

TITLE 31. NATURAL RESOURCES AND CONSERVATION

Part III. Texas Air Control Board

Chapter 101. General Rules

• 31 TAC §101.1

The Texas Air Control Board (TACB) adopts an amendment to §101.1, without changes to the proposed text as published in the August 25, 1989, issue of the *Texas Register* (14 TexReg 4277).

The definitions are amended in response to House Bill 2468, enacted by the 71st Texas Legislature, which requires that the TACB initiate rulemaking concerning commercial infectious waste incinerators. Specifically, the agency added definitions of commercial infectious waste incinerator, fomites, and infectious waste.

The Administrative Procedure Texas Register Act, Texas Civil Statutes, Article 6252-13a, §5(c)(1), requires categorization of comments as being for or against a proposal. A commenter who suggested any changes in the proposal is categorized as against the proposal; a commenter who agreed with the proposal in its entirety is categorized as being for the proposal.

Seven commenters (three private citizens, the United States Environmental Protection Agency (EPA), Hardin Lawson Associates (HLA), Browning-Ferris Industries (BFI), and the Texas Department of Health (TDH)) testified against the proposed amendment. There were no commenters in favor of the proposal.

A complete summary of comments and a discussion of issues follows. Copies of the written testimony and hearing transcript are available for inspection at the central office of the TACB, 6330 Highway 290 East, Austin, Texas 78723.

Seven commenters suggested changes to the definitions listed in the TACB general rules. EPA stated that the proposal is unclear regarding whether the definitions classify all pathological wastes as infectious and subject to both on-site (§111.123(a)) and off-site (§111.123(b)) restrictions. Two private citizens asserted that trench burners should be deleted from the definition of incinerator. A private citizen advocated adding industrial waste to the definition of municipal solid waste.

The staff used the definition published in the Code of Federal Regulations to define infectious waste, and believes that this definition classifies all pathological waste as infectious. Regarding the issue of trench burners, the staff notes that these burners are only approved in conjunction with land-clearing activities, such as the burning of wood and brush. The agency grants approval only if the site conditions and material to be burned will not create a nuisance. Such activities are further limited elsewhere in Regulation I (outdoor burning). Therefore, the staff does not propose to delete the provision from the definition. Adding industrial waste to the definition of municipal solid waste would not be prudent, as industrial waste is potentially more

toxic than municipal. The staff believes that a separate definition of industrial waste should be added to the general rules. However, a new public hearing must be held in order to add the definition. The staff recommends that additional hearings regarding this and other related issues be held in the near future.

It should be noted that state law requires that the TACB allow those who will be impacted by proposed changes to the agency's rules an opportunity to comment on those changes. In cases where a hearing has been held and public testimony has pointed out the need to revise a proposal, the revision cannot be made if it will impact those not previously impacted by the proposal. In the preceding example, adding definitions which had not previously been proposed would not be possible, because no one would have had a chance to comment. Similarly, later in this analysis, the staff agrees with comments that the proposed exemption should be eliminated. However, to do so without an additional hearing would adversely impact those previously exempted without giving them an opportunity to comment. On the other hand, the staff is recommending that a proposed opacity limit be lowered from 20% to 5.0%. This action can be taken without additional hearings because, while it will tighten restrictions, it will not affect any facilities which were not already affected by the previous proposal.

One private citizen proposed definitions of rubble, municipal solid waste, garbage, biomedical waste, and incinerator, while BFI and HLA suggested that the TACB use TDH's definitions relating to special waste from health care-related facilities. Finally, TDH suggested a minor change to the definition of commercial infectious waste incinerator and a new definition of medical waste. TDH also stated that the TACB should use definitions already in the Texas Health and Safety Code, Chapter 361, instead of existing definitions of rubbish, garbage, and municipal solid waste.

While the definitions submitted for rubble, municipal solid waste, garbage, biomedical waste, and incinerator have merit, the staff agrees with the contention of the TDH that the definitions should be consistent with those used by the TDH, which has major jurisdiction in this area. Similarly, the staff recommends that the definitions of commercial infectious waste incinerator and infectious waste be made consistent with the TDH definitions. However, the TDH definitions are considerably broader than those proposed, encompassing all waste generated from health care facilities. Therefore, additional hearings will need to be held in order to allow for public testimony. The staff also recommends redefining the terms rubbish, garbage, and municipal solid waste in accordance with TDH definitions. Again, this will necessitate additional public hearings, which should be held in the near future. In the meantime, the staff recommends adoption of the proposed definitions as a temporary measure to facilitate enforcement of the associated incinerator rules.

The amendment is adopted under the Texas Clean Air Act (TCAA), §382.017, which provides the TACB with the authority to make rules and regulations consistent with the policy and purposes of the TCAA.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel

and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas on January 17, 1990.

