

The Texas Natural Resource Conservation Commission (commission) proposes new §114.440, Definitions; §114.441, Applicability; §114.442, Control Requirements; §114.445, Emission Reduction Credits; §114.446, Recordkeeping and Labeling; §114.448; Registration; and §114.449; Affected Counties and Compliance Dates. The commission proposes these amendments to Chapter 114, Control of Air Pollution From Motor Vehicles; Subchapter I, Non-road Engines; new Division 5, Nitrogen Oxides Reduction Systems; and corresponding revisions to the state implementation plan (SIP) in order to control ground-level ozone in the Houston/Galveston (HGA) ozone nonattainment area.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULES

The HGA ozone nonattainment area is classified as Severe-17 under the Federal Clean Air Act (FCAA) Amendments of 1990 (42 United States Code (USC), §§7401 et seq.), and therefore is required to attain the one-hour ozone standard of 0.12 parts per million (ppm) by November 15, 2007. The HGA area, defined by Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties, has been working to develop a demonstration of attainment in accordance with 42 USC, §7410. On January 4, 1995, the state submitted the first of its Post-1996 SIP revisions for HGA.

The January 1995 SIP consisted of urban airshed model (UAM) modeling for 1988 and 1990 base-case episodes, adopted rules to achieve a 9% rate-of-progress (ROP) reduction in volatile organic compounds (VOC), and a commitment schedule for the remaining ROP and attainment demonstration elements. At the same time, but in a separate action, the State of Texas filed for the temporary nitrogen oxides (NO_x) waiver allowed by 42 USC, §7511a(f). The January 1995 SIP and the NO_x waiver were based on early base-case episodes which marginally exhibited model performance in accordance with

the United States Environmental Protection Agency (EPA) modeling performance standards, but which had a limited data set as inputs to the model. In 1993 and 1994, the commission was engaged in an intensive data-gathering exercise known as the COAST study. The state believed that the enhanced emissions inventory, expanded ambient air quality and meteorological monitoring, and other elements would provide a more robust data set for modeling and other analysis, which would lead to modeling results that the commission could use to better understand the nature of the ozone air quality problem in the HGA area.

Around the same time as the 1995 submittal, EPA policy regarding SIP elements and timelines went through changes. Two national programs in particular resulted in changing deadlines and requirements. The first of these programs was the Ozone Transport Assessment Group. This group grew out of a March 2, 1995 memo from Mary Nichols, former EPA Assistant Administrator for Air and Radiation, that allowed states to postpone completion of their attainment demonstrations until an assessment of the role of transported ozone and precursors had been completed for the eastern half of the nation, including the eastern portion of Texas. Texas participated in this study, and it has been concluded that Texas does not significantly contribute to ozone exceedances in the Northeastern United States. The other major national initiative that has impacted the SIP planning process is the revisions to the national ambient air quality standard (NAAQS) for ozone. The EPA promulgated a final rule on July 18, 1997 changing the ozone standard to an eight-hour standard of 0.08 ppm. In November 1996, concurrent with the proposal of the standards, the EPA proposed an interim implementation plan (IIP) that it believed would help areas like HGA transition from the old to the new standard. In an attempt to avoid a significant delay in planning activities, Texas began to follow this guidance, and readjusted its

modeling and SIP development timelines accordingly. When the new standard was published, the EPA decided not to publish the IIP, and instead stated that, for areas currently exceeding the one-hour ozone standard, that standard would continue to apply until it is attained. The FCAA requires that HGA attain the standard by November 15, 2007.

The EPA issued revised draft guidance for areas such as HGA that do not attain the one-hour ozone standard. The commission adopted on May 6, 1998 and submitted to the EPA on May 19, 1998 a revision to the HGA SIP which contained the following elements in response to EPA's guidance: UAM modeling based on emissions projected from a 1993 baseline out to the 2007 attainment date; an estimate of the level of VOC and NO_x reductions necessary to achieve the one-hour ozone standard by 2007; a list of control strategies that the state could implement to attain the one-hour ozone standard; a schedule for completing the other required elements of the attainment demonstration; a revision to the Post-1996 9% ROP SIP that remedied a deficiency that the EPA believed made the previous version of that SIP unapprovable; and evidence that all measures and regulations required by Subpart 2 of Title I of the FCAA to control ozone and its precursors have been adopted and implemented, or are on an expeditious schedule to be adopted and implemented.

In November 1998, the SIP revision submitted to the EPA in May 1998 became complete by operation of law. However, the EPA stated that it could not approve the SIP until specific control strategies were modeled in the attainment demonstration. The EPA specified a submittal date of November 15, 1999 for this modeling. In a letter to the EPA dated January 5, 1999, the state committed to model two strategies showing attainment.

