

The Texas Commission on Environmental Quality (commission) proposes amendments to §§117.140, 117.145, 117.340, 117.345, 117.2035, and 117.2045.

Sections 117.140, 117.145, 117.340, 117.345, 117.2035, and 117.2045 will be submitted to the United States Environmental Protection Agency (EPA) as revisions to the state implementation plan.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULES

On October 15, 2007, Viridis Energy Texas, L.P., submitted two petitions for rulemaking regarding provisions for output-based monitoring alternatives for stationary engines and stationary gas turbines at major and minor sources of nitrogen oxides (NO_x) in the Houston-Galveston-Brazoria (HGB) ozone nonattainment area. The commission approved the petitions for rulemaking on December 5, 2007, and issued an order on December 13, 2007, directing the executive director to examine the issues in the petitions and to initiate rulemaking.

At the April 16, 2008, commissioners' agenda, the commissioners agreed to remand the proposed rule change and directed staff to examine expanding the proposed rules to include the Beaumont-Port Arthur (BPA) ozone nonattainment area. Staff concluded that expanding the rules to include the BPA ozone nonattainment area would provide additional flexibility for owners and operators of applicable sources to monitor unit activity levels in the manner most appropriate for their facility.

The rules in Chapter 117 currently require stationary reciprocating internal combustion engines and stationary gas turbines located at major sources of NO_x in the BPA and HGB ozone nonattainment areas to each have a fuel flow meter installed. Stationary reciprocating internal combustion engines and

stationary gas turbines located at minor sources of NO_x in the HGB ozone nonattainment area that are in the Mass Emission Cap and Trade Program are also required to have a fuel flow meter installed. The proposed rule change would allow the use of output-based monitoring as an alternative to the engine and turbine fuel flow meter requirements for the BPA and HGB ozone nonattainment areas. The suggested rule change is consistent with an option currently allowed under Chapter 117 for engines in the Dallas-Fort Worth (DFW) eight-hour ozone nonattainment area. During the recent DFW eight-hour ozone nonattainment area rulemaking under Chapter 117, a provision was added under §117.440(a)(2)(D), in response to comment, to allow the output-based alternative to fuel flow monitoring for stationary internal combustion engines and stationary gas turbines. Similar provisions were not provided for the BPA and HGB ozone nonattainment areas because no comments were accepted for the BPA and HGB ozone nonattainment areas at that time.

The proposed rulemaking would amend the major source rule in the BPA ozone nonattainment area in Chapter 117, Subchapter B, Division 1, and amend both the major and minor source rules for the HGB ozone nonattainment area in Chapter 117, Subchapter B, Division 3 and Subchapter D, Division 1. These proposed changes would be consistent with the output-based monitoring option currently allowed for stationary reciprocating internal combustion engines and stationary gas turbines at major sources in the DFW eight-hour ozone nonattainment area. The first proposed rule change would apply to major sources of NO_x in the BPA and HGB nonattainment areas. It would provide output-based monitoring as an additional alternative to the existing requirement to install fuel flow meters on stationary reciprocating internal combustion engines and stationary gas turbines. For consistency with the DFW eight-hour ozone nonattainment area requirements, a corresponding addition would be needed to prescribe recordkeeping requirements for sources using the output-based monitoring option. Owners or operators using output-

based monitoring would be required to maintain records of daily average horsepower and hours of operation.

The second proposed rule change would apply to minor sources of NO_x in the HGB ozone nonattainment area. It would provide output-based monitoring as an additional alternative to the existing requirement to install fuel flow meters on stationary reciprocating internal combustion engines and stationary gas turbines. For consistency with the DFW eight-hour ozone nonattainment area requirements, a corresponding addition would be needed to prescribe recordkeeping requirements for sources using the output-based monitoring option. Owners or operators using output-based monitoring would be required to maintain records of daily average horsepower and hours of operation.

The commission is only accepting comments regarding the specific changes proposed by the petitioner and directed by the commissioners at the April 16, 2008, agenda. Comments received related to other portions of the sections proposed for amendment will not be considered and no changes will be made in response to such comments.

SECTION BY SECTION DISCUSSION

The proposed rulemaking would amend the major source rules in the BPA ozone nonattainment area in Chapter 117, Subchapter B, Division 1, §117.140 and §117.145, and both the major and minor source rules for the HGB ozone nonattainment area in Chapter 117, Subchapter B, Division 3, §117.340 and §117.345, and Chapter 117, Subchapter D, Division 1, §117.2035 and §117.2045. These proposed changes would be consistent with the output-based monitoring option currently allowed for stationary engines and gas turbines at major sources in the DFW eight-hour ozone nonattainment area.

*SUBCHAPTER B, COMBUSTION CONTROL AT MAJOR INDUSTRIAL, COMMERCIAL, AND
INSTITUTIONAL SOURCES IN OZONE NONATTAINMENT AREAS*

DIVISION 1, BEAUMONT-PORT ARTHUR OZONE NONATTAINMENT AREA MAJOR SOURCES

Section 117.140, Continuous Demonstration of Compliance

The commission proposes to amend §117.140(a)(2) to include a subparagraph (D). Section 117.140(a)(2) provides for alternatives to the totalizing fuel flow meter requirement in §117.140(a). The proposed subparagraph (D) would provide an additional output-based alternative for stationary reciprocating internal combustion engines and stationary gas turbines to the §117.140(a) requirement to install, calibrate, maintain, and operate totalizing fuel flow meters on each applicable unit listed under §117.140(a)(1). Applicable units in §117.140(a)(1)(B) and (C) include, respectively, stationary reciprocating internal combustion engines and stationary gas turbines.

The proposed amendment would include subparagraph (D) to state that stationary reciprocating internal combustion engines and stationary gas turbines equipped with a continuous monitoring system that continuously monitors horsepower and hours of operation are not required to install totalizing fuel flow meters. The continuous monitoring system must be installed, calibrated, maintained, and operated according to manufacturers' recommended procedures. This language is identical to existing rule text for the output-based monitoring alternative for stationary engines and stationary gas turbines in the DFW eight-hour ozone nonattainment area.

Section 117.145, Notification, Recordkeeping, and Reporting Requirements

The commission proposes to amend §117.145(f) to include a paragraph (10) for recordkeeping

requirements consistent with the horsepower and hours of operation data that would be collected by the output-based alternative monitoring provision of proposed §117.140(a)(2)(D). Existing §117.145(f) consists of the recordkeeping requirements for units subject to Division 1. The subsection directs owners or operators of subject units to maintain written or electronic records of specified data for a period of at least five years and make available by request by authorized representatives of the executive director, the EPA, or local air pollution control agencies having jurisdiction. Existing §117.145(f)(1) - (9) detail the types of data to be recorded depending on the specific compliance and monitoring methodologies specified in this division.

Proposed §117.145(f)(10) would specify the recordkeeping requirements of output-based monitoring data based on the existing recordkeeping rule text in §117.445(f)(3)(C) for output-based data collection in the DFW eight-hour ozone nonattainment area. Proposed §117.145(f)(10) states that an owner or operator electing to use the alternative monitoring system allowed under §117.140(a)(2)(D) shall record the daily average horsepower and total daily hours of operation. In addition, proposed paragraph (10) would clarify that records of annual fuel usage specified under §117.145(f)(1) are not required for units that are monitored according to proposed §117.140(a)(2)(D).

*SUBCHAPTER B, COMBUSTION CONTROL AT MAJOR INDUSTRIAL, COMMERCIAL, AND
INSTITUTIONAL SOURCES IN OZONE NONATTAINMENT AREAS*

*DIVISION 3, HOUSTON-GALVESTON-BRAZORIA OZONE NONATTAINMENT AREA MAJOR
SOURCES*

Section 117.340, Continuous Demonstration of Compliance

The commission proposes to amend §117.340(a)(2) to include a subparagraph (D). Section 117.340(a)(2)

provides for alternatives to the totalizing fuel flow meter requirement in §117.340(a). The proposed subparagraph (D) would provide an additional output-based alternative for stationary reciprocating internal combustion engines and stationary gas turbines to the §117.340(a) requirement to install, calibrate, maintain, and operate totalizing fuel flow meters on each applicable unit listed under §117.340(a)(1). Applicable units in §117.340(a)(1)(A)(ii) and (iii) include, respectively, stationary reciprocating internal combustion engines and stationary gas turbines.

The proposed amendment would include §117.340(a)(2)(D) to state that stationary reciprocating internal combustion engines and stationary gas turbines equipped with a continuous monitoring system that continuously monitors horsepower and hours of operation are not required to install totalizing fuel flow meters. The continuous monitoring system must be installed, calibrated, maintained, and operated according to manufacturers' recommended procedures. This language is identical to existing rule text for the output-based monitoring alternative for stationary engines and stationary gas turbines in the DFW eight-hour ozone nonattainment area.

Section 117.345, Notification, Recordkeeping, and Reporting Requirements

The commission proposes to amend §117.345(f) to include a paragraph (12) for recordkeeping requirements consistent with the horsepower and hours of operation data that would be collected by the output-based alternative monitoring provision of proposed §117.340(a)(2)(D). Existing §117.345(f) consists of the recordkeeping requirements for units subject to this division. The subsection directs owners or operators of subject units to maintain written or electronic records of specified data for a period of at least five years and made available by request by authorized representatives of the executive director, EPA, or local air pollution control agencies having jurisdiction. Existing §117.345(f)(1) - (11)

detail the types of data to be recorded depending on the specific compliance and monitoring methodologies specified in this division and under 30 TAC Chapter 101, Subchapter H, Division 3, Mass Emissions Cap and Trade.

Proposed §117.345(f)(12) would specify the recordkeeping requirements of output-based monitoring data based on the existing recordkeeping rule text in §117.445(f)(3)(C) for output-based data collection in the DFW eight-hour ozone nonattainment area. Proposed §117.345(f)(12) states that an owner or operator electing to use the alternative monitoring system allowed under §117.340(a)(2)(D) shall record the daily average horsepower and total daily hours of operation. In addition, proposed paragraph (12) would clarify that records of annual fuel usage specified under §117.345(f)(1) are not required for units that are monitored according to proposed new §117.340(a)(2)(D).

