

VALLEY ENVIRONMENTALISTS HOLD THEIR BREATH WHILE THE EPA RETHINKS THE AGRICULTURE EXEMPTION FOR FARMERS AND THEIR DIESEL IRRIGATION PUMPS

INTRODUCTION

The Federal Government is planning to require California farmers to obtain air-quality permits next year, so farmers should start preparing now to deal with the new rules.¹ Farming operations account for 54% of the particulate matter pollution in the San Joaquin Valley but for decades have had to follow few air rules.² Title V of the federal Clean Air Act governs stationary sources of air pollution such as the diesel-powered engines used for irrigation in agriculture.³ At certain times of the year, many farms are using older diesel engines to pump water around-the-clock.⁴ Some large farms can easily exceed 25 tons of pollutants a year, which would require them to have a permit as a “large source” if state law allowed them to be regulated.⁵

In settling a law suit brought by a group of environmental activists, the U.S. Environmental Protection Agency (EPA) has decided to begin regulating California farmers under this Title V.⁶ These regulations call for tightening a three decade old “state law that has shielded the \$27 billion agriculture industry from air emissions rules imposed on other large industries such as oil refineries and glass manufacturers.”⁷ The

¹ CALIFORNIA FARM BUREAU FEDERATION, FARMERS WARNED TO PREPARE FOR AIR-QUALITY REGULATION. at http://www.cfbf.com/release/2002/pr-12_10_02air.html (Dec. 10, 2002).

² *Agriculture a Leading Polluter*, FRESNO BEE, at http://valleyairquality.com/special/valley_air/part3/story1/ (last visited Feb. 13, 2003).

³ 42 U.S.C. § 7601 (2003) [hereinafter Title V].

⁴ *Agriculture a Leading Polluter*, *supra* note 2.

⁵ *Id.*

⁶ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 1.

⁷ Lesli A. Maxwell, *Pollution Measure to Focus on Farms*, FRESNO BEE, Feb. 11, 2003, at <http://www.fresnobee.com/local/story/6154916p-7106295c.html>.

EPA would give local air districts authority to regulate diesel-run irrigation pumps as stationary sources under Title V.⁸ Until now, agricultural operations have always been exempted from regulations under Title V.⁹ If this ruling stands, California will be the only state in the nation that requires its farmers to have a permit to operate under the Clean Air Act.¹⁰ As can be imagined, this ruling has sparked much controversy within the state.

I. DESCRIPTION

Diesel engines emit more than 40 substances including arsenic, benzene and formaldehyde, that are considered to be toxic by the EPA.¹¹ They are also a major source of smog-forming nitrogen oxides (NOx) as well as dangerous particulate matter (PM) also known as soot.¹² Ground level ozone is formed when NOx “reacts with volatile organic compounds and sunlight to become a colorless, odorless gas” known as smog.¹³ Since sunlight is involved in the production of smog, smog levels are at their highest in the summer months within the states with the warmest weather.¹⁴ PM, or soot, is made up of small particles that are covered with compounds formed during the engine combustion process that eventually travel out through the exhaust pipes.¹⁵ The release of soot occurs with diesel engines because of the high sulfur content in diesel fuel, poor refinement processes, and incomplete combustion of fuel.¹⁶ It is estimated that diesel engines are responsible for up to half of all soot found in many urban areas.¹⁷

Diesel PM was identified in 1998 as a “non-threshold” toxic air contaminant.¹⁸ “Non-threshold” means that there is no threshold expo-

⁸ *Id.*

⁹ CAL. HEALTH & SAFETY CODE §§ 42300, 42310 (Deering 2003)

¹⁰ CALIFORNIA FARM BUREAU FEDERATION, FARM BUREAU CONTINUES FIGHT FOR SOUND SCIENCE IN EPA AIR DECISION, at <http://www.cfbf.com/release/2002/pr-072402.htm> (July 24, 2002).

¹¹ SIERRA CLUB, IT'S TIME TO CLEAN UP DIRTY DIESEL, at <http://www.sierraclub.org/cleanair/factsheet/diesel.asp> (last visited Feb. 13, 2003).

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ CALIFORNIA AIR RESOURCES BOARD. PROPOSED AIRBORNE TOXIC CONTROL MEASURES: TO REDUCE DIESEL PARTICULATE MATTER EMISSIONS FROM NEW STATIONARY DIESEL-FUELED CI ENGINES, at www.arb.ca.gov/diesel/documents/090402draftatcm-newpdf (Sept. 2002)

sure level for anticipated significant adverse health effects.¹⁹ Health and Safety Code section 39666 requires the California Air Resources Board (ARB) to adopt an airborne toxic control measure (ATCM) to reduce emissions of toxic air contaminants from non-vehicular sources such as diesel irrigation pumps.