TRD-9000608

Allen Eli Bell
Executive Director
Texas Air Control Board

Effective date: February 7, 1990

Proposal publication date: August 25, 1989

For further information, please call: (512) 451-5711, ext. 354

Chapter 111. Control of Air Pollution From Visible Emissions and Particulate Matter

Incineration

• 31 TAC §111.121

The Texas Air Control Board (TACB), adopts the repeal of §111.121, without changes to the proposed text as published in the August 25, 1989, issue of the *Texas Register* (14 TexReg 4277).

The purpose of the repeal is to remove material superceded by a new undesignated head, which is adopted in concurrent action.

The Administrative Procedure and Texas Register Act, Texas Civil Statutes, Article 6252-13a, §5(c)(1), requires categorization of comments as being for or against a proposal. A commenter who suggested any changes in the proposal is categorized as against the proposal; a commenter who agreed with the proposal in its entirety is categorized as being for the proposal. No comments were received regarding adoption of the repeal.

Copies of the hearing transcript are available for inspection at the central office of the TACB, 6330 Highway 290 East, Austin, Texas 78723.

The repeal is adopted under the Texas Clean Air Act (TCAA), §382.017, which provides the TACB with the authority to make rules and regulations consistent with the policy and purposes of the TCAA.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on January 17, 1990.

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• 31 TAC §§111.121, 111.123, 111.125, 111.127, 111.129

The Texas Air Control Board (TACB) adopts new sections 111.121, 111.123, 111.125, 111.127, and 111.129, with changes to the proposed text as published in the August 25, 1989, issue of the *Texas Register* (14

TexReg 4278). In concurrent action, the TACB repeals existing §111.121, concerning incineration.

The new §111.121 establishes limitations on the burning of domestic or municipal solid waste in residential, commercial, hospital/pathological waste, or publicly-owned incinerators and prohibits burning of other materials. The new §111.123 establishes opacity limits, as well as emissions limits, for particulates and hydrogen chloride (HCl), as well as a combustion efficiency for carbon monoxide, for the same types of incinerators. The section also establishes separate temperature, retention time, and emissions and capacity limits for commercial infectious waste incinerators, which are defined in the section as facilities that accept for incineration infectious waste generated outside the property boundaries of the facility. The new §111.125 establishes test methods for determining compliance regarding particulate, HCl, combustion efficiency, and opacity. The new §111.127 requires facilities to install and operate continuous monitoring devices to record the waste flow to each incinerator and the oxygen content and exhaust gas temperature of the incinerator stack. The new §111.129 exempts incinerators that, based on the total weight of materials burned, burn less than five tons per day of domestic or municipal solid waste from all specified requirements with the exception of opacity limits.

The new sections were adopted in response to House Bill 2468 passed by the 71st Texas Legislature and requiring the TACB to initiate rulemaking concerning commercial infectious waste incinerators. The new sections also improve enforceability regarding single- and multiple-chamber incinerators by establishing specific requirements and defining equivalency.

The Administrative Procedure and Texas Register Act, Texas Civil Statutes, Article 6252-13a, §5(c)(1), requires categorization of comments as being for or against a proposal. A commenter who suggested any changes in the proposal is categorized as against the proposal; a commenter who agreed with the proposal in its entirety is categorized as being for the proposal.

Twenty-five commenters (nine private citizens; Southwest Medical Disposal, Inc. (SMD); Sierra Club; a state representative; Galveston County Health District (Galveston); Waste Management of North America, Inc. (WMI); Community Environmental Watch (CEW); United Neighbors Improving the Environment (UNITE); National Solid Waste Management Association (NSWMA); Browning-Ferris Industries (BFI); Moore Industrial Disposal, Inc. (Moore); Harris County Pollution Control Department (HPCPD), City of Houston (Houston); United States Environmental Protection Agency (EPA); Texas Department of Health (TDH); Houston Sierra Club (HSC); and Galveston/Houston Association for Smog Prevention (GHASP) questioned the proposed rules concerning incineration. There were no commenters in favor of the proposal.

A complete summary of comments and a discussion of issues follows. Copies of the written testimony and hearing transcript are available for inspection at the central office of the TACB, 6330 Highway 290 East, Austin, Texas 78723.

Four commenters (two private citizens, Houston, and BFI) forwarded comments regarding single-chamber incinerators. The private citizens and Houston asserted that all single-chamber incinerators should be banned. BFI noted that since the TACB has proposed specific equivalency measures, there is no need to "dictate the type of technology."

The existing rule governing single-chamber incinerators was vague and difficult to enforce. However, with the proposed revision, the equivalency procedures are specifically enumerated, so that single-chamber incinerators have to meet the same strict conditions as multiple-chamber incinerators. Consequently, single-chamber incinerators must be equally effective in order to continue operation. Therefore, the staff does not recommend elimination of this provision. Regarding the question of "dictating" the type of technology, the staff agrees that this should not be done. The TACB's policy is to require specific emission limits, without mandating specific types of control. The staff does not recommend a change in this procedure.

