The Texas Natural Resource Conservation Commission (commission) adopts an amendment to §106.512, Stationary Engines and Turbines. The commission adopts this amendment to Chapter 106, Permits by Rule, Subchapter W, Turbines and Engines, to preclude registration under §106.512 of new or modified engines or turbines used to generate electricity upon issuance of a standard permit for electric generating units. However, the amendment exempts from this preclusion: 1) engines or turbines used to provide power for the operation of facilities registered under the Air Quality Standard Permit for Concrete Batch Plants; 2) engines or turbines satisfying the conditions for facilities permitted by rule under Chapter 106, Subchapter E, Aggregate and Pavement; and 3) engines or turbines used exclusively to provide power to electric pumps used for irrigating crops. Section 106.512 is adopted *with changes* to the proposed text as published in the January 5, 2001 issue of the *Texas Register* (26 TexReg 82).

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULE

The Public Utility Commission (PUC) of Texas anticipates that small electric generating units (EGUs) may become an attractive option for electric customers as an alternative to central station generating units as a primary source of electricity due to electricity market restructuring and electricity reliability concerns. Small EGUs are usually situated nearer to the load that will use all or most of the electricity generated than are large central station generating units. Many EGUs are eligible for preconstruction authorization under §106.512. However, a number of "clean" EGU technologies exist which can meet and exceed the emission limits in §106.512. Thus, the commission believes it would be inappropriate to allow such technologies to operate under the emission standards in §106.512. Therefore, this rulemaking is being coordinated with development of a standard permit for EGUs that contains emission

limits more stringent than the emission limits in §106.512. The standard permit is designed to provide a streamlined permitting method to encourage the use of "clean" EGU technologies and is being issued in accordance with Chapter 116, Subchapter F, Standard Permits. This rulemaking is necessary to preclude registration of nonemergency EGUs under §106.512, subject to a few exceptions, upon issuance of the standard permit. Emergency engines and turbines may continue to be permitted by rule under §106.511, Portable and Emergency Engines and Turbines.

Upon the effective date of the adopted rule amendment and issuance of the standard permit for EGUs, nonemergency engines or turbines used to drive generators may obtain preconstruction authorization under the standard permit or under Chapter 116, Subchapter B, New Source Review Permits.

SECTION BY SECTION DISCUSSION

The adopted amendment to §106.512 precludes registrations under this section (previously Standard Exemption 6) for nonemergency engines or turbines used to generate electricity once a standard permit for EGUs is issued. The preclusion contains an exception for: 1) engines or turbines used to provide power for the operation of facilities registered under the Air Quality Standard Permit for Concrete Batch Plants; 2) engines or turbines satisfying the conditions for facilities permitted by rule under Chapter 106, Subchapter E; and 3) engines or turbines used exclusively to provide power to electric pumps used for irrigating crops. The commission added the third exception in response to a comment. The adopted revision is necessary to encourage the use of "clean" EGU technology. The commission changed the reference to "engine or turbine-driven generators" to "engines or turbines" for consistency within the section.

FINAL REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225. The commission determined that the amendment to §106.512 does not meet the definition of a "major environmental rule" as defined in Texas Government Code, §2001.0225. "Major environmental rule" means a rule, the specific intent of which is to protect the environment or reduce risks to human health from environmental exposure, and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. Although the specific intent of the amendment to §106.512 is to protect the environment or reduce risks to human health from environmental exposure, the adopted rule will not have an adverse material impact. The adverse impact is not material because owners or operators of EGUs will continue to have multiple methods for obtaining preconstruction authorization of the units. Therefore, this amendment does not constitute a "major environmental rule." In addition, Texas Government Code, §2001.0225, only applies to a major environmental rule, the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the agency instead of under a specific state law. This rulemaking is not subject to the regulatory analysis provisions of §2001.0225(b), because the adopted rule does not meet any of the four applicability requirements. Specifically, the amendment eliminates the opportunity for registrations under this section of nonemergency engines or turbines used to generate electricity upon the issuance of a standard permit for