In September of 2002, the ARB released its proposed ATCMs for both in-use and new stationary diesel-fueled combustion ignition (CI) engines.²⁰ According to the proposal, a stationary CI engine is one that is either used in a piece of equipment that is designed to remain in one location for the duration of its useful life, or used in an equipment unit that can be transported from one location to another but remains at a single location for more than one year.²¹ Examples of stationary CI engine applications include, "electric power generators, grinders, rock crushers, sand screeners, cranes, cement blowers, air compressors, and water pumps."²²

Currently, diesel-fueled CI engines used for agriculture are exempted from these proposed regulations pursuant to Health and Safety Code section 42310, however the ARB staff is working with California agriculture interests to develop an approach to address these agricultural engines.²³ Due to the recently settled lawsuit brought by a group of environmental activists, this exemption will not be around much longer.²⁴

II. HISTORY

A. *The Clean Air Act*

The Clean Air Act²⁵ is the federal legislation governing exhaust emissions. It directs the EPA to establish national ambient air quality standards that adequately protect public health, with an adequate margin of safety, without reference to feasibility and cost.²⁶ It gives states the responsibility for developing and enforcing a plan, subject to EPA approval, for attaining and maintaining those air quality standards by

¹⁹ *Id.*

²⁰ *Id.* at 1.

²¹ *Id.* at 6.

²² *Id.*

²³ *Id.* at 3.

²⁴ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 1.

²⁵ 42 U.S.C. § 7401 (2002) et seq. [hereinafter Clean Air Act].

²⁶ 42 U.S.C. § 7409 (b)(1) (2003); *see also* Lead Indus. Ass'n v. EPA, 647 F.2d 1130, 1148 (D.C. Cir. 1980).

regulating sources of air pollution.²⁷ The Clean Air Act generally preempts state regulation of new motor vehicle emissions standards.²⁸ California is exempt from this preemption, however, and it alone is permitted to enact its own emission standards because it has been regulating automobile emissions since before March 30, 1966.²⁹

The Clean Air Act does not, however, give California free rein to develop whatever emissions standards it desires. Title V of the 1990 Clean Air Act Amendments,³⁰ instituted and centralized a new permitting program to be administered pursuant to rules developed by state and approved by the EPA.³¹ “The EPA has allowed states to exempt insignificant activities and emission levels from certain requirements in order to reduce the regulatory burdens on emitters”³² A state could submit a Title V program that would exempt “insignificant emissions units” from permit application requirements, as well as other monitoring, reporting and record-keeping requirements under the Clean Air Act.³³ Before implementing and enforcing its own standards, the Board must submit an application to the EPA for waiver of the preemption based on findings that its proposed standards “will be, at least as protective of public health and welfare as applicable Federal standards.”³⁴

The purpose of Title V is to direct the EPA to recommend procedures for determining compliance, institute requirements for permit applications, as well as establish the minimum requirements of a state permit program.³⁵ The EPA can deny the application for waiver if the Administrator determines that (1) California’s regulations are arbitrary and capricious, (2) there are not “compelling and extraordinary conditions” justifying the separate standards, or (3) California’s standards are inconsistent with the federal standards in section 202 of the Clean Air Act.³⁶ Section 202 of the Clean Air Act (42 U.S.C. § 7521) provides guidelines for the EPA in regulating emission standards for new motor vehicles and new motor vehicle engines.

²⁷ 42 U.S.C. § 7410(a) (2003).

²⁸ 42 U.S.C. § 7543(a) (2003).

²⁹ 42 U.S.C. § 7543(b)(1) (2003); *see also* People ex rel. State Air Res. Bd. v. Wilmshurst, 68 Cal. App. 4th 1332, 1345 (1999).

³⁰ 42 U.S.C. § 7601 (2003).

³¹ *W. States Petroleum Ass’n et al v. EPA*, 87 F.3d 280, 282 (9th Circ. 1996).

³² *Id.*

³³ *Id.*

³⁴ 42 U.S.C. § 7543 (b)(1) (2003).

³⁵ *See W. States Petroleum Ass’n et al*, 87 F.3d at 282.

³⁶ 42 U.S.C. § 7543(b)(1)(A-C) (2003).

