

The Texas Natural Resource Conservation Commission (commission) proposes new §114.330, Definitions; §114.331, Applicability; §114.332, Diesel Emulsion Standards; §114.336, Recordkeeping and Labeling; §114.338, Registration; and §114.339, Affected Counties and Compliance Dates. The commission proposes these revisions to Chapter 114, Control of Air Pollution From Motor Vehicles; Subchapter H, Low Emission Fuels; new Division 4, Diesel Emulsion Fuel; and corresponding revisions to the state implementation plan (SIP) in order to control ground-level ozone in the Houston/Galveston (HGA) ozone nonattainment area. These rules are designed to require use of a low-emission diesel fuel formulation called diesel emulsion for both on-road and non-road vehicles.

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 area 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 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 f); 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, 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 10.70 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 and 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 proposed diesel emulsion fuel (DEF) program will contribute to attainment and maintenance of the one-hour ozone standard in the HGA ozone nonattainment area.

These proposed rules are one element of the control strategy for the HGA Attainment Demonstration SIP. The purpose of these proposed rules is to establish a diesel emulsion fuel air pollution control strategy for the HGA area that will provide NO_x reductions to assist in demonstrating attainment with the ozone NAAQS. The proposed rules would require on-road heavy-duty diesel engines which are registered in HGA and non-road heavy-duty diesel engines that are primarily operated in the HGA area and greater than 175 nominal horsepower (hp), to use diesel emulsions. Elsewhere in this edition of the *Texas Register*, the commission is proposing to amend 30 TAC Chapter 114, Control of Air Pollution from Motor Vehicles, Subchapter H, Low Emission Fuels, Division 2: Low Emission Diesel, to require the use of low emission diesel in the HGA nonattainment area. The proposed new Division 4: Diesel Emulsion Fuel, requires the addition of diesel emulsion additives to low emission diesel fuel for use in the HGA nonattainment area, thus, it should not conflict with the requirements of the low emission diesel fuel program.

Diesel emulsion fuel is an emergent fuel technology that relies on a water-in-fuel mixture to lower NO_x emissions. The water content lowers flame temperature by absorbing latent heat in the combustion chamber, using the same principle of thermodynamics as injecting water into a turbine. There are three components to diesel emulsion fuels: 1.) diesel fuel; 2.) water, usually 10% to 20% by volume; and 3.) a diesel emulsion additive which suspends the fuel and water together. The diesel emulsion fuel can be blended by the diesel emulsion fuel distributor or blended on site using a fuel metering system.

According to preliminary laboratory results, the diesel emulsion additive can lower exhaust NO_x by 5.0% to 30%, irrespective of the baseline fuel, depending on the engine configuration and operating mode. At least one diesel emulsion additive has been approved for use by the EPA.

Since the EPA does not require the addition of diesel emulsion additives to diesel fuel, as is required by this proposal, the commission does not believe that a waiver under 42 USC, §7445(c)(4)(C) is required.

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 technology 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

New §114.330 contains the following definitions. “Diesel Emulsion Additive” is defined as a type of diesel fuel additive which allows water and diesel to be blended so that it does not separate. The additive may also contain anti-freeze agents, cetane enhancers, and other ingredients as a water/fuel mixture containing a diesel fuel additive to emulsify the water with the fuel, usually in a mixture.

“Diesel Emulsion Fuel” is defined as a water/fuel mixture containing a diesel fuel additive to emulsify the water with the low emission diesel fuel with the water. Typically, DEF contains 10% to 20% by volume water and achieves an emission reduction of 5.0% to 30% NO_x relative to the baseline diesel

fuel depending concentration of water in the fuel and engine design parameters. “Diesel Emulsion Fuel Distributor” is defined as any person, retailer, jobber, bulk fuel reseller, low emission diesel refiner who distributes diesel emulsion fuel to the ultimate user, diesel emulsion additive manufacturer, or other entity who distributes diesel fuel required to be mixed with a diesel emulsion additive. The proposed definition of “Non-Road Heavy-Duty Engine” includes any non-road engines which are rated over 175 nominal hp. This definition is intended to cover larger engines such as bulldozers, graders, and cranes as well as locomotives, tugs, tow-boats, and ferry boats. “On-road Heavy-duty Diesel Engine” is defined as a diesel engine in a on-road vehicle which is greater than 10,000 pounds gross vehicle weight rating (GVWR). The definition would exclude vehicles required to comply with the federal Tier 2 engine standards. “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.

