

The Texas Natural Resource Conservation Commission (commission) adopts amendments to §114.6, Low Emission Fuel Definitions; §114.312, Low Emission Diesel Standards; §114.313, Designated Alternate Limits; §114.314, Registration of Diesel Producers and Importers; §114.315, Approved Test Methods; §114.316, Monitoring, Recordkeeping, and Reporting Requirements; §114.317, Exemptions to Low Emission Diesel Requirements; and §114.319, Affected Counties and Compliance Dates. The commission adopts these amendments to Chapter 114, Control of Air Pollution From Motor Vehicles, and corresponding revisions to the state implementation plan (SIP) in order to control ground-level ozone in the Houston/Galveston (HGA), Dallas/Fort Worth (DFW), and Beaumont/Port Arthur (BPA) ozone nonattainment areas. Sections 114.6, 114.312, 114.313, 114.315, 114.316 114.317, and 114.319 are adopted *with changes* to the proposed text as published in the August 25, 2000 issue of the *Texas Register* (25 *TexReg* 8169). Section 114.314 is adopted *without changes* to the proposed text and will not be republished.

#### BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED 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. In addition, 42 USC, §7502(a)(2), requires attainment as expeditiously as practicable, and 42 USC, §7511a(d), requires states to submit ozone attainment demonstration SIPs for severe ozone nonattainment areas such as HGA. 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, proposed 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 oxide (NO<sub>x</sub>) waiver allowed by 42 USC, §7511a(f). The January 1995 SIP and the NO<sub>x</sub> 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, the 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 (OTAG). 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 the EPA 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<sub>x</sub> 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 state-wide programs proposed 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> reductions needed for attainment; to list and quantify potential control measures to meet the shortfall of NO<sub>x</sub> 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 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<sub>x</sub> emissions. The modeling and other analysis supporting these rules and the HGA SIP indicate a gap of approximately an additional 91 tons per day (tpd) of NO<sub>x</sub> reductions is necessary for an approvable attainment demonstration. The predicted emission reductions is necessary to successfully demonstrate 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.

This rule adoption is one element of the control strategy for the HGA SIP. Adoption and implementation of this control strategy is necessary in order for the HGA nonattainment area to comply with the requirements of the FCAA and achieve attainment for ozone. Additional elements of the control strategy for the HGA SIP are being adopted concurrently in this issue of the *Texas Register*, or

were included in the HGA SIP considered by the commission on December 6, 2000 and planned to be submitted to EPA by December 31, 2000.

The amount of NO<sub>x</sub> reductions required for the area to attain the ozone NAAQS has been estimated by extensive use of sophisticated air quality grid modeling, which because of its scientific and statutory grounding, is the chief policy tool for designing emission reduction strategies. The FCAA, 42 USC, §7511a(c)(2), requires the use of photochemical grid modeling for ozone nonattainment areas designated serious, severe, or extreme. The modeling has been conducted with input from a technical oversight committee. Commission staff have continued to improve the air quality modeling technology and refine emission inventory data. Numerous emission control strategies were considered in developing the modeling. Varying degrees of reductions from point sources, on-road and non-road mobile sources, and area sources were analyzed in multiple iterations of modeling, to test the effectiveness of different NO<sub>x</sub> reductions. The attainment demonstration modeling and other analysis submitted for public hearing and comment concurrently with the HGA SIP show that a significant amount of NO<sub>x</sub> reductions practicably achievable are necessary from ozone control strategies in order for the HGA nonattainment area to achieve the ozone NAAQS by 2007, including reductions from surrounding counties included in the HGA consolidated metropolitan statistical area (CMSA).

Additionally, reductions associated from the ozone control strategies that will be implemented outside the HGA nonattainment area will benefit the HGA nonattainment area. This is due to the regional nature of air pollution, the contribution from mobile sources, and the economies of scale and associated market advantages related to distribution networks for some strategies. At the time the 1990 FCAA

Amendments were enacted, the focus on controlling ozone pollution was centered on local controls. However, for many years an ever increasing number of air quality professionals have concluded that ozone is a regional problem requiring regional strategies in addition to local control programs. As nonattainment areas across the United States prepared attainment demonstration SIPs in response to the 1990 FCAA Amendments, several areas found that modeling attainment was made much more difficult, if not impossible, due to high ozone and ozone precursor levels entering from the boundaries of their respective modeling domains, commonly called transport. Recent science indicates that regional approaches may provide improved control of ozone air pollution.

The current SIP revision contains rules, enforceable commitments, photochemical modeling analyses, and calculation of the remaining NO<sub>x</sub> reductions required to reach attainment (gap calculation) 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<sub>x</sub> 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 low emission diesel fuel (LED) program will contribute to attainment and maintenance of the one-hour ozone standard in the HGA area. The extension of these rules to all counties in the state should also contribute to maintenance of the one-hour standard in the rest of the

state. A LED program also should contribute to a successful demonstration of transportation conformity in the HGA area and other nonattainment areas.

These rules are one element of the control strategy for the HGA Attainment Demonstration SIP. The purpose of these rules is to establish a LED air pollution control strategy that reduces NO<sub>x</sub> emissions necessary for the HGA nonattainment area to be able to demonstrate attainment with the ozone NAAQS. Additional benefits will be achieved in the BPA, El Paso, and DFW ozone nonattainment areas, the 95-county central and eastern Texas region, as well as the remainder of the state.

The adopted revisions to the LED rules will require LED fuel statewide for on-road use. In addition, the revisions to the LED rules will require LED fuel for both on-road and non-road use in the eight counties in the HGA ozone nonattainment area which includes Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties; the four counties of the DFW ozone nonattainment area which includes Collin, Dallas, Denton, and Tarrant Counties; the three counties of the BPA ozone nonattainment area which includes Hardin, Jefferson, and Orange Counties; and 95 additional central and eastern Texas counties including Anderson, Angelina, Aransas, Atascosa, Austin, Bastrop, Bee, Bell, Bexar, Bosque, Bowie, Brazos, Burleson, Caldwell, Calhoun, Camp, Cass, Cherokee, Colorado, Comal, Cooke, Coryell, De Witt, Delta, Ellis, Falls, Fannin, Fayette, Franklin, Freestone, Goliad, Gonzales, Grayson, Gregg, Grimes, Guadalupe, Harrison, Hays, Henderson, Hill, Hood, Hopkins, Houston, Hunt, Jackson, Jasper, Johnson, Karnes, Kaufman, Lamar, Lavaca, Lee, Leon, Limestone, Live Oak, Madison, Marion, Matagorda, McLennan, Milam, Morris, Nacogdoches, Navarro, Newton, Nueces, Panola, Parker, Polk, Rains, Red River, Refugio, Robertson, Rockwall,

Rusk, Sabine, San Jacinto, San Patricio, San Augustine, Shelby, Smith, Somervell, Titus, Travis, Trinity, Tyler, Upshur, Van Zandt, Victoria, Walker, Washington, Wharton, Williamson, Wilson, Wise, and Wood Counties.

The commission's current understanding, based upon national studies as well as the commission's own studies, is that ozone must be controlled at two levels: the regional level and the urban level.

Historically, the FCAA has states focusing on the ozone problem at the local level. Recently, however, this has begun to change. The EPA has started to incorporate the findings of the OTAG, the Southern Oxidant Study, and the advice of stakeholders (e.g., the Federal Advisory Committee Act Subcommittee on Ozone, Particulate Matter, and Regional Haze Implementation) into recent policy guidance, encouraging states to factor regional reductions into their control plans.

On a national level, the OTAG study and its findings are particularly noteworthy. OTAG was established by the EPA to work with states in the eastern portion of the country to develop strategies to address the regional ozone problem. Among the OTAG determinations were that ozone is pervasive; ozone and the compounds that form it are transported both at lower levels of the atmosphere and aloft from one day to the next; and ozone precursors reductions over a large area are beneficial in the lowering of regional ozone background levels.

The commission's own studies provided evidence that there is regional transport of ozone and ozone precursors in Texas, and that regional reductions of ozone precursors are beneficial. The commission's own modeling studies have shown that pollutant sources across Texas contribute to regional ozone

background levels, and that regional ozone precursor reductions will lower those background levels.

These studies and upper air monitoring have found that regional air pollution should be considered when studying air quality in the Texas ozone nonattainment areas. This work is supported by the OTAG study which is the most comprehensive attempt ever undertaken to understand and quantify the transport of ozone. Both the commission and OTAG study results point to the need to take a regional approach to control air pollutants, such as that described in the regional control strategy adopted by the commission.

Reducing regional background ozone levels through a regional strategy will serve three purposes. It will give existing nonattainment areas the flexibility to design optimal local control strategies to help them attain the one-hour and eight-hour ozone standards. It will help areas, which are currently close to violating the standards, to avoid actually violating. Finally, over the longer term, it will help prevent the developing areas of the state from ever violating the standards.

The regional aspect of the state LED fuel program was developed to provide LED fuel for use in areas of the state that could potentially have a negative air quality impact on current ozone nonattainment areas, near nonattainment areas, and future areas of concern. For example, the HGA ozone nonattainment area currently needs every possible emission reduction to demonstrate attainment; the BPA nonattainment area attainment goals are heavily influenced by transport from HGA; the DFW ozone nonattainment area is also impacted by transport and has little leeway to handle additional emissions based on their current attainment demonstration modeling; and several near-nonattainment areas for the new eight-hour standard are seeking immediate reductions to preclude a nonattainment

area designation. All of these areas will benefit from the reductions attributed to the regional aspect of the state-wide LED fuel program.

The main attractiveness of the fuel-based strategy is that it has a more immediate impact than other controls. Once the fuel is in the marketplace, it begins having an immediate air quality impact as both old and new vehicles and non-road equipment begin using the new fuel.

A state-wide LED fuel requirement facilitates distribution. The state-wide coverage area for on-road use will create a large enough market to ease the costs of distribution. Supplies can be co-mingled in the pipeline, trading can take place, and tracking compliance will be simplified. Because a federal reformulated gasoline is already distributed to the DFW and HGA ozone nonattainment areas, and the state's low-Reid vapor pressure (RVP) gasoline is already distributed to the 95-county central and eastern Texas regional area, diesel producers and importers will be able to use the current distribution system to distribute state LED fuel to the affected areas beginning in 2006 when the sulfur content in LED is limited to 15 ppm for the HGA, BPA, and DFW ozone nonattainment areas and the 95-county central and eastern Texas region.

A state-wide LED fuel requirement also reduces non-compliant fuel usage within the nonattainment areas due to out-of-area refueling by pass-through truck traffic. According to data shown on a 1997 truck traffic flow map published by the Texas Department of Transportation (TxDOT), over 10,000 trucks per day traverse the HGA nonattainment area. In addition, according to a TxDOT report, *Effect of the North American Free Trade Agreement on the Texas Highway System*, December 1998, the

volume of truck traffic through the HGA nonattainment area directly associated with the North American Free Trade Agreement ranges between 1,001 and 2,500 trucks per day. Therefore, state-wide coverage for on-road LED use will ensure that higher volumes of pass-through truck traffic will be refueling with LED within the state, and will be using this fuel when traveling within the state's nonattainment areas.

The LED fuel will lower the emissions of NO<sub>x</sub> and other pollutants from fuel combustion. Because NO<sub>x</sub> is a precursor to ground-level ozone formation, reduced emissions of NO<sub>x</sub> will result in ground-level ozone reductions. To comply with the state LED regulations, diesel fuel producers and importers must ensure that diesel fuel distributed to the LED fuel zone meets the specifications stated in these adopted rules. These rules require that, beginning May 1, 2002, diesel fuel produced for delivery and ultimate sale to the consumer in the affected area shall not exceed 500 ppm sulfur, must contain less than 10% by volume of aromatic hydrocarbons, and must have a cetane number of 48 or greater. In addition, these rules will require the sulfur content in the diesel fuel supplied to the DFW, BPA, and HGA ozone nonattainment areas and 95 central and eastern Texas counties, be reduced to 15 ppm sulfur beginning June 1, 2006. Also, these rules require diesel fuel producers and importers who provide fuel to the affected areas to register with the commission and provide quarterly status reports.

These rules will also revise definitions that will impact who is affected by the adopted state LED fuel program as well as who is impacted by the current requirements of the regional low-RVP gasoline program, specified in §§114.301, 114.304 - 114.307, and 114.309. These rules will restrict the

registration, reporting, and testing requirements of these programs to those persons who have direct control over changes in fuel content, i.e., those persons who produce fuel or import fuel into the state.

The commission is aware that the EPA is currently proposing revised nationwide diesel fuel sulfur controls. If a new federal diesel fuel sulfur rule is adopted that covers the areas in Texas impacted by this rule, and the federal rule is at least as stringent as these rules, then the commission may consider compliance with the national rule equally effective and may repeal the state sulfur requirements for diesel fuel.

The commission is expanding the LED fuel ozone control strategy which was developed for the DFW area and requiring diesel fuel content limits more restrictive than federal diesel fuel regulations. The current federal regulations governing diesel fuel quality in Title 40 Code of Federal Regulations (40 CFR) Part 80, Regulation of Fuels and Fuel Additives, §80.29, Controls and Prohibitions on Diesel Fuel Quality, establish limits for fuel content for diesel fuel used in on-road motor vehicle applications. These federal regulations limit sulfur in on-road diesel fuel to 500 ppm and allow the producer to choose between meeting a minimum cetane number of 40 or a maximum aromatic hydrocarbon content of 35% by volume. The state's LED regulations limit on-road diesel to 500 ppm sulfur, 10% aromatic hydrocarbons, and a 48 cetane minimum, and with a more restrictive limit on sulfur being implemented on-road and non-road in the HGA, DFW, BPA ozone nonattainment areas and 95 central and eastern Texas counties in June 2006. As such, the commission is submitting, as part of the SIP, concurrent with this rulemaking, a request for a waiver in accordance with the 42 USC, §7545(C)(4)(c), for the on-road portion of these rules. Although the EPA regulates diesel fuel content for on-road use, it does

not regulate the fuel content for non-road diesel fuel. Therefore, because there is currently no federal limit on the content of non-road diesel, the state has independent authority to place controls on the composition of non-road diesel fuel and the commission does not believe that a waiver is needed for the non-road portion of these rules. This adopted SIP submittal is available to the public by contacting Heather Evans at (512) 239-1970.

Modeling performed for the commission assessing the benefits of this NO<sub>x</sub> emission reduction strategy demonstrated that significant emission reductions could be achieved by using a low aromatic hydrocarbon/high cetane diesel fuel as specified by the commission's LED fuel requirements. By the year 2007, the LED fuel program will reduce statewide NO<sub>x</sub> emissions from on-road vehicles and non-road equipment by 30 tpd, of which 6.67 tpd of reductions will be achieved in the HGA ozone nonattainment area. The commission anticipates production cost will increase from \$.04 to \$.08 per gallon of diesel fuel to comply with rules.

The commission developed this NO<sub>x</sub> emission control strategy to cover the eight counties contained in the HGA ozone nonattainment area. The coverage area also includes all counties in the state for on-road diesel fuel use; and the four DFW ozone nonattainment counties, the three BPA ozone nonattainment counties, as well as 95 central and eastern Texas counties for both on-road and non-road diesel fuel use. The involvement of the statewide and regional counties as part of the NO<sub>x</sub> emission control strategy is necessary for the HGA and DFW areas to demonstrate attainment of the ozone NAAQS. These rules are intended to help bring the ozone nonattainment areas into compliance and to help keep attainment and near nonattainment areas from going into nonattainment by reducing emissions

in those areas and by reducing transport of emissions into those areas. The state-wide and regional coverage will also provide a greater market for diesel fuel producers and importers to provide the fuel required by these regulations and avoid a patchwork of multiple requirements within the state.

Additionally, the state-wide and regional coverage should help alleviate concerns regarding out-of-area refueling practices by making it difficult to refuel outside the covered area for use within a nonattainment or near nonattainment area.

The commission is open to considering future substitution of this measure if a federal program is completed and achieves substantially equivalent emission reductions. In addition, the commission is open to future agreements with entities for emission reductions from other fuel-related strategies. In order for agreements to be used, the commission may have to revisit these rules and the SIP to enable agreements to be considered for substitution of these rules.

The commission solicited comment regarding the possible benefits of reducing sulfur content to 15 ppm prior to the 2006 federal deadline as a possible alternative to controls on aromatics and cetane as proposed. There were two comments received which are addressed in the ANALYSIS OF TESTIMONY section of this preamble.

The commission also solicited 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. There were two comments received which are addressed in the ANALYSIS OF TESTIMONY section of this preamble.

#### SECTION BY SECTION DISCUSSION

The adopted amendments to §114.6 contain revisions to the following definitions: bulk plant, imported, import facility, importer, produce, and production facility. The amendment to the definition of bulk plant is needed for clarification of the definition and will insert the word “fuel” that was inadvertently left out of the original rulemaking. The phrase “solely by truck” is also amended to “by truck or pipeline” to account for those bulk plants that have pipeline delivery. These amendments to the definitions of imported, import facility, and importer are necessary to clarify that only those persons, except persons acting as common carriers, who import fuel into the state are covered by these definitions. These amendments will impact who is affected by the current requirements of the regional RVP gasoline program, specified in §§114.301, 114.304 - 114.307, and 114.309, as well as the amendments to the LED fuel program and will restrict the registration, reporting, and testing requirements of these programs to those persons who have direct control over changes in fuel content, i.e., those persons who produce fuel or import fuel into the state. The amendments to definitions of produce and production facility are necessary for clarification of these terms upon the repeal of the definitions of refiner and refinery. In addition, the amendments to §114.6 contain new definitions for common carrier, motor vehicle, and non-road equipment. The amendments to §114.6 also repealed the definitions of refiner and refinery. These definitions were repealed as being redundant with the

terminology already being used for producer and production facility. Also, as a result of the new definitions, the other existing definitions are to be renumbered accordingly.

These amendments to §114.312 revise subsection (b) to modify the sulfur content standard for diesel fuel to provide for the phase down of sulfur content in certain affected areas from 500 ppm to 15 ppm. Subsection (b)(2) was deleted and subsection (b)(3) was renumbered in order to be consistent with anticipated federal rulemaking. The deadline for meeting 15 ppm sulfur has been changed from May to June to match the deadline proposed in the federal sulfur regulations. Subsection (b) has also been revised to clarify that 15 ppm fuel is not required until the compliance date identified in §114.319. The amendments to §114.312 also revise subsection (e) to provide clarifying changes to replace the terms, “refiner” and “refiner’s refinery” with the term, “producer” and “production facility,” as newly defined in §114.6. In addition, the amendments to §114.312 revise subsection (g) to provide reference to the testing methods prescribed in the adopted amendments to §114.315 and to change the reference prescribing which requirements may be satisfied by subsection (g) from subsection (a) to subsections (c) and (d) which was the original intent at proposal.

The amendments to §114.313 clarify the language of subsection (c) by adding commas in two locations.

The amendments to §114.314 clarify language by adding the word “fuel” after the phrase “low emission diesel (LED).” The amendments also change the word “chapter” to “division” to clarify that LED producers and importers shall comply with the requirements of the subchapter division regarding LED.

The amendments to §114.315 revise subsection (a) to establish the American Society for Testing and Materials (ASTM) Test Method D287-92(1995) as the approved test method for determining the American Petroleum Institute (API) gravity, ASTM Test Method D445-97 as the approved test method for determining viscosity, ASTM Test Method D93-99c as the approved test method for determining the flash point, and ASTM Test Method D86-00 as the approved test method for determining the distillation temperatures of the diesel fuel. The amendments to §114.315 also contain a new subsection (c) which establishes the test procedures and approval process for obtaining the executive director's approval of an alternative diesel fuel formulation, and a new subsection (d) which establishes the approval process for alternative diesel fuel formulations which are intended only for use in non-road equipment.

The amendments to §114.316 revise subsection (e) to require the California Air Resources Board (CARB) executive order number, or the approval notification number as issued by the executive director, to be included on the product transfer documents if the diesel fuel being transferred complies with one of those alternatives.

The amendments to §114.317 contain a new subsection (a) which establishes an exemption from the requirements of these rules for diesel fuel used for research, development, or testing purposes; new subsection (b) establishes an exemption for diesel fuel used for racing purposes; new subsection (c) exempts the owner or operator of a retail fuel dispensing outlet from all monitoring, recordkeeping, and reporting requirements of the rule, except for the requirement to maintain product transfer documents; the previous subsection (b) is renumbered to subsection (d); the language of subsection (d) is revised to

provide an exemption that stipulates diesel fuel not meeting the LED requirements is not prohibited in the affected counties as long as it is not ultimately used to power a diesel fueled compression-ignition engine in a motor vehicle or non-road equipment in the affected counties, except for that fuel used in conjunction with research, development, or testing purposes, or as competition racing fuel. These exemptions were added to more closely match federal motor fuel regulations and are not expected to have a significant impact on air quality.

The amendments to §114.319 contain a new subsection (a) which establishes the compliance date for statewide coverage of the LED program for on-road diesel fuel use, a new subsection (b) which establishes the compliance date and coverage area for the use of LED for both on-road and non-road use, and a new subsection (c) which establishes the compliance date and coverage area for the sulfur content phase down to 15 ppm sulfur. Subsection (a) has also been revised to clarify that some requirements of §114.312 will not be applicable statewide. Finally, the proposed new subsection (c) which would have established a compliance date of May 1, 2004 and coverage area for the sulfur content to phase down to 30 ppm sulfur has been deleted in order to be consistent with anticipated federal rulemaking, and the proposed new subsection (d) has been renumbered to (c).

