

The Texas Natural Resource Conservation Commission (TNRCC or commission) proposes amendments to §111.121, concerning Single-, Dual-, and Multiple-Chamber Incinerators; §111.123, concerning Medical Waste Incinerators; §111.125, concerning Testing Requirements; §111.127, concerning Monitoring and Recordkeeping Requirements; and §111.129, concerning Operating Requirements. The commission proposes these revisions to 30 TAC Chapter 111, concerning Control of Air Pollution from Visible Emissions and Particulate Matter; Subchapter A, concerning Visible Emissions and Particulate Matter; Division 2, concerning Incineration, in order to delete the current requirements for oxygen (O₂) and carbon monoxide (CO) continuous emissions monitoring systems (CEMS) for incinerators that qualify for exemptions in 30 TAC Chapter 106 (Exemptions from Permitting), §106.491 (concerning Dual Chamber Incinerators), and §106.494 (concerning Pathological Incinerators).

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULES

The rules concerning incineration in Chapter 111, Division 2 currently require most incinerators burning solid waste or pathological waste to be equipped with CEMS. Incinerators burning more than 100 pounds per hour must be equipped with O₂ CEMS and a continuous temperature monitor/recorder. In addition, incinerators burning more than 225 pounds per hour must be equipped with CO CEMS. The O₂ and CO monitoring requirements are considered by several affected parties to be cost prohibitive and not contributing to an environmental benefit that justifies the additional cost.

On January 13, 1999, a representative in the Texas Legislature sent a letter to the executive director suggesting that the commission initiate rulemaking to exempt from monitoring requirements those incinerators which can meet the exemption from permitting found in §106.491. Based on verbal

discussions among the air permits staff regarding the engineering and economics impact (for questions, contact David Ferrell of the Air Permits Division at (512) 239-1265), the executive director sent a reply on February 16, 1999, agreeing to initiate this rulemaking.

On September 24, 1998, the commission received a letter from FM Systems, Incorporated of Wheat Ridge, Colorado requesting the commission allow pathological incinerators (for dead animals) to be permitted without the requirement for an oxygen monitoring system. FM Systems, Incorporated proposed a temperature chart recorder as a substitute for the oxygen monitor for the incinerators in the 100 - 200 pound per hour range. On April 9, 1999, the commission received a letter from FC Industries, Incorporated (FC Industries) (who represented three incinerator manufacturers: Therm-Tec, Inc., of Sherwood, Oregon; Shenandoah Manufacturing of Harrisonburg, Virginia; and National Incinerators of Corsicana, Texas) requesting that continuous monitoring and recording of secondary chamber temperature and oxygen on animal units burning more than 100 pounds per hour should be eliminated entirely. FC Industries also stated that the cost for a good quality, low maintenance oxygen monitor and recorder would be approximately \$10,000, which represents an additional cost over and above the cost of the incinerator of approximately 25 - 30%. FC Industries stated that the temperature and residence time requirements for secondary incinerator chambers specified in commission rules ensures a complete burnout of smoke and odor and, therefore, the oxygen monitor/recorder requirements provide no environmental benefit that justifies the additional cost. FC Industries finally stated that Texas is the only state which requires a continuous oxygen monitor/recorder for animal incinerators. On April 13, 1999, the commission received a letter from Therm-Tec, Inc. of Sherwood, Oregon requesting the commission review the requirement for a continuous oxygen monitor for small

pathological incinerators. Therm-Tec, Inc. stated that the oxygen monitoring requirement imposes a major cost for an incinerator operator, with an initial cost as high as 30% of the total project cost, with no real gain in the control of pollution. It stated that good combustion conditions are maintained through the temperature and residence time requirements for the secondary chamber exhaust gas. The air permits staff (see David Ferrell of the Air Permits Division at (512) 239-1265) discussed the engineering and economic analysis impacts and agree these changes can be made without sacrificing air quality.

SECTION-BY-SECTION DISCUSSION

Proposed amendments to §§111.121, 111.125, 111.127, and 111.129 address the concerns raised by these affected parties by deleting the O₂ CEMS requirements for units burning between 100 and 500 pounds per hour, and the CO CEMS requirements for units burning between 225 and 500 pounds per hour. These affected units are those dual chamber incinerators which can meet the exemptions from permitting found in §106.491 and §106.494. These proposed amendments will not delete the requirement to continuously monitor the secondary chamber exhaust gas temperature for units burning more than 100 pounds per hour because temperature is critical in ensuring complete combustion and a continuous temperature monitor can reliably monitor complete combustion at a reasonable capital cost of approximately \$2,000.