The applicable standards should “reflect the greatest degree of emission reduction achievable through the application of technology.”³⁷ Title 42 United States Code, section 7521(a)(3)(A) provides in part:³⁸

- (i) Unless the standard is changed as provided in subparagraph (B), regulations under paragraph (1) of this subsection applicable to emissions of hydrocarbons, carbon monoxide, oxides of nitrogen, and particulate matter from classes or categories of heavy-duty vehicles or engines manufactured during or after model year 1983 shall contain standards which reflect the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available for the model year to which such standards apply, giving appropriate consideration to cost, energy, and safety factors associated with the application of such technology. (ii) In establishing classes or categories of vehicles or engines for purposes of regulations under this paragraph, the Administrator may base such classes or categories on gross vehicle weight, horsepower, type of fuel used, or other appropriate factors.

B. California Air Resources Act

California has been a pioneer in motor vehicle emissions regulation, having passed laws providing for the study of the causes, effects and control of air pollution in 1955.³⁹ California’s programs are historically a year or two ahead of federal controls of motor vehicle emissions.⁴⁰ In 1967 the Legislature enacted what is now Division 26 of the Health and Safety Code, giving the Board “broad powers” over the control of vehicular air pollution.⁴¹ The Air Resources Board is the California State agency required by the Clean Air Act to adopt and submit to the EPA plans designed to implement, maintain, and enforce EPA-established national ambient air quality standards.⁴²

Finding Californians have a “primary interest” in the quality of their physical environment and that its degradation by pollution creates a situation detrimental to their health, safety, welfare and sense of well-being, the Legislature charged the Board with “coordinating ef-

³⁷ 42 U.S.C. § 7521(a)(3)(A) (2003).

³⁸ *Id.*

³⁹ 1955 Cal. Stat. 1312, § 1; *see also* Motor Vehicle Mfrs. Ass’n v. NYS Dept. of Env. Cons., 17 F.3d 521, 525 (2d Cir. 1994). *See also* 38 Fed.Reg. 10317, 10318 (Apr. 26, 1973)

⁴⁰ Arnold W. Reitze, Jr., Mobile Source Air Pollution Control, 6 ENVTL. LAW 309, 328-329 (2000).

⁴¹ W. Oil & Gas Ass’n. v. Orange County Air Pollution Control Dist., 14 Cal. 3d 411, 415 (1975).

⁴² CAL. HEALTH & SAFETY CODE § 39602 (Deering 2003).

forts to attain and maintain ambient air quality standards, to conduct research into the causes of and solution to air pollution, and to systematically attack the serious problem caused by motor vehicles, which is the major source of air pollution in many areas of the state.”⁴³ To this end, the Board is vested with the authority to adopt and implement standards for motor vehicle emissions.⁴⁴ In granting such authorization, the Legislature found the control and elimination of motor vehicle air pollutants of “prime importance for the protection and preservation of the public health and well-being” and recognized “[t]he state has a responsibility to establish uniform procedures for compliance with standards which control or eliminate those air pollutants.”⁴⁵ By section 43000.5, effective in 1989, the Legislature further found and declared:⁴⁶

(a) Despite the significant reductions in vehicle emissions which have been achieved in recent years, continued growth in population and vehicle miles traveled throughout California have the potential not only to prevent attainment of the state standards, but in some cases, to result in worsening of air quality.

(b) The attainment and maintenance of the state air quality standards will necessitate the achievement of substantial reductions in new vehicle emissions and substantial improvements in the durability of vehicle emissions systems.

(c) The burden for achieving needed reductions in vehicle emissions should be distributed equitably among various classes of vehicles, including both on-and off-road vehicles, light-duty cars and trucks, and heavy-duty vehicles, to accomplish improvements in both the emissions level and in-use performance and durability of all new motor vehicles.

(d) The state board should take immediate action to implement both short-and long-range programs of across-the-board reductions in vehicle emissions and smoke, including smoke from heavy-duty diesel vehicles, which can be relied upon by the districts in the preparation of their attainment plans or plan revisions . . .

(e) In order to attain the state and federal standards as expeditiously and equitably as possible, it is necessary for the authority of the state board to be clarified and expanded with respect to the control of motor vehicles and motor vehicle fuels.

Several different provisions of the Air Resources Act authorize the Board to enact motor vehicle emissions standards as well as standards for the regulation of non-vehicle engine categories such as farm equip-

⁴³ CAL. HEALTH & SAFETY CODE §§ 39000, 39003 (Deering 2003); *see also* Harris Transp. Co. v. Air Res. Bd., 32 Cal. App. 4th 1472, 1475 (1995).

⁴⁴ *See* W. Oil & Gas Ass’n., 14 Cal.3d at 415-416.

⁴⁵ CAL. HEALTH & SAFETY CODE § 43000(b), (c) (Deering 2003).