Rule applicability is clarified in §114.331. The proposed new rule would apply to distributors of on-road diesel with a throughput of at least 25,000 gallons per month at a fuel dispensing facility, such as a truck stop, or vehicle fleet refueling station. It would apply to distributors of dyed and undyed, non-road diesel with a throughput of at least 500 gallons of diesel per month at one fuel dispensing facility, such as construction or agricultural refueling. The diesel emulsion fuel distributors would make the diesel emulsion fuel available to all on-road heavy-duty diesels, which are defined as being greater than 10,000 pounds GVWR and all non-road engines rated over 175 nominal hp. Any diesel fuel distributor who provides diesel fuel to owners or operators of affected engines and equipment without inclusion of the diesel emulsion fuel additive is considered in violation of this rule.

Diesel emulsion emission standards are specified in §114.332. The diesel component of the diesel emulsion fuel must first meet low emission diesel fuel requirements as required by §114.312, Low Emission Diesel Standards. The requirement to use low emission diesel fuel is being proposed elsewhere in this edition of the *Texas Register* for the HGA nonattainment area. Requiring use of low emission diesel fuel, consistent with proposed §114.312, will provide a common baseline for all users of the affected equipment and vehicles and will not require the production of an alternative low emission diesel fuel. The diesel emulsion additive must meet EPA requirements in 40 Code of Federal Regulations (CFR) Part 80, Registration of Fuels and Fuel Additives. The amount, concentration, or volume of water used in the diesel emulsion additive must be within the manufacturer specifications. The diesel emulsion must result in emissions that are 15% to 20% lower than the NO_x emissions in the base line fuel, depending on the types and operating mode of the engine, and not result in a net increase in the other pollutant levels, as tested by the manufacturer and approved or recognized by the EPA. Typically, diesel emulsion fuel contains 10% to 20% by volume water and achieves an emission reduction of 5.0% to 30% NO_x relative to the baseline diesel fuel, depending on the concentration of water in the fuel and engine design parameters. The 15% and 20% reduction are a reasonable requirement because significantly lower reductions would not be adequate to lower ozone production in the photochemical modeling.

Recordkeeping and labeling are addressed in §114.336. All diesel emulsion fuel distributors affected by this rule must retain some kind of proof of purchase such as a fuel contract, leased blending facility, or receipts which prove that the diesel emulsion fuel is actually being used. Also, any tanks which are

used to blend and/or dispense diesel emulsion fuel must be labeled “DIESEL EMULSION FUEL ONLY,” so as to differentiate between other fuel blends.

Registration is covered in §114.338. All diesel emulsion fuel distributors affected by this rule are required to register with the executive director. The registration must include a statement of acceptance of the requirements of this rule and consent to allow the collection of samples of diesel emulsion fuel and allow access to records. Registration will be on forms available from the executive director.

Affected counties are addressed in §114.339. The counties covered are in the HGA nonattainment area. The rules would be implemented 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 area depending on the number of affected on-road heavy-duty diesel vehicles and non-road vehicles and equipment owned and operated as a result of administration or enforcement of the proposed amendments. There should be no fiscal implications to units of state and local government located outside of this nonattainment area as a result of this proposed rules.

The proposed amendments require diesel emulsion fuel use for engines installed in on-road heavy-duty diesel vehicles registered in HGA area with a GVWR greater than 10,000 pounds or engines that are

rated more than 175 hp installed in non-road vehicles/equipment primarily operated in the HGA area. The proposed amendments are limited to distributors of on-road diesel that dispense 25,000 or more gallons of diesel fuel per month at one fuel dispensing facility. Additionally, the proposed amendments are limited to distributors of dyed and undyed, non-road diesel that dispense 500 or more gallons of diesel fuel per month at one fuel dispensing facility, such as construction or agricultural refueling sites. The proposed rules would affect approximately 1,900 state and local government and 53,000 privately owned and operated on-road heavy duty diesel vehicles. Additionally, the proposed amendments would also affect approximately 10,000 non-road vehicles/equipment.