#### FINAL REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the rulemaking action in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and has determined that the rulemaking meets 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 intended to protect the environment or reduce risks to human health from environmental exposure to ozone and could affect in a material way, a sector of the economy, competition, and the environment due to its impact on the fuel manufacturing and distribution network of the state. The amendments are intended to implement an LED air pollution control program as part of the strategy to reduce emissions of NO<sub>x</sub> necessary for the counties included in the HGA ozone nonattainment area to be able to demonstrate attainment with the ozone NAAQS.

These adopted rules do not meet any of the four applicability criteria for requiring a regulatory analysis of “major environmental rule” as defined in the Texas Government Code. Section 2001.0225 applies only to a major environmental rule the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the agency instead of under a specific state law.

As discussed earlier in this preamble, this rule adoption is one element of the control strategy for the HGA SIP. Adoption and implementation of this control strategy is necessary in order for the HGA nonattainment area to comply with the requirements of the FCAA and achieve attainment for ozone. Additional elements of the control strategy for the HGA SIP are being adopted concurrently in this issue

of the *Texas Register*, or were included in the HGA SIP considered by the commission on December 6, 2000, and planned to be submitted to EPA by December 31, 2000.

The amendments are intended to implement an LED air pollution control program as part of the strategy to reduce emissions of NO<sub>x</sub> necessary for the counties included in the HGA ozone nonattainment area to be able to demonstrate attainment with the ozone NAAQS. Specifically, the LED fuel requirements within these rules were developed in order to meet the ozone NAAQS set by the EPA under 42 USC, §7409, and therefore meet a federal requirement. This is based on the analysis provided in the rule proposal preamble which was published in the August 25, 2000 issue of the *Texas Register*, including the discussion in the Public Benefit and Costs section.

These rules do not exceed an express standard set by federal law, since they implement requirements of the FCAA. 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. These rules were specifically developed as part of an overall control strategy to meet the ozone NAAQS set by the EPA under 42 USC, §7409. 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 42 USC, 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 FCAA. The provisions of the FCAA 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 the FCAA allows states to develop their own programs, this flexibility does not relieve a state from developing a program that meets the requirements of §7410. In order to avoid federal sanctions, 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. Thus, while specific measures are not prescribed, both a plan and emission reductions are required to assure that the nonattainment areas of the state will be able to meet the attainment deadlines set by the FCAA. The EPA has provided the criteria for both the submission and evaluation of attainment demonstrations developed by states to comply with the FCAA. This criteria requires states to provide, in addition to other information, photochemical modeling and an analysis of specific emission reduction strategies necessary to attain the NAAQS. The commissions photochemical modeling and other analysis indicate that substantial emission reductions from both mobile and point source categories are necessary in order to demonstrate attainment. In this case, this rulemaking is intended to achieve reductions in ozone precursor emissions in the HGA nonattainment area. Specifically, as noted elsewhere in this rule preamble, the emission reductions associated with these rules are a necessary element of the attainment demonstration required by the FCAA.

In addition, 42 USC, §7502(a)(2), requires attainment as expeditiously as practicable, and 42 USC, §7511a(d), requires states to submit ozone attainment demonstration SIPs for severe ozone

nonattainment areas such as HGA. By policy, the EPA requires photochemical grid modeling to demonstrate whether the 42 USC, §7511a(f), NO<sub>x</sub> measures would contribute to ozone attainment. The commission has performed photochemical grid modeling which predicts that NO<sub>x</sub> emission reductions, such as those required by these rules, 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 42 USC, §7511a(f), exemption from NO<sub>x</sub> measures for HGA expired on December 31, 1997. The expiration of the exemption under 42 USC, §7511a(f), was based on the finding that NO<sub>x</sub> reductions in HGA are necessary for attainment of the ozone standard. Therefore, the adopted amendments are necessary components of and consistent with the ozone attainment demonstration SIP for HGA, required by 42 USC, §7410.

During the 75th Legislative Session, Senate Bill (SB) 633 amended the Texas Government Code to require agencies to perform a regulatory impact analysis (RIA) of certain rules. The intent of SB 633 was to require agencies to conduct an RIA of extraordinary rules. 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 adopted 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 adopted 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. Because 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.

The commission has consistently applied this construction to its rules since this statute was enacted in 1997. Since that time, the legislature has revised the Texas Government Code but left this provision substantially unamended. It is presumed that “when an agency interpretation is in effect at the time the legislature amends the laws without making substantial change in the statute, the legislature is deemed to have accepted the agency’s interpretation.” *Central Power & Light Co. v. Sharp*, 919 S.W.2d 485, 489 (Tex. App.–Austin 1995), *writ denied with per curiam opinion respecting another issue*, 960 S.W.2d 617 (Tex. 1997); *Bullock v. Marathon Oil Co.*, 798 S.W.2d 353, 357 (Tex. App.–Austin 1990, no writ). *Cf. Humble Oil & Refining Co. v. Calvert*, 414 S.W.2d 172 (Tex. 1967); *Sharp v. House of Lloyd, Inc.*, 815 S.W.2d 245 (Tex. 1991); *Southwestern Life Ins. Co. v. Montemayor*, 24 S.W.3d 581 (Tex. App.–Austin 2000, *pet. denied*); and *Coastal Indust. Water Auth. v. Trinity Portland Cement Div.*, 563 S.W.2d 916 (Tex. 1978).

The commission's interpretation of the RIA requirements is also supported by a change made to the Texas Administrative Procedure Act (APA) by the legislature in 1999. In an attempt to limit the number of rule challenges based upon APA requirements, the legislature clarified that state agencies are required to meet these sections of the APA against the standard of "substantial compliance." Texas Government Code, §2001.035. The legislature specifically identified Texas Government Code, §2001.0225 as falling under this standard. The commission has substantially complied with the requirements of §2001.0225.

Therefore, in addition to not exceeding an express standard set by federal law, these rules do not exceed state requirements, and are not adopted solely under the general powers of the agency because the provisions of the TCAA, §§382.011, 382.012, 382.017, 382.019, 382.037(g), and 382.039 authorize the commission to implement a plan for the control of the states air quality, including measures necessary to meet federal requirements. The remaining applicability criteria, pertaining to exceeding a delegation agreement or contract between the state and the federal government does not apply. Thus, the commission is not required to conduct a regulatory analysis as provided in Texas Government Code, §2001.0225.

The commission solicited public comment on the draft RIA and received ten comments. These comments are addressed in the ANALYSIS OF TESTIMONY section of this preamble.

## TAKINGS IMPACT ASSESSMENT

The commission evaluated this rulemaking action and performed an analysis of whether the rules are subject to Texas Government Code, Chapter 2007. The following is a summary of that analysis. The specific purpose of the rulemaking action is to establish an LED fuel program which will act as an air pollution control strategy to reduce NO<sub>x</sub> emissions necessary for the eight counties included in the HGA ozone nonattainment area and other nonattainment and near nonattainment areas of the state to be able to demonstrate attainment with the ozone NAAQS.

Texas Government Code, §2007.003(b)(4), provides that Chapter 2007 does not apply to these rules since they are reasonably taken to fulfill an obligation mandated by federal law. The rules fulfill federal mandates under the 1990 Amendments to 42 USC, §7410. Specifically, the emission limitations and control requirements within this rulemaking were developed in order to meet the NAAQS for ozone 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 approval by the EPA, 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 meet the air quality standards established under federal law as NAAQS. Any NO<sub>x</sub> reductions resulting from the current rulemaking are no greater than what scientific research indicates is necessary to achieve the desired ozone levels. However, this rulemaking is only one step among many necessary for attaining the ozone standard. Consequently, one exemption which applies to these adopted rules is that of an action reasonably taken to fulfill an obligation

mandated by federal law; therefore, these adopted rules do not constitute a takings under the Texas Government Code, Chapter 2007.

In addition, Texas Government Code, §2007.003(b)(13), states that Chapter 2007 does not apply to an action that: 1) is taken in response to a real and substantial threat to public health and safety; 2) is designed to significantly advance the health and safety purpose; and 3) does not impose a greater burden than is necessary to achieve the health and safety purpose. This action is taken in response to the HGA and other areas of the state exceeding the federal ambient air quality standard for ground-level ozone, which adversely affects public health, primarily through irritation of the lungs. The action significantly advances the health and safety purpose by reducing ozone levels in HGA. Consequently, these rules meet the exemption in §2007.003(b)(13).

The commission has included elsewhere in this preamble its reasoned justification for adopting this strategy and has explained why it is a necessary component of the SIP which is federally mandated. This discussion, as well as the HGA SIP which is being adopted concurrently, explains in detail that every rule in the HGA SIP package is necessary and that none of the reductions in those packages represent more than is necessary to bring the area into attainment with the NAAQS. This rulemaking therefore meets the requirements of Texas Government Code, §2007.003(b)(4) and (13). For these reasons the rules do not constitute a takings under Chapter 2007 and do not require additional analysis.

Comments received during the comment period regarding the TIA are addressed in the ANALYSIS OF TESTIMONY section of this preamble.

#### CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission determined that the rulemaking action relates to an action or actions subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act of 1991, as amended (Texas Natural Resources Code, §§33.201 et seq.), and the commission rules in 30 TAC Chapter 281, Subchapter B, concerning Consistency with 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<sub>x</sub> 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 51, National Primary and Secondary Ambient Air Quality Standards, and with 40 CFR 52, Requirements for Preparation, Adoption, and Submittal of Implementation Plans. Therefore, in compliance with 31 TAC §505.22(e), the commission affirms that this rulemaking action is consistent with CMP goals and policies.

The commission solicited comments on the consistency of the proposed rules with the CMP during the public comment period, and received no comments.

## HEARINGS AND COMMENTERS

The commission held public hearings on this proposal at the following locations: September 18, 2000, in Conroe and Lake Jackson; September 19, 2000 in Houston (two hearings); September 20, 2000, in Katy and Pasadena; September 21, 2000, in Beaumont, Amarillo, and Texas City; September 22, 2000, in Dayton, El Paso, and Arlington; and September 25, 2000, in Austin and Corpus Christi. The comment period closed at 5:00 p.m. on September 25, 2000.

The following commenters provided oral testimony and/or submitted written testimony: AAE Technologies, Inc. (AAE); Ato Fina Petrochemicals (Ato Fina); Air Surrey Natural Gas Vehicles, Inc. (Air Surrey); Alliance of Automobile Manufacturers (Alliance); American Road and Transportation Builders Association (ARTBA); Associated General Contractors of Texas (AGC-Texas); Association of American Railroads (AAR); American Short Line and Regional Railroad Association (ASLRRA); Baker Botts LLP (Baker Botts); British Petroleum-Amoco (BP); Business Coalition for Cleaner Air (BCCA); CITGO Petroleum Corporation (CITGO); Canal Barge Company, Inc. (CBC); City of Baytown (Baytown); City of Corpus Christi (Corpus Christi); City of Fort Worth (Fort Worth); City of Lake Jackson (Lake Jackson); City of Missouri City (Missouri City); Clean Diesel Technologies, Inc. (CDTI); Corpus Christi Air Quality Committee (CCAQC); Corpus Christi City Councilman Arnold Gonzales (Councilman Gonzales); Dow Chemical Company (Dow); Dynegy, Inc. (Dynegy); Environmental Defense (ED); Ethyl Corporation (Ethyl); ExxonMobil Corporation (ExxonMobil); Galveston-Houston Association for Smog Prevention (GHASP); Grandparents of East Harris County (GEHC); Harris County Judge Robert Eckels (Harris County); Houston Metropolitan Transit Authority (Metro); Houston-Galveston Area Council (HGAC); Houston-Galveston Metropolitan Planning

Organization's Transportation Policy Council (Houston MPO); Intercoastal Towing and Transportation Corporation (ITT); Kirby Inland Marine, Inc. (KIMI); Koch Petroleum Group LP (Koch); League of Women Voters of Texas (LWV-TX); Liberty County Sheriff Gregg Arthur (Liberty County Sheriff); Lyondell-CITGO Refining Company, Ltd (Lyondell-CITGO); Manufacturers of Emission Controls Association (MECA); RMT, Inc. on behalf of Montgomery County (Montgomery Co.); Mothers for Clean Air (MCA); National Association of Truck Stop Operators (NATSO); National Petrochemical and Refiners Association (NPRA); Paso del Norte Clean Cities Coalition (Paso del Norte); Phillips 66 Company (Phillips 66); Port Industries of Corpus Christi (Port Industries); Port of Corpus Christi Authority (PCCA); Texas Public Citizen (Public Citizen); Regional Air Quality Consensus Group (RAQCG); Reliant Energy, Inc. (REI); Sierra Club, Galveston Region (Sierra-Galveston); Sierra Club, Houston Regional Group (Sierra-Houston); State Representative Jaime Capelo (Representative Capelo); State Representative Vilma Luna (Representative Luna); State Senator Carlos F. Truan (Senator Truan); Suderman and Young Towing Company, Inc. (Suderman); Texas Association of Business and Chambers of Commerce (TABCC); Texas Citizens for a Sound Economy (TCSE); Texas Department of Agriculture (TDA); Texas Motor Transportation Association (TMTA); Texas Oil and Gas Association (TxOGA); Texas Petroleum Marketers and Convenience Store Association (TPCA); Texas Waterway Operators Association (TWOA); United States Department of Defense (DoD); EPA; Ultramar Diamond Shamrock Corporation (UDS); Union Pacific Railroad Company (Union Pacific); Valero Refining Company - Texas (Valero); Wesly Community Center (Wesly); Western Towing Company (WTC); Willis Independent School District (WISD); and 57 individuals.

The following persons generally supported the proposal: AAE, Air Surrey, Alliance, Baker Botts, BP, CDTI, CCAQC, Councilman Gonzales, DoD, ED, EPA, Ethyl, Fort Worth, GEHC, GHASP, HGAC, Sierra-Houston, ITT, Lake Jackson, LWV-TX, MECA, MCA, Public Citizen, Representative Capelo, Representative Luna, Senator Truan, Houston MPO, Wesly, WISD, and 38 individuals.

The following persons generally opposed the proposal: ARTBA, Ato Fina, AGC-Texas, AAR, ASLRRRA, BCCA, CITGO, CBC, Baytown, Corpus Christi, Missouri City, Dow, Dynegy, ExxonMobil, Sierra-Galveston, Harris County, KIMI, Koch, Lyondell-CITGO, Liberty County Sheriff, Metro, Montgomery Co., NATSO, NPRA, Phillips 66, Port Industries, PCCA, Paso del Norte, RAQCG, REI, Suderman, TABCC, TCSE, TDA, TMTA, TPCA, TWOA, TxOGA, UDS, Union Pacific, Valero, WTC, and 19 individuals.

The following persons suggested changes to the proposal as stated in the ANALYSIS OF TESTIMONY section of this preamble: AAE, AAR, ASLRRRA, AGC-Texas, Air Surrey, ARTBA, Ato Fina, Baker Botts, Baytown, BCCA, BP, CBC, CITGO, Corpus Christi, Houston MPO, DoD, Dow, Dynegy, EPA, Ethyl, ExxonMobil, Sierra-Galveston, GEHC, GHASP, Harris County, HGAC, Sierra-Houston, KIMI, Koch, Lyondell-CITGO, Liberty County Sheriff, MECA, Montgomery Co., NATSO, NPRA, Phillips 66, Port Industries, PCCA, Paso del Norte, RAQCG, REI, Suderman, TABCC, TCSE, TDA, TMTA, TPCA, TWOA, TxOGA, UDS, Union Pacific, Valero, WTC, and 15 individuals.

ANALYSIS OF TESTIMONY

AGC-Texas, Ato Fina, Baytown, BCCA, CITGO, Corpus Christi, Dow, Dynegy, ExxonMobil, Harris County, Koch, Lyondell-CITGO, NATSO, NPRA, Phillips 66, RAQCG, REI, TABCC, TxOGA, TPCA, UDS, Valero, and eight individuals expressed opposition to all region-specific, patchwork, or boutique fuel control strategy methods and requested that the commission refrain from implementing the proposed rules. Instead, they supported and encouraged the adoption of new federal diesel fuel regulations which are forthcoming in the near future. The new federal regulations will provide virtually identical NO<sub>x</sub> emission reduction benefits at a much lower cost to the public. Koch recommended that the commission withdraw this proposed rule and refrain from seeking a waiver from EPA to regulate diesel in Texas. TxOGA commented that the proposed federal low sulfur diesel fuels should supercede these proposed rules if they are adopted by the commission. TxOGA strongly recommended that the commission repeal all portions of these rules, including the rules regarding aromatics and cetane, as soon as the federal rule is adopted.

**The HGA ozone nonattainment area is required to have three years of emissions monitoring data demonstrating compliance with the NAAQS to support the 2007 attainment demonstration.**

**Therefore, implementing the LED standards in May 2002 provides the area the necessary time to allow the results of this control strategy to be realized through ozone monitoring data. In addition, these rules provide state requirements for non-road diesel fuel use which is not currently addressed by federal regulation. The commission is also aware that the EPA has issued a notice of proposed rulemaking (NPRM) for new heavy-duty engine and vehicle emission standards and new diesel fuel standards. If the outcome of this EPA proposal is a federal rule which covers the areas in Texas impacted by these adopted rules, and the federal rule is at least as stringent as any rules**

**adopted as a result of this rulemaking, then the commission will consider compliance with the national rule equally effective and may repeal all or portions of the state requirements for diesel fuel. However, based on the NPRM, it is quite likely that the EPA will only mandate sulfur reductions for on-road use, leaving aromatics and cetane values at their current levels. Because the EPA believes that the 2004 emission standards can be met without recourse to NO<sub>x</sub> after-treatment devices, sulfur reductions alone are not expected to generate further NO<sub>x</sub> reductions beyond the engine standards themselves. The commission has made no change to the rule language in response to this comment.**

NPRA commented that the United States House of Representatives Committee on Science recently requested the United States Department of Energy (DOE), Energy Information Administration (EIA) to conduct a study of the EPA proposed 15 ppm sulfur cap on highway diesel and that the EIA indicated that this study will not be completed until April 2001, and therefore NPRA recommended that the commission either withdraw the LED proposal or defer promulgation of this proposal until after the commission has received and considered next year's EIA report.

**The commission believes that there is currently adequate information available to support the adoption of these rules. The timeline deemed necessary by the commission to allow fuel producers sufficient time to comply with these rules and to allow the commission to meet SIP submission requirements has made adoption of the rules necessary at this time. The commission has pledged to reconsider all of its rules concerning the HGA attainment strategies during the mid-course review in the 2003 to 2004 time frame. Since the 15 ppm sulfur requirement does not begin until**

**2006 under these rules, the current timeline would allow the commission to reconsider the rules in light of new information which may be contained in the EIA report.**

One individual commented that these proposed rules appear to be set up to embarrass Texas and the Governor and that these proposed rules go far beyond anything necessary to protect the environment. This individual further added that the basis and analysis behind these proposed rules is flawed and should be reevaluated.

**The commission intent is not to embarrass Texas and the Governor, but instead to comply with the timelines provided in 1990 FCAA amendments and subsequent EPA guidance for submitting rules to demonstrate ozone attainment in HGA. Accordingly, the commission has committed to adopting the majority of the necessary rules for the HGA attainment demonstration by December 31, 2000.**

**As noted in the rule preamble, the purpose of these rules is to establish an LED air pollution control strategy that reduces NO<sub>x</sub> emissions necessary for the HGA nonattainment area to be able to demonstrate attainment with the ozone NAAQS. The science behind cleaner-burning fuels is well established. The emission reductions anticipated by the implementation of these rules are necessary to the success of the area in reaching attainment and therefore the commission deemed it necessary for inclusion in the SIP. As demonstrated in the SIP, the strategies do not require more reductions than necessary to meet federal air quality standards.**

NPRA recommended that implementation of new diesel fuel sulfur standards should not occur before 2010. CITGO commented that reducing sulfur prior to the introduction of the new heavy-duty engine vehicles, and to a level lower than that required to enable technology, will provide minimal benefit in reducing NO<sub>x</sub> and is certainly not cost effective.

**The commission disagrees with this comment. Advanced diesel engine emission control systems needed by the diesel engine manufacturers to comply with the proposed 2007 federal heavy-duty diesel engine emission standards will require ultra-low sulfur diesel fuel to operate efficiently. Therefore, the commission is requiring reductions in diesel fuel sulfur beginning in June 2006. The commission removed the requirement for 30 ppm sulfur in calendar year 2004 for the reasons specified in the SECTION BY SECTION DISCUSSION.**

The Liberty County Sheriff expressed his concerns over who is going to enforce these proposed regulations. One individual commented that the commission needs to convey the strategies it plans to use to enforce these proposed rules and that an efficient quality-assurance and enforcement program must be developed and be part of the SIP document for reformulated liquid fuels to be a credible component in the SIP.

**As with all of its rules, the commission will enforce the requirements after the rule compliance date and take appropriate action for noncompliance situations, including situations in which a grandfathered source has modified its operations without first obtaining the required permit authorization under 30 TAC Chapter 116 or Chapter 106. The rules are enforced by staff in the**

**commission's regional offices, as well as local air pollution control programs. Local governments have the same power and are subject to the same restrictions as the commission under TCAA, §382.015, Power to Enter Property, to inspect the air and to enter public or private property in its territorial jurisdiction to determine if the level of air contaminants in an area in its territorial jurisdiction meet levels set by the commission. Local governments are not required to enforce commission rules, but may sign cooperative agreements with the commission to enforce the rules under TCAA, §382.115, Cooperative Agreements. Local programs can also enforce commission rules without signing a cooperative agreement. The authority of local governments to enforce air pollution requirements is specified in detail in TCAA, §§382.111 - 382.115, and local governments can institute civil actions in the same manner as the commission under Texas Water Code (TWC), §7.351.**

**The commission will work with local officials to ensure enforcement of the SIP and SIP rules. The commission has existing relationships with pollution control authorities in the City of Houston, Harris County, and Galveston County for enforcement of other commission rules. The agency will continue enforcement relationships with these entities and develop relationships with other local officials as needed to create effective enforcement mechanisms for the SIP and SIP rules.**

The EPA commented that the commission should explain how the proposed rules prohibit transport, supply, etc. of non-complying diesel fuel, and make any person in the distribution system liable for such a violation.

