Regulatory Analysis Form

This space for use by IRRC

(1) Agency Department of Environmental Protection	RECEIVED 2002 MAR 25 PM 1:54 INDEPENDENT REGULATORY REVIEW COMMISSION
(2) I.D. Number (Governor's Office Use) #7-365	IRRC Number: 2211.

(3) Short Title

Pennsylvania Heavy-Duty Diesel Emissions Control Program

(4) PA Code Cite Title 25 Environmental Protection Chapters 121 and 126 Subchapter E	(5) Agency Contacts & Telephone Numbers Primary Contact: Sharon Trostle, 783-1303 Secondary Contact: John Hines, 783-1303
(6) Type of Rulemaking (Check One) __x__Proposed Rulemaking ____Final Order Adopting Regulation ____Final Order, Proposed Rulemaking Omitted	(7) Is a 120-Day Emergency Certification Attached? __x__No ____ Yes: By the Attorney General ____ Yes: By the Governor

(8) Briefly explain the regulation in clear and nontechnical language.

The regulation would adopt by reference California's emission standards for new heavy-duty diesel vehicles (HDDVs) and engines (HDDEs), which are greater than 14,000 lb., for model year 2005 and subsequent model years. The regulation would require that heavy-duty diesel engine manufacturers that sell HDDVs and HDDEs in Pennsylvania, certify their engines using the Not-To-Exceed (NTE) and Euro III European Stationary Cycle (ESC) tests, also known as supplementary tests. Persons in Pennsylvania would be required to sell, lease, import, deliver, purchase, rent, acquire, or receive new HDDVs and HDDEs that meet the requirements of California's emission standards pertaining to HDDVs and HDDEs for the appropriate model years. The final rule also adopts California rules by reference. It includes a number of exemptions, types of certification testing, and types of enforcement testing. Responsibilities of manufacturers are described for warranty and recall obligations, emissions averaging, banking, and trading obligations, and sales reporting. Record keeping and reporting responsibilities of vehicle and engine dealers are described.

(9) State the statutory authority for the regulation and any relevant state or federal court decisions.

"Air Pollution Control Act", 1960, January 8, P.L. (1959) 2119, § 5 (35 P.S. § 4005)

(10) Is the regulation mandated by any federal or state law or court order, or federal regulation? If yes, cite the specific law, case or regulation, and any deadlines for action.

Federal or state law or court order does not mandate the Pennsylvania Heavy-Duty Diesel Emissions Control Program.

(11) Explain the compelling public interest that justifies the regulation. What is the problem it addresses?

The California Air Resources Board (CARB) and California Air Quality Control Districts produced evidence that engine manufacturers were installing defeat devices into their engines in the mid-1990s. These defeat devices were software innovations that allowed the engine's computer to distinguish between operating conditions included in the certification test and those not included. Consequently, the engines would pass certification testing, but when it was operating on the open highway, it would emit excessive amounts of ozone-forming pollutants for the benefit of fuel economy. These excess emissions occurred from 1988 to 1998. In 1998 alone, the defeat devices caused approximately 1.3 million tons of excess NOx emissions in the country – a significant percentage of overall NOx emissions that year.

As part of a consent decree with the Department of Justice in 1998, in order to make up some of the difference in excess emissions, heavy-duty diesel engine manufacturers agreed to meet federal 2004 exhaust emission standards in 2002 and incorporate the new supplementary tests into their engine certification procedures. These supplementary test procedures, NTE and ESC III, in combination with the federal test procedure (FTP), reflected real world driving conditions much better than the FTP alone. The ESC test also has associate requirements known as maximum achievable emission limits (MAEL). The MAEL requirements can be considered an adjunct to the ESC because they are utilized during the ESC test. The MAEL prevents manufacturers from complying with the ESC using computer programs that "recognize" when the engine is being tested at that specific test points, and then recalibrating for better fuel economy.

EPA recognized the positive effect that these test would have on lowering emissions and tried to incorporate them into their new HDDE standards for model year 2004. EPA is required by the Clean Air Act to give four years notice to manufacturers when they develop a new emission standard. EPA was unable to meet the four-year requirement and only was able to incorporate the tests into their standards for model year 2007. Therefore, the entire country is lacking these testing procedures for model years 2005 and 2006 while the country benefits from them for model years for 2002 to 2004 from a percentage of engines.

High ozone levels continue to pose a significant health threat in areas of Pennsylvania and throughout the Northeast. Pennsylvania needs to implement this rule, as part of its overall clean air strategy, to protect state and regional public health over the long term. Pennsylvania will lower emissions of NOx produced by model years 2005 and 2006 by 2 tons per day in the more-polluted Philadelphia area and 12.5 tons per day statewide in the year 2006 as a direct result of the adoption of this rulemaking. It is quite conceivable that if enough large states adopt similar rules to this one that the engine manufacturers will be compelled by practicality to produce all of their engines so that they comply with the NTE and ESC III testing requirements. This would keep pollution transport from upwind states low and help the Commonwealth lower their transport to downwind states.

Regulatory Analysis Form

(12) State the public health, safety, environmental or general welfare risks associated with on-regulation.

Vehicles complying with the NTE and ESC III testing requirements will have lower emissions of ozone precursors than vehicles currently sold in Pennsylvania. Health problems are associated with "ground-level" ozone exceedances. When inhaled, even at low levels, ozone can cause acute respiratory problems, aggravate asthma symptoms, cause temporary decreases in lung capacity, cause inflammation of lung capacity, cause inflammation of lung tissue, lead to hospital admissions and emergency room visits, impair the body's immune system defenses and lead to premature death.

Despite intense efforts on the part of the states and EPA to control oxides of nitrogen and the anthropogenic (human-made) portion of the VOC emissions, some areas in the state remain in violation of the 1-hour NAAQS for ozone. Many areas of the state will be in violation of the 8-hour ozone NAAQS when that standard comes into effect. Non-regulation will lead to more violations of that health-based standard.

Diesel engines also produce sulfur oxides (SOx), particulate matter (PM), and toxic compounds, such as formaldehyde, all of which have similarly adverse health effects as ozone. Emissions from HDDEs and HDDVs account for a substantial portion of ambient PM levels. These levels are higher in some urban areas.

(13) Describe who will benefit from the regulation. (Quantify the benefits as completely as possible and approximate the number of people who will benefit.)

All of the citizens of the Commonwealth will benefit from reduced emissions of oxides of nitrogen (NOx) from HDDEs. While this regulation by itself will not provide for attainment of the ozone standard, it will provide progress towards that goal. It will also reduce emissions of PM, SOx and toxic air pollutants. The entire population of the Commonwealth as well as the entire populations of states downwind, from New Jersey to Maine, will benefit. A possible greater effect will occur if enough large states like Pennsylvania adopt this regulation so that engine manufacturers are encouraged to produce just engines that comply with the new test procedures. In essence, the California standard will become the national standard.

(14) Describe who will be adversely affected by the regulation. (Quantify the adverse effect as completely as possible and approximate the number of people who will be adversely affected.)

Any person or business entity that purchases a diesel engine to be installed into a vehicle with a gross vehicle weight rating (GVWR) of 14,001 lb or greater will be required to pay more for these vehicles. The cost analysis performed by EPA and CARB included costs for necessary air pollution control equipment to be installed on each engine in order to comply with a more stringent emission standard. It is impossible to estimate the cost of the NTE and ESC tests themselves. It would be considerably less than the $824 total given in the cost analysis. Increased operating costs not to exceed $8.62 per vehicle per year will also be associated with this rulemaking.

Regulatory Analysis Form

(15) List the persons, groups or entities that will be required to comply with the regulation. (Approximate the number of people who will be required to comply.)

Heavy-duty diesel engine manufacturers and vehicle manufacturers that use these engines will be required to comply with the regulation. Also, heavy-duty diesel engine and vehicle dealers will be required to keep records for the Department to review. However, PennDOT already requires the same dealer record keeping requirements.

Ten manufacturers of HDDEs produce nearly all of the diesel engines sold in the United States for use in highway vehicles. These companies include: Caterpillar, Inc., Cummins Engine Company, DaimlerChrysler Corporation, Detroit Diesel Corporation, Ford Motor Corporation, General Motors Corporation, International Truck and Engine Corporation, Isuzu Motors America, Inc., Mack Trucks, Inc, and Volvo Corporation.

(16) Describe the communications with and input from the public in the development and drafting of the regulation. List the persons and/or groups who where involved, if applicable.

The Air Quality Technical Advisory Committee was consulted and gave input for this regulation. We also discussed this regulation with staff from the Pennsylvania Department of Transportation (PennDOT) Bureau of Vehicle Registration and received their input on the best way to proceed. We have consulted with the Pennsylvania Motor Truck Association.

(17) Provide a specific estimate of the costs and/or savings to the regulated community associated with compliance, including any legal, accounting or consulting procedures which may be required.

California prepared a cost analysis for this regulation, (attached) which demonstrated that medium-duty diesel vehicles will cost an extra $674 per vehicle and a heavy-duty diesel vehicle will cost an additional $824 per vehicle. However, these costs include all of the pollution control equipment needed to attain the federal emission standard for model year 2004 in addition to the extra costs associated with the supplementary tests included in the California (but not federal) rule. It is impossible to separate the costs of the two. Nevertheless, the cost per vehicle just for the supplementary tests will be a small fraction of the total cost per vehicle given above. See attached sheet for cost estimates. In addition, if enough states adopt similar regulations as this one, a de facto national standard will be created because manufacturers will not find it economical to make two different engines. Should this happen, consumers will incur the costs whether or not Pennsylvania has a regulation.

The general public in Pennsylvania will purchase approximately 16,050 heavy-duty diesel highway vehicles during a typical calendar year. Using California's cost estimates of $824 and $674 per vehicle, the cost to the manufacturer amounts to $29,567,711 for the two-year gap that this rulemaking, which could be passed on to the consumer. There is also a very slight increase in operating cost of about $8.62 year.

Pennsylvania heavy-duty diesel vehicle dealerships will be required to perform no additional record keeping procedures, since PennDOT already requires them to keep the records that this rule requires.

Regulatory Analysis Form

(18) Provide a specific estimate of the costs and/or savings to local governments associated with compliance, including any legal, accounting or consulting procedures which may be required.

Municipal government purchases approximately 340 heavy-duty diesel highway vehicles during a typical fiscal year. These vehicles will cost the manufacturers about $649,000 more to produce over the two year gap that this rule is covering, which will be passed on to the local government. There will be an extra cost associated with every vehicle that a local government purchases. Operating costs will not exceed $8.62 per vehicle per year.

(19) Provide a specific estimate of the costs and/or savings to state government associated with the implementation of the regulation, including any legal, accounting or consulting procedures which may be required.

State government purchases approximately 200 heavy-duty diesel highway vehicles during a typical fiscal year. These vehicles will cost the manufacturer about $368,451 more to produce over the two year gap that this rule is covering, which will be passed on to the state. Once again, it is impossible to factor out the cost of the supplementary tests from the cost of the extra control equipment. If it were possible, the cost would be a smaller amount. Increased operating cost will not exceed $8.62 per year per vehicle.

Regulatory Analysis Form

(20) In the table below, provide an estimate of the fiscal savings and cost associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

	Current FY Year	FY +1 Year	FY +2 Year	FY +3 Year	FY +4 Year	FY +5 Year
SAVINGS:	$	$	$	$	$	$
Regulated Community	0.00	0.00	0.00	0.00	0.00	0.00
Local Government	0.00	0.00	0.00	0.00	0.00	0.00
State Government	0.00	0.00	0.00	0.00	0.00	0.00
Total Savings	0.00	0.00	0.00	0.00	0.00	0.00
COSTS:						
Regulated Community	0.00	0.00	0.00	7,256,858	14,919,428	7,668,126
Local Government	0.00	0.00	0.00	156,381	323,000	169,643
State Government	0.00	0.00	0.00	90,431	185,941	95,554
Total Costs	0.00	0.00	0.00	7,503,670	15,428,369	7,933,323
REVENUE LOSSES:						
Regulated Community	0.00	0.00	0.00	0.00	0.00	0.00
Local Government	0.00	0.00	0.00	0.00	0.00	0.00
State Government	0.00	0.00	0.00	0.00	0.00	0.00
Total Revenue Losses	0.00	0.00	0.00	0.00	0.00	0.00

(20a) Explain how the cost estimates listed above were derived.

