

The Texas Natural Resource Conservation Commission (commission) adopts new §114.410 (Definitions), §114.412 (Control Requirements), §114.416 (Reporting and Recordkeeping Requirements), §114.417 (Exemptions), and §114.419 (Affected Counties). The commission adopts these revisions to new Division 2 (Heavy Equipment Fleets - Compression-Ignition Engines), Subchapter I (Non-Road Engines), Chapter 114 (Control of Air Pollution from Motor Vehicles), and to the state implementation plan (SIP) in order to reduce ambient concentrations of ground-level ozone in the Dallas/Fort Worth (DFW) ozone nonattainment area through the accelerated purchase of United States Environmental Protection Agency (EPA) certified Tier 2 and Tier 3 non-road equipment 50 horsepower (hp) and larger. These sections are adopted with changes to the proposed text as published in the December 31, 1999 issue of the *Texas Register* (24 TexReg 11943).

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED RULES

The DFW ozone nonattainment area, an area defined by Collin, Dallas, Denton, and Tarrant Counties, was originally designated “moderate” under the Federal Clean Air Act (FCAA) Amendments of 1990 (42 United States Code (USC)) and thus was required to attain the one-hour national ambient air quality standard (NAAQS) for ozone by November 15, 1996. As required by the 42 USC, §7410, the state submitted an attainment demonstration plan in 1994 which projected attainment of the ozone NAAQS by 1996. This plan was based on a volatile organic compound (VOC) reduction strategy. DFW did not attain the ozone NAAQS in 1996. The EPA is authorized to redesignate an area to the next higher classification (“bump up”) if the area fails to attain the standard by the required date. In March 1998, in accordance with 42 USC, §7511(b)(2), the EPA reclassified the DFW area from moderate to serious, based on monitored exceedances of the ozone NAAQS between 1994 and 1996. The reclassification

required the state to submit a revised SIP that demonstrated that the ozone NAAQS would be met in DFW by November 15, 1999. Because the DFW area continued to exceed the ozone NAAQS in 1999, the EPA may bump up the area to the severe classification. Regardless, the EPA and 42 USC, §7410 and §7502(a)(2), require the state to submit a revised SIP which demonstrates that the area will attain the ozone NAAQS as expeditiously as practicable. The rules adopted for DFW in this notice are one element of the ozone attainment demonstration SIP for DFW being adopted concurrently in this issue of the *Texas Register*. The commission plans to submit this SIP to the EPA in April, 2000.

In 1996, the commission began to develop new modeling for the DFW area and now is using newer air quality models with improved meteorological and emission inputs. The newer modeling since 1996 shows that reductions of oxides of nitrogen (NO_x) in the DFW area and regionally will be necessary to attain the ozone NAAQS. The current modeling also shows that achieving the ozone NAAQS in the DFW area will require strenuous effort because the area's rapid growth has resulted in increasing amounts of emissions due to increased levels of activity in the area. The emissions from increased activity are offsetting the emission reductions being achieved from new emission standards applicable to the on-road and non-road engine source categories which dominate the emissions inventory in the DFW area.

The emission reduction requirements adopted as part of this SIP package are the outcome of a development process which involved the EPA, the commission, local elected officials, citizens, industrial stakeholders, air quality researchers, and hired consultants. Local officials from the DFW

area have formally submitted a resolution to the commission requesting the inclusion of many specific emission reduction strategies, including the one contained in these rules.

The NO_x reductions required for the area to attain the ozone NAAQS have been estimated by extensive use of sophisticated air quality grid modeling which, because of its scientific and statutory grounding, is the chief policy tool for designing emission reductions. Title 42 USC, §7511a(c)(2), requires the use of photochemical grid modeling for ozone nonattainment areas designated serious, severe, or extreme.

The modeling has been conducted with input from a technical advisory committee. Hundreds of emission control strategies were considered in developing the modeling. Varying degrees of reductions from point sources and mobile sources were analyzed in at least 50 modeling iterations, to test the effectiveness of different NO_x reductions. The attainment demonstration modeling submitted for public hearing and comment concurrently with these rules shows that, in order for DFW to achieve the ozone NAAQS by 2007, almost all of the practicably achievable NO_x reductions are necessary from each emission source category, including reductions from counties surrounding the DFW nonattainment area. Therefore, each strategy, including the reductions required by this rulemaking, is crucial to meet federal requirements for the DFW nonattainment area.

The commission adopts these revisions to Chapter 114 and to the SIP in order to control ground-level ozone in the DFW ozone nonattainment area. The commission proposed the rules to apply in the four nonattainment counties, as well as the eight other perimeter counties in the DFW consolidated metropolitan statistical area (CMSA). The revisions are one element of the control strategy for the DFW Attainment Demonstration SIP. The purpose of these rules is to establish the accelerated

purchase and operation of non-road, compression-ignition fleet equipment within the 12-county DFW CMSA, to reduce emissions of oxides of nitrogen (NO_x) and volatile organic compounds (VOC) necessary for the counties included in the DFW nonattainment area to be able to demonstrate attainment with the ozone (NAAQS). The commission looked at all possible areas for reduction, and each control strategy chosen is integral and necessary to the attainment demonstration.

In its effort to ensure that the SIP strategies impose no more burden than necessary to protect health and welfare, the commission decided not to include the counties of Ellis, Henderson, Hood, Hunt, Johnson, Kaufman, Parker, and Rockwall as affected counties under these rules because of their limited effect on the air quality within the DFW nonattainment area. Analysis of the construction inventory shows that the majority of equipment is located in the current four nonattainment counties. Due to public comment and the costs and cost effectiveness of this rule the commission re-evaluated the need for implementing this rule in the eight counties surrounding the DFW nonattainment area. The re-evaluation included new photochemical modeling runs which applied these rules in the four nonattainment counties only. The results of these runs indicated a minor impact of including the eight surrounding counties in these rules, but also showed that the area could demonstrate attainment of the NAAQS without those reductions in emissions. However, other control measures which were proposed for these counties do have measurable benefits for attainment of the NAAQS and the costs associated with the other measures are considerably lower.

The EPA has been regulating highway (on-road) cars and trucks since the early 1970s and continues to set increasingly stringent emissions standards for such vehicles. After making considerable progress in

controlling the emissions from on-road vehicles, EPA turned its attention to non-road engines, which also contribute significantly to air pollution.

Non-road diesel engines, also referred to as compression-ignition engines, dominate the large non-road engine market. Examples of non-road equipment that use diesel engines include: agricultural equipment such as tractors, balers, and combines; construction equipment such as backhoes, graders, and bulldozers; general industrial equipment such as concrete/industrial saws, crushing equipment, and scrubber/sweeper; lawn and garden equipment such as garden tractors, rear engine mowers, and chipper/grinders; material handling equipment such as heavy forklifts; and utility equipment such as generators, compressors, and pumps.

EPA adopted regulations in 40 Code of Federal Regulations Part 89 (40 CFR 89), Control of Emissions from New and In-use Nonroad Engines, as effective June 17, 1994. Under 40 CFR 89, compression-ignition engines greater than 50 hp must comply with Tier 1 emissions standards that are being phased in between calendar years 1996 and 2000, depending on the size of the engine. Under the Tier 1 standards, EPA projects that NO_x emissions from new non-road, compression-ignition equipment will be reduced by over 30% from uncontrolled levels of unregulated engines. The Tier 1 standards do not apply to engines used in underground mining equipment, locomotives, and marine vessels. The Mine Safety and Health Administration is responsible for setting requirements for underground mining equipment. Locomotives and marine vessels are covered by separate EPA programs.

On October 23, 1998 EPA adopted, in 40 CFR 89, more stringent emission standards for NO_x, hydrocarbons (which are also called VOC), and particulate matter (PM) for new non-road, compression-ignition engines, to be phased in over several years beginning in model year 1999. Engines used in underground mining equipment, locomotives, and marine vessels over 50 hp are not included. This comprehensive new program phases in more stringent Tier 2 standards for all engine sizes from the model years 2001 to 2006, and yet more stringent Tier 3 standards from the model years 2006 to 2008. The following figure, which was extracted from the Table 1-1 of the “Final Regulatory Impact Analysis: Control of Emissions from Non-road Diesel Engines,” (EPA 420-R-98-016, dated August 1998) shows the emission standards adopted by EPA in 40 CFR §89.112. Also, the new program includes a voluntary program called the “Blue Sky Series” engine program to encourage the production of advanced, very low-emitting engines. Under these new standards, EPA projects that emissions from new non-road, compression-ignition equipment will be further reduced by 60% for NO_x and 40% for PM compared to the emission levels of engines meeting the Tier 1 standards.

Figure 1: 30 TAC Chapter 114 - Preamble

Emission Standards					
In grams per kilowatt-hour (g/kW-hr) and grams per horsepower-hour (g/hp-hr)					
Engine Power	Tier	Model Year	Non-Methane Hydrocarbons plus NO _x	Carbon Monoxide	Particulate Matter
kW < 8 (hp < 11)	Tier 1	2000	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	Tier 2	2005	7.5 (5.6)	8.0 (6.0)	0.80 (0.60)
8 ≤ kW < 19 (11 ≤ hp < 25)	Tier 1	2000	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	Tier 2	2005	7.5 (5.6)	6.6 (4.9)	0.80 (0.60)
19 ≤ kW < 37 (25 ≤ hp < 50)	Tier 1	1999	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	Tier 2	2004	7.5 (5.6)	5.5 (4.1)	0.60 (0.45)
37 ≤ kW < 75 (50 ≤ hp < 100)	Tier 2	2004	7.5 (5.6)	5.0 (3.7)	0.40 (0.30)
	Tier 3	2008	4.7 (3.5)	5.0 (3.7)	
75 ≤ kW < 130 (100 ≤ hp < 175)	Tier 2	2003	6.6 (4.9)	5.0 (3.7)	0.30 (0.22)
	Tier 3	2007	4.0 (3.0)	5.0 (3.7)	
130 ≤ kW < 225 (175 ≤ hp < 300)	Tier 2	2003	6.6 (4.9)	3.5 (2.6)	0.20 (0.15)
	Tier 3	2006	4.0 (3.0)	3.5 (2.6)	
225 ≤ kW < 450 (300 ≤ hp < 600)	Tier 2	2001	6.4 (4.8)	3.5 (2.6)	0.20 (0.15)
	Tier 3	2006	4.0 (3.0)	3.5 (2.6)	
450 ≤ kW ≤ 560 (600 ≤ hp ≤ 750)	Tier 2	2002	6.4 (4.8)	3.5 (2.6)	0.20 (0.15)
	Tier 3	2006	4.0 (3.0)	3.5 (2.6)	
kW > 560 (hp > 750)	Tier 2	2006	6.4 (4.8)	3.5 (2.6)	0.20 (0.15)

The North Texas Clean Air Steering Committee (steering committee), representing the DFW ozone nonattainment area counties, requested that the commission establish an ozone pollution control strategy regarding non-road, compression-ignition engines to aid in the reduction of NO_x so that the counties included in the DFW ozone nonattainment area could demonstrate attainment with the ozone NAAQS. At the request of the steering committee, and after a review of other alternatives, the commission developed an accelerated non-road, compression-ignition fleet program. Non-road equipment covered by this program only includes equipment that is exclusively used for non-road purposes. In other words, non-road equipment does not have a license plate and cannot be used on roads. Dump trucks and other equipment that are used both on-road and off-road are not subject to the requirements of these rules.