EGUs, except for: 1) engines or turbines used to provide power for the operation of facilities registered under the Air Quality Standard Permit for Concrete Batch Plants; 2) engines or turbines satisfying the conditions for facilities permitted by rule under Chapter 106, Subchapter E; or 3) engines or turbines used exclusively to provide power to electric pumps used for irrigating crops. The commission does not believe that the emission limitations contained in §106.512 are sufficiently stringent to encourage the use of existing "clean," small EGUs. This rulemaking is being coordinated with the development of a standard permit for EGUs in accordance with Chapter 116, Subchapter F. The standard permit will contain emission limitations more stringent than the emission limitations in §106.512.

The rulemaking was not developed solely under the general powers of the agency, but was specifically developed under Texas Clean Air Act (TCAA), §§382.011, 382.017, 382.051, and 382.05196.

Comments on the draft regulatory impact analysis determination were solicited, but no comments were received.

TAKINGS IMPACT ASSESSMENT

The commission evaluated the rulemaking and performed a final assessment of whether the adopted rule constitutes a taking under Texas Government Code, Chapter 2007. The following is a summary of that assessment. The specific purpose of the adopted rule is to encourage the use of "clean" EGUs. This is accomplished by eliminating the opportunity for registrations under §106.512 for nonemergency engines or turbines used to generate electricity upon the issuance of a standard permit for EGUs, except for: 1)

engines or turbines used to provide power for the operation of facilities registered in the Air Quality Standard Permit for Concrete Batch Plants; 2) engines or turbines satisfying the conditions for facilities permitted by rule under Chapter 106, Subchapter E; and 3) engines or turbines used exclusively to provide power to electric pumps used for irrigating crops. This rulemaking is being coordinated with the development of a standard permit for EGUs in accordance with Chapter 116, Subchapter F. The standard permit will contain emission limitations more stringent than the emission limitations in §106.512. Promulgation and enforcement of the adopted rule will be neither a statutory nor a constitutional taking of private real property. Specifically, the subject regulations do not affect a landowner's rights in private real property because this rulemaking does not burden (constitutionally), nor restrict or limit the owner's right to property and reduce its value by 25% or more beyond that which would otherwise exist in the absence of the regulations. This amendment is intended to provide notice that upon issuance of the standard permit for EGUs, registrations under this permit by rule for EGUs will no longer be accepted by the commission except in cases so identified. The amendment does not impact existing authorizations under this permit by rule. Consequently, the amendment does not meet the definition of a taking under Texas Government Code, §2007.002(5). Therefore, the adoption of this rule is an action reasonably taken to fulfill requirements of state law to control the quality of the state's air and will not constitute a taking under Texas Government Code, Chapter 2007.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed this rulemaking for consistency with the Texas Coastal Management Program (CMP) goals and policies in accordance with the regulations of the Coastal Coordination Council, and determined that the rulemaking is consistent with the applicable CMP goals and policies.

HEARING AND COMMENTERS

The commission conducted a public hearing on the proposed amendment to §106.512 on January 23, 2001, at the TNRCC, 12100 Park 35 Circle, Building F, Room 2210, in Austin, Texas. Oral testimony was submitted by the Texas Department of Criminal Justice (TDCJ) and Good Company Associates (Good Co.). In addition, the commission received four written comments during the public comment period which closed February 5, 2001. The written comments were received from Good Co.; ASCO Power Technologies, L.P. (ASCO); the Texas Oil and Gas Association (TxOGA); and an individual.

Good Co., TxOGA, and an individual generally opposed the rulemaking. ASCO and TDCJ proposed changes to the rulemaking.

RESPONSE TO COMMENTS

TDCJ requested that TDCJ facilities be allowed to continue to register engines and turbines under §106.512 upon issuance of a standard permit for small EGUs. TDCJ cited public safety, institutional security, and the reliability of local electric utilities as the reasons for this request.