Section 111.129 states that “except in the case of incinerators with continuous opacity or carbon monoxide monitors, or equivalent monitors approved by the executive director . . . , the incinerator shall be limited in hours of operation from one hour after sunrise to one hour before sunset”

Opacity cannot be effectively monitored through visual methods during darkness; therefore, the existing rule requires a CO CEMS or a continuous opacity monitoring system (COMS). The existing rule language referring to the monitoring requirements found in §111.127 is vague, and can be implied to allow units burning less than 100 pounds per hour to burn during nighttime without a COMS or a CO CEMS. While these units are considered to be relatively small, there is no reason to allow nighttime operation when the opacity cannot be visually monitored. Therefore, this proposal clarifies the commission rule by specifying in §111.121(6) that all units, not just those burning more than 100 pounds per hour, must either operate during daylight hours (one hour after sunrise until one hour before sunset), or install a COMS, CO CEMS, or an equivalent monitor approved by the executive director.

Proposed amendments to the existing Chapter 111, Division 2 would be concurrent with a proposed new Division 2, concerning Hospital and Medical/Infectious Waste Incinerators, in 30 TAC Chapter 113, concerning Hazardous Air Pollutants and Stationary Facility Performance Standards; Subchapter D, concerning Designated Facilities and Pollutants, §§113.2070 - 113.2079. In a separate rulemaking package, the new Division 2 in Subchapter D of Chapter 113 will replace the current medical waste incinerator rules found in Chapter 111 with the hospital and medical/infectious waste incinerator rules required by Title 40 Code of Federal Regulations (CFR), Part 60, Subpart Ce, concerning Hospital/Medical/Infectious Waste Incinerator Emission Guidelines.

Sections 111.121, 111.125, 111.127, and 111.129 are proposed to be amended in several places to reflect the proposed movement of medical waste incineration requirements from Chapter 111 to Chapter

113. Existing language in §111.123 would be replaced with a statement that the requirements for medical waste incinerators have been moved to Chapter 113, Subchapter D, Division 2.

Section 111.121(6) is proposed for deletion and existing paragraph (7) would be renumbered because the compliance dates established in the existing paragraph (6) have long since passed and are thus no longer necessary. The new paragraph (6) will be amended to specify that the operating requirements specified in §111.129(1), concerning operations during daylight hours, are applicable to incinerators which can claim permit exemptions found in §106.491 and §106.494. This clarifies the commission rule that all units, not just those burning more than 100 pounds per hour, must either operate during daylight hours or install a COMS or a CO CEMS.

Section 111.127(a) would be amended to delete the requirement for continuous monitoring for O₂ or CO for units meeting the exemption in §106.491. These units can burn up to 500 pounds per hour of waste which is generated on-site. Such waste includes paper, wood, cardboard cartons, rags, garbage (animal and vegetable wastes as defined in 30 TAC Chapter 101, concerning General Rules), and combustible floor sweepings containing overall not more than 10% treated papers, plastic, or rubber scraps. Subsection (a) would also be amended to delete the requirement for continuous monitoring for O₂ for units meeting the exemption in §106.494. These units can burn up to 200 pounds per hour of pathological waste which is generated on-site.

Numerous editorial changes are incorporated to ensure that the incineration rules in Chapter 111 are consistent with the Guiding Principles and policies of the commission, and are consistent in format,

style, and tone per commission guidelines. Section 111.125(2) will be amended to allow the use of two additional United States Environmental Protection Agency (EPA) test methods (Methods 26 and 26A) to test hydrogen chloride emissions. The current test method specified is contained in Texas Air Control Board Sampling Procedures Manual, dated July 1985. The two additional test methods will provide greater flexibility for the owners/operators in testing their CO emissions.

FISCAL NOTE

Bob Orozco, Technical Specialist with Strategic Planning and Appropriations, has determined that for the first five-year period the proposed amendments are in effect there will be no significant fiscal implications for units of state and local government as a result of administration or enforcement of the proposed amendments to Chapter 111. The proposed amendments are anticipated to produce cost saving to units of state and local government which operate or anticipate operating small dual-chamber incinerators or pathological incinerators that can qualify for an exemption from permitting found in Chapter 106.