The adopted rules will require persons in the DFW nonattainment area which own or operate non-road equipment powered by compression-ignition engines 50 hp and up to meet the following requirements. For the portion of the fleet that is 50 hp up to 100 hp, the owner or operator must ensure that such equipment will consist of 100% Tier 2 non-road equipment by the end of the calendar year 2007. For the portion of the fleet that is 100 hp up to 750 hp, the owner or operator must ensure that such equipment consist of a minimum of 50% Tier 3 non-road equipment and the remainder Tier 2 non-road equipment by the end of the calendar year 2007. Finally, for the portion of the fleet that is greater than 750 hp, the owner or operator must ensure that such equipment consist of 100% Tier 2 engines by the end of calendar year 2007. The rules will accelerate the turnover rate of compression-ignition, engine-powered, non-road equipment that would naturally occur. The DFW area needs emissions reductions earlier than what natural turnover would allow; therefore, these rules will require that Tier 2 and Tier 3

equipment be purchased at an accelerated rate once they become available under the EPA schedule outlined in 40 CFR 89. The rule exempts non-road engines used in locomotives, underground mining equipment, marine application, aircraft, airport ground support equipment (GSE), equipment used solely for agricultural purposes, emergency equipment, and freezing weather equipment. Generally, the rules will affect equipment 50 hp and larger used in construction, general industrial, lawn and garden, utility, and material handling applications.

Examples of equipment used in construction applications include backhoes, bore/drill rigs, cement mixers, crawler tractors, excavators, graders, off-highway trucks, pavers, paving equipment, plate compactors, rollers, rubber-tire dozers, rubber-tire loaders, scrapers, signal boards, skid-steer loaders, trenchers, and feller/bunchers. Examples of equipment used in general industrial applications include concrete/industrial saws, crushing equipment, oil field equipment, refrigeration/air conditioning units, scrubber/sweepers, and rail maintenance equipment. Examples of equipment used in lawn and garden applications include garden tractors, rear engine mowers, and chipper/grinders. Examples of equipment used in utility applications include air compressors, hydro-power units, pressure washers, pumps, generator sets, irrigation sets, and welders. Examples of equipment used in material handling applications include aerial lifts, cranes, forklifts, and rough-terrain forklifts.

Using the Base 4d modeling emissions inventory, commission staff estimated that area and non-road emissions make up 33% of all NO_x emissions in the DFW area. The staff calculated that 48% of the emissions from area and non-road emissions inventory come from construction equipment which amounts to 16% of the region's total NO_x emissions. In the Base 4d inventory, the amount of emissions

from construction equipment in the DFW 12-county CMSA was approximately 82 tons per day. Since the time the steering committee made its recommendation, two significant changes have taken place which affect the analysis: First, the construction equipment emissions were significantly revised in the Base 6 inventory, and were further refined in the Base 6a inventory. Second, the commission has reduced the spatial extent of the rule governing hours of operation to now include only the four nonattainment counties instead of the entire 12-county CMSA. The 1996 construction equipment NO_x emission total for the four nonattainment counties in the Base 6a modeling inventory is now 50.6 tons/day.

The costs of meeting the new emission standards are expected to add about 1.0% to the purchase price of typical new non-road, compression-ignition equipment, although for some equipment the standards may cause price increases on the order of 2.0% to 3.0%. The cost of this program is the cost of having to replace the non-road, compression-ignition fleet on an accelerated schedule, not the cost of Tier 2 and Tier 3 engines. The cost of Tier 2 and Tier 3 engines is already accounted for in the EPA regulations, not as a result of these rules. The program is expected to cost between \$8,400 and \$11,700 per ton of NO_x reduced, which compares favorably with other emission control strategies.

The commission solicited comments regarding the issue of small fleets and compliance with the proposed rules. The commission also solicited comments regarding the size cutoff for small fleets below which they should be exempt. The commission used the public comment regarding small fleets to determine if the rules should be adopted with an exemption regarding small fleets. The commission received seven comments regarding small fleets and compliance with the rules. The comments stated

that there would be an adverse financial impact to small fleets because they do not have the money for purchasing new equipment and/or engines. One comment was received on a size cutoff for small fleets to be exempt. The comment was that fleets less than ten pieces should be exempt because, according to the commenter, that the 10% compliance increments suggested a fleet ten pieces or larger. Since no comments were received offering original data on small fleets in the DFW area and since there is the need to obtain as much emission reductions as possible from non-road equipment, the commission decided not to exempt small fleets. However, as explained in the Section-By-Section Discussion for §114.417, an opportunity exists for an exemption from the rules by developing an emission reduction plan that would achieve equivalent emission reductions.

SECTION-BY-SECTION DISCUSSION

Subchapter I is a new subchapter which is adopted as part of a concurrent rulemaking.

The new §114.410 adds definitions for Blue Sky Series engine, compression-ignition engine, fleet, non-road engine, non-road equipment, Tier 2 engine, and Tier 3 engine. The definitions of fleet and non-road engine have been changed in response to comments. The definition of fleet has been changed in response to a comment on leased equipment. The definition of non-road engine was changed in response to comments that the definition was broader than the federal definition. The new definition of non-road engine incorporates by reference the federal definition. The new definition of non-road equipment clarifies that equipment licensed for on-road use is not covered by this rule.

The new §114.412 will require persons in the affected counties listed in §114.419, which own or operate non-road equipment powered by compression-ignition engines to use non-road equipment powered by Tier 2 and Tier 3 compression engines. The phase-in schedule specified in these rules accelerates the natural turnover of non-road equipment. To ensure the equipment is available, the phase-in schedule specified in these rules is set up so that compliance dates come after the implementation dates of the new federal standard as specified in the schedule specified in the federal rules in 40 CFR 89.112, as amended on October 23, 1998. For the portion of the non-road fleets powered by compression-ignition engines greater than or equal to 50 hp, but less than or equal to 750 hp, the rule as proposed gradually increased the percentage of Tier 2 and Tier 3 equipment required, so that by the end of calendar year 2007, at least 50% of the affected portion of the fleet shall meet Tier 3 standards and the remainder of the affected fleet shall meet Tier 2 standards. However, due to comments that the Tier 3 non-road compression-ignition engines for the 50 to 100 hp range will not be available until 2008, the commission changed the requirements. The portion of the fleet greater than or equal to 100 hp, but less than 750 hp, will continue to be required to have at least 50% of the equipment meeting Tier 3 standards and the remaining meeting Tier 2 standards. For the portion of the fleet greater than or equal to 50 hp, but less than 100 hp, the requirements have been changed to require that 100% of the equipment meet Tier 2 standards by the end of calendar year 2007. For engines greater than 750 hp, the rule requires that 100% of the affected fleet be Tier 2 engines by the end of calendar year 2007. The rule also allows the non-road engines designated as “Blue Sky Series” engines be counted toward the percentage requirements as either Tier 2 or Tier 3 engines. The “Blue Sky Series” engine program is a voluntary EPA program that allows for earlier introduction of cleaner engines. The emission standards for the Blue Sky Series program are the same as Tier 3 emission

standards. Finally, the rule will allow that an EPA-certified retrofit of newly purchased engines, in order to meet the Tier 2 or Tier 3 emission standards, be allowed to meet the percentage requirements. This retrofit allowance is adopted because some newly purchased engines may be able to meet the Tier 2 and Tier 3 emission standards by being retrofitted. Therefore, for an affected entity to meet the percentage requirements, they may purchase new equipment or retrofit existing engines if there is an EPA-certified retrofit available.

Language has been added to §114.412(a) that clarifies that an operator of a fleet is responsible for compliance to the rules for equipment that is leased for more than one year. For equipment that is leased for less than one year, the owner of the equipment is responsible for compliance. An editorial change was also made in §114.412(a) that replaced “State and local governments, businesses, and private entities” with “persons.”

The new §114.416 requires persons subject to §114.412 to submit annual fleet reports. The rule also requires them to maintain copies of the submitted reports for a minimum of three years. The date that the initial report is due was changed from 2002 to 2005. Editorial changes were made in §114.416(a) that replaced “governments, businesses, and private entities” with “persons;” in §114.416(a)(2) “affected entities” was replaced with “persons;” in §114.416(a)(3) “person” was replaced with “individual;” and in §114.416(b) “entity” was replaced with “person.” Other minor editorial revisions were made to §114.416(b) for the sake of clarity.

The new §114.417 exempts locomotives, underground mining equipment, aircraft engines, airport GSE, and agricultural equipment. Locomotives, underground mining equipment, marine engines, and aircraft engines are exempt from this rule because they are not regulated by the EPA non-road rule. Airport GSE is exempt from this rule because it is being regulated by another rule being adopted concurrently. Agricultural equipment is exempt from the rule because of its small contribution (less than 1.0%) to non-road emissions, and it is operated primarily in rural areas. Also, the commission added an exemption for equipment used exclusively for emergency operations and for equipment used exclusively for freezing weather operations due to their low impact on air quality during the ozone season. In the separate rulemaking for the Construction Equipment Operating Restrictions rules (Rule Log 1999-055J-114-AI), the commission specifically requested comment on allowing the use of added controls such as catalytic converters or other after-market devices, or the use of EPA-certified cleaner equipment, to exempt such equipment from the operating restrictions of these rules. In response to the Construction Equipment Operating Restrictions exemption comments and other comments to these rules concerning the difficulty in complying with these rules, the commission added a new subsection (b). The new subsection allows owners or operators to be exempt from the requirements of these rules if they submit an emissions reduction plan by May 31, 2002, that is approved by the Executive Director and EPA by May 31, 2003. The commission anticipates that by offering this exemption, the entities affected by these rules, the trade associations representing these entities, and the manufacturers will be encouraged to accelerate the research and development of emissions-reducing technology for equipment that will enable affected entities to meet the exemption. Each plan must describe in detail how the owner or operator will modify the equipment fleet to reduce NO_x emissions by June 1, 2005 by a target amount equivalent to the total reductions achieved by implementation of these rules. If equipment subject to

these rules is also subject to the Construction Equipment Operating Restrictions rules, and the owner or operator would like to be exempt from both sets of rules, then the plan must reduce NO_x emissions by a target amount equivalent to the total reductions achieved by both sets of rules. If the plan demonstrates that these reductions will occur by June 1, 2005, the reductions will be considered equivalent for purposes of timing. The commission will apply emissions inventory factors for equipment used in the modeling used in the development of these rules to quantify the emissions reductions resulting from the fleet modifications. The commission will develop a guidance document to assist operators in developing their plans. The guidance document will contain both the target emissions amount operators must meet, as well as emission factors for each type of equipment affected by the rules, and will offer guidance on how to calculate total emissions reductions for an equipment fleet. Examples of modifications include replacing existing equipment with cleaner-burning engines, retrofitting existing equipment with emissions-reducing technology, using emissions-reducing fuel, and participating in an emissions banking and trading program.

