

The Texas Commission on Environmental Quality (commission) proposes the repeal of §111.155 and a corresponding revision to the state implementation plan (SIP).

#### BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED REPEAL

The Texas Air Control Board (TACB) first developed and adopted ambient air standards for particulate matter (PM) in 1967. These standards were described in Regulation I, Board Order 67-1. The impetus for the standards was the results from field sampling surveys conducted in several regions of the state that suggested that PM control was necessary. At the time, the sampling method typically used for ambient PM was high-volume sampling. High-volume samplers collected the PM size fraction generally referred to as total suspended particulate matter (TSP). TSP does not have a clearly defined upper PM size cutoff, but is commonly recognized as PM that is 25 - 40 micrometers in diameter and smaller. It is important to note that in 1967 there were no national ambient air quality standards (NAAQS) for PM.

In 1971, primary (human health-based) and secondary (welfare-based) NAAQS were promulgated for PM, with TSP serving as the PM indicator. Following the establishment of the PM NAAQS, the TACB significantly revised the state ambient air standards for PM in 1972. The revised standards established net ground-level concentrations in ambient air for PM of 100, 200, and 400 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) (averaged over any five-, three-, and one-hour periods). Though not explicitly stated, the PM indicator for the standards was TSP, given the existing sampling technology at that time.

The 1972 Texas PM standards were reviewed and slightly modified in 1989, with the five-hour standard removed and the one- and three-hour standards readopted, resulting in the current PM standards listed in §111.155. Section 111.155 establishes net ground-level concentrations in ambient air for PM of 200 and 400  $\mu\text{g}/\text{m}^3$ , averaged over any three- and one-hour periods, respectively. These concentrations were originally adopted by the commission in 1972. As noted previously, the PM indicator for §111.155 effectively remained TSP. On the national level, the 1971 PM NAAQS were modified in 1987, with particulate matter ten micrometers or smaller in diameter ( $\text{PM}_{10}$ ) replacing TSP as the PM indicator and new primary and secondary NAAQS established. The rationale for replacing TSP with  $\text{PM}_{10}$  relates to the significant amount of scientific progress made since the promulgation on the 1971 PM NAAQS. This progress occurred in numerous facets of PM research, ranging from monitoring technology (sampling and analysis), atmospheric chemistry, emissions sources, and health effects.

The PM NAAQS were revised again in 1997, with the retention of  $\text{PM}_{10}$  serving as an indicator for coarse PM, and the establishment of a new, additional PM indicator, particulate matter 2.5 micrometers or smaller in diameter ( $\text{PM}_{2.5}$ ). This new indicator was selected to address fine PM based on the emerging science that PM smaller than  $\text{PM}_{10}$  was more strongly associated with premature mortality and severe morbidity. Current PM NAAQS ( $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  NAAQS established in 1997) are under review and may be revised.

Section 111.155 was originally cited in the Texas SIP adopted in 1972 and in subsequent revisions adopted in 1973, 1974, 1975, and 1976. All areas of the state were required to comply with all

sections of Chapter 111 by December 31, 1973. Subsequent SIP revisions in 1979 and 1980 required implementation of revised sections of Chapter 111 in individual areas not meeting the PM NAAQS. When the PM indicator for the PM NAAQS changed from TSP to PM<sub>10</sub>, new PM SIP revisions were adopted. PM<sub>10</sub> SIP revisions adopted in 1988, 1989, and 1991 cited Chapter 111 as a control strategy for El Paso County, the one area in Texas not meeting the PM<sub>10</sub> NAAQS.

On May 14, 2004, Baker Botts L.L.P. (Baker Botts) submitted a petition for rulemaking to repeal §111.155. Baker Botts requested that the rule be repealed because the rule is inconsistent with the direction of modern air quality regulation, results in unnecessarily long delays in air permit issuance, imposes PM controls without evidence of nuisance conditions, and reflects a burdensome and unnecessary regulatory tool to address PM. On July 28, 2004, the commission initiated rulemaking for §111.155 in response to the petition filed by Baker Botts. The commission stated that rulemaking would include an evaluation of §111.155, with stakeholder involvement, to determine if the current rule is adequate, needs to be amended, or repealed. As part of this evaluation, a stakeholder meeting was held on April 5, 2005, at commission headquarters in Austin, Texas, to receive formal stakeholder comments.