Specifically, the proposed amendments to Chapter 111 would delete the current requirements for O₂ CEMS for incinerators that qualify for exemptions in §106.491 and §106.494 and burn between 100 and 500 pounds per hour. The proposed amendments would also delete the CO CEMS requirements for the same exempt incinerators burning between 225 and 500 pounds per hour. The existing requirement to continuously monitor and record the secondary chamber exhaust gas temperature is retained because temperature is critical in ensuring complete combustion and it is anticipated that this can be done at reasonable cost. The proposed amendments allow dual-chamber incinerators to burn up

to 500 pounds per hour of waste generated on-site, such as paper, wood, cardboard cartons, rags, and other combustible materials containing not more than 10% treated papers, plastic, or rubber scraps. Pathological incinerators can burn up to 200 pounds per hour of pathological waste which is generated on-site. The proposed amendments do not change the current emissions standards, but instead change the method of monitoring those emissions. The amended monitoring requirements are sufficient to verify good combustion practices in the affected units. The proposed amendments also clarify that all incinerators that are not equipped with a COMS, CO CEMS, or equivalent monitors approved by the executive director, are limited to operating during daylight hours (one hour after sunrise to one hour before sunset). In addition, the proposed amendments allow two additional methods to test hydrogen chloride emissions.

PUBLIC BENEFIT

Mr. Orozco has also determined that for each year of the first five years the proposed amendments to Chapter 111 are in effect, the public benefit anticipated from enforcement of and compliance with the proposed amendments will be a positive fiscal impact on owners and operators of the affected incinerators because regulatory requirements are reduced and costs associated with compliance are reduced for persons who own and operate or anticipate purchasing the types of incinerators affected by the proposed amendments.

Owners and operators of dual-chamber incinerators affected by the proposed amendments include small businesses, manufacturing operations, grocery stores, retail stores, restaurants, and schools that incinerate trash and cardboard. Owners and operators of pathological incinerators affected by the

proposed amendments include animal feeding operations, veterinary hospitals, hospitals, and animal shelters.

The purpose of the proposed amendments is to reduce the regulatory requirements on incinerators which qualify for exemption from permitting in accordance with the criteria in §106.491 and §106.494. By deleting the requirements for a CEMS, initial capital costs for persons purchasing and operating small dual-chamber incinerators that can qualify for exemption are reduced by approximately 30%. The cost of a continuous oxygen monitoring/recording system is approximately \$10,000. In addition, deletion of the requirement for a continuous oxygen monitoring/recording system is anticipated to reduce annual operating costs for the incinerator by approximately \$3,000 per year.

There are no additional economic costs anticipated to any person required to comply with the proposed amendments to Chapter 111 because the proposed amendments reduce regulatory requirements and the costs associated with complying with those requirements. In addition, the proposed amendments do not impose any new regulatory requirements beyond those which currently exist. It is anticipated that the proposed reduction in regulatory requirements will make the purchase of these types of incinerators more economical and will have a positive fiscal impact on current and future owners and operators and these facilities.

SMALL BUSINESS AND MICRO-BUSINESS IMPACT ANALYSES

Small businesses and micro-businesses are anticipated to be more likely to own and operate an incinerator that can meet the permit exemption requirements. No adverse economic effects are anticipated to any small business or micro-business as a result of implementing the proposed amendments because the proposed amendments reduce regulatory requirements and reduce the cost associated with the operation of incinerators affected by these rules. In addition, the proposed amendments do not add any additional regulatory requirements to small businesses not already required by state or federal law. It is anticipated that there will be cost savings to certain small businesses as a result of implementing the proposed amendments.

DRAFT REGULATORY IMPACT ANALYSIS

The commission has reviewed the rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and has determined that the rulemaking is not subject to §2001.0225 because it does not meet the definition of a “major environmental rule” as defined in the statute.

“Major environmental rule” means a rule the specific intent of which is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way, the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The proposed amendments to Chapter 111 are not anticipated to 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 because the proposed amendments delete current regulatory requirements which are anticipated to have positive economic benefits in affected facilities. The positive economic benefits are

realized through the elimination of the requirement to purchase and operate continuous oxygen and carbon monoxide monitoring systems, while at the same time monitoring good combustion with the existing continuous temperature monitoring requirement. The proposed amendments do not change current emissions standards nor the amount of emissions produced by the affected parties. The proposed amendments represent only a change in the method of monitoring those emissions, and as such, the amended monitoring requirements are sufficient to verify good combustion practices of the affected units and protection of the public health and safety. In addition, the proposed amendments are not a “major environmental rule” because they do not meet any of the four applicability requirements of a “major environmental rule.” Specifically, the proposed amendments do not exceed a standard set by federal law, exceed an express requirement of state law, exceed a requirement of a delegation agreement, nor are adopted solely under the general powers of the commission. The commission invites public comment on the draft Regulatory Impact Analysis.