Diesel emulsion fuel is an emergent technology for fuels which relies on a water-in-fuel mixture to lower NO_x emissions. Diesel emulsion fuel is produced by blending diesel fuel, with water, and a diesel emulsion additive which suspends the fuel and water together.

In order to achieve certain reductions, low emission diesel (LED) fuel will be required to be blended with diesel emulsion fuel in the HGA area by May 1, 2004. Standards for and results of using LED fuel are being presented in a concurrent rulemaking. The commission requires that diesel emulsion fuel used in on-road heavy-duty diesel engines has to result in a 15% decrease in NO_x compared to emission benefits from the use of LED fuel alone. Additionally, the diesel emulsion fuel used in non-road engines has to result in a 20% decrease in NO_x compared to emission benefits from the use of LED fuel alone. Both uses should not result in a net increase in any other pollutant. The diesel emulsion fuel manufacturers have to provide the EPA with data that corroborates required emission reductions.

Based on comments from a nationwide producer, diesel emulsion fuel will cost the same per gallon as the diesel fuel component used to make the product, because the increased cost of the additive is offset by the displacement of fuel due to the inclusion of water in the overall mixture. By May 1, 2004, the use of LED fuel in the HGA area will increase diesel fuel costs in the HGA area by approximately \$.08 more per gallon compared to today's current regular diesel prices. The increased cost for LED fuel is based on analysis published by Northeast States for Coordinated Air Use Management (NESCAUM) and EPA's *Notice of Proposed Rulemaking on the Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. In addition to the fuel-related cost, there may be an approximate 13% reduction in fuel economy as a result of using the fuel. Testing conducted by one nationwide producer shows that fuel economy can decrease by as much as 13%, but it can also stay the same depending on the vehicle and equipment use.

If a unit of state or local government wants to dispense diesel emulsion fuel, a special blending unit may be required. According to one nationwide diesel emulsion fuel producer, a typical unit, which is capable of processing over 5 million gallons a year, is used at major fuel distribution centers. The cost for this type of unit is approximately \$400,000 installed (\$350,000 for the unit and \$50,000 for installation). Final costs would depend on the level of infrastructure at the proposed site (availability of water, electricity, diesel fuel, platform, piping, etc.). The commission does not anticipate additional costs to state and local government diesel emulsion fuel providers due to required records retention, diesel emulsion fuel tank labeling, and registration with the agency.

Units of state and local government will pay more to fuel affected vehicles due to the increased cost of diesel emulsion fuel compared with current diesel prices and the potential reduced gas mileage.

Additionally, if a unit of state or local government decides to dispense the fuel, a special blending unit may have to be purchased or leased. The commission estimates that approximately 1,900 heavy-duty on-road diesel vehicles and a portion of the affected 10,000 non-road vehicles/equipment are owned and operated by state and local governments. These vehicles would be required to use diesel emulsion fuel beginning May 1, 2004. Based on a 25,000 vehicle miles traveled (VMT) per year the total annual cost for units of state and local government affected by the proposed amendments would increase by \$775 per diesel vehicle per year. There will be a cost increase associated with using diesel emulsion fuel in non-road vehicles/equipment; however, the total amount cannot be determined at this time. Total costs to units of state and local government in affected counties, not including blending unit and related infrastructure costs and non-road vehicles/equipment, would be approximately \$1.4 million.

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 area.

The commission estimates there may be significant fiscal impacts for owners and operators of on-road heavy-duty diesel vehicles and non-road diesel vehicles/equipment affected by the proposed amendments. The proposed rules require diesel emulsion fuel use in engines installed in on-road heavy-

duty diesel vehicles registered in the HGA area with a GVWR greater than 10,000 pounds and in engines rated greater than 175 hp installed in non-road vehicles/equipment primarily operated in the HGA area. The proposed rules would affect approximately 53,000 privately owned and operated on-road heavy-duty diesel vehicles and a portion of the 10,000 affected non-road vehicles/equipment that are privately owned and operated.