As the HGA modeling protocol evolved, the state eventually selected and modeled seven basic modeling scenarios. As part of this process, a group of HGA stakeholders worked closely with commission staff to identify local control strategies for the modeling. Some of the scenarios for which the stakeholders requested evaluation included options such as California-type fuel and vehicle programs as well as an acceleration simulation mode equivalent motor vehicle inspection and maintenance program. Other scenarios incorporated the estimated reductions in emissions that were expected to be achieved throughout the modeling domain as a result of the implementation of several voluntary and mandatory statewide programs adopted or planned independently of the SIP. It should be made clear that the commission did not propose that any of these strategies be included in the ultimate control strategy submitted to the EPA in 2000. The need for and effectiveness of any controls which may be implemented outside the HGA eight-county area will be evaluated on a county-by-county basis.

The SIP revision was adopted by the commission on October 27, 1999, submitted to the EPA by November 15, 1999, and contained the following elements: photochemical modeling of potential specific control strategies for attainment of the one-hour ozone standard in the HGA area by the attainment date of November 15, 2007; an analysis of seven specific modeling scenarios reflecting various combinations of federal, state, and local controls in HGA (additional scenarios H1 and H2 build upon Scenario VI); identification of the level of reductions of VOC and NO_x necessary to attain the one-hour ozone standard by 2007; a 2007 mobile source budget for transportation conformity; identification of specific source categories which, if controlled, could result in sufficient VOC and/or NO_x reductions to attain the standard; a schedule committing to submit by April 2000 an enforceable

commitment to conduct a mid-course review; and a schedule committing to submit modeling and adopted rules in support of the attainment demonstration by December 2000.

The April 19, 2000 SIP revision for HGA contained the following enforceable commitments by the state: to quantify the shortfall of NO_x reductions needed for attainment; to list and quantify potential control measures to meet the shortfall of NO_x reductions needed for attainment; to adopt the majority of the necessary rules for the HGA attainment demonstration by December 31, 2000, and to adopt the rest of the shortfall rules as expeditiously as practical, but no later than July 31, 2001; to submit a Post-99 ROP plan by December 31, 2000; to perform a mid-course review by May 1, 2004; and to perform modeling of mobile source emissions using the EPA mobile source emissions model (MOBILE6), to revise the on-road mobile source budget as needed, and to submit the revised budget within 24 months of the model's release. In addition, if a conformity analysis is to be performed between 12 months and 24 months after the MOBILE6 release, the state will revise the motor vehicle emissions budget (MVEB) so that the conformity analysis and the SIP MVEB are calculated on the same basis.

In order for the state to have an approvable attainment demonstration, the EPA has indicated that the state must adopt those strategies modeled in the November submittal and then adopt sufficient controls to close the remaining gap in NO_x emissions. The modeling included in this proposal indicates a gap of an additional 77.98 tons per day (tpd) of NO_x reductions is necessary for an approvable attainment demonstration. The commission estimates that this measure will achieve a minimum of 16.25 tpd of NO_x reductions and is therefore a necessary measure to consider for closing the gap and successfully demonstrating attainment.

The emission reduction requirements included as part of this SIP revision represent substantial, intensive efforts on the part of stakeholder coalitions in the HGA area. These coalitions, involving local governmental entities, elected officials, environmental groups, industry, consultants, and the public, as well as the commission and the EPA, have worked diligently to identify and quantify potential control strategy measures for the HGA attainment demonstration. Local officials from the HGA area have formally submitted a resolution to the commission, requesting the inclusion of many specific emission reduction strategies.

The current SIP revision contains rules, enforceable commitments, and photochemical modeling analyses in support of the HGA ozone attainment demonstration. In addition, this SIP contains Post-1999 ROP plans for the milestone years 2002, 2005, and for the attainment year 2007. The SIP also contains enforceable commitments to implement further measures, if needed, in support of the HGA attainment demonstration, as well as a commitment to perform and submit a mid-course review.

The HGA ozone nonattainment area will need to ultimately reduce NO_x more than 750 tpd to reach attainment with the one-hour standard. In addition, a VOC reduction of about 25% will have to be achieved. Adoption of the NO_x reduction systems program will contribute to attainment and maintenance of the one-hour ozone standard in the HGA area.