**The rules require all parties in the distribution chain to maintain copies or records of product transfer documents for a minimum of two years. It is clear in the rules that each party in the distribution chain is required to comply with the rules, and, as with any rule, is subject to enforcement action for a violation. As with all of its rules, the commission will enforce the requirements after the compliance date and will take appropriate action for noncompliance situations. The commission made no change to the rule language in response to these comments.**

HGAC and Sierra-Houston commented that the proposed rules should be implemented statewide to provide adequate market and to maximize emission benefits for the 2007 attainment data. Four individuals commented that the proposed rule should be applied statewide. One individual commented that the proposed low-sulfur diesel should be delayed until the federal mandate applies across the country or it should be applied across the entire state since there is a high likelihood of shortages due to refinery limitations. GHASP commented that the sulfur concentration in all fuel be reduced to 15 ppm.

**As noted in the rule preamble, the rules do apply statewide regarding the requirement for the use of diesel fuel with 500 ppm maximum sulfur, 10% maximum aromatics, and 48 minimum cetane, for on-road use in motor vehicles. In this rulemaking, the commission cannot revise these proposed rules upon adoption to apply the reductions of sulfur in 2006 for both on-road and non-road use statewide or to other counties in Texas because the additional affected parties would not have had adequate notice and opportunity to comment. Additionally, requirements on any fuel but diesel is outside the scope of this rulemaking. However, the commission will consider the need**

**to expand the rules during the mid-course review scheduled to be completed by May 1, 2004. The commission made no change to the rule language in response to these comments.**

HGAC commented that the commission should encourage introduction of cleaner fuels nationally, including cleaner diesel fuel.

**The commission provided comments to the EPA in support of the proposed federal heavy-duty diesel engine standards and low sulfur diesel fuel rules.**

Paso del Norte commented that studies conducted on improved diesel, so-called clean diesel, have shown that improving diesel causes other problems, including other types of cancers and other related health problems, that the commission should analyze before adopting this proposal.

**The commission disagrees with this comment. The differences between conventional diesel fuel and the clean, or “reformulated,” diesel fuel are that clean diesel fuel contains less sulfur, less polycyclic aromatic compounds (PAC), and an increase in cetane. The commission has conducted a literature search and has not discovered any studies supporting the claim that the clean diesel causes different types of cancers or other related health problems. However, the literature does indicate that fuels with lower sulfur and PAC levels are potentially less biologically hazardous. The commission is of the opinion that a clean diesel formulation, such as the LED required by these rules, will reduce the overall hazard potential. The commission made no change to the rule language in response to this comment.**

Koch commented that the commission should request the EPA to allow the state to take credit in the SIP for reductions that will be achieved through the implementation of the proposed federal heavy-duty diesel engine standards and low sulfur diesel fuel program.

**Because the EPA is still in the NPRM stage of this rulemaking process, the commission cannot claim credit for this proposed initiative. In addition, based on the NPRM, it is likely that the EPA will only mandate sulfur reductions, leaving aromatics and cetane values at their current levels. Because the EPA believes that the 2004 emission heavy-duty diesel emission standards can be met without recourse to NO<sub>x</sub> after-treatment devices, sulfur reductions alone are not expected to generate further NO<sub>x</sub> reductions beyond the engine standards themselves. With regard to obtaining credit for “low emission diesel vehicles,” the commission has modeled the effects of heavy diesel vehicles meeting the 2004 emission standards, and included these results in the 2007 emission projections. For these reasons the commission believes the SIP modeling effort has already claimed the maximum amount of NO<sub>x</sub> reduction credits available from diesel vehicles and fuels, given the current federal rulemaking status.**

Koch and TxOGA responded to the commission’s request for comments regarding the possible benefits of reducing sulfur to 15 ppm prior to the 2006 federal deadline as a possible alternative to controls on aromatics and cetane by commenting that Koch and TxOGA do not recommend the early implementation of ultra-low sulfur diesel prior to the introduction of advanced technology engines and catalysts that must utilize low sulfur diesel. Koch and TxOGA further added that early introduction of

ultra-low sulfur diesel fuel will not provide the intended air quality benefits, nor will it make any difference in the SIP accounting that is to take place in 2007.

**The commission appreciates the response to our request for comments and has revised the rule to delete the proposed requirements which would have required 30 ppm sulfur by May 1, 2004 in order to provide greater flexibility for producers to comply with these rules and to be consistent with anticipated federal rulemaking.**

Koch and TxOGA responded to the commission's request for comments regarding additional flexibility relating to rule content and implementation. Commenters indicated that the flexibility embodied in the proposed federal diesel rule that allows adequate time to make changes to their refineries to reduce sulfur levels is an excellent example of allowing industry to reasonably comply with the rule and to smooth supply transitions for cleaner burning fuels. The flexibility allowed by the federal rule is the critical reason Koch and TxOGA opposed the proposed rules and supported the federal proposal for the HGA area.

**The commission appreciates the response to our request for comments and has taken these comments into consideration.**

BCCA and TxOGA expressed opposition to the waiver request being submitted to the EPA by the commission in accordance with 42 USC, §7545(c)(4)(C) to implement the on-road portion of the proposed rules and expressed support for the proposed federal low sulfur diesel rules.

**The commission contends that the waiver request is necessary for implementation of the on-road portion of the rules and that the rules will provide greater emission reduction benefits than the proposed federal low sulfur diesel rules from the reduction in aromatic content and an increase in cetane level. Therefore, the commission is requesting this waiver from the EPA.**

The EPA commented that the commission should provide further explanation in the 42 USC, §7545(c)(4)(C) waiver request for what other control measures were examined and the reasons for discarding these measures.

**The commission believes that sufficient data are being provided in Appendix L of the HGA Post-1999 ROP/Attainment Demonstration SIP regarding the various alternate control strategies that were reviewed to determine whether the proposed implementation of the LED fuel control strategy is justified to be included as part of the attainment demonstration. The commission revised Appendix L to ensure that the waiver request addresses the EPA concerns.**

The EPA commented that the commission should better address in the 42 USC, §7545(c)(4)(C) waiver request the reasoning for expanding the on-road measure of the proposed rules statewide and why it is necessary for attainment. UDS expressed opposition to the state-wide coverage of the proposed rules and asked why the commission is requiring all of the citizens of Texas to share the cost burden associated with the proposed rules when their additional costs provides so little real benefit to the HGA area. UDS further added that this strategy should not be extended to other areas that are currently in attainment, or who may be designated nonattainment this summer, and that the commission should

examine all potential cost effective strategies before implementing a regulation mandating a fuel standard as stringent as the proposed LED standard. ExxonMobil commented that the commission has not shown a scientific basis for requiring state-wide coverage for the proposed rules, nor has it demonstrated that state-wide boutique fuels are necessary to attain the ozone standard in the HGA area. ExxonMobil further added that the commission has shown no demonstration that the proposed fuel is necessary to maintain air quality in attainment areas. Koch commented that state-wide application of a rule designed to bring a nonattainment area into attainment is inappropriate from outright lack of air quality need. BCCA commented that a boutique fuel is not needed to maintain attainment outside of the HGA area and that requiring a special, boutique fuel for areas of Texas that are in attainment with all air quality standards has no technical, regulatory, or legal basis.

**As noted in the rule preamble, the commission expanded the rules to cover the entire state as a means to help alleviate concerns regarding out-of-area refueling practices in relation to the nonattainment counties and to reduce the regional transport of ozone precursors. Federal and state studies have shown that pollution from one area can affect ozone levels in another area. This work is supported by the findings of the OTAG study, which is the most comprehensive attempt ever undertaken to understand and quantify the transport of ozone. Both the commission and the OTAG study results point to the need to take a regional approach to control air pollutants, such as that prescribed in the rules. The state-wide implementation of LED fuel will help reduce the amount of NO<sub>x</sub> being transported into the HGA, BPA, and DFW ozone nonattainment areas and other areas of the state having concerns over air quality. The state-wide coverage will also provide a greater market for diesel fuel producers and importers to provide the fuel required by**

**these regulations. The commission and local area evaluated over 250 possible strategies while developing the attainment demonstration. These were identified in Appendix L of the SIP submittal. Modeling assessing the benefits of these rules demonstrated that by the year 2007, the use of LED will reduce NO<sub>x</sub> emissions in the HGA ozone nonattainment area by 6.48 tpd, and statewide by 30 tpd. The commission clarified the SIP language to ensure the waiver request addresses the EPA concerns.**

Koch commented that the commission should consider allowing marketable credit for the use of premium diesel fuels, which use advanced performance additives to achieve superior deposit control and corresponding in-use emission benefits, instead of mandating a low emission diesel fuel. AAE commented that it's OxyDiesel™ clean diesel fuel formulation should be included in the proposed rules among the options for the HGA area for on-road and nonroad diesel-powered vehicles and equipment.

**The rules allow the use of alternative formulations that provide emission reductions equivalent to the specified fuel content standards for aromatics and cetane. However, the alternative formulation must comply with the sulfur standard as specified in the rule. The commission made no change to the rule language in response to this comment.**

Corpus Christi expressed opposition to the commission proposal to include Nueces and San Patricio Counties in the coverage area of the proposed rules and requested comment on how the boundaries of the coverage area were determined and justified. Corpus Christi further requested comment on how the commission's accelerated implementation schedule, as compared to the proposed federal

implementation schedule, can be justified in Nueces and San Patricio Counties. These counties are remote from the HGA area, are currently in attainment of the ozone NAAQS, and any benefit to the air quality of the HGA area from the fuel purchased in Corpus Christi would be non-detectable. PCCA and Port Industries commented that unless sound science demonstrates that emissions from the Corpus Christi area, an attainment area, contribute to the nonattainment status of the HGA or other nonattainment areas, the commission should refrain from imposing controls on Nueces and San Patricio Counties and recommended that Nueces and San Patricio Counties be removed from the proposed coverage area. Port Industries further added that the commission should support a renewal of the Flexible Attainment Region agreement that has proven successful in the Corpus Christi area and that the commission should support initiatives for voluntary efforts instead of the proposed mandatory requirements.

**These rules are an element of an integrated regional ozone control strategy. The commission has expanded the rules to cover the entire state as a means to help alleviate concerns regarding out-of-area refueling practices in relation to the nonattainment counties and to reduce the regional transport of ozone precursors. Federal and state studies have shown that pollution from one area can affect ozone levels in another area. This work is supported by the findings of the OTAG study, which is the most comprehensive attempt ever undertaken to understand and quantify the transport of ozone. Both the commission and the OTAG study results point to the need to take a regional approach to control air pollutants, such as that prescribed in the rules. The state-wide implementation of LED fuel will help reduce the amount of NO<sub>x</sub> being transported into the HGA, BPA, and DFW ozone nonattainment areas and other areas of the state having concerns over air**

**quality. As such, the commission is not removing the Corpus Christi area from the clean diesel regulations. The state-wide coverage will also provide a greater market for diesel fuel producers and importers to provide the fuel required by these regulations. The commission revised the rule to delete the proposed requirements which would have required 30 ppm sulfur by May 1, 2004 in order to be consistent with anticipated federal rulemaking and implementation schedules.**

Montgomery Co. commented that the elimination of Montgomery County from the proposed rule coverage area would result in a difference of 1/200th of a ppb (0.005 ppb) of ozone and recommended that Montgomery County be exempted from the proposed rules. The Liberty County Sheriff commented that the commission should exempt Liberty County from the proposed rules.

**The FCAA Amendments of 1990 provided new requirements for areas that had not attained the NAAQS for ozone, carbon monoxide, particulate matter, sulfur dioxide, nitrogen dioxide, and lead, and new requirements for SIPs in general. The EPA was authorized to designate areas failing to meet the NAAQS for ozone as nonattainment and to classify them according to severity. FCAA, §107(d)(4)(A)(iv) mandated that areas designated as serious, severe or extreme for ozone that were within a metropolitan statistical area (MSA) or CMSA must have boundaries that include the entire MSA or CMSA. This requirement is supported by the legislative history for the FCAA Amendments in Senate Report No. 101-228, page 3399, “Because ozone is not a local phenomenon but is formed and transported over hundreds of miles and several days, localized control strategies will not be effective in reducing ozone levels. The bill, thus, expands the size of areas that are defined as ozone nonattainment areas to assure that controls are implemented in an**

area wide enough to address the problem.” The FCAA Amendments did provide the ability to exclude portions of the entire MSA or CMSA prior to designation, if the state conducted a study that EPA agreed proved that the geographic portion did not contribute significantly to violation of the NAAQS.

Montgomery County is a nonattainment county. Redesignation has not occurred for any portion of the HGA nonattainment area, and is not currently being considered. For existing areas currently included within a nonattainment area, the specific area must be redesignated as attainment to be removed from a nonattainment area. FCAA, §107(d)(3) provides that EPA may not redesignate a nonattainment area, or a portion thereof, to attainment unless several criteria are met, which include: a determination that the area has attained the NAAQS; there is a fully approved SIP for the area; there is a determination that the improvement in air quality is due to permanent and enforceable reductions in emissions; there is an approved maintenance plan for the area; and the state has met all requirements for the area under FCAA, §110 and Part D.

However, even if a specific area within the HGA nonattainment area was redesignated by the EPA as attainment for ozone, reductions associated from all adopted ozone control strategies would still be necessary because of the requirements of FCAA, §107(d)(3) and §175A which require maintenance plans for all redesignated areas. The maintenance plan must include the measures specified in §107(d)(3) and any additional measures that are necessary to ensure that the area continues to be in attainment with the NAAQS for ten years after the redesignation. Eight years

**after the redesignation, the state is required to submit an additional revision to the SIP for maintaining the NAAQS for ten years after the end of the first ten-year period.**

**Additionally, reductions associated from the ozone control strategies that will be implemented outside the HGA nonattainment area will benefit the HGA nonattainment area. This is due to the regional nature of air pollution, the contribution from mobile sources, and the economies of scale and associated market advantages related to distribution networks for some strategies.**

**At the time the 1990 FCAA Amendments were enacted, the focus on controlling ozone pollution was centered on local controls. However, for many years an ever increasing number of air quality professionals have concluded that ozone is a regional problem requiring regional strategies in addition to local control programs. As nonattainment areas across the United States prepared attainment demonstration SIPs in response to the 1990 FCAA Amendments, several areas found that modeling attainment was made much more difficult, if not impossible, due to high ozone and ozone precursor levels entering from the boundaries of their respective modeling domains, commonly called transport. Recent science indicates that regional approaches may provide improved control of ozone air pollution.**

**The commission conducted air quality modeling and upper air monitoring that found regional air pollution should be considered when studying air quality in Texas' ozone nonattainment areas. This work is supported by research conducted by the OTAG, the most comprehensive attempt**

**ever undertaken to understand and quantify the transport of ozone. Both the commission and the OTAG study point to the need to take a regional approach to controlling air pollutants.**

The AAR, ASLRRRA, and Union Pacific commented that there is no data showing that diesel fuel meeting the proposed fuel parameters would have a beneficial effect when used in locomotives, especially considering the significant increase in costs that would occur. The AAR, ASLRRRA, and Union Pacific further added that while EPA is considering adoption of stringent sulfur limitations for the purpose of enabling new engine and after-treatment technologies that are sensitive to sulfur, it has not suggested that railroads would be subject to these new requirements since locomotive manufacturers are not expected to rely on the technologies the EPA has identified as being sensitive to sulfur, such as catalysts and particulate filters, for the foreseeable future.

**The commission believes that the reduced sulfur and aromatic content level and the increased cetane level in the LED fuel will provide an emissions benefit when used in locomotive engines and that the control of non-road diesel fuel is necessary in terms of retrofit technology for demonstrating attainment with the ozone NAAQS. The use of LED fuel will be beneficial to areas of the state that are currently seeking voluntary actions from the railroad industry to use newer technology engines while operating in their areas. There are additional reductions of emissions when the low sulfur level is coupled with a reformulation that has lower diesel fuel aromatic content regardless of engine technology. The commission made no change to the rule language in response to this comment.**

Two individuals commented that mandates for cleaner buses and big trucks are also necessary. Two individuals commented that the commission should require all city buses, big trucks, and other transportation to use 'clean fuel,' by 2007.

**There are many federal and state mandates for reducing emissions from transit buses and large trucks, including the EPA Urban Bus Rebuild Program, the EPA 2004 heavy-duty engine standards, the EPA expanded Tier II engine standards (up to 14,000 pounds (lbs) GVWR), and the Texas Clean Fleet Program (up to 26,000 lbs GVWR). The EPA is also proposing new 2007 heavy-duty diesel engine standards. Regarding clean fuel, the state rules will require ultra-low sulfur LED for on-road and non-road use in the DFW and HGA nonattainment areas and an additional 95 central and eastern Texas counties by 2007. The commission made no change to the rule language in response to this comment.**

Paso del Norte commented that the commission should be moving toward the use of cleaner alternative fuels rather than requiring cleaner diesel fuel. One individual commented that the commission should provide incentives for the use of compressed natural gas (CNG), liquified natural gas, ultra-low emission vehicles, and catalysts and filters on all internal combustion engines and that the state road tax should be used to fund the incentives. One individual commented that the commission should promote the use of propane as a transportation fuel. One individual commented that the commission should promote the use of CNG. Air Surrey commented that it had a software tool the commission could use to justify and speed up the switch over from gasoline and diesel to relatively non-polluting compressed

natural gas motor vehicle fuel in the state's urban areas. One individual commented that alternative fuels have not been fully proven.

**The commission acknowledges that the use of alternative fuels in specific situations may provide air quality benefits and that tax credits are one of many incentive strategies that could be used to promote the use of alternative fuels. The commission chose to regulate diesel because the greater penetration of the fuel in heavy-duty market will result in faster reductions of NO<sub>x</sub>. In addition, LED allows for the implementation of retrofit technologies which will result in even greater reductions of NO<sub>x</sub> from existing diesel engines. However, as no provisions concerning the use of alternative fuels were included in the proposed rules, these comments are outside the scope of this rulemaking.**

TWOA commented that the proposed rule would be ineffective in regard to tug/towboat applications due to the fact that 15 ppm sulfur diesel would be more expensive, causing tug/towboat operators to avoid fueling in the HGA area. WTC commented that the commission cannot enforce the proposed rules on tug/towboat operations as the majority of its fuel is purchased outside of the state and the commission's jurisdiction.

**The commission acknowledges that there could be an estimated \$.08 per gallon increase in fuel costs as a result of these rules. The commission also acknowledges that it has no jurisdiction outside the borders of this state. These rules are enforced against the diesel fuel suppliers, not the**

**users. The commission recognizes that some out-of-state refueling may occur and has therefore broadened the program area to lower the likelihood that will occur.**

TWOA commented that requiring tug/towboats operating in the HGA to utilize 15 ppm sulfur diesel fuel creates safety risks because many tug/towboat engines utilize diesel fuel as a lubricant and the drier ultra-low sulfur diesel could cause failures of these engines thereby creating collision and pollution hazards.

**The commission disagrees with this comment. All currently used or proposed low sulfur diesel fuels are designed to meet the ASTM viscosity specification or the ASTM standard for lubricity. The low sulfur diesel fuels currently in use, such as CARB diesel (15 ppm), Swedish diesel (10 ppm), ARCO-BPAmoco (9 ppm), have not demonstrated any lubricity problems with the fuel injection and/or supply systems. Since the low sulfur diesel fuels are designed to meet the specification for lubricity based on ASTM standards, there should be no lubricity problem associated with fuel systems due to their ultra-low sulfur contents. The commission made no changes to the rule language in response to this comment.**

TWOA requested comment on how does the commission propose to overcome the mixing of multiple fuels with multiple sulfur contents, from multiple tug/towboats coming from multiple states and how is the commission going to assure the EPA that the proposed rule will actually reduce the sulfur level of fuels to 15 ppm. TWOA further requested comment on how has the commission accounted for the sulfur contents of oils that enter the engine and increase the sulfur content of the fuel beyond 15 ppm.

Three individuals commented that the commission should consider measures to ensure trucks crossing borders into Texas, or from other Texas regions, are also running on low sulfur diesel. One individual commented that the commission needed to implement a widely deployed field-test system to rapidly determine if a vehicle's fuel is contaminated with high-sulfur fuel.

**The commission acknowledges that it cannot control out-of-state or country fuel purchases and that there may be commingling of fuel with differing sulfur levels in individual vessels and vehicles. The rules apply to the distribution of LED within the covered area, not whether individual vehicles may have noncompliant fuel within their fuel tanks. However, the rules will ensure that local fuel purchases comply with the LED sulfur requirements. In addition, the proposed EPA 2007 heavy-duty diesel engine and vehicle standards and highway diesel fuel sulfur control requirements which require the nationwide use of 15 ppm sulfur for on-road motor vehicles in June 2006 will help alleviate concerns over commingling.**

**While diesel engine lubricating oils do indeed have a relatively high concentration of sulfur (2,500 - 8,000 ppm by weight), these oils do not appear to have a large impact on exhaust sulfur levels. According to EPA's *Draft Heavy-Duty Standards Regulatory Impact Analysis* of May 2000, the equivalent fuel sulfur level increase resulting from a 5,000 ppm lubricant is approximately one ppm. Therefore even at fuel sulfur levels as low as 15 ppm, incremental increases remain quite low.**

**In addition, the sulfur standard is proposed primarily for the purposes of technology enablement, allowing aftertreatment devices such as selective catalytic reduction (SCR) to operate properly in the future. However, the commission's emission benefit calculations do not account for the effect of such devices by 2007. Since an increase in sulfur does not increase NO<sub>x</sub> unless aftertreatment devices are involved, any increase in sulfur from lubricants would not affect the total NO<sub>x</sub> reduction estimates. The commission made no changes to the rule language in response to these comments.**

TWOA strongly recommended that the commission remove the tug/towboat industry from the proposed rule because of the insurmountable issues associated with engine performance and the fact that the majority of the diesel fuel used by this industry is purchased outside of the area under the jurisdiction of the commission.