Seventeen commenters (seven private citizens, a state representative, EPA, Houston, BFI, the Sierra Club, GHASP, UNITE, HSC, CEW, and WMI) raised questions about dual-chamber incinerators. UNITE stated that the TACB did not meet the mandate of House Bill 2468 because emission control technology was not specified. EPA, Houston, and BFI advocated having the same standard for off-site and on-site infectious waste incinerators. BFI noted that the rule, as proposed, might encourage more generators to incinerate on-site because the standards were less restrictive. On private citizen advocated amending the definitions of commercial incinerator and commercial infectious waste incinerator so that they would deal with the burning of infectious waste at hospitals as well as at commercial sites.

As described previously, the TACB's policy has been to require specific emission limits, without mandating specific types of control. Therefore, the staff does not propose to add specific control technology in the rule. Following further evaluation, the staff believes that requiring the same standards for off-site and on-site incinerators has merit, particularly in view of the fact that the incinerators burn the same types of materials. However, the staff needs to evaluate the economic impacts of such requirements especially for small rural hospitals, where in many cases there may be no commercial alternatives available. It appears likely that this will be the topic of additional public hearings.

A private citizen requested that the particulate level be lowered from 0.08 grain per dry standard cubic foot (gr/dscf) to 0.03 gr/dscf or less in §111.123(a)(1), and to 0.04 gr/dscf in §111.123(b)(2). EPA requested that the section state that the particulate standard is based on a correction to 7.0% oxygen in the stream. EPA also suggested that continuous monitoring of control equipment parameters and pollutant emissions be conducted at the inlet and outlet of control devices.

The staff believes that lowering the standard from the proposed 0.08 to 0.03 gr/dscf is too stringent for incinerators which do not burn infectious waste. While it is true that such incinerators can burn plastics and other materials that are potentially toxic, the relative

amount of these materials in the total waste stream is far less than commercial infectious waste facilities. Consequently, the stricter particulate standard is unnecessary. Therefore, the staff proposes to maintain the 0.08 gr/dscf standard for such facilities. The staff also believes that the proposed standard of 0.04 gr/dscf is sufficiently stringent for commercial infectious waste incinerators and that the cost of the control equipment necessary to reduce particulate emission levels from the proposed 0.04 gr/dscf to 0.03 gr/dscf is not justifiable because there would be no significant improvement in air quality. The staff will add a notation that the particulate standard is based on a correction to 7.0% oxygen. However, the staff does not believe that continuous monitoring of control equipment parameters and emissions is justifiable. The section will require temperature and oxygen monitoring. Such monitoring will verify that control equipment is functioning properly, which will in turn verify that emission standards are being met.

EPA requested that the basis for the proposed HCl limit be documented and stated that HCl monitoring should be required to verify compliance. WMI maintained that there is no equipment available which is capable of meeting a 99% control efficiency for HCl continuously.

The staff based the HCl limit on federal national emission standards for hazardous air pollutants. Furthermore, the staff is unaware of any EPA-approved HCl monitors and does not propose to add such a requirement to the rule. However, further evaluation has verified WMI's statement that the proposed HCl removal efficiency of 99% through use of a wet scrubber would be only intermittently achievable, depending on the amount of material being incinerated. Additionally, requiring 99% would result in eliminating an overall more effective type of control technology. While not capable of achieving 99% removal, use of an alternate technology such as a dry scrubber can consistently achieve a 95% removal. This equipment is also more effective in controlling particulates. The staff believes that reducing the requirement to 95% to allow the alternate control technology, which also improves particulate control at only a slight reduction from the original 99% requirement, is in the best interest of air quality. Also, in order to clarify the language, the staff is proposing to add a notation that the sampling is to be averaged over a three-hour period.

BFI asserted that carbon monoxide (CO) monitoring, rather than the proposed 99.99% removal efficiency, is a preferable method for determining complete combustion of organic compounds. Similarly, WMI asserted that continuous feed incinerators are not compatible with distraction removal efficiency testing protocol and that specifying a continuous combustion efficiency (CO:CO₂, (carbon dioxide)) or a "not to exceed" mass rate for hydrocarbon emissions would improve §111.123(b)(4). CEW and a private citizen stated that the term "principal organic constituent" is vague because it is undefined. EPA questioned whether the proposed organics control efficiency applies to ash or gas in §111.123(a) (3) and (b)(4).

The staff believes that the concerns expressed by BFI and WMI have merit. The intent of the proposal was to establish a

means of determining combustion efficiency so that emissions of organic compounds would be limited. However, upon further eval-

uation the staff agrees that it is more accurate and simple to measure CO than organic emissions and that the CO standard is more

enforceable. The staff recommends the following method for calculating combustion efficiency:

combustion efficiency shall be at least 99% on an hourly basis, computed as followed:

$$\frac{\text{CO}_2}{\text{CO}_2 + \text{CO} + \text{THCE}}$$

where CO_2 = concentration of carbon dioxide

CO = concentration of carbon monoxide

THCE = concentration of total hydrocarbon equivalents

The language in §111.123(b)(4) should also be changed to reflect a 99.9% combustion efficiency, with the same formula. This action should allay concerns regarding the vagueness of the term "principal organic constituent" as well as whether the organics control efficiency applies to ash or gas because the change to combustion efficiency works equally for solid or gaseous materials.