These proposed amendments are one element of the control strategy for the HGA Post-1999 ROP/Attainment Demonstration SIP. The proposed amendments would require owners or operators of on-road or non-road vehicles or equipment manufactured prior to model year 1997 having a heavy-duty on-

road or non-road engine and fueled by gasoline, diesel, diesel emulsion fuel or any alternate fuel located in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties to use exhaust systems that will achieve a 80% reduction in NO_x emissions from what the engine would emit without the exhaust system. Examples of exhaust systems that could be used to meet the proposed rule are NO_x adsorbers, methane catalysts, diesel oxidation catalysts, selective catalyst reduction, lean NO_x catalysts, and other exhaust after-treatment systems. Adoption of these requirements to reduce NO_x can contribute to attainment and maintenance of the one-hour ozone standard in the HGA area.

The commission solicits comment on additional flexibilities relating to rule content and implementation which have not been addressed in this or other concurrent rulemakings. These flexibilities may be available for both mobile and stationary sources. Additional flexibilities may also be achieved through innovative and/or emerging systems which may become available in the future. Additional sources of funds for incentive programs may become available to substitute for some of the measures considered here.

SECTION BY SECTION DISCUSSION

The proposed §114.440 has the following definitions: “NO_x Reduction System” is defined as an exhaust or engine-related control device designed for gasoline or diesel engine exhaust systems to achieve NO_x emissions reductions. For example, a NO_x Reduction System could include exhaust systems which use catalysts such as NO_x adsorbers, methane catalysts, diesel oxidation catalysts, selective catalyst reduction, lean NO_x catalysts, and other exhaust after-treatment systems. A “Heavy-

Duty On-Road Engine” is defined as an on-road engine installed in an on-road vehicle that is greater than 10,000 pounds gross vehicle weight rating (GVWR) and is fueled by gasoline, diesel, diesel emulsion fuel, or any alternate fuel. This would exclude vehicles regulated under the federal Tier 2 engine standards. A “Heavy-Duty Non-Road Engine” is defined as a non-road engine used in locomotives, tugs, tow-boats, and ferry boats, that is greater than 175 nominal horsepower (hp) as rated by the manufacturer on the vehicle nameplate and is fueled by gasoline, diesel, diesel emulsion fuel, or any alternate fuel. The proposal focuses on the use of both heavy-duty on-road and non-road engines; because, as seen in the EPA MOBILE and NONROAD models, heavy-duty engines have NO_x emissions which are six to 12 times higher than their light-duty counterparts. “Primarily Operated” is defined as the use of a motor vehicle or engine more than 60 calendar days per year in an affected county; it is presumed that an on-road vehicle is primarily operated in the county in which it is registered.

Proposed §114.441 provides that owners or operators of on-road or non-road vehicles or equipment manufactured prior to model year 1997 having a heavy-duty on-road or non-road engine and fueled by gasoline, diesel, diesel emulsion fuel, or any alternate fuel primarily operated in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties must comply with the requirements of Subchapter I, Division 5. The commission believes these model years are appropriate because newer vehicles and engines have generally much lower NO_x emissions. Thus, the commission believes the regulatory focus should be on the older heavy-duty engines with higher emissions.

Proposed §114.442 provide the criteria for use of heavy-duty on-road and non-road engines in the affected counties. NO_x reduction systems used by any heavy-duty on-road and non-road engines in the affected counties must, at a minimum, comply with the emissions testing and emission standards required by applicable EPA or California Air Resources Board (CARB) regulations. The NO_x reduction system installed on the vehicle or engine must be able to reduce NO_x emissions by at least 80%. Initial laboratory tests show that the use of NO_x reduction systems can reduce NO_x emissions from 65% to in excess of 99%. Based on the emissions modeling for HGA, the commission believes the 80% reduction is necessary to achieve attainment. Further, the NO_x reduction system must not result in a net increase in other primary pollutants.

The commission anticipates that NO_x reduction systems currently under development will be available by May 1, 2004, the proposed compliance date for the proposed rules. The commission believes this is true because NO_x reduction systems are being developed. However, the commission acknowledges that no NO_x reduction systems have been certified for use by the EPA in on-road and non-road applications. This is because most of these systems are used in large, stationary, industrial diesels which have steady-state loads. Nevertheless, the commission believes that these systems will be developed and that they are critical towards obtaining necessary reductions in NO_x emissions in the HGA nonattainment area. Further, to provide consistency in the development process and for implementation, it is important that these systems be able to meet applicable EPA and CARB standards. However, heavy-duty on-road and non-road engines are often subjected to harsh, transient loads which cause variation in catalyst performance. For these reasons, the commission is specifically soliciting comments about alternatives

to the use of NO_x reduction systems as means of control which could achieve the same emission reductions.