SUBCHAPTER D, COMBUSTION CONTROL AT MINOR SOURCES IN OZONE NONATTAINMENT AREAS

DIVISION 1, HOUSTON-GALVESTON-BRAZORIA OZONE NONATTAINMENT AREA MINOR SOURCES

Section 117.2035, Monitoring and Testing Requirements

The commission proposes to amend §117.2035(a)(2) by adding a subparagraph (G), which provides an output-based monitoring alternative to installing, calibrating, maintaining, and operating totalizing fuel flow meters for stationary reciprocating internal combustion engines and stationary gas turbines at minor sources in the HGB ozone nonattainment area. Existing §117.2035(a)(2)(A) - (F) specifies alternatives to the fuel flow meter requirements of this section. This rulemaking proposal would create a subparagraph (G) to add an output-based monitoring alternative to the existing alternatives to the fuel flow monitoring

requirement.

Proposed §117.2035(a)(2)(G) would allow owners or operators to use a continuous monitoring system that continuously monitors horsepower and hours of operation as an alternative to installing fuel meters. The monitoring system must be installed, calibrated, maintained, and operated according to the manufacturers' recommended procedures. This rule language is consistent with the existing output-based monitoring alternative for major sources in the DFW eight-hour ozone nonattainment area and the proposed major source output-based monitoring alternative included in this rulemaking.

Section 117.2045, Recordkeeping and Reporting Requirements

The commission proposes to amend §117.2045(a) to include a paragraph (7) requiring records of daily average horsepower and total daily hours of operation for each engine that the owner or operator elects to use the output-based monitoring option under proposed §117.2035(a)(2)(G). The proposed paragraph (7) would provide consistent recordkeeping and reporting requirements for data collected using the output-based alternative monitoring provisions for stationary engines and stationary gas turbines.

Proposed §117.2045(a)(7) would require an owner or operator electing to use the alternative monitoring system allowed under proposed §117.2035(a)(2)(G) to maintain records of the daily average horsepower and total daily hours of operation for each stationary reciprocating internal combustion engine or stationary gas turbine. Proposed paragraph (7) would clarify that records of annual fuel usage specified under §117.2045(a) are not required for units that are monitored according to proposed §117.2035(a)(2)(G). These records must be maintained for at least five years and must be made available upon request to the authorized representatives of the executive director, EPA, or local air pollution control

agencies having jurisdiction.

FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENT

Nina Chamness, Analyst, Strategic Planning and Assessment, has determined that, for the first five-year period the proposed rules are in effect, no significant fiscal implications are anticipated for the agency or other units of state or local governments as a result of administration or enforcement of the proposed rules. The agency will utilize existing resources to implement the proposed rules. The proposed rules provide an alternative to regulated entities in the HGB and BPA ozone nonattainment areas to monitor sources of NO_x. Overall, local governments and other regulated entities are expected to see a cost savings as a result of the flexibility in monitoring methods that the proposed rules offer.

The proposed rules would amend both the major and minor source rules in Chapter 117 for the HGB and BPA ozone nonattainment areas to allow an additional method of monitoring NO_x emissions from stationary reciprocating internal combustion engines and stationary gas turbines. Current Chapter 117 rules for the HGB and BPA ozone nonattainment areas require the installation of a fuel flow meter on this type of machinery as a method of monitoring NO_x emissions. The proposed rulemaking will allow the use of output-based monitoring as an alternative to the installation of the meter and afford major sources of NO_x emissions in the HGB and BPA ozone nonattainment areas and minor source of NO_x emissions in the HGB ozone nonattainment area with the same flexibility that is available to major sources in the DFW eight-hour ozone nonattainment area. There will be recordkeeping requirements associated with output-based monitoring, but regulated entities are not expected to choose this alternate monitoring method unless it results in reduced costs to them.

The proposed rules are expected to reduce monitoring costs for some local governments in the HGB and BPA ozone nonattainment areas that own or operate stationary reciprocating internal combustion engines and stationary gas turbines. Since the primary purpose of the rules is to provide additional monitoring flexibility while continuing to protect public health and safety, local governments are expected to choose the monitoring method resulting in the lowest cost to them. Staff cannot estimate the number of local governments that will choose this alternate monitoring method, and overall cost savings to local governments in the HGB and BPA ozone nonattainment areas resulting from the proposed rules cannot be quantified.

PUBLIC BENEFITS AND COSTS

Nina Chamness also determined that for each year of the first five years the proposed rules are in effect, the public benefit anticipated from the changes seen in the proposed rules will be continued protection of the environment and public health and safety in the HGB and BPA ozone nonattainment areas while providing additional monitoring alternatives for NO_x emissions to owner or operators of stationary reciprocating internal combustion engines and stationary gas turbines.

The proposed rules are expected to reduce monitoring costs overall for some regulated entities owning or operating stationary internal combustion engines and stationary gas turbines in the HGB and BPA ozone nonattainment areas since it affords them the opportunity to choose a monitoring method that might be less expensive compared to the monitoring method prescribed under current rules. Businesses are expected to choose this method only if associated recordkeeping requirements result in lower operating costs than installing a fuel flow meter. Staff does not have sufficient data to know how many owners of this equipment will choose the proposed alternative, and total costs savings cannot be estimated.

SMALL BUSINESS AND MICRO-BUSINESS ASSESSMENT

No adverse fiscal implications are anticipated for small or micro-businesses under the proposed rules.

The proposed rules provide the same flexibility to small or micro-businesses in the HGB and BPA ozone non-attainment areas regarding the monitoring of NO_x emissions from stationary reciprocating internal combustion engines and stationary gas turbines that is afforded to other regulated entities. Small or micro-businesses are expected to choose the monitoring method that is the least expensive for their business operation, and small or micro-businesses are expected to experience the same cost savings as those experienced by large businesses. Data is not available to determine the monitoring method that will be chosen by these businesses, and therefore, total cost savings for small or micro-businesses cannot be quantified.

SMALL BUSINESS REGULATORY FLEXIBILITY ANALYSIS

The commission has reviewed this proposed rulemaking and determined that a small business regulatory flexibility analysis is not required because the proposed rules do not adversely affect a small or micro-business in a material way for the first five years that the proposed rules are in effect.

LOCAL EMPLOYMENT IMPACT STATEMENT

The commission has reviewed this proposed rulemaking and determined that a local employment impact statement is not required because the proposed rules do not adversely affect a local economy in a material way for the first five years that the proposed rules are in effect.

DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the proposed rules in light of the regulatory analysis requirements of the Texas Government Code, §2001.0225, and determined that the proposed rules do not meet the criteria for a major environmental rule. A "major environmental rule" is a rule that is specifically intended 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.

The intent of the proposed rules is to provide flexibility by allowing the use of output-based monitoring as an alternative to the engine and turbine fuel flow meter requirements for the HGB and BPA ozone nonattainment areas. The proposed rules are also intended to add consistency to the rules; this option is currently allowed under Chapter 117 for stationary reciprocating internal combustion engines and stationary gas turbines in the DFW eight-hour ozone nonattainment area. Therefore, the specific intent of the rule is not to protect the environment or reduce risks to human health from environmental exposure.

The proposed rules will not affect in a material way the economy, a sector of the economy, productivity, jobs, the environment or the public health and safety of the state or a sector of the state. Under the proposed rules, the owners and operators would monitor the engine or turbine's horsepower output as opposed to the fuel flow input for emissions monitoring requirements. Specific costs for the output-based alternative monitoring option are not known. However, the alternative is provided as an option to an existing requirement; it is expected that owners or operators will only use the output-based monitoring if it is more cost effective than the current requirement. The output-based monitoring is at least as accurate as the input-based fuel flow monitoring currently required. Therefore, the proposed rules will not have an adverse affect on the economy, the environment, or public health and safety.

Additionally, this rulemaking does not meet the definition of a major environmental rule because it does not meet any of the four applicability requirements listed in Texas Government Code, §2001.0225(a).

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 action, which is designed to add flexibility and consistency to the rules, does not exceed an express requirement under state or federal law. There is no contract or delegation agreement that covers the topic that is the subject of this action. Furthermore, the rulemaking is not adopted solely under the general powers of the agency, but is authorized by specific sections of the Texas Health and Safety Code, Chapter 382 and the Texas Water Code, as cited to in the STATUTORY AUTHORITY Section.

The commission invites public comment on the draft regulatory impact analysis determination. Written comments on the draft regulatory impact analysis determination may be submitted to the contact person at the address listed under the SUBMITTAL OF COMMENTS section of this preamble.

TAKINGS IMPACT ASSESSMENT

The commission has evaluated the proposed rulemaking and made a preliminary assessment determining that the Texas Government Code, §2007, Governmental Action Affecting Private Property Rights, is not applicable. Under Texas Government Code, §2007.002(5), "taking" means a governmental action that affects private real property in a manner that requires the governmental entity to compensate the private

real property owner as provided by the Fifth and Fourteenth Amendments to the United States Constitution or Section 17 or 19, Article I, Texas Constitution; or it means a governmental action that affects an owner's private real property that is the subject of the governmental action in a manner that restricts or limits the owner's right to the property that would otherwise exist in the absence of the governmental action, and is the producing cause of a reduction of at least 25% in the market value of the affected private real property.

The proposed rule changes would allow for an alternative NO_x emissions monitoring option for owners and operators of stationary reciprocating internal combustion engines and stationary gas turbines in the BPA and HGB ozone nonattainment areas. Promulgation and enforcement of these proposed rules will constitute neither a statutory nor constitutional taking of private real property. The proposed rules do not restrict or limit a landowner's rights to the property or reduce the market value of the property by 25%. Therefore, the proposed rulemaking does not constitute a taking under Texas Government Code, Chapter 2007.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed the proposed rulemaking and found the proposal is a rulemaking identified in the Coastal Coordination Act Implementation Rules, 31 TAC §505.11(b)(4) relating to rules subject to the Coastal Management Program, and will, therefore, require that goals and policies of the Texas Coastal Management Program (CMP) be considered during the rulemaking process.

The commission reviewed this rulemaking for consistency with the CMP goals and policies in accordance with the regulations of the Coastal Coordination Council and determined that the rulemaking is

procedural in nature and will have no substantive effect on commission actions subject to the CMP and is, therefore, consistent with CMP goals and policies.

Written comments on the consistency of this rulemaking may be submitted to the contact person at the address listed under the SUBMITTAL OF COMMENTS section of this preamble.