Section 111.155 is primarily used in air permitting, field operations, and the enforcement division to address nuisance PM. The technical details for establishing the specific net PM concentrations listed in §111.155 are not known. Little documentation exists that describes the rationale or the science used in selecting these concentrations. The background information that does exist comes from Dr. Herbert McKee, former TACB chairman during the establishment of the 1967 and 1972 PM standards. Based

on published literature he authored as well as his written comments to the commission, the 1972 PM standards were based primarily on the professional judgment of air quality regulators at the time. Dr. McKee emphasized that the 1972 PM standards were established to address nuisance PM, not health concerns. According to Dr. McKee, the TACB deferred to the PM NAAQS to address health issues.

In terms of health effects of PM, research overwhelmingly supports respirable PM (PM that can enter the lungs, generally regarded as ten micrometers or smaller in diameter) as the primary causative agent of PM-related health effects, particularly premature mortality and severe morbidity. PM fractions larger than ten micrometers, which are often the dominant PM size fractions, on a per mass basis, collected in TSP samples, are poor indicators of potential health effects. Therefore, the current PM NAAQS using  $PM_{10}$  and  $PM_{2.5}$  as indicators are better suited to address health concerns than standards based on TSP, such as §111.155. Additionally, the commission has developed effects screening levels (ESLs) to address health and welfare concerns for specific air pollutants occurring as PM (e.g., arsenic, chromium, silica, carbon black). ESLs are used to evaluate air concentrations for air permits and ambient air monitoring data, as well as set remediation clean-up levels. ESLs, in addition to the PM NAAQS, provide a means to assess health concerns from ambient PM and ultimately a basis for taking regulatory action when deemed necessary.

The use of §111.155 as a tool to address nuisance PM has historically occurred in the areas of enforcement, through the use of ambient air monitoring to determine net PM source contributions, and air permitting, generally with the use of air dispersion modeling. The PM standard is used infrequently as an enforcement tool for nuisance PM, due to the monitoring requirements to determine

compliance. On the few occasions when monitoring is conducted, complexities such as accessibility of monitoring locations, weather, wind patterns, confounding PM sources (e.g., traffic on unpaved roads), facility operations, etc. can make meaningful sampling results difficult to obtain and interpret. Other enforcement tools available to address nuisance PM include, but are not limited to, tape lifts, still photographs, videotape, field observations of commission staff, the opacity limits described in §111.111 and §111.113, and the general nuisance rule in 30 TAC §101.4. In terms of air permitting, modeled ambient levels of TSP can be compared to the concentrations listed in §111.155 to evaluate the potential for nuisance PM. In addition to comparing modeled TSP levels to the standards, the commission can incorporate preventative measures against nuisance PM such as best available control technology (BACT) and special permit conditions. The inherent complexities and uncertainties of modeling emissions from PM sources that generate TSP has raised concern about the accuracy of these modeled estimates. This may result in imposing PM controls without evidence of nuisance conditions (aside from modeling results) and can delay issuance of air permits. BACT and special permit conditions may serve as more reliable preventative tools for air permitting to address nuisance PM without being unduly burdensome to the regulated community.

To obtain a perspective of other state approaches to PM, specifically nuisance PM, the commission surveyed all 50 states. Based on this survey, the commission determined that §111.155 is generally inconsistent with approaches used by the vast majority of states, with 40 out of 50 states not having ambient standards for nuisance PM. In lieu of ambient air standards, the states generally use other rules and procedures such as opacity standards, best management practices to address nuisance PM (i.e., BACT), and comparing modeled PM concentrations to the PM NAAQS. Many of these rules

and procedures are currently available and utilized by the commission. As discussed previously, examples of tools and procedures used by the commission include BACT, special permit conditions, the opacity limits in §111.113 and §111.111, and the general nuisance rule in §101.4.

As previously stated, the science underlying the basis of §111.155 is largely unknown due to the lack of documentation. However, the evidence that is available points to professional judgment and policy playing a significant role in the derivation of the standards listed in the rule. In addition, the rule was intended to address nuisance PM rather than health concerns. The PM NAAQS addresses health issues of PM. In addition, the commission has ESLs that address the health concerns of specific PM constituents (e.g., metals, carbon compounds, silica). The size fraction that §111.155 has historically addressed is TSP. Regulation of TSP was prominent at both the state and federal levels during, and immediately following, the promulgation of §111.155. However, the majority of federal and state regulatory authorities have since replaced TSP ambient standards with PM standards of a smaller PM size (i.e., PM<sub>10</sub>, PM<sub>2.5</sub>). These changes were dictated by advances in the science of PM that highlighted the importance of PM size fractions smaller than TSP. TSP has since been relegated to nuisance PM concerns. It is generally understood that determining nuisance is highly subjective and is dependent on the PM size, composition, and concentration, as well as the tolerance of individuals for PM depending on the use of their property. This subjectivity prevents the establishment of technically-defensible ambient standards to address nuisance PM. Tools and procedures already available to the commission, and consistent with other state environmental regulatory agencies, are used to address nuisance PM.