Proposed §114.445 provides the incentive for owners or operators of affected heavy-duty on-road and non-road engines to install NO_x reduction systems that result in reductions in excess of the required 80% NO_x emissions reduction. If a NO_x reduction system is used that will achieve greater than 80% NO_x reductions, the owner or operator may obtain mobile emissions reduction credits in accordance with §101.29 of this title (relating to Emission Credit Banking and Trading.) In addition to demonstrating that the NO_x reduction system will achieve NO_x emission reductions of greater than 80%, the owner or operator must demonstrate that all applicable sections of Chapter 114 are met, including Subchapter B, §114.20 and §114.21, relating to Motor Vehicle Anti-Tampering Requirements; Subchapter E, §§114.150 - 114.157, relating to Low Emission Vehicle Fleet Requirements; and Subchapter I, §§114.400 - 114.439, relating to Non-Road Engines. This will ensure that the emissions from NO_x reduction systems comply with Chapter 114 and that additional reductions are surplus to reductions required by other rule requirements.

Recordkeeping and labeling requirements are addressed in proposed §114.446. The owner or operator of heavy-duty on-road and non-road engines in the affected counties must follow manufacturer installation, maintenance, and labeling requirements as required for the NO_x reduction system and by

the EPA in 40 Code of Federal Regulations (CFR) Part 86, Control of Emissions from New and In-Use Highway Vehicles and Engines as amended on February 28, 2000; or 40 CFR Part 89, Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines; or by CARB in Title 13, California Code of Regulations, §1976, as amended on February 26, 1999.

Registration of on-road and non-road engines is specified in §114.448. Owners and operators of affected engines must register using a form available from the executive director which proves that a NO_x reduction system that meets the requirements of Chapter 114 was properly installed.

Affected counties are addressed in §114.449. The affected counties in the HGA ozone nonattainment area are Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller. If adopted, compliance with the rules would be required on May 1, 2004.

FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENT

John Davis, 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 fiscal implications which may be significant for units of state and local government located in the HGA ozone nonattainment area as a result of administration or enforcement of the proposed amendments.

The proposed amendments require the use of NO_x reduction systems, that will achieve a 80% reduction in NO_x, from all engines manufactured prior to model year 1997 installed in on-road vehicles with a GVWR greater than 10,000 pounds and on engines rated at 175 nominal hp or greater used in non-road

locomotives and commercial marine vessels primarily operated in the HGA ozone nonattainment area by May 1, 2004. The NO_x reductions must be accomplished without increasing other pollutants. The HGA area consists of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties. The proposed rules would affect approximately 340 state and local government and 64,000 privately owned and operated on-road heavy-duty vehicles and an unknown number of locomotives and commercial marine vessels.

Examples of NO_x reduction systems that could be used to meet the proposed rules are NO_x absorbers, methane catalysts, diesel oxidation catalyst, selective catalyst reduction, lean NO_x catalysts, and other exhaust after-treatment systems.

The commission anticipates that approximately 340 heavy-duty on-road vehicles are owned and operated by state and local governments. Based on a report from the Manufacturers of Emission Controls Association (MECA) titled *Emission Control Retrofit of Diesel-Fueled Vehicles*, the cost to state and local governments to purchase emission control devices that would meet the emission requirements of the proposed amendments would range from \$500 to \$2,000 per heavy-duty on-road and non-road vehicles/equipment.

The total costs to state and local governments within the HGA area would be approximately \$170,000 to \$680,000 for heavy-duty on-road vehicles/equipment as a result of implementing the proposed amendments. The total costs do not factor in non-road locomotives and commercial marine vessels because the total number owned and operated by state and local governments in the HGA area is

unknown. The commission anticipates the operating costs associated with the proposed amendments will not be significant unless 50 - 200 or more affected vehicles/equipment are owned and operated by a single unit of state or local government.

PUBLIC BENEFIT AND COSTS

Mr. Davis also has determined that for the first five years the proposed amendments are in effect, the public benefit anticipated from enforcement of and compliance with the proposed amendments will be the potential reduction of on-road and non-road mobile source emissions, potentially improved air quality, and contribution toward demonstration of attainment with the NAAQS for the HGA ozone nonattainment areas.

The proposed amendments require the use of NO_x reduction systems that will achieve an 80% reduction in NO_x, from all engines manufactured prior to model year 1997 installed in on-road vehicles with a GVWR greater than 10,000 pounds and engines rated at 175 nominal hp or greater installed in non-road locomotives and commercial marine vessels primarily operated in the HGA area by May 1, 2004. The NO_x reductions must be accomplished without increasing other pollutants.

The commission estimates that approximately 64,000 heavy-duty on-road vehicles affected by the proposed amendments are owned and operated by individuals and businesses. Based on a report from the MECA titled *Emission Control Retrofit of Diesel-Fueled Vehicles*, the cost to state and local governments to purchase emission control devices that would meet the emission requirements of the proposed amendments would range from \$500 to \$2,000.