Regulated Community: California weight classes separate vehicle classes into medium-duty (14,000-18,000 lb.) and heavy-duty (greater than 18,000 lb.). PennDOT supplied total highway vehicle registrations in the Commonwealth for 1999. Since very few vehicles over 14,000 lb. are gasoline-powered, it was assumed that all vehicles over 14,000 lb. were diesel-powered. This total number was apportioned using PennDOT supplied fleet age data for Pennsylvania. First-year diesel vehicles account for 3.4% of all HDDVs in the Commonwealth. Second-year diesel vehicles account for 6.8% of all vehicles. Heavy-duty diesel highway vehicle sales were considered to be constant over the next five years. The number of vehicles for both medium-duty vehicles and heavy-duty vehicles sold in a typical year was multiplied by the appropriate cost estimates derived in the CARB staff report and grown by the rate of inflation (2.82% per year) over five years. This regulation takes effect for model year 2005, which can be produced as early as January 2004. This corresponds to FY +3. We assumed that all vehicles purchased in the second half of FY +3 were affected by this regulation. All of the vehicles purchased in FY + 4 were affected by this regulation and only vehicles in the first half of FY + 5 were affected by this regulation There will be a slight increase in operating costs of no more than $8.62 a year per truck.

Local Government: Registration data was obtained from PennDOT. Costs were estimated by multiplying the number of registered new trucks by the California estimated costs and grown by the rate of inflation over five years. Operating costs will not exceed $8.62 per vehicle per year.

Regulatory Analysis Form
State Government: Individual state agencies that were thought to be major purchasers of diesel vehicles with a GVWR over 14,000 lb. were contacted. The agencies contacted were Fish and Boat, Game Commission, PennDOT, Turnpike Commission, and Department of General Services. We obtained an estimate of the average yearly purchases by these agencies. PennDOT purchases 170. Fish and Boat and Game Commissions each purchase about 3. Turnpike Commission purchases about 25. DGS purchases zero. The costs were estimated by multiplying the number of vehicles by the California estimated costs and grown by the rate of inflation. Operating cost will not exceed $8.62 per vehicle per year.

Regulatory Analysis Form

(20b) Provide the past three year expenditure history for programs affected by the regulation.

No programs were affected by this regulation over the last three years.

Program	FY-3	FY-2	FY-1	Current FY
Air Quality	$21,000,000	$26,000,000	$29,000,000	$24,000,000

(21) Using the cost-benefit information provided above, explain how the benefits of the regulation outweigh the adverse effects and costs.

These supplementary emission-testing requirements in this regulation are a cost effective means to reducing ozone-forming emissions in areas that need the reductions most. An area that fails to attain the standard runs the risk of sanctions, which could include the loss of all federal highway funds.

In addition, the health risks associated with nonregulation, described in (12), will be reduced, thereby lowering health-care and related costs in the effected area.

(22) Describe the nonregulatory alternatives considered and the costs associated with those alternatives. Provide the reasons for their dismissal.

A single program that is large enough to bring Pennsylvania into attainment is impossible. Both regulatory and nonregulatory (including voluntary) measures will be necessary for clean air, as well as controlling emissions from upwind states. This regulation adopts a rule with which engine manufacturers will already be complying and extends that rule two years so that manufacturers do not slide back into the practice of producing engines that are not tested under real-world conditions.

The Department has formed four stakeholder groups in an attempt to devise strategies for four regions of the state. Both regulatory and nonregulatory approaches have been explored and implemented. All of these groups discussed and recommended control measures for diesel truck emissions. While they did not recommend this control measure specifically, they did recognize the importance of controlling emissions from highway diesel vehicles.

(23) Describe alternative regulatory schemes considered and the costs associated with those schemes. Provide the reasons for their dismissal.

The Clean Air Act precludes a state from making a "third vehicle" or in other words, adopting a third emission standard for any type of vehicle or engine, therefore Pennsylvania could not consider its own emission standards. The Commonwealth is limited to adopting either federal or California standards.

The Department also considered using registration or title denial as a mechanism for ensuring that dealers sell only heavy-duty diesel vehicles and engines. After consulting with the Pennsylvania Department of Transportation, the Department discovered that legislation would be required to deny titling or registration for emission standards.

(24) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulation.

The United States EPA requires that the test procedures adopted in this regulation be in effect from 2002 to 2004 for all heavy-duty diesel engine consent decree manufacturers. These manufacturers account for 60 percent of all HDDEs manufactured in the country. EPA included these procedures in the regulation Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements or "2007 Rule." In addition, the U.S. EPA attempted to have these test procedures incorporated into their Control of Emissions of Air Pollution from 2004 and Later Model Year Heavy-Duty Highway Engines in order to cover the years 2005 and 2006, but was unable to do so due to time constraints. The Commonwealth needs to adopt these regulations so that engine manufacturers perform these test procedures and continue to offer engines and vehicles that have been tested over the widest set of conditions. This regulation will preserve the amount of emission reductions that the equipment of today can offer.

(25) How does the regulation compare with those of other states? Will the regulation put Pennsylvania at a competitive disadvantage with other states?

In addition to California and Pennsylvania, at least 18 other states and the District of Columbia are proposing to adopt California's regulation. The states that are proposing to adopt this regulation account for a large percentage of the population of the United States, and thus, truck sales. We believe that if these large states adopt this regulation that the test procedures adopted will become a defacto national standard.

(26) Will the regulation affect existing or proposed regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

Adoption of the Pennsylvania Heavy-Duty Diesel Emissions Control program will not affect any existing or proposed regulations of the promulgating agency or other state agency.

(27) Will any public hearings or informational meetings be scheduled? Please provide the dates, times, and locations, if available.

For the proposed rulemaking, the Department received comments at three public hearings. The hearings were held on October 1, 2001 at 1:00 p.m. in Harrisburg, October 4, 2001 at 1:00 p.m. in Conshohocken, and on October 10, 2001 at 1:00 p.m. in Pittsburgh.

Regulatory Analysis Form

(28) Will the regulation change existing reporting, record keeping, or other paperwork requirements? Describe the changes and attach copies of forms or reports which will be required as a result of implementation, if available.

Engine manufacturers will be required to include on their manufacturers statement of origin (MSOs) proof that their engine or vehicle complies with California emission requirements. Engine manufacturers will be required to submit to the Department a report documenting the total deliveries for sale of engines and vehicles for each engine family over the model year in the Commonwealth. In addition, each heavy-duty diesel engine and vehicle manufacturer shall submit annually to the Department a report of all its heavy-duty diesel engines or vehicles that were included in any of the emissions averaging, banking, and trading programs for heavy-duty diesel engines within the requirements of Title 13, CCR, Division 3, Chapter 1, Article 2, Section 1956.8. These requirements will help the Department calculate emission reductions achieved by the program based on actual vehicle sales.

Vehicle dealers are already required to keep sales records for three years as part of a Pennsylvania Department of Transportation requirement. This will be sufficient time for the Department's enforcement actions.

(29) Please list any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, elderly, small businesses, and farmers.

Compliance assistance will be provided to affected parties, primarily heavy-duty diesel vehicle dealers, by distributing written information and conducting workshops in cooperation with the associations representing truck dealers and purchasers. We will work through the appropriate state trade organizations to distribute information to their members. In addition, the Commonwealth will explain the program to the HDDV-buying public through its normal communication mechanisms.

(30) What is the anticipated effective date of the regulation; the date by which compliance with the regulation will be required; and the date by which any required permits, licenses or other approvals must be obtained?

The anticipated effective date of the regulation will be in the first half of 2002. The program would first affect the engine models manufactured two years after the effective date (anticipated to be model year 2005).

(31) Provide the schedule for continual review of the regulation.

The regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

UL-1

FACE SHEET
FOR FILING DOCUMENTS
WITH THE LEGISLATIVE REFERENCE BUREAU

(Pursuant to Commonwealth Documents Law)

RECEIVED
2002 MAR 26 PM 1:54
REGULATORY REVIEW COMMISSION

#2211

DO NOT WRITE IN THIS SPACE

opy below is hereby approved as to and legality. Attorney General (DEPUTY ATTORNEY GENERAL) DATE OF APPROVAL heck if applicable opy not approved. Objections ttached.	Copy below is hereby certified to be a true and correct copy of a document issued, prescribed or promulgated by: DEPARTMENT OF ENVIRONMENTAL PROTECTION ENVIRONMENTAL QUALITY BOARD (AGENCY) DOCUMENT/FISCAL NOTE NO. #7-365 DATE OF ADOPTION: BY: David E. H TITLE: DAVID E. HESS, CHAIRMAN (EXECUTIVE OFFICER, CHAIRMAN OR SECRETARY)	Copy below is hereby approved as to form and legality. Executive or Independent Agency. BY: [signature] 3/25/02 DATE OF APPROVAL (Deputy General Counsel) ~~(Chief Counsel, Independent Agency)~~ (Strike inapplicable title) ☐ Check if applicable. No Attorney General approval or objection within 30 days after submission.

ORDER ADOPTING REGULATIONS

DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENVIRONMENTAL QUALITY BOARD

HEAVY-DUTY DIESEL EMISSIONS CONTROL PROGRAM
25 PA. CODE, CHAPTERS 121 AND 126

FINAL RULEMAKING

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CHS. 121 AND 126]

Heavy-Duty Diesel Emissions Control Program

ORDER

The Environmental Quality Board (Board) by this order amends Chapters 121 and 126 (relating to general provisions; and standards for motor fuels) to read as set forth in Annex A.

The final-form regulations establish a new heavy-duty diesel emissions control program designed to primarily reduce emissions of carbon monoxide (CO), oxides of nitrogen (NOx), volatile organic compounds (VOCs), particulate matter (PM) and air toxics from new heavy-duty diesel engines and vehicles. The amendments adopt and incorporate by reference certain requirements of the California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Year Heavy-Duty Engines and Vehicles as authorized under § 177 of the Clean Air Act (42 U.S.C.A. § 7507) (CAA).

This order was adopted by the Board at its meeting of March 19, 2002.

A. ***Effective Date***

These amendments will be effective immediately upon publication in the *Pennsylvania Bulletin* as final rulemaking.

B. ***Contact Persons***

For further information, contact Arleen Shulman, Chief, Mobile Sources Section, Division of Air Resource Management, Bureau of Air Quality, Rachel Carson State Office Building, 12th Floor, P. O. Box 8468, Harrisburg, PA 17105-8468, (717) 787-9495, or Bo Reiley, Assistant Counsel, Bureau of Regulatory Counsel, Office of Chief Counsel, Rachel Carson State Office Building, 9th Floor, P. O. Box 8464, Harrisburg, PA 17105-8464, (717) 787-7060.

C. ***Statutory Authority***

This action is being made under the authority of § 5(a)(1) of the Air Pollution Control Act (act) (35 P. S. § 4005(a)(1)), which grants the Board the authority to adopt rules and regulations for the prevention, control, reduction and abatement of air pollution in this Commonwealth. The Board is also expressly authorized by § 5(a)(7) of the act to adopt regulations designed to reduce emissions from motor vehicles.