⁴⁶ CAL. HEALTH & SAFETY CODE § 43000.5 (Deering 2003).

ment or utility engines.⁴⁷ Subdivisions (a) and (b) of section 43013 set out the Board's general powers to implement vehicular emissions standards and regulations as follows:⁴⁸

(a) The state board may adopt and implement motor vehicle emission standards, in-use performance standards, and motor vehicle fuel specifications for the control of air contaminants and sources of air pollution which the state board has found to be necessary, cost-effective, and technologically feasible, to carry out the purposes of this division, unless preempted by federal law. (b) The state board shall, consistent with subdivision (a), adopt standards and regulations for light-duty and heavy-duty motor vehicles; medium-duty motor vehicles, as determined and specified by the state board; and off-road or *nonvehicle engine categories*, including, but not limited to, off-highway motorcycles, off-highway vehicles, construction equipment, *farm equipment*, *utility engines*, locomotives, and, to the extent permitted by federal law, marine vessels.

In 1992 the Legislature added what is now subdivision (h) to section 43013, generally addressing the regulation of NO[x] emissions from diesel-powered vehicles.⁴⁹ That subdivision states: "It is the intent of the Legislature that the state board act as expeditiously as is feasible to reduce nitrogen oxide emissions from diesel vehicles, marine vessels, and other categories of vehicular and mobile sources which significantly contribute to air pollution problems."⁵⁰

Health and Safety Code section 43018 directs the Board to "endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state standards at the earliest practicable date"⁵¹ and requires the Board to, no later than January 1, 1992, "take whatever actions are necessary, cost-effective, and technologically feasible in order to achieve, not later than December 31, 2000, a reduction in the actual emissions of reactive organic gases of at least 55 percent, [and] a reduction in emissions of oxides of nitrogen of at least 15 percent from motor vehicles."⁵² That section further provides: "The state board also shall take action to achieve the maximum feasible reductions in particulates, carbon monoxide, and toxic air contaminants from vehicular sources."⁵³

In August of 1998, the ARB identified particulate emissions from

⁴⁷ CAL. HEALTH & SAFETY CODE § 43013(a) (Deering 2003).

⁴⁸ CAL. HEALTH & SAFETY CODE § 43013(a) (Deering 2003) (*emphasis added*).

⁴⁹ 1992 Cal. Stat. 945 § 16, p. 4511.

⁵⁰ CAL. HEALTH & SAFETY CODE § 43013(h) (Deering 2003).

⁵¹ CAL. HEALTH & SAFETY CODE § 43018 (a) (Deering 2003).

⁵² CAL. HEALTH & SAFETY CODE § 43018(b) (Deering 2003).

⁵³ *Id.*

diesel-fueled engines as toxic air contaminants.⁵⁴ After the identification process, the ARB was required to determine if there is a need for further control.⁵⁵ The Board formed the Diesel Advisory Committee to assist in the development of a risk management guidance document and a risk reduction plan.⁵⁶ The Committee consisted of staff from the ARB, U.S. Environmental Protection Agency, State and local agencies, industry, environmental groups, and interested public.⁵⁷ The Committee developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, and more pertinent to this review, the *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines*.⁵⁸ The ARB approved these documents in September of 2000, which instigated the current control measure phase.⁵⁹ During the current phase, specific statewide regulations designed to further reduce diesel emissions from diesel-fueled engines and vehicles are being evaluated and developed.⁶⁰

III. THE CONTROVERSY

A recent study by the American Lung Association demonstrated that three of the five most polluted places in the nation are situated in the San Joaquin Valley.⁶¹ While most other areas in the country have shown some improvement in controlling smog and soot, the San Joaquin Valley has gotten worse.⁶² An EPA study concluded that air pollution causes 60,000 premature deaths annually nation wide, which is more than auto accidents or homicides.⁶³ Air pollution aggravates asthma attacks, can increase risks of heart attacks and emergency room visits, and decrease productivity by increasing work-loss days.⁶⁴ Asthma is California's leading cause of hospital admissions of young children, with over 7,000 children in Fresno alone suffering from the

⁵⁴ CALIFORNIA AIR RESOURCES BOARD, CALIFORNIA'S DIESEL RISK REDUCTION PROGRAM, at <http://www.arb.ca.gov/diesel/background.htm> (last visited Jan. 20, 2003).

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ EARTHJUSTICE, URGENT CASES, CLEANING THE AIR IN CALIFORNIA'S SAN JOAQUIN VALLEY, at <http://www.earthjustice.org/urgent/display.html?ID=65> (last visited Feb. 13, 2003).