TAKINGS IMPACT ASSESSMENT

The commission has prepared a Takings Impact Assessment for these rules in accordance with Texas Government Code, §2007.043. The following is a summary of that assessment. The rules in Chapter 111, Subchapter A, Division 2 currently require most incinerators burning solid waste to be equipped with CEMS. Incinerators burning more than 100 pounds per hour must be equipped with O₂ CEMS and a continuous temperature monitor/recorder. In addition, incinerators burning more than 225 pounds per hour must be equipped with CO CEMS. The O₂ and CO monitoring requirements are considered by the affected parties to be cost prohibitive and not contributing to an environmental benefit that justifies the additional cost. The proposed amendments to §§111.121, 111.123, 111.125, 111.127,

and 111.129 address the concerns raised by above mentioned persons by deleting the O₂ and CO CEMS requirements for certain dual-chamber incinerators which can meet the permit exemptions found in §106.491 and §106.494. These proposed amendments will not delete the requirement to continuously monitor the secondary chamber exhaust gas temperature for incinerators which burn more than 100 pounds per hour because temperature is critical in ensuring complete combustion and can be monitored at a significantly lower capital cost of approximately \$2,000, than with an O₂ or CO CEMS capital cost of approximately \$10,000.

This proposal also clarifies the commission rule that all units, not just those burning more than 100 pounds per hour, must either operate during daylight hours, or install a COMS or CO CEMS. The current rule language is vague and can be implied to allow that units burning no more than 100 pounds per hour can operate at night without installing either a COMS or CO CEMS. While these units are considered relatively small, it has not been the commission's intent to allow nighttime operation when the opacity cannot be visually monitored. Therefore, the rule language is proposed to clarify that all units, no matter what the burn rate, must either monitor opacity with a CO CEMS or COMS, or restrict operations to daylight hours only.

Promulgation and enforcement of these rules will not burden private real property which is the subject of the rules because this rulemaking will result in a cost savings for units that can qualify for the exemptions from permitting found in §106.491 and §106.494. The cost savings for parties purchasing these incinerators will include an approximate reduction in initial capital cost of 25 - 30% and an approximate reduction in annual operating cost of \$3,000.

Also, the following exception to the application of Chapter 2007 of the Texas Government Code listed in §2007.043(b) applies to these rules: II. B. 5. Adoption of these proposed rule amendments will make the existing rules less stringent for any party which purchases and operates small dual-chamber incinerators that can qualify for the exemptions from permitting found in §106.491 or §106.494. Under existing rules, affected parties which incinerate more than 100 pounds per hour of waste must install, maintain, and operate continuous emissions monitoring systems for O₂ content and temperature of the exhaust gas stream. In addition, affected parties which incinerate more than 225 pounds per hour must install, maintain, and operate a CEMS to monitor CO emissions in the exhaust gas stream. Affected parties which incinerate less than 100 pounds per hour are not required to install and operate a CEMS for oxygen or CO, nor continuous monitor/recorders for temperature. The proposed rules will require only continuous monitoring and recording of the exhaust gas temperature for those incinerators which incinerate more than 100 pounds per hour. The requirement for an O₂ and CO CEMS remains the same for incinerators which cannot meet either of the permit exemptions, i.e., for units burning more than 500 pounds per hour for non-pathological waste incinerators and more than 225 pounds per hour for pathological waste incinerators.

COASTAL MANAGEMENT PROGRAM CONSISTENCY REVIEW

The commission has determined that of this rulemaking relates to an action or actions subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act of 1991, as amended (Texas Natural Resource Code, §§33.201 et seq.), and the commission's rules in 30 TAC Chapter 281, Subchapter B, concerning Consistency with the Texas Coastal Management Program. As required by 31 TAC §505.11(b)(2) and 30 TAC §281.45(a)(3), relating to actions and rules subject to

the CMP, commission rules governing air pollutant emissions must be consistent with the applicable goals and policies of the CMP. The commission has reviewed this action for consistency with the CMP goals and policies in accordance with the rules of the Coastal Coordination Council, and has determined that the action is consistent with the applicable CMP goals and policies. The CMP policy applicable to this rulemaking action is the policy that commission rules comply with regulations at 40 CFR, to protect and enhance air quality in the coastal area (31 TAC §501.14(q)). Although there is no analogous federal requirement at this time, §7429 of the Federal Clean Air Act Amendments of 1990 requires EPA to establish performance standards and other requirements for each category of solid waste incineration unit. In addition 40 CFR Part 51, concerning Requirements for Preparation, Adoption, and Submittal of Implementation Plans, requires that states adopt rules to ensure that they attain and maintain the national ambient air quality standards (NAAQS). These proposed rules involve emissions of two of the NAAQS, particulate and carbon monoxide, and do not propose an increase in emissions which would violate the NAAQS. The proposed rules do not change current emissions standards nor the amount of emissions produced by the affected parties. The proposed rules represent only a change in the method of monitoring those emissions, and as such the amended monitoring requirements are sufficient to verify good combustion practices of the affected units and protection of the public health and safety. Therefore, the proposed rules are consistent with 40 CFR Part 51. Interested persons may submit comments on the consistency of the proposed rules with the CMP during the public comment period.