Diesel emulsion fuel is an emergent technology for fuels which relies on a water-in-fuel mixture to lower NO_x emissions. Diesel emulsion fuel is produced by blending diesel fuel, with water, and a diesel emulsion additive which suspends the fuel and water together.

In order to achieve certain reductions, LED fuel will be required to be blended with diesel emulsion fuel in the HGA area by May 1, 2004. Standards for and results of using LED fuel are being presented in a concurrent rulemaking. The commission requires that diesel emulsion fuel used in on-road heavy-duty diesel engines has to result in a 15% decrease in NO_x compared to emission benefits from the use of LED fuel alone. Additionally, the diesel emulsion fuel used in non-road engines has to result in a 20% decrease in NO_x compared to emission benefits from the use of LED fuel alone. Both uses should not result in a net increase in any other pollutant. The diesel emulsion fuel manufacturers must provide the EPA with data that corroborates required emission reductions.

Based on comments from potential producers, diesel emulsion fuel will cost the same per gallon as the diesel fuel component, because the increased cost of the additive is offset by the displacement of fuel due to the inclusion of water in the overall mixture. By May 1, 2004, the use of LED fuel in the HGA

area will increase diesel fuel costs by approximately \$.08 more per gallon compared to today's current regular diesel prices. Therefore, diesel emulsion fuel sold after May 1, 2004 should cost approximately \$.08 more per gallon. In addition to the fuel-related cost increases, there may be an approximate 13% reduction in fuel economy as a result of using diesel emulsion fuel. Testing conducted by one producer shows that fuel economy can decrease by as much as 13%, but it can also stay the same. The overall fuel economy effect is dependent on vehicle/equipment use.

The proposed amendments will probably directly affect major fuel distribution centers that serve the affected counties and individuals and businesses that want to dispense diesel emulsion fuel to affected vehicles and equipment in the affected counties, because a special blending unit will probably have to be used in order to mix the diesel emulsion fuel. According to one nationwide diesel emulsion fuel producer, a typical unit, which is capable of processing over five million gallons a year, is used at major fuel distribution centers. The cost for this type of unit is approximately \$400,000 installed (\$350,000 for the unit and \$50,000 for installation). Final costs would depend on the level of infrastructure at the proposed site (availability of water, electricity, diesel fuel, platform, piping, etc.). The commission does not anticipate additional costs to individuals and businesses that are diesel emulsion fuel providers due to required records retention, diesel emulsion fuel tank labeling, and registration with the agency.

Individuals and businesses will probably pay more to fuel affected vehicles due to the increased cost of diesel emulsion fuel compared with current diesel prices and the potential reduced gas mileage.

Additionally, if an individual or business decides to dispense diesel emulsion fuel, a special blending

unit will probably have to be purchased or leased. The commission estimates that approximately 53,000 heavy-duty diesel vehicles and a portion of the 10,000 affected non-road vehicles/equipment are owned and operated by individuals and businesses in the affected counties. These vehicles would be required to use diesel emulsion fuel beginning May 1, 2004. Based on a 25,000 to 50,000 VMT per year the total annual cost to individuals and businesses affected by the proposed amendments would increase by \$775 to \$1,550 per diesel vehicle per year. The higher VMT was used in order to reflect the increased miles that some privately-owned heavy-duty diesels (such as long haul semi-trucks) accrue compared with state and local government vehicles. There will be a cost increase associated with using diesel emulsion fuel in non-road vehicles/equipment; however the total amount cannot be determined at this time. Total annual costs to individuals and businesses in the affected counties, not including blending unit and related infrastructure costs and non-road vehicles/equipment, would be approximately \$41 million to \$82 million.