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.*

disease.⁶⁵ Air pollution can also have an impact on agriculture by reducing crop resistance to disease and lowering productivity.⁶⁶

When inhaled, smog causes burning of the cell wall of the lungs and air passages which decreases the elasticity of the lungs causing them to be more susceptible to infections, injury, and causing asthma attacks or other respiratory illnesses.⁶⁷ According to a study by the UCLA School of Medicine, repeated exposure to smog and other air pollutants can cause as much damage to the lungs as smoking a pack of cigarettes a day.⁶⁸ Many studies have linked diesel exhaust to cancer.⁶⁹ According to a report by the Natural Resources Defense Council, 1 out of 2,000 people may develop cancer due to a lifetime exposure to diesel exhaust in the atmosphere.⁷⁰

Airborne PM or soot can also get trapped in the lungs causing tissue damage and exacerbating existing lung problems or causing new ones.⁷¹ Soot can cause bacterial and viral respiratory infections like pneumonia or chronic lung diseases like asthma.⁷² Studies have found that incidence of strokes and heart failure is greater in areas with high levels of soot.⁷³ A recent study by the Environmental Working Group found that there are over 70,000 asthma attacks each year due to PM pollution adding up to over 560,000 days of missed work.⁷⁴ The California Air Resources Board and the World Health Organization have both acknowledged that soot from diesel exhaust is a human carcinogen.⁷⁵ In fact, soot may be the most deadly type of air pollution.⁷⁶ Some of the major sources of PM pollution in the Valley are unpaved roads, farming operations, windblown dust, industrial sources, and fuel combustion.⁷⁷ In the Valley, PM emissions have increased steadily since 1975 to among some of the worst in the nation and are expected

⁶⁵ EARTHJUSTICE, BIG AGRICULTURE IN CALIFORNIA WILL BE REQUIRED TO OBEY CLEAN AIR ACT, at <http://www.earthjustice.org/news/display.html?ID=370> (May 14, 2002).

⁶⁶ EARTHJUSTICE, *supra* note 61.

⁶⁷ SIERRA CLUB, *supra* note 11.

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*

⁷⁴ EARTHJUSTICE, *supra* note 61.

⁷⁵ SIERRA CLUB, *supra* note 11.

⁷⁶ *Id.*

⁷⁷ EARTHJUSTICE, *supra* note 61.

to continue increasing through 2010.⁷⁸ Diesel particles shot into the air from diesel engines may not only be a lung irritant and a trigger for lung conditions, but could also be toxic.⁷⁹ During the summer months in the Valley, hundreds of diesel irrigation pumps run around the clock.⁸⁰

Human health is not the only concern. Sequoia and Kings National Parks are home to the largest trees in the world where smog is as bad as parts of Los Angeles.⁸¹ In fact, the parks' air ranks among the worst anywhere in the federal system.⁸² It ranks worse than Joshua Tree National Park which is downwind from Los Angeles.⁸³ The prevailing wind carries smog from cars, trucks, farms, industries and businesses operating in the San Joaquin Valley east to the parks located the southern Sierra Nevada mountain range.⁸⁴ The smog corrodes the Sequoia ecosystem, weakens at least two types of pine trees and possibly undermines giant sequoia seedlings.⁸⁵ Smog also inhibits photosynthesis which is the plants process of making its own nutrition.⁸⁶ There is also concern that rainfall tainted with smog can contain acid or sulfur that will accumulate in the lakes around the Sierra.⁸⁷ Some of the most pristine lakes in the high Sierra could become acidic, killing its habitat.⁸⁸ Sadly, these damaging effects on Sequoia are not an isolated problem.⁸⁹ Ozone related damage to vegetation has been recorded all along the Central and Southern Sierra Nevada range including Yosemite National Park.⁹⁰

In December 2001, California's agriculture industry was granted a three-year moratorium from the Title V permit program of the 1990 Clean Air Act.⁹¹ "Title V is a permit program . . . that regulates

⁷⁸ *Id.*

⁷⁹ *Last Gasp*, FRESNO BEE, at <http://www.valleyairquality.com> (last visited Feb. 13, 2003).

⁸⁰ *Id.*

⁸¹ *Smog Lurks Even Up High*, FRESNO BEE, at http://valleyairquality.com/special/valley_air/part1/story7/ (last visited Feb. 13, 2003).