Four private citizens (Houston, the Sierra Club, HSC, and GHASP) advocated an opacity limit of 5.0% for all incinerators; two citizens advocated 0% opacity. UNITE, CEW, and three private citizens asserted that a two-second residence time and monitoring of the secondary chamber (§111.123(b)(1)) should be required. EPA suggested changing "one second" to "1.0 second" in §111.123(b)(4) for clarity.

Upon further evaluation, the staff agrees that the proposed capacity rate should be reduced from 20% to 5.0% in order to ensure consistent compliance with the required emissions standards. This change would also make opacity consistent with the requirements for commercial infectious waste incinerators. However, the staff does not believe a requirement of 0% opacity would be possible to achieve on a continuous basis, or necessary in order to meet proposed emission standards. The staff is not aware of any technical basis on which to require a two-second residence time for commercial infectious waste incinerators and maintains that the proposed one-second residence time will ensure that the waste will be adequately incinerated. The staff believes that adding a requirement that monitoring should take place in the secondary chamber has merit and recommends the addition of such a requirement to §111.127. Additionally, the staff proposes to change "one second" to "1.0 second," as EPA sug-

gests.

CEW and two private citizens advocated 2,000 degrees for commercial infectious waste incinerators, while another private citizen supported a requirement for 1,650-1,700 degrees in the secondary chamber of such incinerators. UNITE requested a 99.9999% destruction efficiency, if possible, as a permit requirement. CEW suggested that limits on metals and toxic organics be added and advocated emission monitoring requirements to ensure continuous compliance. WMI stated that the language in §111.123(a)(2) is inconsistent with §111.123(b)(2) because it allows non-commercial incinerators to choose between meeting a mass rate or an emission limit, while the commercial incinerators are not given that option.

The staff's research regarding incineration indicates that a 2,000 degree temperature in the combustion chamber would cause increases in the emission of nitrous oxides, because a higher temperature causes more oxidation of the nitrogen in the air. This in turn can lead to increases in visible emissions.

Additionally, the staff is unaware of any technical data that supports the need to raise temperatures above the proposed 1,800 degrees. Similarly, the staff believes that the 99.9999% destruction efficiency requested by CEW would be impossible to achieve consistently. The staff based the proposed 99.99% efficiency on the federal Toxic Substances Control Act, which lists destruction removal efficiency for specific compounds. The staff believes this standard to be sufficient to protect air quality and health. Trace levels of metals resulting from combustion are so minute that they are well below health screening levels and do not pose a health threat. As noted previously, the staff is proposing to change the language regarding organics to

deal with combustion efficiency. The staff believes that monitoring of temperature will sufficiently ensure compliance, because studies have shown the recommended temperature effectively destroys the constituents being burned. The staff believes that Ws statement about the inequity of allowing non-commercial incinerators to choose meeting either a mass rate or an emission limit has merit. We therefore propose to alter the language in §111.123(a)(2) and (b)(3) to read:

"HCl emissions greater than 1.8 kilograms (four pounds) per hour shall have a removal efficiency of 95%, averaged over a three-hour period."

A state representative, UNITE, CEW, and a private citizen advocated shortening the proposed compliance date. CEW suggested that compliance should be immediate for new facilities. However, BFI maintained that the compliance date should be extended to two years from the effective date of the regulation.

After further evaluation, the staff believes that the compliance date for commercial infectious waste incinerators can be shortened from May 31, 1991 to July 31, 1990 without significant difficulties for the facilities that are affected. This will allow facilities approximately six months after the effective date of the rule to achieve compliance with its provisions. The staff also believes that all incinerators impacted by the proposed rules should have the same amount of time to achieve compliance, and therefore recommends that the same compliance date of July 31, 1990 be established for all incinerators. The staff agrees that it is in the best interest of air quality and public health to reduce this compliance date deadline.

Seven commenters (EPA, Houston, three pri-

vate citizens, UNITE, and BFI) submitted comments regarding these proposed rules. EPA advised specifying the number of testing runs needed for particulate matter and HCl. EPA also requested that the TACB specify Method 9 and the appropriate Code of Federal Regulations citation for measuring opacity. Finally, EPA stated that the provision for allowing equivalent test methods would need to be deleted in order for the proposed rule to be approved as part of the state implementation plan.

The number of testing runs required for determining compliance is included in the EPA reference method cited in the proposed rule; therefore, the staff does not believe it is necessary or useful to add this information to the rule language. The staff agree that adding a specific reference method for measuring opacity would be useful and proposes to add such a reference to §111.125. The staff does not recommend deleting the provision allowing use of alternate testing methods with executive director approval, because we believe it to be necessary and appropriate to be able to approve minor variations and avoid time-consuming federal coordination on issues that will not adversely impact air quality. In cases where a facility proposes a substantively different alternate method, the TACB will coordinate the review with EPA.