The commission did not change the rule in response to this comment. Engines and turbines used for emergency or standby services are not affected by this rulemaking and may continue to be permitted by rule under §106.511, Portable and Emergency Engines and Turbines. TDCJ may use §106.511 to authorize emergency engines and turbines that must be operated in the unlikely event that grid energy fails. Thus, public safety and institutional security should not be compromised by this rulemaking.

Good Co. commented that the proposed amendment may result in more, rather than fewer, emissions from engines and turbines used to drive generators. Good Co. stated that the proposed amendment will require most engines and turbines that drive generators to register under a standard permit for small electric generators upon issuance of the standard permit. Good Co. asserted that the proposed nitrogen oxides (NO_x) emission limits in the proposed standard permit are so stringent that rather than register units under the standard permit, individuals may rely on back-up emergency generators which are exempt from the proposed standard permit. Good Co. observed that most back-up emergency generators combust diesel fuel which results in more emissions than might otherwise be emitted by a cleaner engine or turbine permitted under the proposed standard permit if not for its proposed emission limitations. An individual commented that elimination of relatively clean forms of distributed generation (suggested the proposed standard permit will do because of the proposed NO_x emission limitations) will lead to the use of the dirtiest form of distributed generation, diesel emergency stand-by generation. The individual further stated that emergency generators are often operated on days most susceptible to ozone formation.

The commission did not change the rule in response to this comment. This rulemaking is being coordinated with development of a standard permit for EGUs. The standard permit should contain NO_x emission limits less stringent than those originally proposed. The revised emission limits should allow for more engines and turbines to be permitted under the standard permit. Of course, owners and operators may obtain a new source review permit under Chapter 116, Subchapter B, should a facility not qualify for the standard permit. Finally, owners and operators that choose to authorize facilities under §106.511, instead of the standard permit or

Chapter 116, Subchapter B, must comply with all of the requirements in §106.511, including its limits on hours of operation.

Good Co. stated that the proposed amendment may exclude some very clean 15 megawatt (MW) turbines that otherwise satisfy the emission requirements of §106.512 from obtaining preconstruction authorization under §106.512.

The commission did not change the rule in response to this comment. However, the commission expects the previously mentioned standard permit to provide for authorization of 15 MW turbines that qualify. Thus, 15 MW turbines may be registered under the standard permit or permitted under Chapter 116, Subchapter B. Still, the purpose of this rulemaking is to preclude §106.512 preconstruction authorization of engines and turbines used to generate electricity, regardless of generation capacity or emission characteristics.

Good Co. stated that issuance of the proposed Air Quality Standard Permit for Small EGUs would be premature at this time. Good Co. recommended that, prior to development of the proposed standard permit, the commission enter into a study of distributed generation technology, its potential applications, and available emissions reduction technologies for distributed generation units. Good Co. explained that distributed generation contributes an unknown and insignificant amount of emissions to the Texas environment and that it is unclear whether distributed generation will contribute significant emissions to the environment in the foreseeable future.

The commission did not change the rule in response to this comment. The comment appears to apply more to the standard permit and, therefore, is beyond the scope of this rulemaking. The commission intends to conduct a study to determine the environmental impact of distributed generation on the State of Texas. Based upon the outcome of such a study, the commission may revise any standard permit for EGUs that it may have issued. However, this amendment to §106.512 is necessary at this time to encourage the use of "clean" EGUs in a market in which distributed generation is advocated as an option for saving money and maintaining reliable service (see PUC of Texas News Release, "Electric Customers Gain from On-Site Power: Texas Takes Lead in Developing Distributed Generation," January 29, 2001, Austin, Texas, *www.puc.state.tx.us*). Many EGU technologies exist which can meet emission limitations more stringent than the emission limitations in §106.512.

ASCO commented that emergency engines and turbines can be used to provide supplemental electric power to prevent blackouts during a power shortage and temporarily deployed for this purpose until generating capacity and transmission and distribution infrastructure are upgraded to meet power demand. Toward this end, ASCO commented that existing permitting rules could be updated to allow operation of emergency engines or turbines for no more than six hours following declaration of a power shortage emergency with total annual operation of such an engine or turbine not to exceed 500 hours. ASCO defined a power shortage emergency as that which occurs when system-wide or region-wide available power reserves are reduced to 2.0% or less. ASCO stated that technology exists which can be used to reduce emissions from emergency engines or turbines by 40% and that application of this

technology in conjunction with ASCO's suggested limited operation schedule will limit the impact on air quality.