PUBLIC HEARING

A public hearing on this proposal will be held in Austin on January 5, 2000, at 10:00 a.m. in Room 5108 of TNRCC Building F, located at 12100 Park 35 Circle. Visitor parking is located in the lots surrounding Buildings A and F, and there is no need to make reservations or pre-register. The hearing is structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion within the audience will not occur during the hearings; however, a commission staff member will be available to discuss the proposal 30 minutes prior to the hearing and will answer questions before and after the hearing.

Persons with disabilities who have special communication or other accommodation needs who are planning to attend the hearing should contact the commission at (512) 239-4900. Requests should be made as far in advance as possible.

SUBMITTAL OF COMMENTS

Written comments may be submitted to Lola Brown, Office of Environmental, Policy, Analysis, and Assessment, MC 205, P.O. Box 13087, Austin, Texas 78711-3087 or faxed to (512) 239-4808. All comments should reference Rule Log No. 99012-111-AI. Comments must be received by 5:00 p.m., January 7, 2000. For further information, please contact Alan Henderson, Policy and Regulations Division, (512) 239-1510. Copies of the proposed amendments may be obtained by calling Ms. Brown at (512) 239-0348 or by accessing the "proposals/adoptions" portion of the commission's web site at www.tnrcc.state.tx.us/oprd.

STATUTORY AUTHORITY

These amendments are proposed under the Texas Water Code, §5.103 and §5.105, which provide the commission with the authority to adopt any rules necessary to carry out its powers and duties under the provisions of the Texas Water Code or other laws of this state; and under Texas Health and Safety Code, Texas Clean Air Act (TCAA), §382.017, which provides the commission with the authority to adopt rules consistent with the policy and purposes of the TCAA. The amendments are also proposed under the TCAA, §382.011, which provides the commission with the authority to control the quality of the state's air, which the new proposed rule will accomplish by regulating air emissions from incinerators. The amendments are also proposed under TCAA, §382.016, which authorizes the commission to require monitoring requirements and examination of records and therefore is consistent with the referenced requirements.

The proposed amendments implement Texas Health and Safety Code, TCAA, §382.011, General Powers and Duties; §382.002, Policy and Purpose; and §382.016, Monitoring Requirements, Examination of Records.

SUBCHAPTER A : VISIBLE EMISSIONS AND PARTICULATE MATTER

DIVISION 2 : INCINERATION

§§111.121, 111.123, 111.125, 111.127, 111.129

§111.121. Single-, Dual-, and Multiple-Chamber Incinerators.

No person shall cause, suffer, allow, or permit the burning of domestic, municipal, commercial, or industrial solid waste as defined in §101.1 of this title (relating to Definitions) in a single-, dual-, or multiple-chamber incinerator, unless the conditions listed in paragraphs (1)-(6) [(7)] of this section are met. For purposes of this section, the term "commercial waste" shall be defined as waste material generated from retail and wholesale establishments. The requirements of this section do not apply to hazardous waste incinerators, or hospital and medical/infectious waste incinerators.

(1) Particulate emissions shall not exceed 0.18 gram per dry standard cubic meter (g/dscm) or 0.08 grain per dry standard cubic foot (gr/dscf), front-half of sampling train only, when corrected for 7.0% oxygen (O_2) in the stack gas according to the formula: Figure: 30 TAC

§111.121(1)

$$P_c = P_m \times \frac{14}{21 - Y}$$

Where:

P_c is the corrected concentration of particulate matter,
 P_m is the measured particulate matter concentration, and
 Y is the measured concentration of O_2 in the stack gas using the Orsat method for O_2 analysis of dry flue gas as defined in 40 Code of Federal Regulations Part 60, Appendix A (Method 3).

(2) Hydrogen chloride (HCl) emissions greater than 1.8 kilograms (4 pounds) per hour require a control device with a minimum removal efficiency of 95%.

(3) Carbon monoxide (CO) emissions shall not exceed 120 parts per million by volume dry basis, when corrected to 7.0% O_2 [oxygen (O_2)] in the stack gas as specified in paragraph (1) of this section. CO and O_2 shall be measured at the same location. Upon the approval of the executive director of the Texas Natural Resource Conservation Commission (TNRCC) [Texas Air Control Board (TACB)], a total hydrocarbon (THC) standard may be chosen as an alternative to the CO standard. In such cases, the emissions shall not exceed 20 parts per million, when corrected to 7.0% O_2 [oxygen] in the stack gas as specified in paragraph (1) of this section. THC and O_2 shall be measured at the same location.