D. ***Background and Purpose.***

Heavy-duty diesel (HDD) engines and vehicles contribute greatly to a number of serious health and welfare problems. First, they emit pollutants like PM, sulfur oxides (SOx), toxic compounds, such as formaldehyde, and ozone precursors, such as NOx and VOCs, whose documented adverse health effects include premature mortality, aggravation of respiratory and cardiovascular disease, changes in lung function and increased respiratory symptoms, changes to lung tissues and structures, altered respiratory defense mechanisms, chronic bronchitis and decreased lung function. Second, ozone pollution causes crop and forestry losses, and PM causes damage to materials and soiling of commonly used building materials and culturally important items such as statues and works of art. Third, NOx, SOx and PM contribute to visibility impairment. Fourth, NOx emissions from HDD vehicles contribute to the acidification, nitrification and eutrophication of water bodies. Fifth, the United States Environmental Protection Agency (EPA) has concluded that diesel exhaust is likely to be carcinogenic to humans. Finally, while vehicles powered by HDD engines account for about only 1% of all motor vehicles and equipment, they are responsible for nearly a quarter of NOx emissions.

Emissions from HDD engines and vehicles account for a substantial portion of ambient PM and ground-level ozone levels. These proportions are higher in some urban areas. Urban areas, which include many poorer neighborhoods, can be disproportionately impacted by HDD vehicle emissions because of heavy traffic in densely populated urban areas.

In addition, due to its location in the Northeast, this Commonwealth is a conduit for a large amount of truck traffic. Without the benefits of this final rulemaking, this Commonwealth can expect an additional 12.5 tons of NOx emissions per average summer day in 2006 Statewide from the trucks manufactured in 2005 and 2006. In the five-county Philadelphia area alone, model year 2005 and 2006 trucks are expected to emit an additional 2 tons of NOx per average summer day in 2006 without these additional controls.

HDD engines and vehicles have not been subject to many environmental regulations since passage of the Clean Air Act in 1970. The EPA's regulation of HDD engines and vehicles did not begin until 1984, when the agency adopted a 10.7 grams/brake horsepower-hour (g/bhp-hr) NOx standard. The EPA's NOx emissions standards for 1998 to 2003 model year HDD engines are 4 g/bhp-hr. The EPA currently requires testing of the engine (with emission control systems in place) rather than the entire vehicle. Thus the standards are expressed in units of g/bhp-hr (that is, grams of emission per unit of work the engine performs over a period of time), rather than the grams per mile unit used for testing passenger cars and light-duty trucks.

Before being offered for sale, new engines must be certified to compliance with Federal emissions standards. Engines are tested for certification using an engine dynamometer. The performance test cycle or cycles for determining compliance with numerical standards plays an important part in determining the stringency of the existing standards. It is the performance test that serves as the basis for determining this compliance.

Currently, the EPA only tests engines with the Federal test procedure (FTP) to determine compliance with the HDD engine standards. The FTP, however, only represents a small portion

of "real world" driving conditions. For example, the FTP does not include elevated high temperatures and highway cruise patterns. Therefore, it is inadequate in testing emissions under these conditions.

Several years ago, the United States Department of Justice, the EPA and the California Air Resources Board (CARB) brought major enforcement actions alleging that seven of the largest HDD engine and vehicle manufacturers (representing approximately 60% of HDD engine sales) violated Federal and California engine certification regulations by "defeating" or turning off diesel emission control devices during in-use highway driving. The manufacturers employed "defeat devices" in the HDD engines for model years 1988 through 1998. With these defeat devices, emission controls typically were turned off during cruising conditions to save fuel. This allowed NOx emissions as high as three times the emission standard. It is estimated that in 1998 alone, the "defeat devices" caused approximately 1.3 million tons of excess NOx emissions Nationally.

The Federal government and the seven HDD engine and vehicle manufacturers resolved the cases through settlement agreements. In 1998, they entered into judicial consent decrees (binding settlement orders) that imposed substantial penalties upon the seven manufacturers and required them to achieve additional emission reductions.

In the consent decrees, the settling manufacturers are required, among other things, to produce HDD engines and vehicles that comply with prescribed emission standards that are lower than those required in current California and Federal regulations, as measured by the FTP. Specifically, these engines must meet a 2.5 g/bhp-hr standard for nonmethane hydrocarbons (NMHC) plus NOx emissions no later than October 1, 2002. This will require production of new engines that are approximately 50% cleaner than current engines.

The majority of these settling engine manufacturers (Caterpillar, Cummins, Detroit Diesel, Mack Trucks, Renault (RVI) and Volvo Trucks) have also agreed to produce HDD engines by October 1, 2002, that meet supplemental certification test procedures. Together with the FTP test, the supplemental test procedures will require control of emissions during the majority of real world operating conditions, insuring that in the future "defeat devices" will no longer be employed. This will result in significant additional emission reductions of NOx and other pollutants during "real world" conditions. These supplemental test procedures are designed to make up for the deficiencies of the FTP.

The California rules require manufacturers to perform supplemental test procedures, in addition to the existing FTP. The two components of the supplemental test are known as the Not To Exceed (NTE) test and the EURO III European Stationary Cycle (ESC) test. The ESC test also has associate requirements known as maximum achievable emission limits (MAEL).

The NTE test procedure can be run in a vehicle on the road or in an emissions testing laboratory using an appropriate dynamometer. The vehicle or engine is operated under conditions that may reasonably be expected in normal vehicle operation and use, including operation under steady-state or transient conditions and under varying ambient conditions. Emissions are averaged over a minimum time of 30 seconds and then compared to the applicable emission limits.

The ESC test simulates cruising conditions better than either the FTP or the NTE procedures. This can help prevent excess emissions increasing during highway driving. This test consists of 13 modes of speed and power, primarily covering the typical highway cruise operating range of HDD engines. During each mode of operation, the concentration of the gaseous pollutant is measured and weighted. The weighted average emissions for each pollutant, as calculated by this test, must not be greater that the applicable FTP emission standard.

The MAEL requirements can be considered an adjunct to the ESC test because they are utilized during the 12 nonidle test modes of that test. The MAEL specifications prevent manufacturers from complying with the ESC using computer programs that recognize when the engine is being tested at specific test points, and then recalibrating for better fuel economy (which results in higher emissions) between test points. The MAEL requirements ensure that emissions do not exceed a cap when operating within the nonidle ESC test modes.

Since certifying HDD engines using the NTE and ESC tests produces much higher reductions than the reductions achieved when only the FTP is used, the EPA issued a final rule to adopt these supplemental test procedures for 2004 and subsequent model year HDD engines and vehicles. See, 65 *Fed. Reg.* 59895 (October 6, 2000). However, due to timing constraints that the Clean Air Act imposes on the EPA under § 202 of the CAA (42 U.S.C.A. § 7521), manufacturers will not be required to comply with the NTE and ESC test procedures until 2007 model year. Therefore, there will be a 2-year gap between the expiration of these test procedures for the settling manufacturers following the 2004 model year and the commencement of the test procedures for model year 2007 under EPA's final rule.

As a result, for two entire model years there may be serious backsliding, that is, diesel exhaust emissions could increase significantly above the previous levels mandated by the consent decrees. For this reason, California decided to fill the gap by requiring compliance with the NTE and ESC test procedures in addition to the FTP test procedure during the 2005 and 2006 model years. Moreover, this regulation will apply to all manufacturers, not just those affected by the consent decrees, who may want to enter the United States HDD engine market to gain an unfair competitive advantage.

A number of other states have also recognized the benefits of adopting these test procedures to prevent any backsliding attempts by HDD engine and vehicle manufacturers and to maintain improved air quality. To date the states of Delaware, North Carolina, Maryland, Georgia, Massachusetts, Texas, New Jersey, New York, Maine, and Rhode Island, and the District of Columbia have adopted the California rules under § 177. Truck sales in these states account for 37% of national truck sales.

The Commonwealth also recognizes the benefits of adopting these test procedures. It is estimated that an additional 12.5 tons of NOx emissions per average summer day Statewide from trucks manufactured in 2005 and 2006 will be reduced through the adoption of this rule.

Section 209 of the CAA (42 U.S.C. § 7543) allows California (and only California) to obtain a waiver of Federal preemption to continue to set its own motor vehicle standards. The CAA was amended in 1977 under §177 (42 U.S.C. § 7507) to allow states to adopt emission standards for

motor vehicles if the standards are identical to the California standards and a state adopts the standard at least 2 years before commencement of the model year.

Congress amended § 177 of the CAA in 1990 to prohibit states from taking any action that would have the effect of creating a motor vehicle or motor vehicle engine different than a motor vehicle or engine certified in California under California standards or otherwise create a "third vehicle."

The final-form rules establish a HDD program consistent with the requirements of § 177 of the CAA and will serve as the framework for the Commonwealth's program to control emissions from new HDD engines and vehicles.

The Commonwealth's proposed HDD emissions control program does not mandate the sale or the use of any special diesel fuel which complies with the specifications adopted by the state of California. The courts have held that a state's failure to adopt California fuel requirements does not violate § 177 of the CAA requirement that state emission standards be "identical to the California standards for which a waiver has been granted." *Motor Vehicle Manufacturers Association of the United States (MVMA) v. New York State Department of Environmental Conservation (NYSDEC)*, 17 F. 3d 521 (2d Cir. 1994).

Since HDD engines are engine certified, currently there is no mechanism in California to ensure that either a replacement engine or rebuild complies with requirements at least as stringent as the original engine. However, nonregulatory common practice dictates that when an engine is replaced, it is typically replaced with a newer, lower-emitting engine due to hardware and electronics compatibility concerns. Additionally, modern electronically controlled engines typically operate for more than 500,000 miles (and in many cases more than 1 million miles) before requiring replacements/rebuilds. By the time a typical replacement/rebuild occurs, engines older than the original engines are generally too old to be used or are not available.

Following promulgation of the proposed new HDD emissions control program regulations, amendments to Chapters 121 and 126 will be submitted to the EPA as a revision to the State Implementation Plan (SIP).

Under § 5(a)(7) of the act, the Department consulted with the Department of Transportation during the development of the proposed amendments. The Department also consulted with the Air Quality Technical Advisory Committee (AQTAC) on the final-form rulemaking. On January 17, 2002, the AQTAC recommended that the final-form rulemaking be submitted to the Board for consideration. AQTAC also suggested that the Department continue its aggressive efforts with other states to support uniform Federal standards for HDD vehicles to ensure progress in significantly reducing truck emissions during this decade.

This final-form rulemaking is consistent with the mandate under Executive Order 1996-1. The final-form rulemaking is necessary to achieve and maintain the ambient air quality standard for ozone and, as such, is justified as a compelling and articulable State interest as required under the Executive Order.

E. ***Summary of Comments and Responses on the Proposed Rulemaking***

The Board received 198 sets of comments on the regulatory proposal. The following discussion summarizes the major issues and the Board's response.

Of the 198 commentators, 193 expressed general support for the rulemaking. Of the 193 commentators, 177 sent a form letter, which expressed general support for the rulemaking.

Two commentators expressed the view that adopting California's emission standards for heavy-duty diesel engines would provide states an opportunity to obtain substantial and cost effective emission reductions. The Board agrees. The cost for a ton of reductions is approximately $400, which compares favorably with emission controls placed on industrial sources of several thousand dollars per ton.

A substantial number of commentators thought that a great opportunity exists for engine manufacturers to "backslide" to previous less stringent emission limits for model years 2005 and 2006. The Board agrees and believes that this is one of the main reasons why many states have decided to adopt the NTE standards. The economic and competitive incentives for engine manufacturers who sign the consent decrees could be too great not to backslide into the emissions standards developed prior to the signing of the consent decrees. The Board also believes that manufacturers would offer for sale engines that pollute excessively during the steady state portion of the engines operations unless the NTE requirements are enforced in Pennsylvania.

One commentator believes that the NTE program is nothing more than a patchwork State-by-State program. The commentator further believes that Pennsylvania can expect significant negative economic impacts if the regulation is adopted because truck purchasers will take their business to other states. The Board does not agree with this comment for several reasons. First, there are a number of states that have already adopted this rulemaking including California, Delaware, North Carolina, Maryland, Georgia, Massachusetts, Texas, New Jersey, New York, Maine, and Rhode Island, and the District of Columbia. There are also a number of states that are working to adopt this regulation. Those states include Pennsylvania, Arizona, and Minnesota. The Board believes that once these and other states adopt the requirements that nearly 50% of all new trucks will be required to comply with the supplemental test procedures. Moreover, the Board does not believe there will be a significant economic impact for several reasons. As stated above, the NTE standards are becoming a de facto national program. The extra cost per truck required to comply with this regulation will be less than several hundred dollars. In addition, this regulation is only intended to cover a 2-year interim window between when the test procedures in the consent decrees expire and the new federal regulations take place.