The commission is requiring submission of the emission reduction plans by May 31, 2002 to allow sufficient time to review and quantify the collective emissions reductions the plans propose. The commission will complete the reviews by May 31, 2003, which coincides with the planned mid-course review of all control measures included in the SIP. After reviewing the plans, the commission will determine whether the collective emissions reductions proposed by the plans are equivalent to the reductions achieved from implementing both these rules.

Editorial revisions were also made to §114.417(a) for the sake of clarity.

The new §114.419 specifies the counties subject to the new requirements. The counties proposed to be included were all 12 counties in the DFW CMSA. However, the commission changed counties subject to the rule to include only the four nonattainment counties in the DFW CMSA (Collin, Dallas, Denton, and Tarrant).

Editorial revisions were also made to §114.419 to replace “state and local governments, businesses, and private entities” with “persons.”

FINAL REGULATORY IMPACT ANALYSIS

The commission reviewed the rulemaking action in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rulemaking meets the definition of a “major environmental rule” as defined in that statute. “Major environmental rule” means a rule the specific intent of which is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The amendments to Chapter 114 are intended to protect the environment or reduce risks to human health from environmental exposure to ozone and could affect in a material way, the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The amendments would require persons in the four-county DFW nonattainment area which own or operate non-road, compression-ignition equipment to meet the following requirements. For the portion of the fleet with equipment powered by non-road engines in the 50 hp to 100 hp range, the owner or operator must ensure that 100% of such equipment

will meet Tier 2 standards by the end of the calendar year 2007. For the portion of the fleet in the 100 hp to 750 hp range, the owner or operator must ensure that at least 50% of such equipment meets Tier 3 standards and the remaining meets Tier 2 standards. For the portion of the fleet greater than 750 hp, the owner or operator must ensure that 100% of such equipment meet Tier 2 standards by the end of calendar year 2007. This air pollution control program is part of the strategy to reduce NO_x emissions necessary for the counties included in the DFW nonattainment area to be able to demonstrate attainment with the NAAQS for ozone. The steering committee representing the DFW ozone nonattainment area counties requested an air pollution control program, including the use of Tier 2 and Tier 3 non-road, compression-ignition engine standards, be established to reduce NO_x emissions necessary for the counties included in the DFW nonattainment area to be able to demonstrate attainment with the ozone NAAQS. The amendments are part of the commission response to the request and one element of the DFW Attainment Demonstration SIP. Although the amendments meet the definition of a “major environmental rule” as defined in the 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, unless the rule is specifically required by state law; 2. exceed an express requirement of state law, unless the rule is specifically required by federal law; 3. exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4. adopt a rule solely under the general powers of the agency instead of under a specific state law. This rulemaking action does not meet any of these four applicability requirements. Specifically, the use of Tier 2 and Tier 3 non-road, compression-ignition engine standards within these rules were developed in order to meet the NAAQS for ozone set by the EPA under 42 USC, §7409, and therefore meet a federal requirement. States are primarily responsible for ensuring attainment and

maintenance of NAAQS once EPA has established those standards. Under 42 USC, §7410 and related provisions, states must submit, for EPA approval, SIPs that provide for the attainment and maintenance of NAAQS through control programs directed to sources of the pollutants involved. This rulemaking action is not an express requirement of state law, but was developed specifically in order to meet the air quality standards established under federal law as NAAQS. These rules are intended to help bring ozone nonattainment areas into compliance, and help keep attainment and near nonattainment areas from going into nonattainment. These rules do not exceed a standard set by federal law, exceed an express requirement of state law unless specifically required by federal law, nor exceed a requirement of a delegation agreement. These rules were not developed solely under the general powers of the agency, but were specifically developed to meet the air quality standards established under federal law as NAAQS, as authorized under the Texas Clean Air Act (TCAA), §§382.012, 382.017, 382.019, and 382.039. Two businesses and one trade group submitted comments on the draft regulatory impact analysis during the public comment period which are addressed in the ANALYSIS OF TESTIMONY section of this preamble.

TAKINGS IMPACT ASSESSMENT

The commission prepared a takings impact assessment for these rules in accordance with Texas Government Code, §2007.043. The following is a summary of that assessment. The specific purpose of the rulemaking is to require persons in the four-county DFW nonattainment area which own or operate non-road, compression-ignition equipment to meet the following requirements. For the portion of the fleet with equipment powered by non-road engines in the 50 hp to 100 hp range, the owner or operator must ensure that 100% of such equipment will meet Tier 2 standards by the end of the

calendar year 2007. For the portion of the fleet in the 100 hp to 750 hp range, the owner or operator must ensure that at least 50% of such equipment meets Tier 3 standards and the remainder of the fleet meets Tier 2 standards. For the portion of the fleet greater than 750 hp, the owner or operator must ensure that 100% of such equipment meet Tier 2 standards by the end of calendar year 2007. This rulemaking action will act as an air pollution control strategy to reduce NO_x emissions necessary for the four counties included in the DFW ozone nonattainment area to be able to demonstrate attainment with the ozone NAAQS. Promulgation and enforcement of these rules will not burden private, real property. 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 partially fulfill a federal mandate under 42 USC, §7410. Specifically, the emissions limitations and delays within these rules 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 the NAAQS, once the EPA has established them. Under 42 USC, §7410, and related provisions, states must submit, for EPA approval, SIPs that provide for the attainment and maintenance of NAAQS through control programs directed to sources of the pollutants involved. Therefore, the purpose of these rules is to implement a cleaner-burning, non-road, compression-ignition fleet program necessary for the DFW nonattainment area to meet the air quality standards established under federal law as NAAQS. Consequently, the exemption which applies to these rules is that of an action reasonably taken to fulfill an obligation mandated by federal law. Therefore, these revisions will not constitute a takings under the Texas Government Code, Chapter 2007.

COASTAL MANAGEMENT PROGRAM CONSISTENCY REVIEW

The commission determined that this rulemaking relates to an action or actions subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act of 1991, as amended (Texas Natural Resources Code, §§33.201 et seq.), and the commission rules in 30 TAC Chapter 281, Subchapter B, concerning Consistency with the Texas Coastal Management Program. As required by 31 TAC §505.11(b)(2) and 30 TAC §281.45(a)(3), relating to actions and rules subject to the CMP, commission rules governing air pollutant emissions must be consistent with the applicable goals and policies of the CMP. The commission reviewed this action for consistency with the CMP goals and policies in accordance with the rules of the Coastal Coordination Council, and determined that the action is consistent with the applicable CMP goals and policies. The CMP policy applicable to this rulemaking action is the policy that commission rules comply with regulations in 40 CFR, to protect and enhance air quality in the coastal area (31 TAC §501.14(q)). No new sources of air contaminants will be authorized by these rule amendments. Therefore, in compliance with 31 TAC §505.22(e), the commission affirms that this rulemaking action is consistent with CMP goals and policies. There were no comments on the consistency of these rules with the CMP during the public comment period.

HEARING AND COMMENTERS

The commission held public hearings on this proposal on January 24, 2000 in El Paso; January 25, 2000 in Austin; January 26, 2000 in Longview and Irving; January 27, 2000 in Dallas and Lewisville; January 28, 2000 in Fort Worth; January 31, 2000 in Beaumont and Houston; and February 9, 2000 in Denton. The comment period was originally scheduled to close on February 1, 2000, but was extended

until 5:00 p.m. on February 14, 2000. (See the January 21, 2000 issue of the *Texas Register* (25 TexReg 461).) The following 703 commenters submitted oral and/or written testimony: Alternative Fuel Technology, Inc. (AFT); Associated General Contractors of America - Dallas Chapter (AGC); Baker & Botts L.L.P. on behalf of the Texas Industry Project (Baker & Botts); Business Coalition for Clean Air of Houston (BCCA); the Cities of Cleburne, Corpus Christi, Dallas, Farmers Branch, Greenville, Irving, Plano, and Waxahachie; Downwinders At Risk (DAR); Dallas Fort Worth International Airport Board (DFW Airport); Dunaway & Cross on behalf of the Industrial Truck Association (Dunaway & Cross); Ellis County Judge Al Cornelius (Ellis County); Engine Manufacturers Association (EMA); EPA Region 6; ExxonMobil Chemical Company (ExxonMobil); Home Builders Association of Greater Dallas (HBA); Henderson County Commissioner, Precinct 2, Wade McKinney (Henderson County); Hood County Commissioner, Precinct 3, Ron Cullers (Hood County); North Central Texas Council of Governments submitted a report that described the impact of the rules to the City of Arlington (NCTCOG-Arlington); Neighbors for Neighbors (NFN); Organization of Hispanic Contractors of Dallas (OHC); Sustainable Economic and Environmental Development (SEED); Frank Siddons Insurance (Siddons); Greater Fort Worth Sierra Club (Sierra-Greater Fort Worth); Sierra Club - Dallas Regional Group (Sierra-Dallas Region); Dallas Sierra Club (Sierra-Dallas); Silver Creek Materials Recycling & Compost (Silver Creek); Texas Chemical Council (TCC); Texas Campaign for the Environment (TCE); Thompson & Knight; Texas Nursery & Landscape Association (TNLA); Texas Public Citizen (TPC); Trinity Industries (Trinity); Texas Clean Water Action (TWCA); Lone Star Chapter of the Solid Waste Association of North America (TxSWANA); Waste Management, Inc. (WMI); and 663 individuals. The Sierra-Dallas Regional; Sierra-Greater Fort

Worth; DAR; SEED; TCE; TWCA; and TPC submitted joint comments and will be referred to as Sierra-Dallas Region.