(4) Oxygen content shall be maintained at greater than 4.0% by volume of the emissions of the incinerator, measured at the exit of the incinerator, or at an alternate location approved by the executive director or a designated representative of the TNRCC [TACB]. Incinerators subject to the requirements of this section may operate at O_2 [oxygen] concentrations less than 4.0% by volume if

compliance with paragraph (3) of this section can be continuously demonstrated at a lower O_2 [oxygen] concentration.

(5) Visible emissions shall not exceed an opacity of 5.0% averaged over any six-minute period.

[(6) Compliance with the requirements of this section shall be as soon as practicable, but no later than July 31, 1990, except in the case of industrial solid waste incinerators, which shall be in compliance as soon as practicable, but no later than December 31, 1992.]

~~(6)~~ [(7)] Incinerators burning not more than 100 pounds per hour of domestic, municipal, commercial, or industrial solid waste, based on the total weight of materials burned, shall be subject to an opacity limit of 5.0% averaged over a six-minute period, [and] the requirements of §111.127(d) of this title (relating to Monitoring and Recordkeeping Requirements), and the operating requirements of §111.129(1) of this title (relating to Operating Requirements); but shall be otherwise exempt from the provisions of this section and §§[111.123,] 111.125, 111.127, and 111.129 of this title (relating to Incineration).

§111.123. Medical Waste Incinerators.

All requirements for medical waste incinerators are in §§113.2070 - 113.2079 of this title (relating to Hospital and Medical/Infectious Waste Incinerators).

[No person shall cause, suffer, allow, or permit the burning of medical waste, as defined in §101.1 of this title (relating to Definitions), unless the incinerator meets the following requirements.]

[(1) On-site medical waste incinerators burning not more than 100 pounds per hour of waste must:]

[(A) be equipped with a secondary chamber which maintains a temperature of 1,400 degrees Fahrenheit or higher, measured at the exit of the secondary chamber and recorded continuously;]

[(B) not exceed visible emissions of 5.0% opacity averaged over any six-minute period;]

[(C) maintain written records as specified in §111.127(b) of this title (relating to Monitoring and Recordkeeping Requirements);]

[(D) limit hours of operation as specified in §111.129(1) of this title (relating to Operating Requirements);]

[(E) post current manufacturer's operating procedures as specified in §111.129(2); and]

[(F) comply with the requirements of this section, as soon as practicable, but no later than December 31, 1991.]

[(2) On-site medical waste incinerators burning more than 100 but no more than 225 pounds per hour of waste must:]

[(A) be equipped with a secondary chamber which retains all combustion gases for 1.0 second or longer at a temperature of 1,600 degrees Fahrenheit or higher, measured at the exit of the secondary chamber and recorded continuously;]

[(B) limit particulate emissions to 0.18 gram per dry standard cubic meter (g/dscm) or 0.08 grain per dry standard cubic foot (gr/dscf), front-half of sampling train only, when corrected for 7.0% oxygen in the stack according to the formula specified in §111.121(1) of this title (relating to Single-, Dual-, and Multiple-Chamber Incinerators);]

[(C) maintain an oxygen content at greater than 4.0% by volume of the emissions of the secondary chamber, measured at the exit of the secondary chamber or at an alternate location approved by the executive director or a designated representative of the TACB;]

[(D) not exceed visible emissions of 5.0% opacity averaged over any six-minute period;]

[(E) maintain written records as specified in §111.127(b);]

[(F) limit hours of operation as specified in §111.129(1);]

[(G) post current manufacturer's operating procedures as specified in §111.129(2); and]

[(H) comply with the requirements of this section as soon as practicable but no later than July 31, 1992.]

[(3) On-site medical waste incinerators burning more than 225 pounds per hour of waste, and commercial medical waste incinerators, as defined in §101.1 of this title (relating to Definitions), must:]

[(A) be equipped with a secondary chamber which retains all combustion gases for 1.0 second or longer at a temperature of 1,800 degrees Fahrenheit or higher, measured at the exit of the secondary chamber and recorded continuously;]

[(B) limit particulate emissions to 0.07 g/dscm or 0.03 gr/dscf, front-half of the sampling train only, when corrected for 7.0% oxygen in the stack gas as specified in §111.121(1);]

[(C) for hydrogen chloride emissions greater than 1.8 kilograms (four pounds) per hour, a control device with a minimum removal efficiency of 95% is required;]