One commentator is concerned that the Commonwealth will not realize the expected emission reduction gains and that engines from outside the State will dominate the population of engines inside the State. As the Board has noted before, this program is fast becoming a de facto national program with over 37% of the national sales being covered by this regulation by the end of 2001. In addition, the Board believes that the Commonwealth will receive emission reduction benefits

which will help the State improve its air quality. Specifically, it is estimated that an additional 12.5 tons of NOx per average summer day will be reduced with the adoption of this rule.

A number of commentators believe that if enough states adopt the NTE supplemental testing requirements that a level regulatory playing field will be created for all engine manufacturers and states. The Board agrees. Non-consent decree and consent decree manufacturers will be required to follow the same regulations, and all states will have the same low-emitting vehicles available for sale.

One commentator is concerned that the cost for Pennsylvania to adopt, implement, and enforce the California requirements far outweigh the potential air quality benefits from their adoption. The Board disagrees. First, the cost to adopt, implement, and enforce this regulation will be low for the Commonwealth since enforcement will be handled by a small number of inspectors. Second, initial reductions that will be achieved as a result of this regulation will cost $400 per ton, which compares favorably to stationary source reductions that usually cost $1,000 or more per ton. Third, NOx emission reductions in the Commonwealth will approach 12 tons per day in 2006, which makes the adoption of the regulation worthwhile.

The CARB regulation has been challenged in the case *International Truck and Engine Corp v. California Air Resources Board et al.* (Case No. SIVS-01-1245GED GGH U.S. District Court, Eastern District of California). The commentator believes that the challenge will be successful and that the Board should not adopt the regulations. The Board notes that on October 24, 2001, the Court issued an Order in the above referenced case denying the Plaintiff's motion for summary judgment and granting the Defendant's motion to dismiss the case based on the grounds that the lawsuit is not "ripe" for adjudication.

Several commentators contend that California's adoption of the NTE standards are in violation of the statutory lead-time and stability requirements under § 202 of the CAA. Since there are no proposed changes to the emission standards that CARB adopted in 1999, the Clean Air Act requirements under § 202 did not apply to that rulemaking. Moreover, since § 202(a)(3)(C) is only applicable to standards promulgated under § 202(a) and California promulgates its standards under § 209(b), the provision does not apply to California. However, as a practical matter, since the NTE standards were adopted in 2000 and don't apply until 2005, manufacturers to have the four-year lead-time they requested of California. As to stability, while the requirements of California certification testing changed between the 2004 and 2005, the underlying standards are the 2004 standards as set forth in Title 13, California Code of Regulations § 1956.8(a). These standards are unchanged by the adoption of the supplemental test procedures as incorporated by reference in § 1956.8(b). Furthermore, California has the authority to adopt a separate State program, including a certification program, for new motor vehicles and new motor vehicle engines under § 209(b) of CAA. California has the authority to adopt test procedures that ensure that new motor vehicles and new motor vehicle engines meet California's state emission controls.

One commentator believes that the Commonwealth will need to ensure that the appropriate diesel fuel is available in Pennsylvania for heavy-duty diesel vehicles subject to the supplemental test procedures. The commentator goes on to say that the California test fuel used to certify the engines must be the predominate fuel that in-use vehicles employ. The Board believes that these

concerns are not valid. The provisions about certification of test fuel have been adopted to ensure that the fuel used during the certification is "not cleaner" than the fuel which is available in the California market, not the Pennsylvania market. During certification, if a very clean fuel is used to meet the emission standards, the standards may not be met in reality because that particular clean fuel may not be available on the market. If Pennsylvania performs any type of compliance testing, the Department will obtain California fuel used in the certification process.

This commentator further states that failure to adopt California fuels appears to be in violation of the identicality requirement under § 177 of the CAA. The Board disagrees. The Courts have held that a State's failure to adopt California fuel requirements does not violate the § 177 requirements that state emission standards be identical to the California standards. *MVMA v. NYSDEC*, 17 F. 3d 521, 523 (2d Cir 1994).

Several commentators believe that Pennsylvania is constrained by § 177 from adopting the California regulations before California has obtained a federal waiver of exemption. The Board disagrees. CARB already has an existing EPA waiver for heavy-duty diesel engines and vehicles. 53 *Fed. Reg.* 7021 (March 4, 1998). On December 26, 2001, CARB submitted to EPA a "scope of the waiver request" to confirm that the NTE tests are within the scope of the previously granted waiver of federal preemption under CAA § 209(b). Moreover, a federal court has ruled that states may adopt, but not enforce, CARB regulations before EPA has acted on the waiver request. *MVMA v. NYSDEC*, 17 F. 3d 521, 534 (2d Cir 1994). As a result, the Commonwealth believes that adopting the CARB standards at this time is not precluded under the CAA.

One commentator believes that the proposed requirements constitute new emission standards and not test procedures. The Board disagrees. The supplemental test procedures constitute additional test procedures to the Federal Test Procedures (FTP) since the requirement only provides extended methods for testing heavy-duty diesel engines and vehicles. Emission results from the tests are compared to the existing emission standard rather than a new emission standard. The underlying standards are the 2004 standards as set forth in Title 13, California Code of Regulations § 1956.8(a). These standards are unchanged by the adoption of the supplemental test procedures as incorporated by reference in § 1956.8(b).

One commentator is concerned that the CARB regulation goes well beyond the supplemental test procedure requirements contained in the CARB settlement agreement and was rushed to completion without adequate technical input and discussion with stakeholders. Under § 177 of the CAA, Pennsylvania can only adopt those standards that have been adopted by California. The Board believes that California's regulation, which incorporates the Federal standards with supplemental test procedures, represents the best way to reduce emissions from new on-highway heavy-duty diesel engines at this time.

Several commentators believe that California has not found that the supplemental test procedures are technologically feasible as required under the CAA. The Board disagrees. Six of the seven settling manufacturers will comply with the NTE test procedures beginning in 2002. From February to June of 2000 CARB participated in a series of meetings with engine manufacturers and with the U.S. EPA regarding the supplemental tests. The major concerns raised by the engine manufacturers were extreme operating conditions. If there are feasibility

concerns, the deficiency provisions under the California rule may be used for additional lead-time for compliance. Moreover, the Board notes that CARB received over 80 public comments on their supplement test procedure rules. Most comments originated from engine manufacturers or the manufacturers' representatives. Out of that public comment process, manufacturers were granted additional flexibilities by CARB for meeting some of the technical challenges.

One commentator believes that the Board should cooperate with California to adopt standards to include stricter enforcement of standards for urban buses and emergency vehicles, which are exempt under this rule. The Board recognizes that urban buses and emergency vehicles are a significant source of diesel exhaust in heavily populated areas, and the Board will work diligently to reduce their emissions. Nevertheless, the Board believes that emission reductions would be insignificant as a result of incorporating urban buses and emergency vehicles into this rulemaking.

A number of commentators believe that effectively limiting excess emissions from heavy-duty diesel vehicles and engines needs to be addressed from a regional or national level. The Board agrees. States, particularly those in the northeast, share a heavy volume of diesel traffic along with persistent elevated summertime ozone levels. Consequently this is one of the main reasons why the Board and other states have promulgated this rulemaking.

A number of commentators believe that diesel exhaust is a large contributor to adverse health effects among members of the population. The Board agrees. Diesel engines produce large amounts of NOx, which is a precursor for the formation of ozone. Children, the elderly, and individuals with preexisting respiratory problem are most at risk. This regulation will greatly limit NOx production from diesel engines.

A number of the commentators share Pennsylvania's concern about such persistent air pollution problems like ground level ozone, fine particulate matter, regional haze and acid deposition. The Board agrees. All of the pollutants listed above contribute to adverse health effects or interfere with the quality of life in some of the most populated areas of the Commonwealth and neighboring states.

F. ***Summary of Regulatory Requirements***

This final-form regulation establishes the requirements for the implementation of a new HDD emissions control program. A summary of the final rulemaking follows:

Chapter 121. General Provisions

The amendment to § 121.1 (relating to definitions) includes terms and phrases applicable to the New HDD Emissions Control Program. The final definitions include the following terms: "heavy-duty diesel engine" and "heavy-duty diesel vehicle."

The final rulemaking also amends the definition of "new motor vehicle" or "new light-duty vehicle" to include vehicles subject to the requirements of the HDD Emissions Control Program.

Chapter 126. Motor Vehicle and Fuels Programs

Subchapter E. Pennsylvania Heavy-Duty Diesel Emissions Control Program

The title of Chapter 126 is changed from "Standards for Motor Fuels" to "Motor Vehicle and Fuels Programs." Subchapter E contains provisions that establish a new HDD emissions control program in this Commonwealth to reduce the emissions of NOx, SOx, PM, and air toxics from HDD engines and vehicles under § 177 of the CAA.

Section 126.501 (relating to purpose) establishes a HDD emissions control program consistent with the requirements of § 177 of the CAA. It adopts and incorporates by reference certain provisions of the California exhaust emissions standards and test procedures for 1985 and subsequent model year HDD engines and vehicles. It also provides for certain exemptions from the program.

Section 126.502(a) (relating to general requirements) provides that the Commonwealth's HDD Emission Control Program applies to engines and vehicles with the model year beginning 2 years after the effective date of this regulation with a gross vehicle weight rating (GVWR) greater than 14,000 pounds that are sold, leased, offered for sale or lease, imported, delivered, purchased, rented, acquired or received in this Commonwealth.

Section 126.502(b) adopts and incorporates by reference the California Exhaust Emissions Standards and Test Procedures for 1985 and Subsequent Heavy-Duty Engines and Vehicles to the extent that they pertain to the applicable model years for HDD engines and vehicles with a GVWR of greater than 14,000 pounds.

Section 126.502(c) adopts and incorporates by reference the California Enforcement of Vehicle Emission Standards and Surveillance Testing under Title 13 *California Code of Regulations* (CCR), Division 3, Chapter 2, Article 1.5, § 2065.

Section 126.503 (relating to emission requirements) provides that a person may not sell, import, deliver, purchase, lease, rent, acquire or receive a HDD engine or vehicle starting with the applicable model year that is subject to the requirements of this program that has not received a CARB Executive Order for all applicable requirements of Title 13 CCR.

Section 126.503(b) allows manufacturers the option to include any of the HDD engines or vehicles it sells in this Commonwealth to participate in the averaging, banking and trading programs as provided under Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8.

Section 126.503(c) allows manufacturers the option to certify any of its HDD engines and vehicles delivered for sale in this Commonwealth to the optional emission standards as provided under Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8.

Section 126.503(d) requires that all new heavy-duty engines and vehicles subject to the requirements of this subject chapter shall posses a valid emissions control label which meets the requirements of Title 13 CCR, Division 3, Chapter 1, § 1965.

Section 126.504 (relating to exemptions) provides that the following are exempt from the HDD Emissions Control Program in this Commonwealth: emergency vehicles; an HDD engine or vehicle transferred by a dealer to another dealer; an HDD vehicle transferred for use exclusively off highway; an HDD vehicle granted a National security or testing exemption under § 203(b)(1) of the CAA (42 U.S.C.A. § 7522(b)); an HDD vehicle defined as a military tactical vehicle or engine under Title 13, CCR, Division 3, Chapter 1, Article 1, § 1905; a HDD vehicle sold after the effective date of the final rule if it was registered in this Commonwealth before the effective date of the final-form rulemaking; an HDD engine or vehicle for the model years 2005 and 2006 manufactured by an ultra-small volume manufacturer as defined under Title 13 CCR, Division 3, Chapter 1, Article 2, § 1976(f)(2); an urban bus as defined under Title 13, CCR, Division 3, Chapter 1, Article 2, § 1956.2(b)(4) for model years 2005 and 2006; and an HDD engine that following a technology review, CARB determines it to be inappropriate to require compliance with the emissions standards under § 1956.8 for that particular model year.