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ KATE CAMPBELL, FARM BUREAU FEDERATION, FARMERS FACE TOUGH AIR QUALITY RULES, at <http://www.cbf.com/agalert/2002/aa-052202b.htm> (May 22, 2002).

large stationary sources that release pollutants into the air.”⁹² In order for a permit to be issued, a business is required to provide information on the type and quantity of pollutants being released, as well as the steps taken to mitigate their release.⁹³ The EPA deferred requiring permits for agricultural operations “because they are not like traditional industrial sources.”⁹⁴ Also, it is difficult to measure and monitor emissions from activities like irrigation water pumping and feeding operations using the currently available methods.⁹⁵

Several studies are being conducted to develop the necessary data on agricultural emissions, these include studies by the National Academy of Sciences and work by U.S. Department of Agriculture.⁹⁶ The purpose of the three-year deferral of agricultural sources was so that ongoing and planned studies could be completed to determine more accurately what agricultural operations contribute to air emissions.⁹⁷ The “EPA states that it considers it ambitious to evaluate existing science, improve on assessment tools, collect additional data, remove any remaining legal obstacles, and issue any necessary guidance within the three year deferral time period.”⁹⁸

Lawsuits filed in early 2002 by Earthjustice, the Sierra Club, Natural Resources Defense Council, as well as the Center for Race, Poverty and the Environment, and the California Rural Legal Assistance Foundation, prompted judicial review of the EPA’s decision to defer requiring permits for agricultural operations, by the Ninth Circuit Court of Appeals.⁹⁹ These environmental activists were suing the EPA to end the agricultural deferral of permits under Title V of the clean Air Act.¹⁰⁰ The California Farm Bureau, the state’s largest family farm organization, intervened in the lawsuit in support of the EPA’s decision to grant farmers three years to study the applicability of Title V of the federal Clean Air Act.¹⁰¹ The Farm Bureau argues that any regulations should be based on sound science and reliable data and that the three-

⁹² CALIFORNIA FARM BUREAU FEDERATION, FARM BUREAU SUPPORTS EPA IN AIR QUALITY CASE, at <http://www.cfbf.com/release/2002/pr-040802.htm> (Apr. 8, 2002).

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ CAMPBELL, *supra* note 91.

⁹⁶ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 92.

⁹⁷ CALIFORNIA FARM BUREAU FEDERATION, FARM BUREAU DISMAYED AT AIR DECISION, at <http://www.cfbf.com/release/2002/pr-051402.htm> (May 14, 2002).

⁹⁸ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 92.

⁹⁹ CAMPBELL, *supra* note 91.

¹⁰⁰ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 97.

¹⁰¹ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 92.

year moratorium should go forward until these two objectives are met.¹⁰²

As a result of this litigation, the EPA reached a settlement with the environmental activist groups but not the Farm Bureau, in May of 2002, which would effectively end the three-year deferral for agricultural operations.¹⁰³ The EPA believes that the settlement was the best approach for resolving the lawsuit in that it “preserves the California programs for non-agriculture facilities, ensures reasonable time to address remaining issues and allows the EPA to focus its resources and attention on the technical and practical difficulties associated with applying Clean Air Act permit requirements to agriculture.”¹⁰⁴ Pursuant to the settlement, new regulations would be imposed on stationary diesel-powered engines used on farms beginning May 1, 2003 and all other major agricultural sources of emissions beginning August 1, 2003.¹⁰⁵

The Farm Bureau was dismayed that the EPA has proceeded toward regulation without waiting for the results of ongoing studies determining what agricultural operations contributed to air emissions.¹⁰⁶ The Farm Bureau continues to believe that the “rational approach is to develop the necessary data on agricultural emissions before implementing regulations that will create new costs and paperwork for farmers.”¹⁰⁷ Because there is not sufficient information about agricultural emissions, there is the risk of expensive and burdensome regulations that will not provide the desired clean air result.¹⁰⁸ The Farm Bureau argues that “activists have portrayed farmers as villains when in actuality they contribute significantly to cleaner air through the crops they grow and the voluntary emissions control strategies many use”.¹⁰⁹ However, the EPA believes that most farms will not be subject to permitting requirements because they do not emit a significant amount of air pollution.¹¹⁰ Nevertheless, California will be the only state in the nation that requires its farmers to have a permit to operate under the Clean Air Act.¹¹¹

¹⁰² *Id.*

¹⁰³ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 97.

¹⁰⁴ CAMPBELL, *supra* note 91.

¹⁰⁵ *Id.*

¹⁰⁶ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 97.

¹⁰⁷ *Id.*

¹⁰⁸ CAMPBELL, *supra* note 91.

¹⁰⁹ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 97.

¹¹⁰ CAMPBELL, *supra* note 91.

¹¹¹ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 10.