[(D) limit carbon monoxide emissions to 100 parts per million by volume dry basis, when corrected to 7.0% oxygen in the stack gas as specified in §111.121(1). CO and O₂ shall be measured at the same location;]

[(E) maintain an oxygen content at greater than 4.0% by volume of the emissions of the secondary chamber, measured at the exit of the secondary chamber or at an alternate location approved by the executive director or a designated representative of TACB;]

[(F) not exceed visible emissions of 5.0% opacity averaged over any six-minute period;]

[(G) maintain written records as specified in §111.127(b);]

[(H) post current manufacturer's operating procedures as specified in §111.129(2); and]

[(I) comply with the requirements of this section as soon as practicable, but no later than July 31, 1990, for commercial medical waste incinerators, and December 31, 1992, for on-site medical waste incinerators.]

§111.125. Testing Requirements.

Upon the request of the executive director or a designated representative of the Texas Natural Resource Conservation Commission (commission) [(Texas Air Control Board], or a representative of the United States Environmental Protection Agency, or the local air pollution control agency, compliance with §111.121 of this title (relating to Single-, Dual-, and Multiple-Chamber Incinerators) [and §111.123 of this title (relating to Medical Waste Incinerators)] shall be demonstrated by application of the test methods included in paragraphs (1) - (4) of this section, as appropriate. Compliance with §111.124 of this title (relating to Burning Hazardous Waste Fuels in Commercial Combustion Facilities) shall be demonstrated by application of the test methods included in paragraphs (1)-(5) of this section. Test reports prepared to demonstrate compliance with §111.124 of this title shall clearly document the operating conditions and waste feed composition existing during the test. [:]

(1) Particulate [particulate] matter. Test Method 5 (40 Code of Federal Regulations (CFR) 60, Appendix A) modified to include particulate caught by impinger train;

(2) Hydrogen [hydrogen] chloride. Test Method 26 or 26A (40 CFR 60, Appendix A), or Test Method [method] outlined in Chapter 5 [of the latest edition] of the TNRCC [Texas Air Control Board] “Sampling Procedures Manual,” dated July 1985;[”]

(3) Carbon [carbon] monoxide. Test Method 10, 10A, or 10B (40 CFR [Code of Federal Regulations] 60, Appendix A) or, for [nonmedical waste incinerators,] total hydrocarbons: Test Method 25A (40 CFR [Code of Federal Regulations] Part 50, Appendix A);

(4) Opacity [opacity]. Test Method 9 (40 CFR [Code of Federal Regulations,] Part 60, Appendix A);

(5) Destruction [destruction] and removal efficiency. Destruction and removal efficiency, measuring principal organic hazardous constituent (POHC) mass feed rate to the commercial combustion facility, measuring the mass emission rate of POHC in the stack gas, and analyzing the POHC sample obtained from the stack gas, using the following test methods, respectively: Method 8240 of SW-846 "Test Methods for Evaluating Solid Waste," Method 0030 (VOST) of SW-846, Method 5040 of SW-846; or

(6) Alternative [alternative] methods. Equivalent test methods approved by the executive director.

§111.127. Monitoring and Recordkeeping Requirements.

(a) [Incinerators burning not more than 100 pounds per hour of medical waste as specified in §111.123 of this title (relating to Medical Waste Incinerators) shall install, calibrate, maintain, and operate a monitoring device that continuously measures and records the temperature of the exhaust gas

of the incinerator.] Except for incinerators which can qualify for exemptions from permitting found in §106.491 of this title (relating to Dual Chamber Incinerators), and §106.494 of this title (relating to Pathological Waste Incinerators), [All] incinerators burning more than 100 pounds per hour of waste as specified in §111.121 of this title (relating to Single-, Dual-, and Multiple-Chamber Incinerators) [and §111.123] shall install, calibrate, maintain, and operate a monitoring device that continuously measures and records the oxygen (O_2) content and temperature of the exhaust gas of the incinerator. Incinerators which qualify for exemptions from permitting in §106.491 and §106.494 of this title, and which burn more than 100 pounds per hour, shall install, calibrate, maintain, and operate a monitoring device that continuously measures and records the temperature of the exhaust gas of the incinerator. The monitoring device for incinerators equipped with a wet scrubbing device shall continuously measure and record the pressure drop of the gas flow through the wet scrubbing device. Except for incinerators which can qualify for exemptions from permitting found in §106.491 and §106.494 of this title, incinerators [Commercial medical waste incinerators and incinerators] burning more than 225 pounds per hour of domestic, municipal, commercial, [medical,] or industrial solid waste shall be equipped with continuous emissions monitors which measure and record in-stack carbon monoxide (CO) in addition to the other requirements of this section. A [For nonmedical incinerators, a] total hydrocarbon (THC) monitor may be substituted for the CO [carbon monoxide] monitor if a THC [total hydrocarbon] standard is established in accordance with [pursuant to] §111.121(3) of this title. For municipal incinerators built prior to 1990 and burning less than 2,000 pounds per hour of municipal solid waste, a stack test for CO [carbon monoxide] may be performed to establish O_2 [oxygen] and temperature requirements necessary to maintain minimum CO [carbon monoxide] emissions, and monitoring of these parameters may be substituted for the CO [carbon monoxide] monitoring device. The O_2