Houston asserted that particulate matter testing should apply to incinerators which burn 1,000 pounds per hour (lbs/hr) or more of domestic or municipal solid waste. Houston also asserted that the testing requirements should apply to all infectious waste incinerators with design capacity of 100 lbs/hr or more.

The staff believes that particulate matter and other proposed testing methods should apply to all incinerators and sees no rationale for limiting them to those burning more than 1,000 lbs/hr or basing them on design capacity.

Houston recommended that the monitoring requirements should apply to all infectious waste incinerators, and temperature and oxygen content should be monitored from the secondary chamber and not from the exhaust stack. UNITE noted that the rule should apply to emission monitoring, especially since the proposed rule does not specify control technology requirements. BFI questioned the requirement for monitoring supplemental fuel flow and asserted that monitoring temperature in the secondary chamber is sufficient to determine compliance. A private citizen suggested testing when PVC plastics are burned. This citizen also noted that the TACB should provide monitoring devices and check them at differing intervals.

The proposed monitoring requirements apply to all infectious waste incinerators with no exemptions allowed. Houston's assertion that temperature should be monitored from the secondary chamber is valid, and the staff proposes to change the language to reflect this. However, monitoring oxygen from the secondary chamber is not feasible because the heat from the chamber would melt the sampling probe. Therefore, oxygen must be monitored "downstream" of the secondary chamber. This does not affect the accuracy of the measurement. The staff maintains that temperature and oxygen levels are accurately indicative of proper operation of the incinerator

and does not believe that emissions testing is necessary. The staff believes BFI raised a valid point regarding monitoring supplemental fuel flow, especially in light of the previous recommendation to delete the reference to organic constituents and replace it with combustion efficiency requirements. Therefore, the staff proposes to delete the reference to supplemental fuel flow in §111.127. Finally, the TACB does not have the resources to provide industry with monitoring equipment. Each facility is responsible for purchasing and installing its own monitoring equipment. Rather than checking the monitors at differing intervals, the proposed rule calls for continuous compliance monitoring and thus is more stringent than the commenter's suggestion.

Fifteen commenters (five private citizens, EPA, NSWMA, Moore, SMD, the Sierra Club, GHASP, Galveston, HSC, HCPCD, and Houston) expressed concern about the proposed exemption level. Five private citizens, EPA, HSC, NSWMA, Moore, SMD, the Sierra Club, and GHASP recommended that the exemption be deleted. Galveston and HCPCD recommended that the exemption be deleted for single-chamber incinerators. EPA requested that if the exemption is retained, the TACB clarify how the exemption would be determined, i.e., capacity, actual feed rate, batch, or continuous. Houston asserted that the exemption should apply to incinerators with a design capacity of less than 1,000 lbs/hr of domestic or municipal solid waste and that no incinerator should be exempt from monitoring temperature in the secondary chamber.

It should be noted that the proposed exemption applied only to incinerators burning municipal or domestic solid waste; it did not apply to those burning hospital/pathological or commercial infectious waste. The staff proposed the exemption for small incinerators which were unlikely to be causing adverse health or safety impacts and for which the proposed requirements would pose an economic hardship. However, because of the large number of such facilities and their proximity to the public, the staff agrees that the proposed exemption should be deleted. Nevertheless, public law requires that those impacted by this decision must have the opportunity to comment on it. Therefore, the staff plans to hold additional public hearings in the near future on a proposal containing no exemptions. In the meantime, in response to EPA's comment, the staff recommends adding a notation that the exemption is based on total weight of materials burned.

Twelve commenters (seven private citizens, the Sierra Club, GHASP, EPA, HSC, and CEW) submitted suggestions or questions about issues not enumerated in the proposed rules. Two private citizens suggested separate incineration regulations similar to those used by the State of Oklahoma. Five private citizens, GHASP, HSC, and EPA asserted that the proposal should contain recordkeeping of downtime and performance and training requirements for incinerator operators. One private citizen also cited related EPA reference material concerning training for operators of hospital waste incinerators.

A private citizen recommended that the state should certify all incinerator operators and issue fines for unsafe incinerator practices.

The staff has read with interest the information submitted regarding the State of Oklahoma's incineration guidelines, and those guidelines may be factored into future revisions. However, the staff holds that the proposed rules, particularly as revised following public comment, will be sufficiently stringent to protect air quality and health. The suggestion regarding record-keeping and training requirements appears to have merit. However, additional public hearings will need to be held before adding such requirements. It would be difficult to define "unsafe" incinerator practices, but the staff points out that such facilities are inspected by TACB investigators, and violations can be issued for improper operation. Safety of the workers at the incineration facility is governed by the federal Occupational Safety and Health Administration.