Section 126.511 (relating to new engine and vehicle certification testing) requires that prior to being offered for sale or lease in this Commonwealth, new HDD engines and vehicles shall be certified as meeting the motor vehicle requirements of Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8.

Section 126.512 (relating to new engine and vehicle compliance testing) requires that prior to being offered for sale or lease in this Commonwealth, new HDD engines and vehicles shall be certified as meeting the HDD engine and vehicle requirements of Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8 as determined by Title 13 CCR, Chapter 2, Article 2, §§ 2101--2110. An additional subsection was added to clarify that all CARB testing determinations apply for compliance testing with subsection (a).

Section 126.513 (relating to assembly line testing) provides that each manufacturer of new HDD engines and vehicles subject to the Commonwealth's HDD Emission Control Program shall conduct assembly line testing in accordance with Title 13 CCR, Chapter 2, Article 1. An additional subsection was added to clarify that all CARB testing determinations apply for compliance testing with subsection (a).

Section 126.514 (relating to in-use engine and vehicle enforcement testing) provides that for the purposes of detection and repair of engines and vehicles that fail to meet the emission requirements of the program, the Department may, after consultation with CARB, conduct in-use vehicle enforcement testing in accordance with the protocol and testing procedures under Title 13 CCR, Division 3, Chapter 2, Article 2.3, §§ 2136--2140.

Section 126.515 (relating to in-use surveillance testing) provides that the Department may conduct in-use surveillance testing after consultation with CARB.

Section 126.521 (relating to warranty and recall) provides that manufacturers of new HDD engines and vehicles shall warrant to the owner that each engine or vehicle complies over its period of warranty coverage with the requirements of Title 13 CCR, Division 3, Chapter 1, Article 6, §§ 2036 and 2039--2041.

Under § 126.521(b), each manufacturer shall submit to the Department failure of emission-related component reports for engines or vehicles subject to the program.

Under § 126.521(c), any voluntary or influenced emission related recall programs initiated by an HDD engine or vehicle manufacturer shall extend to all new HDD engines or vehicles in this Commonwealth.

Under § 126.521(d), any in-use vehicle ordered recalls under Title 13 CCR, Division 3, Chapter 2, Article 2.2, §§ 2122--2135 shall extend to all new HDD engines and vehicles sold, leased or offered for sale or lease in this Commonwealth.

Section 126.522 (relating to reporting requirements) provides that each manufacturer shall submit annually to the Department a report documenting the total deliveries for sale of HDD engines and vehicles for each engine family of that model year in this Commonwealth.

Under § 126.522(b), each HDD engine and vehicle manufacturer shall submit annually to the Department a report of all of its HDD engines or vehicles delivered for sale that were included in any of the emissions averaging, banking and trading programs for heavy-duty diesel vehicles within the requirements of Title 13 CCR, Division 3, Chapter 1, § 1965.

Section 126.531 (relating to responsibilities of heavy-duty diesel highway vehicle dealers) provides that a dealer must convey to the owner of a new HDD engine or vehicle subject to the requirements of this subchapter a valid emission control label which meets the requirements of Title 13 CCR, Division 3, Chapter 1, § 1965.

Under § 126.531(b) a dealer may not sell, offer for sale or lease, or deliver a new HDD engine or vehicle subject of this subchapter unless the engine or vehicle conforms to the standards and requirements under Title 13 CCR, Division 3, Chapter 2, Article 3, § 2151.

Under § 126.531(c) a dealer who imports, sells, delivers, leases or rents any HDD engines or vehicles subject to this subchapter shall retain records concerning the transaction for at least 3 years following the transaction.

G. *Benefits and Costs*

Executive Order 1996-1 requires a cost benefit analysis of the final-form regulation.

Benefits. The new HDD engine and vehicle emissions control program will contribute to the attainment and maintenance of the ozone health-based standard in this Commonwealth due to emission reductions from the operation of lower-emitting HDD vehicles. Modeling data from the Philadelphia area indicates that daily emissions of NOx will be reduced by 2 tons per average summer day and 12.5 tons per average summer day Statewide from trucks that are subject to the requirements of this program. In addition, it is anticipated that the health of the citizens of this Commonwealth will benefit from these reductions as well as through reduced exposure of air toxics, NOx and other air pollutants, which place people's health at risk.

Compliance Costs. The primary cost to the trucking industry will be incurred when purchasing a new truck or engine. For those model years affected in 2005, this regulation could increase the average cost of an engine, which has a useful life of 15 to 20 years, by as much as $800 and increase operating costs by up to $9 per year. Because it is difficult to separate the incremental cost of the supplemental tests from other aspects of complying with Federal and California standards, the actual cost is anticipated to be much lower.

Compliance Assistance Plan. Compliance assistance will be provided to affected parties, primarily automobile dealers, by distributing pamphlets and conducting public meetings and workshops to explain the regulatory requirements. The Department will involve appropriate State trade organizations in the distribution of information to their membership. Information concerning the program will also be provided to affected consumers.

Paperwork Requirements. HDD engine and vehicle manufacturers will be required to submit paperwork demonstrating compliance with the emissions standards and other requirements of the Commonwealth's HDD emissions control program. HDD engine and vehicle dealers, leasing and rental agencies, and purchasers of HDD engines and vehicles must demonstrate to the Department that new vehicles subject to the proposed amendments meet the emissions standards.

H. *Sunset Review*

This regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

I. *Regulatory Review*

Under § 5(a) of the Regulatory Review Act (71 P.S. §§ 745.5(a)), the Department submitted a copy of this proposed amendment on March 26, 2002 to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the Senate and House Environmental Resources and Energy Committees. In compliance with § 5(c) of the Regulatory Review Act, the Department also provided IRRC and the Committees with copies of the comments, as well as other documentation.

In preparing this final-form regulation, the Department has considered the comments received from IRRC and the public. These comments are addressed in the comment and response document and Section E of this preamble.

This final-form regulation was (deemed) approved by the House Environmental Resources and Energy Committee on April 15, 2002 and was (deemed) approved by the Senate Environmental Resources and Energy Committee on April 15, 2002. The Commission met on April 25, 2002 and (deemed) approved the regulation in accordance with § 5(c) of the Act.

J. *Finding of the Board*

The Board finds that:

(1) Public notice of proposed rulemaking was given under §§ 201 and 202 of the act of July 31, 1968 P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202) and regulations promulgated thereunder at 1 *Pennsylvania Code* §§ 7.1 and 7.2.

(2) A public comment period was provided as required by law, and all comments were considered.

(3) These final-form regulations do not enlarge the purpose of the proposal published at 31 *Pennsylvania Bulletin* 4958 (September 1, 2001).

(4) These final-form regulations are necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this Preamble and are reasonably necessary to achieve and maintain the NAAQS for ozone.

K. *Order of the Board*

The Board, acting under the authorizing statutes, orders that:

(a) The regulations of the Department of Environmental Protection, 25 *Pennsylvania Code,* Chapter 121 and 126, are amended by amending Chapter 121 and 126 to read as set forth in Annex A, with ellipses referring to the existing text of the regulations.

(b) The Chairman of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.

(c) The Chairman shall submit this order and Annex A to the Independent Regulatory Review Commission and the Senate and House Environmental Resources and Energy Committees as required by the Regulatory Review Act.

(d) The Chairman of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.

(e) This order shall take effect immediately.

BY:

DAVID E. HESS
Chairperson

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE III. AIR RESOURCES

CHAPTER 121. GENERAL PROVISIONS

§ 121.1. Definitions.

The definitions in § 3 of the act (35 P. S. § 4003) apply to this article. In addition, the following words and terms, when used in this article, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

***Heavy-duty diesel engine*--A diesel engine that is used to propel a motor vehicle with a GVWR of greater than 14,000 pounds.**

***Heavy-duty diesel vehicle*--A diesel-powered motor vehicle with a GVWR of greater than 14,000 pounds.**

* * * * *

New motor vehicle or *new light-duty vehicle*--A motor vehicle for which the equitable or legal title has never been transferred to the ultimate purchaser. For purposes of the Pennsylvania Clean Vehicles Program **and the Pennsylvania Heavy-Duty Diesel Emissions Control Program**, the equitable or legal title to a motor vehicle with an odometer reading of 7,500 miles or more shall be considered to be transferred to the ultimate purchaser. If the equitable or legal title to a motor vehicle with an odometer reading is less than 7,500 miles, the vehicle will not be considered to be transferred to the ultimate purchaser.

* * * * *

CHAPTER 126. [STANDARDS FOR MOTOR FUELS] MOTOR VEHICLE AND FUELS PROGRAMS

(*Editor's Note*: This subchapter is new and is printed in regular type to enhance readability.)

Subchapter E. PENNSYLVANIA HEAVY-DUTY DIESEL EMISSIONS CONTROL PROGRAM

GENERAL PROVISIONS

Sec.

APPLICABLE HEAVY-DUTY ENGINE AND VEHICLE TESTING

ENGINE AND VEHICLE MANUFACTURERS' OBLIGATIONS

MOTOR VEHICLE DEALER RESPONSIBILITIES

GENERAL PROVISIONS

§ 126.501. Purpose.

(a) This subchapter establishes a heavy-duty diesel emissions control program under § 177 of the Clean Air Act (42 U.S.C.A. § 7507) designed primarily to achieve emission reductions of the precursors of ozone, particulate matter, air toxics and other air pollutants from new heavy-duty diesel engines and vehicles.

(b) This subchapter adopts and incorporates by reference certain provisions of the California Exhaust Emission Standards and Test Procedures for Heavy-Duty Diesel Engines and Vehicles.

(c) This subchapter also exempts certain new heavy-duty diesel engines and vehicles from this new emissions control program.

§ 126.502. General requirements.

(a) The Pennsylvania Heavy-Duty Diesel Emissions Control Program requirements apply to new heavy-duty diesel engines and vehicles with a GVWR of greater than 14,000 pounds that are sold, leased, offered for sale or lease, imported, delivered, purchased, rented, acquired or received in this Commonwealth starting with the model year **[2005]** **BEGINNING TWO (2) YEARS AFTER _____**, (Editor's Note: The blank refers to the effective date of the adoption of this proposal.) and each model year thereafter.

(b) The California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Heavy-Duty Engines and Vehicles, Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8 **[is]** **ARE** adopted and incorporated by reference to the extent that **[it]** **THEY** pertain**[s]** to the requirements for heavy-duty diesel engines and vehicles with a GVWR of greater than 14,000 pounds.

(c) The California Enforcement of Vehicle Emission Standards and Surveillance Testing, Title 13 CCR, Division 3, Chapter 2, Article 1.5, § 2065, are adopted and incorporated by reference.

§ 126.503. Emission requirements.

(a) Starting with **THE** model year **[2005]** **BEGINNING TWO (2) YEARS AFTER _____,** (Editor's Note: The blank refers to the effective date of the adoption of this proposal.) a person may not sell, import, deliver, purchase, lease, rent, acquire or receive a new heavy-duty diesel engine or vehicle, subject to the Pennsylvania Heavy-Duty Diesel Emissions Control Program requirements, in this Commonwealth that has not received a CARB Executive Order for all applicable requirements of Title 13 CCR, **ADOPTED AND** incorporated **[~~herein~~]** by reference.

(b) Starting with the model year **[2005]** **BEGINNING TWO (2) YEARS AFTER _____,** (Editor's Note: The blank refers to the effective date of the adoption of this proposal.) a manufacturer may elect to include its heavy-duty diesel engines or vehicles delivered for sale in this Commonwealth in the emissions averaging, banking and trading programs for heavy-duty diesel engines or vehicles as provided under Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8.