The following commenters generally opposed the proposal: Baker & Botts; Cleburne; Greenville; Irving; Waxahachie; Dunaway & Cross; Siddons; Henderson County; Hood County; OHC; TNLA; Thompson & Knight; and WMI.

The following commenters generally supported the rules but suggested changes or clarifications to the proposal as stated in the ANALYSIS OF TESTIMONY section of this preamble: AFT; AGC; BCCA; City of Corpus Christi (Corpus Christi); City of Dallas (Dallas); City of Farmers Branch (Farmers Branch); City of Plano (Plano); DFW Airport; Sierra-Dallas; Ellis County; EMA; EPA Region 6; ExxonMobil; HBA; NCTCOG-Arlington; TxSWANA; NFN; Silver Creek; TCC; Trinity; and 96 individuals generally supported the proposed rule but suggested changes or clarifications. Sierra-Dallas Region's comments included the *Citizen's Implementation Plan for Cleaner Air in DFW* (January 2000). Silver Creek supported the comments submitted by TxSWANA.

ANALYSIS OF TESTIMONY

Baker & Botts, Dunaway & Cross, EMA, and WMI commented that the proposed rule is preempted by federal law. The commenters stated that the proposed rules expressly require fleets to meet engine standards, and that the proposed standards exceed federal standards since federal standards do not apply to in-use engines. They stated that §209(e)(2) of the FCAA authorizes only California to adopt and enforce "standards and other requirements relating to the control of emissions." They further stated

that other states are empowered to adopt California's new or used engine standards, but are not otherwise allowed to adopt new or used engine standards. The commenters further stated that since California does not require Tier 2 or Tier 3 engine standards for in-use off-road equipment, Texas cannot adopt such standards. Dunaway & Cross commented that the rules are also not an "in-use" regulation.

The commission disagrees that these rules are preempted by federal law. The rules do not set a standard for non-road engines, but instead require that certain percentages of a non-road fleet meet the existing federal Tier II and Tier III standards. No manufacturer will have to create a special vehicle for Texas, which is what Congress intended to prohibit. Additionally, these rules do not set a standard for in-use engines, but simply restrict the use of older, dirtier engines within the DFW nonattainment area. This type of use restriction is clearly allowed for state implementation by EPA rule and caselaw regarding preemption under the FCAA, §209(e). See 59 Fed. Reg. 36, 969 (July 20, 1994) and Engine Manufacturers Association v. E.P.A., 88 F.3d 1075 (D.C. Cir. 1996). The commission disagrees with the Dunaway & Cross comment which characterizes these rules as a standard instead of a use restriction.

Thompson & Knight commented that the State of Texas is preempted by federal law to require the retrofit or re-engining of existing non-road engines.

The commission disagrees with this comment because these rules do not require the retrofit of existing non-road engines, but simply allows retrofitting as an option for compliance. These rules

restrict the use of the older, dirtier engines within the nonattainment area which is allowed as a use restriction. There will be vehicles available for purchase which meet the federal Tier 2/Tier 3 standards without any retrofit needed. Retrofit may prove to be the most cost-effective option for some businesses, which is why it was included as an option, but it is not required. For these reasons the commission does not believe the rules are preempted by federal law.

Thompson & Knight commented that the TCAA prohibits the TNRCC from requiring that land vehicles meet any state approval criteria as distinct from federal approval criteria.

The commission disagrees that these rules are prohibited by Texas Health and Safety Code (THSC), §382.019(b). The language of this statute limits its application to prohibit state inspection, certification, or other approval of emission control features of motor vehicles “as a condition precedent to the initial sale.” This statutory language was intended to prohibit duplicate state certification programs for new vehicles when a federal program already exists. These rules do not set a standard for new vehicles, they require that a certain percentage of the fleet meet existing federal standards. The statute was also intended to apply only to on-road vehicles as is generally meant by the term, “motor vehicle.” And finally, these rules do not set up a state approval process. The approval process takes place at the federal level when manufacturers demonstrate to EPA that the non-road equipment meets the federal Tier 2/Tier 3 standards. For these reasons, the language of THSC, §382.019(b), does not prohibit these rules.

TxSWANA commented that the commission needs to perform a more meaningful Regulatory Impact Analysis (RIA). TxSWANA stated that all of the applicability requirements for a full RIA have been met and that TNRCC is not excused from the RIA requirements when it proposes specific control strategies to meet the mandated NAAQS. TxSWANA commented that the RIA process was designed to require a careful cost/benefit analysis when an agency must pick and choose from a group of possible strategies to meet a more generalized goal. They further stated that the legislative history of the RIA requirement makes it clear for such rules as being proposed for the attainment of the NAAQS in the DFW area. TxSWANA also stated that for the RIA, TNRCC has failed to explain or support its statement that the laws cited and summarized in the preamble specifically require adoption of these rules.

Although the commission determined that this is a major environmental rule because it may adversely impact in a material way a sector of the economy, the commission is not required to perform an RIA because the rules do not meet any of the criteria listed in Texas Government Code, §2001.0225(a). The rules do not exceed a standard set by federal law or state law. The standard in this case is the NAAQS for ozone. The state is required to demonstrate compliance with this standard under federal law, 42 USC, §7410, and under state law, THSC, §382.012 and §382.039. As shown in the modeling for the SIP that is associated with this control strategy, the state is requiring no more emission reductions than absolutely required to meet the standard. Additionally, these rules would not exceed a requirement of a delegation agreement or contract with the federal government because none exists on this topic. And finally, these rules have not

been proposed under the general powers of the agency, but instead have been proposed under the specific state laws found in THSC, §§382.011, 382.012, 382.017, 382.019, and 382.039.

The commenter has stated that the commission cannot avoid the requirement to perform a RIA simply by saying that if a rule is needed for SIP purposes, then the rule is federally mandated. Section 7410 of the FCAA requires states to adopt a SIP which provides for “implementation, maintenance, and enforcement” of the primary national ambient air quality standard in each air quality control region of the state. While §7410 does not require specific programs, methods or reductions in order to meet the standard, state SIP’s must include “enforceable emission limitations and other control measures, means or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance as may be necessary or appropriate to meet the applicable requirements of this chapter,” (meaning Chapter 85, Air Pollution Prevention and Control). It’s true that the FCAA does require some specific measures for SIP purposes, like the inspection and maintenance program, but those programs are the exception, not the rule, in the SIP structure of the FCAA. The provisions of the FCAA recognize that states are in the best position to determine what programs and controls are necessary or appropriate in order to meet the national ambient air quality standards. This flexibility allows states, affected industry, and the public, to collaborate on the best methods for attaining the national ambient air quality standards for the specific regions in the state. Even though the FCAA allows states to develop their own programs, this flexibility does not relieve a state from developing a program that meets the requirements of §7410. Thus, while specific measures are not generally required, the emission reductions are

required. States are not free to ignore the requirements of §7410 and must develop programs to assure that the nonattainment areas of the state will be brought into attainment on schedule.

Therefore, adopting the SIP rules are specifically required by federal law.

Additionally, the legislative history contradicts the conclusion of the commenter that a full RIA is required of these rules. The requirement to provide a fiscal analysis of proposed regulations in the Texas Government Code were amended by Senate Bill 633 (SB 633) during the 75th Legislative Session. The intent of SB 633 was to require agencies to conduct a regulatory impact analysis of extraordinary rules. These are identified in the statutory language as major environmental rules that will have a material adverse impact and will exceed a requirement of state or federal law, a delegated federal program or is adopted solely under the general powers of the agency. With the understanding that this requirement would seldom apply, the commission provided a cost estimate for SB 633 that concluded “based on an assessment of rules adopted by the agency in the past, it is not anticipated that the bill will have significant fiscal implications for the agency due to its limited application.” The commission also noted that the number of rules that would require assessment under the provisions of the bill was not large. This conclusion was based, in part, on the criteria set forth in the bill that exempted proposed rules from the full analysis unless the rule was a major environmental rule that exceeds a federal law. As discussed above, the FCAA does not require specific programs, methods or reductions in order to meet the national ambient air quality standards, thus, states must develop programs for each nonattainment area to ensure that area will meet the attainment deadlines. Because of the ongoing need to address nonattainment issues, the commission routinely adopts rules for inclusion

into the SIP. The legislature is presumed to understand this federal scheme. If each rule proposed for inclusion in the SIP was considered to be a major environmental rule that exceeds federal law, then every SIP rule would require the full RIA contemplated by SB 633. This conclusion is inconsistent with the conclusions reached by the commission in its cost estimate and by the Legislative Budget Board (LBB) in its fiscal notes. Since the legislature is presumed to understand the fiscal impacts of the bills it passes, and that presumption is based on information provided by state agencies and the LBB, the commission believes that the intent of SB 633 was to only require the full RIA for rules that are extraordinary in nature. While the SIP rules will have a broad impact, that impact is no greater than is necessary or appropriate to meet the requirements of the FCAA. For these reasons, SIP rules fall under the exception in Texas Government Code, §2001.0225(a), because they are specifically required by federal law.

TxSWANA commented that the TNRCC reliance upon the exception under Texas Government Code, §2007.003(b)(4), as a reason not to perform Takings Impact Assessment (TIA) is not proper. They stated that the federal law mandates attainment with NAAQS, but that it cannot be said to specifically mandate any one control strategy. The commenter also expressed that the legislature intended a TIA to be prepared in situations where a choice is being made among several options to fulfill a federal mandate. They stated that in order for TNRCC to establish that a TIA is not required, TNRCC is required to specifically describe why each control strategy is “reasonably taken to fulfill the attainment mandate.

The primary reason the commission determined that these rules did not constitute a takings under Texas Government Code, Chapter 2007, is that they will not burden private real property. These rules apply to non-road equipment which is not real property or appurtenance thereto. In its complete analysis the commission also found that the rules are exempt from Chapter 2007 under §2007.003(b)(4) because they are reasonably taken to fulfill an obligation mandated by federal law. The commission has included in this preamble its reasoned justification for adopting this strategy and has explained why it is a necessary component of the SIP which is federally mandated. This description meets the requirements of §2007.003(b)(4). For these reasons the rules do not constitute a takings under Chapter 2007.

Thompson & Knight commented that the proposed rules constitute a takings under the United States Constitution and the Texas Constitution

The commission disagrees that these rules constitute a taking under either the United States or Texas Constitutions. These rules do not actually “take” any property in the sense of diminishing its value in a significant way. All noncompliant equipment may be sold for use in areas outside the four-county nonattainment area. The market value of this equipment should not be substantially lost due to the inability to use it in this limited area. Additionally, this rule is a legitimate use of the police powers of the state to protect the health and welfare of its citizens and, therefore, it is permissible. Ensuring that the air meets health standards protects the health and welfare of the citizenry and these rules are a reasonable method of achieving that goal.

