine engine was located at a stationary source. These records shall be maintained for a minimum of two calendar years by the owner or operator of such gas turbine engine and made available to the District upon request.

(iii)   Any stationary gas turbine engine with a power rating less than or equal to 0.4 MW used in conjunction with military tactical support equipment operated at military sites, provided that operations do not exceed 1000 hours per calendar year. It is the responsibility of any person claiming this exemption to maintain records indicating the hours that such gas turbine engine was operated. These records shall be maintained for a minimum of two calendar years by the owner or operator of such gas turbine engine and made available to the District upon request.

(iv)   Any stationary gas turbine engine with a power rating less than 1 MW which was installed and operated in San Diego County on or before September 27, 1994.

(2)    The provisions of Section (d) shall not apply to the following:

(i)    Any emergency unit provided that operation for non-emergency purposes to ensure operability in the event of an emergency situation does not exceed 80 hours per calendar year. It is the responsibility of any person claiming this exemption to maintain records in accordance with Subsections (e)(4) and (e)(5) of this rule.

(ii)   Any unit during startup, shutdown or a fuel change for a period not to exceed 120 continuous minutes. It is the responsibility of any person claiming this exemption to maintain records in accordance with Subsections (e)(3) and (e)(5) of this rule. Nothing in this rule shall be construed to limit the actual time needed to conduct a startup, shutdown or fuel change.

(c) **DEFINITIONS**

For the purposes of this rule, the following definitions shall apply:

(1) **"Emergency Situation"** means any one of the following:

(i) an unforeseen electrical power failure of the serving utility or of onsite electrical transmission equipment; or

(ii) an unforeseen flood, fire or life-threatening situation.

Emergency situation shall not include operation of any unit for training purposes or other foreseeable event, or operation of any peaking unit for the purpose of supplying power for distribution to an electrical grid.

(2) **"Emergency Unit"** means a stationary gas turbine engine used only in the event of an emergency situation. A peaking unit shall not be considered an emergency unit.

(3) **"Fuel Change"** means the transitory operating period when a switch occurs between liquid or gaseous fuels, or any combination thereof.

(4) **"Gaseous Fuel"** means natural gas, digester gas, landfill gas, methane, ethane, propane, butane, or any gas stored as a liquid at high pressure such as liquefied petroleum gas.

(5) **"Liquid Fuel"** means any fuel which is a liquid at standard conditions including but not limited to distillate oils, kerosene and jet fuel. Liquefied gaseous fuels are not liquid fuels.

(6) **"Military Tactical Support Equipment"** means any equipment owned by the U.S. Department of Defense or the National Guard and used in combat, combat support, combat service support, tactical or relief operations, or training for such operations.-

(7) **"Peaking Unit"** means a stationary gas turbine engine that is operated intermittently for generation of electric power during periods of high energy demand.

(8) **"Portable Gas Turbine Engine"** means a gas turbine engine which meets the definition of a portable emission unit in Rule 20.1. -

(9) **"Power Augmentation"** means an increase in the gas turbine engine shaft output, or a decrease in turbine fuel consumption, by the addition of energy recovered from exhaust heat.

(10) **"Power Rating"** means the maximum, continuous power output of a unit, in megawatts (MW) or equivalent, as certified by the manufacturer unless limited by a condition in a District Authority to Construct or a Permit to Operate. Power augmentation shall not be included in power rating.

(11) **"Reasonably Available Control Technology (RACT)"** means the lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.

(12) **"Shutdown"** means an action necessary to cease operation of a unit and includes the amount of time needed to safely do so.

(13) **"Stationary Gas Turbine Engine"** means any gas turbine engine system, with or without power augmentation, which is permanently attached to a foundation, or is not a portable gas turbine. Two or more gas turbines powering a common shaft shall be treated as one gas turbine.

(14) **"Stationary Source"** means the same as defined in Rule 2.

(15) **"Startup"** means an action necessary to begin operation of a unit and includes the amount of time needed for a unit and ancillary equipment to achieve stable operation.

(16) **"Unit"** means any stationary gas turbine engine.

**(d) STANDARDS**

(1) Except as provided in Section (b), the emissions concentration of oxides of nitrogen (NO<sub>x</sub>) from any unit subject to this rule, calculated as nitrogen dioxide at 15% oxygen on a dry basis, shall not exceed the following:

- (i) 42 parts per million by volume (ppmv) when operated on a gaseous fuel.
- (ii) 65 parts per million by volume (ppmv) when operated on a liquid fuel.

**(e) MONITORING AND RECORDKEEPING REQUIREMENTS**

(1) An owner or operator of a unit which is subject to the requirements of Section (d) shall install continuous monitors to allow for monitoring of the operational characteristics of the unit and of any NO<sub>x</sub> emissions reduction system, as applicable, to demonstrate continuous compliance, such as:

- (i) exhaust gas flow rate;
- (ii) exhaust gas temperature;
- (iii) ammonia injection rate;

- (iv) water injection rate; and
- (v) stack-gas oxygen content.

(2) An owner or operator of any unit with a continuous emission monitoring system (CEMS) which has been installed to measure NO<sub>x</sub> emissions pursuant to any federal regulation shall certify, calibrate and maintain the CEMS in accordance with applicable federal regulations including the reporting requirements of Sections 60.7(c), 60.7(d), and 60.13 of Title 40, Code of Federal Regulations Part 60 (40 CFR 60), performance specifications of Appendix B of 40 CFR 60, quality assurance procedures of Appendix F of 40 CFR 60, and a protocol approved in writing by the Air Pollution Control Officer.

(3) An owner or operator of any unit subject to this rule shall maintain an operating log and record actual times and duration of all startups, shutdowns and fuel changes, and the type and quantity of each fuel used.

(4) An owner or operator of an emergency unit shall maintain an operating log and record the hours of operation for non-emergency purposes and during each emergency situation. At a minimum, these records shall include the dates and actual times and duration of all startups and shutdowns, total cumulative annual hours of operation for non-emergency purposes, and a description of each emergency situation.

(5) An owner or operator of any unit subject to this rule shall maintain all records required by Section (e) for a minimum of two calendar years. These records shall be maintained on the premises and made available to the District upon request.

**(f) TEST METHODS**

To determine compliance with Section (d), measurement of NO<sub>x</sub> and stack-gas oxygen content shall be conducted in accordance with the District Source Test Method 100, or the Air Resources Board (ARB) Test Method 100, as approved by the U.S. Environmental Protection Agency (EPA).

**(g) SOURCE TEST REQUIREMENTS AND COMPLIANCE DETERMINATION**

(1) Any required source testing shall be performed at no less than 80% of the power rating. If an owner or operator of a turbine demonstrates to the satisfaction of the Air Pollution Control Officer that the turbine cannot operate at these conditions, then emissions sources testing shall be performed at the highest achievable continuous power rating.

(2) A unit subject to the requirements of Section (d) shall be tested for compliance at least annually before the Permit to Operate renewal date, unless otherwise specified in writing by the Air Pollution Control Officer. Testing shall be conducted in accordance with Section (f) and a source test protocol approved in writing by the Air Pollution Control Officer.

(3) Test reports shall include the operational characteristics, as described in Subsection (e)(1), of the unit and of all add-on NOx control systems.

(4) For the purposes of a compliance determination based on source testing, the NOx emissions concentration shall be calculated as an average of three subtests.

(5) For the purposes of a compliance determination based on CEMS data, the averaging period to calculate NOx emissions concentration shall be one clock hour.