(c) Starting with **THE** model year **[2005]** **BEGINNING TWO (2) YEARS AFTER _____,** (Editor's Note: The blank refers to the effective date of the adoption of this proposal.) a manufacturer may elect to certify any of its heavy-duty diesel engines or vehicles delivered for sale in this Commonwealth to the optional emission standards as provided under Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8.

(d) New heavy-duty diesel engines and vehicles subject to the requirements of this subchapter shall possess a valid emissions control label that meets the requirements of Title 13 CCR, Division 3, Chapter 1, § 1965, **ADOPTED AND** incorporated **[~~herein~~]** by reference.

§ 126.504. Exemptions.

The following new heavy duty diesel engines and vehicles are exempt from the Pennsylvania Heavy-Duty Diesel Emissions Control Program requirements of this subchapter:

(1) Emergency vehicles.

(2) A heavy-duty diesel vehicle transferred by a dealer to another dealer.

(3) A heavy-duty diesel vehicle transferred for use exclusively off-highway.

(4) A heavy-duty diesel vehicle granted a National security or testing exemption under § 203(b)(1) of the Clean Air Act (42 U.S.C.A. § 7522(b)(1)).

(5) A heavy-duty diesel vehicle defined as a military tactical vehicle or engine under Title 13 CCR, Division 3, Chapter 1, Article 1, § 1905, **ADOPTED AND** incorporated **[~~herein~~]** by reference.

(6) A heavy-duty diesel vehicle sold after _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.), if the vehicle was registered in this Commonwealth before _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposal.).

(7) A heavy-duty diesel engine or vehicle for the model years 2005 and 2006 manufactured by an ultra-small volume manufacturer as defined under Title 13 CCR, Division 3, Chapter 1, Article 2, § 1976(f)(2), **ADOPTED AND** incorporated **[~~herein~~]** by reference.

(8) For model years 2005 and 2006, an urban bus as defined under Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.2(b)(4), **ADOPTED AND** incorporated **[~~herein~~]** by reference.

(9) A heavy-duty diesel engine or vehicle that, following a technology review, CARB determines is inappropriate to require compliance with the emission standards **AND OTHER**

REQUIREMENTS under Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8 for a particular model year.

APPLICABLE HEAVY-DUTY ENGINE AND VEHICLE TESTING

§ 126.511. New engine and vehicle certification testing.

(a) Prior to being offered for sale or lease in this Commonwealth, new heavy-duty diesel engines and vehicles subject to the Pennsylvania Heavy-Duty Diesel Emissions Control Program requirements of this subchapter shall be certified as meeting the heavy-duty diesel engine and vehicle requirements of Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8 as determined by Title 13 CCR, **DIVISION 3,** Chapter 2, Article 2, §§ 2101--2110**, ADOPTED AND INCORPORATED BY REFERENCE**.

(b) For purposes of complying with subsection (a), new vehicle certification testing determinations and findings made by CARB apply.

§ 126.512. New engine and vehicle compliance testing.

(a) Prior to being offered for sale or lease in this Commonwealth, new heavy-duty diesel engines and vehicles subject to the Pennsylvania Heavy-Duty Diesel Emissions Control Program requirements of this subchapter shall be certified as meeting the heavy-duty diesel engine and vehicle requirements of Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8 as determined by Title 13 CCR, **DIVISION 3,** Chapter 2, Article 2, §§ 2101--2110**, ADOPTED AND INCORPORATED BY REFERENCE**.

(b) FOR PURPOSES OF COMPLIANCE WITH SUBSECTION (a), NEW ENGINE AND VEHICLE COMPLIANCE TESTING DETERMINATIONS AND FINDINGS MADE BY CARB APPLY.

§ 126.513. Assembly line testing.

(a) Each manufacturer of new heavy-duty diesel engines and vehicles subject to the Pennsylvania Heavy-Duty Diesel Emission Control Program requirements of this subchapter, certified by CARB and sold or leased in this Commonwealth, shall conduct assembly line testing in accordance with Title 13 CCR, **DIVISION 3,** Chapter 2, Article 1**, ADOPTED AND INCORPORATED BY REFERENCE**.

(b) FOR PURPOSES OF COMPLIANCE WITH SUBSECTION (a), ASSEMBLY LINE TESTING DETERMINATIONS AND FINDINGS MADE BY CARB APPLY.

§ 126.514. In-use engine and vehicle enforcement testing.

(a) For the purposes of detection and repair of engines and vehicles subject to the Pennsylvania Heavy-Duty Diesel Emissions Control Program requirements which fail to meet the emission requirements of Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8, the Department may, after consultation with CARB, conduct in-use vehicle enforcement testing in accordance with the protocol and testing procedures in Title 13 CCR, Division 3, Chapter 2, Article 2.3, §§ 2136--2140, **ADOPTED AND** incorporated **[~~herein~~]** by reference.

(b) For purposes of compliance with subsection (a), in-use engine and vehicle enforcement testing determinations and findings made by CARB apply.

§ 126.515. In-use surveillance testing.

(a) For the purposes of testing and monitoring, the overall effectiveness of the Pennsylvania Heavy-Duty Diesel Emissions Control Program in controlling emissions, the Department may conduct in-use surveillance testing after consultation with CARB, in accordance with Title 13 CCR, Division 3, Chapter 2, Article 3, §§ 2150--2153**, ADOPTED AND INCORPORATED BY REFERENCE**.

(b) For purposes of program planning, in-use surveillance testing determinations and findings made by CARB apply.

ENGINE AND VEHICLE MANUFACTURERS' OBLIGATIONS

§ 126.521. Warranty and recall.

(a) A manufacturer of new heavy-duty diesel engines [~~and~~] **OR** vehicles subject to the Pennsylvania Heavy-Duty Diesel Emissions Control Program requirements of this subchapter which are sold, leased, or offered for sale or lease in this Commonwealth shall warrant to the owner that each engine or vehicle shall comply over its period of warranty coverage with the requirements of Title 13 CCR, Division 3, Chapter 1, Article 6, §§ 2036, 2039-2041 and 2046, **ADOPTED AND** incorporated [~~herein~~] by reference.

(b) Each manufacturer of new heavy-duty diesel engines [~~and~~] **OR** vehicles shall submit to the Department failure of emission-related components reports, as defined in Title 13 CCR, Division 3, Chapter 2, Article 2.4, § 2144, **ADOPTED AND** incorporated [~~herein~~] by reference, for engines and vehicles subject to the Pennsylvania Heavy-Duty Diesel Emissions Control Program in compliance with the procedures in Title 13 CCR, Division 3, Chapter 2, Article 2.4, §§ 2141--2149, **ADOPTED AND** incorporated [~~herein~~] by reference.

(c) For heavy-duty diesel engines and vehicles subject to the Pennsylvania Heavy-Duty Diesel Emissions Control Program, a voluntary or influenced emission-related recall campaign initiated by any heavy-duty diesel engine or vehicle manufacturer under Title 13 CCR, Division 3, Chapter 2, Article 2.1, §§ 2111--2121, **ADOPTED AND INCORPORATED BY REFERENCE,** shall extend to all new heavy-duty diesel engines or vehicles sold, leased or offered for sale or lease in this Commonwealth.

(d) For heavy-duty diesel engines and vehicles subject to the Pennsylvania Heavy-Duty Diesel Emission Control Program, an in-use vehicle ordered recall under Title 13 CCR, Division 3, Chapter 2, Article 2.2, §§ 2122--2135, **ADOPTED AND INCORPORATED BY REFERENCE,** shall extend to all new heavy-duty diesel engines or vehicles sold, leased or offered for sale or lease in this Commonwealth.

§ 126.522. Reporting requirements.

(a) For the purposes of determining compliance with the Pennsylvania Heavy-Duty Diesel Emissions Control Program, commencing with the model year **[2005] BEGINNING TWO (2) YEARS AFTER** _____, (Editor's Note: The blank refers to the effective date of the adoption of this proposal.) each manufacturer shall submit annually to the Department, within 60 days of the end of each model year, a report documenting the total deliveries for sale of engines and vehicles for each engine family over that model year in this Commonwealth.

(b) For the purposes of determining compliance with the Pennsylvania Heavy-Duty Diesel Emissions Control Program, each heavy-duty diesel engine and vehicle manufacturer shall submit annually to the Department, by March 1 of the calendar year following the close of the completed calendar year, a report of its heavy-duty diesel engines and vehicles delivered for sale in this Commonwealth that were included in the emissions averaging, banking and trading programs for heavy-duty diesel engines and vehicles within the provisions of Title 13 CCR, Division 3, Chapter 1, Article 2, § 1956.8.

MOTOR VEHICLE DEALER RESPONSIBILITIES

§ 126.531. Responsibilities of heavy-duty diesel highway vehicle dealers.

(a) A dealer may not sell, offer for sale or lease, or deliver a new heavy-duty diesel engine or vehicle subject to the requirements of this subchapter without a valid emissions control label

which meets the requirements of Title 13 CCR, Division 3, Chapter 1, **ARTICLE 2,** § 1965, **ADOPTED AND INCORPORATED BY REFERENCE**.

(b) A dealer may not sell, offer for sale or lease, or deliver a new heavy-duty diesel engine or vehicle subject to the requirements of this subchapter unless the engine or vehicle conforms to the standards and requirements under Title 13 CCR, Division 3, Chapter 2, Article 3, § 2151, **ADOPTED AND INCORPORATED BY REFERENCE**.

(c) A dealer who imports, sells, delivers, leases or rents an engine or vehicle subject to the requirements of this subchapter shall retain records concerning the transaction for at least 3 years following the transaction.

PENNSYLVANIA HEAVY-DUTY DIESEL EMISSIONS CONTROL PROGRAM
COMMENT AND RESPONSE DOCUMENT

List of Commentators:

ID	Name/Address	Zip	Submitted 1 pg Summary	Provided Testimony	Req Final Rule
1	Caterpillar, Inc. c/o Mr. Gilbert S. Keteltas, Esq. Howrey Simon Arnold & White 1299 Pennsylvania Avenue, NW Washington, DC	20004-2402	X		
2	Mr. Richard A. Valentinetti Air Pollution Control Division Department of Environmental Conservation 103 South Main Street Building 3 South Waterbury, VT	05671-0402			
3	Mr. Harold F. Reheis, Director Georgia Department of Natural Resources Environmental Protection Division Air Protection Branch 205 Butler Street, SW Room 1152 Atlanta, GA	30334			
4	Mr. Stephen Majkut, Chief Office of Air Resources Rhode Island Department of Environmental Management 235 Promenade Street Providence, RI	02908-5767			
5	Mr. Allen Biaggi, Administrator Division of Environmental Protection Department of Conservation and Natural Resources 333 W. Nye Lane, Room 138 Carson City, NV	89706			
6	Mr. John C. Elston, Administrator Office of Air Quality Management Department of Environmental Protection 401 East State Street P.O. Box 418 Trenton, NJ	08625-0418			

ID	Name/Address	Zip	Submitted 1 pg Summary	Provided Testimony	Req Final Rule
7	Mr. Alan W. Klimek P.E. Director Division of Air Quality North Carolina Department of Environment and Natural Resources 1641 Mail Service Center Raleigh, NC	27699-1641			
8	Mr. Charles McPhedran Senior Attorney Citizens for Pennsylvania's Future 117 South 17th Street Suite 1801 Philadelphia, PA	19103			
9	Mr. Robert Cross, Chief Mobile Source Control Division Air Resources Board 9528 Telstar Avenue P.O. Box 8001 El Monte, CA	91731			
10	Mr. James C. Colman Assistant Commissioner Bureau of Waste Prevention Department of Environmental Protection One Winter Street 9th Floor Boston, MA	02108			
11	Ms. Michelle Wallhagen 2123 Spruce Street Apt. 1A Philadelphia, PA	19103-4864			
12	Ms. Elizabeth Shevi Director Policy & Planning Division Minnesota Pollution Control Agency 520 LaFayette Road N. St. Paul, MN	55155-4194			

ID	Name/Address	Zip	Submitted 1 pg Summary	Provided Testimony	Req Final Rule
13	Mr. Christopher A. James Director Planning and Standards Division Bureau of Air Management Department of Environmental Protection 79 Elm Street Hartford, CT	06106-5127			
14	Ms. Beth McConnell PennPRIG Advocate 1334 Walnut Street 6th Floor Philadelphia, PA	19107			
15	Mr. Verne Thalheimer Environmental Analyst NESCAUM 129 Portland Street Boston, MA	02114			
16	Mr. Kevin M. Stewart Director of Environmental Health American Lung Association of Pennsylvania 630 Janet Avenue Lancaster, PA	17601-4584			
17	Ms. Judy Hawson Policy Analyst Clean Air Council 135 South 19th Street Suite 300 Philadelphia, PA	19103			
18	Ms. Lisa Stegink Engine Manufacturers Association Two North LaSalle Street Suite 2200 Chicago, IL	60602	X		
19	Gary R. Brown, President RT Environmental Services, Inc. 215 West Church Road King of Prussia, PA	19406		X	
20	Ms. Gina Dianna 328 West Lafayette Street West Chester, PA *(First of 177 Form Letters)*	19380			

ID	Name/Address	Zip	Submitted 1 pg Summary	Provided Testimony	Req Final Rule
21	International Truck and Engine Corporation c/o Andrew R. Stewart Latham & Watkins Attorneys at Law 555 Eleventh Street, NW Suite 100 Washington, DC	20004-1301			
22	Mr. Robert E. Nyce, Executive Director Independent Regulatory Review Commission 14th Floor, Harristown #2 333 Market Street Harrisburg, PA	17120			

COMMENTS AND RESPONSES

1. Comment: Sixteen commentators and another 177 commentators through form letters expressed general support for the rulemaking. (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20)

Response: The Department greatly appreciates the support of so many states, organizations and Commonwealth residents.