The commission did not change the rule in response to this comment. ASCO's comment is relevant to emissions and equipment authorized by §106.511, Portable and Emergency Engines and Turbines. Section 106.511 permits by rule and limits the hours of operation of emergency engines and turbines. ASCO suggested possible changes to the hours of operation of emergency engines and turbines. The commission did not propose amendments to §106.511; therefore, under Texas administrative law, the section cannot be amended with this adoption.

An individual commented that the proposed emission limitations in the proposed Air Quality Standard Permit for Small EGUs will have the effect of establishing and maintaining a monopoly for existing generation companies. She stated that many of these companies have paid for costly emission-reduction technology in a regulated electricity market. She added that fuel cell technology (which is probably capable of complying with the proposed standard permit NO_x emission limitations) cannot approach the needed power output to make an impact on the market. The individual continued that fuel cell technology is 500 - 1000% more expensive than existing forms of reciprocating engine generation (which some commenters assert cannot meet the proposed standard permit NO_x emission limitations).

The commission did not change the rule in response to this comment. The comment appears to apply more to the standard permit and, therefore, is beyond the scope of this rulemaking. However, this rulemaking does not preclude preconstruction authorization of any class of

generating unit. EGUs may be registered under the standard permit or permitted under Chapter 116, Subchapter B. Also, the commission expects to issue a standard permit with NO_x emission limits that will allow for a variety of generating units, including fuel cells, to be authorized under it.

An individual commented that some existing distributed generation units in the State of Texas do not meet the proposed emission limits in the proposed Air Quality Standard Permit for Small EGUs. The individual wrote that micro-generators which serve the agricultural market in West Texas are one example. The individual explained that electrical utilities do not want to provide power to meet the seasonal agricultural peak load that micro-generators serve. The individual also stated that the cost to run electrical lines to water wells that require submersible pumps for cotton and peanut irrigation is cost-prohibitive for farmers. The individual claimed that farmers who incur these costs may not be able to operate in a profitable manner and may default on their loans. The individual asked whether the impact on the West Texas economy due to farmers' inability to repay their loans and its impact on the banks (and their shareholders) that serve these farmers had been studied.

The commission changed the rule in response to this comment to allow engines or turbines used exclusively to provide power to electric pumps used for irrigating crops to continue to be permitted by rule under §106.512. Also, the commission would like to clarify that units authorized under §106.512 before the effective date of this rulemaking are not affected by this rule change since the rule change only affects new or modified units.

An individual commented that the proposed amendment will force individuals to choose between paying housing costs and groceries and paying their electric bill. The individual pointed to the recent California energy crisis for support of this position and stated that the average citizen will not tolerate such a situation.

The commission did not change the rule in response to this comment. Before this rulemaking, EGUs could be authorized under §106.512 or under Chapter 116, Subchapter B. After this rulemaking, EGUs may be authorized under the standard permit or under Chapter 116, Subchapter B. The number of authorization mechanisms for these units remains the same. The most substantive difference between §106.512 and the standard permit is the emission limits for NO_x. The emission limits in the standard permit are more stringent than the emission limits in §106.512 because the emission limits in §106.512 do not represent best available control technology for small EGUs. However, the emission limits in the standard permit should allow for a number of EGU technologies to be authorized under the standard permit.

In addition, the commission notes that 27 power plants have been constructed in Texas since 1995; 27 are currently under construction, and 31 are in the planning stages (see PUC of Texas News Release, "Texas Power Plant Additions Continue: Customer Choice Pilot Program Enrollment Under Way," March 14, 2001, Austin, Texas, *www.puc.state.tx.us*). The PUC predicts that the State of Texas will have a 23% excess power margin for the 2001 summer peak demand period and indicates that the annual Electric Reliability Council of Texas Wholesale Market Report shows 5,385 MW of generating capacity were added in 2000 and another 9,188 MW will be added

this year. The PUC indicates that the total additional capacity can power more than 3.25 million Texas homes on the hottest summer day. For these reasons, the commission does not anticipate that this rulemaking will lead to a situation in Texas similar to that in California.