Repealing §111.155 will not weaken the Texas SIP. As discussed previously, the commission has adequate tools to enforce the PM NAAQS, such as BACT, special permit conditions, and the opacity limits in §111.111 and §111.113. Additionally, since TSP is no longer used as an indicator for a criteria pollutant, it is not an appropriate component of the Texas SIP and should be removed.

Based on the commission's evaluation, as well as stakeholder input, the commission proposes the repeal of §111.155 given that it is not based on good science nor is it current and necessary. The commission determined that it has sufficient tools and procedures currently available to address nuisance PM.

#### SECTION DISCUSSION

Section 111.155 establishes one-hour and three-hour ground level concentration levels for particulate matter. The commission proposes to repeal §111.155.

#### FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENT

Nina Chamness, Analyst, Strategic Planning and Grants Management Section, determined that, for the first five-year period that the proposed repeal is in effect, no fiscal implications are anticipated for the agency or other units of state or local governments as a result of administration or enforcement of the proposed repeal. The proposal would repeal §111.155, regarding the state standards for ground level concentrations of PM.

The commission evaluated §111.155 to determine if the current rule was adequate, needed to be

amended, or should be repealed. The current rule established standards for permissible levels of PM affecting enjoyment of property rather than human health. Upon evaluation, which included consideration of stakeholder input, the commission is proposing to repeal the rule. The commission determined that required compliance with NAAQS for PM adequately protects human health and welfare, and the use of other tools at its disposal, such as the general prohibition, will provide the same or better enforcement for PM nuisances than the current rule. Various tools like videotaping, requiring the use of best management practices, and requiring engineering controls on the emitters of PM that constitute a nuisance will effectively and more defensibly enforce compliance for PM emissions. Compliance with the current rule may require the review of modeling data that regulated entities submit as part of their air permit applications. Under the proposed rulemaking, this type of data would no longer be necessary. However, agency staff may be required to review other information in lieu of modeling data to ensure that nuisance levels of PM are prevented. Therefore, the commission does not anticipate any cost savings to result from this rulemaking.

#### PUBLIC BENEFITS AND COSTS

Ms. Chamness also determined that for each year of the first five years that the repeal is in effect, the public benefit anticipated from the changes seen in the proposal will be more effective prevention of nuisances through reliance on the health and welfare protection provided by the NAAQS, the nuisance prohibition, and other tools at the commission's disposal.

Businesses emitting PM would no longer be required to meet the standards of the current rule and may be able to save money currently spent on modeling data submitted when requesting an air permit.

However, compliance with other agency conditions such as the use of best practices or more stringent engineering controls to reduce the emission of PM may offset the savings generated by not having to do modeling analysis. Whether a business would experience cost savings or increased costs depends on the facility to be regulated and the tools employed by the agency in ensuring that particulate emissions remain in compliance with NAAQS. Therefore, the proposed repeal may affect the regulated community's compliance burden for PM and may translate into cost savings.

#### SMALL BUSINESS AND MICRO-BUSINESS ASSESSMENT

No adverse fiscal implications are anticipated for small or micro-businesses. Section 111.155 applies to all entities, including small or micro-businesses, and they would experience the same cost savings or cost increases as a large business. The amount of any savings or increase would vary widely among regulated entities and would depend on the facility regulated and the tools employed by the agency in ensuring acceptable emission levels of PM.

#### LOCAL EMPLOYMENT IMPACT STATEMENT

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

#### DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the proposed rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the proposed repeal does not meet the

definition of a “major environmental rule” as defined in the statute. Therefore, Texas Government Code, §2001.0225 does not apply to this rulemaking. “Major environmental rule” is defined in Texas Government Code, §2001.0225(g)(3), as 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, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The specific purpose of the proposed repeal is to delete a rule that is no longer necessary, effective, current, or based on good science, as described in the BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED REPEAL section of this preamble. This proposed repeal will not have an adverse material impact because the commission determined that the currently existing NAAQS for PM adequately protects human health and welfare, and the remaining prohibition against nuisance conditions remains in effect. The commission invites public comment on the draft regulatory impact analysis determination.