The total costs to individuals and businesses within the HGA area as a result of the proposed amendments would be approximately \$32 million to \$128 million as a result of implementing the proposed amendments. The total costs does not factor in non-road locomotives or commercial marine vessels because the total number owned and operated by individuals and businesses in the HGA area is unknown. The total fiscal impact to individuals and businesses would depend on the number of vehicles that would be required to have the NO_x reducing systems installed.

SMALL AND MICRO-BUSINESS ASSESSMENT

There may be adverse fiscal implications for small or micro-businesses located in the HGA area as a result of administration or enforcement of the proposed amendments. The proposed amendments require the use of NO_x reduction systems that will achieve a 80% reduction in NO_x, on all engines manufactured prior to model year 1997 installed in on-road heavy-duty vehicles with a GVWR greater than 10,000 pounds or higher, and engines with a hp rating greater than 175 installed in non-road locomotives and commercial marine vessels primarily operated in the HGA area by May 1, 2004. The NO_x reductions must be accomplished without increasing other pollutants. Of the approximately 64,000 privately owned and operated on-road heavy-duty vehicles and the unknown number of non-road locomotives and commercial marine vessels affected by the proposed amendments, some are anticipated to be owned and operated by small and/or micro-businesses in an amount that cannot be determined.

The cost to small or micro-businesses to purchase emission control devices that would meet the emission requirements of the proposed amendments would range from \$500 to \$2,000 per vehicle affected by the proposed amendment. The total fiscal impact to small or micro-businesses would depend on the number of vehicles that would be required to have the NO_x reduction systems installed.

DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and has determined that the rulemaking action does not meet the definition of a “major environmental rule” as defined in that 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 amendments to Chapter 114 are one element of the HGA Post-1999 ROP/Attainment Demonstration SIP and will require NO_x emission reductions from owners or operators of heavy-duty on-road and non-road engines in the HGA ozone nonattainment area. The commission does not believe the rules will have an adverse, material affect or will impact a sector of the economy. While the new rules are intended to protect the environment, based on the analysis provided in the preamble including the discussion in the Public Benefit and Costs section, the commission does not believe the rules will adversely affect, in a material way, the use of heavy-duty engines greater than 10,000 pounds GVWR or heavy-duty non-road engines that are greater than 175 nominal hp as rated by the manufacturer on the nameplate, both of which are fueled by gasoline, diesel, diesel emulsion fuel, or any alternative fuel. The commission does not believe that the owners or operators of these entities comprise a sector of the economy, or that these rules will 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.

Title 42 USC, §7410, requires states to adopt a SIP which provides for “implementation, maintenance, and enforcement” of the primary NAAQS in each air quality control region of the state. While §7410 does not require specific programs, methods, or reductions in order to meet the standard, state SIPs must include “enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance as may be necessary or appropriate to meet the applicable requirements of this chapter,” (meaning Chapter 85, Air Pollution Prevention and Control). It is true that 42 USC does require some specific measures for SIP purposes, like the inspection and maintenance program, but those programs are the exception, not the rule, in the 42 USC SIP structure. The provisions of 42 USC recognize that states are in the best position to determine what programs and controls are necessary or appropriate in order to meet the NAAQS. This flexibility allows states, affected industry, and the public, to collaborate on the best methods for attaining the NAAQS for the specific regions in the state. Even though 42 USC allows states to develop their own programs, this flexibility does not relieve a state from developing a program that meets the requirements of §7410. Thus, while specific measures are not generally required, the emission reductions are required. States are not free to ignore the requirements of §7410 and must develop programs to assure that the nonattainment areas of the state will be brought into attainment on schedule.

The requirement to provide a fiscal analysis of proposed regulations in the Texas Government Code was amended by Senate Bill (SB) 633 during the 75th Legislative Session. The intent of SB 633 was to require agencies to conduct a regulatory impact analysis (RIA) of extraordinary rules. These are identified in the statutory language as major environmental rules that will have a material adverse