Four private citizens, the Sierra Club, HSC, and GHASP recommended adding rules for the handling, storage, and transportation/disposal of ash. A citizen recommended interlocks for radioactive materials, while another recommended banning the burning of all radioactive waste. A private citizen suggested that incinerators be licensed by the TDH and the TACB. One private citizen suggested that the TDH institute a manifest disposal ("cradle-to-grave") system for infectious waste, similar to the system in place for toxic waste.

The staff agrees that the issue of handling/disposal of incinerator ash is important; however, it falls under the jurisdiction of the TDH. Similarly, TDH is responsible for overseeing issues relating to radioactive materials and waste. Joint permitting of commercial infectious waste and municipal solid waste incinerators by the TDH and the TACB is now taking place, with the TACB evaluating the air quality impacts of the permit applications before the TDH. The TACB issues permits on all other types of incinerators. The staff agrees that a manifest disposal system may be appropriate for infectious waste. Again, however, the TACB cannot legally direct the TDH to institute such a system. A copy of the public testimony and this analysis will be forwarded to TDH for its information and consideration.

CEW and four private citizens advocated listing specific control technology in the rules, including acid gas scrubbers, filters, mandatory retrofit of abatement equipment, and flue gas cleaners.

The Texas Clean Air Act (TCAA) states that, except in the case of outdoor burning, vehicles, and certain agricultural processes, the TACB "may not specify a particular method ... type, or design ... of equipment to be used to control or abate air pollution." As a result of this mandate, the staff proposes specific standards and emissions levels which must be met, rather than the type of equipment to be installed. The end result is to limit the emission of contaminants into the ambient air; the method of how this is to be achieved is left to the facility involved. In many cases, there may be only one type of control equipment capable of meeting a prescribed standard. For instance, wet scrubbers will most likely have to be used in order to meet the proposed HCl standard. However, the staff cannot require this particular type of equipment.

Four private citizens, HSC, and the Sierra

Club asserted that the TACB should add operating and maintenance requirements, and two private citizens suggested that incinerators be inspected by the TACB. Two other private citizens recommended that stack height requirements be added. A private citizen recommended that the rules call for the elimination of metals and chlorinated plastics from waste streams.

Given the variety of types of incinerators being used throughout the state, it would not be feasible to define specific operating and maintenance requirements in the rules. However, the staff believes it would be useful to require each facility to post manufacturer's operating guidelines on or near each incinerator. Adding such a requirement would necessitate holding an additional public hearing in order to give impacted facilities an opportunity to comment on the proposal. It should be noted that incinerators have been inspected by TACB staff since the inception of the agency. The staff does not propose to add stack height requirements because incinerated materials will be adequately combusted under the new rules and will not require high stacks for additional dispersion. Similarly, the staff does not believe it necessary to require the elimination of metals and chlorinated plastics from waste streams because the proposed rules allow for the safe combustion of such materials. In addition, it would be infeasible to separate such materials from other potentially toxic/infectious wastes.

Five private citizens requested that zoning-related factors be instituted, including banning commercial infectious waste incinerators within one to 10 miles of residences or schools, disallowing the siting of future such incinerators near petro-chemical industries, other commercial infectious waste facilities, and water wells, and limiting them to five tons per day (tons/day) if near residences. Three citizens also requested that incinerators not be allowed to be "eyesores," that they be kept up-to-date, and be limited to one unit. Four citizens maintained that incinerators should not be allowed to burn at night, while another citizen suggested limiting hours of burning to 7 a.m.-6 p.m.

The TACB currently has no authority regarding land-use and zoning activities. The ability to control such activities would require legislative action. Similarly, the agency cannot regulate aesthetic qualities such as how a facility looks, although it can and does regulate odor nuisances. The agency can also require facilities to meet specified performance standards, which are updated as technology improves. Rather than limiting the number of units within a facility, the agency enforces such performance standards, as well as emission standards, to ensure protection of ambient air and public health. Finally, the staff believes that limiting the hours of burning for incinerators may be useful, especially since nighttime conditions are more conducive to air stagnation episodes than daylight hours. However, it should be reiterated that the proposed controls will severely curtail emissions from properly operating incinerators. The staff will plan, however, to evaluate the need for limiting incinerator operations between the hours of 7 a.m. to 6 p.m. and determine if such a proposal should be included in the public hearings to be held in the future. Incinerators which would be exempt from such a provision would be those

which meet the 0.04 gr/dscf standard; such incinerators have state-of-the-art control equipment and are designed to be run on a continuous basis.

Three private citizens recommended permit-related changes, including: better public hearing notification; hearings to be held within five-10 miles of the facility; shutting the facility down if it does not have or fails to obtain a permit; requiring a new permit if a new facility is added; requiring best available control technology (BACT) on facilities; public notification of the type of facility that is operating, including clearly marked signs on buildings; and standby systems for facilities in case of power loss. One citizen also suggested that the TACB perform periodic monitoring of such facilities, while another recommended that the agency levy a 1/2 cent per pound tax on commercial hospital waste to defray increased enforcement costs.