TxOGA stated its objection to adoption of the proposed amendment and recommended the proposed rule be withdrawn until such time that the commission is prepared to concurrently propose issuance of a standard permit for small EGUs. TxOGA explained that such action would allow stakeholders an opportunity to make a reasoned evaluation of the impact of the proposal based on the proposed conditions of the standard permit. TxOGA reasoned that commission action on this proposal is unnecessary until such time that it proposes a standard permit since the current proposal will have no force and effect until a standard permit is issued.

On November 17, 2000, the commission published notice in the *Texas Register* and 11 newspapers across the State of Texas of the opportunity for public comment and a public meeting to receive comments concerning a draft standard permit for small EGUs. Notice was also posted on the agency's web site. The standard permit is proposed in accordance with 30 TAC Chapter 116, Subchapter F. The commission expects to take final action on the proposed standard permit concurrently with the adoption of this amendment to §106.512.

TxOGA recommended the proposed rule change be made applicable only to those engines that power small EGUs used to export electricity to the electrical grid. TxOGA commented that the language of the proposed rule amendment makes it applicable to engines for all small EGUs, including those that

are not and will never be used for distributed generation. TxOGA elaborated that the proposed rule change unnecessarily penalizes operators of other small EGUs by subjecting them to the added cost and delays associated with obtaining a standard permit or Subchapter B new source review permit, but not incurred with construction under §106.512.

The commission did not change the rule in response to this comment. The commission is most concerned about the emissions from EGUs as opposed to the final use of the electricity generated. Thus, the commission does not distinguish between units that export electricity to the grid and those that do not. However, the commission would like to clarify that units currently authorized under §106.512 are not affected by this rulemaking. Only new units or modified units that no longer satisfy the requirements of §106.512 are affected by this rulemaking.

STATUTORY AUTHORITY

The amendment is adopted under Texas Health and Safety Code, TCAA, §382.011, which authorizes the commission to control the quality of the state's air; §382.017, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA; §382.051, which authorizes the commission to issue permits; and §382.05196, which authorizes the commission to adopt permits by rule for certain types of facilities.

SUBCHAPTER W: TURBINES AND ENGINES

§106.512

§106.512. Stationary Engines and Turbines.

Gas or liquid fuel-fired stationary internal combustion reciprocating engines or gas turbines that operate in compliance with the following conditions of this section are permitted by rule.

(1) The facility shall be registered by submitting the commission's Form PI-7, Table 29 for each proposed reciprocating engine, and Table 31 for each proposed gas turbine to the commission's Office of Permitting, Remediation, and Registration in Austin within ten days after construction begins. Engines and turbines rated less than 240 horsepower (hp) need not be registered, but must meet paragraphs (5) and (6) of this section, relating to fuel and protection of air quality. Engine hp rating shall be based on the engine manufacturer's maximum continuous load rating at the lesser of the engine or driven equipment's maximum published continuous speed. A rich-burn engine is a gas-fired spark-ignited engine that is operated with an exhaust oxygen content less than 4.0% by volume. A lean-burn engine is a gas-fired spark-ignited engine that is operated with an exhaust oxygen content of 4.0% by volume, or greater.

(2) For any engine rated 500 hp or greater, subparagraphs (A) - (C) of this paragraph shall apply.