impact and will exceed a requirement of state law, federal law, or a delegated federal program, or are adopted solely under the general powers of the agency. With the understanding that this requirement would seldom apply, the commission provided a cost estimate for SB 633 that concluded “based on an assessment of rules adopted by the agency in the past, it is not anticipated that the bill will have significant fiscal implications for the agency due to its limited application.” The commission also noted that the number of rules that would require assessment under the provisions of the bill was not large. This conclusion was based, in part, on the criteria set forth in the bill that exempted proposed rules from the full analysis unless the rule was a major environmental rule that exceeds a federal law. As previously discussed, 42 USC does not require specific programs, methods, or reductions in order to meet the NAAQS; thus, states must develop programs for each nonattainment area to ensure that area will meet the attainment deadlines. Because of the ongoing need to address nonattainment issues, the commission routinely proposes and adopts SIP rules. The legislature is presumed to understand this federal scheme. If each rule proposed for inclusion in the SIP was considered to be a major environmental rule that exceeds federal law, then every SIP rule would require the full RIA contemplated by SB 633. This conclusion is inconsistent with the conclusions reached by the commission in its cost estimate and by the Legislative Budget Board (LBB) in its fiscal notes. Since the legislature is presumed to understand the fiscal impacts of the bills it passes, and that presumption is based on information provided by state agencies and the LBB, the commission believes that the intent of SB 633 was only to require the full RIA for rules that are extraordinary in nature. While the SIP rules will have a broad impact, that impact is no greater than is necessary or appropriate to meet the requirements of 42 USC. For these reasons, rules proposed for inclusion in the SIP fall under the exception in Texas Government Code, §2001.0225(a), because they are required by federal law. The

commission has performed photochemical grid modeling which predicts that NO_x emission reductions, such as those required by these rules, will result in reductions in ozone formation in the HGA ozone nonattainment area. This rulemaking action does not exceed an express requirement of state law. This rulemaking action is intended to obtain NO_x emission reductions which will result in reductions in ozone formation in the HGA ozone nonattainment area and help bring HGA into compliance with the air quality standards established under federal law as NAAQS for ozone. The rulemaking does not exceed a standard set by federal law, exceed an express requirement of state law (unless specifically required by federal law), or exceed a requirement of a delegation agreement. The rulemaking was not developed solely under the general powers of the agency, but was specifically developed to meet the NAAQS established under federal law and authorized under Texas Clean Air Act (TCAA) §§382.002, 382.011, 382.012, 382.019, and 382.039.

The commission invites public comment on the draft regulatory impact analysis determination.

TAKINGS IMPACT ASSESSMENT

The commission prepared a takings impact assessment for these rules in accordance with Texas Government Code, §2007.043. The following is a summary of that assessment. These proposed new sections are one element of the control strategy for the HGA Post-1999 ROP/Attainment Demonstration SIP. The specific purpose of the rulemaking is to require owners or operators of on-road or non-road vehicles or equipment manufactured prior to model year 1997 having a heavy-duty on-road or non-road engine and fueled by gasoline, diesel, diesel emulsion fuel, or any alternate fuel located in the HGA nonattainment area to use exhaust systems that will achieve a 80% reduction in NO_x emissions from

what the engine would emit without the exhaust technology. Adoption of these requirements to reduce NO_x can contribute to attainment and maintenance of the one-hour ozone standard in the HGA area.

Promulgation and enforcement of the rule amendments will not burden private real property because the NO_x reduction system requirement applies to heavy-duty on-road and non-road engines, which are not attached to, or considered to be, private real property. Although the rule revisions do not directly prevent a nuisance or prevent an immediate threat to life or property, they do prevent a real and substantial threat to public health and safety and fulfill federal mandates under the 42 USC, §7410. Specifically, control requirements have been developed to meet the ozone NAAQS set by the EPA under 42 USC, §7409. States are primarily responsible for ensuring attainment and maintenance of NAAQS once the EPA has established them. Under 42 USC, §7410 and related provisions, states must submit, for EPA approval, SIPs that provide for the attainment and maintenance of NAAQS through control programs directed to sources of the pollutants involved. Therefore, the purpose of this rulemaking action is to implement restrictions on the use of heavy-duty on-road and non-road engines in the HGA ozone nonattainment area to meet the air quality standards established under federal law as NAAQS. Consequently, the exemption which applies to these rules is that of an action reasonably taken to fulfill an obligation mandated by federal law; therefore, these proposed rules do not constitute a takings under the Texas Government Code, Chapter 2007.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission determined that 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 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 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 reviewed this action for consistency with the CMP goals and policies in accordance with the regulations of the Coastal Coordination Council. For this rulemaking, the commission determined that the rules are consistent with the applicable CMP goal expressed in 31 TAC §501.12(1) of protecting and preserving the quality and values of coastal natural resource areas and the policy in 31 TAC §501.14(q), which requires that the commission protect air quality in coastal areas. This rulemaking will require owners or operators of on-road or non-road vehicles or equipment manufactured prior to model year 1997 having a heavy-duty on-road or non-road engine and fueled by gasoline, diesel, diesel emulsion fuel, or any alternate fuel located in the HGA nonattainment area to use exhaust systems that will achieve a 80% reduction in NO_x emissions from what the engine would emit without the exhaust system. Adoption of these requirements to reduce NO_x can contribute to attainment and maintenance of the one-hour ozone standard in the HGA area. This action is consistent with the CMP because it does not authorize any new emissions and will reduce existing emissions of NO_x.