AGC, Silver Creek, and TxSWANA commented on the completeness of the economic impact analysis. AGC stated that TNRCC should perform the economic impact and “major environmental rule” cost benefit analyses, as required by Texas statute. TxSWANA and Silver Creek also stated that the commission has failed to comply with its statutory obligations to prepare a complete and accurate Fiscal Note.

The commission does not agree that a cost benefit analysis is required and the commission believes that all statutory obligations have been met in preparing the fiscal note. Since the commission has determined that an RIA is not required, the subsequent cost-benefit analysis required by an RIA is not required. Therefore, the commission has met its obligations by describing cost to governments and other affected parties of these rules in the Fiscal Note, Public Benefit, and Small Business and Micro-Business Impact Analysis sections of the rule proposal.

An individual, AGC, HBA, OHC, Thompson & Knight, and TNLA commented on the impact to small businesses, and businesses owned by minorities or women. An individual, AGC, HBA, and OHC stated that small contractors would be adversely affected financially. OHC and AGC also stated that minority-owned businesses would be adversely affected. AGC further stated that women-owned contractors will be adversely affected because they do not have the resources to comply with the rules. TNLA stated that the proposed rule will negatively impact small businesses. TNLA stated that the proposed rules will require significant capital expenditures in a short period of time and will increase the cost of doing business and that small businesses lack sufficient cash flow or lines of credit to meet the requirements of the rules. Finally, Thompson & Knight stated that small operators will be

disproportionately affected since with the percentage requirements, they will have to convert more or all of their equipment sooner than larger fleets.

The commission agrees that there will be a fiscal impact to all small contractors. However, the commission is under federal mandate from the FCAA to submit a plan that will attain the air quality standards in the DFW non-attainment area. These rules are one of many that will be submitted to ensure clean air for the region. The commission has considered exempting smaller fleet to mitigate the cost to small businesses but the emission reductions were ultimately needed to demonstrate attainment. However, a Carl Moyer type program (for funding) is being studied and the staff is preparing a briefing paper regarding issues, interim solutions, and a state-wide pilot program which would be viable for not only DFW but other nonattainment and near-nonattainment areas within Texas. A program of this type must be approved by the Texas Legislature for grant funding.

Also, the adopted rule includes a provision for an emission reduction plan. This is a plan submitted to the commission by a fleet owner or operator to show alternate methods of achieving emission reductions equivalent to the emission reductions that would be achieved by complying with the requirements of these rules. This will allow for the impact to small operators to be mitigated if they find ways to get the emission reductions without having to buy new equipment. For example, a fleet may get equivalent reductions if they use emulsified diesel or other fuel-control technologies.

OHC, TxSWANA, and Thompson & Knight commented on the value of their equipment. OHC stated that the sale of old equipment would not be profitable because of the inability to sell to local buyers. TxSWANA also stated that the costs of phasing out or retrofitting diesel equipment will be significant. TxSWANA continued to state that the combined effect of the Construction Equipment Operating Restrictions rules and these rules will decrease the value of equipment at a much faster rate than normal depreciation. Thompson & Knight stated that the market will be glutted and the prices will be depressed.

The commission agrees that this is a possible scenario. However, there will still be a market for this equipment outside the four nonattainment so the equipment will still retain value for resell. Also, through the use of the emission reduction plans, some older used equipment potentially could still be used in the four nonattainment counties since other less costly measures may be used if proven to get equivalent reductions. Therefore, although the value of the equipment may be lower, there is still a market and the equipment can still be sold.

Siddons commented on the effect to the financial condition of contractors. Siddons stated that virtually all the fleets of contractors they reviewed would be forced to buy new and sell used equipment at the same time. This will depress the value of used equipment, and when coupled with the cost of purchasing new equipment, the contractors's financial condition will be affected. Siddons further stated that the Texas Department of Transportation requires contractors to provide performance and payment bonds on all new construction contracts. Siddons commented that the financial condition of a contractor is one of the prime factors in a contractor's ability to provide these bonds and that the proposed rules

will affect the contractor's ability to provide these bonds due to the increased financial demands of complying with the proposed rules. The net result of this is a reduced pool of capacity in the road construction industry which will drive up the cost of road construction which will reduce overall improvements to our highway system provided by a limited number of highway dollars which will eventually lead to the net result of a decreasing in air quality in the DFW area because limited funds are available with which to construct the highway infrastructure system. Siddons also stated that any provision which has the result of decreasing the mobility of the traveling public will leave cars and trucks on the road longer, therefore increasing emissions far beyond any reduction achieved by the proposed rules.

The commission agrees that there may be a financial impact to the contractors. However, these proposed rules are one of many needed for the DFW area to reach attainment. If these rules are not included in the SIP and no replacement strategy can be found, then the SIP will not be approved. This will mean that no roads will be constructed while the area is in a conformity lapse. The commission believes that it is in the best interest of the DFW area that these rules be adopted so that road construction can continue.

Also, the rules include a provision for an emission reduction plan. This is a plan submitted to the commission by a fleet owner or operator to show alternate methods of achieving emission reductions equivalent to the emission reductions that would be achieved by complying with the requirements of these rules. This will allow for possible mitigation of costs to the fleets if they find alternate methods to get the emission reductions without having to buy new equipment.

Henderson County expressed opposition to the proposed rules because they would be a financial burden for the local governments and tax paying citizens because of increased costs.

The commission agrees that there will be a financial burden to small local governments and taxpaying citizens. However, the commission is under federal mandate from the FCAA to submit a plan that will attain the air quality standards in the DFW nonattainment area. These rules are one of many that will be submitted to ensure clean air for the region.

In regard to Henderson County, the proposal called for a 12-county area, including Henderson County, to be subject to the rules because modeling has shown that ozone is a regional problem and is not just a local problem. However, in regard to these rules, analysis of the construction equipment inventory shows that the majority of equipment is located in the current four nonattainment counties, and therefore the adopted rules will only affect the four-county area (Collin, Dallas, Denton, and Tarrant).

AGC, DFW Airport, Farmers Branch, Irving, NCTCOG-Arlington, Silver Creek, Trinity, and WMI commented on the financial impact of these rules. AGC stated that no economic impact calculations have been performed. AGC also stated the cost of construction will increase. Farmers Branch suggested that a cost/benefit analysis be done on replacing fleet equipment. They also stated that the impact of the proposed rules would be on the cost of purchasing new equipment to meet the Tier 2 and Tier 3 emission standards and that they will have to review their equipment replacement program in future years. WMI commented that retrofitting existing equipment is not cost effective. NCTCOG-

Arlington stated that the City of Arlington will need to purchase eleven pieces of equipment earlier than intended and that to purchase these eleven pieces, the city will likely have to delay purchasing needed on-road equipment, such as police cars, in order to meet the requirements of the proposed rules. Irving stated that the cost of replacing their landfill fleet will drain their Equipment Replacement Fund that is available for all city departments, which would deprive other city departments of the funds needed to provide essential services. Irving suggested that the financial impact on them as well as the solid waste operations of the entire DFW area should be evaluated. Silver Creek stated that the proposed rules will create a significant economic burden for its composting and mining operations. Silver Creek also commented that the cost implications for facilities like theirs should be taken very seriously because of the commission stated goals of encouraging recycling, avoiding land disposal, and preserving precious landfill capacity. DFW Airport stated that it is an economic burden to meet the requirements for calendar years 2006 and 2007. Trinity stated that the accelerated purchase and upgrade of equipment is estimated to cost them \$10.3 million between years 2001 through 2007.

The commission disagrees that no economic impact calculations have been performed. In the proposed rule preamble, the fiscal impact to the parties affected by these proposed rules are detailed in the Fiscal Note, Public Benefit, and Small Business and Micro-Business Impact Analysis sections. These analyses have shown that costs will be high. The commission understands that there will be a financial burden, however, the use of the newer Tier 2 and Tier 3 engines are one of the measures needed for the DFW area to reach attainment. Under the FCAA, the cost to meet a health-based standard does not need to be considered. The commission strives to use the most cost-effective measures when possible. The commission also understands that

Arlington, Farmers Branch and Irving will be challenged to meet the requirements of these rules. These cities will need to plan for new purchases carefully. The commission urges these cities as well as other cities in the DFW nonattainment area to consider developing an emission reduction plan that will get them the equivalent emission reductions and therefore exempt them from the requirements of these rules.

The commission also understands that costs will be significant for Silver Creek and the commission continues to support recycling as a way to preserve landfill capacity. However, the commission is under federal mandate from the FCAA to submit a plan that will attain the air quality standards in the DFW nonattainment area. These rules are one of many that will be submitted to ensure clean air for the region.

Thompson & Knight commented that their client has a loader that will reach the end of its useful life in 2000 or 2001. They also stated that their client will be forced to buy equipment that is not Tier 2 compliant and thus will have to sell it when the Tier 2 equipment reaches the market.

The commission understands that there will be situations like this. The commission believes that, if all possible, the life of the existing equipment should be extended until the Tier 2 equipment come out on the market. If this is not possible, there remains the options of purchasing used equipment or leasing equipment until Tier 2 equipment is available.

OHC commented that the equipment manufacturers already are required to produce low-emitting vehicles as required by the Texas Clean Fleet Program.

The Texas Clean Fleet Program is only for on-road vehicles while this program applies only to non-road equipment. Therefore the commission has made no change in response to this comment.

OHC commented that the proposed rules offer no guarantees that NO_x and VOC emissions will be reduced.

The commission disagrees with this comment. The newer Tier 2 and Tier 3 engines are lower emitting engines than their predecessors. Therefore NO_x and VOC emissions will be reduced.

Corpus Christi commented that the proposed rules have the potential to cause severe adverse impacts on areas in the state outside of the DFW nonattainment area. Corpus Christi stated that the equipment that is being replaced will be diverted to near nonattainment areas, and therefore will make it harder for these areas to stay in attainment. Corpus Christi suggested that this can be avoided by using retrofit technology rather than forced replacement of the equipment. Corpus Christi also requested that the commission quantify the impact these proposed rules will have on the near nonattainment areas and incorporate the results of this determination in the rulemaking process.

The commission agrees that the equipment being replaced may be diverted to near nonattainment areas as well as to other areas that are in attainment. However, this equipment being diverted,

will be the same kind of equipment that is currently being used in these near-nonattainment areas. Therefore, the commission believes that there will not be a significant adverse impact. However, cities might explore the possibility of enacting a local ordinance to restrict this kind of equipment from entering their area.