**The control strategies being implemented by the commission in the HGA nonattainment area are necessary to the area's federal requirement to demonstrate attainment by 2007 and all possible reductions are needed. The commission believes that tug/tow boats are a contributing emission source in the HGA area and that it would not be appropriate to exclude them from these rules. The commission made no change to the rule language in response to this comment.**

Sierra-Galveston commented that the commission should adopt the California standards for low sulfur fuels.

**The commission believes that the LED fuel program will provide more emission reductions benefits than California diesel fuel standards, mainly due to the addition of minimum cetane requirements in the Texas rules. The commission made no change to the rule language in response to this comment.**

GEHC commented that the commission could solve a lot of the pollution reduction problems with airport ground equipment, large trucks, locomotives, and marine vessels by requiring cleaner-burning diesel fuel.

**As noted in the rule preamble, the rule requires LED for on-road use statewide and for both on-road and non-road use in the DFW and HGA nonattainment areas and an additional 95 central and eastern Texas counties in the regional area. The requirement for non-road use of LED will impact airport ground equipment, locomotives, and marine vessels equipped with diesel fueled engines and large diesel fueled trucks will be impacted by the on-road LED use requirement. The commission made no change to the rule language in response to this comment.**

One individual commented that the commission should consider other options that should include forcing refineries to change diesel formulations to remove more toxins.

**The commission shares the commenter's concern regarding toxins. The commission anticipates that the limits on aromatics in the rules will result in reductions in toxics in diesel fuel. The commission made no changes in the rule language in response to these comments.**

One individual commented that requiring the use of low sulfur/low aromatic fuels for all types and forms of internal combustion (I/C) engine use has been delayed too long and that Sweden and Germany are moving to ten ppm sulfur liquid fuels and expect to market five ppm fuel.

**The commission is aware of the diesel fuel standards that are being proposed for Europe. However, the NO<sub>x</sub> benefits of ultra-low sulfur diesel fuels are dependent upon advanced emission control technologies, such as NO<sub>x</sub> catalytic converters and particulate filters. Requiring such fuels before the technology is available does not guarantee NO<sub>x</sub> emission reductions. The commission's timing of the sulfur requirement is to ensure that it is available when federal diesel engine standards are implemented.**

One individual commented that the cost of plant modification distributed over 20 years of plant life must be considered against the reduced costs of child and adult health care accruing from breathing cleaner air with reduced ozone and PM concentrations.

**The commission evaluated previous studies, such as those conducted by the EPA and the DOE, regarding the estimated economics of producing low sulfur diesel fuel and believes that these studies provide sufficient cost benefit analysis to justify the data included in the fiscal impact section of the rule preamble. The commission agrees with the commenter that the benefits of these rules include public health improvements.**

Three individuals commented that low sulfur/low aromatic gasoline and diesel fuels are essential for the effective use of current catalytic and filter technologies to reduce I/C engine exhaust-gas pollutants and be consistent with an acceptable catalyst life, avoiding catalyst poisoning.

**The commission agrees with this comment.**

One individual commented that a tax relief credit for conversion to, and use of, low sulfur fuels should be made available for three years. Alternatively the excise tax on this fuel must make it cheaper per gallon at the pump than non-reformulated equivalent fuel. A well-funded Carl Moyer type program would help the multiple small firms make the conversion. One individual commented that the commission should promote the use of low sulfur, low aromatic fuels and subsidize the cost so that these fuels are less expensive than the standard fuels.

**The commission agrees that economic incentive programs can potentially be an effective tool for achieving air quality. One such program is the Carl Moyer program in California. That program appears to be successful in providing flexibility to the regulated industry while still achieving reductions in air emissions. The California program is authorized by and funded through the state legislative process and such legislative approval does not currently exist for a similar Texas program. The commission will continue to try to identify economic incentives which it has authority to implement. Because the commission agrees that market-based incentive programs can be an important component in encouraging development of new technologies and/or**

**greater or more cost-effective emission reduction strategies, the commission provided for the inclusion of economic incentive programs as a component of the HGA SIP in the future.**

**The commission does not have the authority to make changes to any state taxes or offer fuel tax credits. Only the legislature has the authority to modify state tax regulations. Currently, 30 TAC Chapter 117, Tax Relief for Property Used for Environmental Protection, is the commission's program that provides tax relief for the purchase of pollution control property. On November 2, 1993, the voters of Texas approved a constitutional amendment, commonly referred to as "Proposition 2," that provides an exemption from property taxation for pollution control property. The intent of the constitutional amendment was to ensure that capital investment undertaken to comply with federal, state, or local environmental mandates did not result in an increase in a facility's property taxes. Legislation implementing that amendment, House Bill 1920, was passed during the 73rd Texas Legislative Session which added a new §11.31 and §26.045 to the Texas Tax Code (Tax Code). The Tax Code provides that pollution control property could include any land purchased after January 1, 1994, or any structure, building, installation, excavation, machinery, equipment, or device and any attachment or addition to or reconstruction, replacement, or improvement of property that is used, constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any federal, state or local environmental agency for the prevention, monitoring, control or reduction of air, water, or land pollution. Motor vehicles are specifically noted as being ineligible for an exemption under this provision of the Tax Code. The Tax Code contains a two-step process for securing an exemption from property taxes for pollution control property. An applicant must first receive a**

**determination from the commission that the property is used for pollution control purposes. The applicant then can use this determination to apply to the local appraisal district for a property tax exemption. The commission made no change to the rule language in response to this comment.**

Koch and TxOGA expressed strong concerns that LED product availability was not given proper consideration in the proposed rulemaking and the timing is out of sync with the proposed federal diesel requirements. CITGO, ExxonMobil, Koch, Lyondell-CITGO, NPRA, TxOGA, and Valero expressed concern that the proposed rule will lead to supply disruptions and product outages as well as price volatility which will have a severe negative impact on supplies of on-road and non-road diesel fuel in the state. BCCA commented that the proposed LED presents a much higher market risk and uncertainty for diesel supplies throughout east Texas than the proposed federal low sulfur diesel fuel rule because the proposed LED rule will reduce regional diesel fuel supplies, reduce incentives for refiners to invest in low sulfur diesel facilities, and limit refiner's ability to build new facilities. TCSE commented that requiring the sale of more costly low emission diesel will cause tremendous economic disruption in the state and hurt the public.

**The commission revised the rule to delete the proposed requirements which would have required 30 ppm sulfur by May 1, 2004 in order to provide greater flexibility for producers to comply with these rules and to be consistent with anticipated federal rulemaking and implementation schedules.**

TxOGA commented that even if the refiners willing to comply with the proposed LED requirements can manufacture sufficient supplies of LED, it does not believe that the existing distribution system can provide continuous and ample supplies of a 15 ppm diesel fuel for Texas while products containing significantly higher sulfur levels are being shipped in the same delivery system. BCCA commented that the existing fuels distribution infrastructure is not currently sufficient to deliver Texas boutique fuels to the marketplace in a timely fashion. NATSO and NPRA expressed opposition to the proposed reduction in sulfur to 30 ppm in 2004, a full two years ahead of the proposed federal standard, and commented that it would seriously jeopardize the integrity of the region's fuel supply and delivery system and place both supply and demand for the ultra-low sulfur fuel at risk, thereby seriously jeopardizing the success and viability of the proposal. NATSO further added that the proposed rule requiring 30 ppm sulfur levels in 2004 could seriously disrupt the travel plaza and truck stop industry's ability to consistently and reliably acquire highway diesel fuel for retail sales and would place those diesel retailers in the covered areas under the 2004 proposal at a significant competitive disadvantage when compared to those diesel retailers in other area of Texas and neighboring states not covered by the proposal by requiring them to sell a fuel that would be almost impossible to acquire. NATSO commented that the proposed 30 ppm sulfur diesel required in 2004 would need to be segregated from the 500 ppm fuel throughout the state's distribution chain to prevent cross contamination and the added costs to segregate these fuels would further drive up fuel prices. Valero commented that the logistics of distributing "boutique" fuels ahead of the federal regulations to the eastern half of Texas is a practical impossibility. CITGO commented that refiners that supply both the Texas market and the Colonial/Explorer pipeline systems will have to have separate tanks to store the ultra-low diesel required in the Texas market in 2004 from the federal diesel being supply to the rest of the nation and

that the tankage does not exist today to support an additional grade of diesel fuel that will only serve the Texas market. CITGO further added that the current tankage and logistics systems in refiners were not designed to protect product qualities down to the significantly ultra-low sulfur levels being proposed, especially when higher sulfur products are being handled in the same system. CITGO, Phillips 66, and TxOGA commented that a study conducted by the National Petroleum Council, *U.S. Petroleum Refining: Assuring the Adequacy and Affordability of Cleaner Fuels*, June 2000, concluded that there was a doubt on whether the distribution system can handle ultra-low sulfur product and maintain the integrity of the sulfur level as long as higher sulfur products are being shipped in the same system. TMTA commented that the proposed rule will fragment the diesel fuel supply by requiring four types of diesel fuel within the state - a Western, an Eastern/Central, and a Houston/Galveston diesel, and this fragmentation will strain the state's diesel production and distribution system, leading to supply shortages and exorbitant prices. BCCA commented that the proposed LED rule will create an additional grade of diesel to be blended and distributed through systems that are already stretched beyond design and that there are serious and real concerns that it will not be possible to blend and distribute the boutique fuels throughout Texas while providing the rest of the country with EPA-specified fuels.

**The commission acknowledges that the distribution system may have difficulties in segregating ultra-low sulfur diesel from other higher sulfur products. However, the commission believes that these issues can be overcome, as was shown by the industry's previous experiences with reformulated gasoline and low sulfur highway diesel fuel. The commission is confident that the industry will be able to provide compliant fuel in sufficient quantities to supply the Texas market**

**and do so in a timely fashion to prevent major supply disruptions. The commission revised the rule to delete the proposed requirements which would have required 30 ppm sulfur by May 1, 2004 in order to provide greater flexibility for producers to comply with these rules and to be consistent with anticipated federal rulemaking and implementation schedules.**

NATSO also commented that the proposed rule requiring 30 ppm in 2004 would essentially prohibit influx of foreign supplies of diesel fuel, which could otherwise be used to ease shortages in domestic production and supply, since the highway diesel fuel required in the covered areas would have a lower sulfur level than highway diesel produced in most other countries.

**The commission revised the rule to delete the proposed requirements which would have required 30 ppm sulfur by May 1, 2004 in order to provide greater flexibility for producers to comply with these rules and to be consistent with anticipated federal rulemaking and implementation schedules.**

Ato Fina and BCCA commented that the proposed implementation schedule does not allow sufficient time for the refining industry design, engineer, permit, procure equipment, construct, and begin production of the new fuel. ExxonMobil, Koch, NPRA, and UDS commented that the implementation schedule is unrealistic since refinery and infrastructure changes are not only costly but time consuming and it is not realistic to stipulate that major fuel property changes occur slightly more than a year after promulgation of regulations. Koch further added that a minimum of four years lead time is necessary in the best of times to plan, engineer, permit, construct, and test the additional diesel refining units needed

to comply with the proposed fuel standard and that the unprecedented changes in gasoline properties that have been promulgated by the EPA as well as other voluntary actions that have been adopted by various refiners has extended engineering design and construction as never before and the time schedule for any other requirements can be expected to be longer than usual because of the enormous demand on finite resources. CITGO and NPRA commented that implementing new diesel fuel sulfur standards in 2002, 2004, and 2006 will certainly exceed the capacity of the industry's engineering and construction resources. CITGO, NPRA, and UDS commented that the proposed implementation date of May 1, 2002 does not allow adequate lead time for refiners to build the facilities needed to comply with the LED specifications and that the commission should not implement a diesel fuel standard that will require engineering and construction schedules for diesel desulfurization facilities to overlap with those of refinery facilities that will be built to meet the federal Tier II and other gasoline requirements. CITGO further added that overlapping the schedules for the federal and state gasoline and diesel fuel projects will increase the costs of both programs, as these projects will compete for the same scarce resources and both projects will be competing for permit approvals from state agencies, which are unlikely to have the resources to expedite the approvals even if they wished to do so. NPRA commented that the 30 and 15 ppm sulfur caps proposal exacerbates the competition for scarce construction and engineered equipment resources and that the commission should take these concerns into account and develop a more rational schedule for fuel specification changes. Valero recommended that the proposed rules be harmonized with the federal rules to prevent supply disruptions in Texas. ExxonMobil recommended that the commission use the maximum implementation schedule allowed by federal law and EPA policy as an alternative to the 2004 schedule and allow the installation of controls

up until the HGA ozone attainment year of 2007 to alleviate much of the projected labor, material, and equipment shortfall and reduce the number of unscheduled shutdowns.

**The commission acknowledges that the implementation schedule may be difficult for some producers to comply with if major refinery modifications are required. However, the 2002 implementation date does not require any further reductions in sulfur than required by current federal regulations and the rules allow the producer to use an approved alternative diesel fuel formulation if it is equivalent in emission reduction benefits to fuel meeting the rules' aromatic and cetane standards. The commission acknowledges that refinery modification will be required to comply with the 2006 sulfur standards and made all permit requests regarding facilities modifications or new construction to comply with the LED rules or the EPA Tier II low sulfur gasoline regulations top priority within the commission permitting process. The commission anticipates these types of permits will be processed within nine months of receipt, if uncontested. The commission believes that the industry is already planning refinery changes to meet both the EPA Tier II low sulfur gasoline and the proposed federal ultra-low sulfur diesel rules and should be able to complete these projects within the frame work of the rules' implementation schedule.**

TMTA requested that the commission provide the public with the substantive materials that were used to develop the proposed rule and that the materials used to determine the feasibility and cost of distributing, storing, and retailing this stew of diesel fuels should also be provided to the public so that the industry can determine how the commission expects the Texas distribution system to respond when shortages or strong demand tax the fuel supply in different parts of the state.

**The commission believes that sufficient fiscal impact information was provided in the fiscal note section of the rule proposal preamble. The commission believes that the current diesel fuel distribution system is adequate to handle the requirements of the rules and does not anticipate major supply shortages as a result of these rules. The commission is confident that the petroleum industry will be able to provide compliant fuel in sufficient quantities to supply the Texas market and do so in a timely fashion to prevent major supply disruptions. The commission has made no change to the rule language in response to these comments.**

MECA expressed support for the proposed rules and commented that the availability of diesel fuel with very low sulfur levels is critical in maximizing the effectiveness of exhaust PM control technologies on the widest range of engines and that the proposed 30 ppm cap followed by the 15 ppm cap on diesel fuel for both non-road and on-road engines will greatly facilitate the utilization and optimization of the full range of control technologies for maximum control efficiency and will insure reliable and durable operation.

**The commission appreciates the support. However, the commission revised the rule to delete the proposed requirements which would have required 30 ppm sulfur by May 1, 2004 in order to provide greater flexibility for producers to comply with these rules and to be consistent with anticipated federal rulemaking and implementation schedules.**

Valero commented that it has no plans to upgrade its Texas refineries ahead of the federal rules to produce “boutique” fuels and will be forced to participate in the Texas market only as economics

dictate. CITGO and ExxonMobil expressed concern that Texas refiners who are unable or unwilling to make the significant investments to address cetane and aromatics will find alternate deposition for the diesel volume they currently supply to Texas and that product availability will diminish significantly, creating fuel supply disruptions and dramatic price increases. UDS commented that Texas refineries currently export a large portion of their diesel outside of Texas and thus, have an alternative to supplying a boutique fuel to Texas markets.

**The commission acknowledges that some producers may make the decision not to compete in the Texas market based on their inability or unwillingness to comply with the requirements of the rules. However, the commission is confident that the market will be supplied by existing producers that do make the investment to supply the market and by producers that may not have entered the Texas market in the past.**

Koch and NATSO commented that the investment costs are underestimated and that fuel prices are estimated to be at least two to three times more than the commission's estimates. Metro commented that the estimated increase cost of \$.08 per gallon is too optimistic and it is more likely that the cost of diesel fuel will increase in more severe increments and with higher frequency than considered in the proposed rule. AAR, ASLRRA, and Union Pacific commented that the commission significantly underestimated the effect this proposed rule will have on fuel prices because the infrastructure to produce and distribute diesel fuel meeting the proposed specifications is not in place in Texas, there have been no analysis of whether the prices that railroads and other ultimate purchasers of diesel fuel would pay for this special diesel and the price comparisons commensurate with increased production

costs, and the price comparisons fail to consider actual differences in fuel prices or the recent spikes in fuel prices. CITGO commented that their experiences with producing maximum 15ppm LED fuel has shown that the more frequent catalyst replacement needed to maintain the 15 ppm sulfur cap raises the cost of production by about \$.07 per gallon, excluding capital recovery, and if CITGO is required to decrease aromatics and/or raise the cetane levels, the investment and operation costs will increase even more. TABCC commented that the proposed fuel is estimated to cost consumers and businesses \$.12 to \$.14 more per gallon and will be subject to price spikes like those observed in the Chicago area this past summer. NPRA commented that the cost of the first phase of the proposal may be understated since California diesel, which is similar to the proposed LED, has maintained a retail price difference much higher than the \$.04 per gallon estimated by the commission. BCCA commented that the production cost of the proposed LED fuel in 2002 to be in the same league as CARB diesel, or about \$.09 per gallon, based on the CARB diesel market place experience, since the two fuel specifications are similar. BCCA further added that the production cost to go from the 500 ppm sulfur level in the proposed LED in 2002 to the 15 ppm sulfur LED proposed for 2006 will be comparable to the cost to produce the proposed federal ultra-low sulfur diesel (15 ppm sulfur), or about \$.10 per gallon, and therefore, unless there is a desulfurization technology breakthrough, or new refining process synergies developed, the combined cost for the proposed LED program in 2006 is estimated to be over two times higher than the commission estimate of \$.08 per gallon. Five individuals commented that ultra clean fuels will carry high prices. PCCA commented that from the standpoint of cost to produce, benefits derived versus the increased costs to make the fuel makes the proposed requirements cost-prohibitive and worthy of reconsideration by the commission. ExxonMobil commented that the commission not

provided valid and adequate cost estimates and economic impact analyses for the proposed 2004 implementation schedule.

According to a CARB publication entitled, *California Diesel Fuel Factsheet*, published in March 1997, a gallon of California diesel fuel costs approximately \$.01 to \$.04 more to produce than diesel fuel in other states. While other factors beside production costs can and do affect the retail prices of diesel fuel in California, the commission contends that production costs are the most stable measure for comparison analysis. A recent report published by the California Attorney General's Office entitled, *Preliminary Report to the Attorney General Regarding California Gasoline Prices*, dated November 22, 1999, stated that differences between fuel prices in California and most of the rest of the states can be attributed to a relative lack of competition within the California refining and marketing structure, California's unique fuel specifications and the distances from major refining centers and potential supply sources outside the state, and somewhat higher state taxes.

A comparison of the weekly average retail prices for on-highway diesel fuel published by the DOE for the week ending October 16, 2000 showed retail prices of California diesel to be \$.16 more expensive than the retail prices of diesel fuel sold in the Gulf Coast region and \$.10 more expensive than the national average. However, the commission contends that the \$.04 increase in production costs is a valid determination of the costs associated with the proposed rules since other factors which could affect retail prices, as indicated above, are not the same in Texas as those in California.

**The commission agrees with the comments that the actual retail price could be more expensive than just the difference in production costs. However, the commission is not aware of any firm method of determining what the actual retail price of LED fuel will be in May 2002 or in June 2006 and what factors will be affecting the price difference to that of conventional diesel fuel. In addition, the commission believes that new refining technologies for reducing sulfur, such as the recently introduced Phillips 66 “S Zorb” technology and BP’s OATS process, could significantly reduce production costs and could help alleviate concerns over supply availability. The commission revised the rule to delete the proposed requirements which would have required 30 ppm sulfur by May 1, 2004 in order to provide greater flexibility for producers to comply with these rules and to be consistent with anticipated federal rulemaking and implementation schedules.**

BCCA commented that based on learning from the CARB diesel experience and recent estimates made by the EPA and Charles Rivers Associates for very low sulfur diesel, it is estimated that the capital cost for statewide 2002 LED will be \$500 million.

**The commission acknowledges that significant capital costs could be incurred by some producers to meet the requirements of the rules and that the \$500 million state-wide capital costs estimated by the commenter is comparable to the calculations estimated by the EPA. According to the EPA analysis found in the *Notice of Proposed Rulemaking on the Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*, the estimated capital costs for a typical refinery will be approximately \$31 million.**

TDA commented that the commission should consider the financial impact of the proposed rule on agriculture producers and that TDA would not like to see more government regulations placed on this industry if they are not necessary. BCCA commented that the commission has not considered the cost of the proposed rule on operators of non-road diesel equipment.

**As noted in the rule proposal preamble, the fiscal analysis only considered on-road diesel vehicles because vehicle counts for non-road diesel vehicles were not available. However, the commission believes that costs will be similar for both on-road and non-road diesel vehicle users. The commission made no change to the rule language in response to these comments.**

UDS commented that many formulations covering the production of California specification diesel are either patented or proprietary and therefore the cost to produce this fuel by non-California refiners may be even higher than in California itself.

**The commission acknowledges that there may be issues with some producers over patent infringement. However, the rules allow the use of California-certified diesel fuel formulations as an option for compliance flexibility, not as a requirement. The rules do not prohibit diesel fuel producers from submitting their own diesel fuel formulations to California for certification and possibly preventing any patent infringement issues. The commission is unable to adequately address the issue of cost in this comment because the commenter did not provide any estimates toward the possible cost of patent infringement issues. The commission made no change to the rule language in response to this comment.**

The Houston MPO commented that the commission should re-examine the NO<sub>x</sub> benefit of the proposed rule because the commission's calculation of the NO<sub>x</sub> benefit for the effect of using LED for on- and non-road vehicles produces less NO<sub>x</sub> reductions than those calculated by the CARB.

**The commission is aware that CARB claims a higher potential emission reduction (about 12%) for electronically-controlled diesel engines, using an equivalent fuel specification. However, this estimate is based on limited testing of a single engine from the early 1990's, using a simple fuel test matrix. The commission's estimate of NO<sub>x</sub> benefits for the proposed rules is based on extensive testing under the EPA Heavy-Duty Engine Work Group (HDEWG), utilizing a sophisticated fuel matrix and a late-technology engine using exhaust gas recirculation, representative of engines meeting the upcoming 2004 standards. In addition, the 5.7% benefit estimate is more in line with other recent findings for similar fuels, including a 4.1% value obtained for 1998-equivalent engines under the European Auto-Oil study in 1999. Therefore, the commission believes the 5.7% value to be reasonable, and representative of those late model, electronically-controlled engines having the greatest emissions impacts in 2007. The commission made no changes to the rule language in response to this comment.**

NPRA commented that the commission's estimate of 30 tpd of NO<sub>x</sub> reduction in 2007 is too high and is a overstatement of the benefits in Texas that can be realized by changing diesel fuel formulation and that changing diesel fuel specifications without adding yet-to-be-commercialized retrofit pollution control to existing vehicles results in limited NO<sub>x</sub> emission reductions from the existing fleet of heavy-duty trucks and buses.

**The commission disagrees with this comment. The EPA proposed 2007 heavy-duty diesel engines standards will require engine manufacturers to utilize advanced emission control systems to achieve the standards and these systems will require the use of an ultra-low sulfur diesel fuel to be effective. The modeling associated with these rules used the estimated emission reductions from 2004 model heavy-duty engines using low sulfur diesel to estimate the claimed emission reductions for existing diesel engines. The commission made no change to the rule language in response to this comment.**

UDS commented that emission benefits from boutique fuels may be overstated since some diesel vehicles that are not centrally fueled and have sufficient fuel capacity range will choose to purchase diesel outside of Texas, not only in Louisiana, New Mexico, and Oklahoma, but also Mexico, especially if the price differential between the EPA diesel and the proposed Texas LED is substantial. TMTA requested the commission to expand its analysis to more thoroughly address how freight contracts will shift to out-of-state companies offering cheaper rates using cheaper non-compliant diesel fuel and how this will reduce the rule's effectiveness. TMTA commented that given the proximity of the state's nonattainment areas to adjacent state borders, any state diesel fuel requirement can and will be avoided due to the higher cost of compliant fuel and that this will lead to a proliferation of out-of-state trucking companies serving the state.

**The commission acknowledges that the possibility of out-of-state refueling by diesel truck traffic does exist. The commission is not aware of any estimates of the fraction of vehicle miles traveled (VMT) attributable to such "pass through" truck traffic. Therefore, without additional**

**information, the commission is not able to estimate a reasonable offset factor for this effect.**

**However, the rules apply to all diesel sales for on-road use statewide and the commission does not anticipate the impact of out-of-state refueling will be significant. Nevertheless, the intent of the rules is to impact as large a fraction of area-wide diesel VMT as is reasonable, which the commission believes will be accomplished through these rules. The commission made no change to the rule language in response to these comments.**

BCCA, Koch, and TxOGA commented that the emission benefits of the proposal are overestimated because the two prediction models, the HDEWG model for post 1990 engines and the CARB model for earlier engines, used by ERG to predict emission benefits are extremely limited in scope and focus exclusively on advanced technology engines meeting the 2004 and later emission standards. Koch and TxOGA further added that the HDEWG study utilized large amounts of cetane improver in the diesel used to conduct the study and that most diesel fuel used in the HGA area does not contain cetane enhancers. Koch and TxOGA commented that the commission should consider the conclusions drawn in the Society of Automotive Engineers (SAE) Paper 982649, *Fuel Quality Impact on Heavy Duty Diesel Emission: A Literature Review*, in determining the benefits associated with the proposal.

**The commission believes that while the uncertainty of the estimates from mechanically-controlled diesel engines provided by the ERG study, which was based on a small CARB data set operating on California diesel, is greater than the uncertainty of the estimates for newer, electronically-controlled engines, the claimed reductions are indeed reasonable and conservative. The 7.0% NO<sub>x</sub> emission reduction value is only slightly higher than the 5.7% figure used for electronically-**

controlled engines in this analysis. Also, the mechanically-controlled engines make up less than 2.0% of the on-road VMT by 2007, based on local registration distributions and MOBILE5 default mileage accumulation rates. Therefore, for the on-road sector the impact of any uncertainty in these figures is diminished by the small size of the fleet under consideration.

In Phase I of the HDEWG testing, five to six fuel blends were sent to several different engine manufacturers, including Cummins and Detroit Diesel, for baseline testing. The EPA determined that the Caterpillar 3176 engine had emissions typical of equivalent technology engines from other manufacturers. These engines were selected to be representative of upcoming engines meeting 1998/2004 standards, according to the Southwest Research Institute (SwRI) program manager. Therefore, the Caterpillar 3176 engine was deemed an appropriate selection for further testing. This was the consensus among participating manufacturer representatives as well.

While it is true that the fuel set used in the HDEWG test program is atypical, the study could not have achieved its objective of determining parameter-specific effects without some sort of manipulations of the blends involved. In addition, SwRI technical staff involved in the test program point out that, by and large, the fuel set parameters were selected to mimic the fuel properties anticipated from advanced diesel fuel production in the near future. Finally, in regard to cetane enhancers, the test program clearly demonstrated that there was no significant difference in the interaction between natural or boosted cetane levels and other effects such as aromatics-induced reductions. Therefore, the pervasive presence of boosted cetane in the fuel matrix did not bias the outcome of the test program.

**The SAE Paper 982649, which summarizes the available research up to that point on diesel fuel property impacts on emissions, cites a less than 5.0% impact for total aromatic reductions from 30% - 10% by weight. However, the authors of the paper themselves acknowledge that “on a percent basis, polyaromatics should contribute more to NO<sub>x</sub> than a corresponding amount of mono-aromatics.” Thus, if polyaromatics are reduced disproportionately compared to mono-aromatics, the reductions could be even greater than stated above. Since the HDEWG predictive model accounts for both poly- and mono-aromatic levels, the commission believes that the modeled result of 5.7% is within the range of reasonable reductions. In addition, the SAE authors themselves reference the ongoing work by the HDEWG as a source of future data concerning the differential effect of aromatic species. The commission made no change to the rule language in response to these comments.**

Koch and TxOGA commented that the 2.5% emission reduction benefit claimed by the ERG study, and used by the commission to estimate the NO<sub>x</sub> benefit of the proposed LED program, should be reduced to a 1.75% NO<sub>x</sub> reduction benefit because the modeling in the ERG study assumed a typical alternative diesel formulation at 20% aromatics, compared to 10% aromatics required by the California diesel fuel standards. Information provided in the SAE Paper 982649 showed 2.5% to be a reasonable estimate only if aromatics were reduced from 30% - 10%.

**The commission disagrees with this comment because all CARB certified alternative diesel formulations must demonstrate equivalent emissions performance to the base standard at 10% aromatics, and other parameters, such as cetane number, are usually raised to compensate for an**

**increase in aromatics. Accordingly, the commission accounted for the modified parameters specified in the certified alternative diesel formulations, including relative contributions of poly- and mono-aromatics, in its modeling. Therefore, the fact that California diesel fuels were modeled by the commission at 20% aromatics levels to emulate the diesel fuel currently being used in California does not warrant the proposed correction factor. The 0% - 5.0% range cited in the SAE Paper 982649 may also be somewhat biased by the model year of the engines tested. Specifically, of approximately ten engines used to generate the 0% - 5.0% estimate, all but two were 1995 or older models (as old as 1991). Although more detailed research would be needed to quantify the effect, the commission believes that these engines most likely featured a higher pre-mix burn fraction than is found in the most advanced engines today, such as the Caterpillar 3176 engine tested by the HDEWG. This factor would tend to decrease the impact of aromatic reductions somewhat for the relatively older engines. The commission made no change to the rule language in response to this comment.**

BCCA recommended that the commission remove the aromatic and cetane specifications associated with the proposed rule since these specifications are much less relevant when the new federal ultra-low sulfur diesel enters the market in 2006 followed by the low emission heavy-duty diesel engines in 2007. Ethyl commented that raising the minimum cetane number of diesel fuel in Texas to 50 would meet or exceed the emission reduction targets presented in the proposal and that no other fuel property changes, such as limiting aromatic hydrocarbons, are needed. Ethyl further added that this strategy is an inexpensive NO<sub>x</sub> reduction proposal, that implementation is quick and easy, it requires no significant capital expense, it allows refiners flexibility in meeting the commission's target NO<sub>x</sub> reductions, it will not

disrupt supply since refiners can meet the cetane target through either refinery processing or readily available additives, the 50 cetane proposal can be accomplished within the commission's time frame, the new fuel can be easily monitored for compliance, and it would not require significant recordkeeping. UDS commented that replacing the proposed aromatics requirement with an increase in diesel cetane is the only realistic solution currently available to improve diesel quality and that this alternative would achieve the targeted NO<sub>x</sub> reductions at a lower cost than requiring refinery modifications and could be implemented in accordance with the regulatory timetable without increased risk of supply disruptions.

**The federal low-sulfur diesel proposal only generates significant NO<sub>x</sub> reductions if used in conjunction with aftertreatment devices such as SCR. While such devices are anticipated in order to meet the proposed 2007 emission standards, there will be relatively little penetration of these engines into the fleet by calendar year 2007. Therefore, in order to generate the required NO<sub>x</sub> reductions by this time, aromatics reductions (or equivalent formulations) are needed to affect the large portion of the on-road fleet unaffected by the 2007 standards.**

**The commission agrees that increasing cetane number appears to have a beneficial impact on NO<sub>x</sub> emissions for current engine technologies. However, the HDEWG study is the best (and only) study to date evaluating fuel changes in 2004-compliant engines. This study found that cetane has a negligible effect on these engines. Considering the "pull-ahead" of the 2004 standards to the 2002 model year, and the disproportionately large contribution to total VMT from heavy-duty trucks six years of age and newer, 2004-compliant engines will have a very significant impact on**

**on-road NO<sub>x</sub> emissions in 2007. Therefore fuel specifications must affect this portion of the fleet as well as those engines meeting earlier standards. In order to achieve the required reductions, fuel strategies will most likely have to address both aromatics and cetane. While the commission is eager to evaluate additional studies involving 2004-compliant engines when they become available, judgements regarding fuel effects must be made given currently available information.**

**The commission agrees that manipulation of cetane number is likely to be less expensive than aromatics changes. However, the commission does not agree that cetane changes are the “only realistic solution” to the goal of NO<sub>x</sub> reduction. The availability of low-aromatic diesel fuel in California and other markets clearly indicates that aromatic control is a realistic formulation strategy. In addition, the rules do allow alternative formulations of diesel fuel to be used, including diesel fuel with a higher cetane content than specified in the rules, as long as the emission reduction performance of the alternative formulation is equivalent to the specified LED fuel. The commission made no change to the rule language in response to these comments.**

TxOGA commented that the proposed 10% aromatics limit may adversely affect the seals used within diesel engines resulting in possible seal failures and increased costs to the diesel engine user from otherwise unnecessary downtime and the substantial labor and materials involved in engine repairs.

One individual commented that the commission should not implement the proposed rule if it will cause damage to diesel engines. One individual commented that the commission should make sure to adequately test new fuel formulas before imposing them on Houston to ensure against seal failures.

**Investigation by the EPA and the CARB has shown that the reduced aromatic contents of low aromatic diesel fuels has contributed to fuel leaks in older diesel engines and vehicles, mainly from the shrinkage and possible cracking of the elastomeric seals, commonly known as O-rings, in some older diesel engines, but not in every case. The change from a higher to a lower aromatic fuel may cause elastomeric seals found in some older engines to shrink and possibly crack, especially those seals made of nitrile rubber that have seen long service at high temperatures. Commonly, the seals that failed were worn considerably and due for replacement. Thus, the cost for the worn seal or O-ring replacement would have to be incurred by the vehicle operator at some point, regardless of the change in fuel. The commission suggests that proper seal replacement and maintenance schedules will help prevent untimely equipment failures. Studies have shown that after the replacement of these seals, the occurrence of leaks was virtually eliminated.**

**In addition, the rules do allow alternative formulations of diesel fuel to be used, including diesel fuel with a higher aromatic content than specified in the rules, as long as the emission reduction performance of the alternative formulation is equivalent to the specified LED fuel. The commission made no change to the rule language in response to this comment.**

Koch commented that the State of Texas seek any and all extensions to the attainment deadline that might be available under law to allow enough time for the federal fuel programs to deliver the emission reductions that are so critically needed by the HGA area. Koch further added that Texas should not be “forced” to adopt short-term stopgap measures that add enormous cost, and essentially inconsequential benefits.

**The FCAA requires that a state have no more than one exceedance of the NAAQS in the year preceding the extension year, and that the state has complied with all requirements and commitments in the applicable implementation plan, prior to EPA granting such an extension.**

**There is no provision in the FCAA or EPA guidance for EPA granting an extension in the absence of this data. However, the commission is committed to working with EPA and all interested parties to provide opportunities for new, low-emission equipment availability within the HGA nonattainment area.**

The EPA commented that 42 USC, §7545(c)(4) preemption does not apply to fuel content for non-road diesel engines and therefore no waiver request is needed for the non-road portion of the proposed rule.

**The commission agrees with the comment and has submitted its waiver request for the on-road portion of the rules only.**

ARTBA, ExxonMobil, Koch, Lyondell-CITGO, Phillips 66, Union Pacific, and TxOGA commented that the commission failed to follow the requirements for adopting a major environmental rule as required by Texas Government Code, §2001.0225 (i.e. no cost benefit analysis performed; no draft impact analysis performed; no description of why identified reasonable alternative were rejected; and no final RIA performed). BCCA, CITGO, Lyondell-CITGO, Phillips 66, and REI commented that the proposed rule meets the definition of a major environmental rule and that the RIA requirements of Texas Government Code, §2001.0225 are triggered because the proposed rule exceeds standards set by federal law and exceeds an express requirement of state law. BCCA, REI, and Union Pacific further

commented that the commission's efforts to avoid an RIA by asserting that the proposed rules are exempt from the RIA requirements because federal law mandates the rules is legally flawed and may render the rules invalid. UDS commented that the commission is required to perform a RIA since these proposals will require significant capitol investments by refiners.

**The commission agrees with the commenters that the proposed rules meet the definition of a major environmental rule; however, the commission disagrees that its interpretation of the exemption for federally mandated standards is legally flawed. While the rules may require significant capital investments by refiners, that alone is not enough to trigger the RIA requirements. The Texas Government Code, §2001.0225 only applies to a major environmental rule adopted by a state agency, the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the agency instead of under a specific state law.**

**This rulemaking action does not meet any of these four applicability requirements, and is adopted in substantial compliance with the RIA requirements. Texas Government Code, §2001.035.**

**These rules does not exceed an express standard set by federal law because the LED requirements are specifically developed to meet the ozone NAAQS set by the EPA under 42 USC, §7409. 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 42 USC, §7410 does not specifically prescribe programs, methods, or reductions to meet the federal 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 42 USC, Chapter 85, Air Pollution Prevention and Control). The FCAA does require some specific measures for SIP purposes, such as an inspection and maintenance program, but those programs are the exception, not the rule, in the federal SIP structure. The provisions of the FCAA 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. In order to avoid federal sanctions, states are not free to ignore the requirements of 42 USC, §7410, and must develop programs to assure that the nonattainment areas of the state will be brought into attainment on schedule. Failure to develop control strategies to demonstrate attainment can result in federal sanctions. Thus, while specific measures are not prescribed, both a plan and emission reductions are required to assure that the nonattainment areas of the state will be able to meet the attainment deadlines set by the FCAA. The EPA provided the criteria for both the submission and evaluation of attainment demonstrations developed by states to comply with the FCAA. This criteria requires states to provide, in addition to other information, photochemical modeling and an analysis of specific emission reduction strategies necessary to attain the NAAQS. The commissions photochemical modeling and other analysis indicate that substantial emission

**reductions from both mobile and point source categories are necessary in order to demonstrate attainment. In this case, this rulemaking is intended to achieve reductions in ozone emissions in the HGA nonattainment areas. Specifically, as noted elsewhere in these rules preamble, the emission reductions associated with this rule are a necessary element of the attainment demonstration required by the FCAA.**

**This conclusion is supported by the legislative history for Texas Government Code, §2001.0225. During the 75th Legislative Session, SB 633 amended the Texas Government Code to require agencies to perform a RIA of certain rules. The intent of SB 633 was to require agencies to conduct a RIA of 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. 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. Because of the ongoing need to address nonattainment demonstrations required by federal law, the commission routinely proposes and adopts SIP rules. If each rule proposed for inclusion in the SIP was incorrectly considered as exceeding federal law, every SIP rule would require the full RIA contemplated by SB 633. This result would be inconsistent with the cost estimates and fiscal notes prepared by the commission and by the LBB. 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 meet the requirements under §2001.0225(a). 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. In other words, the proposed rules are intended to meet federal and state law, and do not go above and beyond what is required to meet federal or state statutes.

The commission has consistently applied this construction to its rules since this statute was enacted in 1997. Since that time, the legislature has revised the Texas Government Code but left this provision substantially unamended. It is presumed that “when an agency interpretation is in effect at the time the legislature amends the laws without making substantial change in the statute, the legislature is deemed to have accepted the agency’s interpretation.” *Central Power & Light Co. v. Sharp*, 919 S.W.2d 485, 489 (Tex. App. – Austin 1995), writ denied with per curiam opinion respecting another issue, 960 S.W.2d 617 (Tex. 1997); *Bullock v. Marathon Oil Co.*, 798 S.W.2d 353, 357 (Tex. App. – Austin 1990, no writ). Cf. *Humble Oil & Refining Co. v. Calvert*, 414 S.W.2d 172 (Tex. 1967); *Sharp v. House of Lloyd, Inc.*, 815 S.W.2d 245 (Tex. 1991); *Southwestern Life Ins. Co. v. Montemayor*, 24 S.W.3d 581 (Tex. App. - Austin 2000, pet. denied); and *Coastal Indust. Water Auth. v. Trinity Portland Cement Div.*, 563 S.W.2d 916 (Tex. 1978).

The commission's interpretation of the RIA requirements is also supported by a change made to the APA by the legislature in 1999. In an attempt to limit the number of rule challenges based upon APA requirements, the legislature clarified that state agencies are required to meet these sections of the APA against the standard of "substantial compliance." Texas Government Code,

**§2001.035. The legislature specifically identified §2001.0225 as falling under this standard. The commission substantially complied with the requirements of §2001.0225.**

**Therefore in addition to not exceeding an express standard set by federal law, these rules does not exceed state requirements, and are not adopted solely under the general powers of the agency because the provisions of the TCAA, §§382.011, 382.012, 382.017, 382.019, 382.037(g), and 382.039 authorize the commission to implement a plan for the control of the states air quality, including measures necessary to meet federal requirements. The remaining applicability criteria, pertaining to exceeding a delegation agreement or contract between the state and the federal government does not apply. Thus, the commission is not required to conduct a regulatory analysis as provided in Texas Government Code, §2001.0225.**

ExxonMobil and Union Pacific commented that the proposed rules were proposed without adequate notice as required by Texas Government Code, §2002.024. The commenters stated that Texas Government Code, §2001.024, requires adequate notice of a proposed rule, including information about its public benefits and costs. The commenters stated that adequate notice is essential for fairness as well as a meaningful opportunity to comment on a proposed rule, and that courts have considered notice "adequate" only if: interested persons can confront the agency's factual suppositions and policy preconceptions; and the agency provides interested parties the opportunity to challenge the underlying factual data relied upon by the agency. The commenters asserted that the proposal included insufficient information and analysis regarding costs and impacts. The commenters asserted that in proposing the

rules, the commission failed to provide interested parties with sufficient information to constitute adequate notice.

The commenters stated that it has identified a number of critical gaps in the underlying factual data, methodology, and analysis in support of the proposed rules. The commenters asserted that the commission has not adequately responded to requests for additional information from stakeholders. The commenters stated that the following requests for information were outstanding: information regarding the modeling of emissions; information regarding the corrected emissions inventory database; and information supporting the estimated costs of control. The commenters stated that this information is necessary in order to comment effectively on the proposed rules and that data gaps in the proposal hindered effective comment.

**The commission disagrees with the commenters and made no change in response to these comments. Texas Government Code, §2001.024 requires of the notice of a proposed rule include certain information. Subsection (a)(5) requires that the notice state the public benefits expected as a result of the adoption of the proposed rule and the probable economic cost to persons required to comply with the rule. Adequate notice is essential for fairness as well as a meaningful opportunity to comment on a proposed rule. *United Loans, Inc. v. Pettijohn*, 955 S.W.2d 649, 651 (Tex. App - Austin 1997). To achieve the goal of encouraging meaningful public participation in the formulation and adoption of rules by state agencies, the notice must have sufficient information so that interested persons can determine whether it is necessary for them to participate in order to protect their legal rights and privileges. The proposed rules contained an**

**analysis of information available to the commission regarding the costs and benefits of the proposed rules. The commission received intelligent comments which were substantial in both number and in scope, regarding the costs as well as the benefits. Therefore, the commission believes this goal has been achieved and that the notice includes sufficient information to constitute adequate notice.**

**The purpose of the comment period is for the public to provide the commission with information to say why they agree or disagree. There is no requirement that the commission determine the probable economic cost of the unique aspects of every facility or source that must comply, nor give the probable economic cost of every possible method of control. Rather, the notice must include the cost of a reasonable method of compliance. Mere disagreement with cost estimates does not render notice inadequate.**

**The proposed rules meet the requirement to include sufficient information explaining the fuel concentration requirements, to whom they apply, the compliance schedule, the anticipated cost of compliance, and the anticipated reduction in emissions. To simply state that the proposal failed to provide sufficient information does not provide the commission with sufficient information to propose changes or alternative strategies. The commenters did not say how the notice is insufficient, merely that it is insufficient. Nevertheless, the commission reviewed the notice, determined it to be adequate, and responded to comments regarding costs associated with compliance with these rules elsewhere in this ANALYSIS OF TESTIMONY.**

**Similarly, the comments which state there are critical gaps did not identify what those gaps are or how that results in inadequate notice. The commission is unaware of any requests for additional information to which it was not completely responsive.**

BCCA, ExxonMobil, Lyondell-CITGO, Phillips 66, REI, and Union Pacific commented that the commission proposed these rules without an adequate TIA as required by Texas Government Code, §2007 and that, although the commission asserted an exemption from performing a TIA based on the assertion that the proposal does not impose a greater burden than necessary to advance a health and safety propose and that the proposal “reasonably” fulfills federal mandates, the commission failed to provide the public a basis to infer that a cost/benefit analysis or a reasonableness determination was, in fact, performed as necessary to support the commission’s exemption claim. The commenters stated that the TIA provision mandates that covered agencies "take a 'hard look' at the private real property implications of the actions they undertake . . . ," according to the Office of the Attorney General, *Private Real Property Rights Preservation Act Guidelines*, (21 TexReg 387, January 12, 1996). The commenters stated that under §2007.043, a TIA must describe the specific purpose of the proposed action, determine whether engaging in the proposed governmental action will constitute a taking, and describe reasonable alternative actions that could accomplish the specified purpose. The commenters stated that the agency must also explain whether these alternative actions also would constitute takings.

The commenters stated that agencies must also comply with guidelines developed by the Texas Attorney General when developing the TIA and that according to these guidelines, agencies must carefully review governmental actions that have a significant impact on the owner's economic interest. The

commenters stated that these guidelines include the statement: "Although a reduction in property value alone may not be a 'taking,' a severe reduction in property value often indicates a reduction or elimination of reasonably profitable uses." (21 TexReg 392, January 12, 1996).

The commenters stated that the proposed rule preamble acknowledged that some of the rules may "burden" private real property, including these rules, but claimed an exemption from performing a TIA based on the assertion that the proposal does not impose a greater burden than necessary to advance a health and safety purpose and that the proposal "reasonably" fulfills a federal mandate. The commenters stated that the commission provided the public no basis to infer that a cost/benefit analysis or a reasonableness determination was, in fact, performed as necessary to support the TIA exemption claim because the preamble contains only the bare assertions. The commenters asserted that the proposed rules will impose a greater burden than is necessary, and are not reasonably taken to fulfill a federal mandate. The commenters believed that according to the Attorney General's Guidelines, a full TIA was required to be completed with the proposal, and that failure to perform a TIA could invalidate the rules.

**As stated previously in the preamble, the purpose of the adopted rules is to ensure that LED is in place for all areas of the state in order to conform with the air quality standards established under federal law as NAAQS for ozone. The commission noted in the proposal that the rules may require the installation of control systems at refineries in some cases. The acknowledgment that the rules may require a capital investment or the installation of controls, is simply that, an acknowledgment. The commission understands that the rules may have an impact on real**

property and in noting this, sought comments on any potential impact to ensure that the adopted rules are technically and economically feasible. The commission believes that this acknowledgment has caused the commenters to misunderstand the commission's interpretation of the requirements of Texas Government Code, Chapter 2007. The commission does not believe that the assessment required by Chapter 2007 begins with a determination of whether or not the proposed rules could result in a capital investment. Rather, the commission believes that before an assessment is required, the commission must determine whether Chapter 2007 applies to the government action. If the proposed action is subject to an exception to Chapter 2007, the analysis is complete. Section 2007.003(b) provides that "this chapter does not apply to the following governmental actions. . . ." Because the commission believes the adopted rules meet the two exceptions to Chapter 2007, the full TIA is not required for the rules.

The commission believes the adopted rules are exempt under Texas Government Code, §2007.003(b)(4) because they are reasonably taken to fulfill an obligation mandated by federal law. While several governmental actions are subject to being reviewed under Chapter 2007, including the adoption of rules, §2007.003(b)(4) specifically excludes an action that is reasonably taken to fulfill an obligation mandated by federal law. The purpose of this rulemaking is to meet the air quality standards established under federal law as NAAQS.

The commission also believes that the adopted rules meet an additional exception to the requirements of Texas Government Code, Chapter 2007. First, Texas Government Code, §2007.003(b)(13), states that Chapter 2007 does not apply to an action that: 1) is taken in

**response to a real and substantial threat to public health and safety; 2) is designed to significantly advance the health and safety purpose; and 3) does not impose a greater burden than is necessary to achieve the health and safety purpose. 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 significantly advance the health and safety purpose. This action is taken in response to the HGA area exceeding the federal ambient air quality standard for ground-level ozone, which adversely affects public health, primarily through irritation of the lungs. The action significantly advances the health and safety purpose by reducing ambient VOC and ozone levels in HGA. Consequently, these rules meet the exemption in §2007.003(b)(13).**

**The commission has included elsewhere in this preamble its reasoned justification for adopting this strategy and has explained why it is a necessary component of the SIP which is federally mandated. This discussion, as well as the HGA SIP which is being adopted concurrently, explains in detail that every rule in the HGA SIP package is necessary and that none of the reductions in those packages represent more than is necessary to bring the area into attainment with the NAAQS. This rulemaking therefore meets the requirements of Texas Government Code, §2007.003(b)(4) and (13). For these reasons the rules do not constitute a takings under Chapter 2007 and do not require additional analysis.**

BCCA, ExxonMobil, Lyondell-CITGO, Phillips 66, REI, and Union Pacific commented that the commission proposed these rules without an adequate small and micro-business assessment as required by Texas Government Code, §2006.002 and that it is not sufficient for the commission to merely state

that the costs for small and large businesses will be the same or that the costs to small businesses cannot be determined, but that the commission is required to provide a cost comparison using an established standard to determine whether there is a disparate impact on small business. BCCA and REI further added that the commission did not publish the information mandated by Texas law and as a result, it is impossible for the public to comment on whether the commission adequately considered the effect of the proposed rules on small businesses.

**The agency has estimated, to the extent possible, the costs to small businesses and has determined that the cost depends more upon the amount of diesel fuel consumed by the business and that it is not dependent upon the number of employees, hours of labor, or amount of sales income. Some small businesses use large amounts of diesel fuel while others use none. Large businesses vary in the same way. The commission provided the estimated cost per gallon of fuel and argues that this is the only meaningful way to provide sufficient notice of the cost to small business and therefore that it meets the objective of the Texas Government Code, Chapter 2006. This assertion is supported by the fact that no small businesses provided comments which include cost of compliance in terms of the number of employees, hours of labor, or amount of sales income.**

BCCA, ExxonMobil, Lyondell-CITGO, Phillips 66, REI, and Union Pacific commented that the commission proposed these rules without a Local Employment Impact Statement as required by Texas Government Code, §2001.022 and that the commission failed to make the required initial determination, apparently ignoring that there is a great potential for the proposed rules to adversely affect the local economy.

**The commission agrees with the commenters that the proposed rules may affect a local economy, however, does not agree that it is the responsibility of the commission to provide the local employment impact analysis. The APA requires state agencies to determine whether a rule may affect a local economy before proposing a rule for adoption. If the agency determines that a proposed rule may affect a local economy, the agency must send a copy of the proposed rule and other information to the Texas Workforce Commission (Workforce Commission) before the agency files notice of the proposed rule with the secretary of state. The APA requires the Workforce Commission to prepare a local employment impact statement for proposed rules, if a state agency requests the statement. The commission determined that the proposed rules might affect a local economy, and sent the proposed rules and other requested information to the Workforce Commission. The commission received a letter from the Workforce Commission, indicating that the Workforce Commission did not have the ability to determine the potential local employment impacts from the proposed rules.**

BCCA, Koch, Lyondell-CITGO, REI, Phillips 66, and TxOGA commented that the proposed fuel rule is specifically prohibited by the Texas Health and Safety Code, §382.037(g) which prohibits state regulation of fuel content to a level more stringent than required by federal law unless a determination is made that a more stringent fuel-content rule is necessary to meet the ozone NAAQS. Phillips 66 and TxOGA further added that this prohibition would especially apply toward the attainment areas proposed to be affected by the proposal. BCCA and REI added that the commission therefore lacks the authority to require fuel controls in attainment areas. ExxonMobil commented that the commission must resolve

several legal issues including the commission exceeding federal requirements without justification and the lack of financial and risk assessments as required by state law.

**Texas Health and Safety Code, §382.037(g) authorizes the commission to regulate fuel content under certain circumstances, including the situation where the regulation is necessary for the attainment of the federal ozone ambient air quality standards. In its request for a federal waiver from the EPA, the commission demonstrates that the rules are a necessary component of the SIP and that there are no other reasonable or practicable alternatives available. This demonstration applies statewide and also satisfies the condition of §382.037(g) that the rules are necessary to meet the NAAQS.**

ExxonMobil commented that the commission has not provided valid and adequate scientific and technical analysis or justification, nor legal justification for the proposed 2004 implementation schedule, which exceeds federal requirements.

**The commission revised the rule to delete the proposed requirements which would have required 30 ppm sulfur by May 1, 2004 in order to provide greater flexibility for producers to comply with these rules and to be consistent with anticipated federal rulemaking and implementation schedules.**

Phillips 66 and TxOGA commented that the proposed rules violate FCCA, §211(c) which is a federal preemption of state regulation of fuel content to more stringent level than as regulated by the EPA

unless a waiver has been applied for and approved in the SIP. Phillips 66 and TxOGA further added that the commission simply made conclusory statements about the need to control NO<sub>x</sub> emissions on a regional basis and described how the commission's model determined the amount of NO<sub>x</sub> reductions attributable to the proposed rules instead of evaluating all reasonable and feasible alternatives to the fuel-content rules. ExxonMobil commented that implementing the proposed rules statewide or regionally, solely to benefit the HGA nonattainment area counties, raises a number of federal preemption issues since there is no demonstration that these fuels are necessary to maintain air quality in attainment areas, especially when forthcoming federal fuel programs will be implemented throughout Texas and nationwide. Koch and UDS commented that the state may be preempted under the FCAA from adopting more stringent sulfur limits than the federal standards, especially in attainment counties.

**The commission is approving simultaneously with these rules a SIP submittal which includes a FCAA, 211(c)(4)(C) waiver request and demonstration. This submittal includes all required components including a justification for the area of coverage. The commission is confident that the submittal meets the requirements for such a waiver and that the waiver will be approved by the EPA.**

Baker Botts, BCCA, Dynegy, Dow, ExxonMobil, and Union Pacific commented that since EPA-regulated sources account for about 40% of the NO<sub>x</sub> emissions in the affected areas, and that these sources are federally preempted and only the EPA, not the state, can effectively regulate them, the commission should incorporate an appropriate level of "federal assignments" into the proposal to restore it balance and to address the proposal's undue reliance on state-regulated sources. The

commenters stated that the EPA issued a number of regulations for some federally preempted sources, such as land-based spark engines, marine, recreational and land-based diesel engines, aircraft and locomotive engines, well after the FCAA deadlines, and that the EPA recently strengthened rules for on-road and non-road vehicles and fuels, such as low sulfur gas and diesel, Tier II motor vehicles, heavy-duty highway vehicle standards, and non-road Tier II/Tier III heavy-duty engine standards. The commenters stated that delays in implementing these rules have prompted the commission to propose technically and economically infeasible emission reductions from sources in HGA that the state has authority to regulate to make up for the missing federal reductions. The commenters stated that these delays have forced the commission to propose expensive regional fuels and significant use restriction regulations. The commenters stated that the commission and the EPA can ensure an equitable distribution of the compliance burdens necessary to meet mandated air quality improvement in HGA only by allowing the SIP to capture anticipated emission reductions from federally preempted sources. Baker Botts noted that the EPA demonstrated a willingness to assume responsibility for a portion of emission reductions by creating a process in Los Angeles called a “public consultative process,” that would resolve issues related to emissions from national and international sources, and that the EPA has also provided flexibility in obtaining offsets by allowing states to provide offsets to refiners based on emission reductions that the EPA projected would result from mobile sources using Tier II gasoline. Baker Botts suggested that this same sort of prospective crediting should be used to develop a more rational HGA SIP, and that the EPA should allow the commission to credit in the SIP the prospective emission reductions that will result from implementation of the Tier II gasoline rule and from other federally preempted sources. Finally, Baker Botts cited two cases wherein the District of Columbia Circuit has approved the EPA flexibility with respect to statutory deadlines under the FCAA when the

EPA has failed to meet its own deadlines, and this failure was deemed to upset the balanced federal/state responsibilities under the FCAA. ExxonMobil commented that it supports the commission and the EPA crediting the HGA SIP with an additional 60 tpd of federally preempted emission reductions that will occur over the next ten years. Harris County commented that the commission should work with the EPA to accelerate the implementation schedule for federally preempted emissions so that at least one-half of the related emission reductions are achieved by 2007, and that as a part of this process, the commission should delineate federal assignments detailing the engine standards and emission reductions necessary to achieve real and sustainable pollution reductions.

**The commission agrees with the commenters that emission reductions from federally preempted sources would provide benefits for the HGA SIP demonstration, and the inability of the commission to regulate certain source categories has necessitated the use of other ozone control strategies. However, the commission understands that the EPA SIP approval process does not provide a mechanism for credit for emission reductions that occur after the attainment date. The commission understands that the EPA is not currently considering accelerating implementation schedules for existing federal rules. The commission is working with the EPA to determine the availability of SIP credit for many non-traditional control strategy mechanisms, like economic incentive programs and flexibility for preempted source categories. Additionally, the commission is working with the EPA to determine an appropriate federal contribution credit available for the HGA SIP.**

Lyondell-CITGO, Phillips 66, and TxOGA commented that the proposed rules are being promulgated under improper rulemaking procedures due to the lack of a reasoned justification for the rules as required by Texas Government Code, §2001.033(a) and that the commission has not provided a reasonable justification for the application of the proposed rule in attainment areas. Phillips 66 and TxOGA further added that the FCAA evidences a clear congressional purpose to have nonattainment areas bear the economic burdens and sanctions of not being in compliance with NAAQS and that the commission is superceding this principle by seeking a regional solution to local nonattainment conditions. TMTA and Koch commented that the commission does not have the authority to require cleaner diesel fuel beyond the nonattainment area and requested that the commission identify the regulatory authority under which it is requiring cleaner diesel fuel in attainment counties.

**The commission adopts these rules pursuant to authority TCAA, §§382.011, 382.012, 382.017, 382.019, 382.037(g), and 382.039. The underlying reason for adopting the rules is that they are necessary to achieve and to maintain attainment in the State of Texas especially in the nonattainment areas and the near nonattainment areas. The authority cited is not limited to nonattainment areas. As noted in the rule preamble, the commission expanded the rules to cover the entire state as a means to help alleviate concerns regarding out-of-area refueling practices in relation to the nonattainment counties and to reduce the regional transport of ozone precursors. Federal and state studies have shown that pollution from one area can affect ozone levels in another area. This work is supported by the findings of the OTAG study, which is the most comprehensive attempt ever undertaken to understand and quantify the transport of ozone. Both the commission and the OTAG study results point to the need to take a regional approach to**

control air pollutants, such as that prescribed in the rules. The state-wide implementation of LED fuel will help reduce the amount of NO<sub>x</sub> being transported into the HGA, BPA, and DFW ozone nonattainment areas and other areas of the state having concerns over air quality. The state-wide coverage will also provide a greater market for diesel fuel producers and importers to provide the fuel required by these regulations. The commission and local area evaluated over 250 possible strategies while developing the attainment demonstration. These were identified in Appendix L of the SIP submittal. Modeling assessing the benefits of these rules demonstrated that by the year 2007, the use of LED will reduce NO<sub>x</sub> emissions in the HGA ozone nonattainment area by 6.48 tpd, and statewide by 30 tpd.

The commission has demonstrated in the SIP that these rules are necessary to achieve the NAAQS. The commission disagrees with the comment that these rules circumvent the intent of Congress to limit the burden of non-compliance with the NAAQS to those areas specifically designated nonattainment. If Congress had intended SIP strategies to be implemented only in nonattainment areas it could have specified so in the FCAA. And if Congress intended a fuel waiver request only to be granted for implementation in nonattainment area it could have specified so in FCAA, §211(c)(4)(C). However, Congress used the broad language allowing waivers of federal preemption if the fuel strategy “is necessary to achieve the national primary or secondary ambient air quality standard which the plan implements.” Congress did provide additional limitation to this waiver, although they do not limit the waiver as far as the commenters suggest. The additional limitation has to do with whether there are other reasonable and practicable measures which can be used instead. The commission has fulfilled all of the

**limitations which Congress placed on the waiver of federal preemption for fuel strategies and has demonstrated this in its SIP submittal. Therefore, the commission disagrees that this strategy circumvents the intent of Congress.**

CBC, KIMI, Suderman, TWOA, and WTC commented that the commission lacks authority to regulate tug/towboat sources under the Commerce Clause of the United States Constitution and federal preemption of marine vessels as non-road mobile sources. TWOA further added that the commission lack authority under Texas Health and Safety Code, §382.019(a) to regulate marine vessels and engines since this regulation is specific to engines used to propel land vehicles.

**The commission disagrees that the rules are preempted as regulations of non-road mobile sources. The commission points out that the regulated entities under these rules are the suppliers of diesel fuel, not the users. These rules do not require anything of tug/towboat sources. The commenter's interpretation of §209(e) would contradict the clear authority under §211(c)(4)(C) for states to adopt fuel regulations under certain circumstances. Therefore, these rules are not preempted as non-road engine standards.**

**The rules do not violate the Interstate Commerce Clause for a number of reasons. The rules do not impose different burdens on out-of-state entities, they do not impose any requirement on the equipment operator, either directly or indirectly, and they do not actually regulate what fuel may be used, only what fuel is available for sale. These rules will not require marine vessels to have different equipment to operate in Texas. The rules do not regulate the design, construction,**

alteration, repair, maintenance, operation, equipping, personnel qualification, and manning of marine vessels. The rules promulgated by the commission are specifically designed to attain a federal standard which applies equally in all states. Texas must comply with these limits like all states, and in so doing must choose which sources to regulate. The commission's actions do not place burdens on interstate commerce, they simply regulate local activities within the H/GA area, and thus do not violate the Commerce Clause of the United States Constitution.

Although the commission disagrees that there is any burden placed on interstate commerce by these rules and the corresponding SIP, any burdens that might be found are merely incidental and thus the regulations are allowable exercises of the state's police powers to promote health and safety. The United States Supreme Court has consistently held that the Commerce Clause is not an absolute bar to state regulation. "The limitation imposed by the Commerce Clause on state regulatory power is by no means absolute, and the states retain authority under their general police powers to regulate matters of legitimate local concern, even though interstate commerce may be affected." *Maine v. Taylor*, 477 U.S. 131, 138 (1986) citing *Lewis v. BT Investment Managers, Inc.*, 447 U.S. 27, 36 (1980). The Court has also consistently ruled that states may impose incidental burdens on interstate commerce, so long as the burdens are not "clearly excessive in relation to the putative local benefits." *Pike v. Church*, 397 U.S. 137 (1970). It has also been held that "the protection of the environment and conservation of natural resources . . . are areas of legitimate local concern" justifying incidental burdens on interstate commerce. *New York State Trawler's Assoc. v. Jorling*, 16 F.3d 1303, 1308 (2d Cir. 1994). The instant regulations and SIP will promote attainment of the ozone NAAQS in the HGA area, benefitting the health of

**hundreds of thousands of residents of that airshed. The minimal burdens, if any, imposed on interstate commerce clearly pale in comparison to these real gains in air quality.**

**Finally, Texas Health and Safety Code, §382.019 specifically authorizes rules to reduce emissions from engines used to propel land vehicles. Engines which use fuel subject to these rules are used, at least in part, to propel the equipment. The statute doesn't limit the commission's authority to control emissions from engines which are used solely or primarily to propel engines. Therefore the commission asserts that §382.019 does provide authority for the adoption of these rules.**

**Additionally, the presence of this authorization does not imply a lack of authority to control emissions from other types of vehicles or equipment. For these reasons, the commission disagrees that this rulemaking exceeds its statutory authority.**

KIMI, Suderman, and WTC commented that the commission proposed regulations that adversely affect their equipment while at the same time poses a direct threat to the safety of its operations and that the commissions should specifically exempt tug and tow boats from all proposed regulations because the proposed rules impose standards that unreasonably interfere with interstate commerce and impose an uniquely local standard in violation of the federal government's intent to regulate the maritime industry and under the Commerce Clause and require tug and tow boats to use unproven technology and fuel which could create a significant risk of substantial marine casualty and a threat of adverse impact to the environment and health and safety of the crew and surrounding population.

**The control strategies being implemented by the commission in the HGA nonattainment area are necessary to the area's federal requirement to demonstrate attainment by 2007 and all possible reductions are needed. The commission believes that tug/tow boats are a contributing emission source in the HGA area and that it would not be appropriate to exclude them from these rules. As previously mentioned, the commission does not have any evidence to support the assertion that the LED fuel will adversely affect the commenters' equipment.**

**These rules do not directly apply to the user of the fuel but to the supplier. The rules simply regulate which fuel is available to those who purchase it in the state. Marine vessels which travel interstate are free to obtain fuel outside the state. For the reasons mentioned in a previous response, these rules do not violate the Interstate Commerce Clause. Additionally, these rules are not a regulation of the maritime industry.**

ARTBA commented that the state is preempted under FCAA, §209(e) from adopting or attempting to enforce any standard or other requirement relating to the control of emissions from new farm or construction vehicles or engines under 176 hp or locomotives and as such the proposed fuel rules are not legally defensible.

**The commission disagrees with the commenter's interpretation of FCAA, §209(e). This statutory provision is aimed at preventing manufacturing standards for new engines. See *Engine Manufacturers Association v. EPA*, 88 F.3d 1075, 1079 (D.C. Cir. 1996). Under the court's interpretation, only standards which apply to the non-road vehicles or engines are preempted by**

**§209(e). States retain authority to promulgate in-use restrictions. Under this rule, no manufacturer will have to create a special vehicle for Texas which is what Congress intended to prohibit. The commenter's interpretation of §209(e) would contradict the clear authority under §211(c)(4)(C) for states to adopt fuel regulations under certain circumstances.**

DoD commented that military equipment and fuel used to power the equipment should be exempted from these proposed rules under FCAA, §203(b)(1) and under the definition of motor vehicles specified in 40 CFR §85.1703 and under the exemption allowed in §85.1708 to exempt tactical wheeled vehicles from meeting the new 2007 emission standards.

DoD requested that the commission add a new subsection (c) to §114.317 which states as follows:

*Equipment, which may otherwise be subject to this chapter, but used by any Department of Defense component, (including but not limited to the Departments of the Army, Navy, Air Force, any Reserve Component or National Guard Entity), and powered by a fuel in accordance with DoD mission requirements and directives shall not be subject to the requirements of this chapter.*

**The commission disagrees with this comment. The commission believes that this exemption is not needed as the definition for diesel fuel as specified in §114.6 precludes the fuel normally used by the DoD in its vehicles and engines, specifically JP-5 and JP-8. The commission made no change to the rule language in response to this comment.**

Union Pacific expressed concern that the definition of “importer” could be read to include a railroad acting in its capacity as a common carrier of freight, i.e. merely hauling tank cars filled with diesel fuel into the HGA area while under hire by a separate entity, and requested that the commission provide a clarification in the rule that does not require common carriers to ensure that the fuel they haul meets the requirements of this rule. TPCA commented that transporters should not be considered “importers” because they have no control over the fuel they transport beyond moving the fuel from one destination to another at the behest of a supplier and that recordkeeping and reporting requirements should only be applied to those entities exercising control over the fuel’s characteristics such as refiners manufacturing fuel for sale inside the state of Texas. TxOGA supported the proposed changes to the definitions of import and importer.

**The commission agrees with this comment and made clarifications to the rule to exempt common carriers and transporters from the registration, reporting, and recordkeeping requirements by adding new definitions for transport and transporter and revising the definition of importer to exclude transporters acting in their capacity as common carriers.**

TPCA recommended that the definition of “importer” be amended to apply to only those persons who import motor vehicle fuel into the affected counties listed in §114.319.

**The rule requires diesel fuel to meet the LED requirement statewide in 2002 and as such the definition of importer must cover all persons who import fuel into the state. The commission made no change to the rule language in response to this comment.**

Koch expressed concern that since the EPA made it clear that they consider ultra-low sulfur diesel fuel (in conjunction with advanced technology after-treatment) to be the only fuel reformulation approach that they consider cost effective or appropriate, the test protocol prescribed in 30 TAC §114.315(c) for alternative diesel formulation approval would be the only viable protocol acceptable by the EPA and therefore there would be no alternative to major refinery and infrastructure modification to comply with the proposed diesel fuel rule.

**As noted in the rule preamble, the rules do allow the use of alternative formulations that provide the same emissions performance as the specified fuel content standards for aromatics and cetane. The commission believes that producers should be able to provide these alternative formulations in sufficient quantities in the near term to alleviate any concerns over the availability of supply for the 2002 implementation date. The alternative formulations may be produced through existing refining practices or through the use of additives as long as the emissions performance is equivalent to the specified fuel standards. As such, if alternative formulations are used, producers should be able to begin supplying diesel fuel compliant to the rules within the specified time frame. In addition, the commission believes that new refining technologies for reducing sulfur, such as the recently introduced Phillips 66 “S Zorb” technology and BP’s OATS process, could significantly reduce production costs and could help alleviate concerns over supply availability. The EPA rulemaking regarding federal sulfur requirements does not imply that there are not areas of the nation that need more stringent controls. The commission submitted a request to the EPA for a waiver under FCAA, §211(c)(4)(C) which demonstrates the need for these rules. The commission believes that the waiver requirements have been met and anticipates**

**that the EPA will approve the waiver. The commission made changes to the rules in response to these comments to include additional flexibility for approval of alternative diesel fuel formulations which are intended only for use in non-road equipment.**

The EPA commented that §114.315(c) was not clear on whether alternative diesel fuel formulations would be approved with sulfur level greater than 30/15 ppm sulfur and if they are, these formulations could cause enforcement problems by contaminating supplies of compliant diesel fuel when mixed in retail storage tanks and therefore the proposed rule should require retailers and distributors to maintain all records relevant to fuel deliveries, including daily stick readings and meter readings to be maintained, and requiring stick readings before and after every fuel delivery to be maintained. The EPA commented that §114.315(c)(4) does not seem to require the applicant to show the effects of using a product that consists of commingled candidate fuel and referenced fuel and that this raises technical concerns about the effectiveness of alternative diesel fuel formulations, if not segregated from 30/15 ppm fuel at all parts of the distribution system.

**The commission agrees that the rule proposal was not clear as to the commission's intent that all alternative diesel fuel formulations approved under §114.315(c) be required to meet the sulfur standards as specified in §114.312(b) and that the alternative formulations were only intended for compliance flexibility with the aromatic and cetane standards as specified in §114.312(c) and (d). The commission made clarifying changes to §114.312(g) to specify that the sulfur standard is not covered under the alternative formulation provisions of §114.315(c), only the aromatic and cetane standards.**

The EPA commented that the proposed rules should require alternative diesel fuel formulations to be segregated from 30/15 ppm diesel in terminal storage tanks, as well as at retail level, in order to make the proposed rules enforceable. The EPA commented that the definitions of import facility and importer do not necessarily facilitate allowing the commission to track fuel from a refinery to a particular import facility without a requirement to designate and segregate every batch of fuel produced by each refinery, especially batches of alternative diesel fuel formulations with sulfur levels exceeding 30/15 ppm sulfur, and that without such a requirement the alternative diesel fuel formulation will be treated by pipelines and terminal as fungible 30/15 ppm product and commingled with LED from other refineries resulting in contamination of the compliance fuel with sulfur levels exceeding the sulfur standard.

**The commission made changes to the rule language based on the previous comment that no longer allows the sulfur level of the alternative formulation to deviate from the specified sulfur standard. Therefore, both alternative formulations and compliance diesel fuel will be required to meet the same sulfur standard and there will be no need to segregate the alternative formulation from other compliance diesel within the distribution system.**

The EPA commented that in 30 TAC §114.315(c) the commission should set upper and lower limits to all relevant specifications when approving alternative diesel fuel formulations, especially for sulfur content.

**The commission disagrees with this comment. The rule allows the use of alternative formulations that provide the same emissions reduction performance as the specified LED fuel as flexibility for producers in complying with the aromatic and cetane standards. Upper and lower limits are not required for alternative formulations since all diesel must continue to meet the minimum requirements for federal diesel fuel in order to be used on-road in Texas. As mentioned previously, the alternative formulation provision has been clarified to specify that it does not cover sulfur content. The commission made no changes in response to this comment.**

The EPA commented that the commission should clarify the definition for bulk plant which seems to include all terminals and asked whether this was intended.

**The commission believes that the definition of bulk plant is clearly understood to include terminals and that it was the commission intent to include these facilities under these regulations. The commission made no change to the rule language in response to this comment.**

The EPA commented that it does not understand the difference between the terms, “producer” and “refiner,” and asked whether it is the intent to make “refiners” a subset of the term, “producer.”

**The commission agrees with this comment in that there seemed to be no difference in the coverage of the terms, “producer” and “refiner,” in the rule proposal. The commission made changes in the rule language to remove the definitions for refiner and refinery and incorporate their meaning**

**into the definitions of producer and production facility and also make clarifying changes through the rules to reflect these revisions.**

The EPA commented that the language in §114.314 is confusing since the person who imports the fuel is not necessarily the same person who stores the fuel in a fixed storage facility and therefore the term, “its facility,” as used in conjunction with the term, “importer,” will frequently not apply.

**The commission disagrees with this comment. The definition of import facility in §114.6 does not specify whether the import facility has to be owned or operated by the importer, only that it is where the importer takes delivery of the imported fuel and from which this fuel is transferred into the distribution system. Therefore, the language in §114.314 will always apply to the importer regardless of whether the importer is the same person that originally stored the fuel at that facility. The commission made no change to the rule language in response to this comment.**

The EPA commented that the commission does not appear to have included a test method for sulfur in §114.315.

**The test method for sulfur is specified in §114.315(a)(1) as adopted by the commission on April 19, 2000. The commission made no changes in the rule language in response to this comment.**

STATUTORY AUTHORITY

The amendment is adopted under 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 amendments are also adopted 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.

## SUBCHAPTER A: DEFINITIONS

### §114.6

#### §114.6. Low Emission Fuel Definitions.

Unless specifically defined in the TCAA or in the rules of the commission, the terms used in this subchapter 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, §3.2 of this title (relating to Definitions), and §101.1 of this title (relating to Definitions), 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) **Additive** - Any substance, other than one composed solely of carbon and/or hydrogen, that is intentionally added to gasoline or diesel fuel, including any added to a motor vehicle fuel system, and that is not intentionally removed prior to sale or use and that is approved by and registered with the EPA in accordance with 40 Code of Federal Regulations 79.

(2) **Barrel** - A unit of measure equal to 42 United States gallons.

(3) **Bulk plant** - An intermediate motor vehicle fuel distribution facility where delivery of motor vehicle fuel to and from the facility is solely by truck or pipeline.

(4) **Bulk purchaser/consumer** - A person who purchases or otherwise obtains motor vehicle fuel in bulk and then dispenses it into the fuel tanks of motor vehicles owned or operated by the person.

(5) **Common carrier** - A person engaged in the transportation of goods or products of another person for compensation and is available to the public for hire.

(6) **Designated alternative limit (DAL)** - An alternative specification limit for a specific fuel standard, which is assigned by a producer or importer to a final blend of low emission diesel fuel (LED) in accordance with §114.313 of this title (relating to Designated Alternative Limits).

(7) **Diesel fuel** - Any fuel that is commonly or commercially known, sold, or represented as diesel fuel Number 1-D or Number 2-D, in accordance with the American Society for Testing and Materials (ASTM) Test Method D975-98b (Standard Specification for Diesel Fuel Oils), dated 1998.

(8) **Final blend** - A distinct quantity of LED which is introduced into commerce without further alteration which would tend to affect a regulated LED specification of the fuel.

(9) **Further process** - To perform any activity on motor vehicle fuel, including distillation, treating with hydrogen, or blending, for the purpose of bringing the motor vehicle fuel into compliance with the requirements of Subchapter H of this chapter.

**(10) Gasoline** - Any fuel that is commonly or commercially known, sold, or represented as gasoline, in accordance with ASTM Test Method D4814-99 (Standard Specification for Automotive Spark-Ignition Engine Fuel), dated 1999.

**(11) Import** - The process by which motor vehicle fuel is transported into the State of Texas by any means or method whatsoever, including transport via pipeline, railway, truck, motor vehicle, barge, boat, or railway tank car.

**(12) Import facility** - The stationary motor vehicle fuel transfer point wherein the importer takes delivery of imported motor vehicle fuel and from which imported motor vehicle fuel is transferred into the cargo tank truck, pipeline, or other delivery vessel from which the fuel will be delivered to a bulk plant or retail fuel dispensing facility.

**(13) Importer** - Any person, except a person acting as a common carrier, who imports motor vehicle fuel.

**(14) Low emission diesel (LED)** - Any diesel fuel:

(A) sold, intended for sale, or made available for sale which may ultimately be used to power a diesel fueled compression-ignition engine in the counties listed in §114.319 of this title;

(B) that the producer knows, or reasonably should know, may ultimately be used to power a diesel fueled compression-ignition engine in counties listed in §114.319 of this title; and

(C) complies with the standards specified in §114.312 of this title (relating to Low Emission Diesel Standards).

**(15) Motor vehicle** - Any self-propelled device powered by a gasoline fueled spark-ignition engine or a diesel fueled compression-ignition engine in or by which a person or property is or may be transported, and is required to be registered under Texas Transportation Code (TTC), §502.002, excluding vehicles registered under TTC, §502.006(c).

**(16) Motor vehicle fuel** - Any gasoline or diesel fuel used to power gasoline fueled spark-ignition or diesel fueled compression-ignition engines.

**(17) Non-road equipment** - Any device powered by a gasoline fueled spark-ignition engine or a diesel fueled compression-ignition engine which is not required to be registered under TTC, §502.002.

**(18) Produce** - Perform the process to convert liquid compounds which are not motor vehicle fuel into motor vehicle fuel, except where a person supplies motor vehicle fuel to a producer who agrees in writing to further process the motor vehicle fuel at the production facility and to be

treated as a producer of the motor vehicle fuel, only the final producer shall be deemed for all purposes under Subchapter H of this chapter to be the producer of the motor vehicle fuel.

**(19) Producer** - Any person who owns, leases, operates, controls, or supervises a production facility and/or produces motor vehicle fuel.

**(20) Production facility** - A facility at which motor vehicle fuel is produced or that manufactures liquid fuels by distilling petroleum.

**(21) Retail fuel dispensing outlet** - Any establishment at which gasoline and/or diesel fuel is sold or offered for sale for use in motor vehicles, and the fuel is directly dispensed into the fuel tanks of the motor vehicles using the fuel.

**(22) Supply** - To provide or transfer fuel to a physically separate facility, vehicle, or transportation system.

**SUBCHAPTER H: LOW EMISSION FUELS**

**DIVISION 2: LOW EMISSION DIESEL**

**§§114.312 - 114.317, 114.319**

**STATUTORY AUTHORITY**

The amendments are adopted under 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, Texas Clean Air Act (TCAA), §382.017, which authorizes the commission to adopt rules consistent with the policy and purposes of the TCAA. The amendments are also adopted 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.

**§114.312. Low Emission Diesel Standards.**

(a) No person shall sell, offer for sale, supply, or offer for supply, dispense, transfer, allow the transfer, place, store, or hold any diesel fuel in any stationary tank, reservoir, or other container in the counties listed in §114.319 of this title (relating to Affected Counties and Compliance Dates), which may ultimately be used to power a diesel fueled compression-ignition engine in the affected counties, that does not meet either the low emission diesel (LED) standards of subsections (b) - (d) of this section, or the requirements of subsection (f) or (g) of this section.

(b) Sulfur content.

(1) The maximum sulfur content of LED shall not exceed 500 parts per million (ppm) by weight per gallon in the counties specified in §114.319(a) and (b) of this title.

(2) The maximum sulfur content of LED shall not exceed 15 ppm by weight per gallon in accordance with the counties and compliance date specified in §114.319(c) of this title.

(c) The maximum aromatic hydrocarbon content of LED is 10% by volume per gallon; or the LED has been reported in accordance with all of the requirements of §114.313 of this title (relating to Designated Alternative Limits), where:

(1) the aromatic hydrocarbon content does not exceed the designated alternative limit (DAL); and

(2) the designated alternative limit exceeds 10% by volume, the excess aromatic hydrocarbon content is fully offset in accordance with §114.313 of this title.

(d) The minimum cetane number for LED is 48.

(e) Subsection (a) of this section shall not apply to a sale, offer for sale, or supply of diesel fuel to a producer where the producer further processes the diesel fuel at the producer's production facility prior to any subsequent sale, offer for sale, or supply of the diesel fuel.

(f) Diesel fuel which has been produced to comply with all specifications for a Certified Diesel Fuel Formulation as approved by an executive order by the California Air Resources Board may be used to satisfy the requirements of subsection (a) of this section.

(g) Alternative diesel fuel formulations which the producer has demonstrated to the satisfaction of the executive director and the EPA, through emissions and performance testing methods prescribed in §114.315(c) and (d) of this title (relating to Approved Test Methods), as achieving comparable or better reductions in emissions of oxides of nitrogen, volatile organic compounds, and particulate matter may be used to satisfy the requirements of subsections (c) and (d) of this section. For alternative diesel fuel formulations that incorporate additive systems, the estimated emissions benefits of the alternative

diesel fuel formulation may be determined by comparing the emissions and performance characteristics of the alternative diesel fuel with the additive system versus the emissions and performance characteristics of a diesel fuel without the additive system, as determined by the testing methods prescribed in §114.315(c) and (d) of this title. The commission recognizes that fuel content specifications, additive formulation, and testing technology often include factors that can reasonably be considered proprietary or confidential. Therefore, proprietary or confidential information supplied by the producer for evaluation of an alternative diesel fuel formulation must be identified as such when submitted. Decisions regarding confidentiality will be made subject to the Texas Public Information Act, Texas Government Code, Chapter 552.

**§114.313. Designated Alternate Limits.**

(a) A producer or importer may assign a designated alternative limit (DAL) for aromatic hydrocarbon content to a final blend of low emission diesel fuel (LED) produced or imported by the producer or importer, except for that LED produced in accordance with §114.312(g) of this title (relating to Low Emission Diesel Standards), if the following conditions are met.

(1) In no case shall the aromatic hydrocarbon content of the final blend shown by the sample and test conducted in accordance with §114.315 of this title (relating to Approved Test Methods) exceed the assigned DAL.

(2) The producer or importer shall notify the executive director of the volume (in barrels) and the DAL of the final blend. This notification shall be received by the executive director before the start of physical transfer of the LED from the production or import facility, and in no case less than 12 hours before the producer either completes physical transfer of the final blend.

(3) Within 90 days before or after the start of physical transfer of any final blend of LED to which a producer or importer has assigned a DAL exceeding the limit for aromatic hydrocarbon content specified in §114.312(c) of this title, the producer or importer shall complete physical transfer from the production or import facility of LED in sufficient quantity and with a DAL sufficiently below the standard specified in §114.312(c) of this title to offset the volume of aromatic hydrocarbons in the LED reported in excess of the standard.

(b) No person shall sell, offer for sale, or supply LED, in a final blend to which a producer or importer has assigned a DAL:

(1) exceeding the standard specified in §114.312(c) of this title for aromatic hydrocarbon content, where the total volume of the final blend sold, offered for sale, or supplied exceeds the volume reported to the executive director in accordance with subsection (a)(2) of this section; nor

(2) less than the standard specified in §114.312(c) of this title for aromatic hydrocarbon content, where the total volume of the final blend sold, offered for sale, or supplied is less than the volume reported to the executive director in accordance with subsection (a)(2) of this section.

(c) Whenever the final blend of a producer or importer includes volumes of diesel fuel the producer or importer has produced or imported, and volumes it has not produced or imported, the producer's or importer's DAL shall apply only to the volume of diesel fuel the producer or importer has produced or imported. In such a case, the producer or importer shall report to the executive director in accordance with subsection (a)(2) of this section, both the volume of diesel fuel produced or imported and the total volume of the final blend.

**§114.314. Registration of Diesel Producers and Importers.**

Each producer and importer that sells, offers for sale, supplies, or offers for supply from its production facility or import facility low emission diesel fuel (LED) which may ultimately be used in counties listed in §114.319 of this title (relating to Affected Counties and Compliance Dates) shall register with the executive director by December 1, 2001; or after May 31, 2002, within 30 days after the first date that such person will produce or import LED. Registration shall be on forms prescribed by the executive director and shall include a statement of acceptance of the standards and enforcement provisions of this division; and shall include a statement of consent by the registrant that the executive director shall be permitted to collect samples and access documentation and records. The executive director shall maintain a listing of all registered suppliers.

**§114.315. Approved Test Methods.**

(a) Compliance with the diesel fuel content requirements of §114.312 of this title (relating to Low Emission Diesel Standards) shall be determined by applying the following test methods and procedures, as appropriate.

(1) The sulfur content of low emission diesel (LED) shall be determined by the American Society for Testing and Materials (ASTM) Test Method D2622-98 (Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry), dated 1998.

(2) The aromatic hydrocarbon content of LED shall be determined by ASTM Test Method D5186-99 (Standard Test Method for Determination of Aromatic Content and Polynuclear Aromatic Content of Diesel Fuels and Aviation Turbine Fuels by Supercritical Fluid Chromatography), dated 1999.

(3) The cetane number of LED shall be determined by ASTM Test Method D613-95 (Standard Test Method for Cetane Number of Diesel Fuel Oil), dated 1995.

(4) The polycyclic aromatic hydrocarbon content of LED shall be determined by ASTM Test Method D2425-99 (Standard Test Method for Hydrocarbon Types in Middle Distillates by Mass Spectrometry), dated 1999.

(5) The nitrogen content of LED shall be determined by ASTM Test Method D4629-96 (Standard Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons by Syringe/Inlet Oxidative Combustion and Chemiluminescence Detection), dated 1996.

(6) The American Petroleum Institute (API) gravity index of LED shall be determined by ASTM Test Method D287-92 (Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)), dated 1995.

(7) The viscosity of LED shall be determined by ASTM Test Method D445-97 (Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (the Calculation of Dynamic Viscosity)), dated 1997.

(8) The flashpoint of LED shall be determined by ASTM Test Method D93-99c (Standard Test Methods for Flash-Point by Pensky-Martens Closed Cup Tester), dated 1999.

(9) The distillation temperatures of LED shall be determined by ASTM Test Method D86-00 (Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure), dated 2000.

(b) Alternatives to the test methods prescribed in subsection (a) of this section may be used if validated by Title 40 Code of Federal Regulations (CFR), Part 63, Appendix A (related to Test Methods), Method 301 (related to Field Validation of Pollutant Measurement Methods from Various

Waste Media), dated December 29, 1992. For the purposes of this subsection, substitute "executive director" in each location that Test Method 301 references "administrator."

(c) The executive director, upon application of any producer or importer, may approve alternative diesel fuel formulations as prescribed under §114.312(g) of this title in accordance with the following procedures.

(1) The applicant shall initially submit a proposed test protocol to the executive director, which shall include:

(A) the identity of the entity which will conduct the tests described in paragraph (4) of this subsection;

(B) test procedures consistent with the requirements of paragraphs (2) and (4) of this subsection;

(C) test data showing that the candidate fuel meets the specifications for Number 1-D or 2-D diesel fuel as specified in ASTM D975-98b (Standard Specification for Diesel Fuel Oils), dated 1998, and identifying the characteristics of the candidate fuel identified in paragraph (2) of this subsection;

(D) test data showing that the fuel to be used as the reference fuel satisfies the specifications identified in paragraph (3) of this subsection;

(E) reasonable quality assurance and quality control procedures; and

(F) notification of any outlier identification and exclusion procedure that will be used, and a demonstration that any such procedure meets generally accepted statistical principles.

The tests shall not be conducted until the protocol is approved by the executive director. Upon completion of the tests, the applicant may submit an application for certification to the executive director. The application shall include the approved test protocol, all of the test data, a copy of the complete test log prepared in accordance with paragraph (4)(D) of this subsection, a demonstration that the candidate fuel meets the requirements for certification specified in this subsection, and other information as the executive director may reasonably require. Upon review of the certification application, the executive director shall grant or deny the application. Any denial shall be accompanied by a written statement of the reasons for denial.

(2) The applicant shall supply the candidate fuel to be used in the comparative testing in accordance with paragraph (4) of this subsection.

(A) The sulfur content, total aromatic hydrocarbon content, polycyclic aromatic hydrocarbon, nitrogen content, and cetane number of the candidate fuel shall be determined as

the average of three tests conducted in accordance with the referenced test method specified in subsection (a) of this section.

(B) The identity and concentration of each additive in the candidate fuel shall be determined by a test method specified by the applicant and approved by the executive director to adequately determine the presence and concentration of the additive.

(C) The applicant may also specify any other parameters for the candidate fuel, along with the test method for determining the parameters. The applicant shall provide the chemical composition of each additive in the candidate fuel, except that if the chemical composition of an additive is not known to either the applicant or to the manufacturer of the additive (if other), the applicant may provide a full disclosure of the chemical process of manufacture of the additive in lieu of its chemical composition.

(3) The reference fuel used in the comparative testing described in paragraph (4) of this subsection shall be produced from straight-run diesel fuel by a hydrodearomatization process and shall have the following characteristics determined in accordance with the referenced test method specified in subsection (a) of this section:

(A) sulfur content - as specified in §114.312(b) of this title;

(B) total aromatic hydrocarbon content - 10% maximum, volume percent;

(C) polycyclic aromatic hydrocarbon content - 1.4%, maximum weight percent;

(D) nitrogen content - ten parts per million, maximum;

(E) cetane number - 48, minimum;

(F) API gravity index - 33 to 39 degrees;

(G) viscosity at 40 degrees Celsius - 2.0 to 4.1 centistokes;

(H) flash point - 130 degrees Fahrenheit, minimum; and

(I) distillation:

(i) initial boiling point - 340 to 420 degrees Fahrenheit;

(ii) 10% point - 400 to 490 degrees Fahrenheit;

(iii) 50% point - 470 to 560 degrees Fahrenheit;

(iv) 90% point - 550 to 610 degrees Fahrenheit; and

(v) end point - 580 to 660 degrees Fahrenheit.

(4) Exhaust emission tests using the candidate fuel and the reference fuel specified in paragraph (3) of this subsection shall be conducted in accordance with the federal test procedures as specified in Title 40 CFR, Part 86 (Control of Emissions from New and in-Use Highway Vehicles and Engines), Subpart N (Emission Regulations for New Otto-Cycle and Diesel Heavy-Duty Engines - Gaseous and Particulate Exhaust Test Procedures), dated 1998.

(A) The tests shall be performed using a Detroit Diesel Corporation Series-60 engine or an engine specified by the applicant and approved by the executive director to be equally representative of the post-1990 model year heavy-duty diesel engine fleet.

(B) The comparative testing shall be conducted by a third-party or third-parties that are mutually agreed upon by the executive director and the applicant. The applicant shall be responsible for all costs of the comparative testing.

(C) The applicant shall conduct a minimum of five exhaust emission tests on the engine with each fuel, using either of the following sequences, where "R" is the reference fuel and "C" is the candidate fuel:

(i) RC, RC, RC, RC, RC (and continuing in the same order); or

(ii) RC, CR, RC, CR, RC (and continuing in the same order).

(D) The applicant shall submit a test schedule to the executive director at least one week prior to commencement of the tests. The test schedule shall identify the days on which the tests will be conducted, and shall provide for conducting the test consecutively without substantial interruptions other than those resulting from the normal hours of operations at the test facility. The executive director or his designee shall be permitted to observe any tests. The party conducting the testing shall maintain a test log which identifies all tests conducted, all engine mapping procedures, all physical modifications to or operational tests of the engine, all re-calibrations or other changes to the test instruments, and all interruptions between tests and the reason for each such interruption. The party conducting the tests or the applicant shall notify the executive director by telephone and in writing of any unscheduled interruption resulting in a test delay of 48 hours or more, and of the reason for such delay. Prior to restarting the test, the applicant or person conducting the tests shall provide the executive director with a revised schedule for the remaining tests. All tests conducted in accordance with the test schedule, other than any tests rejected in accordance with an outlier identification and exclusion procedure included in the approved test protocol, shall be included in the comparison of emissions in accordance with paragraph (5) of this subsection.

(E) In each test of a fuel, exhaust emissions of oxides of nitrogen (NO<sub>x</sub>), volatile organic compounds (VOC), and particulate matter (PM) shall be measured.

(5) The average emissions during testing with the candidate fuel shall be compared to the average emissions during testing with the reference fuel specified in paragraph (3) of this subsection, applying one-sided Student's t statistics as set forth in Snedecar and Cochran, *Statistical Methods* (7th edition), page 91, Iowa State University Press, 1980. The executive director shall issue a certification in accordance with this paragraph only if he or she makes all of the following determinations:

(A) the average individual emissions of NO<sub>x</sub>, VOC, and PM, respectively, during testing with the candidate fuel do not exceed the average individual emissions of NO<sub>x</sub>, VOC, and PM, respectively, during testing with the reference fuel; and

(B) use of any additive identified in accordance with paragraph (2)(B) of this subsection in diesel powered engines will not increase emissions of noxious or toxic substances which would not be emitted by such engines operating without the additive.

(6) If the executive director finds that a candidate fuel has been properly tested in accordance with this subsection, and makes the determinations specified in paragraph (5) of this subsection, then the executive director shall issue an approval notification certifying that the alternative diesel fuel formulation represented by the candidate fuel may be used to satisfy the requirements of §114.312(a) of this title. The approval notification shall identify all of the characteristics of the candidate fuel determined in accordance with paragraph (2) of this subsection.

(A) The approval notification shall provide that the approved alternative diesel fuel formulation has the following specifications:

(i) a sulfur content, total aromatic hydrocarbon content, polycyclic aromatic hydrocarbon content, and nitrogen content not exceeding that of the candidate fuel;

(ii) a cetane number not less than that of the candidate fuel; and

(iii) presence of all additives that were contained in the candidate fuel, in a concentration not less than in the candidate fuel.

(B) All such characteristics shall be determined in accordance with the test methods identified in subsection (a) of this section. The approval notification shall assign an identification number to the specific approved alternative diesel fuel formulation.

(d) Notwithstanding subsection (c) of this section, the executive director, upon application of any producer or importer, may approve alternative diesel fuel formulations as prescribed under §114.312(g) of this title which may be used to satisfy the requirements of §114.312(c) and (d) of this title if the formulations are intended only for use in non-road equipment and, through emissions and performance testing with supporting data, the producer or importer has demonstrated to the satisfaction of the executive director and the EPA as achieving comparable or better reductions in emissions of NO<sub>x</sub>, VOC, and PM.

**§114.316. Monitoring, Recordkeeping, and Reporting Requirements.**

(a) Every producer or importer that has elected to sell, offer for sale, supply, or offer for supply low emission diesel fuel (LED) in counties listed in §114.319 of this title (relating to Affected Counties and Compliance Dates) is subject to the requirements of this section. Under these requirements LED which has been produced or imported must conform with the standards for sulfur content, aromatic hydrocarbon content, and minimum cetane number as specified in §114.312 of this title (relating to Low Emission Diesel Standards) or other standards, including the type and concentration of additive as specified in accordance with §114.312(g) of this title. All records relating to LED must contain a statement declaring whether the aromatic hydrocarbon content of the sample conforms to the basic standard, to a designated alternative limit (DAL) in accordance with §114.313 of this title (relating to Designated Alternative Limits), to a limit specified in a Certified Diesel Fuel Formulation as approved by an executive order issued by the California Air Resources Board (CARB), or whether the diesel fuel conforms to an alternative diesel fuel formulation approved under §114.312(g) of this title.

(b) Each producer or importer of a diesel fuel that conforms to §114.312(a) - (f) of this title shall sample and test for the sulfur content, aromatic hydrocarbon content, and minimum cetane number in each final blend of LED which the producer or importer has produced or imported, by collecting and analyzing a representative sample of diesel fuel taken from the final blend, using the methodologies specified in §114.315 of this title (relating to Approved Test Methods). If a producer or importer blends diesel fuel components directly to pipelines, tank ships, railway tank cars, or trucks and trailers,

the loading(s) shall be sampled and tested for the sulfur content, aromatic hydrocarbon content, and minimum cetane number by the producer or importer or authorized contractor. The producer or importer shall maintain, for two years from the date of each sampling, records showing the sample date, identity of blend sampled, container or other vessel sampled, final blend volume, and the sulfur content, aromatic hydrocarbon content, and minimum cetane number. All diesel fuel produced by the producer or imported by the importer and not tested as LED by the producer or importer as required by this section shall be deemed to exceed the standards specified in §114.312 of this title, unless the producer or importer demonstrates that the diesel fuel meets those standards and limits.

(c) Each producer or importer of a diesel fuel that conforms to §114.312(g) of this title shall sample and test for the appropriate components approved by the executive director in each final blend of LED which the producer or importer has produced or imported, by collecting and analyzing a representative sample of diesel fuel taken from the final blend, using the methodologies specified in §114.315 of this title. If a producer or importer blends diesel fuel components directly to pipelines, tank ships, railway tank cars, or trucks and trailers, the loading(s) shall be sampled and tested for the appropriate components approved by the executive director by the producer or importer or authorized contractor. If the approved blend contains an additive system, the producer or importer or authorized contractor shall maintain records showing that sufficient additive was added to maintain the appropriate additive concentration as approved by the executive director. The producer or importer shall maintain, for two years from the date of each sampling, records showing the sample date, identity of blend sampled, container or other vessel sampled, final blend volume, and the appropriate fuel components. All diesel fuel produced by the producer or imported by the importer and not tested as LED by the

producer or importer as required by this section shall be deemed to exceed the standards specified in §114.312 of this title, unless the producer or importer demonstrates that the diesel fuel meets those standards and limits.

(d) A producer or importer shall provide to the executive director any records required to be maintained by the producer or importer in accordance with this section within five days of a written request from the executive director, if the request is received before expiration of the period during which the records are required to be maintained. Whenever a producer or importer fails to provide records regarding a final blend of LED in accordance with the requirements of this section, the final blend of diesel fuel shall be presumed to have been sold by the producer or importer in violation of the standards specified in §114.312 of this title, to which the producer or importer has elected to be subject.

(e) All parties in the distribution chain (producer, importer, terminals, pipelines, truckers, rail carriers, and retail fuel dispensing outlets) subject to the provisions of §114.312 of this title must maintain copies or records of product transfer documents for a minimum of two years and shall upon request, make such copies or records available to representatives of the commission, EPA, or local air pollution agency having jurisdiction in the area. The product transfer documents must contain, at a minimum, the following information:

(1) the date of transfer;

(2) the name and address of the transferor;

(3) the name and address of the transferee;

(4) in the case of transferors or transferees who are producers or importers, the registration number of those persons as assigned by the commission under §114.314 of this title (relating to Registration of Diesel Producers and Importers);

(5) the volume of diesel fuel being transferred;

(6) the location of the diesel fuel at the time of transfer;

(7) the following certification statement: “This product complies with the requirements for low emission diesel fuel specified in Title 30 Texas Administrative Code, §114.312 and may be used in any Texas county requiring the use of low emission diesel fuel in compression-ignition engines.”; and

(8) in the case of diesel fuel that was produced under the requirements of §114.312(f) or (g) of this title, the executive order number as issued by the CARB or the approval notification number as issued by the executive director in accordance with §114.315(c)(6) or (d) of this title.

(f) For each final blend which is sold or supplied by a producer or importer from the party's production facility or import facility, and which contains volumes of diesel fuel that the party has produced and imported and volumes that the party neither produced nor imported, the producer or

importer shall establish, maintain, and retain adequately organized records containing the following information.

(1) The volume of diesel fuel in the final blend that was not produced or imported by the producer or importer, the identity of the persons(s) from whom such diesel fuel was acquired, the date(s) on which it was acquired, and the invoice(s) representing the acquisition(s).

(2) The sulfur content, aromatic hydrocarbon content, and the cetane number of the volume of diesel in the final blend that was not produced or imported by the producer or importer, determined either by:

(A) sampling and testing by the producer or importer of the acquired diesel fuel represented in the final blend; or

(B) written results of sampling and test of the diesel fuel supplied by the person(s) from whom the diesel fuel was acquired.

(3) A producer or importer subject to subsection (f) of this section shall establish such records by the time the final blend triggering the requirements is sold or supplied from the production or import facility, and shall retain such records for two years from such date. During the period of required retention, the producer or importer shall make any of the records available to the executive director upon request.

(g) Each producer or importer electing to sell, offer for sale, supply, or offer to supply LED in accordance with §114.312 of this title shall provide a report on each final blend and a quarterly summation report to the executive director no later than the fifteenth of the month following the end of the calendar quarter. The report on each final blend shall provide, at a minimum, the information required to be collected by subsections (b), (c), and (f) of this section. The quarterly report shall provide, at a minimum, reconciliation of the quarter's transactions relative to the requirements of subsections (b), (c), and (f) of this section. Updates or revisions to estimated transaction volumes required by subsections (b) and (c) of this section shall be included in this report.

(h) Each producer or importer electing to sell, offer for sale, supply, or offer to supply LED under §114.312(f) of this title shall provide to the executive director a copy of the executive order issued by the CARB for the Certified Diesel Fuel Formulation used to produce the LED and shall comply with the requirements of subsections (b) and (f) of this section using the fuel specifications for aromatic hydrocarbon, sulfur, and cetane set by this executive order.

(i) Each producer or importer electing to sell, offer for sale, supply, or offer to supply LED under §114.312(f) of this title shall sample and test for the polycyclic aromatic hydrocarbon content and nitrogen content in each final blend of LED which the producer or importer has produced or imported using the fuel specifications for polycyclic aromatic hydrocarbons and nitrogen set by the executive order issued by the CARB for the Certified Diesel Fuel Formulation used to produce the LED, by collecting and analyzing a representative sample of diesel fuel taken from the final blend using the

methodologies specified in §114.315 of this title and shall include a record of these tests in the report required by subsection (g) of this section.

**§114.317. Exemptions to Low Emission Diesel Requirements.**

(a) Any diesel fuel that is either in a research, development, or test status; or is sold to petroleum, automobile, engine, or component manufacturers for research, development, or test purposes; or any diesel fuel to be used by, or under the control of, petroleum, additive, automobile, engine, or component manufacturers for research, development, or test purposes, is exempted from the provisions of this division (relating to Low Emission Diesel), provided that:

(1) the diesel fuel is kept segregated from non-exempt product, and the person possessing the product maintains documentation identifying the product as research, development, or testing fuel, as applicable, and stating that it is to be used only for research, development, or testing purposes; and

(2) the diesel fuel is not sold, dispensed, or transferred, or offered for sale, dispensing, or transfer from a retail fuel dispensing facility. It shall also not be sold, dispensed, or transferred, or offered for sale, dispensing, or transfer from a wholesale purchaser-consumer facility, unless such facility is associated with fuel, automotive, or engine research, development or testing.

(b) Any diesel fuel that is refined, sold, dispensed, transferred, or offered for sale, dispensing, or transfer as competition racing fuel is exempted from the provisions of this division, provided that:

(1) the fuel is kept segregated from non-exempt fuel, and the party possessing the fuel for the purposes of refining, selling, dispensing, transferring, or offering for sale, dispensing, or transfer as competition racing fuel maintains documentation identifying the product as racing fuel, restricted for non-highway use in competition racing motor vehicles or engines;

(2) each pump stand at a regulated facility, from which the fuel is dispensed, is labeled with the applicable fuel identification and use restrictions described in paragraph (1) of this subsection; and

(3) the fuel is not sold, dispensed, transferred, or offered for sale, dispensing, or transfer for highway use in a motor vehicle.

(c) The owner or operator of a retail fuel dispensing outlet is exempt from all requirements of §114.316 of this title (relating to Monitoring, Recordkeeping, and Reporting Requirements) except §114.316(e) of this title.

(d) Diesel fuel that does not meet the requirements of §114.312 of this title (relating to Low Emission Diesel Standards) is not prohibited from being transferred, placed, stored, and/or held within the affected counties so long as it is not ultimately used:

(1) to power a diesel fueled compression-ignition engine in a motor vehicle in the counties listed in §114.319 of this title, except for that used in conjunction with purposes stated in subsections (a) and (b) of this section; or

(2) to power a diesel fueled compression-ignition engine in non-road equipment in the counties listed in §114.319(b) of this title, except for that used in conjunction with purposes stated in subsections (a) and (b) of this section.

**§114.319. Affected Counties and Compliance Dates.**

(a) Beginning May 1, 2002, affected persons in all counties of Texas shall be in compliance, as applicable, with §§114.312 - 114.317 of this title (relating to Low Emission Diesel Standards; Designated Alternate Limits; Registration of Diesel Producers and Importers; Approved Test Methods; Monitoring, Recordkeeping, and Reporting Requirements; and Exemptions to Low Emission Diesel Requirements) for that diesel fuel which may ultimately be used to power a diesel fueled compression-ignition engine in a motor vehicle.

(b) Beginning May 1, 2002, affected persons in the following counties shall be in compliance with §§114.312 - 114.317 of this title for that diesel fuel which may ultimately be used to power a diesel fueled compression-ignition engine in a motor vehicle or in non-road equipment:

(1) Collin, Dallas, Denton, and Tarrant;

(2) Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller;

(3) Hardin, Jefferson, and Orange; and

(4) Anderson, Angelina, Aransas, Atascosa, Austin, Bastrop, Bee, Bell, Bexar, Bosque, Bowie, Brazos, Burlison, Caldwell, Calhoun, Camp, Cass, Cherokee, Colorado, Comal, Cooke, Coryell, De Witt, Delta, Ellis, Falls, Fannin, Fayette, Franklin, Freestone, Goliad, Gonzales, Grayson, Gregg, Grimes, Guadalupe, Harrison, Hays, Henderson, Hill, Hood, Hopkins, Houston, Hunt, Jackson, Jasper, Johnson, Karnes, Kaufman, Lamar, Lavaca, Lee, Leon, Limestone, Live Oak, Madison, Marion, Matagorda, McLennan, Milam, Morris, Nacogdoches, Navarro, Newton, Nueces, Panola, Parker, Polk, Rains, Red River, Refugio, Robertson, Rockwall, Rusk, Sabine, San Jacinto, San Patricio, San Augustine, Shelby, Smith, Somervell, Titus, Travis, Trinity, Tyler, Upshur, Van Zandt, Victoria, Walker, Washington, Wharton, Williamson, Wilson, Wise, and Wood.

(c) Beginning June 1, 2006, affected persons in the counties listed in subsection (b) of this section shall be in compliance with §114.312(b)(2) of this title for that diesel fuel which may ultimately be used to power a diesel fueled compression-ignition engine in a motor vehicle or in non-road equipment.