(A) The emissions of nitrogen oxides (NO_x) shall not exceed the following limits:

(i) 2.0 grams per horsepower-hour (g/hp-hr) under all operating conditions for any gas-fired rich-burn engine;

(ii) 2.0 g/hp-hr at manufacturer's rated full load and speed, and other operating conditions, except 5.0 g/hp-hr under reduced speed, 80-100% of full torque conditions, for any spark-ignited, gas-fired lean-burn engine, or any compression-ignited dual fuel-fired engine manufactured new after June 18, 1992;

(iii) 5.0 g/hp-hr under all operating conditions for any spark-ignited, gas-fired, lean-burn two-cycle or four-cycle engine or any compression-ignited dual fuel-fired engine rated 825 hp or greater and manufactured after September 23, 1982, but prior to June 18, 1992;

(iv) 5.0 g/hp-hr at manufacturer's rated full load and speed and other operating conditions, except 8.0 g/hp-hr under reduced speed, 80-100% of full torque conditions for any spark-ignited, gas-fired, lean-burn four-cycle engine, or any compression-ignited dual fuel-fired engine that:

(I) was manufactured prior to June 18, 1992, and is rated less than 825 hp; or

(II) was manufactured prior to September 23, 1982;

(v) 8.0 g/hp-hr under all operating conditions for any spark-ignited, gas-fired, two-cycle lean-burn engine that:

(I) was manufactured prior to June 18, 1992, and is rated less than 825 hp; or

(II) was manufactured prior to September 23, 1982;

(vi) 11.0 g/hp-hr for any compression-ignited liquid-fired engine.

(B) For such engines which are spark-ignited gas-fired or compression-ignited dual fuel-fired, the engine shall be equipped as necessary with an automatic air-fuel ratio (AFR) controller which maintains AFR in the range required to meet the emission limits of subparagraph (A) of this paragraph. An AFR controller shall be deemed necessary for any engine controlled with a non-selective catalytic reduction (NSCR) converter and for applications where the fuel heating value varies more than $\pm$ 50 British thermal unit/standard cubic feet from the design lower heating value of the fuel. If an NSCR converter is used to reduce NO_x, the automatic controller shall operate on exhaust oxygen control.

(C) Records shall be created and maintained by the owner or operator for a period of at least two years, made available, upon request, to the commission and any local air pollution control agency having jurisdiction, and shall include the following:

(i) documentation for each AFR controller, manufacturer's, or supplier's recommended maintenance that has been performed, including replacement of the oxygen sensor as necessary for oxygen sensor-based controllers. The oxygen sensor shall be replaced at least quarterly in the absence of a specific written recommendation;

(ii) documentation on proper operation of the engine by recorded measurements of NO_x and carbon monoxide (CO) emissions as soon as practicable, but no later than seven days following each occurrence of engine maintenance which may reasonably be expected to increase emissions, changes of fuel quality in engines without oxygen sensor-based AFR controllers which may reasonably be expected to increase emissions, oxygen sensor replacement, or catalyst cleaning or catalyst replacement. Stain tube indicators specifically designed to measure NO_x and CO concentrations shall be acceptable for this documentation, provided a hot air probe or equivalent device is used to prevent error due to high stack temperature, and three sets of concentration measurements are made and averaged. Portable NO_x and CO analyzers shall also be acceptable for this documentation;

(iii) documentation within 60 days following initial engine start-up and biennially thereafter, for emissions of NO_x and CO, measured in accordance with United States Environmental Protection Agency (EPA) Reference Method 7E or 20 for NO_x and Method 10 for CO.

Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods. Modifications to these methods will be subject to the prior approval of the Source and Mobile Monitoring Division of the commission. Emissions shall be measured and recorded in the as-found operating condition; however, compliance determinations shall not be established during start-up, shutdown, or under breakdown conditions. An owner or operator may submit to the appropriate regional office a report of a valid emissions test performed in Texas, on the same engine, conducted no more than 12 months prior to the most recent start of construction date, in lieu of performing an emissions test within 60 days following engine start-up at the new site. Any such engine shall be sampled no less frequently than biennially (or every 15,000 hours of elapsed run time, as recorded by an elapsed run time meter) and upon request of the executive director. Following the initial compliance test, in lieu of performing stack sampling on a biennial calendar basis, an owner or operator may elect to install and operate an elapsed operating time meter and shall test the engine within 15,000 hours of engine operation after the previous emission test. The owner or operator who elects to test on an operating hour schedule shall submit in writing, to the appropriate regional office, biennially after initial sampling, documentation of the actual recorded hours of engine operation since the previous emission test, and an estimate of the date of the next required sampling.