In regard to the suggestion that retrofit technology be used instead of forced replacement, the rules have retrofit as an option for compliance to the rules. The commission believes that a choice should be given regarding to methods of compliance. Non-road equipment can either be bought new or can be retrofitted to reach compliance of the rules. Also the emission reduction plan will allow other control technologies to be used if the fleet operator or owner can prove to the commission that they will get equivalent reductions. This will allow for other options to be pursued and possibly less older equipment from the DFW area diverted to near nonattainment areas such as Corpus Christi.

An individual commented that he wondered if a study has been done to identify the major polluters in the DFW area. The individual also noted that in the Grapevine area he has noticed plumes of smoke from diesel vehicles such as 18 wheelers, haulers, and dump trucks. The individual also stated that the engines used in these trucks should be phased out on a short timetable and that infrared roadside vehicle emission detectors should be used to identify these gross polluters.

To address the concern over the identification of major polluters, the emission inventory for 1996 for the area shows that for the main pollutant of concern, NO_x, the contribution from NO_x sources

include on-road mobile sources 53%; area and non-road sources 28%; point sources 15%; and biogenic sources 4%. The emission inventory shows that pollution comes from more than one source.

The phasing out of engines in trucks and the use of remote sensing, is beyond the scope of rulemaking because these rules only affect non-road engines and equipment. However, the commission is considering for adoption concurrent with this rulemaking low-emission diesel fuel rules and such on-road heavy-duty vehicles are subject to new federal standards starting in 2002.

AGC and the HBA commented that the commission model on which the proposed rules are based contains incorrect diesel construction equipment inventory data that overstates the contribution to the overall NO_x problem.

The commission agrees with this comment. At the time of the proposal, the commission used the best diesel construction equipment inventory available for use in its urban airshed modeling. The commission realizes that there is better data and has developed a newer diesel construction equipment inventory which has been incorporated into the nonattainment modeling. This inventory does reflect a smaller contribution of construction equipment, however, that contribution is still significant.

Hood County commented that the proposed rules are exceptionally punitive because there is no evidence that the transport of NO_x generated in Hood County affects the current four nonattainment counties.

The proposal called for a 12-county area (including Hood County) to be subject to these rules because modeling has shown that ozone is a regional problem and is not just a local problem. However, regarding these rules, analysis of the construction equipment inventory shows that the majority of equipment is located in the current four nonattainment counties, therefore these adopted rules will only affect the four-county area (Collin, Dallas, Denton, and Tarrant).

AFT and Irving commented on the use of natural gas. AFT stated that diesel engines can and should be replaced by natural gas engines. Irving questioned if it is possible to comply with this regulation by converting their solid waste fleet to an alternative fuel, such as natural gas.

The commission believes that if it is feasible for the commenter to modify equipment to run on natural gas engines, then they may do so. However, if Irving only modifies their non-road equipment powered by compression-ignition engines to run on natural gas instead of diesel, then this fleet would still be subject to these rules since the fleet is still made up of compression-ignition engines. However, if non-road equipment is converted to use spark-ignition dedicated natural gas engines then it would not be subject to these rules, because it is no longer a compression-ignition engine. Also, converting the fleet to a cleaner burning fuel is certainly a measure which could be included in an emission reduction plan submitted under §114.417(b).

AGC and Irving commented on the availability of the newer Tier 2 and Tier 3 non-road engines and equipment. AGC stated that the proposed rules require contractors to have equipment that is not now

available for purchase and will not be for years. Irving asked if the Tier 2 and Tier 3 engines are even available.

The requirement dates in the rules are set up so that they come after the federal implementation dates of the Tier 2 and Tier 3 engines. In other words, if a owner or operator of a fleet chooses to buy new non-road equipment to comply with these rules, then this equipment will already be on the marketplace. The following table contains the implementation dates of the Tier 2 and Tier 3 standards.

Figure 2: 30 TAC Chapter 114 - Preamble

Implementation Dates of Federal Non-road Emission Standards		
Engine Power	Tier	Model Year
50 ≤ hp < 100	Tier 2	2004
	Tier 3	2008
100 ≤ hp < 175	Tier 2	2003
	Tier 3	2007
175 ≤ hp < 300	Tier 2	2003
	Tier 3	2006
300 ≤ hp < 600	Tier 2	2001
	Tier 3	2006
600 ≤ hp ≤ 750	Tier 2	2002
	Tier 3	2006
hp > 750	Tier 2	2006

For example, the rules as adopted require non-road equipment fleets in the 100 to 750 hp range to be 10% Tier 2 by the end of 2004. Tier 2 engines are available beginning 2001 to 2003 for this hp range. Thus the rules are not requiring use of the equipment until after it is available on the marketplace.

Baker & Botts, BCCA, EMA, ExxonMobil, Greenville, Irving, and WMI commented on the availability and demand for the new non-road equipment and engines. Baker & Botts, BCCA, Greenville, Irving, and WMI stated that they believed it unlikely that diesel manufacturers will be able to produce enough Tier 2/Tier 3 engines to meet the demand. They also stated that even if the engine manufacturers met this demand, the investment required for the new equipment would not be economically feasible for many businesses. BCCA suggested that the commission work with Original Equipment Manufacturers (OEM) to define their ability to deliver new, lower emission engines for the DFW area and potentially to the Houston-Galveston area and establish a schedule that is more technically feasible. EMA stated that the requirement for fleets of engines greater than 750 hp to be 50% Tier 2 by the end of 2006 presents a significant challenge, considering that these engines are first required by the Tier 2 standards in the same year. EMA also expressed that there is the same concern for engines between 100 and 175 hp which are subject to the 50% Tier 3 fleet requirement by the end of 2007. ExxonMobil commented that the OEM may not be able to provide the new low-emission engines for retrofit application in addition to the engines required for new equipment sales.

The commission believes that the compliance schedule is long enough to ensure adequate supply. The commission also expects that the adoption of these rules and the subsequent demand that will result from the adoption will prompt the manufacturers to make sure that they can meet the demand. Also, if fleet operators or owners submit emission reduction plans, that are approved by the commission, then the demand for the equipment may not be as great since there will be other alternatives to achieve the emission reductions. Nonetheless, the commission understands that there will be a financial burden on fleet operators and owners in making the investments to

comply with these rules. However, under the FCAA, the cost to meet a health-based standard does not need to be considered, but the commission strives to use the most cost effective measures when possible.

An individual and Thompson & Knight commented on enforcement. An individual questioned how we will enforce the rules. Thompson & Knight stated that the proposed rules should be withdrawn because they are not enforceable, and questioned the commission's ability to enforce these requirements unless it develops statewide, interstate, and international procedures to identify and monitor each state and local government, business, and private entity that owns or operates non-road equipment within the affected area. They also stated that there are no practical means to enforce these rules and that there are not enough resources to keep track of all the equipment and no database by which to determine which entities may be subject to these rules.

The commission disagrees that these rules are practically unenforceable. The rules as adopted apply to any entity who owns or operates the equipment within the affected counties. This would apply to those entities which reside outside of the area but operate the equipment within the affected counties. Those entities would be required to report in accordance with §114.416 (relating to Reporting and Recordkeeping Requirements) and would have to keep those reports on-site. These rules have been written to allow enforcement to take place during operation by an investigator who requests the reports. An operator without reports on site which include the piece of equipment being operated can then be cited with a violation of the rules. In addition, enforcement is possible by reviewing construction permits in the affected counties and performing spot checks

at construction sites. The commission plans to use public education and public awareness as part of the enforcement strategy to ensure that the requirements of these rules are understood and that they will be enforced. The commission agrees that resources are sometimes limited, however, they can be directed as appropriate to ensure compliance.

WMI commented that if the rules are finalized, it would distract the regulated community from focusing on viable controls and further delay ozone attainment. They suggested that the commission explore other attainment strategies, such as extending the attainment deadline in order for new, low-emission equipment to penetrate the market.

The commission agrees that there may be other strategies that can be employed, and therefore created the emission reduction plan which will allow fleet owners or operators to prove to the commission that they can get equivalent emission reductions through other means. However, extending the attainment date deadline is not one of them. The commission is not allowed to extend the attainment deadline because it is set by the FCAA and by the EPA.

Waxahachie urged the commission to search for other proven strategies that are more reasonable, cost effective, and enforceable.

The commission believes that through the inclusion of the emission reduction plan in the rules, the rules are more reasonable. Regarding the cost effectiveness, under the FCAA, the cost to meet a health-based standard does not need to be considered, however, the commission strives to use the

most cost effective measures when possible. Finally, the commission believes the rules are enforceable through the reporting requirements, spot checks, and public education.

Ellis County commented that the proposed rules appear to be onerous.

The commission agrees that the rules are requiring significant investment from the fleet operators or owners and may be construed as onerous by some. However, the commission believes that the implementation schedule is reasonable and achievable, and through the emission reduction plan, the requirements to a fleet operator or owner may become less onerous. Regarding Ellis County, the proposal called for a 12-county area (including Ellis County) to be subject to the rule because modeling has shown that ozone is a regional problem and is not just a local problem. However, analysis of the construction equipment inventory has shown that the majority of equipment is located in the current four nonattainment counties, therefore the rules that is being adopted will only affect the four-county area (Collin, Dallas, Denton, and Tarrant).

Cleburne commented on the availability of equipment, the costs, the value of their equipment, and the affect on small businesses. They stated that the implementation schedule listed in the proposed rules would be almost impossible to meet. Cleburne stated that the vendors that they have questioned are unable to supply them with equipment that would meet the Federal Tier 2 standards and that the engines will not be available until 2002 at the earliest. They also stated that meeting the requirements for the 10% fleet replacement by 2004, the 20% replacement by 2005, and the 30% replacement by 2006 could possibly be accomplished through purchases scheduled to occur after 2002 and before those deadlines.

However, because the city's current equipment ~ replacement schedule includes replacement of vehicles between now and the 2002 Tier 2 availability date, the 50% replacement with Tier 2 engines by 2007 seems unattainable. Beyond that, the 50% replacement of the fleet with Tier 3 vehicle by 2007 will be too costly for the city to bear. Cleburne is still uncertain what equipment will be made available with the Tier 3 engine before the 2007 deadline. Many engines are not required under federal law to comply with the Tier 3 standards until 2006 - 2008. If this includes equipment that would be required to be replaced, it would not even be available. If all of the equipment is available, the cost of replacement to the city would be high enough to prohibit its purchase. Cleburne estimated that for the current replacement schedule an estimated \$5,820 million would be required for equipment replacement in 2007. Many of the vehicles or equipment that would have to be replaced in 2007 are not scheduled for replacement for several more years; some of the equipment is anticipated to still be in use until 2018. Additionally, the types of equipment that would be forced into early retirement are often expensive pieces that a small city anticipates using for extended time periods to allow for recovery of the initial equipment cost. Cleburne also stated that the trade-in value will probably drop and this drop of value was not included in the equipment replacement cost. Cleburne further stated that the proposed rules will adversely affect small businesses because they will not be able to make the capital expenditures needed to comply with the rules.