Interested persons may submit comments on the consistency of the proposed rules with the CMP during the public comment period.

ANNOUNCEMENT OF HEARINGS

The commission will hold public hearings on this proposal at the following times and locations:

September 18, 2000, 10:00 a.m., Lone Star Convention Center, 9055 Airport Road (FM 1484), Conroe; September 18, 2000, 7:00 p.m., Lake Jackson Civic Center, 333 Highway 332 East, Lake Jackson; September 19, 2000, 10:00 a.m. and 7:00 p.m., George Brown Convention Center, 1001 Avenida de Las Americas, Houston; September 20, 2000, 9:00 a.m., VFW Hall, 6202 George Bush Drive, Katy; September 20, 2000, 6:00 p.m., East Harris County Community Center, 7340 Spencer, Pasadena; September 21, 2000, 10:00 a.m., Southeast Texas Regional Airport Media Room, 6000 Airline Drive, Beaumont; September 21, 2000, 2:00 p.m., Amarillo City Commission Chambers, City Hall, 509 East 7th Avenue, Amarillo; September 21, 2000, 6:00 p.m., Charles T. Doyle Convention Center, 21st Street at Phoenix Lane, Texas City; September 22, 2000, 10:00 a.m., Dayton High School, 2nd Floor Lecture Room, 3200 North Cleveland Street, Dayton; September 22, 2000, 11:00 a.m., El Paso City Council Chambers, 2 Civic Center Plaza, 2nd Floor, El Paso; September 22, 2000, 2:00 p.m., North Central Texas Council of Governments, 2nd Floor Board Room, 616 Six Flags Drive, Suite 200, Arlington; and September 25, 2000, 10:00 a.m., Texas Natural Resource Conservation Commission, 12100 North I-35, Building E, Room 201S, Austin. The hearings are structured for the receipt of oral or written comments by interested persons. Registration will begin one hour prior to each hearing. Individuals may present oral statements when called upon in order of registration. A four-minute time limit will be established at each hearing to assure that enough time is allowed for every interested person to speak. Open discussion will not occur during each hearing; however, agency staff members will be available to discuss the proposal one hour before each hearing, and will answer questions before and after each hearing.

Persons with disabilities who have special communication or other accommodation needs who are planning to attend the hearing should contact the Office of Environmental Policy, Analysis, and Assessment at (512) 239-4900. Requests should be made as far in advance as possible.

SUBMITTAL OF COMMENTS

Written comments may be submitted to Heather Evans, Office of Environmental Policy, Analysis, and Assessment, MC 206, P.O. Box 13087, faxed to (512) 239-4808, or emailed to *siprules@tnrcc.state.tx.us*. All comments should reference Rule Log Number 2000-011M-114-AI. Comments must be received by 5:00 p.m., September 25, 2000. For further information, please contact Sam Wells at (512) 239-1441 or Alan Henderson at (512) 239-1510.

STATUTORY AUTHORITY

The new sections are proposed under the Texas Water Code (TWC), §5.103, which authorizes the commission to adopt rules necessary to carry out its powers and duties under the TWC; and under the Texas Health and Safety Code, TCAA, §382.017, which authorizes the commission to adopt rules consistent with the policy and purposes of the TCAA. The new sections are also proposed under TCAA, §382.011, which authorizes the commission to control the quality of the state's air; §382.012, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.019, which authorizes the commission to adopt rules to control and reduce emissions from engines used to propel land vehicles; and §382.039, which authorizes the commission to develop and implement transportation programs and other measures necessary to demonstrate attainment and protect the public from exposure to hazardous air contaminants from motor vehicles.

The proposed new sections implement TCAA, §382.002, relating to Policy and Purpose; §382.011, relating to General Powers and Duties; §382.012, relating to State Air Control Plan; §382.019, relating to Methods Used to Control and Reduce Emissions from Land Vehicles; and §382.039, relating to Attainment Program.

SUBCHAPTER I: NON-ROAD ENGINES

Division 5: NITROGEN OXIDES REDUCTION SYSTEMS

§§114.440 - 114.442, 114.445, 114.446, 114.448, 114.449

§114.440. Definitions.

Unless specifically defined in the TCAA or in the rules of the commission, the terms used by the commission have the meanings commonly ascribed to them in the field of air pollution control. In addition to the terms which are defined by the TCAA, the following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) **Heavy-duty on-road engine** - An on-road engine installed in an on-road vehicle that is greater than 10,000 pounds gross vehicle weight rating, and is fueled by gasoline, diesel, diesel emulsion fuel, or any alternate fuel.