(3) For any gas turbine rated 500 hp or more, subparagraphs (A) and (B) of this paragraph shall apply.

(A) The emissions of NO_x shall not exceed 3.0 g/hp-hr for gas-firing.

(B) The turbine shall meet all applicable NO_x and sulfur dioxide (SO_2) (or fuel sulfur) emissions limitations, monitoring requirements, and reporting requirements of EPA New Source Performance Standards Subpart GG--Standards of Performance for Stationary Gas Turbines. Turbine hp rating shall be based on turbine base load, fuel lower heating value, and International Standards Organization Standard Day Conditions of 59 degrees Fahrenheit, 1.0 atmosphere and 60% relative humidity.

(4) Any engine or turbine rated less than 500 hp or used for temporary replacement purposes shall be exempt from the emission limitations of paragraphs (2) and (3) of this section. Temporary replacement engines or turbines shall be limited to a maximum of 90 days of operation after which they shall be removed or rendered physically inoperable.

(5) Gas fuel shall be limited to: sweet natural gas or liquid petroleum gas, fuel gas containing no more than ten grains total sulfur per 100 dry standard cubic feet, or field gas. If field gas contains more than 1.5 grains hydrogen sulfide or 30 grains total sulfur compounds per 100 standard cubic feet (sour gas), the engine owner or operator shall maintain records, including at least quarterly measurements of fuel hydrogen sulfide and total sulfur content, which demonstrate that the annual SO_2 emissions from the facility do not exceed 25 tons per year (tpy). Liquid fuel shall be petroleum distillate oil that is not a blend containing waste oils or solvents and contains less than 0.3% by weight sulfur.

(6) There will be no violations of any National Ambient Air Quality Standard (NAAQS) in the area of the proposed facility. Compliance with this condition shall be demonstrated by one of the following three methods:

(A) ambient sampling or dispersion modeling accomplished pursuant to guidance obtained from the executive director. Unless otherwise documented by actual test data, the following nitrogen dioxide (NO_2)/NO_x ratios shall be used for modeling NO_2 NAAQS;

Figure: 30 TAC §106.512(6)(A)

Device	NO_x Emission Rate (Q) g/hp-hr	NO_2/NO_x Ratio
IC Engine	Less than 2.0	0.4
IC Engine	2.0 thru 10.0	0.15 +(0.5/Q)
IC Engine	Greater than 10.0	0.2
Turbines		0.25
IC Engine with catalytic converter		0.85

(B) all existing and proposed engine and turbine exhausts are released to the atmosphere at a height at least twice the height of any surrounding obstructions to wind flow. Buildings, open-sided roofs, tanks, separators, heaters, covers, and any other type of structure are

considered as obstructions to wind flow if the distance from the nearest point on the obstruction to the nearest exhaust stack is less than five times the lesser of the height, Hb, and the width, Wb, where:

Figure: 30 TAC §106.512(6)(B)

Hb = maximum height of the obstruction, and

Wb = projected width of obstruction =

$$2\sqrt{\frac{lw}{3.141}}$$

where:

L = length of obstruction

W = width of obstruction

(C) the total emissions of NO_x (nitrogen oxide plus NO_2) from all existing and proposed facilities on the property do not exceed the most restrictive of the following:

(i) 250 tpy;

(ii) the value (0.3125 D) tpy, where D equals the shortest distance in feet from any existing or proposed stack to the nearest property line.

(7) Upon issuance of a standard permit for electric generating units, registrations under this section for engines or turbines used to generate electricity will no longer be accepted, except for:

(A) engines or turbines used to provide power for the operation of facilities registered under the Air Quality Standard Permit for Concrete Batch Plants;

(B) engines or turbines satisfying the conditions for facilities permitted by rule under Subchapter E of this title (relating to Aggregate and Pavement); or

(C) engines or turbines used exclusively to provide power to electric pumps used for irrigating crops.