All of these issues have been addressed in other parts of this section. The proposal called for a 12-county area (in which Johnson County was part of) to be subject to the rule because modeling has shown that ozone is a regional problem and is not just a local problem. However, in regards to this rule, analysis of the construction equipment inventory has shown that the majority of

equipment is located in the current four non-attainment counties, therefore, the rule that is being adopted will only affect the four-county area (Collin, Dallas, Denton, and Tarrant).

NTCOG-Arlington commented that for Arlington, all contracts for construction activities would have to incorporate conditions on the age and standards of equipment. They stated that the contracts will also need to be modified to require proof of compliance with the proposed rules.

The commission believes that if Arlington chooses to modify their contracts to put in conditions on age and standards then they may do so. It will potentially make it easier for the commission to enforce the rules. Ultimately it will be the contractors' responsibility to ensure that they are in compliance with the rules.

Thompson & Knight commented that the proposed rules assume that all equipment is resident in the 12-county area. They stated that this is not accurate and this type of equipment moves in and out of the area as the market demands. They further stated that the proposed rules fail to address companies whose construction equipment is used both within and outside the 12-county area. Thompson & Knight questioned whether or not all of their equipment is used toward fleet percentage requirements. They commented that since such companies will only have to replace equipment in the affected area they will have lower costs and therefore able to submit lower bids than companies that have all of their equipment in the affected area.

The commission believes that the definition of “fleet” adequately addresses this comment as far as what equipment is subject to the fleet requirements. The definition defines fleet as “The aggregate of non-road equipment powered by compression-ignition engines that operate within the counties specified in §114.419 of this title (relating to Affected Counties)....” Therefore any equipment that is operated for any amount of time in the affected counties is subject to these rules. As far as the advantage that companies who will be able to bid lower because they have construction equipment inside and outside the affected counties and thus the lower costs they incur because only part of their fleet is affected, the commission has no control over this. Note that under the FCAA, the cost to meet a health-based standard does not need to be considered. However, the commission strives to use the most cost effective measures when possible.

Sierra-Dallas and 86 individuals commented that they would like to see the rules expanded to include diesel engines in trucks, busses, locomotives, and ships. They would like to see diesel engines replaced with cleaner diesel or alternative-fueled engines.

The suggestion is beyond the scope of this rulemaking and therefore the commission has made no change in response to this comment. However, this does not mean there is nothing being done about control over other diesel engines. First, the commission is scheduled to adopt low-emission diesel fuel rules which will be required for both on-road and off-road applications. Second, the diesel engines used in locomotives and ships are controlled by federal regulations which require cleaner engines in the future. Third, on-road trucks are also required to have cleaner engines in the future as required by federal regulation and have been regulated for many years. Because

regulation of non-road equipment has just started and the fact that this equipment has a longer life than on-road equipment and a subsequent lower turnover rate, these rules are a necessity. The commission believes that the adopted rules will accelerate this turnover and allow for cleaner non-road equipment in the DFW nonattainment area.

Four individuals commented that they would prefer a greater replacement acceleration rate than is currently proposed.

The commission has made no change in response to these comments because as stated earlier, the requirement dates in the rules were established so that they come after the federal implementation dates of the Tier 2 and Tier 3 engines. In other words, if a owner or operator of a fleet chooses to buy new non-road equipment to comply with the rules, then this equipment will already be on the marketplace. The commission believes that the compliance schedule is as aggressive as possible given these considerations.

An individual commented that the proposed rules are needed for the Houston/Galveston (HGA) area.

The rules currently being adopted are only for the DFW nonattainment area. However, the commission is considering proposing these rules as part of the HGA nonattainment area SIP later this year.

NFN and an individual commented that the proposed rules should cover the whole state and not just the DFW area.

This suggestion is beyond the scope of this rulemaking. To cover the whole state would be an undue burden on areas of the state that do not have a lot of non-road equipment and activity and do not have an impact on an area with an air quality problem. However, the commission will likely propose these rules for the HGA nonattainment area. Also, if needed in other nonattainment areas or future nonattainment areas, then the commission may consider this measure.

Thompson & Knight commented that the rules do not specify how the percentage of the affected portions of the fleet are to be calculated.

The commission believes that the commenter should look at the definition of fleet. A “fleet” is defined as the “...aggregate of non-road equipment powered by compression-ignition engines...” Equipment should be identified as part of the “fleet” if it is ever operated within the nonattainment counties. Therefore, the percentages are calculated by the number of pieces of equipment in a fleet. Numbers should be rounded up. For example, ten percent of a fleet of four vehicles should be rounded up from .4 to one vehicle.

Thompson & Knight described an example fleet of a business and questioned how it would comply with the rules. They described a fleet of two pieces of non-road equipment. One has a 300 hp engine and

the other has a 600 hp engine. Thompson & Knight stated that the business would have to convert one of these vehicles in order to comply with the 10% requirement and asked which one should be converted. They also asked if the business converted the smaller of the two, then will it be deemed to meet the 30% and 50% requirements when they take affect.

The business can choose which piece of equipment would better for them to convert first. The first requirement of these rule is that 10% be converted by December 31, 2004. In this example, the Tier 2, 300 hp engines start in 2001 and the 600 hp engine in 2002. If the business converts the 300 hp engine to meet the 10% requirement then it will actually will have met the 20% requirement and the 30% requirement as well. All the business would have to do now is convert the 600 hp to Tier 3 to meet the 50% Tier 3 requirement by the end of 2007.

DFW Airport, EMA, and EPA commented that the engines rated between 50 and 100 hp are required by the end of 2007 even though they are not available until 2008.

The commission agrees with this comment and has made revisions to §114.412 (relating to Control Requirements). The requirements have been changed so that the end result will be 100% Tier 2 equipment required for fleets with equipment in the 50 to 100 hp range by December 31, 2007. However, fleets with engines in the 100 to 750 hp range will continue to be required to have 50% Tier 2 and 50% Tier 3 engines by the end of 2007, and fleets with engines above 750 hp will be required at 100% Tier 2 by the end of 2007.

Six individuals, AGC, Baker & Botts, EMA, HBA, Plano, and WMI commented that the proposed rules should provide incentives. The individuals stated that the rules should provide incentives, while EMA stated that the proposed rules would punish fleets comprised of greater than 50% Tier 2 engines between the years 2004 and 2007 because they would be required to turn over these clean engines to obtain 50% Tier 3 content by the end of 2007. EMA further stated that it would lead to a tremendous waste of investment in Tier 2 engine technology over the 50% 2007 requirement and act as a disincentive to fleets to be comprised of more than 50% Tier 2 engines in the years leading up to 2007. EMA suggested a program that incorporates incentives for early investment in new engine technologies and encourages voluntary fleet turnover. AGC, HBA, Baker Botts, Plano, and WMI stated that an incentive program similar to California's Carl Moyer Program should be developed for the state.

In response to these comments, the commission revised §114.117 (relating to Exemptions) so that a fleet owner or operator can be exempt from the requirements of the rules if they submit an approved emission reduction plan. This will remove disincentives and provide for incentives. The emission reduction plan will specify how the owner or operator will achieve the reductions, which would result from the implementation of these rules, through alternative means. Examples of alternatives include retrofits, fuel additives, and buying credits through a trading and banking program. Also, for construction equipment that is banned from operating between 6:00 a.m. to 10:00 a.m., if the emission reduction plan achieves the reductions, which would result from the implementation of both these rules and the Construction Equipment Operating Restrictions rules, then the owner or operator will be allowed to operate during the ban.

Another type of incentive would be through funding. An incentive for funding could be developed in a program similar to the Carl Moyer program in California. The commission believes in the spirit of a Carl Moyer type of program to push heavy-duty emissions technology, but must await action by the Texas Legislature as far as grant funding. Staff is evaluating these issues, interim solutions, and a state-wide pilot program which would be viable for not only DFW but other nonattainment and near-nonattainment areas within Texas.

AGC commented that in Houston two after-market control techniques (catalytic retrofits and diesel emulsifiers) are being proposed to meet their attainment shortfall. They also stated that the proposed rules offer no incentives for early acquisition of reduced emission equipment or engine retrofits to existing equipment. AGC suggested as an incentive that companies making such investments be exempted from the Construction Equipment Operating Restrictions rules.

In the adopted rules, the commission established a process where a fleet operator or owner can submit a emission reduction plan which will achieve the same emission reductions as the implementation of this rules. The emission reduction plan will specify how the owner or operator will achieve the reductions, which would result from the implementation of these rules, through alternative means. Also, for equipment subject to the adopted Construction Equipment Operating Restrictions rules, there is a provision in those rules that states if a emission reduction plan achieves the emission reductions, which would result from the implementation of both these rules and the Construction Equipment Operating Restrictions rules, then the owner or operator will be allowed to operate during the ban. Therefore, options such as catalytic retrofits and diesel

emulsifiers, along with any other measures, can be used if an owner or operator can prove that these controls would achieve equivalent emission reductions.

DFW Airport commented that the definition of fleet should allow for exemptions for emergency equipment and equipment with minimal usage during the ozone season such as snowplows. They also requested that the commission consider limiting the definition of fleet to equipment that meets a minimum number of operating hours.

The commission agrees that emergency equipment should be exempted, but does not agree that equipment with minimal usage during the ozone season should be exempted. However, the commission does believe equipment like snowplows should be exempted because it is never operated during the ozone season. In response to this comment, language has been added to §114.417 which exempts non-road equipment that is used exclusively for emergency operation and non-road equipment this is used exclusively for freezing weather operations. The commission does not believe that the definition of fleet should be limited to equipment that meet a minimum number of operating hours. The commission believes generally that any equipment that operates during the ozone season, no matter how many hours, contributes to the pollution in the DFW nonattainment area and should be subject to these rules.

An individual commented that landfill equipment should be exempted until newer, cleaner diesel equipment is available and Irving requested that the commission provide an exemption for solid waste disposal operations.

The commission does not agree that landfill equipment and equipment used in solid waste disposal operations should be exempted. These types of non-road equipment along with all other non-road equipment are not required to be phased out until the newer equipment is available. The schedule for compliance is set up so that all the newer engines will be available on the market before a fleet operator has to comply to the first 10% Tier 2 requirement on December 31, 2004.