2. Comment: The commentator raised issues pertaining to regulating certain classes of construction equipment that are usually considered stationary sources, which are either mounted on or towed by a motor vehicle. Specifically, the commentator called for changes in the permitting process for these equipment types. (19)

Response: The Department would like to emphasize that this regulation pertains strictly to motor vehicles powered by diesel fuel. Motor vehicles are defined in Title 25 as a "A self-propelled vehicle designed for transporting persons or property on a street or highway." The comment is beyond the scope of this regulation.

3. Comment: Adopting California's emissions standards for heavy-duty diesel engines for 2005 and subsequent model years will provide states with an opportunity to obtain substantial and cost-effective emissions reductions. (2, 12)

Response: The Department agrees. The cost per ton of reductions will be about $400, which compares favorably with emissions controls placed on industrial sources of several thousands of dollars per ton.

4. Comment: A loophole exists for engine manufacturers to "backslide" to previous emissions levels that do not greatly limit emissions from steady state (highway) driving for model year 2005 and beyond. (2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 15, 16, 20)

Response: The Department agrees. The Department believes the economic and competitive incentives for engine manufacturers who signed consent decrees could be too great for them not to backslide into the requirements that were in place before the consent decrees were signed. The Department believes that manufacturers may offer for sale engines that pollute excessively during the steady

state portion of the engine's operation without the supplemental test procedures being adopted.

5. Comment: This program will become a patchwork state-by-state program and not a national program. Pennsylvania can expect significant negative economic impacts if this regulation is adopted as truck purchasers will take their business to other states. (1)

Response: Many states are working to adopt this NTE regulation. These states include Pennsylvania, Arizona, and Minnesota. States that have already adopted this rulemaking include California, Delaware, North Carolina, Maryland, Georgia, Massachusetts, Texas, New Jersey, New York, Maine, Rhode Island, and Connecticut and the District of Columbia. The Department believes that state regulations in the adopting states will require well over 50% of all new trucks to comply with the supplemental test requirements. The Department believes this will lead to a de facto national program.

The Department does not believe there will be significant economic impacts for a number of reasons. First, as stated above, the proposed supplemental test procedure will become a de facto national program as the states with the largest amount of truck activity adopt similar regulations to Pennsylvania's. Second, the Department believes that in the end the extra cost per truck required to comply with this regulation will be less than several hundred dollars, which is less than a one percent increase in the cost of an average new heavy-duty diesel truck. Third, this regulation is only intended to cover a two-year interim window between when the test procedures in the consent decrees expire and when new federal regulations take effect in 2007. The Department does not believe that truck manufacturers will pit their dealerships from one state against the dealerships of another state for a two-year period (if in fact there is not a de facto national program) and jeopardize their established nationwide network. As a result, the Department believes that price differences between states, if any, will be small.

6. Comment: Pennsylvania will not realize the expected emission reduction gains. Engines from outside the state will dominate the population of engines inside the state. (1)

Response: The Department expects this program to be a de facto national program, or at the very least, to cover the majority of the trucks in

the country, particularly in the Northeast. In fact, the Northeastern States of New York, Massachusetts, New Jersey, Delaware, Rhode Island and Maryland have already adopted this rulemaking as provided for under § 177 of the CAA. The Department believes the Commonwealth will receive emission reduction benefits that will help the state improve air quality, improve air quality in downwind states, and allow all states to more easily attain their clean air goals. In addition, this regulation is an extremely cost-effective emission reduction strategy. It will cost only $400 for each ton of emission reduction, which is more favorable than emission controls placed on stationary sources.

7. Comment: If enough states adopt California's supplemental testing requirements for diesel engines for model years 2005 and 2006, a level regulatory playing field will be created for all engine manufacturers and states. (2, 4, 5, 6, 7, 10, 15)

Response: The Department agrees. Non-consent decree and consent decree manufacturers will be required to follow the same regulations, and all states will have the same low-emitting vehicles available for sale.

8. Comment: Costs for Pennsylvania to adopt, implement, and enforce the pending California requirements far outweigh the potential air quality benefits from their adoption. (18)

Response: The cost to adopt, implement, and enforce this regulation will be low for the Commonwealth, since the Department will use its own enforcement tools. Emission reductions that will be achieved as a result of this regulation will cost $400 per ton, which compares favorably to stationary source reductions that usually cost $1000 per ton or more. NOx emission reductions in the Commonwealth will approach 12 tons per day in 2006, which makes adoption of this regulation worthwhile.

9. Comment: It is hoped that a de facto national standard will be established when states adopt California's supplemental testing requirements for diesel engines for model years 2005 and 2006. (3, 8, 9, 16)

Response: The Department agrees. The states of California, Connecticut, Delaware, North Carolina, Maryland, Georgia, Massachusetts, Texas, New Jersey, New York, Maine and Rhode Island and the District of Columbia have already adopted the NTE regulation.

Truck sales in these states account for 37% of national truck sales. Enough states will have adopted this regulation so that it will be economically unviable for engine manufacturers to sell an engine that does not comply with the supplemental tests.

10. Comment: The California Air Resources Board (CARB) regulation has been challenged in the case *International Truck and Engine Corp. v. California Air Resources Board, et al.*, (Case No. SIV S-01-1245 GED GGH U.S. District Court Eastern District of California). The commentator believes that the challenge will be successful on the basis that EPA cannot issue the required federal preemption waiver for California to adopt this rule. (1, 18, 21)

Response: On October 24, 2001, the Court issued an Order in the above referenced case and denied the plaintiff's motion for summary judgment and granted the defendant motion to dismiss the case based on the grounds that the lawsuit is not "ripe" for adjudication.

11. Comment: Based upon the federal Clean Air Act, § 202, the statutory lead-time and stability requirements have been violated by California's adoption of the Not-To-Exceed (NTE) standards. (1, 18, 21)

Response: California does not believe that to be the case. As stated in CARB's Summary of Comments and Agency Response of December 8, 2000, and its December 26, 2001 "scope of the waiver" request letter to EPA, the federal timing constraints do not apply to California's rulemaking. California does not promulgate its standards under the grant of authority in § 202(a). California promulgates vehicular emissions standards under the grant of authority in state law (California Health and Safety Code Division 26) and under the waiver of federal preemption of state standards contained in CAA § 209(b). Since § 202(a)(3)(C) is only applicable to standards promulgated under § 202(a) and since California does not promulgate its standards under § 202(a), the provision does not apply to California. And, if the provision does not apply, its specified lead-time and stability requirements do not apply to California. However, California further states that California has provided sufficient lead-time to meet the lead-time set out in § 202(a)(3)(C), since it adopted the supplemental test procedures in 2000 that provided the manufacturers with 4 years lead-time as a matter of law. In addition, as a practical matter, lead-time has accrued since the entry of the settlement agreements and the consent decrees in 1998.

As to stability, while the requirements of California certification testing changed between the 2004 and 2005, the underlying standards are the 2004 standards as set forth in Title 13, California Code of Regulation § 1956.8(a). These standards are unchanged by the adoption of the supplemental test procedures as incorporated by reference in § 1956.8(b). Moreover, the test procedures have been stable since their inclusion in the 1998 settlement agreements and consent decrees, since there are no proposed changes to emission standards that CARB adopted in 1999 under § 1956.8(a) only to the test procedures under § 1956.8(b). Further, California has authority to adopt a separate state program, including a certification program, for new motor vehicles and new motor vehicle engines under CAA § 209(b). California has the authority to adopt test procedures that ensure that new motor vehicles and new motor vehicle engines meet California's state emission control standards.

12. Comment: The Commonwealth will need to ensure that the appropriate diesel fuel is available in Pennsylvania for heavy-duty diesel vehicles subject to the supplemental test procedures. The commentator states that the California test fuel used to certify the engines must be the predominate fuel that the vehicles employ in-use. The commentator also states that without mandating the availability and use of California diesel fuel the manufacturers would be in violation of the underlying certification, and consumers utilizing federal fuel could be considered misfueling in violation of Section 11(g) of the Clean Air Act. (21)

Response: The commentator's concerns about issues related to fuel are incorrect. The provisions about the certification of test fuel have been adopted to assure that the fuel used during certification process is not "cleaner" than the fuel that will be available in the California market, not the Pennsylvania market. During the certification if very clean fuel is used to meet emissions standards, the standards may not be met in reality because the very clean fuel may not be available in the market. As California revises the California fuel requirements, cleaner fuel may be available in the future. The rule gives the engine manufacturer the benefit of certifying with a cleaner fuel if the manufacturer can show that the fuel is/will be available in the market.

The certification process is carried out solely based on the availability of California fuels. If a "clean" certification fuel is not available in Pennsylvania, the emission benefits will simply not be as great. This is a possibility in 2005. In 2006, however, when low sulfur diesel fuel is federally mandated, the certification fuel issue will be moot for all practical purposes. If Pennsylvania performs any type of compliance testing, the Department will obtain California fuel to carry out the testing.

13. Comment: The commentator goes on to say that the failure to adopt California fuels appears to be a violation of the identicality requirement of Section 177 of the Clean Air Act. (21)

Response: The courts have held that a state's failure to adopt California fuel requirements does not violate the Section 177 requirement that state emission standards be identical to the California standards. *MVMA v. NYSDEC*, 17 F. 3rd 521, 523 (2d Cir. 1994).

14. Comment: Pennsylvania is constrained by Section 177 of the Clean Air Act from adopting California's regulation before California has obtained a federal waiver of exemption. (18, 21, 22)

Response: CARB already has an existing EPA waiver for heavy-duty diesel engines and vehicles. 53 Fed. Reg. 7021 (March 4, 1988). On December 26, 2001, CARB submitted to EPA a "scope of the waiver request" to confirm that the NTE rule is within the scope of the previously granted waiver of federal preemption under CAA § 209(b). A federal court has ruled that states may adopt, but not enforce, CARB regulations before EPA has acted on the waiver request. *MVMA v. NYSDEC*, 17 F. 3rd 521, 534 (2d Cir. 1994). As a result, the Commonwealth believes that adopting the CARB standard at this time is not precluded under the CAA. Because of the two-year lead-time requirement, DEP would not have to enforce this rule until mid-2004.