In order to comply with the settlement, California must change its law which currently exempts agricultural activities from the Title V program.¹¹² If the state does not change Health and Safety Code Section 42300, which exempts “any equipment used in agricultural operations” from the requirement to obtain a permit, the EPA will move to run the states program for agriculture until the change is made.¹¹³ Also, the federal government could freeze billions of dollars set aside for road projects throughout California until the law is changed.¹¹⁴

In October of 2002, The Farm Bureau filed a new petition challenging the EPA’s plan to impose the new regulations on farmers under the Clean Air Act.¹¹⁵ This petition was filed following a dismissal of a prior petition filed before the final rule by the EPA was published requiring permits for agricultural operations.¹¹⁶ The court dismissed the prior petition without examining the merits of the case, based on premature filing.¹¹⁷ The Farm Bureau argues that it “cannot stand by while regulations are proposed under the threat of litigation that are not supported by sound, credible science.”¹¹⁸ At the time of this article, this matter was still pending.

IV. REGULATIONS AND PROGRAMS

The primary goal of each regulation is to make diesel-fueled CI engines as clean as possible through state-of-the-art technology requirements in order to reduce diesel PM emissions.¹¹⁹ However, the cost of these state-of-the-art requirements may cause some farmers to switch to electricity-powered pumps causing a greater burden on an already burdened power supply.

According to the ARB’s diesel emission inventory for the year 2000, agricultural operations constituted approximately 14 percent of the total statewide emissions, which is comparable to on-road heavy-duty trucks that comprised approximately 16 percent of the total statewide diesel PM emissions.¹²⁰ Of that 14 percent, 97 percent of those

¹¹² CAMPBELL, *supra* note 91.

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ CALIFORNIA FARM BUREAU FEDERATION, FARM BUREAU FILES CHALLENGE TO EPA DECISION, at http://www.cfbf.com/release/2002/pr-10_16_02.html (Oct. 16, 2002).

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ CALIFORNIA AIR RESOURCES BOARD, *supra* note 54.

¹²⁰ CALIFORNIA AIR RESOURCES BOARD, CALIFORNIA’S DIESEL RISK REDUCTION PROGRAM FAQ, at <http://www.arb.ca.gov/diesel/FAQ.htm> (last visited Jan. 20, 2003).

emissions came from agricultural tractors and irrigation pumps.¹²¹ Accordingly, these engines should be the primary targets for the regulations.

The ARB will evaluate a variety of approaches for reducing diesel PM emissions from agricultural equipment. As stated above, the ARB is currently proposing legislation that would regulate non-agriculture stationary diesel-fueled CI engines. All in-use stationary diesel-fueled CI engines operated in California would be required to meet the following requirements:¹²²

- (1) Reduce diesel PM emissions by greater than or equal to 85 percent, by weight, from baseline levels. Diesel PM control strategies used to meet these requirements may not result in an increase in NMHC, NO_x, or CO emissions greater than 10 percent from baseline levels, or result in the NO₂ weight fraction of total NO_x exceeding 20 percent of the total baseline NO_x emissions on a mass basis.

Or

- (2) Emit less than or equal to 0.01 g/bhp-hr of diesel PM. Diesel PM control strategies used to meet these requirements may not result in an increase in NMHC, NO_x, or CO emissions greater than 10 percent from baseline levels, or result in the NO₂ weight fraction of total NO_x exceeding 20 percent of the total baseline NO_x emissions on a mass basis.

Or

- (3) Be replaced with an engine or technology that emits at base levels less than or equal to the emissions limits defined in section xxx, "The New Diesel-Fueled ATCM."

For new stationary diesel-fueled CI engines, the ARB will develop new engine standards that the manufacturers must meet. The proposed regulations for new stationary diesel-fueled CI engines require that no person shall sell, purchase, lease, or operate for use in California any new stationary prime diesel-fueled CI engine that does not meet all of the following emission performance standards:¹²³

- (1) 0.01 grams PM per brake-horsepower-hour;
- (2) at a minimum, the model year NMHC NO_x and carbon monoxide performance standards that would apply if the new stationary diesel-fueled engine were subject to the applicable Off-Road Compression-Ignition Engine Regulations. For any new stationary diesel-fueled engine whose model year NMHC NO_x and carbon monoxide perform-

¹²¹ *Id.*

¹²² CALIFORNIA AIR RESOURCES BOARD, PROPOSED AIRBORNE TOXIC CONTROL MEASURES: TO REDUCE DIESEL PARTICULATE MATTER EMISSIONS FROM IN-USE STATIONARY DIESEL-FUELED CI ENGINES GREATER THAN OR EQUAL TO 50 HORSEPOWER, at www.arb.ca.gov/diesel/documents/090402draftatcm-inusepdf (Sept. 2002).

¹²³ *Id.*

ance standards that would apply if the new stationary diesel-fueled engine were subject to the Off-Road Compression-Ignition Engine Regulations but not specified in those Regulations, the engine must meet the applicable NMHC NOx and carbon monoxide performance standards for the 1996 model year; and

- (3) the NO₂ weight fraction shall be no more than 20 percent of the total NOx emissions on a mass basis.