EFFECT ON SITES SUBJECT TO THE FEDERAL OPERATING PERMITS PROGRAM

Chapter 117 is an applicable requirement under 30 TAC Chapter 122, Federal Operating Permits Program. If the proposed amendments are adopted by the commission, owners or operators subject to the federal operating permit program that elect to comply with the optional output-based monitoring may need to revise their operating permit to include the new requirement.

ANNOUNCEMENT OF HEARINGS

A public hearing for the proposed rulemaking and SIP revision has been scheduled in Austin on October 23, 2008, at 2:00 p.m., at the Texas Commission on Environmental Quality complex located at 12100 Park 35 Circle, Building E, Room 201S. The hearing will be structured for the receipt of oral or written comments by interested persons. Registration will begin 30 minutes prior to the hearing. Individuals may present oral statements when called upon in order of registration. A time limit may be established at the hearing to assure that enough time is allowed for every interested person to speak. There will be no discussion during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes before the hearing.

Persons who have special communication or other accommodation needs who are planning to attend the

hearing should contact Joyce Spencer, Air Quality Division, at (512) 239-5017. Requests should be made as far in advance as possible.

Comments may be submitted to Patricia Duron, Texas Register Team, Office of Legal Services, Texas Commission on Environmental Quality, MC 205, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at www5.tceq.state.tx.us/rules/ecomments/. File size restrictions may apply to comments being submitted via the eComments system. All comments should reference Rule Project Number 2008-008-117-EN. Comments must be received by October 24, 2008. Copies of the proposed rules can be obtained from the commission's Web site at http://www.tceq.state.tx.us/nav/rules/propose_adopt.html. For further information, please contact Ray Schubert, Air Quality Planning Section, at (512) 239-6615.

**SUBCHAPTER B: COMBUSTION CONTROL AT MAJOR INDUSTRIAL, COMMERCIAL,
AND INSTITUTIONAL SOURCES IN OZONE NONATTAINMENT AREAS**

**DIVISION 1: BEAUMONT-PORT ARTHUR OZONE NONATTAINMENT AREA MAJOR
SOURCES**

§117.140, §117.145

STATUTORY AUTHORITY

The amendments are proposed under the authority of the following: Texas Water Code (TWC), §5.102, concerning General Powers, §5.103, concerning Rules, and §5.105, concerning General Policy, that authorize the commission to adopt rules necessary to carry out its powers and duties under the TWC; and Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act; THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; THSC, §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and THSC, §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air.

The amendments are also proposed under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; THSC, §382.021, concerning Sampling Methods and Procedures, authorizes the commission to prescribe sampling methods and procedures; and THSC, §382.051(d), concerning Permitting Authority of Commission; Rules, authorizes

the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under THSC, Chapter 382.

The proposed amendments implement THSC, §§382.002, 382.011, 382.012, 382.016, 382.021, and 382.051(d).

§117.140. Continuous Demonstration of Compliance.

(a) Totalizing fuel flow meters. The owner or operator of units listed in this subsection shall install, calibrate, maintain, and operate a totalizing fuel flow meter, with an accuracy of $\pm 5\%$, to individually and continuously measure the gas and liquid fuel usage. A computer that collects, sums, and stores electronic data from continuous fuel flow meters is an acceptable totalizer. The owner or operator of units with totalizing fuel flow meters installed prior to March 31, 2005, that do not meet the accuracy requirements of this subsection shall either recertify or replace existing meters to meet the $\pm 5\%$ accuracy required as soon as practicable but no later than March 31, 2007. For the purpose of compliance with this subsection for units having pilot fuel supplied by a separate fuel system or from an unmonitored portion of the same fuel system, the fuel flow to pilots may be calculated using the manufacturer's design flow rates rather than measured with a fuel flow meter. The calculated pilot fuel flow rate must be added to the monitored fuel flow when fuel flow is totaled.

(1) Totalizing fuel flow meters are required for the following units that are subject to §117.105 or §117.110 of this title (relating to Emission Specifications for Reasonably Available Control

Technology (RACT); and Emission Specifications for Attainment Demonstration) and for stationary gas turbines that are exempt under §117.103(b)(6) of this title (relating to Exemptions):

(A) if individually rated more than 40 million British thermal units per hour (MMBtu/hr):

(i) boilers;

(ii) process heaters; and

(iii) gas turbine supplemental-fired waste heat recovery units;

(B) stationary, reciprocating internal combustion engines not exempt by §117.103(a)(6), (a)(8), (b)(8), or (b)(9) of this title; and

(C) stationary gas turbines with a megawatt (MW) rating greater than or equal to 1.0 MW operated more than 850 hours per year.

(2) The following are alternatives to the fuel flow monitoring requirements of paragraph (1) of this subsection.

(A) Units operating with a nitrogen oxides (NO_x) and diluent continuous emissions monitoring system (CEMS) under subsection (e) of this section may monitor stack exhaust

flow using the flow monitoring specifications of 40 Code of Federal Regulations (CFR) Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A.

(B) Units that vent to a common stack with a NO_x and diluent CEMS under subsection (e) of this section may use a single totalizing fuel flow meter.

(C) Diesel engines operating with run time meters may meet the fuel flow monitoring requirements of this subsection through monthly fuel use records maintained for each engine.

(D) Stationary reciprocating internal combustion engines and stationary gas turbines equipped with a continuous monitoring system that continuously monitors horsepower and hours of operation are not required to install totalizing fuel flow meters. The continuous monitoring system must be installed, calibrated, maintained, and operated according to manufacturers' recommended procedures.

(b) Oxygen (O₂) monitors.

(1) The owner or operator shall install, calibrate, maintain, and operate an O₂ monitor to measure exhaust O₂ concentration on the following units operated with an annual heat input greater than 2.2(10¹¹) British thermal units per year (Btu/yr):

(A) boilers with a rated heat input greater than or equal to 100 MMBtu/hr; and

(B) process heaters with a rated heat input greater than or equal to 100 MMBtu/hr, except as provided in subsection (f) of this section.

(2) The following are not subject to this subsection:

(A) units listed in §117.103(b)(3) - (5) and (7) - (9) of this title;

(B) process heaters operating with a carbon dioxide CEMS for diluent monitoring under subsection (e) of this section; and

(C) wood-fired boilers.

(3) The O₂ monitors required by this subsection are for process monitoring (predictive monitoring inputs, boiler trim, or process control) and are only required to meet the location specifications and quality assurance procedures referenced in subsection (e) of this section if O₂ is the monitored diluent under that subsection. However, if new O₂ monitors are required as a result of this subsection, the criteria in subsection (e) of this section should be considered the appropriate guidance for the location and calibration of the monitors.

(c) NO_x monitors.

(1) The owner or operator of units listed in this paragraph shall install, calibrate, maintain, and operate a CEMS or predictive emissions monitoring system (PEMS) to monitor exhaust NO_x. The units are:

(A) boilers with a rated heat input greater than or equal to 250 MMBtu/hr and an annual heat input greater than $2.2(10^{11})$ Btu/yr;

(B) process heaters with a rated heat input greater than or equal to 200 MMBtu/hr and an annual heat input greater than $2.2(10^{11})$ Btu/yr;

(C) boilers and process heaters that are vented through a common stack and the total rated heat input from the units combined is greater than or equal to 250 MMBtu/hr and the annual heat input combined is greater than $2.2(10^{11})$ Btu/yr;

(D) stationary gas turbines with an MW rating greater than or equal to 30 MW operated more than 850 hours per year;

(E) units that use a chemical reagent for reduction of NO_x ; and

(F) units that the owner or operator elects to comply with the NO_x emission specifications of §117.105 or §117.110(a) of this title using a pounds per million British thermal unit (lb/MMBtu) limit on a 30-day rolling average.

(2) The following are not required to install CEMS or PEMS under this subsection:

(A) for purposes of §117.105 or §117.110(a) of this title, units listed §117.103(b)(3) - (5) and (7) - (9) of this title; and

(B) units subject to the NO_x CEMS requirements of 40 CFR Part 75.

(3) The owner or operator shall use one of the following methods to provide substitute emissions compliance data during periods when the NO_x monitor is off-line:

(A) if the NO_x monitor is a CEMS:

(i) subject to 40 CFR Part 75, use the missing data procedures specified in 40 CFR Part 75, Subpart D (Missing Data Substitution Procedures); or

(ii) subject to 40 CFR Part 75, Appendix E, use the missing data procedures specified in 40 CFR Part 75, Appendix E, §2.5 (Missing Data Procedures);

(B) use 40 CFR Part 75, Appendix E monitoring in accordance with §117.1040(d) of this title (relating to Continuous Demonstration of Compliance);

(C) if the NO_x monitor is a PEMS:

(i) use the methods specified in 40 CFR Part 75, Subpart D; or

(ii) use calculations in accordance with §117.8110(b) of this title (relating to Emission Monitoring System Requirements for Utility Electric Generation Sources); or

(D) if the methods specified in subparagraphs (A) - (C) of this paragraph are not used, the owner or operator shall use the maximum block one-hour emission rate as measured during the initial demonstration of compliance required in §117.135(f) of this title (relating to Initial Demonstration of Compliance).

(d) Carbon monoxide (CO) monitoring. The owner or operator shall monitor CO exhaust emissions from each unit listed in subsection (c)(1) of this section using one or more of the methods specified in §117.8120 of this title (relating to Carbon Monoxide (CO) Monitoring).

(e) CEMS requirements. The owner or operator of any CEMS used to meet a pollutant monitoring requirement of this section shall comply with the requirements of §117.8100(a) of this title (relating to Emission Monitoring System Requirements for Industrial, Commercial, and Institutional Sources).

(f) PEMS requirements. The owner or operator of any PEMS used to meet a pollutant monitoring requirement of this section shall comply with the following.

(1) The PEMS must predict the pollutant emissions in the units of the applicable emission specifications of this division (relating to Beaumont-Port Arthur Ozone Nonattainment Area Major Sources).

(2) The PEMS must meet the requirements of §117.8100(b) of this title.

(g) Engine monitoring. The owner or operator of any stationary gas engine subject to the emission specifications of this division shall stack test engine NO_x and CO emissions as specified in §117.8140(a) of this title (relating to Emission Monitoring for Engines).