#### TAKINGS IMPACT ASSESSMENT

The commission evaluated this proposed rulemaking and performed a preliminary assessment of whether this action would constitute a taking under Texas Government Code, Chapter 2007. Promulgation and enforcement of this proposed repeal would be neither a statutory nor a constitutional taking of private real property. The proposed repeal of §111.155 does not affect private property in a manner that restricts or limits an owner’s right to the property that would otherwise exist in the absence of a government action. Consequently, this proposal does not meet the definition of a taking under Texas Government Code, §2007.002(5). This rulemaking is proposed to repeal §111.155, since the commission determined that the currently existing NAAQS for PM adequately protects human health

and welfare, and the remaining prohibition against nuisance conditions remains in effect. Therefore, this proposed repeal will not constitute a taking under Texas Government Code, Chapter 2007. The commission invites public comment on this preliminary takings impact assessment.

#### CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission determined that this rulemaking action 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 Resources Code, §§33.201 *et seq.*), and the commission rules in 30 TAC Chapter 281, Subchapter B, concerning Consistency with Texas Coastal Management Program. As required by §281.45(a)(3), Actions Subject to Consistency with the Goals and Policies of the Texas Coastal Management Program (CMP), and 31 TAC §505.11(b)(2), relating to Actions and Rules Subject to the Coastal Management Program, commission rules governing air pollutant emissions must be consistent with the applicable goals and policies of the CMP. The commission reviewed this action for consistency with the CMP goals and policies in accordance with the rules of the Coastal Coordination Council, and determined that the action is consistent with the applicable CMP goals and policies. The CMP goal applicable to this rulemaking action is the goal to protect, preserve, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas (31 TAC §501.12(l)). No new sources of air contaminants will be authorized and the proposed revisions will maintain the same level of emissions control as the existing rules. The CMP policy applicable to this rulemaking action is the policy that commission rules comply with federal regulations in 40 Code of Federal Regulations to protect and enhance air quality in the coastal areas (31 TAC §501.14(q)). This rulemaking action complies with 40 Code of Federal Regulations Part 51, Requirements for

Preparation, Adoption, and Submittal of Implementation Plans. Therefore, in accordance with 31 TAC §505.22(e), the commission affirms that this rulemaking action is consistent with CMP goals and policies.

#### EFFECT ON SITES SUBJECT TO THE FEDERAL OPERATING PERMITS PROGRAM

Because §111.155 is an applicable requirement under 30 TAC Chapter 122, Federal Operating Permits Program, owners or operators subject to the Federal Operating Permit Program must, consistent with the revision process in Chapter 122, revise their operating permit to delete requirements relating to §111.155.

#### ANNOUNCEMENT OF HEARING

The commission will hold a public hearing on this proposal in Austin on December 15, 2005, at 2:00 p.m. in Building E, Room 254S, at the commission's central office located at 12100 Park 35 Circle. 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 will not be permitted during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes before 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 Joyce Spencer, Office of Legal Services, at (512) 239-5017. Requests should be made as far in advance as possible.

#### SUBMITTAL OF COMMENTS

Comments may be submitted to Joyce Spencer, MC 205, Texas Register Team, Office of Legal Services, P.O. Box 13087, Austin, Texas 78711-3087 or faxed to (512) 239-4808. Comments must be received by 5:00 p.m., January 13, 2006, and should reference Rule Project Number 2005-013-111-EN. Copies of the proposal can be obtained from the commission's Web site at [http://www.tceq.state.tx.us/nav/rules/propose\\_adopt.html](http://www.tceq.state.tx.us/nav/rules/propose_adopt.html). For further information, please contact Kathy Singleton, Air Quality Planning and Implementation Division, at (512) 239-6098.

**SUBCHAPTER A: VISIBLE EMISSIONS AND PARTICULATE MATTER**

**DIVISION 5: EMISSIONS LIMITS ON NONAGRICULTURAL PROCESSES**

**§111.155**

**STATUTORY AUTHORITY**

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

The proposed repeal implements THSC, §§382.002, 382.011, 382.012, 382.016, and 382.017.

**§111.155. Ground Level Concentrations.**