TACB notification procedures for public hearings currently exceed statutory requirements, and every effort is made to notify all affected parties. In the past, most public hearings were held in the county where the contested facility was located. However, in 1986 the staff performed a cost-benefit study and determined that it would be more cost-effective to hold the hearings in Austin. As a result, in most instances hearings are now held in Austin. However, the staff recognizes the difficulties that this may present and is certainly willing to relocate hearings when circumstances warrant. The TACB has issued permits on new sources and modifications of existing sources since 1972. All new permits and modifications of existing permits require at least BACT. If an investigation proves that a facility does not have a permit, the staff issues a notice of violation and the facility is required to submit a permit application. In cases of consistent noncompliance, the facility is referred to the attorney general's office for enforcement action. In some cases, court orders have been obtained and the noncompliant facility has been shut down.

Although TACB rules require that clearly marked signs must be posted when a new facility has applied for a permit or an existing facility is making a major modification, there are no requirements for posting signs on existing facilities. The staff will give further consideration to whether such signs would be necessary or useful for air pollution control purposes. In the meantime, the public can get information about specific facilities from each TACB regional office and from local authorities. While the staff agrees that adding a requirement for standby a system in case of power loss has value, such action would result in great expense and could not be accomplished at this time without additional public hearings to allow for comment by those impacted by the proposal. The TACB has historically monitored for air contaminants if complaints are received about a particular facility or if compliance problems are suspected. Finally, the staff has only estimated the additional costs that will be incurred from enforcing these proposed rules. If actual investigation and compliance costs prove to be excessive, the staff may propose to add such facilities to the TACB inspection fee system. In this system, major facilities pay a yearly fee based on their emissions, compliance history, and the difficulty of inspection. An additional public hearing would need to be held in

order to give impacted facilities the opportunity to comment on such a proposal.

CEW suggested limiting the size of infectious waste incinerators to 10 tons/day. CEW also recommended that infectious waste be burned exclusively in incinerators designed for that purpose and kept separate from other noninfectious waste.

The TACB has the authority to limit emissions of air contaminants, but is not authorized to limit the size or production of a facility, as long as that facility meets established emissions limits. The proposed rules were written to ensure efficient combustion in all types of incinerators. A commercial infectious waste facility has a limited throughput capability that is designed to combust a limited amount of waste. Therefore, it would not be capable of incinerating the large amounts of waste typically burned at other incinerating facilities. In other words, the staff believes that infectious waste will be burned exclusively in incinerators designed for that purpose and does not feel such language needs to be added to the rule.

These sections are adopted under the TCAA, §382.017, which provides the TACB with the authority to make rules and regulations consistent with the policy and purposes of the TCAA.

§111.121. Single-Chamber Incinerators. No person shall cause, suffer, allow, or permit the burning of domestic or municipal solid waste as defined in §101.1 of this title (relating to Definitions) in a single-chamber residential, publicly-owned, hospital/pathological waste, or commercial incinerator unless the incinerator has been demonstrated to provide equivalent performance to multiple-chamber incinerators as specified in §111.123(a) of this title (relating to Dual- or Multiple-Chamber Incinerators) and is approved by the executive director. Single-chamber incineration of any other material is prohibited. Compliance with the requirements of this section shall be as soon as practical but no later than July 31, 1990.

§111.123. Dual- or Multiple-Chamber Incinerators.

(a) No person shall cause, suffer, allow, or permit a dual- or multiple-chamber residential, publicly-owned, hospital/pathological waste, or commercial incinerator burning domestic or municipal solid waste as defined in §101.1 of this title (relating to Definitions) to discharge into the atmosphere unless the following requirements are met.

(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), when corrected for 7.0% oxygen in the stack gas according to the formula:

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

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 oxygen in the stack gas using the Orsat method for oxygen analysis of dry flue gas as defined in 40 CFR Part 60, Appendix A (Method 3).

(2) Hydrogen chloride (HCl) emissions greater than 1.8 kilograms (four

pounds) per hour require a removal efficiency of 95%, averaged over a three-hour period.

(3) Combustion efficiency (CE) shall be at least 99% on an hourly basis, computed as follows.

$$\frac{CO_2}{CO_2 + CO + THCE}$$

where CO_2 = concentration of carbon dioxide

CO = concentration of carbon monoxide

$THCE$ = concentration of total hydrocarbon equivalents

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

property boundaries of the facility unless the facility meets the following requirements.

not exceed 0.09 g/dscm or 0.04 gr/dscf, when corrected for 7.0% oxygen in the stack gas as specified in subsection (a)(1) of this section.

(5) Compliance with this section shall be as soon as practicable, but no later than July 31, 1990.

(1) The incinerator must be equipped with a secondary chamber which retains all combustion gases for one second or longer at a temperature of 1,800 degrees Fahrenheit or higher.

(3) A removal efficiency of 95% is required for HCl emissions.