15. Comment: The proposed requirements constitute new emission

standards, not simply test procedures. (18)

Response: The supplemental test requirements constitute additional test procedures to the Federal Test Procedure (FTP) since the requirements only provide extended methods for testing heavy-duty diesel engines and vehicles. Emission results from the tests are compared to the existing emission standard, rather than a new emission standard. CARB adopted the standard in 1999 for the 2004 model year to parallel the U.S. EPA's 2004 model year standards. The underlying standards are the 2004 standards as set forth in Title 13, California Code of Regulations § 1956.8(a). These standards are unchanged by the adoption of the supplemental test procedures as incorporated by reference in § 1956.8(b). The NTE testing allowance of an additional increment of 25% of the FTP provides manufacturers flexibility to control emissions during operation not included in the FTP.

Further, the test procedures ensure the original emission benefits assumed for the existing FTP-based emission standards. The benefits previously assumed during the typical range of in-use operation were no greater than certified emissions. Notwithstanding the emission levels tested by the FTP, some engine manufacturers modified their engines to increase fuel economy during non-FTP driving. This resulted in higher than certified emissions. The NTE and European Stationary Cycle (ESC) test procedures will cover a wider range of operating conditions, thereby ensuring that "non-FTP" emissions are at the same levels as FTP emissions.

16. Comment: The CARB regulation goes well beyond the supplemental test requirements contained in the CARB Settlement Agreements and was rushed to completion without adequate technical input and discussions with stakeholders. Therefore, the requirements are likely to have significant technical flaws, which could be the source of future litigation and uncertainty for the regulated community. (1)

Response: Section 177 of the CAA limits what Pennsylvania may adopt when regulating mobile source emissions. Only

federal or California standards can be used to regulate vehicle emissions in the 49 states other than California. As a result, Pennsylvania can only adopt those requirements that are California law and not what is provided for under the consent decrees. The Department believes that California's regulation, which incorporates the federal standards with supplemental test procedures, represents the best way to reduce emissions from new on-highway heavy-duty diesel engines at this time.

The Department notes that the CARB received over 80 public comments on their supplemental test procedure rule. (See, CARB's Summary of Comments and Agency Responses, December 8, 2000). Most comments originated from engine manufacturers or the manufacturers' representatives. Out of that public comment process, manufacturers were granted additional flexibility by the CARB for meeting some of the technical challenges. In addition, the CARB met with engine manufacturers prior to adoption of this rule and asked for their input. They have also committed to meet with consent decree and non-consent decree engine manufacturers in order to discuss technical issues and receive suggestions in the future.

17. Comment: California has not shown that the supplemental test procedure is technologically feasible as required by the Clean Air Act. (18, 21)

Response: As a result of the settlement agreement with CARB and the consent decrees with EPA, six of the seven settling manufacturers will comply with the NTE test procedures beginning in 2002. As a result there should be no question that the NTE test procedures are technologically feasible. Moreover, for a more thorough review of technological feasibility and for examples of the specific technologies that may be available, see the December 8, 2000, CARB staff report for the supplemental test procedures at pages 25-28. In addition, from February to June of 2000, CARB staff participated in a series of meetings with the engine manufacturers and the U.S. EPA regarding the supplemental tests. The major concerns raised by

engine manufacturers were extreme operating conditions, such as high altitude and high torque conditions. These conditions represent a small, though challenging, portion of the control zone of the supplemental test procedures. Control strategies compliant under these conditions are expected in the consent decree engines by October 2002. Thus feasibility in 2005 should not be a problem. If there are concerns, the deficiency provisions under the California rule may be used for additional lead-time for compliance.

18. Comment: Implementation of the California standards is permitted under the provisions of the Clean Air Act and that a timely implementation of the proposed rule would assure time for the truck manufacturers to meet the engine standards before 2005. (4)

Response: The Department agrees. California has built flexibility into their rulemaking specifically for the engine manufacturers so that they can solve the outstanding technical challenges for when a truck is operating in extreme operating conditions, like high-altitude driving.

19. Comment: The Department should cooperate with California to adopt standards to include stricter enforcement of standards for urban buses and emergency vehicles, which are exempt from this rule. (14)

Response: The Department recognizes that urban buses and emergency vehicles are a significant source of diesel exhaust in heavily populated areas, and will work diligently to reduce their emissions. Nevertheless, the Department believes that emission reductions would be insignificant as a result of incorporating urban buses and emergency vehicles into this rulemaking. Supplemental test procedures are designed to measure and limit a vehicle's emissions in steady-state operation, otherwise known as highway driving. Urban buses and emergency vehicles travel mostly in a low-speed transient mode (stop-and-go traffic) in an urban setting.

20. Comment: Effectively limiting excess emissions from heavy-duty diesel engines needs to be addressed from a regional or national level in order to address the regional nature of the trucking industry. (2, 4, 6, 7, 10, 12, 13, 15)

Response: The Department agrees. States, particularly Northeastern states, share heavy volumes of diesel vehicles along with persistent elevated summertime ozone levels. In addition, Pennsylvania and other Northeastern states are adopting the NTE standards to help reduce these emissions on a regional basis.

21. Comment: Diesel exhaust is a large contributor to adverse health effects among members of the population. (8, 11, 14, 16, 17, 20)

Response: The Department agrees. Diesel engines produce large amounts of oxides of nitrogen, which is a precursor for the formation of ozone. Children, the elderly, and individuals with pre-existing respiratory problems are most at risk. Ozone can aggravate bronchitis, emphysema and asthma. Healthy adults can experience health problems on high ozone days, especially while exercising or working outdoors. This regulation will greatly limit NOx emissions from diesel engines.

22. Comment: The commentators, to varying degrees, share Pennsylvania's concerns about such persistent air pollution problems such as ground-level ozone, fine particulate matter, regional haze, and acid deposition. (2, 4, 5, 6, 7, 10, 12, 14,15, 16, 17)

Response: All of the pollutants listed above contribute to adverse health effects or interfere with quality of life in some of the most populated areas in the Commonwealth and neighboring states. This regulation, along with many other emission-reducing strategies, will help address both public health and environmental effects.

STATE OF PENNSYLVANIA
ENVIRONMENTAL QUALITY BOARD

Summary of Statement of Caterpillar Inc. Regarding Adoption of a Heavy Duty Diesel Emissions Control Program

The Environmental Quality Board ("EQB) has proposed requiring that, beginning in model year 2005, all heavy duty diesel engines sold or leased in Pennsylvania must be certified by the California Air Resources Board ("CARB").

EQB's proposed requirements refer to the California Code of Regulations, §1956.8. This section includes certain amendments, proposed by CARB, that would require heavy-duty engines to meet not-to-exceed ("NTE") and Euro III European Stationary Cycle ("Euro III") standards and test requirements for 2005 and subsequent model years ("CARB Regulations"). CARB has not yet sought, or received from EPA, the waiver of federal preemption necessary for these standards to become effective.

Caterpillar would like to support EQB's proposal and the underlying CARB Regulations; however, Caterpillar believes that the CARB Regulations, and the Pennsylvania proposal incorporating them, have grave flaws. Caterpillar, therefore, could not support EQB's proposal unless (1) it adopted the supplemental test requirements as described in the CARB Settlement Agreements with Caterpillar and other engine manufacturers; (2) there was an assurance that enough states would adopt the CARB proposal that the standard would effectively become national; and (3) the CARB proposal could be expected to survive legal challenges based on the failure to meet the statutory lead-time and period of stability requirements of the Federal Clean Air Act.

We believe that none of these three conditions are in place. Therefore, Caterpillar can not support EQB's regulatory proposal.

Caterpillar has the following particular concerns about the EQB proposal: (1) the CARB Regulations are likely to have significant technical flaws, because they were prepared hastily and without proper public input; (2) the program will become a patchwork state-by-state program rather than a national program, since Caterpillar expects only a few states to actually adopt the CARB Regulations; (3) Pennsylvania can expect significant negative economic impact to its trucking industry, because trucking companies will relocate truck purchases to states that have not adopted the CARB Regulations; (4) Pennsylvania will not realize the expected emissions gains, because engines from outside the state will dominate the population of engines operating within the state; and (5) Caterpillar expects that the CARB Regulations will be subject to a successful legal challenge, on the basis that EPA can not issue the required Federal preemption waiver for California to actually adopt this rule, based upon the Federal Clean Air Act's statutory lead-time and stability requirements. *See* 42 U.S.C. § 7543(b)(1).

Pennsylvania Department of Environmental Protection
Rachel Carson State Office Building
P.O. Box 2063
Harrisburg, PA 17105-2063
March 26, 2002

The Secretary

Phone: 717-787-2814
E-Mail: DavidHess@state.pa.us

Mr. Robert E. Nyce, Executive Director
Independent Regulatory Review Commission
14th Floor, Harristown #2
333 Market Street
Harrisburg, PA 17120

RE: Final Rulemaking: Heavy-Duty Diesel Emissions Control Program (#7-365)

Dear Bob:

Pursuant to Section 5.1(a) of the Regulatory Review Act, enclosed is a copy of a final-form regulation for review by the Commission. This final rulemaking was approved by the Environmental Quality Board (EQB) on March 19, 2002.

This final rulemaking establishes a new heavy-duty diesel (HDD) emissions control program that is consistent with Section 177 of the Clean Air Act. The program adopts California regulations to require a portion of 2005 and all subsequent model year HDD engineers to meet the same testing requirements in effect for model years 2002 through 2004. The 2002-2004 requirements resulted from consent decrees signed by the U. S. Department of Justice, the EPA and the California Air Resources Board (CARB) with seven of the largest HDD engine manufacturers who violated certification regulations by employing "defeat devices" in HDD engines for model years 1988 through 1998. The consent decrees require the manufacturers to meet new lower emission standards by October 1, 2002, for the two-year period. EPA's supplemental test procedures won't be required until model year 2007. Adopting the California regulations by Pennsylvania and other states, which is the only option available to states wanting to close the 2005 and 2006 model year gap, will create de facto national requirements that would maintain lower emissions during that time.

The proposed rulemaking was adopted by the EQB on July 17, 2001, and published on September 1, 2001, with a 60-day public comment period and 3 public hearings. There were 198 commentators to the proposal, 177 of which were form letters from citizens expressing general support for the rule due to health and environmental effects of diesel exhaust. Supportive comments were also received from four environmental groups, ten states and one state air association. Two engine manufacturers and the Engine Manufacturers Association oppose the rule for several reasons. For example, they assert that the rule goes beyond the consent decrees,

is technologically infeasible, and will result in more cost than benefit. DEP disagrees with these comments and has provided detailed responses in the final rulemaking package.

The Air Quality Technical Advisory Committee (AQTAC) endorsed the draft final rulemaking on January 17, 2002.

The Department will provide the Commission with any assistance required to facilitate a thorough review of this final-form regulation. Section 5.1(e) of the Act provides that the Commission shall, within ten days after the expiration of the committee review period, approve or disapprove the final-form regulation.

For additional information, please contact Sharon Trostle, Regulatory Coordinator, at 787-4526.

Sincerely,

David E. Hess
Secretary

Enclosures

TRANSMITTAL SHEET FOR REGULATIONS SUBJECT TO THE REGULATORY REVIEW ACT

I.D. NUMBER: 7-365

SUBJECT: Heavy-Duty Diesel Emissions Control Program

AGENCY: DEPARTMENT OF ENVIRONMENTAL PROTECTION

TYPE OF REGULATION

Proposed Regulation

X Final Regulation

Final Regulation with Notice of Proposed Rulemaking Omitted

120-day Emergency Certification of the Attorney General

120-day Emergency Certification of the Governor

Delivery of Tolled Regulation
a. With Revisions b. Without Revisions

FILING OF REGULATION

DATE	SIGNATURE	DESIGNATION
3/26/02	[signature]	HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
3-26-02	[signature]	SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
3-26-02	Elena Pagán	INDEPENDENT REGULATORY REVIEW COMMISSION
		ATTORNEY GENERAL
		LEGISLATIVE REFERENCE BUREAU

March 25, 2002