(h) Monitoring for stationary gas turbines less than 30 MW. The owner or operator of any stationary gas turbine rated less than 30 MW using steam or water injection to comply with the emission specifications of §117.105 of this title or §117.115 of this title (relating to Alternative Plant-Wide Emission Specifications) shall either:

(1) install, calibrate, maintain, and operate a NO_x CEMS or PEMS in compliance with this section and monitor CO in compliance with subsection (d) of this section; or

(2) install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the average hourly fuel and steam or water consumption:

(A) the system must be accurate to within $\pm 5.0\%$;

(B) the steam-to-fuel or water-to-fuel ratio monitoring data must be used for demonstrating continuous compliance with the applicable emission specification of §117.105 or §117.115 of this title; and

(C) steam or water injection control algorithms are subject to executive director approval.

(i) Run time meters. The owner or operator of any stationary gas turbine or stationary internal combustion engine claimed exempt using the exemption of §117.103(a)(6)(D), (b)(2), or (b)(8) of this title shall record the operating time with an elapsed run time meter. Any run time meter installed on or after October 1, 2001, must be non-resettable.

(j) Hydrogen (H₂) monitoring. The owner or operator claiming the H₂ multiplier of §117.105(b)(6) or §117.115(g)(4) or (h) of this title shall sample, analyze, and record every three hours the fuel gas composition to determine the volume percent H₂.

(1) The total H₂ volume flow in all gaseous fuel streams to the unit must be divided by the total gaseous volume flow to determine the volume percent of H₂ in the fuel supply to the unit.

(2) Fuel gas analysis must be tested according to American Society for Testing and Materials (ASTM) Method D1945-81 or ASTM Method D2650-83, or other methods that are demonstrated to the satisfaction of the executive director and the United States Environmental Protection Agency to be equivalent.

(3) A gaseous fuel stream containing 99% H₂ by volume or greater may use the following procedure to be exempted from the sampling and analysis requirements of this subsection.

(A) A fuel gas analysis must be performed initially using one of the test methods in this subsection to demonstrate that the gaseous fuel stream is 99% H₂ by volume or greater.

(B) The process flow diagram of the process unit that is the source of the H₂ must be supplied to the executive director to illustrate the source and supply of the hydrogen stream.

(C) The owner or operator shall certify that the gaseous fuel stream containing H₂ will continuously remain, as a minimum, at 99% H₂ by volume or greater during its use as a fuel to the combustion unit.

(k) Data used for compliance. After the initial demonstration of compliance required by §117.135 of this title, the methods required in this section must be used to determine compliance with the emission specifications of §117.105 or §117.110(a) of this title. For enforcement purposes, the executive director may also use other commission compliance methods to determine whether the source is in compliance with applicable emission specifications.

(l) Enforcement of NO_x RACT limits. If compliance with §117.105 of this title is selected, no unit subject to §117.105 of this title may be operated at an emission rate higher than that allowed by the emission specifications of §117.105 of this title. If compliance with §117.115 of this title is selected, no unit subject to §117.115 of this title may be operated at an emission rate higher than that approved by the executive director under §117.152(b) of this title (relating to Final Control Plan Procedures for Reasonably Available Control Technology).

(m) Loss of NO_x RACT exemption. The owner or operator of any unit claimed exempt from the emission specifications of this division using the low annual capacity factor exemption of §117.103(b)(2)

of this title shall notify the executive director within seven days if the Btu/yr or hour-per-year limit specified in §117.10 of this title (relating to Definitions), as appropriate, is exceeded.

(1) If the limit is exceeded, the exemption from the emission specifications of this division is permanently withdrawn.

(2) Within 90 days after loss of the exemption, the owner or operator shall submit a compliance plan detailing a plan to meet the applicable compliance limit as soon as possible, but no later than 24 months after exceeding the limit. The plan must include a schedule of increments of progress for the installation of the required control equipment.

(3) The schedule is subject to the review and approval of the executive director.

§117.145. Notification, Recordkeeping, and Reporting Requirements.

(a) Startup and shutdown records. For units subject to the startup and/or shutdown provisions of §101.222 of this title (relating to Demonstrations), hourly records must be made of startup and/or shutdown events and maintained for a period of at least two years. Records must be available for inspection by the executive director, United States Environmental Protection Agency, and any local air pollution control agency having jurisdiction upon request. These records must include, but are not limited to: type of fuel burned; quantity of each type of fuel burned; and the date, time, and duration of the procedure.

(b) Notification. The owner or operator of an affected source shall submit notification to the appropriate regional office and any local air pollution control agency having jurisdiction as follows:

(1) verbal notification of the date of any testing conducted under §117.135 of this title (relating to Initial Demonstration of Compliance) at least 15 days prior to such date followed by written notification within 15 days after testing is completed; and

(2) verbal notification of the date of any continuous emissions monitoring system (CEMS) or predictive emissions monitoring system (PEMS) relative accuracy test audit (RATA) conducted under §117.140 of this title (relating to Continuous Demonstration of Compliance) at least 15 days prior to such date followed by written notification within 15 days after testing is completed; and

(c) Reporting of test results. The owner or operator of an affected unit shall furnish the Office of Compliance and Enforcement, the appropriate regional office, and any local air pollution control agency having jurisdiction a copy of any testing conducted under §117.135 of this title and any CEMS or PEMS RATA conducted under §117.140 of this title:

(1) within 60 days after completion of such testing or evaluation; and

(2) not later than the compliance schedule specified in §117.9000 of this title (relating to Compliance Schedule for Beaumont-Port Arthur Ozone Nonattainment Area Major Sources).

(d) Semiannual reports. The owner or operator of a unit required to install a CEMS, PEMS, or water-to-fuel or steam-to-fuel ratio monitoring system under §117.140 of this title shall report in writing to the executive director on a semiannual basis any exceedance of the applicable emission specifications of this division (relating to Beaumont-Port Arthur Ozone Nonattainment Area Major Sources) and the monitoring system performance. All reports must be postmarked or received by the 30th day following the end of each calendar semiannual period. Written reports must include the following information:

(1) the magnitude of excess emissions computed in accordance with 40 Code of Federal Regulations §60.13(h), any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the unit operating time during the reporting period:

(A) for stationary gas turbines using steam-to-fuel or water-to-fuel ratio monitoring to demonstrate compliance in accordance with §117.140(h)(2) of this title, excess emissions are computed as each one-hour period that the average steam or water injection rate is below the level defined by the control algorithm as necessary to achieve compliance with the applicable emission specifications in §117.105 of this title (relating to Emission Specifications for Reasonably Available Control Technology (RACT)); and

(B) for units complying with §117.123 of this title (relating to Source Cap), excess emissions are each daily period that the total nitrogen oxides (NO_x) emissions exceed the rolling 30-day average or the maximum daily NO_x cap;

(2) specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected unit, the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted;

(3) the date and time identifying each period that the continuous monitoring system was inoperative, except for zero and span checks and the nature of the system repairs or adjustments;

(4) when no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information must be stated in the report; and

(5) if the total duration of excess emissions for the reporting period is less than 1.0% of the total unit operating time for the reporting period and the CEMS, PEMS, or water-to-fuel or steam-to-fuel ratio monitoring system downtime for the reporting period is less than 5.0% of the total unit operating time for the reporting period, only a summary report form (as outlined in the latest edition of the commission's *Guidance for Preparation of Summary, Excess Emission, and Continuous Monitoring System Reports*) must be submitted, unless otherwise requested by the executive director. If the total duration of excess emissions for the reporting period is greater than or equal to 1.0% of the total operating time for the reporting period or the CEMS, PEMS, or water-to-fuel or steam-to-fuel ratio monitoring system downtime for the reporting period is greater than or equal to 5.0% of the total operating time for the reporting period, a summary report and an excess emission report must both be submitted.

(e) Reporting for engines. The owner or operator of any gas-fired engine subject to the emission specifications in §§117.105, 117.110, or 117.115 of this title (relating to Emission Specifications for

Reasonably Available Control Technology (RACT); Emission Specifications for Attainment Demonstration; and Alternative Plant-Wide Emission Specifications) shall report in writing to the executive director on a semiannual basis any excess emissions and the air-fuel ratio monitoring system performance. All reports must be postmarked or received by the 30th day following the end of each calendar semiannual period. Written reports must include the following information:

(1) the magnitude of excess emissions based on the quarterly emission checks of §117.130(d)(7) of this title (relating to Operating Requirements) and the biennial emission testing required for demonstration of emissions compliance in accordance with §117.140(g) of this title, computed in pounds per hour and grams per horsepower-hour, any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the engine operating time during the reporting period; and

(2) specific identification, to the extent feasible, of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the engine or emission control system, the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted.

(f) Recordkeeping. The owner or operator of a unit subject to the requirements of this division shall maintain written or electronic records of the data specified in this subsection. Such records must be kept for a period of at least five years and must be made available upon request by authorized representatives of the executive director, United States Environmental Protection Agency, or local air pollution control agencies having jurisdiction. The records must include:

(1) for each unit subject to §117.140(a) of this title, records of annual fuel usage;

(2) for each unit using a CEMS or PEMS in accordance with §117.140 of this title,
monitoring records of:

(A) hourly emissions and fuel usage (or stack exhaust flow) for units complying
with an emission limit enforced on a block one-hour average; or

(B) daily emissions and fuel usage (or stack exhaust flow) for units complying
with an emission limit enforced on a daily or rolling 30-day average. Emissions must be recorded in units
of:

(i) pounds per million British thermal units heat input; and

(ii) pounds or tons per day;

(3) for each stationary internal combustion engine subject to the emission specifications
of this division, records of:

(A) emissions measurements required by:

(i) §117.130(d)(7) of this title; and

(ii) §117.140(g) of this title; and

(B) catalytic converter, air-fuel ratio controller, or other emissions-related control system maintenance, including the date and nature of corrective actions taken;

(4) for each stationary gas turbine monitored by steam-to-fuel or water-to-fuel ratio in accordance with §117.140(h) of this title, records of hourly:

(A) pounds of steam or water injected;

(B) pounds of fuel consumed; and

(C) the steam-to-fuel or water-to-fuel ratio;

(5) for hydrogen (H₂) fuel monitoring in accordance with §117.140(j) of this title, records of the volume percent H₂ every three hours;

(6) for units claimed exempt from emission specifications using the exemption of §117.103(a)(6)(D) or (b)(2) of this title (relating to Exemptions), either records of monthly:

(A) fuel usage, for exemptions based on heat input; or

(B) hours of operation, for exemptions based on hours per year of operation. In addition, for each engine claimed exempt under §117.103(a)(6)(D) of this title, written records must be maintained of the purpose of engine operation and, if operation was for an emergency situation, identification of the type of emergency situation and the start and end times and date(s) of the emergency situation;

(7) records of carbon monoxide measurements specified in §117.140(d) of this title;

(8) records of the results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS, PEMS, or steam-to-fuel or water-to-fuel ratio monitoring systems; [and]

(9) records of the results of performance testing, including initial demonstration of compliance testing conducted in accordance with §117.135 of this title; and.]