(b) No person shall cause, suffer, allow, or permit the burning of infectious waste in a facility that accepts for incineration infectious waste generated outside the

(2) Particulate emissions shall

(4) Combustion efficiency (CE) shall be at least 99.9% on an hourly basis, computed as follows.

$$\frac{CO_2}{CO_2 + CO + THCE}$$

where CO_2 = concentration of carbon dioxide

CO = concentration of carbon monoxide

THCE = concentration of total hydrocarbon equivalents

(5) Visible emissions shall not exceed an capacity of 5.0% for any six-minute period from any commercial infectious waste incinerator except for emissions during the cleaning of a firebox or the building of a new fire, soot-blowing, equipment changes, ash removal, and rapping of precipitators. During those periods, the visible emissions may not exceed 20% for a period of six minutes in any 60 consecutive minutes. This exemption shall not apply to the emissions mass rate standard as outlined in §111.151 of this title (relating to Allowable Emissions Limits).

(6) Compliance with the requirements of this section shall be as soon as practicable but no later than July 31, 1990.

§111.125. Testing Requirements. Compliance with §111.121 of this title (relating to Single-chamber Incinerators) and §111.123 of this title (relating to Dual-or Multiple-chamber Incinerators) shall be determined by applying the following test methods, as appropriate:

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

(2) hydrogen chloride. Test method outlined in Chapter 5 of the latest edition of the Texas Air Control Board "Sampling Procedures Manual."

(3) Combustion efficiency. Combustion efficiency, measuring carbon dioxide (CO₂), carbon monoxide (CO), and hydrocarbons (HC), using the following test methods: CO₂: reference Method 3 or 3A (40 Code of Federal Regulations Part 60, Appendix A); CO: Method 10 (40 Code of Federal Regulations Part 60 Appendix A); HC: Method 25A (40 Code of Federal Regulations Part 60, Appendix A).

(4) opacity. Test Method 9 (40 Code of Federal Regulations Part 60, Appendix A).

(5) Equivalent test methods. Equivalent test methods approved by the executive Director.

§111.127. Monitoring Requirements. Facilities subject to the requirements of §§111.121, 111.123, and 111.125 of this title (relating to Single-chamber Incinera-

tors; Dual-or Multiple-chamber Incinerators; and Testing Requirements) shall install, calibrate, maintain, and operate a monitoring device that continuously measures and records the oxygen content of the stack and temperature of the exhaust gas of the secondary chamber 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. All such monitoring equipment must be approved by the executive director of the Texas Air Control Board.

§111.129. Exemptions. Incinerators burning less than five tons per day of domestic or municipal solid waste, based on the total weight of the materials burned, shall be exempt from the requirements of §§111.121, 111.123(a)(1), (2), and (3), 111.125, and 111.127 of this title (relating to Single-chamber Incinerators; Dual-or Multiple-chamber Incinerators; Testing Requirements; and Monitoring Requirements).

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas on January 17, 1990.

TRD-9000607 Allen Eli Bell
Executive Director
Texas Air Control Board

Effective date: February 7, 1990

Proposal publication date: August 25, 1989

For further information, please call: (512) 451-5711, ext. 354

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**TITLE 37. PUBLIC
SAFETY AND
CORRECTIONS**

**Part I. Texas Department
of Public Safety**

**Chapter 1. Organization and
Administration**

Aircraft Operations

• 37 TAC §1.141, §1.142

The Texas Department of Public Safety adopts amendments to §1.141 and §1.142, without changes to the proposed text as published in the December 15, 1989, issue of the

Texas Register (14 TexReg 6541).

The amendments will ensure the public that department aircraft are used for official state business and that aircraft are available for public safety responses on a timely basis.

Amendments to §1.141 delete and add language relating to department aircraft operation regulations concerning use, approval for passenger transportation, flight safety, and response to public safety activities. Amendments to §1.142 change the section title from helicopter programs to aerial support programs to properly describe the department's aircraft operational missions. Paragraphs (1) and (2) separate the operational missions into law enforcement and administrative flights by adding new language regarding the type of aerial support activities that department aircraft can be expected to be utilized in and deleting the existing language. Paragraphs (3)-(7) are deleted due to the language in paragraphs (1) and (2) which covers the activities of the operational missions for department aircraft.

No comments were received regarding adoption of the amendments.

The amendments are adopted under the Texas Government Code, §411.004(3) and §411.006(4), which provides the Public Safety Commission with the authority to adopt rules necessary for carrying out the department's work. The director, subject to the approval of the commission, shall have the authority to adopt rules considered necessary for the control of the department.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on January 16, 1990.

TRD-9000643 Joe E. Milner
Director
Texas Department of
Public Safety

Effective date: February 8, 1990

Proposal publication date: December 15, 1989

For further information, please call: (512) 465-2000

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**Part X. Texas Adult
Probation Commission**

Chapter 323. Fund Distribution

• 37 TAC §323.3

The Texas Adult Probation Commission adopts new §323.3, without changes to the