SMALL AND MICRO-BUSINESS ASSESSMENT

The commission determined that fiscal implications are possible as a result of administration or enforcement of the proposed amendments, for small and micro-businesses that own a fleet of vehicles or that dispense diesel fuel in the HGA area. There are no known diesel fuel producers or importers that would be considered small or micro-businesses. The commission estimates that many independent retailers of diesel fuel, which are potential diesel emulsion fuel retailers in the affected counties, are small or micro-businesses that will probably not choose to mix diesel emulsion fuel on-site. The commission anticipates that small or micro-businesses that choose to dispense diesel emulsion fuel will purchase the mixed fuel from larger fuel distributors and store the fuel on-site. However, if a small or

micro-businesses chooses to mix and dispense diesel emulsion fuel, a special blending unit will have to be purchased or leased. A typical blending unit would cost approximately \$400,000 installed (\$350,000 for the unit and \$50,000 for installation). Production costs to produce diesel emulsion fuel, which incorporates the estimated \$.08 per gallon increase based on the use of LED fuel as the baseline, are not anticipated to affect small or micro-business except for passing increased costs of production through to consumers. Of the 53,000 heavy-duty on-road diesel vehicles and the 10,000 non-road vehicles/equipment affected by the proposed amendments, some will be owned and operated by small or micro-businesses. The total annual cost to small or micro-businesses, not including blending unit and related infrastructure costs and non-road vehicles/equipment, would increase by \$775 to \$1,550 per heavy-duty diesel vehicle per year. There will be a cost increase associated with using diesel emulsion fuel in non-road vehicles/equipment; however, the total amount cannot be determined at this time. Total fiscal impact to small or micro-businesses will depend on the total number of vehicles affected by the proposed amendments that are owned and operated by individual small and micro-businesses.

DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the rulemaking in light of the regulatory impact analysis (RIA) requirements of Texas Government Code, §2001.0225, and has determined that the rulemaking 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 new sections to Chapter 114 are one element of the HGA Attainment

SIP and will require the use of diesel emulsions in the HGA nonattainment area. 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 operation of on-road or non-road heavy-duty diesel engines or diesel emulsion fuel distributors. The commission does not believe 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.

Provisions of 42 USC, §7410, require 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 SIP structure of 42 USC. 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 633 (SB 633) during the 75th Legislative Session, 1999. 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 the FCAA. 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 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 does not exceed an express requirement of state law. This rulemaking 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), §§382.011, 382.012, 382.017, 382.019, 382.037(g), and 382.039. The commission invites public comment on the draft regulatory impact analysis.

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 rules 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 on-road or non-road heavy-duty diesel engines which are registered or primarily operated in the HGA nonattainment area to use diesel emulsion fuel. Adoption of these requirements to reduce NO_x can contribute to attainment and maintenance of the one-hour ozone standard in the HGA nonattainment area. Promulgation and enforcement of the rules may burden private real property because the requirement to use diesel emulsion fuel could require a diesel emulsion fuel distributor to install a blending station or other equipment, that could be attached to 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 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 the proposed 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 the CMP. As required by 30 TAC §281.45(a)(3) and 31 TAC §505.11(b)(2), 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 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(1)). No new sources of air contaminants will be authorized and NO_x air emissions will be reduced as a result of these rules. The CMP policy applicable to this rulemaking action is the policy that commission rules comply with regulations in 40 CFR, to protect and enhance air quality in the coastal area (31 TAC §501.14(q)). This rulemaking action complies with 40 CFR 50, National Primary and Secondary Ambient Air Quality Standards, and 40 CFR 51, Requirements for Preparation, Adoption, and Submittal Of Implementation Plans. Therefore, in compliance with 31 TAC §505.22(e), this rulemaking action is consistent with CMP goals and policies.

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 a 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

Comments may be mailed to Heather Evans, Office of Environmental Policy, Analysis, and Assessment, MC 206, P.O. Box 13087, Austin, Texas 78711-3087, faxed to (512) 239-4808, or emailed to siprules@tnrcc.state.tx.us. All comments should reference Rule Log Number 2000-011K-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 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 provides the commission the authority 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; §382.037(g), which authorizes the commission to regulate fuel content if it is demonstrated to be necessary for attainment of the NAAQS; 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; §382.037(g), relating to Vehicle Emissions Inspection and Maintenance Program, and §382.039, relating to Attainment Program.