[oxygen], THC [total hydrocarbon], and CO [carbon monoxide] monitoring devices described in this section must be certified for use following procedures outlined in 40 Code of Federal Regulations (CFR) 60, Appendix B, Performance Specifications 3 and 4, respectively. Such certification must be approved by the executive director or a designated representative of the Texas Natural Resource Conservation Commission (TNRCC) [Texas Air Control Board (TACB)]. Compliance determinations may be made based on results of monitoring with a certified monitor. Compliance with the CO [carbon monoxide] and/or THC [total hydrocarbon] requirements specified in §111.121(3) of this title and §111.124(4) [§§111.121(3), 111.123(3)(D), and 111.124(4)] of this title (relating to Burning Hazardous Waste Fuels in Commercial Combustion Facilities) may be demonstrated using a rolling hourly average. The rolling hourly average shall be defined as the arithmetic mean of the 60 most recent one-minute concentrations measured by the continuous monitoring system.

(b) The owner or operator of an incinerator or commercial combustion facility subject to the requirements of §§111.121, [and 111.123-] 111.124, and 111.125 of this title (relating to Single-, Dual-, and Multiple-Chamber Incinerators; [Medical Waste Incinerators;] Burning Hazardous Waste Fuels in Commercial Combustion Facilities; and Testing Requirements), respectively, shall maintain written records of all monitoring and testing results, hours of operation, and quantity of waste burned. Such records shall be retained for a period of not less than two years before being destroyed. Such records shall be made available upon request by authorized representatives of the TNRCC [TACB], United States Environmental Protection Agency (EPA), or local air pollution control agencies. Alternately, for facilities other than commercial combustion facilities, in the absence of records verifying waste quantities burned, the design capacity of the unit will be used to determine applicable controls.

(c) The owner or operator of a commercial combustion facility subject to the requirements of §111.124 of this title [(relating to Burning Hazardous Waste Fuels in Commercial Combustion Facilities)] shall install, calibrate, maintain, and operate a monitoring device that continuously measures and records the waste feed rate, combustion gas velocity, opacity, O_2 [oxygen] content, CO [carbon monoxide (CO)] content, THC [(total hydrocarbon (THC))] content, and temperature of the exhaust gas of the combustion device. CO and THC shall be corrected to 7.0% O_2 , [oxygen] reported on a dry basis, and measured in the same location. The O_2 , [oxygen] THC, CO, combustion gas velocity, and opacity devices must be certified for use following procedures outlined in 40 CFR Part 60. Such certification must be approved by the executive director or his designated representative of the TNRCC [TACB]. Compliance determinations may be made based on results of monitoring with a certified monitor.

(d) Upon the request of the executive director or a designated representative of the TNRCC [TACB], EPA, or local air pollution control agency, the owner or operator of an incinerator which is exempt from the requirements specified in §111.121 of this title [(relating to Single-, Dual-, and Multiple-Chamber Incinerators)] and whose incinerator has the capacity to burn more than 100 pounds per hour shall maintain written records of the amount of waste burned. Such records shall be retained for a period of not less than two years before being destroyed.

§111.129. Operating Requirements.

The owner or operator of incinerators or commercial combustion facilities subject to the requirements of §§111.121, [111.123-] 111.124, 111.125, and 111.127 of this title (relating to Single-, Dual-, or Multiple-Chamber Incinerators; [Medical Waste Incinerators;] Burning Hazardous Waste Fuels in Commercial Combustion Facilities; Testing Requirements; and Monitoring and Recordkeeping Requirements), respectively, shall meet the following operating requirements.

(1) Except in the case of incinerators with continuous opacity or carbon monoxide monitors, or equivalent monitors approved by the executive director or a designated representative of the Texas Natural Resource Conservation Commission [Texas Air Control Board], the incinerator shall be limited in hours of operation from one hour after sunrise to one hour before sunset.

(2) Current manufacturer's operating procedures shall be posted on or near each incinerator or the incinerator control room, and the incinerator shall be operated in accordance with those procedures.