(2) **Heavy-duty non-road engine** - A non-road engine used in locomotives, tugs, tow-boats, and ferry boats that is greater than 175 nominal horsepower as rated by the manufacturer on the vehicle nameplate and is fueled by gasoline, diesel, diesel emulsion, or any alternate fuel.

(3) **Nitrogen oxides (NO_x) reduction system** - An exhaust or engine-related control device designed for gasoline or diesel engine exhaust systems to achieve NO_x emissions reductions;

(4) **Primarily operated** - Use of a motor vehicle or engine more than 60 calendar days per year in an affected county. It is presumed that an on-road vehicle is primarily operated in the county in which it is registered.

§114.441. Applicability.

(a) Owners or operators of non-road vehicles or equipment manufactured prior to model year 1997 having a heavy-duty non-road engine primarily operated in the counties listed in §114.449 of this title (relating to Affected Counties and Compliance Dates) must comply with the requirements of this division.

(b) Owners or operators of on-road vehicles or equipment manufactured prior to model year 1997 having a heavy-duty on-road engine primarily operated in the counties listed in §114.449 of this title must comply with the requirements of this division.

§114.442. Control Requirements.

(a) Non-road vehicles or equipment manufactured prior to model year 1997 using heavy-duty on-road and non-road engines primarily operated in the counties listed in §114.449 of this title (relating to Affected Counties and Compliance Dates) must use nitrogen oxides (NO_x) emission reduction systems that are approved:

(1) by the EPA as to their emissions as tested by the applicable Federal Test Procedure in 40 Code of Federal Regulations (CFR) Part 86, Control of Emissions from New and In-Use Highway Vehicles and Engines as amended on February 28, 2000; or 40 CFR Part 89, Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines as amended on October 23, 1998; or

(2) by the California Air Resources Board as tested by the applicable emissions test in Title 13, California Code of Regulations, §1976, as amended on February 26, 1999.

(b) Owners or operators of heavy-duty engines subject to §114.441 of this title (relating to Applicability) shall ensure that the NO_x reduction system has a minimum control efficiency of 80% for NO_x emissions.

(c) The installation of the NO_x reduction system cannot result in an increase in any pollutant.

§114.445. Emission Reduction Credits.

(a) Owners or operators of heavy-duty engines subject to §114.441 of this title (relating to Applicability) that install nitrogen oxides (NO_x) reduction systems that achieve greater than 80% reductions as required by §114.442 of this title (relating to Control Requirements) may obtain mobile emissions reduction credits in accordance with §101.29 of this title (relating to Emission Credit Banking and Trading.)

(b) In order to demonstrate that the NO_x reduction system will achieve emission reductions of greater than 80%, the owner or operator of the on-road heavy-duty engine or non-road heavy-duty engine must demonstrate that all applicable sections of this chapter are met, including the following provisions:

(1) §114.20 of this title (relating to Maintenance and Operation of Air Pollution Control Systems or Devices Used to Control Emissions from Motor Vehicles);

(2) §§114.150-157 of this title (relating to Requirements for Mass Transit Authorities, Requirements for Local Governments and Private Entities, Exceptions, Exceptions for Certain Mass Transit Authorities, Reporting, Record Keeping, and Low Emission Vehicle Fleet Program Compliance Credits); and

(3) the requirements of Chapter 114, Control of Air Pollution from Motor Vehicles, Subchapter I, Non-Road Engines, Division 5: Airport Ground Support Equipment; Division 2: Heavy Equipment Fleets - Compression-Ignition Engines; Division 3: Non-Road Large Spark-Ignition Engines; and Division 4: Construction Equipment Operating Restrictions.

§114.446. Recordkeeping and Labeling.

Owners or operators of heavy-duty on-road and non-road engines subject to §114.441 of this title (relating to Applicability) that install nitrogen oxides (NO_x) reduction systems must follow all:

(1) written procedures by the manufacturer of the NO_x reduction systems, as to engine maintenance and recordkeeping; and

(2) written labeling requirements set by the EPA in 40 Code of Federal Regulations (CFR), Part 86, as amended on February 28, 2000 or the California Air Resources Board in Title 13, California Code of Regulations, §1976, as amended on February 26, 1999.

§114.448. Registration.

Owners or operators of heavy-duty on-road and non-road engines subject to §114.441 of this title (relating to Applicability) that install nitrogen oxides (NO_x) reduction systems must submit registration on an appropriate form available from the executive director which will require information that demonstrates compliance with the requirements of this division.

§114.449. Affected Counties and Compliance Dates.

Beginning on May 1, 2004, the requirements of this division shall be enforced in the following counties: Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller.