The Texas Commission on Environmental Quality (TCEQ or commission) adopts amendments to §§114.6, 114.312, 114.313, and 114.315 - 114.318. Sections 114.6, 114.313, 114.315, 114.316, and 114.318 are adopted *with changes* to the proposed text as published in the December 16, 2005, issue of the *Texas Register* (30 TexReg 8407). Sections 114.312 and 114.317 are adopted *without changes* and will not be republished.

The amended sections as adopted will be submitted to the United States Environmental Protection Agency (EPA) as revisions to the state implementation plan (SIP).

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED RULES

On March 9, 2005, the commission adopted revisions to the low emission diesel fuel (LED) rules (§§114.312 - 114.319) and submitted them as a SIP revision to the EPA on March 23, 2005. Subsequently, EPA raised concerns with certain provisions of §114.315 that give the state unilateral authority to accept alternative methods of compliance. Specifically, EPA stated that subsections (b) and (c)(4)(C)(ii)(V) of §114.315 were problematic in regard to EPA's approval of the rule and SIP revision.

On July 5, 2005, the TCEQ's executive director (ED) wrote to the EPA's Region 6 director, Mayor Greene, requesting EPA exclude certain provisions of §114.315 from its review of the SIP submittal, and stating that the commission would address these provisions in a future rulemaking. On August 10, 2005, the EPA published a notice of proposed rulemaking in the *Federal Register* (70 FR 46448), proposing to approve the revisions, excluding the provisions of §114.315 the ED requested. On

October 6, 2005, the EPA published a final rule in the *Federal Register* (70 FR 58325) that approved the SIP revision submitted by Texas, excluding the provisions of §114.315 the ED requested. The commission is adopting in this rulemaking revisions to the excluded provisions of §114.315(b) so that the ED consults EPA before approving an alternative test method and, accordingly, removes §114.315(c)(4)(C)(ii)(V).

These adopted rules also address issues raised by EPA regarding its consideration of alternative emission reduction plans (AERPs) as allowed under §114.318. Under the previous rule, the AERPs must be approved by both the ED and EPA. The ED has approved 17 AERPs to date. The EPA determined that the commission must submit the AERPs in the form of a SIP revision, requiring public review of each AERP. However, many of the diesel fuel producers consider their AERPs to be confidential business information. Furthermore, the commission would be required to submit a new SIP revision any time a producer amended its AERP. In lieu of a SIP revision, this rulemaking changes §114.318 to establish a method by which all AERPs could be approved by the ED and EPA without a SIP revision. The ED notified all holders of currently approved AERPs of the commission's intention to develop a protocol to facilitate EPA approval of AERPs that may impact the approvability of some strategies in these AERPs; however, the protocol will continue to allow a majority of the strategies in these AERPs, with some modifications. Under this adoption, all currently approved AERPs will expire December 31, 2006. Under the adopted changes to §114.318, producers wishing to use an AERP for compliance with the LED rules must submit an AERP under the new protocol by no later than November 15, 2006, to be approved before December 31, 2006. The commission believes

that a December 31, 2006, expiration date provides an appropriate amount of time for producers to submit an AERP that would be approvable under the new protocol.

On October 14, 2005, the commission held a stakeholder meeting in Austin to solicit feedback on a draft protocol for state and federal approval of AERPs. Comments received as a result of this meeting were considered prior to the commission's proposal to revise the LED rules.

The LED amendments adopted on March 9, 2005, contained changes that included section restructuring, which require revisions to other sections of Subchapter H, Division 2 that were not modified in that rulemaking in order to correct citation references for consistency and accuracy. This adopted rulemaking makes changes to §114.313, Designated Alternative Limits, and §114.317, Exemptions to Low Emission Diesel Requirements, to correct rule references.

The commission is also adopting changes to the testing requirements for alternative diesel fuel formulations in §114.315. These changes clarify test procedures consistent with procedures and guidance approved by the EPA and the California Air Resource Board (CARB) from which the LED rules were initially patterned. The EPA requested the commission make these changes to ensure consistent and accurate emission testing results. The adopted changes also apply to the testing of diesel fuel additive-based formulations.

SECTION BY SECTION DISCUSSION

Administrative changes are adopted throughout the rules to be consistent with *Texas Register* requirements and agency guidelines.

The adopted changes to §114.6 amend the definition of additive to clarify that substances added to gasoline or diesel that are registered with the EPA or added for the purposes of reducing exhaust emissions from motor vehicles or non-road equipment and are exempted from the EPA registration requirements are also considered to be additives under these rules. In addition, the new definition of additive does not reference the exclusion of an additive composed solely of carbon and/or hydrogen because this exclusion is already provided under 40 Code of Federal Regulations (CFR) Part 79 as it relates to fuel additive registration requirements. Also, the other adopted changes in §114.6 amend the definitions of final blend and LED for consistency relating to the acronym for LED and the definition of gasoline for accuracy in citing the reference to the American Society for Testing and Materials (ASTM) standard.

The adopted changes to §114.312(f) remove volatile organic compounds (VOCs) from the comparison requirements that are needed for consistency with the proposed changes to §114.315(c)(5) as described in the paragraph concerning changes to §114.315. Diesel engines emit very little VOCs and therefore, their contribution to total VOC emissions inventories is very small as well. In addition, since test data from alternative diesel fuel formulation approval testing has demonstrated that VOC emissions from the engines being tested on both the reference fuel and candidate fuels are significantly below the EPA's emission certification standards for these test engines, there is no additional benefit in comparing VOC

emissions when determining whether an alternative formulation can achieve oxides of nitrogen (NO_x) emission reductions that are comparable to those attributed to LED in the SIP.

The adopted changes to §114.313 amend references to other sections of Subchapter H, Division 2, as needed for accuracy and consistency. The commission also adopts amendments to §114.313(a)(1) and (2) to change the word "shall" to "must" or "may" to conform to the drafting rules in the *Texas Legislative Council Drafting Manual*, November 2004.

The adopted changes to §114.315(a) specify the correlation equation to be used with ASTM Test Method D5186 (Standard Test Method for Determination of Aromatic Content and Polynuclear Aromatic Content of Diesel Fuels and Aviation Turbine Fuels by Supercritical Fluid Chromatography) to convert the supercritical fluid chromatography (SFC) results in mass percent to volume percent. The adopted changes to §114.315(b) require the ED to consult with and obtain agreement of the EPA before approving an alternative to the test methods listed under §114.315(a) in response to EPA's comments relating to ED approval without EPA review.

The adopted changes to §114.315(c) amend the procedures and testing requirements for alternative diesel fuel formulations to clarify what information is required to be submitted as part of the test protocol; specify that the sulfur content of the candidate fuel must not exceed 15 parts per million (ppm); clarify how many hot start emission test cycles will be required for each hot start only alternative test sequence; and remove the Alternative 5 test sequence in response to EPA's comments relating to ED approval without EPA review. These adopted changes also require that the engine used

for the testing have a minimum of 125 hours of use and exhibit stable operation before beginning the testing and be within 110% of the applicable exhaust emission standards when tested on the reference fuel. This change was needed to be consistent with the testing procedures and guidance approved for EPA's Environmental Technology Verification (ETV) Program. The adopted changes to §114.315(c)(5) require that the NO_x and particulate matter (PM) emissions of the reference and candidate fuels be compared when determining whether an alternative diesel fuel formulation is comparable or better than LED. This change was needed for consistency with the CARB regulations for approving alternative diesel fuel formulations since CARB-approved formulations are acceptable under §114.312(e). In addition, these changes also require that the average individual emissions of total hydrocarbons (THC) and non-methane hydrocarbons (NMHC), respectively, recorded during testing with the candidate fuel not exceed 110% of the test engine's applicable exhaust emission standards in order to prevent unacceptable increases in VOC emissions. The adopted changes to §114.315(c)(6) were needed for consistency with the approval notification provisions in §114.315(d). The adopted changes to §114.315(d) remove THC and NMHC from the comparison requirements for consistency with the adopted changes to §114.315(c)(5). The adopted new §114.315(d)(3) allows the approval of alternative diesel formulations that use the EPA's Unified Model to demonstrate that the applicable fuel properties of the formulation will achieve at least a 5.5% reduction in NO_x emissions from on-road diesel fuel for the year 2007, and at least a 6.2% reduction in NO_x emissions from non-road diesel. The adopted new §114.315(d)(4) allows the approval of alternative diesel formulations that receive a verification from EPA's ETV Program's Air Pollution Control Technologies Center and the EPA's Office of Transportation and Air Quality's Voluntary Diesel Retrofit Program demonstrating at least a 5.78% reduction in NO_x emissions when compared against a base diesel fuel with fuel

properties within the ranges as described for nationwide average fuel in EPA's *Verification Protocol for Determination of Emissions Reductions Obtained by Use of Alternative or Reformulated Liquid Fuels, Fuel Additives, Fuel Emulsions, and Lubricants for Highway and Nonroad Use Diesel Engines and Light Duty Gasoline Engines and Vehicles* (Revision No. 03, September 2003). These additions were needed to specify criteria that may be used to demonstrate to the satisfaction of the ED and the EPA that the formulation will achieve reductions in emissions of NO_x and PM that are comparable to or better than LED.

The commission requested comments on whether additional "no-harm" testing should be required as part of the alternative diesel fuel formulation approval process to provide assurance that approved fuels and fuel additives are not harmful to the mechanical operation of diesel engines and what test protocols and/or test methods should be used if "no-harm" testing is required. The commission appreciates the response to the request for comment on this issue, however, as explained in the PUBLIC COMMENT section of this preamble, the commission does not agree that a no-harm testing requirement is a necessary prerequisite for LED compliance.

The adopted changes to §114.316(b) clarify that only those records relating to sampling require a statement declaring the appropriate aromatic hydrocarbon content standard of the fuel. The adopted changes to §114.316(e) correct the reference citation for the federal code for the new federal on-highway diesel fuel standards. The adopted changes to §114.316(k) require producers who have AERPs approved under §114.318 to include information in their quarterly report that is required to be collected in accordance with the sampling and testing requirements of this subsection and to also

include a reconciliation of the quarter's transactions relative to the requirements of this section for the appropriate fuel components of the diesel fuel that the projected emission reductions demonstrated in the producer's AERP were based upon.

The adopted changes to §114.317 amend references to other sections of this division as needed for accuracy and consistency.

The adopted changes to §114.318 establish a protocol that producers must follow when developing AERPs to ensure that equivalent emission reductions are being achieved. These adopted changes allow producers to submit AERPs using the EPA's Unified Model to demonstrate that the average of all on-road diesel fuel produced in any given calendar year that is sold, offered for sale, supplied, or offered for supply by the producer in the counties affected by these rules achieves at least a 5.5% reduction in NO_x emissions for the year 2007, and at least a 6.2% reduction from the average of all non-road diesel produced by the producer for use in the affected counties, equating to an average reduction of approximately 5.78% for both on-road and non-road diesel combined. Currently, a producer may use the Unified Model under §114.315(d) to demonstrate compliance using a specific fuel formulation. This adopted option allows for the submission of an AERP using a methodology that allows the averaging of different diesel fuel formulations within the same geographic area.

In addition, the adopted changes to §114.318 include procedures to allow AERPs to include diesel credits from early gasoline sulfur reduction that can be used in the 90-county area listed in §114.319(b)(4). The adopted changes to §114.318(b)(2) are significantly different than the proposed

amendment, specifically, the tables containing gasoline-to-diesel offset ratios based on four wide ranges of sulfur reduction percentages have been replaced with methodologies to calculate the amount of noncompliant diesel fuel that may be offset by using the actual percentage of sulfur reduction in the gasoline supplied by the producer to the affected counties to calculate the appropriate gasoline-to-diesel offset ratio. The commission made these changes in response to public comments requesting a higher level of accuracy in the offset calculations than provided in the proposed amendment.

The diesel credits from early gasoline sulfur reductions will be calculated from the actual barrels of lower sulfur gasoline that was produced and supplied to the affected counties by the producer using the level of gasoline sulfur reduction to calculate the appropriate gasoline-to-diesel offset. The adopted methodologies for determining the appropriate offset ratios were developed using the EPA MOBILE6 emissions model to calculate the percentage of emission reduction from varying the sulfur level of gasoline in calendar years 2003, 2004, and 2005, from the MOBILE6 default gasoline sulfur level assumptions for those years, then weighting the reduction percentages by vehicle type between the four classes of gasoline vehicles with catalysts. Since the NO_x emission inventories change each year, the number of lower sulfur gasoline barrels needed to offset noncompliant diesel fuel is calculated by comparing the reduction percentages to the applicable emissions inventory of on- and off-road diesel fueled vehicles and equipment. However, the overall NO_x emissions inventory from on- and off-road diesel engines is always greater than just the on-road NO_x emissions inventory from gasoline engines. Therefore, in working out the appropriate offset ratio, the reductions in NO_x emissions from lower sulfur gasoline is discounted as a reflection of its smaller overall contribution to the inventory. Because gasoline credits would start to be used in calendar year 2007, the 2007 diesel NO_x emissions

inventory is used and remains a constant for these calculations. The weighted average NO_x emissions reduction achieved by using LED in the on-road and non-road fleets in 2007 is 5.78%.

For example, the gasoline NO_x emissions inventory in 2003 for the 90-county area was 229.51 tons per day. A 25% reduction in gasoline sulfur from 259 ppm to 194 ppm achieves a 2.75% reduction in gasoline NO_x emissions. The 2007 on- and off-road diesel NO_x emissions inventory for the same 90-county area is 450.56 tons. To calculate the appropriate 2003 gasoline-to-diesel offset ratio the following methodology is used: determine the 2003 MOBILE6 gasoline emission reduction associated with a 25% reduction in sulfur level using the following equation, i.e., $((0.0000007)(194^2) - (0.0007)(194) + (0.137)) = 0.0275$, and then use these results to determine the appropriate gasoline-to-diesel offset ration using the 2007 diesel inventory multiplied by the weighted average LED reductions in 2007 divided by the 2003 gasoline inventory multiplied by the 2003 MOBILE6 gasoline emission reduction associated with a 25% reduction in sulfur level, i.e., ((450.56)x(0.0578)) / ((229.51)x(0.0275)), which calculates an offset ratio of 4.12. Using this example, a producer that supplied gasoline with a 25% reduction in sulfur to the 90-county area in 2003 would be allowed to offset one barrel of noncompliant diesel fuel being supplied to the 90-county area in the years 2006 - 2010 for each 4.12 barrels of lower sulfur gasoline produced in 2003.

Also, the adopted changes to §114.318 provide an option to calculate diesel credits from early gasoline sulfur reduction in certain counties when used in combination with a “cleaner” diesel fuel, calculated with the Unified Model from the average fuel properties of the diesel fuel supplied by the producer in the 90-county area as part of the equation. If a producer is supplying a cleaner diesel fuel to the 90-

county area, although not as clean as LED, the adopted rule allows the producer to use the emission reduction calculated with the Unified Model to decrease the offset ratio of gasoline. For example, if a producer elects to produce a diesel fuel that achieves a 2.0% NO_x emissions reduction in 2007 according to the Unified Model, the producer would calculate an offset ratio as follows: ((450.56)x(0.0578 - 0.02)) / ((229.51)x(0.0275)), for an offset ratio of 2.69. In this case, only 2.69 barrels of lower sulfur gasoline would be needed to offset each barrel of "cleaner" noncompliant diesel fuel. Under this option, credits from early gasoline sulfur reduction can only be generated from the gasoline supplied by the producer in calendar years 2003, 2004, and 2005, to the counties listed under §114.319(b)(4) and these credits can only be used to demonstrate compliance through December 31, 2010.

The commission requested comments on the feasibility of accepting residual NO_x emission benefits from the supply of early lower sulfur gasoline as a creditable fuel strategy for producers to submit as part of an AERP and how best to calculate the residual NO_x emission benefit using currently available EPA-approvable calculation methodologies. Based on comments received regarding this issue, the commission adopted a new §114.318(b)(4) specifying a methodology to determine the amount of noncompliant diesel that may be offset in the Dallas-Fort Worth (DFW) and Houston-Galveston-Brazoria (HGB) nonattainment area counties with credits from the residual effects of early gasoline sulfur reduction on the NO_x emission reduction efficiencies of catalytic converters installed in gasoline-powered motor vehicles. These credits may only be generated from the volumes of reformulated gasoline (RFG) supplied to the DFW and HGB nonattainment area counties in 2004 and 2005 that had an average sulfur level that was below the sulfur level of 92 ppm in 2004 and 77 ppm in 2005,

identified by EPA as being the base average sulfur levels for RFG during those years in both areas. These credits can only be used in the DFW and HGB nonattainment area counties for compliance through December 31, 2008. The credits generated in either one of these nonattainment areas may not be used for compliance in the other.

In addition, the adopted changes to §114.318(c) specify that all AERPs approved by the ED prior to December 16, 2005, will expire on December 31, 2006, with the exception that the ED may allow a producer operating under a previously approved AERP to continue to operate under that plan for a limited time beyond December 31, 2006, if the following conditions are met: the producer's previously approved AERP relied on the use of an alternative diesel formulation that has not been approved by the ED under §114.315(c); the producer has submitted an application to the EPA's ETV Program to pursue verification of this specific alternative diesel fuel formulation to demonstrate that it will achieve at least a 5.78% reduction in NO_x emissions; the producer has a contract with the EPA's testing center to perform the verification testing that is signed by both parties and paid in full by September 1, 2006; and the emissions testing as specified under a test plan approved by both the testing center and EPA is completed before December 1, 2006.

The adopted new §114.318(e) requires the ED to approve or disapprove newly submitted AERPs within 45 days of submittal.

The adopted new §114.318(f) specifies that AERPs submitted to the ED must contain sufficient documentation to validate the average diesel fuel properties used to calculate the emission reductions

claimed when using EPA's Unified Model and, as appropriate, the sulfur properties and volumes of the gasoline that is being used to generate the diesel credit from early gasoline sulfur reductions. This documentation is necessary for the ED to determine in a timely manner if the submitted AERP is approvable.

The commission also requested comments on whether to allow credits from early gasoline sulfur reduction to be used until December 31, 2010, in the Beaumont-Port Arthur (BPA) ozone nonattainment area containing Hardin, Jefferson, and Orange Counties. Based on comments received from the EPA, the commission will not allow credit from early gasoline sulfur reductions to be used in the BPA nonattainment area counties.

FINAL REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the adopted rulemaking considering the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rulemaking does not meet the definition of a "major environmental rule." A 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 adopted amendments to §§114.6, 114.312, 114.313, and 114.315 - 114.318 provide for EPA consultation and agreement prior to commission approval of alternative test methods; establish a protocol by which AERPs, or revisions to those plans, could be approved by the EPA without the need for individual SIP revisions for each plan; make alternative formulation testing requirements consistent

with EPA guidance and CARB regulations; and make corrections to citations for accuracy and consistency. In addition, the adopted amendments are intended to provide additional clarification and flexibility in the LED air pollution control program as part of the strategy to reduce emissions of NO_x necessary for the counties in the HGB, BPA, and DFW nonattainment areas to be able to demonstrate attainment with the ozone national ambient air quality standard (NAAQS). While this strategy is intended to protect the environment by reducing NO_x emissions that help form ozone, the commission does not find that the diesel fuel producers and importers covered by this rulemaking comprise a sector of the economy, or that the revisions adopted in this rulemaking will adversely affect in a material way the economy, productivity, competition, jobs, the environment, or the public health and safety in the HGB, BPA, and DFW nonattainment areas. This rulemaking will address EPA concerns regarding its input on test methods and review of alternative formulations; create consistency with EPA and CARB guidance and regulations of which the refining industry is familiar; and create a protocol for AERPs that will simplify EPA approval of all AERPs and protect producers' potentially confidential information.

The adopted amendments to Chapter 114 are not subject to the regulatory analysis provisions of Texas Government Code, §2001.0225(b), because the adopted rules do not meet any of the four applicability requirements. Texas Government Code, §2001.0225 only applies to a major environmental rule, the result of which is to: 1) exceed a standard set by federal 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.

Specifically, the LED requirements in Chapter 114 were developed as part of the control strategy to meet the ozone NAAQS set by the EPA under Federal Clean Air Act (FCAA), 42 United States Code (USC), §7409, and therefore meet a federal requirement. The amendments to this chapter were developed in order to provide more clarity and consistency to the LED requirements, provide a smoother process for EPA approval of AERPs and revisions to those plans, and address concerns from the EPA. FCAA, 42 USC, §7410, requires states to adopt and submit a SIP that 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 require specific programs, methods, or reductions in order to meet the standard, 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). While 42 USC, §§7401 *et seq.* does require some specific measures for SIP purposes, like the inspection and maintenance program, the statute also provides flexibility for states to select other necessary or appropriate measures. The federal government, in implementing 42 USC, §§7401 *et seq.*, recognized that the states are in the best position to determine what programs and controls are necessary or appropriate to meet the NAAQS, and provided for the ability of states and the public to collaborate on the best methods for attaining the NAAQS within a particular state. However, this flexibility does not relieve a state from developing and submitting a SIP

that meets the requirements of 42 USC, §7410. Thus, while specific measures are not generally required, the emission reductions are required. 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.

As discussed earlier in this preamble, this rulemaking action implements requirements of 42 USC, §§7401 *et seq*. There is no contract or delegation agreement that covers the topic that is the subject of this action. Therefore, the adopted rulemaking does not exceed a standard set by federal law, exceed an express requirement of state law, or exceed a requirement of a delegation agreement. Finally, this rulemaking action was not developed solely under the general powers of the agency, but is authorized by specific sections of Texas Health and Safety Code, Chapter 382 (also known as the Texas Clean Air Act), and the Texas Water Code, which are cited in the STATUTORY AUTHORITY section of this preamble, including Texas Health and Safety Code, §§382.012, 382.019, 382.202, and 382.208. Therefore, this rulemaking action is not subject to the regulatory analysis provisions of Texas Government Code, §2001.0225(b), because the adopted rulemaking does not meet any of the four applicability requirements.

TAKINGS IMPACT ASSESSMENT

The commission completed a takings impact analysis for the adopted rulemaking action under Texas Government Code, §2007.043. The specific purpose of this strategy is to achieve reductions of NO_x emissions to reduce ozone formation in the HGB, BPA, and DFW nonattainment areas and thus help bring these areas into compliance with the air quality standards established under federal law as

NAAQS for ozone. As adopted, the amendments to §§114.6, 114.312, 114.313, and 114.315 - 114.318 provide for EPA consultation and agreement prior to commission approval of alternative test methods; establish a protocol by which AERPs, or revisions to those plans, could be approved by the EPA without the need for individual SIP revisions for each plan; make alternative formulation testing requirements consistent with EPA guidance and CARB regulations; and make corrections to citations for accuracy and consistency. These amendments will not place a burden on private, real property because this action does not require an investment in the permanent installation of new refinery processing equipment.

Texas Government Code, §2007.003(b)(4), provides that Chapter 2007 does not apply to this rulemaking action, because it is reasonably taken to fulfill an obligation mandated by federal law. Specifically, the emission limitations and control requirements of the LED air pollution control program were developed in order to meet the ozone NAAQS set by the EPA under 42 USC, §7409. States are primarily responsible for ensuring attainment and maintenance of NAAQS once the EPA has established them. Under 42 USC, §7410, and related provisions, states must submit, for 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, one purpose of this rulemaking action is to provide additional clarification and flexibility in implementing the LED program necessary for the state's nonattainment areas to meet the air quality standards established under federal law as NAAQS. Attainment of the ozone standard will eventually require substantial reductions in NO_x emissions as well as VOC emissions. This rulemaking is only one step among many necessary for attaining the ozone standard.

In addition, Texas Government Code, §2007.003(b)(13), states that Texas Government Code, 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 rules 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 HGB, BPA, and DFW areas exceeding the federal ozone NAAQS, that adversely affects public health, primarily through irritation of the lungs. The action significantly advances the health and safety purpose by improving the LED program that reduces ozone levels in these nonattainment areas and 90 central and eastern Texas counties. Consequently, these adopted rules meet the exemption in Texas Government Code, §2007.003(b)(13). This rulemaking action therefore meets the requirements of Texas Government Code, §2007.003(b)(4) and (13). For these reasons, the adopted rules do not constitute a takings under Texas Government Code, Chapter 2007.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission determined the adopted rulemaking relates to an action or actions subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act of 1991, as amended (Texas Natural Resources Code, §§33.201 *et seq.*), and the commission rules in 30 TAC Chapter 281, Subchapter B, concerning Consistency with the Texas Coastal Management Program. 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 regulations of the Coastal Coordination Council and determined that the adopted amendments are consistent with the applicable CMP goal expressed in 31 TAC §501.12(1) of protecting and preserving the quality and values of coastal natural resource areas, and the policy in 31 TAC §501.14(q), which requires that the commission protect air quality in coastal areas. The adopted rulemaking will ensure that the amendments comply with 40 CFR Part 50, National Primary and Secondary Air Quality Standards, and 40 CFR Part 51, Requirements for Preparation, Adoption, and Submittal of Implementation Plans. This rulemaking action is consistent with CMP goals and policies, in compliance with 31 TAC §505.22(e).

The commission solicited comments on the consistency of the amendments with the CMP during the public comment period, but did not receive any comments during the public comment period.

PUBLIC COMMENT

The public hearing for this rulemaking was held on January 10, 2006, in Austin. The following persons submitted written or oral comment: Alamo Area Council of Governments (AACOG); Biofriendly Corporation (Biofriendly); Capital Area Council of Governments (CAPCOG); City of Houston (Houston); Dallas Area Rapid Transit (DART); Delek Refining, Ltd. (Delek); Flint Hills Resources, LP (FHR); Sierra Club, Houston Regional Group (Sierra-Houston); Lloyd Gosselink on behalf of the Texas Low Emission Diesel Coalition (Coalition); Texas Low Emission Diesel Coalition (Coalition) (forms turned in at hearing); EPA; and Valero Energy Corporation (Valero).

RESPONSE TO COMMENTS

Biofriendly, DART, and EPA generally supported the direction of the proposal. AACOG, Houston, and Sierra-Houston generally opposed the proposal. AACOG, Biofriendly, CAPCOG, Coalition, DART, Delek, EPA, FHR, Sierra-Houston, and Valero expressed concerns and/or suggested changes to the proposal.

Gasoline Credits

AACOG commented that it is opposed to the proposed changes to the AERP provisions in §114.318 because the use of credits from early introduction of lower sulfur gasoline will be allowed through 2010. AACOG also commented that the commission has not quantified possible loss of emission reduction credit in 2007 due to this rule proposal nor has the commission evaluated the impact on ozone attainment demonstrations. AACOG further commented that the quantity of gasoline credits available from petroleum producers has not been published nor is the distribution of such credits certain as necessary to assist AACOG's or the state's air quality planners in determining the extent of impact on AACOG's region from the proposed rule. CAPCOG expressed opposition to the use of credits from early gasoline sulfur reduction to offset LED compliance requirements through 2010 in the Austin Early Action Compact (EAC) counties as allowed under the proposed changes to §114.318 and recommended that the proposed LED rule revision be modified to offer the same protections on AERP approvals for the Austin EAC area as it does for nonattainment areas.

The commission believes that both the greater San Antonio and Austin areas received significant early reductions in NO_x emissions due to the efforts of fuel suppliers to these areas in the years

2003, 2004, and 2005. These early reductions were due to a voluntary lowering of the gasoline sulfur levels in these years. The commission believes these reductions played a part in the Austin area avoiding nonattainment of the eight-hour NAAQS for ozone and lowering the eight-hour ozone levels in San Antonio.

The LED rules were originally adopted in the 110 East Texas County area to assist DFW and HGB in reaching attainment with the one-hour NAAQS for ozone. Emission reductions for the EAC areas and other counties were a side benefit of the program. Having the LED rules applying to all 110 counties is still very beneficial and necessary for the ultimate achievement of attainment for both DFW and HGB. The commission has made no change in response to this comment.

EPA commented that the early reduction credits and averaging, banking, and trading (ABT) provisions of the federal Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Control Rule (40 CFR §§80.275, 80.285, and 80.305 - 80.315) allow most refineries to generate either sulfur allotments or early sulfur credits from early compliance with the Tier 2 sulfur requirements that began in 2000 and such emissions reductions can only be claimed once. EPA also commented that while it is possible for the MOBILE model to calculate a benefit to pre-Tier 2 vehicles, EPA does not believe the model can reflect real-world benefits because of the uncertainty of fueling habits of the general public. EPA further commented that it does not support allowing credits for early implementation of low sulfur gasoline for use in BPA nonattainment area and the EAC areas past December 31, 2006. Valero stated there will be a reduction in NO_x levels in 2006, 2007, and 2008, due to a residual NO_x effect because

the catalytic converters in gasoline-powered motor vehicles in DFW and HGB were exposed to less sulfur and will perform more efficiently. Valero expressed concern that the commission's proposal to eliminate the credit for residual NO_x effects after December 2006, is based on the commission's belief that these credits are to difficult to calculate. Valero also commented that its AERP using residual credits was approved by the commission in August of 2005.

The commission agrees with Valero's comments and has made changes to the rule to include a methodology for determining credits from the residual effects of early gasoline sulfur reduction on the NO_x emission reduction efficiencies of catalytic converters installed in gasoline-powered motor vehicles in the DFW and HGB counties.

FHR recommended that the commission calculate the credits from early gasoline sulfur reduction based on the percent reduction on the refiner's actual annual gasoline reduction sulfur concentration instead of being placed into one of the three current categories. FHR requested that an equation that interpolates between the MOBILE 6.2 derived reductions of 25%, 50%, and 75%, which uses the refiner's actual average production sulfur level be used instead of the percent reduction corresponding to the highest sulfur level in the defined ranges.

The commission agrees with both comments and made changes to the rule to use the percent reduction from a refiner's actual annual gasoline sulfur reduction to calculate credits. In addition, the commission has revised the rules to include equations to calculate the percent reduction in NO_x for any average gasoline sulfur level between an upper and lower valid range.

Valero provided suggested regulatory language and a calculation protocol for determining credits from the residual NO_x effects of early gasoline sulfur reductions. Valero requested that the rule allow residual credits in 2006, 2007, and 2008, based on a calculation using actual barrels of lower sulfur gasoline produced and supplied to the DFW and HGB areas in 2005, and using offset ratios to determine diesel credits that were developed using EPA's MOBILE6 and RFG survey data. Valero noted an RFG survey that indicates sulfur levels different than that used in the SIP for years 2003, 2004, and 2005. Specifically, Valero stated the actual average sulfur in the HGB and DFW areas for these years was below the values projected by the SIP. Valero stated the average RFG sulfur value in the United States in 2004 was 92 ppm and the standard deviation was 63 ppm; and the average RFG sulfur for the first three quarters of 2005 was 77 ppm and the standard deviation was 56 ppm. Valero recommended setting the maximum sulfur for the base case at 189. Valero recommended using actual sulfur levels to counteract the issue that a given vehicle does not receive gasoline produced by just one refiner. Valero recommended using the same maximum sulfur or cap in the base case run and the early low sulfur gasoline case run in 2003 to counteract the effect of vehicles refueling with higher sulfur outside the DFW and HGB areas. Valero noted for the SIP, the RFG pool was not modeled separately from the conventional pool for sulfur, overstating NO_x emissions and taking a conservative approach. Valero stated that it has not seen sulfur credits used to raise the sulfur in the RFG pool that supplies DFW and HGB. Valero recommended use of the actual average sulfur value when available. Valero stated a producer that supplied early low sulfur gasoline as part of an AERP to DFW or HGB would divide the volume of gasoline supplied in 2005 by the offset ratios for 2006, 2007, and 2008, to determine the volume of noncompliant diesel for supply to the areas. FHR encouraged the commission to adopt Valero's proposal for the calculation of the residual NO_x effects from early gasoline sulfur

reduction that could be used in the DFW and HGB areas. FHR also suggested that the same approach for capturing the benefits of the residual NO_x effects be applicable to the counties in §114.319(b)(4).

The commission considered Valero's comments and made changes to the rule to include a methodology for determining diesel credits for residual benefits in DFW and HGB from the early gasoline sulfur reductions. The commission coordinated with EPA in the development of the base case sulfur values for RFG in 2004 and 2005, and the gasoline-to-diesel offset ratios used for determining the amount of diesel credit from residual benefits that is used in the methodology adopted for use in the DFW and HGB nonattainment area counties. The EPA determined that there was no difference between the EPA-defined default values of gasoline sulfur in 2003, and what actually occurred in the HGB and DFW areas, but EPA did find a difference in the years 2004 and 2005 (based on RFG survey data for the two areas) and these values were used to calculate gasoline-to-diesel offset ratios for residual benefit adopted in this rulemaking. These gasoline-to-diesel offset ratios are valid for use starting in 2006 and expiring at the end of 2008. The commission appreciates the suggested rule language provided by Valero but adopted its own language to better fit the existing rule structure and to conform to the Texas Register style requirements.

Valero provided comments on a TCEQ white paper. Valero disagreed with the paper by stating it is appropriate to use the MOBILE6 model. Valero also raised the issue of sulfur irreversibility. Valero expressed the belief that there is no technical issue in using the MOBILE6 model to calculate benefits of early low sulfur gasoline.

The commission agrees that using the EPA's MOBILE6 emissions model is an appropriate method for calculating the benefits of early gasoline sulfur reductions. The methodologies for determining diesel credits from early gasoline sulfur reductions adopted in this rulemaking are based on modeling from the MOBILE6 model.

General Comments

EPA asked the commission to explain how the TxLED program will achieve the desired emission reductions if cumulative effect additives are approved for use, but are not consistently used in vehicles. EPA also asked how will trucks achieve the claimed reductions if they use different fuels approved under the TxLED program but not the same additive regularly. EPA expressed that the claimed emission reductions from cumulative effect additives should only be considered when the additive is used consistently such as in centrally fueled fleets where vehicles only use fuel with the additive.

The provisions for alternative formulations have been in the rule since 1999 and have been approved by EPA during all of the previous rulemakings. The provision for the Alternative 4 test sequence (allowing the testing of formulations with cumulative effects) was adopted by the commission in March of 2005, with no specific comments from EPA relating to this provision, and was ultimately approved by EPA in a final rule published on October 6, 2005, in the *Federal Register* (70 FR 58325). The commission has made no changes as a result of this comment.

Valero expressed support for the TxLED program, for the commission's efforts to meet clean air standards, and noted its capital expenditures to produce compliant diesel.

The commission appreciates Valero's long support of this diesel fuel emissions reduction strategy and implementation program.

Sierra-Houston commented that it is opposed to any proposal that allows AERPs to be labeled as "confidential business information" and kept from the public. Biofriendly commented that §114.315(c)(2)(B) should be amended to indicate specifically that all information gathered by the commission regarding the composition of an additive and/or the test (detection) method for that additive be confidential and may not be released by the commission to any third party without approval of the owner/provider of the confidential information.

The commission maintains that companies that submit AERPs have the right to claim that the information contained within these plans is confidential business information. In addition, as stated in the previous rulemaking on LED (30 TexReg 1782), the commission does not believe it is necessary or appropriate to include language suggested by Biofriendly. The commission is prohibited by Texas Health and Safety Code, §382.041 from releasing information to the public related to secret processes or methods of manufacture or production that has been marked confidential when submitted. The Texas Public Information Act (PIA) provides exceptions from public disclosure by any state agency for trade secret and business confidential information. Any confidential or trade secret information submitted to TCEQ should be clearly marked as such at the time submitted. Any requests for information so marked will be forwarded to the Office of the Attorney General as appropriate for a determination of the applicability of the PIA exceptions. The commission has made no changes to the rule based on these comments.

Sierra-Houston commented that the commission should clearly explain the importance of VOC in the control of air pollution from the evaporation and combustion of diesel fuels.

The contribution from diesel engines to the total VOC emissions inventories is very small because diesel engines inherently emit very little exhaust VOC emissions and diesel fuel emits virtually no evaporative VOC emissions in normal refueling operations. However, since VOC emissions can help contribute to the formation of ozone, the adopted rules will ensure that in order to be approved by the commission, alternative diesel formulations must demonstrate that no significant increase in VOC emissions occurs when the fuel is used in a diesel engine. The commission made no changes to the rules in response to these comments.

Sierra-Houston commented that the proposal was confusing because of the multiple average percentage requirements listed in the rule proposal (i.e., 5.5%, 5.7%, 5.78%, and 6.2%) and requested that the commission simplify the rule.

The emission reductions from the LED rules are not inconsistent. Emission reductions are different for on-road (5.5% reduction) and non-road (6.2% reduction). The weighted average based on the percentage of NO_x from the on-road and non-road inventories is 5.78%. The commission made no changes to the rules in response to this comment but did make a change in the SECTION BY SECTION DISCUSSION of this preamble to correctly reference the weighted average of 5.78%.

Biofriendly commented that the commission should accept biodiesel that meets the ASTM D6751 standards when approving an acceptable biodiesel blended LED.

The commission has provided biodiesel producers the opportunity to comply with the LED requirements under an AERP that will allow the blending of B100 biodiesel with LED-compliant diesel fuel for use in the 110 counties affected by the LED requirements. The B100 biodiesel must meet ASTM D6751 standards for B100 biodiesel and must be mixed with LED-compliant diesel fuel. This AERP will expire on December 31, 2006. After December 31, 2006, all biodiesel blends produced for use in the affected 110-county region must be produced in compliance with an alternative diesel formulation that is approved by the commission.

Delek recommended that the commission issue a grandfather waiver, until at least 2010, for small refiners that complied with original AERP rules and were granted an AERP. Delek noted that grandfathered AERP fuel subject to a waiver could be limited to fuel transported directly from the refiner to a retail outlet or fleet user and not commingled with other fuel in a pipeline or terminal tanks.

The commission cannot create a grandfather provision for any diesel supplier without losing a potentially significant amount of NO_x reduction. There are several ways to comply with the LED rules, including the purchase of approved additives. With the multitude of compliance options, the commission does not believe a grandfathering provision is warranted.

Delek stated that it does not have the financial resources of the large refining companies and the proposed change in the AERP rules for TxLED will pose an unacceptably high financial burden, which cannot be recovered through competitive market pricing.

The LED rules provide multiple options for compliance and the commission would be glad to assist Delek in determining which option would best accommodate Delek's needs.

Delek commented that the proposal provides only two months after final rule adoption for existing approved plans to remain in effect and before new/revised plans would have to be approved and implemented. Delek stated that additional time is required for compliance with the proposed rule change. Delek noted that because the commission approved the facility's AERP, Delek committed to the EPA to make all ultra-low sulfur diesel (ULSD) as a condition of a small refinery hardship waiver, extending compliance with Tier II gasoline sulfur standards to 2008.

An agreement with the EPA for a federal gasoline program does not relieve Delek of its responsibilities to comply with the commission's state diesel fuel regulation.

FHR supported the commission's proposal to extend the expiration date on the use of early gasoline credits from 2007 until 2010. FHR also requested that the commission consider not having an expiration date and allowing refiners to utilize all of the gasoline credits that they have generated.

The commission disagrees. Credits should be expended by 2010. This time period should be adequate for a refiner to implement changes to comply with LED requirements without the use of gasoline credits.

Delek recommended that the commission should determine if the extensive use of additives and probable elimination of existing approved AERPs will have a market price impact beyond the previous estimated range.

The commission believes that the market will determine the most economical way of complying with the LED requirements. If an additive's cost or supply is at issue, a refiner has other compliance options.

Delek stated that the commission should provide an added incentive to move to low-NO_x engines by allowing the use of conventional (non-TxLED) ULSD. Additionally, ULSD sold for use in a low-NO_x engine should not only qualify for an AERP, but should generate a credit to be used for fuel that does not meet TxLED standards, if those engines have not been converted or purchased using Texas Emission Reduction Plan (TERP) funding.

The commission believes there is some level of additional reduction from the use of LED even in advanced technology low NO_x engines. The commission has made no change in response to this comment.

FHR suggested that the commission avoid the possibility of approving additives that are not acceptable to diesel engine and diesel exhaust after treatment system suppliers by requesting that additives be ashless.

Some additives contain fuel-borne catalysts that are usually metals, these are commonly defined as ash. These catalysts can help reduce diesel PM but also can contribute to plugging of diesel particulate filters. Metals are also commonly found in the lube oil. Lube oil being burned and passed through the combustion chamber also contributes to ash in the exhaust. It is not expected that diesel particulate filters will be in widespread use in the United States for the foreseeable future. Therefore, the commission is not including an ashless requirement for diesel fuel additives used for compliance with the LED rules. The commission reserves the right to require ashless additives in the future if warranted.

No-Harm Testing

EPA commented that a supplier should be in a position to guaranty that the approved fuels or fuel additives are not harmful to the mechanical operation of diesel engines. EPA also stated that the key factor for determining "no harm" is the effect of the fuel or additives on the elastomers used in diesel engines and that there are several ASTM standards available upon which a test system should be formulated to test the properties of the elastomers under different conditions. EPA further commented that requiring the supplier of an approved alternative diesel formulation to provide a warranty or the results of such tests prior to the approval of an alternative formulation would be appropriate. Both EPA and the Coalition supported the inclusion of some type of "no-harm" test requirement in the rule.

EPA recommended that the rules should be amended to include a supplier or producer guarantee that the "approved fuels and fuel additives are not harmful to the mechanical operation of diesel engines." The Coalition commented that the current rule only requires emission and performance testing methods for additives and alternative formulations. The Coalition suggested that the commission's current position on not providing for no-harm testing violates its statutory mandate to implement cost-effective environmental regulations. The Coalition expressed the belief that extreme market conditions of the LED fuel market may result in unreliable products being forced onto the market as producers take extreme measures to avoid fuel shortages. The Coalition expressed concern that the current rule language does not provide for "no-harm" testing of additives that would demonstrate the long-term compatibility of fuels and additives with diesel engine components and dynamometer tests that demonstrate the impact of fuels and additives on engine horsepower. Additionally, the Coalition suggested that the commission require filter media compatibility testing and elastometer testing. EPA also suggested that a key component of no-harm testing should be elastometer testing. EPA commented that such tests could be similar to current tests conducted by lubricant manufacturers on wear and tear on piston rings, cylinders, and crankshaft bearings. EPA also suggested that a supplier's warranty of no-harm testing prior to approval of a formulation would be appropriate.

The commission appreciates the response to our request for comment on this issue, however, does not agree that a no-harm testing requirement is a necessary prerequisite for LED compliance. All of the approved additives, up to this point, have voluntarily done no-harm testing without being required by our agency. The commission is confident that in order to be competitive an additive would not only have to compete on price but also on the assurance that the product

would not damage engines by showing that no-harm testing has been done. The commission does not believe that there are "extreme market conditions" in the LED market because of the numerous strategies available for compliance with LED requirements. Therefore, the commission does not anticipate producers taking "extreme measures" such as using unreliable products in order to come into compliance with LED regulations. Additionally, this type of information should be available through EPA. All fuels and fuel additives that are intended for use in on-road motor vehicles are required by federal regulation to be registered with EPA prior to introduction into commerce. Registration involves providing a chemical description of the product and certain technical, marketing, and health-effects information. This allows EPA to identify the likely combustion and evaporative emissions. The commission also recognizes that its authority to regulate diesel fuels is predicated on the need to reduce air emissions and protect public health and the environment. The commission does not have the authority to restrict the production, sale, or importation of fuels or additives based upon engine quality and performance impacts of those products. However, the commission does expect that fuel and additive producers will have conducted these no-harm tests in order to meet customer expectations and market their product. The commission encourages fuel and additive producers to make these no-harm tests publicly available. The commission made no changes to the rules in response to these comments.

Section-Specific Comments

EPA commented that the phrase "required to be" in the definition of additive in §114.6 may be misinterpreted to mean that additives may be used in Texas before being approved and registered by EPA and therefore, EPA does not recommend the adoption of this change.

The commission made changes to the rule in response to this comment and revised the definition of additive to clarify that substances added to gasoline or diesel fuel, which are registered with the EPA in accordance with 40 CFR Part 79 and those that are added for the purpose of reducing exhaust emissions from vehicles and equipment but are exempted from EPA registration requirements under 40 CFR Part 79, are considered to be additives under these rules.

EPA commented that the changes to §114.315(b) do not resolve its concerns regarding ED discretion and stated that "consultation" is not adequate in the case of disagreements. EPA suggested that this subsection be changed to read "with the consent of EPA," or "consultation and agreement by EPA," or changed to resemble §114.315(d) in which it would be demonstrated to the satisfaction of the ED and the EPA.

The commission agrees with the comment and has made the changes to §114.315(b) as noted.

EPA commented that §114.315(c)(4) should be amended to add the phrase, "and in the Environmental Technology Verification Protocol of the EPA, where applicable" at the end of the reference to 40 CFR Part 86, Subpart N.

The commission declines to make this change. The emission testing procedures specified under §114.315(c) are designed to certify that the emissions generated when using an alternative diesel formulation are comparable to the emissions generated when using the LED reference fuel in the same test engine. The test procedures under this rule are not designed to verify a specific percentage of emission reductions as the EPA's *Verification Protocol for Determination of Emissions Reductions Obtained by Use of Alternative or Reformulated Liquid Fuels, Fuel Additives, Fuel Emulsions, and Lubricants for Highway and Nonroad Use Diesel Engines and Light Duty Gasoline Engines and Vehicles* (Revision No. 03, September 2003) was designed to achieve. The commission made no changes to the rules in response to these comments.

FHR commented that the language in the proposed §114.315(c)(6)(A)(i) is less clear than current language and could be interpreted to be requiring a specific aromatics concentration, rather than a maximum. FHR also stated that §114.315(c)(6)(A)(ii) does not clearly define the requirements for this "minimum specifications of the base diesel fuel" and that it would be clearer to use language similar to the present regulations and say that the base fuel properties for total aromatics should not exceed those of the base fuel used in the additive verification.

The commission disagrees. The commission believes that the approval notification for alternative diesel formulations should only contain information regarding the characteristics of the formulation that are relevant for compliance and enforcement purposes. The commission made no changes to the rules in response to this comment.

Biofriendly commented that §114.315(d) should be revised to add the phrase, "EPA's Environmental Technology Verification program," in the sentence just after ". . . to the satisfaction of the executive director" to allow fuels and fuel additives that have been tested under this EPA program to be considered for approval as an alternative diesel formulation.

The commission declines to make the suggested changes. The need for EPA's approval is already explicit under the existing rule text in this section, therefore, there is no need to include a specific EPA program.

EPA commented that §114.315(d)(2) should be amended to add the phrase, "and the EPA," in the sentence just after "executive director" to be consistent with subsection (d).

The commission agrees with the EPA comment and made changes to the rule accordingly.

EPA commented that it does not oppose the removal of EPA approval from §114.318(a) because a replicable procedure for the state to approve the AERPs is being proposed. EPA commented that the critical part of a replicable procedure is public participation in the process at the state level and that public participation is being carried out through the proposal notice and comment period in which the state is enacting the revised §114.318.

The commission appreciates the support for this method.

FHR commented that there are two distinct problems with the December 31, 2006, expiration date for currently approved AERPs as proposed in §114.318(c). First, it does not appear that the commission has provided itself with the discretion to extend the year-end expiration date when circumstances warrant. Second, the proposed transition process from existing plans to revised plans creates unnecessary confusion and is inconsistent with how the commission handles such transitions in analogous situations under other environmental rules.

The commission considered FHR's comment and made changes in §114.318(c) of the adopted rule to provide the ED flexibility to allow a producer to continue using a currently approved AERP for a limited time beyond the December 31, 2006, expiration date if certain specific conditions are met.

CAPCOG recommended that §114.319(b) be revised to move the Austin EAC counties (Travis, Williamson, Hays, Bastrop, and Caldwell) to a separate grouping under a new paragraph (5) or specify that credits from early gasoline sulfur reduction as provided under §114.318 may not be used in the Austin EAC counties. DART recommended revisions to §114.319 to mitigate the cost impact of future potential changes to the TxLED regulations by adding a new subsection (d) to read "Any rule changes affecting the cost or availability of fuel shall allow sufficient time for replacement of long term contracts for supply of fuel under this rule."

The commenters are requesting an action that is beyond the scope of this rulemaking, as §114.319 (Affected Counties and Compliance Dates) was not amended in the proposed rules that

were published in the December 16, 2005, issue of the *Texas Register* (30 TexReg 8407). The commission has no authority to specify the length of private long-term fuel contracts. Contractual provisions should be made to long-term contracts to accommodate potential rule changes which may affect prices. The commission made no changes to the rules in response to these comments.

Supply and Distribution Data from Producers and Importers

The Coalition commented that end users of diesel fuel cannot determine the market availability of fuel types in their specific areas. The commission registration forms do not provide adequate information and many are submitted by producers and importers under claims of confidentiality. The only information provided by the commission publicly is a one-page summary containing a list of producers and importers, total volumes, and projected volumes of LED-compliant fuel. This information does not adequately provide information on whether the fuel is provided under an AERP, alternative formulation, or other LED-compliant fuel. The Coalition suggested that the commission could "re-aggregate" the data collected from registration forms into a more useful format that explains how much fuel will be produced using additives, under AERPs, or some other LED compliance strategy in each of the 110 counties. The Coalition commented that this information could be made available publicly without compromising the confidentiality of market information submitted by producers and importers.

The commenters are requesting a change to §114.314, Registration of Diesel Producers and Importers. This section is not open for amendment in this rulemaking. The Coalition also suggests data collection changes that are not required by rule and were developed as part of the

TCEQ registration form. The commission will continue to work with producers and importers of LED-compliant fuel as well as end users to develop useful information about market supply without compromising the confidentiality of individual producers' data.

The Coalition expressed the belief that the commission could greatly enhance its ability to predict impacts within regions of the 110-county area if it were to utilize data directly derived from demand projections based on actual diesel fuel usage in the affected counties. The commission used data that appears to be extrapolated from gasoline usage and population distribution. The Coalition expressed the belief that the TCEQ has severely underestimated diesel fuel demand for the 110-county affected area. An approach that uses real diesel fuel sales data to assess fuel demand is suggested, using data collected from the Texas Comptroller's Office representative of fuel consumption in the 110-county area. Alternatively, the commission should require fuel producers and importers to submit such data or its equivalent. Delek raised concern of potential supply issues and increased prices. Delek recommended that the commission should re-survey suppliers before setting a compliance date for the revised rule to determine if volumes previously committed will still be available.

As stated previously, market data aggregation through producer registration forms is not open for amendment at this time. The commission remains confident that supply of LED-compliant fuel in the 110-county area of Texas will be sufficient due to the variety of choices (i.e., LED fuel, alternative formulations, CARB diesel, and AERPs) available to producers and importers to comply with the rule. The amendments adopted in this rulemaking will not alter this assessment of supply. In fact, these changes in the LED rules should provide greater flexibility and

assurances that adequate supply of LED-compliant fuel will be available in the affected counties. For instance, the AERP protocol in §114.318 will create a more consistent approach to developing these plans and streamline the TCEQ and EPA approval process, thereby giving producers through end users more confidence that LED supply will not be disrupted due to any compliance uncertainties.

Price Concerns and Fiscal Note Analysis

The Coalition expressed concern about the potentially inflated fuel prices that are likely to result from the boutique and additized LED fuel market. The LED program and its purposes have evolved over many years and the changes made have been substantive, yet there has never been a meaningful fiscal analysis of the rule. There seems to be no doubt that the evolving LED program will increase the cost of LED-compliant fuel and this cost may or may not be able to be passed on to customers. This is especially true for certain end users such as municipalities, small businesses, and private citizens. The Coalition commented that the fiscal note in the proposal fails to consider the impact on state agencies, local governments, the public, and the regulated community, as required under Texas Government Code, §2001.0225(c) and §2001.024(a)(4) and (5). The proposal states any fiscal implications will primarily affect the producer and suppliers, and not typically government entities. The commission should evaluate how the fuel price increase will be passed on to local governments, state agencies, and the public.

The commission disagrees with this comment and has made no changes to the rule. As discussed in the response regarding the regulatory impact analysis, this rule is not a major environmental

rule. Therefore, §2001.0225(c) does not apply. However, the commission did meet the requirements of §201.024. Section 2001.024 does not require an evaluation of how an increase in diesel prices resulting from this rule will affect end users. The Government Code requires the commission to assess costs to persons that must comply with the rules. In previous rulemakings, the commission has done just that, by estimating a production cost increase of $.04 to $.08 per gallon of diesel to meet LED standards. As stated in the proposal, the commission believes that these specific amendments to the LED rules will primarily affect producers and suppliers of LED, which typically do not include governmental entities. The adopted amendments make changes to testing, recordkeeping, and AERP requirements. This rulemaking does not amend the LED standard itself and does not change the rules in such a way that would increase the production cost estimated by the commission in previous rulemakings on LED.

Regulatory Impact Analysis

The Coalition stated that the commission did not develop a full regulatory impact analysis and fiscal analysis as required for a major environmental rule under Texas Government Code, §2001.0225. The Coalition argued that the amendments to Chapter 114, Subchapter H, Division 2 is a major environmental rule because it exceeds a standard set by federal law. As evidence, the commission was required to submit a waiver in accordance with 42 USC, §7545(C)(4)(c) when the rules were originally adopted. The state has also not demonstrated how this rule is specifically required by state law.

The commission disagrees with this comment. As stated in the preamble published in the *Texas Register* on December 16, 2005 (30 TexReg 8407 and 8410), the commission determined that this

rulemaking does not meet the definition of a "major environmental rule." The commission discussed at length in the draft regulatory impact analysis section of the preamble that the ozone NAAQS is a federal requirement set by EPA that must be met by states at a certain date. The FCAA (42 USC, §7410) provides that states must develop SIPs that include "enforceable emission limitations, and other control measures, means or techniques" necessary to meet the NAAQS. The LED rules were developed as part of the control strategy to meet the NAAQS. The commission also described in the draft regulatory impact analysis that this rule is specifically required by Texas Health and Safety Code, §382.012, which requires the state to develop a general, comprehensive plan for the proper control of the state's air, in other words, a SIP. The rule also meets the specific requirements of: Texas Health and Safety Code, §382.019, providing the commission the authority to control and reduce emission from engines used to propel land vehicles; §382.202, restricting the establishment of fuel content standards before January 1, 2004, or the distribution of Texas LED as described in the SIP prior to February 1, 2005; and §382.208, requiring the commission to develop and implement, in coordination with federal, state, and local transportation planning agencies, transportation programs and other measures necessary to demonstrate attainment of the NAAQS and protect the public from exposure to hazardous air contaminants from motor vehicles. Because the rule is not a "major environmental rule," the regulatory analysis requirements of Texas Government Code, §2001.0225 do not apply.

Applicability of Rule on Wholesale Bulk Purchasers

Because of additive based alternative plans, the Coalition expressed the belief that some end users will in fact become "producers" and thus be subject to the reporting and recordkeeping requirements.

Some Coalition members may become producers because they purchase large quantities of diesel fuel for fleet use and will blend in additives to create TxLED-compliant fuel on their sites prior to use in individual fleet engines. The commission's guidance on TxLED appears to set a trigger of 50,000 gallons for becoming a wholesale bulk purchaser, however, there is no explanation for this cut-off and whether there is an exception for lesser quantities of fuel. The Coalition suggested a clarification in the preamble to better explain the applicability of the rule to end users.

The provisions for timing of when bulk purchasers should start distributing LED have passed. As of January 1, 2006, only LED should be provided to bulk purchasers regardless of the tank size. The commission has made no changes to the rule in response to these comments.

SUBCHAPTER A: DEFINITIONS

§114.6

STATUTORY AUTHORITY

The amendment is adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code. The amendment is also adopted under Texas Health and Safety Code, §382.002, concerning Policy and Purpose, which establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.017, concerning Rules, which authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act; §382.019, concerning Methods Used to Control and Reduce Emissions from Land Vehicles, which authorizes the commission to adopt rules to control and reduce emissions from engines used to propel land vehicles; §382.202, concerning Vehicle Emissions Inspection and Maintenance Program, which authorizes the commission to establish vehicle fuel content standards after January 1, 2004, as long as distribution of LED as described in the SIP is not required prior to February 1, 2005, and authorizes the commission to consider AERPs to comply with LED requirements; and §382.208, concerning Attainment Program, which authorizes the commission to develop and implement transportation programs and other measures necessary to

demonstrate attainment and protect the public from exposure to hazardous air contaminants from motor vehicles.

The adopted amendment implements Texas Water Code, §5.103 and §5.105, and Texas Health and Safety Code, §§382.002, 382.011, 382.012, 382.017, 382.019, 382.202, and 382.208.

§114.6. Low Emission Fuel Definitions.

Unless specifically defined in Texas Health and Safety Code, Chapter 382, also known as the Texas Clean Air Act (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 that are defined by TCAA, §3.2, 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), have the following meanings, unless the context clearly indicates otherwise.

(1) **Additive**--Any substance 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:

(A) registered with the United States Environmental Protection Agency (EPA) in accordance with 40 Code of Federal Regulations Part 79; or

(B) added to gasoline or diesel for the purpose of reducing exhaust emissions from motor vehicles or non-road equipment and is exempted from the EPA registration requirements in accordance with 40 Code of Federal Regulations Part 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 Grade No. 1-D or Grade No. 2-D diesel fuel, in accordance with the active version of

American Society for Testing and Materials (ASTM) D975 (Standard Specification for Diesel Fuel Oils), except for lubricity.

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

(9) **Further process**--To perform any activity on motor vehicle fuel, including distillation, treating with hydrogen, blending, or addition of an approved additive, 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 American Society for Testing and Materials (ASTM) 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 fuel (LED)**--Any diesel fuel:

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

(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 that is not required to be registered under Texas Transportation Code, §502.002.

(18) **Produce**--Perform the process to convert liquid compounds that 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, 114.313, 114.315 - 114.318

STATUTORY AUTHORITY

The amendments are adopted under Texas Water Code, §5.103, concerning Rules, and §5.105, concerning General Policy, which authorize the commission to adopt rules necessary to carry out its powers and duties under the Texas Water Code. The amendments are also adopted under Texas Health and Safety Code, §382.002, concerning Policy and Purpose, which establishes the commission's purpose to safeguard the state's air resources, consistent with the protection of public health, general welfare, and physical property; §382.011, concerning General Powers and Duties, which authorizes the commission to control the quality of the state's air; §382.012, concerning State Air Control Plan, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air; §382.017, concerning Rules, which authorizes the commission to adopt rules consistent with the policy and purposes of the Texas Clean Air Act; §382.019, concerning Methods Used to Control and Reduce Emissions from Land Vehicles, which authorizes the commission to adopt rules to control and reduce emissions from engines used to propel land vehicles; §382.202, concerning Vehicle Emissions Inspection and Maintenance Program, which authorizes the commission to establish vehicle fuel content standards after January 1, 2004, as long as distribution of LED as described in the SIP is not required prior to February 1, 2005, and authorizes the commission to consider AERPs to comply with LED requirements; and §382.208, concerning Attainment Program, which authorizes the commission to develop and implement transportation programs and other measures necessary to

demonstrate attainment and protect the public from exposure to hazardous air contaminants from motor vehicles.

The adopted amendments implement Texas Water Code, §5.103 and §5.105, and Texas Health and Safety Code, §§382.002, 382.011, 382.012, 382.017, 382.019, 382.202, and 382.208.

§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), that 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 fuel (LED) standards of subsections (b) and (c) of this section, or the requirements of subsection (f) of this section.

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

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

(d) Subsection (a) of this section does 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.

(e) Diesel fuel that 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 on or before January 18, 2005, for compliance with California diesel fuel regulations that were in effect as of October 1, 1993, except for those approved for small refinery compliance, or diesel fuel that has been produced to meet all specifications for diesel fuel under regulations adopted by the California Air Resources Board, except for those approved for small refinery compliance, that were in effect as of January 18, 2005, may be used to satisfy the requirements of subsection (a) of this section.

(f) Alternative diesel fuel formulations that the producer has demonstrated to the satisfaction of the executive director, 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 and particulate matter may be used to satisfy the requirements of subsections (b) and (c) 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.

§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(f) of this title (relating to Low Emission Diesel Standards), if the following conditions are met.

(1) In no case may 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 must 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 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(b) 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(b) 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(b) 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(b) 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.

§114.315. Approved Test Methods.

(a) Compliance with the diesel fuel content requirements of this division must be determined by applying the appropriate test methods and procedures specified in the active version of American Society for Testing and Materials (ASTM) D975 (Standard Specification for Diesel Fuel Oils), or the following supplementary methods, as appropriate.

(1) The aromatic hydrocarbon content may be determined by the active version of ASTM Test Method D5186 (Standard Test Method for Determination of Aromatic Content and Polynuclear Aromatic Content of Diesel Fuels and Aviation Turbine Fuels by Supercritical Fluid Chromatography). The following correlation equation must be used to convert the supercritical fluid chromatography (SFC) results in mass percent to volume percent: aromatic hydrocarbons expressed in percent by volume = 0.916 x (aromatic hydrocarbons expressed in percent by weight) + 1.33.

(2) The polycyclic aromatic hydrocarbon (also referred to as polynuclear aromatic hydrocarbons or PAH) content may be determined by the active version of ASTM Test Method D5186 (Standard Test Method for Determination of Aromatic Content and Polynuclear Aromatic Content of Diesel Fuels and Aviation Turbine Fuels by Supercritical Fluid Chromatography). The correlation

equation specified in paragraph (1) of this subsection must be used to convert the SFC results in mass percent to volume percent.

(3) The nitrogen content may be determined by the active version of ASTM Test Method D4629 (Standard Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons by Syringe/Inlet Oxidative Combustion and Chemiluminescence Detection).

(4) The American Petroleum Institute (API) gravity index may be determined by the active version of ASTM Test Method D287 (Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)).

(5) The viscosity may be determined by the active version of ASTM Test Method D445 (Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (the Calculation of Dynamic Viscosity)).

(6) The flashpoint may be determined by the active version of ASTM Test Method D93 (Standard Test Methods for Flash-Point by Pesky-Martens Closed Cup Tester).

(7) The distillation temperatures may be determined by the active version of ASTM Test Method D86 (Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure).

(b) Modifications to the testing methods and procedures in this section may be approved by the executive director after consultation with and agreement by the United States Environmental Protection Agency (EPA).

(c) The executive director, upon application, may approve alternative diesel fuel formulations as prescribed under §114.312(f) of this title (relating to Low Emission Diesel Standards) in accordance with the following procedures.

(1) The applicant shall initially submit a proposed test protocol to the executive director for approval, that must include:

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

(B) a testing plan with test procedures that are consistent with the requirements of paragraphs (2) and (4) of this subsection;

(C) fuel analysis test data showing that the candidate fuel meets the specifications for the appropriate Grade No. 1-D S15 or Grade No. 2-D S15 diesel fuel as specified in the active version of ASTM D975, except for lubricity, and identifying the characteristics of the candidate fuel identified in paragraph (2) of this subsection;

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

(E) a detailed description of the reasonable quality assurance and quality control procedures that will be implemented by the entity identified in subparagraph (A) of this paragraph to ensure the validity of the testing being performed; 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.

(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, cetane number, API gravity index, viscosity at 40 degrees Celsius, flash point, and distillation (in degrees Fahrenheit) of the candidate fuel must be determined as the average of three tests conducted in accordance with the referenced test method specified in subsection (a) of this section.

(B) For alternative diesel fuel formulations that use an additive in the candidate fuel to achieve reductions, the applicant shall provide to the executive director upon application, the identity, chemical composition, and concentration of each additive used in the

formulation and the test method by which the presence and concentration of the additive may be determined.

(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 when 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 must be produced from straight-run diesel fuel by a hydrodearomatization process and must have the following characteristics determined in accordance with the referenced test method specified in subsection (a) of this section:

(A) sulfur content - 15 parts per million maximum;

(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 must be conducted in accordance with the federal test procedures as specified in 40 Code of Federal Regulations 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), as amended.

(A) The tests must 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. The test engine must have a minimum of 125 hours of use and exhibit stable operation before beginning the testing specified in this paragraph and must not exceed 110% of its applicable exhaust emission standards when using the reference fuel specified in paragraph (3) of this subsection.

(B) The comparative testing must be conducted by a third party that is 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 ensure that one of the test sequences in clause (i) or (ii) of this subparagraph is used to conduct the exhaust emissions tests.

(i) If both cold start and hot start exhaust emission tests are conducted, a minimum of five exhaust emission tests, each test consisting of at least one cold start and two hot

start cycles, must be performed on the engine with each fuel, using either of the following sequences, where "R" is a test on the reference fuel and "C" is a test on the candidate fuel: RC RC RC (and continuing in the same order) or RC CR RC CR RC (and continuing in the same order). The engine mapping procedures and a conditioning transient cycle must be conducted with the reference fuel before each cold start procedure using the reference fuel. The reference cycle used for the candidate fuel must be the same cycle as that used for the fuel preceding it.

(ii) If only hot start exhaust emission tests are conducted, one of the following test sequences must be used throughout the testing, where "R" is a test on the reference fuel and "C" is a test on the candidate fuel, each test consisting of at least three hot start cycles:

(I) Alternative 1: RC CR RC CR (continuing in the same order for a given calendar day; a minimum of 20 individual hot start cycles must be completed with each fuel);

(II) Alternative 2: RR CC RR CC (continuing in the same order for a given calendar day; a minimum of 20 individual hot start cycles must be completed with each fuel);

(III) Alternative 3: RRR CCC RRR CCC (continuing in the same order for a given calendar day; a minimum of 21 individual hot start cycles must be completed with each fuel); or

(IV) Alternative 4: RR CCC RR (a minimum of six hot start cycles must be performed on the reference fuel followed with a conditioning period not to exceed 72 hours of engine operation on the candidate fuel before the first individual hot start emission test on the candidate fuel is performed; the conditioning cycle must represent normal engine operation; a minimum of nine hot start cycles must be performed on the candidate fuel after the conditioning period; only the emissions from the tests on the reference fuel conducted before the candidate fuel tests must be used in the calculations conducted in accordance with paragraph (5) of this subsection; a minimum of six hot start cycles must be performed on the reference fuel after the candidate fuel tests to determine any carry-over effect that may occur from the use of the candidate fuel).

(iii) For alternatives 1, 2, and 3, an equal number of tests must be conducted using the reference fuel and the candidate fuel on any given calendar day. At the beginning of each calendar day, the sequence of testing must begin with the fuel that was tested at the end of the preceding day.

(iv) For all alternatives, the engine mapping procedures and a conditioning transient cycle must be conducted after every fuel change and/or at the beginning of each day. The reference cycle generated from the reference fuel for the first test must be used for all subsequent tests.

(v) Each paired or triplicate series of individual tests must be averaged to obtain a single value that would be used in the calculations conducted in accordance with paragraph (5) of this subsection.

(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 must identify the days that the tests will be conducted, and must 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 that 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. 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, must 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_x), total hydrocarbons (THC), non-methane hydrocarbons (NMHC), and particulate matter (PM) must be measured.

(F) The exhaust emissions tests described in this paragraph must not be conducted until the test protocol as described in paragraph (1) of this subsection is approved by the executive director.

(G) Upon completion of the tests described in this paragraph, the applicant may submit an application for certification to the executive director. The application must include the approved test protocol, all of the fuel analysis and emissions test data, a copy of the complete test log prepared in accordance with subparagraph (D) of this paragraph, 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 must be accompanied by a written statement of the reasons for denial.

(5) The average emissions during testing with the candidate fuel must 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 may issue a certification in accordance with this paragraph only if the executive director makes all of the following determinations:

(A) the average individual emissions of NO_x and PM, respectively, recorded during testing with the candidate fuel are comparable or better than the average individual emissions of NO_x and PM, respectively, recorded during testing with the reference fuel;

(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 that would not be emitted by such engines operating without the additive;

(C) in order for the determinations in subparagraph (A) of this paragraph to be made, for each referenced pollutant the candidate fuel must satisfy the following relationship; and

Figure: 30 TAC §114.315(c)(5)(C)

$$\bar{X}_C < \bar{X}_R + \text{-} S_p \cdot \sqrt{2/n} \cdot t\ (a, 2n\text{-}2)$$

Where:

$\bar{X}_C$ = Average emissions during testing with the candidate fuel.

$\bar{X}_R$ = Average emissions during testing with the reference fuel.

= Tolerance level equal to 1% of $\bar{X}_R$ for oxides of nitrogen (NO_x), and 2% of $\bar{X}_R$ for particulate matter (PM).

S_p = Pooled standard deviation.

t (a, 2n-2) = The one-sided upper percentage point of t distribution with a = 0.15 and 2n-2 degrees of freedom.

n = Number of tests of candidate and reference fuel.

(D) the average individual emissions of THC and NMHC, respectively, recorded during testing with the candidate fuel do not exceed the test engine's applicable exhaust emission standards.

(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 may, after consultation with the EPA, 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 must identify all of the relevant characteristics of the candidate fuel determined in accordance with paragraph (2) of this subsection.

(A) The approval notification must identify the following specifications of the alternative diesel fuel formulation as approved under this subsection:

(i) the total aromatic hydrocarbon content, cetane number, or other characteristics as appropriate and as determined in accordance with the test methods identified in subsection (a) of this section; or

(ii) for an alternative diesel fuel formulation using an additive to achieve reductions, the identity and minimum concentration or treatment rate of the additive, the minimum specifications of the base diesel fuel used in the approved formulation, and the test method or

methods that must be used to satisfy the monitoring requirements of §114.316 of this title (relating to Monitoring, Recordkeeping, and Reporting Requirements).

(B) The approval notification must assign an identification number to the specific approved alternative diesel fuel formulation.

(d) Notwithstanding subsection (c) of this section, the executive director, upon application, may approve alternative diesel fuel formulations as prescribed under §114.312(f) of this title that may be used to satisfy the requirements of §114.312(b) and (c) of this title if the applicant has demonstrated to the satisfaction of the executive director and the EPA that the formulation will achieve comparable or better reductions in emissions of NO_x and PM.

(1) For alternative diesel fuel formulations that use an additive to achieve reductions, the applicant shall provide to the executive director upon application, the identity, chemical composition, and concentration of each additive used in the formulation, and the test method by which the presence and concentration of the additive may be determined.

(2) If the alternative diesel fuel formulation has been demonstrated to the satisfaction of the executive director and the EPA to achieve comparable or better reductions in emissions of NO_x and PM under this subsection, then the executive director may issue an approval notification certifying that the alternative diesel fuel formulation may be used to satisfy the requirements of §114.312(a) of this title.

(A) The approval notification must identify the following specifications of the alternative diesel fuel formulation as approved under this subsection:

(i) the total aromatic hydrocarbon content, cetane number, or other parameters as appropriate and as determined in accordance with the test methods identified in subsection (a) of this section; or

(ii) for an alternative diesel fuel using an additive to achieve reductions, the identity and minimum concentration or treatment rate of the additive, the minimum specifications of the base fuel used in the approved formulation, and the test method or methods that must be used to satisfy the monitoring requirements of §114.316 of this title.

(B) The approval notification must assign an identification number to the specific approved alternative diesel fuel formulation.

(3) The demonstration required under this subsection may be satisfied using the Unified Model as described in the EPA staff discussion document, *Strategies and Issues in Correlating Diesel Fuel Properties with Emissions*, Publication Number EPA420-P-01-001, published July 2001, to demonstrate that the applicable fuel properties of the alternative diesel fuel formulation will achieve at least a 5.5% reduction in NO_x emissions from on-road diesel fuel for the year 2007, and at least a 6.2% reduction in NO_x emissions from non-road diesel.

(4) The demonstration required under this subsection may be satisfied by the verification of an alternative diesel fuel formulation by the Air Pollution Control Technologies Center, a center under the EPA's Environmental Technology Verification Program, and the EPA's Office of Transportation and Air Quality's Voluntary Diesel Retrofit Program, demonstrating at least a 5.78% reduction in NO_x emissions when compared against a base diesel fuel with fuel properties within the ranges as described for nationwide average fuel in EPA's *Verification Protocol for Determination of Emissions Reductions Obtained by Use of Alternative or Reformulated Liquid Fuels, Fuel Additives, Fuel Emulsions, and Lubricants for Highway and Nonroad Use Diesel Engines and Light Duty Gasoline Engines and Vehicles* (Revision No. 03, September 2003).

§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 diesel fuel that may ultimately be used in counties listed in §114.319 of this title (relating to Affected Counties and Compliance Dates) is subject to the applicable requirements of this section.

(b) All records relating to low emission diesel (LED) sampling must contain a statement declaring whether the aromatic hydrocarbon content of the sample conforms to the basic standard as specified in §114.312(b) of this title (relating to Low Emission Diesel Standards), to a designated alternative limit (DAL) in accordance with §114.313 of this title (relating to Designated Alternative Limits), to a limit as accepted under §114.312(e) of this title, or whether the diesel fuel conforms to an alternative diesel fuel formulation approved under §114.312(f) of this title.

(c) Each producer or importer of a diesel fuel that conforms to §114.312(a) - (e) of this title shall sample and test for the aromatic hydrocarbon content and minimum cetane number in each final blend of LED that the producer or importer has produced or imported, by collecting and analyzing a representative sample of diesel fuel taken using the methodologies specified in §114.315 of this title (relating to Approved Test Methods). 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 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 will 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) Each producer or importer of a diesel fuel that conforms to §114.312(f) of this title shall sample and test for the appropriate components of the alternative diesel fuel formulation as listed in the approval notification issued by the executive director under §114.315(c) or (d) of this title in each final blend of LED that 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 the diesel fuel components of the approved alternative diesel fuel formulation to produce a final blend of LED directly to pipelines, tank ships, railway tank cars, or trucks and trailers, the loading(s) must be sampled and tested for the appropriate components of the alternative diesel fuel formulation as approved by the executive director by the producer or importer or authorized contractor at a rate of one sample and test per 250,000 gallons of

LED produced. The producer or importer shall maintain records showing the sample date, identity of blend sampled, container or other vessel sampled, final blend volume, and the content of the appropriate fuel components for two years from the date of each sampling. 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 will 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.

(e) If the alternative diesel fuel formulation being sampled and tested under subsection (d) of this section contains an additive system, the final blend must be sampled and tested for the content of the appropriate fuel components of the base fuel and additive as listed in the approval notification issued by the executive director under §114.315(c) or (d) of this title, and 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. If the additive is approved by the executive director for use with diesel fuel produced to comply with the fuel content standards specified in 40 Code of Federal Regulations §80.520, the testing for the content of the fuel components of the base fuel is not required.

(f) A producer or importer subject to the requirements of this division shall provide to the executive director any records required to be maintained by the producer or importer in accordance with this section within 15 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 will 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.

(g) 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 shall 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, United States Environmental Protection Agency, 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; and

(7) one of the following certification statements, as appropriate:

(A) "This product is Texas low emission diesel and may be used as fuel for diesel engines in any Texas county requiring the use of low emission diesel fuel."; or

(B) "This product may not be used as fuel for diesel engines in any Texas county requiring the use of low emission diesel fuel without further processing."; or

(C) "This product has been produced under a TCEQ approved alternative emission reduction plan and may be used as fuel for diesel engines in any Texas county requiring the use of low emission diesel fuel."

(h) For each final blend that is sold or supplied by a producer or importer from the party's production facility or import facility, and that 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 person(s) from whom such diesel fuel was acquired, the date(s) that it was acquired, and the invoice(s) representing the acquisition(s).

(2) The 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 this subsection 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.

(i) 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 quarterly summation report to the executive director no later than the 45th day following the end of the calendar quarter. The quarterly report must

provide, at a minimum, the information required to be collected by subsections (c) - (e), and (h) of this section and a reconciliation of the quarter's transactions relative to the requirements of subsections (c) - (e), and (h) of this section. Updates or revisions to estimated transaction volumes required by subsections (c) - (e) of this section must be included in this report.

(j) Each producer or importer electing to sell, offer for sale, supply, or offer to supply LED under §114.312(e) of this title shall provide to the executive director, as applicable, a copy of the executive order issued by the California Air Resources Board (CARB) for the Certified Diesel Fuel Formulation used to produce the LED or documentation demonstrating that the LED has been produced to meet all specifications for diesel fuel under regulations adopted by the CARB, except for those approved for small refinery compliance, that were in effect as of January 18, 2005, and shall comply with the requirements of subsections (c) and (h) of this section using the fuel specifications for aromatic hydrocarbon and cetane set by this executive order or regulations.

(k) Each producer electing to sell, offer for sale, supply, or offer to supply diesel fuel in accordance with §114.318 of this title (relating to Alternative Emission Reduction Plan) shall comply with the sampling and testing requirements of subsections (d) and (e) of this section for the appropriate fuel components of the diesel upon which the projected emission reductions were based. Each producer shall provide a quarterly report to the executive director no later than the 45th day following the end of the calendar quarter. The quarterly report must provide, at a minimum, the following information:

(1) the volume of diesel fuel produced by the producer that is subject to the provisions of the alternative emission reduction plan as approved by the executive director;

(2) the volume of diesel fuel that was not produced by the producer but was sold or supplied by the producer in the counties listed in §114.319 of this title and is subject to the provisions of the alternative emission reduction plan as approved by the executive director and the identity of the persons(s) from whom such diesel fuel was acquired and the date(s) that it was acquired. The producer shall retain records of the invoice(s) representing the acquisition(s) for two years from such date; and

(3) the information required to be collected in accordance with the sampling and testing requirements of this subsection and a reconciliation of the quarter's transactions relative to the requirements of this subsection for the appropriate fuel components of the diesel fuel that the projected emission reductions demonstrated in the producer's alternative emission reduction plan were based upon.

§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(g) 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 (relating to Affected Counties and Compliance Dates), 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.

§114.318. Alternative Emission Reduction Plan.

(a) Diesel fuel that is sold, offered for sale, supplied, or offered for supply by a producer who submits an alternative emission reduction plan in accordance with subsection (b) of this section that is approved by the executive director will be considered in compliance with the requirements of §114.312(a) of this title (relating to Low Emission Diesel Standards).

(b) An alternative emission reduction plan must demonstrate that the emission reductions associated with compliance of this division (relating to Low Emission Diesel) that are attributable to the volume of diesel fuel that is sold, offered for sale, supplied, or offered for supply by the producer to the affected counties listed under §114.319(b) of this title (relating to Affected Counties and Compliance Dates) each year will be achieved through an equivalent substitute fuel strategy in accordance with either one or a combination of the following procedures.

(1) A producer shall demonstrate for each specific group of affected counties listed under each paragraph of §114.319(b) of this title, using the Unified Model as described in the United States Environmental Protection Agency (EPA) staff discussion document, *Strategies and Issues in Correlating Diesel Fuel Properties with Emissions*, Publication Number EPA420-P-01-001, published July 2001, and using only the diesel fuel that is sold, offered for sale, supplied, or offered for supply by the producer in the specific counties listed in each group to determine the average fuel properties to be used for the demonstration applicable to each group of affected counties, the following:

(A) the average fuel properties of all on-road diesel fuel produced in any given calendar year that is sold, offered for sale, supplied, or offered for supply by the producer in the

applicable group of affected counties achieve at least a 5.5% reduction in oxides of nitrogen (NO_x) emissions for the year 2007; and

(B) the average fuel properties of all non-road diesel produced in any given calendar year that is sold, offered for sale, supplied, or offered for supply by the producer in the applicable group of affected counties achieve at least a 6.2% reduction in NO_x emissions.

(2) A producer shall demonstrate for the counties listed in §114.319(b)(4) of this title, the total number of barrels of noncompliant diesel fuel that may be offset by credits from early gasoline sulfur reduction using the following methodology or the methodology specified in paragraph (3) of this subsection.

(A) The credits from early gasoline sulfur reduction as determined in subparagraph (C) of this paragraph and paragraph (3)(A) of this subsection will be based on the actual level of sulfur in a producer's gasoline that was below the sulfur levels identified in the EPA's MOBILE6 model as the default refinery average and cap for conventional gasoline in each applicable year and as reported by the producer to EPA in accordance with 40 Code of Federal Regulations (CFR) §80.105 for 2003, and 40 CFR §80.370 for 2004 and 2005.

(B) The credits from early gasoline sulfur reduction can only be generated from the gasoline supplied by the producer in calendar years 2003, 2004, and 2005, to the counties listed in §114.319(b)(4) of this title and these credits, as determined in accordance with the applicable

gasoline-to-diesel offset ratios calculated under subparagraph (D) of this paragraph, can only be used in the counties listed in §114.319(b)(4) of this title to demonstrate compliance through December 31, 2010.

(C) The credits from early gasoline sulfur reduction will be determined based on the level of sulfur reduction in each year using the following methodologies and subject to the applicable gasoline-to-diesel offset ratios determined using the methodology specified under subparagraph (D) of this paragraph.

(i) Methodology 1 - valid only for 2003 gasoline sulfur values between 259 parts per million (ppm) and 30 ppm.

Figure: 30 TAC §114.318(b)(2)(C)(i)

$$M6 = (0.0000007 \cdot X^2) - (0.0007 \cdot X) + (0.137)$$

Where: M6 = The percent reduction in oxides of nitrogen (NO_x) emission reductions as determined using factors calculated by MOBILE6.2.

X = The gasoline sulfur level in 2003 in parts per million (ppm).

(ii) Methodology 2 - valid only for 2004 gasoline sulfur values between 121 ppm and 30 ppm.

Figure: 30 TAC §114.318(b)(2)(C)(ii)

$$M6 = (0.000003 \cdot X^2) - (0.0012 \cdot X) + (0.1042)$$

Where: M6 = The percent reduction in oxides of nitrogen (NO_x) emission reductions as determined using factors calculated by MOBILE6.2.

X = The gasoline sulfur level in 2004 in parts per million (ppm).

(iii) Methodology 3 - valid only for 2005 gasoline sulfur values between 92 ppm and 30 ppm.

Figure: 30 TAC §114.318(b)(2)(C)(iii)

$$M6 = (0.000005 \cdot X^2) - (0.0016 \cdot X) + (0.1046)$$

Where: M6 = The percent reduction in oxides of nitrogen (NO_x) emission reductions as determined using factors calculated by MOBILE6.2.

X = The gasoline sulfur level in 2005 in parts per million (ppm).

(D) To determine the number of barrels of noncompliant diesel fuel that may be offset by credits from early gasoline sulfur reduction, the actual number of barrels of lower sulfur gasoline supplied by the producer to the counties listed in §114.319(b)(4) of this title annually in 2003, 2004, and 2005, must be divided by the gasoline-to-diesel offset ratio determined in accordance with the following methodology.

Figure: 30 TAC §114.318(b)(2)(D)

$$(450.56 \cdot (5.78\%))/(GNEI \cdot M6) = \text{Gasoline-to-Diesel Offset Ratio}$$

Where: GNEI = Total oxides of nitrogen (NO_x) emissions inventory in tons per day attributed to gasoline engines for the counties listed in §114.319(b)(4) of this title as follows: 229.51 tons per day for 2003, 215.37 tons per day for 2004, and 201.24 tons per day for 2005.

M6 = The appropriate percent reduction as determined using the applicable methodology specified under subparagraph (C) of this paragraph.

(3) A producer shall demonstrate for the counties listed in §114.319(b)(4) of this title the total number of barrels of noncompliant diesel fuel that may be offset by credits from early gasoline sulfur reduction using the percentage of NO_x emission reductions attributed to on-road diesel for 2007 calculated with the Unified Model as described in paragraph (1) of this subsection, and the average fuel properties of the diesel fuel that is sold, offered for sale, supplied, or offered for supply by the producer in these specific counties, to determine the applicable offset ratio to be applied to the actual number of barrels of lower sulfur gasoline supplied by the producer to the counties listed in §114.319(b)(4) of this title annually in 2003, 2004, and 2005.

(A) To determine the number of barrels of noncompliant diesel fuel that may be offset by credits from early gasoline sulfur reduction, the actual number of barrels of lower sulfur gasoline supplied by the producer to the counties listed in §114.319(b)(4) of this title annually in 2003, 2004, and 2005, must be divided by the gasoline-to-diesel offset ratio determined in accordance with the following methodology.

Figure: 30 TAC §114.318(b)(3)(A)

$$(450.56 \cdot (5.78\%\text{-UM}))/(\text{GNEI} \cdot \text{M6}) = \text{Gasoline-to-Diesel Offset Ratio}$$

Where:

UM = Percentage of oxides of nitrogen (NO_x) emission reductions attributed to on-road diesel for 2007 as calculated with the Unified Model.

GNEI = Total NO_x emissions inventory in tons per day attributed to gasoline engines for the counties listed in §114.319(b)(4) of this title as follows: 229.51 tons per day for 2003, 215.37 tons per day for 2004, and 201.24 tons per day for 2005.

M6 = The appropriate percent reduction as determined using the applicable methodology specified under paragraph (2)(C) of this subsection.

(B) The credits from early gasoline sulfur reduction can only be generated from the gasoline supplied by the producer in calendar years 2003, 2004, and 2005, to the counties listed in §114.319(b)(4) of this title and these credits, as determined in accordance with the applicable gasoline-to-diesel offset ratios as calculated in accordance with subparagraph (A) of this paragraph, can only be used in the counties listed in §114.319(b)(4) of this title for compliance through December 31, 2010.

(4) A producer shall demonstrate for the counties listed in §114.319(b)(1) or (2) of this title, respectively, the total number of barrels of noncompliant diesel fuel that may be offset by credits from the residual effects of early gasoline sulfur reduction on the NO_x emission reduction efficiencies of catalytic converters installed in gasoline-powered motor vehicles by using the following methodology.

(A) The credits from the residual effect of early gasoline sulfur reduction may only be generated by the volume of reformulated gasoline supplied by the producer in 2004 and 2005 to the counties listed in §114.319(b)(1) or (2) of this title, that had an average sulfur level reported by

the producer to EPA in accordance with 40 CFR §80.370 that was below the sulfur level of 92 ppm in 2004, and 77 ppm in 2005.

(B) The number of barrels of noncompliant diesel fuel that may be offset by credits from the residual effects of early gasoline sulfur reduction will be determined by dividing the actual number of barrels of lower sulfur gasoline determined to be eligible to generate credit in accordance with subparagraph (A) of this paragraph by the following gasoline-to-diesel offset ratio as applicable.

(i) The gasoline-to-diesel offset ratio for eligible lower sulfur gasoline supplied to the counties listed in §114.319(b)(1) of this title will be 32.0 for calendar years 2006 through 2008.

(ii) The gasoline-to-diesel offset ratio for eligible lower sulfur gasoline supplied to the counties listed in §114.319(b)(2) of this title will be 66.0 for calendar years 2006 through 2008.

(C) The credits from the residual effects of early gasoline sulfur reduction as determined in accordance with subparagraph (B)(i) or (ii) of this paragraph can only be used in the counties listed in §114.319(b)(1) or (2) of this title, respectively, for compliance through December 31, 2008.

(c) All alternative emission reduction plans approved by the executive director prior to December 16, 2005, will expire on December 31, 2006, with the following exception. The executive director may allow a producer operating under an alternative emission reduction plan approved by the executive director prior to December 16, 2005, to continue to operate under that plan for a limited time beyond December 31, 2006, if all the following conditions are demonstrated to the satisfaction of the executive director:

(1) the producer's alternative emission reduction plan relied on the use of an alternative diesel formulation that has not been approved by the executive director under §114.315(c) of this title (relating to Approved Test Methods);

(2) the producer has submitted an application to the Air Pollution Control Technologies (APCT) Center, a center under the EPA's Environmental Technology Verification (ETV) Program, and the EPA's Office of Transportation and Air Quality's Voluntary Diesel Retrofit Program to pursue verification of this alternative diesel fuel formulation to demonstrate that it will achieve at least a 5.78% reduction in NO_x emissions when compared against a base diesel fuel with fuel properties within the ranges as described for nationwide average fuel in EPA's *Verification Protocol for Determination of Emissions Reductions Obtained by Use of Alternative or Reformulated Liquid Fuels, Fuel Additives, Fuel Emulsions, and Lubricants for Highway and Nonroad Use Diesel Engines and Light Duty Gasoline Engines and Vehicles* (Revision No. 03, September 2003);

(3) the producer has a contract with the APCT Center to perform the verification testing that is signed by both parties and paid in full by September 1, 2006; and

(4) the emissions testing as specified under an ETV test plan approved by both the APCT Center and EPA is completed before December 1, 2006.

(d) An alternative emission reduction plan must be approved by the executive director prior to the use of that plan for compliance with the requirements of this section.

(e) The executive director shall approve or disapprove alternative emission reduction plans that have been submitted by producers in accordance with subsection (b) of this section within 45 days of submittal.

(f) Alternative emission reduction plans submitted to the executive director in accordance with subsection (b) of this section must contain sufficient documentation to validate the average diesel fuel properties used in accordance with subsection (b)(1) or (2) of this section and, as appropriate, the sulfur properties and volumes of the gasoline that is being used to generate credit in accordance with subsection (b)(3) or (4) of this section.