(10) for each stationary reciprocating internal combustion engine and stationary gas turbine for which the owner or operator elects to use the alternative monitoring system allowed under §117.140(a)(2)(D) of this title, records of the daily average horsepower and total daily hours of operation. Units that are monitored according to §117.140(a)(2)(D) of this title are not required to keep records of annual fuel usage as required by paragraph (1) of this subsection.

**SUBCHAPTER B: COMBUSTION CONTROL AT MAJOR INDUSTRIAL, COMMERCIAL,
AND INSTITUTIONAL SOURCES IN OZONE NONATTAINMENT AREAS**

DIVISION 3: HOUSTON-GALVESTON-BRAZORIA OZONE NONATTAINMENT AREA

MAJOR SOURCES

§117.340, §117.345

STATUTORY AUTHORITY

The amendments are proposed under the authority of the following: Texas Water Code (TWC), §5.102, concerning General Powers, §5.103, concerning Rules, and §5.105, concerning General Policy, that authorize the commission to adopt rules necessary to carry out its powers and duties under the TWC; and Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act; THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; THSC, §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and THSC, §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air.

The amendments are also proposed under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; THSC, §382.021, concerning Sampling Methods and Procedures, authorizes the commission to prescribe sampling methods and procedures; and THSC, §382.051(d), concerning Permitting Authority of Commission; Rules, authorizes

the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under THSC, Chapter 382.

The proposed amendments implement THSC, §§382.002, 382.011, 382.012, 382.016, 382.021, and 382.051(d).

§117.340. Continuous Demonstration of Compliance.

(a) Totalizing fuel flow meters. The owner or operator of units listed in this subsection shall install, calibrate, maintain, and operate a totalizing fuel flow meter, with an accuracy of $\pm 5\%$, to individually and continuously measure the gas and liquid fuel usage. A computer that collects, sums, and stores electronic data from continuous fuel flow meters is an acceptable totalizer. The owner or operator of units with totalizing fuel flow meters installed prior to March 31, 2005, that do not meet the accuracy requirements of this subsection shall either recertify or replace existing meters to meet the $\pm 5\%$ accuracy required as soon as practicable but no later than March 31, 2007. For the purpose of compliance with this subsection for units having pilot fuel supplied by a separate fuel system or from an unmonitored portion of the same fuel system, the fuel flow to pilots may be calculated using the manufacturer's design flow rates rather than measured with a fuel flow meter. The calculated pilot fuel flow rate must be added to the monitored fuel flow when fuel flow is totaled.

(1) The units are the following:

(A) for units that are subject to §117.305 of this title (relating to Emission Specifications for Reasonably Available Control Technology (RACT)), for stationary gas turbines that are

exempt under §117.303(b)(7) of this title (relating to Exemptions):

(i) if individually rated more than 40 million British thermal units per hour (MMBtu/hr):

(I) boilers;

(II) process heaters;

(III) boilers and industrial furnaces that were regulated as existing facilities by 40 Code of Federal Regulations (CFR) Part 266, Subpart H, as was in effect on June 9, 1993; and

(IV) gas turbine supplemental-fired waste heat recovery units;

(ii) stationary reciprocating internal combustion engines not exempt by §117.303(a)(6), (a)(8), (b)(9), or (b)(10) of this title;

(iii) stationary gas turbines with a megawatt (MW) rating greater than or equal to 1.0 MW operated more than 850 hours per year; and

(iv) fluid catalytic cracking unit boilers using supplemental fuel; and

(B) for units subject to §117.310 of this title (relating to Emission Specifications

for Attainment Demonstration):

(i) boilers (excluding wood-fired boilers that must comply by maintaining records of fuel usage as required in §117.345(f) of this title (relating to Notification, Recordkeeping, and Reporting Requirements) or monitoring in accordance with paragraph (2)(A) of this subsection);

(ii) process heaters;

(iii) boilers and industrial furnaces that were regulated as existing facilities by 40 CFR Part 266, Subpart H, as was in effect on June 9, 1993;

(iv) duct burners used in turbine exhaust ducts;

(v) stationary, reciprocating internal combustion engines;

(vi) stationary gas turbines;

(vii) fluid catalytic cracking unit boilers and furnaces using supplemental fuel;

(viii) lime kilns;

(ix) lightweight aggregate kilns;

(x) heat treating furnaces;

(xi) reheat furnaces;

(xii) magnesium chloride fluidized bed dryers; and

(xiii) incinerators (excluding vapor streams resulting from vessel cleaning routed to an incinerator, provided that fuel usage is quantified using good engineering practices, including calculation methods in general use and accepted in new source review permitting in Texas. All other fuel and vapor streams must be monitored in accordance with this subsection.)

(2) The following are alternatives to the fuel flow monitoring requirements of paragraph (1) of this subsection.

(A) Units operating with a nitrogen oxides (NO_x) and diluent continuous emissions monitoring system (CEMS) under subsection (f) of this section may monitor stack exhaust flow using the flow monitoring specifications of 40 CFR Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A.

(B) Units that vent to a common stack with a NO_x and diluent CEMS under subsection (f) of this section may use a single totalizing fuel flow meter.

(C) Diesel engines operating with run time meters may meet the fuel flow

monitoring requirements of this subsection through monthly fuel use records maintained for each engine.

(D) Stationary reciprocating internal combustion engines and stationary gas turbines equipped with a continuous monitoring system that continuously monitors horsepower and hours of operation are not required to install totalizing fuel flow meters. The continuous monitoring system must be installed, calibrated, maintained, and operated according to manufacturers' recommended procedures.

(b) Oxygen (O₂) monitors.

(1) The owner or operator shall install, calibrate, maintain, and operate an O₂ monitor to measure exhaust O₂ concentration on the following units operated with an annual heat input greater than 2.2(10¹¹) British thermal units per year (Btu/yr):

(A) boilers with a rated heat input greater than or equal to 100 MMBtu/hr; and

(B) process heaters with a rated heat input greater than or equal to 100 MMBtu/hr, except as provided in subsection (g) of this section.

(2) The following are not subject to this subsection:

(A) units listed in §117.303(b)(3) - (5) and (8) - (10) of this title;

(B) process heaters operating with a carbon dioxide CEMS for diluent monitoring under subsection (g) of this section; and

(C) wood-fired boilers.

(3) The O₂ monitors required by this subsection are for process monitoring (predictive monitoring inputs, boiler trim, or process control) and are only required to meet the location specifications and quality assurance procedures referenced in subsection (f) of this section if O₂ is the monitored diluent under that subsection. However, if new O₂ monitors are required as a result of this subsection, the criteria in subsection (f) of this section should be considered the appropriate guidance for the location and calibration of the monitors.

(c) NO_x monitors.

(1) The owner or operator of units listed in this paragraph shall install, calibrate, maintain, and operate a CEMS or predictive emissions monitoring system (PEMS) to monitor exhaust NO_x. The units are:

(A) boilers with a rated heat input greater than or equal to 250 MMBtu/hr and an annual heat input greater than $2.2(10^{11})$ Btu/yr;

(B) process heaters with a rated heat input greater than or equal to 200 MMBtu/hr and an annual heat input greater than $2.2(10^{11})$ Btu/yr;

(C) stationary gas turbines with an MW rating greater than or equal to 30 MW operated more than 850 hours per year;

(D) units that use a chemical reagent for reduction of NO_x;

(E) units that the owner or operator elects to comply with the NO_x emission specifications of §117.305 of this title using a pound per MMBtu (lb/MMBtu) limit on a 30-day rolling average;

(F) lime kilns and lightweight aggregate kilns;

(G) units with a rated heat input greater than or equal to 100 MMBtu/hr that are subject to §117.310(a) of this title; and

(H) fluid catalytic cracking units (including carbon monoxide (CO) boilers, CO furnaces, and catalyst regenerator vents). In addition, the owner or operator shall monitor the stack exhaust flow rate with a flow meter using the flow monitoring specifications of 40 CFR Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A.

(2) The following are not required to install CEMS or PEMS under this subsection:

(A) for purposes of §117.305 of this title, units listed §117.303(b)(3) - (5) and (8)

- (10) of this title; and

(B) units subject to the NO_x CEMS requirements of 40 CFR Part 75.

(3) The owner or operator shall use one of the following methods to provide substitute emissions compliance data during periods when the NO_x monitor is off-line:

(A) if the NO_x monitor is a CEMS:

(i) subject to 40 CFR Part 75, use the missing data procedures specified in 40 CFR Part 75, Subpart D (Missing Data Substitution Procedures); or

(ii) subject to 40 CFR Part 75, Appendix E, use the missing data procedures specified in 40 CFR Part 75, Appendix E, §2.5 (Missing Data Procedures);

(B) use 40 CFR Part 75, Appendix E monitoring in accordance with §117.1240(e) of this title (relating to Continuous Demonstration of Compliance);

(C) if the NO_x monitor is a PEMS:

(i) use the methods specified in 40 CFR Part 75, Subpart D; or

(ii) use calculations in accordance with §117.8110(b) of this title

(relating to Emission Monitoring System Requirements for Utility Electric Generation Sources); or

(D) use the maximum block one-hour emission rate as measured during the initial demonstration of compliance required in §117.335(f) of this title (relating to Initial Demonstration of Compliance); or

(E) use the following procedures:

(i) for NO_x monitor downtime periods less than 24 consecutive hours, use the maximum block one-hour NO_x emission rate, in lb/MMBtu, from the previous 24 operational hours of the unit;

(ii) for NO_x monitor downtime periods equal to or greater than 24 consecutive hours, use the maximum block one-hour NO_x emission rate, in lb/MMBtu, from the previous 720 operational hours of the unit; and

(iii) if the fuel flow or stack exhaust flow monitor required by subsection (a) of this section is off-line simultaneous with the NO_x monitor downtime, the owner or operator shall use the maximum block one-hour NO_x pound per hour emission rate for the substitute data under clause (i) or (ii) of this subparagraph in lieu of the lb/MMBtu emission rate.

(d) Ammonia monitoring requirements. The owner or operator of units that are subject to the ammonia emission specifications of §117.310(c)(2) of this title shall comply with the ammonia monitoring requirements of §117.8130 of this title (relating to Ammonia Monitoring).

(e) CO monitoring. The owner or operator shall monitor CO exhaust emissions from each unit listed in subsection (c)(1) of this section using one or more of the methods specified in §117.8120 of this title (relating to Carbon Monoxide (CO) Monitoring).

(f) CEMS requirements. The owner or operator of any CEMS used to meet a pollutant monitoring requirement of this section shall comply with the following.

(1) The CEMS must meet the requirements of §117.8100(a) of this title (relating to Emission Monitoring System Requirements for Industrial, Commercial, and Institutional Sources).

(2) For units subject to §117.310 of this title:

(A) all bypass stacks must be monitored, in order to quantify emissions directed through the bypass stack:

(i) if the CEMS is located upstream of the bypass stack, then:

(I) no effluent streams from other potential sources of NO_x emissions may be introduced between the CEMS and the bypass stack; and

(II) the owner or operator shall install, operate, and maintain a continuous monitoring system to automatically record the date, time, and duration of each event when the

bypass stack is open; and

(ii) process knowledge and engineering calculations may be used to determine volumetric flow rate for purposes of calculating mass emissions for each event when the bypass stack is open, provided that:

(I) the maximum potential calculated flow rate is used for emission calculations; and

(II) the owner or operator maintains, and makes available upon request by the executive director, records of all process information and calculations used for this determination; and

(B) exhaust streams of units that vent to a common stack do not need to be analyzed separately.

(g) PEMS requirements. The owner or operator of any PEMS used to meet a pollutant monitoring requirement of this section shall comply with the following.

(1) The PEMS must predict the pollutant emissions in the units of the applicable emission specifications of this division (relating to Houston-Galveston-Brazoria Ozone Nonattainment Area Major Sources).

(2) The PEMS must meet the requirements of §117.8100(b) of this title.

(h) Engine monitoring. The owner or operator of any stationary gas engine subject to §117.305 of this title that is not equipped with NO_x CEMS or PEMS shall stack test engine NO_x and CO emissions as specified in §117.8140(a) of this title (relating to Emission Monitoring for Engines). The owner or operator of any stationary internal combustion engine subject to §117.310 of this title that is not equipped with NO_x CEMS or PEMS shall stack test engine NO_x and CO emissions as specified in §117.8140(a) and (b) of this title.

(i) Monitoring for stationary gas turbines less than 30 MW. The owner or operator of any stationary gas turbine rated less than 30 MW using steam or water injection to comply with the emission specifications of §117.305 or §117.315 of this title (relating to Emission Specifications for Reasonably Available Control Technology (RACT) and Alternative Plant-Wide Emission Specifications) shall either:

(1) install, calibrate, maintain, and operate a NO_x CEMS or PEMS in compliance with this section and monitor CO in compliance with subsection (e) of this section; or

(2) install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the average hourly fuel and steam or water consumption:

(A) the system must be accurate to within $\pm 5.0\%$;

(B) the steam-to-fuel or water-to-fuel ratio monitoring data must constitute the

method for demonstrating continuous compliance with the applicable emission specification of §117.305 or §117.315 of this title; and

(C) steam or water injection control algorithms are subject to executive director approval.

(j) Run time meters. The owner or operator of any stationary gas turbine or stationary internal combustion engine claimed exempt using the exemption of §117.303(a)(6)(D), (a)(10), (a)(11), (b)(2) or (b)(9) of this title shall record the operating time with an elapsed run time meter. Any run time meter installed on or after October 1, 2001, must be non-resettable.

(k) Hydrogen (H₂) monitoring. The owner or operator claiming the H₂ multiplier of §117.305(b)(6) or §117.315(g)(4) or (h) of this title shall sample, analyze, and record every three hours the fuel gas composition to determine the volume percent H₂.

(1) The total H₂ volume flow in all gaseous fuel streams to the unit must be divided by the total gaseous volume flow to determine the volume percent of H₂ in the fuel supply to the unit.

(2) Fuel gas analysis must be tested according to American Society for Testing and Materials (ASTM) Method D1945-81 or ASTM Method D2650-83, or other methods that are demonstrated to the satisfaction of the executive director and the United States Environmental Protection Agency to be equivalent.

(3) A gaseous fuel stream containing 99% H₂ by volume or greater may use the following procedure to be exempted from the sampling and analysis requirements of this subsection.

(A) A fuel gas analysis must be performed initially using one of the test methods in this subsection to demonstrate that the gaseous fuel stream is 99% H₂ by volume or greater.

(B) The process flow diagram of the process unit that is the source of the H₂ must be supplied to the executive director to illustrate the source and supply of the hydrogen stream.

(C) The owner or operator shall certify that the gaseous fuel stream containing H₂ will continuously remain, as a minimum, at 99% H₂ by volume or greater during its use as a fuel to the combustion unit.

(l) Data used for compliance.

(1) After the initial demonstration of compliance required by §117.335 of this title, the methods required in this section must be used to determine compliance with the emission specifications of §117.305 of this title. For enforcement purposes, the executive director may also use other commission compliance methods to determine whether the source is in compliance with applicable emission limitations.

(2) For units subject to §117.310(a) of this title, the methods required in this section must be used in conjunction with the requirements of Chapter 101, Subchapter H, Division 3 of this title

(relating to Mass Emissions Cap and Trade Program) to determine compliance. For enforcement purposes, the executive director may also use other commission compliance methods to determine whether the source is in compliance with applicable emission limitations.

(m) Enforcement of NO_x RACT limits. If compliance with §117.305 of this title is selected, no unit subject to §117.305 of this title may be operated at an emission rate higher than that allowed by the emission specifications of §117.305 of this title. If compliance with §117.315 of this title is selected, no unit subject to §117.315 of this title may be operated at an emission rate higher than that approved by the executive director under §117.352(b) of this title (relating to Final Control Plan Procedures for Reasonably Available Control Technology).

(n) Loss of NO_x RACT exemption. The owner or operator of any unit claimed exempt from the emission specifications of this division using the low annual capacity factor exemption of §117.303(b)(2) of this title shall notify the executive director within seven days if the Btu/yr or hour-per-year limit specified in §117.10 of this title (relating to Definitions), as appropriate, is exceeded.

(1) If the limit is exceeded, the exemption from the emission specifications of this division is permanently withdrawn.

(2) Within 90 days after loss of the exemption, the owner or operator shall submit a compliance plan detailing a plan to meet the applicable compliance limit as soon as possible, but no later than 24 months after exceeding the limit. The plan must include a schedule of increments of progress for the installation of the required control equipment.

(3) The schedule is subject to the review and approval of the executive director.

(o) Testing and operating requirements. The owner or operator of units that are subject to §117.310(a) of this title shall comply with the following.

(1) The owner or operator of units that are subject to §117.310(a) of this title shall test the units as specified in §117.335 of this title in accordance with the schedule specified in §117.9020(2) of this title (relating to Compliance Schedule for Houston-Galveston-Brazoria Ozone Nonattainment Area Major Sources).

(2) Each stationary internal combustion engine controlled with nonselective catalytic reduction must be equipped with an automatic air-fuel ratio (AFR) controller that operates on exhaust O₂ or CO control and maintains AFR in the range required to meet the engine's applicable emission limits.

(p) Emission allowances. The owner or operator of units that are subject to §117.310(a) of this title shall comply with the following.

(1) The NO_x testing and monitoring data of subsections (a), (c), (f), (g), and (o) of this section, together with the level of activity, as defined in §101.350 of this title (relating to Definitions), must be used to establish the emission factor for calculating actual emissions for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).

(2) For units not operating with CEMS or PEMS, the following apply.

(A) Retesting as specified in subsection (o)(1) of this section is required within 60 days after any modification that could reasonably be expected to increase the NO_x emission rate.

(B) Retesting as specified in subsection (o)(1) of this section may be conducted at the discretion of the owner or operator after any modification that could reasonably be expected to decrease the NO_x emission rate, including, but not limited to, installation of post-combustion controls, low-NO_x burners, low excess air operation, staged combustion (for example, overfire air), flue gas recirculation, and fuel-lean and conventional (fuel-rich) reburn.

(C) The NO_x emission rate determined by the retesting must be used to establish a new emission factor to calculate actual emissions from the date of the retesting forward. Until the date of the retesting, the previously determined emission factor must be used to calculate actual emissions for compliance with Chapter 101, Subchapter H, Division 3 of this title.

(D) All test reports must be submitted to the executive director for review and approval within 60 days after completion of the testing.

(3) The emission factor in paragraph (1) or (2) of this subsection is multiplied by the unit's level of activity to determine the unit's actual emissions for compliance with Chapter 101, Subchapter H, Division 3 of this title.

§117.345. Notification, Recordkeeping, and Reporting Requirements.

(a) Startup and shutdown records. For units subject to the startup and/or shutdown provisions of §101.222 of this title (relating to Demonstrations), hourly records must be made of startup and/or shutdown events and maintained for a period of at least two years. Records must be available for inspection by the executive director, the United States Environmental Protection Agency, and any local air pollution control agency having jurisdiction upon request. These records must include, but are not limited to: type of fuel burned; quantity of each type of fuel burned; and the date, time, and duration of the procedure.

(b) Notification. The owner or operator of an affected source shall submit notification to the appropriate regional office and any local air pollution control agency having jurisdiction as follows:

(1) verbal notification of the date of any testing conducted under §117.335 of this title (relating to Initial Demonstration of Compliance) at least 15 days prior to such date followed by written notification within 15 days after testing is completed; and

(2) verbal notification of the date of any continuous emissions monitoring system (CEMS) or predictive emissions monitoring system (PEMS) relative accuracy test audit (RATA) conducted under §117.340 of this title (relating to Continuous Demonstration of Compliance) at least 15 days prior to such date followed by written notification within 15 days after testing is completed.

(c) Reporting of test results. The owner or operator of an affected unit shall furnish the Office of

Compliance and Enforcement, the appropriate regional office, and any local air pollution control agency having jurisdiction a copy of any testing conducted under §117.335 of this title and any CEMS or PEMS RATA conducted under §117.340 of this title:

(1) within 60 days after completion of such testing or evaluation; and

(2) not later than the compliance schedule specified in §117.9020 of this title (relating to Compliance Schedule for Houston-Galveston-Brazoria Ozone Nonattainment Area Major Sources).

(d) Semiannual reports. The owner or operator of a unit required to install a CEMS, PEMS, or water-to-fuel or steam-to-fuel ratio monitoring system under §117.340 of this title shall report in writing to the executive director on a semiannual basis any exceedance of the applicable emission specifications of this division (relating to Houston-Galveston-Brazoria Ozone Nonattainment Area Major Sources) and the monitoring system performance. For sources in the mass emissions cap and trade program of Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program), that are no longer subject to §117.305 of this title (relating to Emission Specifications for Reasonably Available Control Technology (RACT)), the report is only a monitoring system report as specified in paragraph (3) of this subsection. All reports must be postmarked or received by the 30th day following the end of each calendar semiannual period. Written reports must include the following information:

(1) the magnitude of excess emissions computed in accordance with 40 Code of Federal Regulations §60.13(h), any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the unit operating time during the reporting period:

(A) for stationary gas turbines using steam-to-fuel or water-to-fuel ratio monitoring to demonstrate compliance in accordance with §117.340(i)(2) of this title, excess emissions are computed as each one-hour period that the average steam or water injection rate is below the level defined by the control algorithm as necessary to achieve compliance with the applicable emission specifications in §117.305 of this title; and

(B) for units complying with §117.323 of this title (relating to Source Cap), excess emissions are each daily period that the total nitrogen oxides (NO_x) emissions exceed the rolling 30-day average or the maximum daily NO_x cap;

(2) specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected unit, the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted;

(3) the date and time identifying each period that the continuous monitoring system was inoperative, except for zero and span checks and the nature of the system repairs or adjustments;

(4) when no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information must be stated in the report; and

(5) if the total duration of excess emissions for the reporting period is less than 1.0% of the total unit operating time for the reporting period and the CEMS, PEMS, or water-to-fuel or steam-to-fuel ratio monitoring system downtime for the reporting period is less than 5.0% of the total unit

operating time for the reporting period, only a summary report form (as outlined in the latest edition of the commission's *Guidance for Preparation of Summary, Excess Emission, and Continuous Monitoring System Reports*) must be submitted, unless otherwise requested by the executive director. If the total duration of excess emissions for the reporting period is greater than or equal to 1.0% of the total operating time for the reporting period or the CEMS, PEMS, or water-to-fuel or steam-to-fuel ratio monitoring system downtime for the reporting period is greater than or equal to 5.0% of the total operating time for the reporting period, a summary report and an excess emission report must both be submitted.

(e) Reporting for engines. The owner or operator of any gas-fired engine subject to §§117.305, 117.310, or 117.315 of this title (relating to Emission Specifications for Reasonably Available Control Technology (RACT); Emission Specifications for Attainment Demonstration; and Alternative Plant-Wide Emission Specifications) shall report in writing to the executive director on a semiannual basis any excess emissions and the air-fuel ratio monitoring system performance. All reports must be postmarked or received by the 30th day following the end of each calendar semiannual period. Written reports must include the following information:

(1) the magnitude of excess emissions [()based on the quarterly emission checks of §117.330(d)(7) of this title (relating to Operating Requirements) and the biennial emission testing required for demonstration of emissions compliance in accordance with §117.340(h) of this title, computed in pounds per hour and grams per horsepower-hour, any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the engine operating time during the reporting period; and

(2) specific identification, to the extent feasible, of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the engine or emission control system, the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted.

(f) Recordkeeping. The owner or operator of a unit subject to the requirements of this division shall maintain written or electronic records of the data specified in this subsection. Such records must be kept for a period of at least five years and must be made available upon request by authorized representatives of the executive director, the United States Environmental Protection Agency, or local air pollution control agencies having jurisdiction. The records must include:

(1) for each unit subject to §117.340(a) of this title, records of annual fuel usage;

(2) for each unit using a CEMS or PEMS in accordance with §117.340 of this title, monitoring records of:

(A) hourly emissions and fuel usage (or stack exhaust flow) for units complying with an emission limit enforced on a block one-hour average;

(B) daily emissions and fuel usage (or stack exhaust flow) for units complying with an emission limit enforced on a daily or rolling 30-day average. Emissions must be recorded in units of:

(i) pound per million British thermal units (lb/MMBtu) heat input; and

(ii) pounds or tons per day; or

(C) daily emissions and fuel usage (or stack exhaust flow) for units subject to the mass emissions cap and trade program of Chapter 101, Subchapter H, Division 3 of this title. Emissions must be recorded in units of:

(i) lb/MMBtu heat input or in the units of the applicable emission specification in §117.310(a) of this title; and

(ii) pounds or tons per day;

(3) for each stationary internal combustion engine subject to the emission specifications of this division, records of:

(A) emissions measurements required by:

(i) §117.330(d)(7) of this title; and

(ii) §117.340(h) of this title; and

(B) catalytic converter, air-fuel ratio controller, or other emissions-related control

system maintenance, including the date and nature of corrective actions taken;

(4) for each stationary gas turbine monitored by steam-to-fuel or water-to-fuel ratio in accordance with §117.340(i) of this title, records of hourly:

(A) pounds of steam or water injected;

(B) pounds of fuel consumed; and

(C) the steam-to-fuel or water-to-fuel ratio;

(5) for hydrogen (H₂) fuel monitoring in accordance with §117.340(k) of this title, records of the volume percent H₂ every three hours;

(6) for units claimed exempt from emission specifications using the exemption of §117.303(a)(6)(D), (a)(10), (a)(11), or (b)(2) of this title (relating to Exemptions), either records of monthly:

(A) fuel usage, for exemptions based on heat input; or

(B) hours of operation, for exemptions based on hours per year of operation. In addition, for each engine claimed exempt under §117.303(a)(6)(D) of this title, written records must be maintained of the purpose of engine operation and, if operation was for an emergency situation, identification of the type of emergency situation and the start and end times and date(s) of the emergency

situation;

(7) records of carbon monoxide measurements specified in §117.340(e) of this title;

(8) records of the results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS, PEMS, or steam-to-fuel or water-to-fuel ratio monitoring systems;

(9) records of the results of performance testing, including initial demonstration of compliance testing conducted in accordance with §117.335 of this title;

(10) for each stationary diesel or dual-fuel engine, records of each time the engine is operated for testing and maintenance, including:

(A) date(s) of operation;

(B) start and end times of operation;

(C) identification of the engine; and

(D) total hours of operation for each month and for the most recent 12 consecutive months; [and]

(11) for units subject to the ammonia monitoring requirements of §117.340(d) of this

title, records that are sufficient to demonstrate compliance with the requirements of §117.8130 of this title (relating to Ammonia Monitoring). For the sorbent or stain tube option, these records must include the ammonia injection rate and NO_x stack emissions measured during each sorbent or stain tube test; and [.]

(12) for each stationary reciprocating internal combustion engine and stationary gas turbine for which the owner or operator elects to use the alternative monitoring system allowed under §117.340(a)(2)(D) of this title, records of the daily average horsepower and total daily hours of operation.
Units that are monitored according to §117.340(a)(2)(D) of this title are not required to keep records of annual fuel usage as required by paragraph (1) of this subsection.

SUBCHAPTER D, COMBUSTION CONTROL AT MINOR SOURCES IN OZONE

NONATTAINMENT AREAS

DIVISION 1, HOUSTON-GALVESTON-BRAZORIA OZONE NONATTAINMENT AREA

MINOR SOURCES

§117.2035, §117.2045

STATUTORY AUTHORITY

The amendments are proposed under the authority of the following: Texas Water Code (TWC), §5.102, concerning General Powers, §5.103, concerning Rules, and §5.105, concerning General Policy, that authorize the commission to adopt rules necessary to carry out its powers and duties under the TWC; and Texas Health and Safety Code (THSC), §382.017, concerning Rules, that authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act; THSC, §382.002, concerning Policy and Purpose, that establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; THSC, §382.011, concerning General Powers and Duties, that authorizes the commission to control the quality of the state's air; and THSC, §382.012, concerning State Air Control Plan, that authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air.

The amendments are also proposed under THSC, §382.016, concerning Monitoring Requirements; Examination of Records, authorizes the commission to prescribe requirements for owners or operators of sources to make and maintain records of emissions measurements; THSC, §382.021, concerning Sampling Methods and Procedures, authorizes the commission to prescribe sampling methods and procedures; and THSC, §382.051(d), concerning Permitting Authority of Commission; Rules, authorizes

the commission to adopt rules as necessary to comply with changes in federal law or regulations applicable to permits under THSC, Chapter 382.

The proposed amendments implement THSC, §§382.002, 382.011, 382.012, 382.016, 382.021, and 382.051(d).

§117.2035. Monitoring and Testing Requirements.

(a) Totalizing fuel flow meters.

(1) The owner or operator of each unit subject to §117.2010 of this title (relating to Emission Specifications) and subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program), or of each unit claimed exempt under §117.2003(b) of this title (relating to Exemptions) shall install, calibrate, maintain, and operate totalizing fuel flow meters with an accuracy of $\pm 5\%$, to individually and continuously measure the gas and liquid fuel usage. A computer that collects, sums, and stores electronic data from continuous fuel flow meters is an acceptable totalizer. The owner or operator of units with totalizing fuel flow meters installed prior to March 31, 2005, that do not meet the accuracy requirements of this subsection shall either recertify or replace existing meters to meet the $\pm 5\%$ accuracy required as soon as practicable, but no later than March 31, 2007. For the purpose of compliance with this subsection for units having pilot fuel supplied by a separate fuel system or from an unmonitored portion of the same fuel system, the fuel flow to pilots may be calculated using the manufacturer's design flow rates rather than measured with a fuel flow meter. The calculated pilot fuel flow rate must be added to the monitored fuel flow when fuel flow is totaled.