Other programs for existing engines will include retrofits or incentive based programs.¹²⁴ One such program will subsidize a farmer for the cost of a new diesel-fueled engine if the existing one is destroyed.¹²⁵ This approach will help clear the air without placing all the cost on the individual farmer. With the help of this incentive, farmers have replaced more than 2,000 dirty diesel engines used for pumping water.¹²⁶ In the past, the EPA and USDA have supported California's voluntary program in the San Joaquin Valley, to reduce air emissions from stationary diesel powered agricultural irrigation pumps.¹²⁷ Funds are provided to farmers by the local air district so they can retrofit, rebuild or replace existing engines with new, cleaner burning engines or an electric motor in order to reduce emissions.¹²⁸

"Retrofits of existing diesel-fueled engines are an essential element of the Diesel Risk Reduction Plan."¹²⁹ The most effective retrofit is a catalyst-based diesel particulate filter or DPF.¹³⁰ These filters have demonstrated the ability to reduce diesel emissions by 85 percent or more.¹³¹ The problem is that the cost of retrofitting existing engines with a DPF ranged up to \$30 per horsepower.¹³² This retrofit may be cost prohibitive because most of the agricultural engines have between 100 to 200 horsepower, making the cost of retrofitting between \$3000 and \$6000.¹³³

Pursuant to Health and Safety Code section 40703:¹³⁴

In adopting any regulation, the district shall consider, pursuant to section 40922, and making available to the public, its findings related to the cost effectiveness of a control measure, as well as the basis for the findings

¹²⁴ CALIFORNIA AIR RESOURCES BOARD, *supra* note 120.

¹²⁵ CAMPBELL, *supra* note 91.

¹²⁶ *Agriculture a Leading Polluter*, *supra* note 2.

¹²⁷ CAMPBELL, *supra* note 91.

¹²⁸ *Id.*

¹²⁹ CALIFORNIA AIR RESOURCES BOARD, *supra* note 120.

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.*

¹³³ JOHN DEERE, POWERTECH DIESEL ENGINES, pg 4. (2002)

¹³⁴ CAL. HEALTH & SAFETY CODE § 40703 (Deering 2003).

and the considerations involved. A district shall make reasonable efforts, to the extent feasible within existing budget constraints, to make specific reference to the direct costs expected to be incurred by regulated parties, including businesses and individuals.

The ARB estimates that this cost will decrease as the technology becomes more prevalent.¹³⁵ For now, the ARB remains sensitive to the cost impacts on California agricultural business and will not require retrofits until the cost is reasonable even though cost does need not be considered.¹³⁶

V. CONCLUSION

Air pollution is a problem that affects everyone and no one person or entity can be blamed for causing it. The EPA and ARB should try to devise regulations that will control the pollution without placing all the cost on the farmers whose livelihood depends on these stationary diesel-fueled engines. The settlement is a disappointment to California farmers because they now could face hastily developed air quality regulations that lack sufficient scientific underpinning to make a meaningful impact on air quality. By some accounts, the regulations are based on inadequate and out dated information.¹³⁷ In fact, the tremendous contributions that farmers already make to air quality by growing crops like cotton, corn, treefruit, grapes and other crops that scrub damaging ozone from the atmosphere should be acknowledged.¹³⁸ Making it harder for farmers to provide these and many other important environmental benefits is not good public policy.¹³⁹ It is also in the best interest of farmers to help reduce emissions because recent studies have revealed ozone is damaging to crops.¹⁴⁰ Even these positive contributions through ozone-scrubbing have not been enough to overcome the harm caused by increased urbanization in the state. Here in the San Joaquin Valley, for example, regulators must tackle the problems of transported air pollution that blows in from the Bay Area as well as the increased pollution that accompanies population growth and not just focus on farms.¹⁴¹

¹³⁵ CALIFORNIA AIR RESOURCES BOARD, *supra* note 120.

¹³⁶ *Id.*

¹³⁷ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 1.

¹³⁸ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 115.

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ CALIFORNIA FARM BUREAU FEDERATION, *supra* note 1.

The EPA was premature in pressing forward with regulations that were developed without sound science. The EPA should have waited until ongoing studies were completed before making its rule. The results of the studies would likely show that because of the farmers' voluntary efforts and a better understanding of how farms operate, air emissions are likely far lower than what activist groups have charged.¹⁴² Any change in regulations should aim at actual improvements in air quality, requiring a permit under Title V does not necessarily achieve that goal.

ALEX MERRIAM

¹⁴² CALIFORNIA FARM BUREAU FEDERATION, *supra* note 115.