SUBCHAPTER H: LOW EMISSION FUELS

DIVISION 4: DIESEL EMULSION FUEL

§§114.330 - 114.332, 114.336, 114.338, 114.339

§114.330. 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 Subchapter H of this chapter (relating to Low Emission Fuels), shall have the following meanings, unless the context clearly indicates otherwise.

(1) Diesel emulsion additive - A type of diesel fuel additive which allows water and diesel to be blended so that it does not separate. The additive may also contain, but is not limited to, anti-freeze agents, cetane enhancers, and other ingredients.

(2) Diesel emulsion fuel - A water/fuel mixture containing a diesel fuel additive to emulsify the water with the fuel.

(3) Diesel emulsion fuel distributor - Any person, retailer, jobber, bulk fuel reseller, low emission diesel refiner who distributes diesel emulsion fuel to the ultimate user, diesel emulsion

additive manufacturer, or other entity who distributes diesel emulsion fuel required to be mixed with a diesel emulsion additive.

(4) Non-road heavy-duty engine - A non-road engine 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, including, but not limited to, locomotives, tugs, tow-boats, construction equipment, and ferry boats.

(5) On-road heavy-duty diesel engine - An engine installed in an on-road vehicle which is greater than 10,000 pounds gross vehicle weight rating.

(6) 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.

§114.331. Applicability.

The requirements of this division apply to:

(1) diesel emulsion fuel distributors that supply fuel for on-road heavy-duty diesel engines which are registered in the counties listed under §114.339 (relating to Affected Counties and

Compliance Dates) with a total throughput of at least 25,000 gallons per month at one fuel dispensing facility; and

(2) diesel emulsion fuel distributors who supply dyed and undyed diesel fuel for non-road heavy-duty engines primarily operated in the counties listed under §114.339 of this title with a total throughput of at least 500 gallons per month at one fuel dispensing facility.

§114.332. Diesel Emulsion Standards.

No diesel fuel shall be used in the counties listed in §114.329 of this title (relating to Affected Counties and Compliance Dates) unless it meets the following.

(1) The low emission diesel fuel used to blend diesel emulsion fuel must meet all the performance standards contained in §114.312 of this title (regarding Low Emission Diesel Standards).

(2) The diesel emulsion additive must be registered with the EPA in accordance with 40 Code of Federal Regulations (CFR), Subpart 80 (concerning Registration of Fuels and Fuel Additives, as amended on February 28, 2000).

(3) The amount, concentration, or volume of water must be within the diesel emulsion additive manufacturer specifications.

(4) The diesel emulsion must:

(A) result in emissions that are lower than the emissions of oxides of nitrogen in the low emission diesel as follows:

(i) on-road heavy-duty diesel engines - 15%; and

(ii) non-road heavy-duty diesel engine - 20%; and

(B) not result in a net increase in the other pollutant levels, as tested in accordance with 40 CFR, Subpart 80 as amended on February 28, 2000, or Title 13, California Code of Regulations, §2281 and §2282, as amended on June 4, 1997.

§114.336. Recordkeeping and Labeling.

(a) All diesel emulsion fuel distributors affected by this division shall maintain complete and accurate records for at least two years and, upon request, shall make such records available to representatives of the commission, EPA, or local air pollution control agency having jurisdiction in the area. The information in the records shall include, but shall not be limited to, proof of purchase of diesel emulsion fuel such as by bulk fuel contract, bills of lading, purchase orders, fuel analysis, or other records sufficient to demonstrate compliance.

(b) All tanks in service or blending units in which diesel emulsion fuel is stored must be clearly labeled with a sign which reads "DIESEL EMULSION FUEL ONLY" in at least four-inch letters, and each tank must have a visible, unique identification number which corresponds to a plot plan which shows the location of the tank or blending unit.

§114.338. Registration.

Diesel emulsion fuel distributors must register with the executive director. Registration will be on forms provided by the executive director and shall include a statement of acceptance of the requirements of this division and shall include a statement of consent by the registrant that the executive director shall be permitted to collect samples and have access to all documentation and records. The executive director shall maintain a listing of all registered diesel emulsion fuel distributors.

§114.339. Affected Counties and Compliance Dates.

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