(2) The following are alternatives to the fuel flow monitoring requirements of this subsection.

(A) Units operating with a nitrogen oxides (NO_x) and diluent continuous emissions monitoring system (CEMS) under subsection (c) of this section may monitor stack exhaust flow using the flow monitoring specifications of 40 Code of Federal Regulations (CFR) Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A.

(B) Units that vent to a common stack with a NO_x and diluent CEMS under subsection (c) of this section may use a single totalizing fuel flow meter.

(C) Diesel engines operating with run time meters may meet the fuel flow monitoring requirements of this subsection through monthly fuel use records.

(D) Units of the same category of equipment subject to Chapter 101, Subchapter H, Division 3 of this title may share a single totalizing fuel flow meter provided:

(i) the owner or operator performs a stack test in accordance with subsection (e) of this section for each unit sharing the totalizing fuel flow meter; and

(ii) the testing results from the unit with the highest emission rate (in pounds per million British thermal units or grams per horsepower-hour) are used for reporting purposes in §101.359 of this title (relating to Reporting) for all units sharing the totalizing fuel flow meter.

(E) The owner or operator of a unit or units claimed exempt under §117.2003(b) of this title, located at an independent school district may demonstrate compliance with the exemption by the following:

(i) in addition to the records required by §117.2045(a)(1) of this title (relating to Recordkeeping and Reporting Requirements), maintain the following monthly records in either electronic or written format. These records must be kept for a period of at least five years and must be made available upon request by authorized representatives of the executive director, the United States Environmental Protection Agency, or local air pollution control agencies having jurisdiction;

(I) total fuel usage for the entire site;

(II) the estimated hours of operation for each unit;

(III) the estimated average operating rate (e.g., a percentage of maximum rated capacity) for each unit; and

(IV) the estimated fuel usage for each unit; and

(ii) within 60 days of written request by the executive director, submit for review and approval all methods, engineering calculations, and process information used to estimate the hours of operation, operating rates, and fuel usage for each unit.

(F) The owner or operator of units claimed exempt under §117.2003(b) of this title may share a single totalizing fuel flow meter to demonstrate compliance with the exemption, provided that:

(i) all affected units at the site qualify for the exemption under §117.2003(b) of this title; and

(ii) the total fuel usage for all units at the site is less than:

(I) the annual fuel usage limitation in §117.2003(b)(1) of this title; or

(II) the annual fuel usage limitation in §117.2003(b)(2) of this title when all affected units at the site are equal to or greater than 5.0 million British thermal units per hour.

(G) Stationary reciprocating internal combustion engines and stationary gas turbines equipped with a continuous monitoring system that continuously monitors horsepower and hours of operation are not required to install totalizing fuel flow meters. The continuous monitoring system must be installed, calibrated, maintained, and operated according to manufacturer's procedures.

(b) Oxygen (O₂) monitors. If the owner or operator installs an O₂ monitor, the criteria in §117.8100(a) of this title (relating to Emission Monitoring System Requirements for Industrial,

Commercial, and Institutional Sources) should be considered the appropriate guidance for the location and calibration of the monitor.

(c) NO_x monitors. If the owner or operator installs a CEMS or predictive emissions monitoring system (PEMS), it must meet the requirements of §117.8100(a) or (b) of this title. If a PEMS is used, the PEMS must predict the pollutant emissions in the units of the applicable emission specifications of this division (relating to Houston-Galveston-Brazoria Ozone Nonattainment Area Minor Sources).

(d) Monitor installation schedule. Installation of monitors must be performed in accordance with the schedule specified in §117.9200 of this title (relating to Compliance Schedule for Houston-Galveston-Brazoria Ozone Nonattainment Area Minor Sources).

(e) Testing requirements. The owner or operator of any unit subject to §117.2010 of this title shall comply with the following testing requirements.

(1) Each unit must be tested for NO_x, carbon monoxide (CO), and O₂ emissions.

(2) One of the ammonia monitoring procedures specified in §117.8130 of this title (relating to Ammonia Monitoring) must be used to demonstrate compliance with the ammonia emission specification of §117.2010(i)(2) of this title for units that inject urea or ammonia into the exhaust stream for NO_x control.

(3) For units not equipped with CEMS or PEMS, all testing must be conducted according

to §117.8000 of this title (relating to Stack Testing Requirements). In lieu of the test methods specified in §117.8000 of this title, the owner or operator may use American Society for Testing and Materials (ASTM) D6522-00 to perform the NO_x, CO, and O₂ testing required by this subsection on natural gas-fired reciprocating engines, combustion turbines, boilers, and process heaters. If the owner or operator elects to use ASTM D6522-00 for the testing requirements, the report must contain the information specified in §117.8010 of this title (relating to Compliance Stack Test Reports).

(4) Test results must be reported in the units of the applicable emission specifications and averaging periods. If compliance testing is based on 40 CFR Part 60, Appendix A reference methods, the report must contain the information specified in §117.8010 of this title.

(5) For units equipped with CEMS or PEMS, the CEMS or PEMS must be installed and operational before testing under this subsection. Verification of operational status must, at a minimum, include completion of the initial monitor certification and the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

(6) Initial compliance with §117.2010 of this title for units operating with CEMS or PEMS must be demonstrated after monitor certification testing using the NO_x CEMS or PEMS.

(7) For units not operating with CEMS or PEMS, the following apply.

(A) Retesting as specified in paragraphs (1) - (4) of this subsection is required within 60 days after any modification that could reasonably be expected to increase the NO_x emission

rate.

(B) Retesting as specified in paragraphs (1) - (4) of this subsection may be conducted at the discretion of the owner or operator after any modification that could reasonably be expected to decrease the NO_x emission rate, including, but not limited to, installation of post-combustion controls, low-NO_x burners, low excess air operation, staged combustion (for example, overfire air), flue gas recirculation, and fuel-lean and conventional (fuel-rich) reburn.

(C) The NO_x emission rate determined by the retesting must establish a new emission factor to be used to calculate actual emissions from the date of the retesting forward. Until the date of the retesting, the previously determined emission factor must be used to calculate actual emissions for compliance with Chapter 101, Subchapter H, Division 3 of this title.

(8) Testing must be performed in accordance with the schedule specified in §117.9200 of this title.

(9) All test reports must be submitted to the executive director for review and approval within 60 days after completion of the testing.

(f) Emission allowances.

(1) For sources that are subject to Chapter 101, Subchapter H, Division 3 of this title, the NO_x testing and monitoring data of subsections (a) - (e) of this section, together with the level of activity,

as defined in §101.350 of this title (relating to Definitions), must be used to establish the emission factor calculating actual emissions for compliance with Chapter 101, Subchapter H, Division 3 of this title.

(2) The emission factor in subsection (e)(7) of this section or paragraph (1) of this subsection is multiplied by the unit's level of activity to determine the unit's actual emissions for compliance with Chapter 101, Subchapter H, Division 3 of this title.

(g) Run time meters. The owner or operator of any stationary diesel engine claimed exempt using the exemption of §117.2003(a)(2)(E), (H), or (I) of this title shall record the operating time with an elapsed run time meter. Any run time meter installed on or after October 1, 2001, must be non-resettable.

§117.2045. Recordkeeping and Reporting Requirements.

(a) Recordkeeping. The owner or operator of a unit subject to §117.2010 of this title (relating to Emission Specifications) or claimed exempt under §117.2003(b) of this title (relating to Exemptions) shall maintain written or electronic records of the data specified in this subsection. Such records must be kept for a period of at least five years and must be made available upon request by authorized representatives of the executive director, the United States Environmental Protection Agency, or local air pollution control agencies having jurisdiction. The records must include:

(1) records of annual fuel usage;

(2) for each unit using a continuous emission monitoring system (CEMS) or predictive

emission monitoring system (PEMS) in accordance with §117.2035(c) of this title (relating to Monitoring and Testing Requirements), monitoring records of:

(A) hourly emissions and fuel usage (or stack exhaust flow) for units complying with an emission specification enforced on a block one-hour average; and

(B) daily emissions and fuel usage (or stack exhaust flow) for units complying with an emission specification enforced on a rolling 30-day average. Emissions must be recorded in units of:

(i) pounds per million British thermal units heat input; and

(ii) pounds or tons per day;

(3) for each stationary internal combustion engine subject to §117.2010 of this title, records of:

(A) emissions measurements required by §117.2030(b)(5) of this title (relating to Operating Requirements); and

(B) catalytic converter, air-fuel ratio controller, or other emissions-related control system maintenance, including the date and nature of corrective actions taken;

(4) records of carbon monoxide measurements specified in §117.2030(b)(5) of this title;

(5) records of the results of initial certification testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS, PEMS, or steam-to-fuel or water-to-fuel ratio monitoring systems; [and]

(6) records of the results of performance testing, including the testing conducted in accordance with §117.2035(e) of this title; and[.]

(7) records of daily average horsepower and total daily hours of operation for each stationary reciprocating internal combustion engine or stationary gas turbine that the owner or operator elects to use the alternative monitoring system allowed under §117.2035(a)(2)(G) of this title. Units that are monitored according to §117.2035(a)(2)(G) of this title are not required to keep records of annual fuel usage as required by paragraph (1) of this subsection.

(b) Records for exempt engines. Written records of the number of hours of operation for each day's operation must be made for each engine claimed exempt under §117.2003(a)(2)(E), (H), or (I) of this title or §117.2030(b)(5) of this title. In addition, for each engine claimed exempt under §117.2003(a)(2)(E) of this title, written records must be maintained of the purpose of engine operation and, if operation was for an emergency situation, identification of the type of emergency situation and the start and end times and date(s) of the emergency situation. The records must be maintained for at least five years and must be made available upon request to representatives of the executive director, the United States Environmental Protection Agency, or any local air pollution control agency having

jurisdiction.

(c) Records of operation for testing and maintenance. The owner or operator of each stationary diesel or dual-fuel engine shall maintain the following records for at least five years and make them available upon request by authorized representatives of the executive director, the United States Environmental Protection Agency, or local air pollution control agencies having jurisdiction:

(1) date(s) of operation;

(2) start and end times of operation;

(3) identification of the engine; and

(4) total hours of operation for each month and for the most recent 12 consecutive months.