TCC commented that in the preamble the commission describes non-road diesel engines as categories that fall into one of three categories: (1) agricultural equipment; (2) construction equipment; and (3) utility equipment. However, none of these are specifically defined in §114.410. In addition, a “general industrial category” and a “lawn and garden category” are discussed and but defined in §114.410.

These categories in the preamble were described to show applications and type of equipment that non-road engines are used for to give the reader a better idea of what the commission is proposing to regulate. They do not limit the applicability of this rule. To define these categories in §114.410 (relating to Definitions) would be unnecessary and redundant since non-road engines are used in all these categories and non-road engine is already defined. However, language has been put in the preamble to clarify what these categories mean.

NCTCOG-Arlington and Thompson & Knight commented on the definition of non-road. Thompson & Knight stated that the proposed rules contain a definition of “non-road engine” broader than found in the federal definition and therefore go unlawfully beyond federal regulations. They recommended that

the state definition should incorporate the federal definition by reference. NCTCOG-Arlington stated that the definition of non-road equipment needs to be clarified. They also stated that §114.410(4)(D) defines non-road as “primarily used for off-road functions.” Specifically, NCTCOG-Arlington wanted to know what “primarily” means, operating hours or miles traveled. They wondered if a dump truck which operates on-road and then goes off-road would be considered non-road equipment.

The commission agrees with the comment by Thompson and Knight and in response has changed that definition of “non-road engine” in §114.410(4)(D) to reference the federal definition in 40 CFR §89.2. Since the definition has changed, the “primarily” issue raised by NCTCOG-Arlington is not an issue, however, a definition of non-road equipment has been added to the rule to describe non-road equipment as equipment that is not licensed for on-road use. In other words, the equipment is only used off-road and is not allowed on the road.

Thompson & Knight commented that a de minimis exemption should be added to §114.412. They stated that fleets under ten pieces should be exempt because the control requirements are in increments of 10% which suggest that a fleet should be defined as ten pieces or more.

In the preamble of the proposed rules, the commission solicited comments on small fleets and a size cutoff below which they would be exempt. This comment was the only one received on this issue. The commission does not agree with the commenter that the percent requirements suggest a fleet of ten or more pieces. The percent requirements were developed to gradually phase in the requirements of these rules. Since no other comments were received on the issue of fleet size and

an appropriate cutoff size, the commission has no information on a typical fleet size for the DFW area. This lack of information, coupled with the need for the greatest emission reductions possible, has led to decision to not exempt smaller fleets.

TCC suggested that the commission should clarify the impacted entities by revising §114.412(a) as follows: “State and local governments, businesses, and private entities who own or *lease* non-road equipment powered by compression-ignition engines 50 hp and larger ... are subject....” TCC believes that the commission should distinguish between long-term lease (one year or longer) and short-term lease (less than one year) because this would clarify responsibility for plants that own, lease, or conduct short-term rentals. They stated that if a plant owns the equipment or has a long-term lease then the plant should ensure that the equipment meets the requirements. However, short-term rental equipment may move from county to county and it should be responsibility of the rental company to understand the requirements for doing business in the counties in which they operate. TCC also commented that if an outside contractor performs maintenance for a chemical plant and if the outside contractor’s equipment is used, then the contractor should be responsible to meet the requirements.

The commission partially agrees with this comment. In response to this comment, the commission decided to revise the definition of “fleet” in §114.412(a) to delineate the responsibility over long and short-term leases. The commission did not make any change to the rules concerning TCC comments on outside contractors. An outside contractor is a separate entity from a plant and the contractor is responsible for compliance of his equipment affected by these rules.

TCC suggested that §114.416(b) be revised to allow annual reports to be maintained on site after initial submission.

The commission does not agree with this suggestion. The reports need to be submitted annually to allow for proper enforcement of the rules. Without this requirement, enforcement will be more difficult and result in less effective rules.

STATUTORY AUTHORITY

The new sections are adopted under the THSC, TCAA, §382.011, which provides the commission the authority to control the quality of the state's air; §382.012, which provides the commission the authority to prepare and develop a general, comprehensive plan for the control of the state's air; §382.017, which provides the commission the authority to adopt rules consistent with the policy and purposes of the TCAA; §382.019, which provides the commission the authority to adopt rules to control and reduce emissions from engines used to propel land vehicles; and §382.039, which provides the commission the authority 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 new sections are also adopted under the Texas Water Code (TWC), §5.103, which provides the commission the authority to adopt rules necessary to carry out its powers and duties under the TWC.

CHAPTER 114: CONTROL OF AIR POLLUTION FROM MOTOR VEHICLES

SUBCHAPTER I: NON-ROAD ENGINES

DIVISION 2: HEAVY EQUIPMENT FLEETS - COMPRESSION-IGNITION ENGINES

§114.410. Definitions.

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

(1) **Blue Sky Series engine** - A non-road engine meeting the requirements of Title 40 Code of Federal Regulations §89.112(f), as amended on October 23, 1998.

(2) **Compression-ignition engine** - A type of engine with operating characteristics significantly similar to the theoretical Diesel combustion cycle. The non-use of a throttle to regulate intake air flow for controlling power during normal operation is indicative of a compression-ignition engine.

(3) **Fleet** - The aggregate of non-road equipment powered by compression-ignition engines that operate within the counties specified in §114.419 of this title (relating to Affected Counties) under the authority of the same person. Regarding fleet equipment leased for one year or

longer, the authority is considered to reside with the lessee. For fleet equipment leased for less than one year, the authority is considered to reside with the lessor.

(4) **Non-road engine** - An engine as defined in Title 40 Code of Federal Regulations §89.2, as amended on December 29, 1999.

(5) **Non-road equipment** - Equipment which is powered by a non-road engine and which is not licensed for on-road use.

(6) **Tier 2 engine** - An engine subject to the Tier 2 emission standards listed in Title 40 Code of Federal Regulations, §89.112(a), Table 1, as amended on October 23, 1998.

(7) **Tier 3 engine** - An engine subject to the Tier 3 emission standards listed in Title 40 Code of Federal Regulations §89.112(a), Table 1, as amended on October 23, 1998.

§114.412. Control Requirements.

(a) Persons who own or operate non-road equipment powered by compression-ignition engines 50 horsepower (hp) and larger, in the counties listed in §114.419 of this title (relating to Affected Counties), are subject to the compliance requirements specified in subsection (b) of this section.

(b) Owners or operators shall ensure that their fleet is certified to meet or exceed the Tier 2 and Tier 3 standards in accordance with the following schedule.

(1) For the part of the fleet greater than or equal to 50 and less than 100 hp:

(A) at least 25% of the affected portion of the fleet shall meet Tier 2 certification standards by December 31, 2004;

(B) at least 50% of the affected portion of the fleet shall meet Tier 2 certification standards by December 31, 2005;

(C) at least 75% of the affected portion of the fleet shall meet Tier 2 certification standards by December 31, 2006; and

(D) 100% of the affected portion of the fleet shall meet Tier 2 certification standards by December 31, 2007.

(2) For the part of the fleet greater than or equal to 100 and less than or equal to 750 hp:

(A) at least 10% of the affected portion of the fleet shall meet Tier 2 certification standards by December 31, 2004;

(B) at least 20% of the affected portion of the fleet shall meet Tier 2 certification standards by December 31, 2005;

(C) at least 30% of the affected portion of the fleet shall meet Tier 2 certification standards by December 31, 2006; and

(D) at least 50% of the affected portion of the fleet shall meet Tier 3 certification standards and the remainder of the affected portion of the fleet shall meet Tier 2 certification standards by December 31, 2007.

(3) For that part of the fleet with an hp rating greater than 750 hp:

(A) at least 50% of the affected portion of the fleet must meet Tier 2 certification standards by December 31, 2006; and

(B) 100% of the affected portion of the fleet must meet Tier 2 certification standards by December 31, 2007.

(c) Non-road equipment that uses a "Blue Sky Series" engine, as defined in §114.410 of this title (relating to Definitions) may be considered a Tier 2 or Tier 3 engine for compliance with the percentage requirements of subsection (b) of this section.

(d) The percentage requirements of subsection (b) of this section may also be met by a retrofit of currently owned or newly purchased non-road, compression-ignition engines certified by EPA to meet or exceed the Tier 2 or Tier 3 emission standards.

§114.416. Reporting and Recordkeeping Requirements.

(a) Persons affected by §114.412 of this title (relating to Control Requirements) must submit annual reports for the previous year beginning February 1, 2005, and every February 1 thereafter. The report shall be submitted to the executive director and shall contain, at a minimum:

(1) the fleet identification number (when assigned by the Texas Natural Resource Conservation Commission);

(2) the person's name, mailing address, telephone and fax numbers;

(3) the name, title, mailing address, and telephone number of the specified individual responsible for the fleet;

(4) a list of all non-road equipment with compression-ignition engines 50 horsepower and larger; and

(5) a demonstration of compliance with the applicable implementation schedule under §114.412 of this title.

(b) The affected person shall maintain copies of reports required by subsection (a) of this section on-site at the reported fleet address for a minimum of three years, and upon request shall make such reports available to the executive director or local air pollution control agencies with jurisdiction.

§114.417. Exemptions.

(a) The following non-road equipment powered by compression-ignition engines are exempt from §114.412 and §114.416 of this title (relating to Control Requirements; and Reporting and Recordkeeping Requirements):

- (1) locomotives;
- (2) underground mining equipment;
- (3) marine engines;
- (4) aircraft engines;
- (5) airport ground support equipment;

(6) equipment used solely for agricultural purposes which includes, but is not limited to, tractors, balers, combines, sprayers, swathers, and skidders;

(7) equipment used exclusively for emergency operations to protect public health and safety or the environment; and

(8) equipment used exclusively for freezing weather operations.

(b) Owners or operators who submit an emission reduction plan by May 31, 2002, that is approved by the executive director and the EPA by May 31, 2003, will be exempt from §114.412 and §114.416 of this title in the counties listed in §114.419 of this title (relating to Affected Counties) upon implementation of the rules of this division on December 31, 2004. In order to be approved the plan must demonstrate reductions of oxides of nitrogen emissions equivalent to those required by §114.412 of this title and must contain adequate enforcement provisions.

§114.419. Affected Counties.

Persons in the following counties shall be in compliance with §114.412 and §114.416 of this title (relating to Control Requirements; and Reporting and Recordkeeping Requirements) no later than the dates specified in §114.412(b) of this title: Collin, Dallas, Denton, and Tarrant.